ROLE OF COMMUNITY PARTICIPATION IN DROUGHT RISK MANAGEMENT IN KILIFI COUNTY, KENYA.

BY

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2014

DECLARATION

I declare that this research project report is my original work and has not been presented for award of any other degree in any university.

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DEDICATION

I dedicate my dissertation work to my family and many friends. A special feeling of gratitude to my loving son Moffat Muuo and my wife Theresia whose words of encouragement and push for tenacity still ring in my ears. A special feeling of gratitude to my loving parents, Mr. and Mrs Paul Musimba who raised me from humble beginnings, instilled in me the love of reading, the discipline and respect for education.

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ABBREVIATIONS AND ACRONYMS

ADCL	Appropriate Development Consultants Limited
ASAL	Arid And Semi-Arid Land
CAST	Centro per un Appropriato Sviluppo Tecnologico (A*ppropriate technology development centre)*
CBDRR	Community Based Disaster risk management
CBO	Community Based Organization
DRR	Disaster risk management
EDE	Ending Drought Emergencies
GoK	Government of Kenya
HFA	Hyogo Framework For Action
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IDDR	International Day for Disaster Reduction
IFAD	International Fund for Agricultural Development
IFPR	International Food Policy Research.
IFRC	International Federation of red Cross and red Crescent Societies
IIRR	International Institute of Rural Reconstruction
IISD	International Institute for Sustainable Development
ILO	International Labour Organization
ISDR	International Strategy For Disaster Reduction
KFSSG	Kenya Food Security Steering Group
Ksh	Kenya Shillings
KNBS	Kenya National Bureau of Statistics.

MTEF	Medium Term Expenditure Framework
MTP II	Medium Term Plan II
NCCS	National Council for Children Services
NCLR	National Council for Law Reporting
OVC	Orphans And Vulnerable Children
UNISDR	United Nations International Strategy For Disaster Reduction
UNOCHA	United Nations Office For Coordination of Humanitarian Affairs
VLSA	Village Loans and Savings Association

ABSTRACT

African heads of states summit in 2012 developed a framework to end drought emergencies for African nations by the year 2027 that Kenya ratified and a national target set to ending drought emergencies in the country 2022 in the Medium Term Plan III of Vision 2030. Alongside, community participation was crucial among priorities for action in the Hyogo Framework for Action 2005-2015 adopted by 168 member states of the United Nations in 2005. As a result the importance of local initiatives and participatory and gender sensitive approaches in disaster risk management and sustainable development have gained popularity in the country. The Constitution of Kenya set the stage for paradigm shift in terms of institutional reforms providing for citizen participation. Devolution of government and public participation are not only new, but also critical components of national development. While the constitution strongly advocates for citizen participation in the country as a fundamental right to involve local communities in building disaster resiliency for effective drought risk management, it is regrettable that there is still no clear understanding of the role of community participation in disaster risk management. Stakeholders often view community participation simply as a matter of training emergency response volunteers and ignore, rather than support, initiatives developed by community based and especially women's and youth groups. This research sought to determine the role of community participation in the management of drought disaster risk management in Kilifi County by analyzing data collected from community members focusing on grassroots community participation in disaster resilience building initiatives. The researcher examined the role of community participation in beneficiary identification, needs identification, information dissemination, ownership and control in disaster risk initiatives and described their effects on the management of drought disaster risk management. Literature relating to the role of community participation in disaster management was carried out. Qualitative and quantitative data was collected from 199 respondents and analyzed. The study revealed that there was a significant role of community participation in drought risk management as the process was implemented by the community themselves although in most of the cases the criteria was predetermined and dominated by experts who assertively considered the contribution of community. The study recommended that stakeholders needed to set up an integrated drought early warning stations fully furnished with facilities so that many people can get drought warning information early, timely and adequately. Development partners need to assist the county government to form community units at the sub counties and train them adequately to become community drivers for drought risk planning and management. Development agencies and the government needed to create awareness among the male population on the importance of participating in drought risk management. There was need for the development agencies to scale up extension services through community based technical assistants to promote uptake of new drought risk reduction technologies to elevate community livelihood productivity beyond subsistence.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Drought is a normal recurring feature of climate in most parts of the world, which is among the earliest documented climatic events (George, 2003). Drought leads to significant environmental, agricultural, health, economic and social consequences (ISDR, 2009). The hunters and gatherers of Africa were among the earliest communities who were overwhelmed by drought owing to low level of participation in drought preparedness and management. Series of historic droughts in Sahel region caused serious environmental and societal effects, claiming lives, destroying livelihoods and rendering scores depended on relief assistance thus negatively impacting economies, agriculture, livestock and human populations (ISDR, 2005).

Mayell (2002) elucidates that despite the huge disruption caused by the droughts in the 19th century in West Africa, the role of community participation in drought risk reduction was not lucid. George (2003) categorically identifies coerced community participation in drought risk reduction dating back to the times of Epic of Gilgamesh and biblical times of Joseph to have yielded effective drought risk reduction. George further elaborates that effective drought disaster risk management involve definite roles in community participation for the purpose of maximizing opportunities, knowledge and synergies in interventions considering appropriateness of needs, perceptions and existing capacities.

The theoretical basis of this study is derived from the Arnstein's ladder of participation which emerged from the levels of community partnership and citizen control (Arnstein, 1969). The

ladder analogy implies that more community control was always better in the management of disaster risk management interventions. IIRR (2011) argues that social analysis was limited in disaster management and external experts were popular in setting the agenda for prevention, mitigation, response, rehabilitation and recovery which resulted in weak link between relief and development and was often antagonistic to the management of disaster risk management interventions. In the disaster risk management function, community participation build community survivability and defrays the drought risk level, *ibid*. Community managed process was characterized by functions that enable the community to prioritize needs, plan activities, organize strategies, lead in implementation, coordinate efforts and evaluate drought disaster risk interventions as opposed to the practice by many agencies.

Disaster risk management system analyzes and manages the causal factors of drought disaster risks, including reduction of exposure to hazards, lessening individual vulnerability and property (ISDR, 2005). ISDR explains that communities participate in disaster risk management by taking part in any of the processes of formulation, passage, implementation and management of drought disaster risk management. Goyet (1999) challenges the myth that the drought affected population is too shocked, weak and helpless to take responsibility for their own survival as superseded by the reality that many victims find new strength during emergencies in form of coping strategies for individual survivability. Keen (1994) explains that communities affected by disasters should be given the maximum opportunity to participate in risk reduction and response programmes. While it is imperative to force people to participate in projects which affect their lives, Keen observes that the public should be given the opportunity for participation as it was a basic human right and a fundamental principle of democracy.

ISDR (2005) confirms that despite the understanding of the determinants of drought risk vulnerabilities and drought risk mitigation matrix, most measures emphasize emergency relief and response and precariously bear a blind eye on community participation. Poor communities are more vulnerable to drought disasters because they tend to be located in geographically vulnerable areas where they are heavily dependent on extraction of natural resources for their livelihoods. The poor have few alterative livelihood options when drought strikes and they do not have the political clout to ask why existing early warning system did not warn them of the hazard. People are motivated to participate by being told what is going to happen or has already happened. More often than not there has been unilateral declaration by project administration without listening to people's responses where the information being shared belongs only to external professionals (Wilford, 1993). People participate by answering questions posed by extractive drought risk assessors using questionnaire surveys or similar approaches and in turn do not get the opportunity to prioritize needs or influence proceedings as the findings of the assessment are neither shared nor checked for accuracy.

The consultative principle holds that communities participate by being consulted and external professionals, development partners and change learners listen to the views of the community. Bamberger (1988) points out that more often than not external professionals defined both problems and solutions through implication and are not privy to modify these in the light of people's responses. Such a consultative process does not concede any share in decision-making on the part of the community and often professionals are under no obligation to take on board people's views (Reid, 2000). Eventually communities form groups to meet predetermined

objectives related the projects involving the development or promotion of externally initiated social organization. Such involvement does not take place at the early stages of project cycle but rather after major decisions have been made which become a creation of external initiators and facilitators.

The centrality of the role of community participation in disaster risk management enhances the effectiveness of drought risk management by identifying the community not only as the primary beneficiary but also as the key actor of disaster risk management. Empowered community provides meaningful participation in the whole process of disaster risk management. The interest of most vulnerable members of the community, including women, children, youth, the elderly, people living with disability, people living with HIV/AIDS and other marginalized groups influences the effectiveness of disaster risk management. When the most vulnerable people have the chance to participate in disaster management activities at local level they are supported to reduce vulnerability and promote their own responsive capacity to disasters (IFRC, 2010).

Sustainability of interventions benefits from full participation of women during the whole disaster management process. Community awareness creation awakens the community recognition of different perceptions of risks, vulnerabilities, and capacities. Different individuals, families and groups in the community have different vulnerabilities and capacities determined by age, gender, class, sources of livelihoods, ethnicity, language, religion, and physical location. Women can be particularly active and enthusiastic members of community action teams and management committees as they had more free time to commit to the disaster risk management programmes and are less likely to leave communities (Schilderinck, 2009). However, to take full

advantage of these qualities significant consideration has to be given to overcoming barriers to female participation (UNICEF, 2008).

The primary content of disaster management activities revolve around reducing vulnerable conditions and the root causes of vulnerability. The primary strategy is to increase community's capacities, resources and coping strategies in order to avoid the occurrence of disasters in future. Okoth (2012) notes that the level of community participation and ownership had a direct impact upon both the success and sustainability of a community disaster risk management programme and recommended community consultation in the earliest stages of programme inception to ensure the programme meet needs and capture community support. Regular meetings and inclusion in decision making and monitoring processes are solid prerequisites for the building of ownership, positive rapport and trust between the programme and the wider beneficiaries (Patrick & Akureje, 2012).

IFRC (2011) noted the importance of engaging community leaders was that they became part of, or have direct influence over, the established community-based organizations and mobilization of community leaders was easier if the CBDRR programme had the support at community level. Community leaders' participation in CBDRR training promotes better information sharing and understanding among local communities (India, 2009). Community action teams and management committees were consistently described as significant achievements of CBDRR programmes and valued are by communities as useful ingredients of stimulating participation (Yonder, 2012). Yonder observed that community initiatives were most effective where linkages

were made with other community based organizations to allow sharing of information and experiences and encourage coordination of activities.

According to IISD (2007), disasters, large and small, strike people where they live. It is at the community level where shocks of hazards were experience most and, frequently, it is where risk reduction steps could make the biggest difference. As observed by UNDP (2005), disaster risk management at the local level was a key element in any viable national strategy to reduce disaster risks, building on the quality of community networks, the social fabric, and effective governance. IFRC (2011) confirms that the communities themselves undertook the majority of the activities that contribute to a safe and resilient community. The scenario described above points to the need to determine the role of community participation in drought risk management.

1.2 Statement of the Problem

Droughts have become more frequent and severe over the recent years. Owing to the drought effects, loss of livelihood assets during successive droughts has been experienced in many parts of Kenya rendering her food security status fragile (USAID 2012). Drought strike people where they live and its shocks were felt most at the community level; therefore, it is this where risk reduction initiatives could make the biggest difference (IISD, 2007). Disaster risk management at the local level was a key element in any viable national strategy to reduce disaster risks, building on the quality of community networks, the social fabric, and effective governance. (UNDP, 2005). Community participation in drought disaster risk management had been ignored and emphasis has been on emergency relief and response. The affected communities become too weak when drought strikes and unilateral declaration by project administration without listening to people's responses would involve communities by answering questions posed by extractive

drought risk assessors using questionnaire surveys without giving the opportunity to prioritize felt needs (Wilford, 1993).

Kilifi County is one of the semi-arid counties of Kenya, which houses Ganze Sub County, one of her seven sub counties, which is among the poorest sub counties in Kenya (Kenya, 2004). The Ganze is the most ASAL sub County of Kilifi County that suffered from recurrent droughts for the last two decades, which have posed adverse effects on livelihoods (KFSSG, 2012). Sokoke ward is the most food insecure of the four wards of Ganze Sub County, which has been recording high levels of malnutrition among children less than five years attributed to drought and lack of dietary diversification. In the year 2004, KFSSG Food security assessment recommended Sokoke ward for food assistance owing to exacerbated community vulnerability to drought as a way of responding to drought hazard to cushion communities from slipping into deep vulnerabilities while at the same time addressing the underlying causes of drought risk reduction sustainably (KFSSG, 2003).

Various actors have implemented work based food assistance programmes in the ward as a way of involving public in resilience building. Several drought disaster risk management programmes have been designed by the government and development partners to save livelihoods and help communities become more resilient by creation of productive communal and household assets. These efforts have not yielded sustainable resilience outcomes in Sokoke ward (Okoth, 2012). Participation roles assumed by the community in interventions should support the investment by the agencies and create synergy among disaster risk management actors geared towards spurring positive impact of designed interventions in order to navigate communities from drought risk

(Wilford, 1993). Drought risk management was more effective when the communities themselves (IFRC (2011) undertook majority of the activities contributing to safe and resilient community. Accordingly, this study sought to determine and describe the role of community participation in the implementation and management of drought reduction interventions in Kilifi County, Kenya.

1.3 Purpose of the Study

The purpose of this study was to determine the role of community participation in drought risk management using cross sectional survey with a view of improving community participation in drought risk management in Kilifi County, Kenya.

1.4 Objectives of the study

The objectives of this study were-

1. To determine the role of community participation in beneficiary identification in drought risk management in Kilifi County.
2. To establish the role of community participation in needs identification in drought disaster risk management in Kilifi County.
3. To determine the role of community participation in information dissemination in drought disaster risk management in Kilifi County.
4. To establish the role of community participation in galvanizing community ownership and control in drought risk management in Kilifi County.

1.5 Research Questions

This study sought to answer the following questions:

1. What is the role of community participation in beneficiary identification in drought risk management in Kilifi County?
2. What is the role of community participation in needs identification in drought risk management in Kilifi County?
3. What is the role of community participation in information dissemination in drought risk management in Kilifi County?
4. What is the role of community participation in ownership and control of drought risk reduction in Kilifi County?

1.6 Research Hypothesis

The study tested the hypotheses that:

H_1: Community participation plays a role of identifying beneficiaries in drought risk management in Kilifi County.

H_1: Community participation plays a role of community needs identification in drought risk management in Kilifi County.

H_1: The role of Community participation plays a role of information dissemination in drought risk management in Kilifi County.

H_1: Community participation plays a role of galvanizing community ownership and control in drought risk management in Kilifi County.

1.7 Significance of the Study

This study contributed valuable knowledge to the field of disaster risk management in general. The study focussing on the roles of community participation in drought risk management produced important knowledge to Kilifi County Government and the community on the best practices that could enable harness the synergies of the masses into progressive development. The study was also useful to the partners involved in drought risk reduction and response programming in the County and other parts of the world.

The study generated suggestions, which were significant to formulation of policy statements through its recommendations. The study made recommendations on identification of beneficiaries, prioritization of needs, information dissemination and ownership and control. Such recommendations could inform intervention programming and policy formulation in the county and other counties in the country because they originated from valid research data.

The study influenced the practice of disaster risk management in Kenya. In the attempt to enhance citizen participation and its role in the management of disaster risk management, the county government and the national government would focus on specific issues of community participation generated through research. Henceforth they needed not follow theories, rules or traditions that were remote and irrelevant to them, but base their planning, decisions and actions on research reference specific to their situations. The research provide basis for the role of community engagement in drought risk reduction by partners and concretize community involvement and participation. The use of such specific knowledge would improve the management of disaster risk management and build community resilience in the Country.

1.8 Delimitations of the Study

The scope of this study was Sokoke ward that represented the whole of Kilifi County. This ward was ideal for the study because over 60% of Kilifi County landmass is semi arid and receives annual rainfall ranging from 500mm to 800mm and occasional prolonged droughts, which negatively affects livelihoods. Sokoke ward is in Ganze Sub County that entirely falls within the semi arid region of the county and her people have consistently suffered from chronic food insecurity and malnutrition more than the other areas of the county, which makes it to rank among the poorest constituencies in the country. Sokoke ward's environment is typically semi arid and most of the disaster risk managements by different partners cover all the sub locations of the Sokoke Ward. The inhabitant mixed farmers equally suffer from drought and climate change risks and thus the findings of this study gave the position of the County on the role of community participation in drought risk management and Sokoke ward gave a significant sample.

1.9 Limitations of the study

The study of role of community participation in drought risk management involved data collection procedures that the research suffer from red tape and long bureaucratic procedures from the government officers who were the key informants which definitely caused delays in approval of authority to collect data. Seeking permission and the requisite authorization from the County Commissioner prior to the data collection mitigated this challenge. Although, Bantus not all respondents understood English and the national language, Swahili, was used in administration of data collection tools. Since not all Swahili words have equivalent English translation efforts were made not to miss out important information in translation.

1.11 Assumptions of the study

The research project was based on the assumption that the respondents of this study were affected by drought and would cooperate and give information truthfully and that many respondents understood Kiswahili.

1.12 Operational Definition of terms

Community participation

Community participation concerns the engagement of individuals and communities in decisions and execution of activities that affect their lives.

Disaster

A disaster is a serious disruption of the functioning of a community or society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community and society to cope using its own resources.

Disaster Management

Disaster management is the organized analysis, planning, decision-making, allocations of resources, roles and responsibilities to prepare, prevent, mitigate, respond, recover and rehabilitate from disruptions by disasters.

Vulnerability

Vulnerability is the susceptibility of the individual, community, property, infrastructure or the environment to a hazardous event.

1.13 Organization of the study

In chapter one, the researcher presented the background of the of the study, introduced the problem statement, described the purpose of the study with its significance and came up with

research objectives, research questions and research hypothesis that guide the study in determining the role of community participation in the management of drought disaster risk management interventions Kilifi County.

Chapter two presents a review of literature and relevant research associated with the variable under investigation by providing a clear understanding on beneficiary identification needs identification, information dissemination and community control as elements of community participation in drought risk reduction. Conceptual framework of the study summarizes this chapter.

Chapter three presents the methodology and procedures used for data collection and analysis.

Chapter four contains an analysis of the data and presentation of the results in tables in percentages and chi square test results.

Chapter five offers a summary and discussion of the researcher's findings on the role of community participation in drought risk management Kilifi County, recommendations and areas for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter looks at the overview of drought risk reduction and published literature on the role of community participation. It further considers what has been learnt on community participation in various settings for comparison purposes so as to elicit how community participation role could be enhanced in effective drought risk reduction.

2.2 Overview of community participation and Drought disaster risk management

Drought is a weather-related natural hazard which may affect vast regions for months or years with protracted impacts on food production reducing life expectancy and the economic performance of large regions or entire countries (ISDR, 2009). Keddy (2007) elaborates drought as a recurrent feature of the climate occurring virtually in all climatic zones whose characteristics vary significantly among regions differing from aridity in that it is temporary whereas aridity is a permanent characteristic of regions with low rainfall. Drought is more than a physical phenomenon or natural event whose impact results from the relation between a natural event and demands on water supply and often exacerbated by human activities. Significant environmental, agricultural, health, economic and social consequences signifies drought periods.

According to George, et al (2003), drought is among World's earliest documented climatic events, present in the Epic of Gilgamesh and tied to the biblical story of Joseph's arrival in and the later exodus from Ancient Egypt. The Akkadian empire, under the rule of Sargon, collapsed abruptly in the beginning of 2200 B.C. after only a century of prosperity following a 300-year

drought as depicted by microscopic analysis of soil moisture at the ruins of Akkadian cities in the northern farmlands, which disclosed that the onset of the drought was swift, and the consequences severe. In 2005, parts of the Amazon basin experienced the worst drought in 100 years (World Bank, 2010). According to Mayell (2002), the earliest exodus of humans out of Africa and into the rest of the world were the hunters and gatherers migration, linked to drought phenomenon, dating back to 9,500 BC. Immense droughts overwhelmed community coping and survivability capabilities owing to low level of preparedness and participation in drought risk reduction. ISDR (2005) records that Sahel region suffered from a series of historic droughts, beginning the 17th century to the end of the 19th century where droughts caused dramatic environmental and societal effects upon the Sahel nations. The area was struck by severe famine from the late 1960s to early 1980s that claimed thousands lives, left many people dependent on food aid and severely destroyed livelihoods impacting economies, agriculture, livestock and human populations of much of Upper Volta countries. Ahmeda (2013) observed that people living in the drainage basin of the Himalayan Rivers would be at risk of floods followed by droughts in coming decades affecting the Ganges while the west coast of North America, which gets much of its water from glaciers in mountain ranges were also be affected. Kenya (2009) indicates that there has been an increase in the intensity and frequency of occurrence of drought disasters over the past two decades. UNDP (2011) illustrates that in the ASALs of Sub-Saharan Africa, it is likely that the forces of extreme weather events and aridity became more frequent and intense as a result of climate change thereby undermining and offsetting much of the progress already achieved in meeting the United Nations Millennium Development Goals and contribute to the continued downward spiral of poverty and environmental degradation.

Oxfam (2011) elaborates that climate in the Horn is experiencing an increase in the rates of drought and that drought-related shocks used to occur every ten years, and they are now occurring every five years or less. Among Borana communities of Ethiopia, whereas droughts were recorded every 6-8 years in the past, they now occur every 1-2 years which is now the case over the entire East Africa region (Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania and Uganda) and come with inevitable uncertainties associated with localised impacts. They nonetheless show that even with moderate increases in the length of crop growing period in some patches of the region, agricultural productivity could decline dramatically due to climate change in the decades ahead as temperatures increase and rain patterns change. On top of these projections, any incidence of extreme weather events like droughts would further be hit food production in the region. These reductions in food production would have severe consequences most directly for smallholder farmers and agro-pastoralists, who rely on farming for income, and for all those who purchase such crops. Kenya (2009) describes Kenya's disaster profile as being dominated by drought disasters that disrupt people's livelihoods, destroy infrastructure, divert planned use of resources, interrupt economic activities and retard development. Kenya (2009) records that 1999-2001 drought disaster response costs were more than would otherwise be the case if sufficient efforts had been put in place for effective disaster management.

Drought disaster risk management involves systematic analysis and manage of the effects of droughts through reduced exposure, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events (ISDR, 2005). Community participation refers to members of the public taking part in the analysis and

management of threats posed by drought and developing survivability capacities. Goyet, (1999) challenges the myth that drought affected population would be too shocked and helpless to take responsibility for their own survival as superseded by the reality that many find new strength during emergencies. Keen (1994) explains that communities affected by drought disasters have a role to play in disaster risk management and should be given the maximum opportunity to participate in risk reduction and response programmes. People are involved to solve their own problems and cannot be forced to participate in projects which affect their lives but should be given the opportunity for involvement as it is a basic human right and a fundamental principle of democracy (Mainlay & Tan, 2012). Citizens are involved in community needs assessment where the community expresses opinions about desirable improvements, prioritizing goals and negotiating with agencies for synergy building where they are engaged to plan and design interventions through formulation of appropriate objectives, setting goals, criticizing plans based on traditional knowledge of disaster risk management.

Government mobilization of community participation into drought management dates back to the times of Epic of Gilgamesh and biblical times of Joseph. The Bible presents a scenario where the government authoritatively commanded community participation in drought management and drought risk reduction in Egypt where it worked efficiently (ABS, 2004). Effective drought risk reduction involves the participation of communities for maximizing the opportunities, knowledge, and synergies in interventions considering appropriateness of needs, perceptions, and existing capacities. Community knowledge on drought disaster patterns forms a rudimental part of early warning system where forecasting of drought disaster through traditional and scientific methods is very vital. India, (2009) observed that most drought risk reduction have yielded

mixed results due to their failure to recognize the role of community participation in planning and management of interventions and relating them to the traditionally practised adaptation and coping strategies.

2.3 Community participation and Beneficiary identification in disaster risk management

According to Bryson (2004), beneficiaries in drought risk reduction refers to persons, groups, or organizations that whom leaders, managers and front-line staff must consider in the process of implementing a drought disaster risk management venture. Ironically, while the term has passed the tipping point into common use and the notion that communities must be attended to as key stakeholders is an idea in good currency there is relatively little in the public and non-profit literatures on exactly the role of community in systematically identifying and analyzing beneficiaries (Gladwell, 2000; Schon, 1971).

People participate by forming groups to meet predetermined objectives related to the project, which can involve the development or promotion of externally initiated social organization, which tend to take place after major decisions are made instead of taking place at early stages of project cycles or planning. Many institutions and even the government tend to be dependent on external initiators and facilitators in beneficiary mobilization. Shileche (2012) observes that the role of community participation in identification of beneficiaries of the oil spill related disasters in Kenya was scanty. Shileche further elaborates that an effective disaster risk management should involve effective community participation in identifying the beneficiaries' interests, involvement, expectations, importance, influence and impact on desired disaster risk

management project execution as well as any specific communications requirements and come up with a stakeholder register.

Disasters strike the communities in their local setting where they command a big share of the wellbeing of the community (World Bank, FAO & IFAD, 2009). In this case, the community is the primary beneficiaries who are also the key actors as planners, implementers, partners and leaders of disaster risk management. Disaster risk management should be built upon the interest of the most vulnerable members of the community, including women, children, the youth, the elderly, disabled and the sick while addressing the concerns of other stakeholders. Most vulnerable people have a chance to participate in disaster management activities at local level and may require to be supported in activities to both reduce vulnerability and promote own responsive capacity to disasters. The disaster risk management process must be gender-sensitive and ensure the full participation of women during the whole disaster management process. However, there is different perceptions of risk amongst the community members and all people see the danger of risk in their own community thus this diversity should be considered in the process of disaster risk management through community participation in planning interventions. Different individuals, families and groups in the community have different vulnerabilities and capacities varying by age, gender, class, occupation, sources of livelihoods, ethnicity, language, religion and physical location.

A successful community managed disaster risk management should bring together local communities in a given geographical setting in the identification of their most at risk beneficiaries and risk reduction strategies to address the priority groups' vulnerability. The

practice had failed to recognize that the most effective support system during disasters in the community itself since it bears the burden on the survivors and casualties. While external organizations and individuals outside the community play a key role in supporting and guiding local people in disaster management activities more often than not assumes the role of communities in beneficiary identification. Disasters are viewed as unmanaged development risks and unresolved problems of the development process, community disaster risk management should lead to a general improvement of the quality of life of the vast majority of the poor people and of the natural environment (World Bank, 2010).

2.4 Community participation and Needs identification in disaster risk management

According to IISD (2007), disasters, large and small, strike people where they live. It is at the community level that disasters are felt most and frequently, it is also where hazard force is felt and risk reduction steps make the biggest difference. As observed by UNDP (2005), disaster risk management at the local level is a key element in any viable national strategy to reduce disaster risks, building on the quality of community networks, the social fabric and effective governance. IFRC (2011) elaborates that needs identification and goal determination that contribute to a safe and resilient community should be undertaken by the communities themselves. In the Hyogo Framework for Action, states acknowledged, as a general consideration, that both communities and local authorities should be empowered to manage and reduce disaster risk by having access to the necessary information, resources and authority to implement actions for disaster risk management (ISDR, 2005). The 1992 Rio Declaration on Environment and Development affirmed that disaster issues could best be handled with the participation of all concerned citizens. At the national level, each individual shall have appropriate access to information

concerning the environment that is held by public authorities, including information on hazards in their communities, and the opportunity to participate in decision-making processes.

Williams (2006) describes community participation in Post-apartheid South Africa to have literally became synonymous with legitimate governance where executive mayors annually reported on the involvement of community organizations in the affairs of the municipality and ensure that due regard was given to public views and report on the effect of consultation on the decisions of council. Most community participation in post-apartheid South Africa was yet largely spectator politics. Ordinary people mostly become endorsees of pre-designed planning programmes and often the objects of administrative manipulation and a miracle of reconciliation in the international arena of consensus politics whilst state functionaries of both the pre- and post-apartheid eras ensconce themselves as bureaucratic experts summoned to 'ensure a better life for all'.

Consequently, the process, visions and missions of a more equitable society operated merely as promissory notes issued every four years during election campaigns. In the course of this endless rhetoric and multiple platitudes, the very concept of community participation has been largely reduced to a cumbersome ritual; a necessary appendix required by the various laws and policies operating at the local government level. Informed discussions and rational debates on the merits and demerits of specific planning programmes are literally non-existent, even though 'community participation' features as a key component of planning programmes at the local level. Onsomu et al. (2004) observed that community participation in community schools in Kenya in spite of their high level of poverty and illiteracy, communities had organized parents'

associations that had some responsibility in school management. Communities strongly believed in themselves in solving their problems and expected education of their children to insure the way to get out of the vicious circle of poverty and improved resilience.

Community participation is expected to yield more satisfaction to the community from open community involvement and also achieve more results, more rapidly and with greater benefit to the community as a whole (IFAD, 2007). Communities with higher rates of citizen participation in identifying their needs are much more likely to have citizen control of their community governing institutions, more diverse membership, greater adoption of the empowerment approach, and as a result higher levels of success in attracting the resources needed to implement plans to meet their needs. Scott (1998) pointed out that community power involves deep acceptance of one another, complete inclusiveness, and the self-awareness to have a realistic understanding of the circumstances in which the community finds itself. The community offers each member the safety of knowing that they are accepted for whom they are, and bring forth the best each person can to offer, because they know their gifts of time, talent and ideas are acceptable which motivates community members to offer what they have to enable the whole community to prosper (World Bank, 2010). All members of the area should be invited into an open, welcoming community of action, establishing a safe environment in which all can not only benefit, individually and collectively, but also give. Past discrimination, or just the belief that drought disaster risk management needs identification is expert's job, is likely to make citizens reluctant to engage. This is especially true for members of minority groups and for groups that have newly arrived.

Disaster risk management revolves around reducing vulnerable conditions and the root causes of vulnerability while building community readiness and individual survivability capacities. The primary strategy is to increase community's capacities, resources and coping strategies in order to avoid the occurrence of disasters in future. Population numbers and density, economic conditions, religious traditions, literacy, health status, nutritional benefits, political economy, land arrangements, government structures and effectiveness, levels of infrastructural development, educated unemployed youth, exposure levels and other factors are relevant variables in needs identification that are well understood by the community (Lovell, 1992). Lovell also notes that development strategies appropriate in one country are not necessarily needed or appropriate in another because contextual constraints and possibilities differ widely; particular programs are not necessarily replicable country to country even where needs are similar. Barret & Clay (2003) recommended that communities should be involved in the earliest stages of programme inception to ensure the programme meets their needs and captures their support.

In an endeavor to increase women participation in governance, the constitution of Kenya has entrenched the gender policy, which mainstreams the needs of women in planning and encourages women empowerment in decision making process (NCLR, 2010). Many stakeholders are privy of the two-thirds gender rule and have tried to embrace it in disaster risk management and development which aims to improve women voices in decision making process. In Kenya, females constitute a majority of the population (KNBS, 2009). In Ganze Sub County, Women form majority of the workforce for both productive and reproductive work (Kenya, 2007). The community understands the unique needs of the youth with respect to the physical,

psychological, cultural, social, biological and political aspects that confront the youth and this knowledge should be considered in drought disaster risk management interventions. The Kenyan youth constitute 75 percent of the country's population, forming the largest source of human resource but have remained on the periphery of the country's affairs and their status has not been accorded due recognition (Kenya, 2007). As a result, many of the youth who are productive and energetic remain unemployed, continue to suffer from poor health, lack sufficient support and apparently play no role in drought disaster risk management. A common misconception of most youth policies has been that boys and girls are a homogeneous group. It is important to critically assess the needs of female and male youth differently as they have different and conflicting interests. Rural adolescent girls are virtually trapped within the domestic sphere performing reproductive chores whereas boys spend more time in productive activities that generate income to the household or for themselves (Bennell, 2007). Involvement of the youth in needs identification is very vital since youth are driven by results of their work and may be discouraged by routine activities which take long to give results (WFP, 2011).

2.5 Community participation and Information Dissemination in disaster risk management

An effective drought disaster risk management network is characterized by the establishment of a disaster information management system that clearly outlines the perceived benefits of the community according to their priorities with outreach programs to develop and implement mechanisms that increase community awareness and improve management of hazard risks and vulnerabilities (World Bank, 2010). The system should strive to increase awareness and understanding at the community levels of the sector impact of natural hazards demonstrating

strong training programs for community leaders, possessing communication and coordination mechanisms to facilitate preparedness and response capabilities of the communities. The disaster risk management system should set out a clear framework that assists the community in monitoring, forecasting and early warning and assist in warning dissemination incorporating forecasting through mass information dissemination system for community disaster preparedness. The information system should be sensitive to the needs of different groups in the community thereby enabling vulnerable communities and local groups to understand climate forecasts and undertake corresponding disaster preparedness and mitigation activities. Incorporate innovative approaches and technologies for reducing risk to vulnerable communities, incorporating local context with guidelines on financing sources and possible risks.

Today (2009) argues that while drought is one of the hurdles that may prevent Kenya from achieving the millennium development goals (MDGs), especially those related to poverty eradication, attainment of food security and promotion of environmental sustainability involvement and participation of communities would check the situation a great deal. The last decade alone recorded four major food crises in Kenya triggered by drought. When the community lack the opportunity to discuss progress, gaps, relevance of disaster risk management and contribute ideas on best practices for beneficiary identification it leads to poor targeting and embezzlement of resources. Article 1 of the constitution of Kenya vests aall sovereign power to the People of Kenya and directs that the power shall be exercised only in accordance with the Constitution. First, the constitution gives the power of self-governance to the people and enhances the participation of the people in the exercise of the powers of the State and in making decisions affecting them. Secondly, recognizes the right of communities to manage their own

affairs and to further their development. Thirdly, protects and promotes the interests and rights of minorities and marginalized communities. Fourthly, promotes social and economic development and the provision of proximate, easily accessible services throughout Kenya; and lastly ensures equitable sharing of national and local resources throughout Kenya. This by default requires timely feedback to the beneficiaries for these powers to be recognized. Timely feedback is vital in management of drought disaster risk management as to provide the community with the opportunity to learn and get involved in the process of recovery and improve on the level of acceptance and survivability. According to Finsterbusch & Van Wicklin (1987), communities should be empowered so as to place final decision-making power in the hands of the public and the agencies should be ready to implement what the community decides and set up community project management committees. Higher levels of community participation allow for increased potential for conflict resolution and arbitration; increased capacity for critical thinking and innovation; and increased capacity for problem-solving. Accountability is a relationship based on obligations to demonstrate, review, and take responsibility for performance, both the results achieved in light of agreed expectations and the means used from an internalized sense of integrity (Finsterbusch & Van Wicklin, 1987). Demonstrating performance involves proactively reporting results achieved and the appropriateness of the means used, which requires honesty, openness, and transparency.

2.6 Community participation and Ownership and Community Control in disaster risk management

Community participation in drought risk reduction can represent assigning certain decisive roles to the individuals who are beneficiaries of drought risk reduction. Community participation implies involvement of people, with similar needs and goals, in making decisions that affect their

lives. The local community play an active role in the ownership and control of drought disaster risk management programs and improvements directly affecting their lives. It is rational to give control of affairs and decisions to people most affected by them. Besides, since no government or authority has the means to solve all the public problems adequately, it is necessary for the communities to own the process and activities of disaster risk management and have control over the matters that affect them (Abrams, 1971).

Community participation not only brings many lasting benefits to people but also a means of getting things done. Citizen participation can be associated with citizen power and control as, the redistribution of power that enables the have-not citizens to be deliberately involved in the planning and implementation of disaster risk management activities. Participation is good and brings people together in creating and making decisions about their environment. Since people are actively involved in the process, participation helps promote sense of ownership and control among the people. In 2004 the world identified and recognized Wangari Muta Maathai for Nobel Prize award, the founder of a community movement that enlisted community participation and control in environmental conservation popularly known as The Greenbelt Movement in Kenya. Although it was the first award to an environmentalist to be awarded the movement did not last long (IISD, 2007). IISD also elaborates an exercise of community control where the public in 1988 apprehended a Brazilian rubber tapper in vehement fight against destruction of Amazon rainforest and made recommendations to the government for assassination of the culprit and a plea that was heeded.

Arnstein (1969) explains that the ladder of community participation classification is necessary to unveil the manipulation of people in the garb of community participation projects by professionals and policy holders. The ladder has eight rungs each corresponding to a different level of participation, that is, manipulation, therapy, informing, consultation, placation, partnership, delegated power and citizen control as shown in figure 1. The rungs at the bottom of the ladder indicate least citizen participation or "nonparticipation" and include manipulation and therapy. Informing, consultation and placation occupy the middle rungs of the ladder and border between manipulation at the bottom and citizen control at the top and is termed as "tokenism" where the people are allowed to participate only to the extent of expressing their views but have no real power to influence matters. Partnership, delegated power and finally citizen control at the top of the ladder, are termed equivalent to "citizen power" and this is where true and meaningful participation takes place.

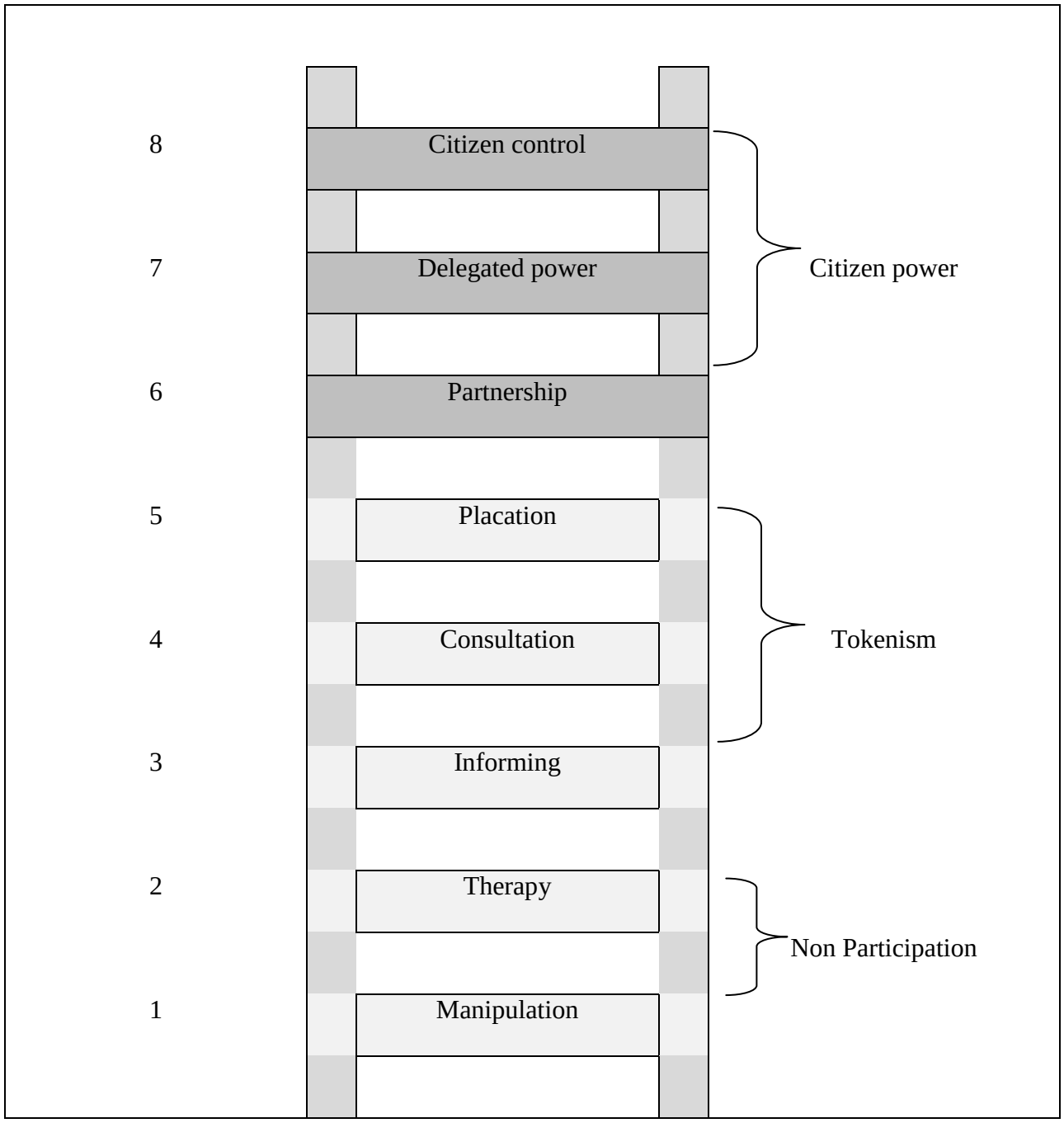

Figure 1: Ladder of Community Participation

Adopted from Arnstein, (1969)

Chambers (1995) cited in Adato *et al.* (2005) argues that the instrumentalist foundation involving a recognition that top-down, technocratic forms of development imposed on diverse local realities often resulted in failure; that local people best understood their own needs; and that

involving local people could be cost-effective in terms of reduced capital costs and increased involvement in operation and maintenance of initiatives. Moser, (1989) elucidates that rational philosophical political foundation involves the belief that poor people should be empowered and should have more command over their lives; and that they should be empowered to determine choices in life and to influence the direction of change

2.7 Conceptual Framework

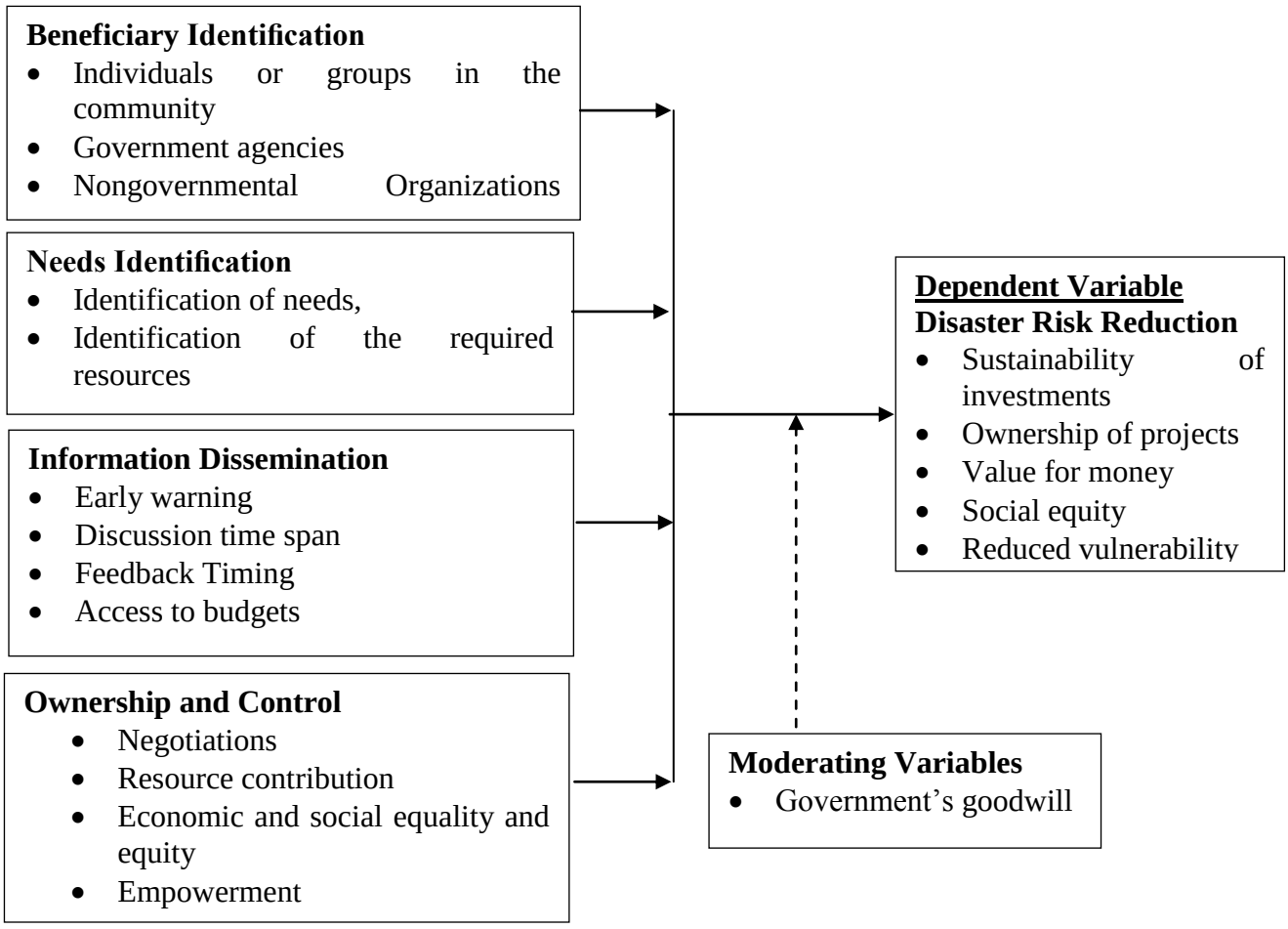

Figure 2 : Conceptual framework

This conceptual framework, in figure 2 above, is a graphical representation of the elements of community participation that define the role of community participation in management of drought risk reduction. The hypothesis derived from figure 2 suggests that drought risk management is the dependent variable in the study that depends on the roles of community participation in beneficiary identification, needs identification, information dissemination, and control as the independent variables. The existence of appropriate policy provisions, government's goodwill and the prevailing political atmosphere are the moderating variables of the study.

2.8 Summary of literature review

Drought is among World's earliest documented climatic events, which had irreversible effects on lives and livelihoods and requires community coping and survivability capabilities to adapt to and adequately mitigate its impacts. Forces of extreme weather events and aridity have become more frequent and intense because of climate change thereby undermining and offsetting much of the progress already achieved in meeting the United Nations Millennium Development Goals and contribute to the continued downward spiral of poverty and environmental degradation. Drought risk reduction involving systematic analysis and management of the effects of droughts through reduced exposure, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events is desired. Drought affected population find new strength during emergencies and have key roles to play therefore they should be given the maximum opportunity to participate in risk management and response programmes. People are engaged to solve their own problems hence cannot be forced to participate in activities that affect their lives but should be given the opportunity to exercise their basic human right and a fundamental principle of democracy.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the procedures and methods the researcher used in order to obtain data needed for the study. The section discusses the research design, describes the study area, the population size, sampling procedures, data collection instruments and procedures, ethical considerations and methods of data analysis.

3.2 Research Design

This study was conducted through descriptive survey research design. This design provide deep understanding of the events being studied and its instruments are helpful in getting first-hand experience as well as in-depth coverage of the study (Kothari, 2004). This research design was a present oriented methodology that the researcher used to investigate the role of community participation in the planning and management of drought risk reduction in Kilifi County by selecting a sample population. The design helped the researcher to establish conditions that exist, practices that prevail, beliefs and attitudes that were held, processes that were on-going and trends that were developing. The researcher collected data from the sample population and analysed it to discover the role of community participation in drought risk management. The research design provided numeric descriptions of the sample population by describing the role of community participation in management of drought risk reduction. Kothari also notes that this method had the ability to allow collection of large amount of data quickly and at minimal costs. The researcher opted for a descriptive survey design to cater for the large population that was involved in the study through a sample for the purpose of data collection and analysis. The study

generated themes, patterns, concepts, insights and understandings using qualitative research method.

3.3 Target Population

The target population consisted of all the 48,195 people in the drought prone Sokoke Ward (KNBS, 2009) comprised of 59 percent female gender while male gender trailed at 41 percent with gross dependency rate of 68 percent. Drought hazard was a major threat to the livelihoods of the agrarian Bantu communities' residents of Sokoke. The shocks sustained by livelihoods owing to the cumulative impacts of drought had irreversible effects on the socio-economic, physical, environmental and even political aspects of life. The participation of communities in drought risk reduction was very crucial for the survival of the livelihoods. Research on the role community participation and drought risk management would provide insight on issue for proper implementation of disaster risk management in Kilifi County.

Table 3.1: Sampling Frame

Strata	**Number**
GoK Personnel	100
NGO workers	100
Opinion leaders	150
Female adult community members	500
Male adult community members	500
Female youths	350
Male youths	300
Total	**2000**

Source: Kenya National Bureau of Statistics, 2010

3.4 Sampling Techniques

The sampling technique is the process of selecting a specific number of respondents for a study (Ngulube, 2003). This study employed simple random sampling technique to sample locations for data collection in the ward. Simple random sampling was conducted to ensure that each

member of the target population had equal and independent chance of being included to produce unbiased sample of study. The researcher conducted simple random sampling to select individual respondents to participate in the study.

3.5 Sample Size

The sample consisted of respondents drawn from sampled sub locations out of the seventeen sub locations of the Ward. Data collection tools were administered to randomly selected respondents. The sample size for the quantitative data was determined by Yamane's formula of a finite population (Yamane, 1967) as illustrated below:

$$n = \frac{z^2 \times p \times q \times N}{e^2 (N-1) + z^2 \times p \times q}$$

Where;

n is the sample size

z is the value of standard variate at a given confidence level

p is the probability of occurrence of a variate

q is the probability of non-occurrence of a variate given by 1-p

N is the total population size;

e is the precision level with a confidence interval of 95 %.

In this study, the researcher desired to achieve a 95% confidence level giving the value of z tabulated as ±1.96 while the expected acceptable error would be 5 percent (Faraday, 2006), implying that the probability that a significant difference between the actual variate and the observed variate would occur was 5 percent. The probability of picking a respondent for interview was equal to that of not picking the respondent. Kothari (2004) recommends that a p-

value of 50 percent would yield maximum sample size and thus give the desired results. The sample size would be determined as follows;

$$n = \frac{1.51^2 \times 0.5 \times 0.5 \times 48{,}195}{0.05^2(48{,}195 - 1) + 1.51^2 \times 0.5 \times 0.5}$$

$$n = 204.7678\backslash$$

$$n \approx 200$$

The approach that was used to determine the sample size from the list of key informants was adopted from Mugenda and Mugenda (1999) recommending a sample of 10 percent of the total population.

Table 3.2: Sampling key informants

Locations	No. of GoK technical staff	10%	No. of stakeholders	10%
Vitengeni	10	1	9	1
Mrima wa Ndege	9	1	8	1
Mwahera	9	1	8	1
Dida	8	1	9	1
Total	36	4	34	4

Source: Kenya National Bureau of Statistics, 2010

Therefore, a sample size of 200 individual respondents using simple random sampling, four government technical staff and four stakeholders' key informants using cluster-sampling technique were drawn for administration of data collection instruments.

3.6 Data collection methods

Questionnaires, interviews, and document analysis were used as the main tools for collection of data. The selection of these instruments was guided by the nature of the data to be collected and the objectives of the study. The researcher was mainly concerned with views, opinions, perceptions, feelings, attitudes, and facts. Such information could be collected using

questionnaire and interview techniques. Document analysis was used to obtain historical data on participation of communities in disaster risk management.

The researcher used semi-structured instruments in data collection. These enabled the researcher to balance between quality and quantity of data collected in the study and on the other hand provide more information on the variable under investigation. The balance between quality and quantity of information would be useful for fuller explanation of the phenomena under investigation. Questionnaires were used since the study would investigate variable that could not be directly observed.

3.7 Validity and Reliability of the Research Instruments

The study involved assessment of data collection instruments prior to use for both validity and reliability. Content validation of the questionnaires was systematically carried out to ensure that the tools were appropriate for the study.

3.7.1 Reliability of the Research Instruments

Reliable research instruments are those, which give consistent results when administered to different sets of respondents (Kothari, 2004). The researcher carried out a test re-test run on a sample of ten respondents in a different geographical area rather than the area of study prior to the commencement of the research and the research instruments were modified to ensure that the responses were stable and consistent across variables. This way errors resulting from administration of the research instruments were minimal. The researcher attained a reliability coefficient of 70 percent that was acceptable.

3.7.2 Validity of the Research Instruments

Validity is the extent to which research results can be accurately interpreted and generalized to other populations (Kothari, 2004). It is the extent to which research instruments measure what they are intended to measure. To establish the validity, the instruments were given to two experts to evaluate the relevance of each item in the instrument to the objectives and rate each item on the scale of very relevant (4), quite relevant (3), somewhat relevant (2) and not relevant (1). Validity was determined using Content Validity Index (C.V.I.), which is the quotient of the number of items scored three and four to the total number of the items in the instruments. C.V.I of 0.78 was obtained which was acceptable.

3.8 Ethical Considerations

High value of knowledge is gained through research, but it is unfair to pursue knowledge at the expense of human dignity. The major ethical problems in this study were privacy and confidentiality of the respondents. The researcher recognized that obtaining a valid sample entailed gaining access to specific lists and files documented in past disaster risk initiatives, which in itself were an infringement of the privacy and confidentiality of the respondents, but it was the only way to construct a sampling frame and generate a valid sample. The respondents were given the freedom to accept or to decline to give information. In order to conduct the study the researcher submitted a written request to the County Commissioner Kilifi County seeking permission to conduct the study with community members in the County. The respondents were provided with a subject information sheet explaining to them the purpose of the study as well as seeking their informed consent.

3.9 Data Analysis Methods

Kothari (2004) describes data analysis as the computation of certain measures along with searching for patterns of relationships that exist among data groups. Descriptive statistics were used analyze the sample characteristics and the variables of the study. Before analysis, data was crosschecked for accuracy and completeness, coded and entered into the computer for analysis. The researcher used content analysis techniques on the data generated by Statistical Package for Social Sciences, SPSS-Version 11.5 to analyze the quantitative data. The results of the analyzed quantitative data were presented by use of tables. Qualitative data collected from key informants was analyzed and presented as confirmation to the quantitative data collected from the community.

3.10 Operational Definition of variables

Variables refer to the parameters that might affect the outcome of the study. The operational definition of variables describes the variables used and how they were measured within the context of the study. Table 3.3 show the operational definition of variables for the study, indicators, measurement and data collection methods that were used.

Table 3.3: Operational Definition of variables

RESEARCH QUESTION	TYPE OF VARIABLE	INDICATORS	MEASURE	LEVEL OF SCALE	RESEARCH DESIGN	DATA COLLECTION METHODS	LEVEL OF ANALYSIS
Did the community play the role of beneficiary identification in drought risk management?	**Independent** Participation in beneficiary identification	Communities	Communities participating	Nominal	Descriptive	Questionnaire	Descriptive
		Individuals	Individuals participating	Ratio	Descriptive	Questionnaire	Descriptive
		Community groups	Vulnerable groups	Ratio	Descriptive	Questionnaire	Descriptive
		Selection criteria	Vulnerability	Ratio	Descriptive	Questionnaire	Descriptive
	Dependent management of drought disaster	Sustainability	Benefits after project closure	Nominal	Descriptive	Questionnaire Key informant	Descriptive

RESEARCH QUESTION	TYPE OF VARIABLE	INDICATORS	MEASURE	LEVEL OF SCALE	RESEARCH DESIGN	DATA COLLECTION METHODS	LEVEL OF ANALYSIS
	risk management interventions						
Did the community play the role of needs identification in drought risk management?	**Independent** Participation in Needs identification	Intervention Prioritization	Satisfaction	Nominal	Descriptive	Questionnaire	Descriptive
		Involvement of community	Involvement	Nominal	Descriptive	Questionnaire	Descriptive
		Needs of the community	needs identified	Ratio	Descriptive	Questionnaire	Descriptive
Did the community play the role of information dissemination in drought risk	**Independent** Information dissemination in the community	Information Sources	Community source	Nominal	Descriptive	Questionnaire Key informants	Descriptive
		Involvement project design	community involved	Ratio	Descriptive	Questionnaire	Descriptive

RESEARCH QUESTION	TYPE OF VARIABLE	INDICATORS	MEASURE	LEVEL OF SCALE	RESEARCH DESIGN	DATA COLLECTION METHODS	LEVEL OF ANALYSIS
management?		Access budgets	community access to budgets	Ratio	Descriptive	Questionnaire	Descriptive
		Access to drought early warning information	community access to drought early warning information	Ratio	Descriptive	Questionnaire	Descriptive
		Access to feedback	community accessing feedback	Ratio	Descriptive	Questionnaire	Descriptive
	Dependent Sustainability investments	vulnerability reduction	Projects contributing vulnerability reduction	Nominal	Descriptive	Questionnaire	Descriptive

RESEARCH QUESTION	TYPE OF VARIABLE	INDICATORS	MEASURE	LEVEL OF SCALE	RESEARCH DESIGN	DATA COLLECTION METHODS	LEVEL OF ANALYSIS
Did the community play ownership and control role in drought risk management?	**Independent** Level of ownership and control of interventions	Involvement in negotiations	community involved in negotiations	Ratio	Descriptive	Questionnaire	Descriptive
		Individuals contributing during negotiations	Individuals contributing during negotiations	Ratio	Descriptive	Questionnaire	Descriptive
		Community contribution in DRR interventions	Community contribution	Ordinal	Descriptive	Questionnaire Focus group Discussion Key informant Interview	Descriptive

RESEARCH QUESTION	TYPE OF VARIABLE	INDICATORS	MEASURE	LEVEL OF SCALE	RESEARCH DESIGN	DATA COLLECTION METHODS	LEVEL OF ANALYSIS
		Community funded interventions	Existence of community funded projects	Ratio	Descriptive	Questionnaire	Descriptive
		Access of project benefits	vulnerable groups Accessing project benefits	Ratio	Descriptive	Questionnaire	Descriptive
	Dependent Sustainability investments	Maintaining initiatives	Communities maintaining initiatives	Ratio	Descriptive	Questionnaire	Descriptive
		Value for money for the interventions	Value of benefits	Nominal	Descriptive	Questionnaire Focus group Discussion	Descriptive

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This section describes the findings of the study. The findings of this study were presented in tables. Inferential statistics Chi-square test for independence was used in hypothesis testing to determine the relationships among the variables.

4.2 Response rate

Table 4.1: Response Rate on Individual Respondents

Questionnaire	Frequency	Percent	Valid Percent	Cumulative Percent
Returned	199	99.5	99.5	99.5
Not returned	1	0.5	0.5	100.0
Total	200	100.0	100.0	

In the study, two hundred questionnaires were administered to the respondents but one was not returned achieving high (99.5 %) response rate from the participants.

4.3 Demographic characteristics

Table 4.2 the demographic findings indicate that male participation in the interviews was high (52%) while that of females was low (48%). Majority of the interviewed respondents were male owing the fact that culturally men were freer than the women were and easily accessible. Most respondents were 20-29 years and majority of respondents had primary education. Most of the respondents (98%) were aware that in Kilifi County there were drought risk reduction

interventions. Water harvesting initiatives (37%) were the most practiced drought disaster risk interventions the area which were implemented by NGOs (84%).

Table 4:2: Summary of demographic profile of respondent's

Respondent characteristics	Parameter	Percent
Gender	Male	52.0
	Female	47.5
Age	10-19 years	12.0
	20-29 years	36.5
	30-39 years	24.5
	40-49 years	15.5
	50-59 years	8.5
	60-69 years	2.0
	70-79 years	0.5
Education level	No Education	22.0
	Primary	57.5
	Secondary	14.5
	Tertiary/University	5.5
Knowledge on Existence of drought disaster risk management interventions	Yes	97.5
	No	1.0
	I don't Know	1.0
DRR interventions	Agriculture	39.0
	Livestock	1.5
	Water Harvesting	36.5
	NRM	12.0
	Income Generation	4.5
	Education	1.0
	Microcredit	1.0
	Food Security	4.0
Implementing agencies	NGO	83.5
	GOK	8.5
	CBO	1.5
	Individuals	6.0

4.4 Community participation and Beneficiary identification in disaster risk management.

This variable sought to investigate the role of community participation in beneficiary identification in disaster risk management in Kilifi County. Role of community participation in identification of beneficiaries was assessed using four key indicators, which were, communities participating in intervention identification, individuals participating in selecting interventions, targeted community groups in the beneficiary selection and criteria of beneficiary selection. Table 4.3 shows that a higher proportion (59%) of the community members was not individually involved in the selection of the interventions.

Table 4.3: Respondents' involvement in the selection of the interventions

Were you involved in the selection of the interventions	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	81	40.7	40.7	40.7
No	118	59.3	59.3	100.0
Total	199	100.0	100.0	

Table 4.4 indicates that most drought disaster risk management interventions targeted women (53%) whereas widowers and men were least targeted by the interventions.

Table 4.4: Beneficiaries targeted by the interventions

Mostly targeted by the interventions	Percent	Valid Percent	Cumulative Percent
Everyone in the community	16.6	16.6	16.6
Youth	3.0	3.0	19.6
Widows	2.5	2.5	22.1
PLWDs	5.5	5.5	27.6
Elderly	6.0	6.0	33.7
Men	0.5	0.5	34.2
Women	63.3	63.3	97.5
Widowers	0.5	0.5	98.0
Other; e.g. Poor, Terminally ill etc	2.0	2.0	100.0
Total	100.0	100.0	

Table 4.5 reveals that most of the community members (47%) were involved in beneficiary identification through their committees. The beneficiary identification exercise was heavily dominated by the dictates of the NGO staff (26%) and the area chiefs' direction (24%), whereas the youth participated the least (1%) in beneficiary selection, which was also confirmed by the key informants and focus group discussions.

Table 4.5: Choice of beneficiaries

Who chose the beneficiaries?	Percent	Valid Percent	Cumulative Percent
NGO staff	25.6	25.6	25.6
The chief	24.1	24.1	49.7
The disabled	1.0	1.0	50.8
All community members	46.7	46.7	97.5
Men	1.0	1.0	98.5
Women	1.0	1.0	99.5
The youth	0.5	0.5	100.0
Total	**100.0**	**100.0**	

Table 4.6 shows that beneficiary selection was based on a number of factors where individual vulnerability was the most applied criteria (57%) while connection with agency staff was the least considered factor.

Table 4.6: Basis of beneficiaries' selection

Beneficiary Selection criteria	Percent	Valid Percent	Cumulative Percent
Gender	9.5	9.5	9.5
Vulnerability	57.3	57.3	66.8
Education	1.5	1.5	68.3
Connection with agency staff	0.5	0.5	68.8
Capacity	6.5	6.5	75.4
Ability	24.6	24.6	100.0
Total	**100.0**	**100.0**	

Table 4.7 shows that majority of the community members (60%) were not individually involved in beneficiary identification and that most of the respondents (68%) were satisfied with beneficiaries' identification process.

Table 4.7: Respondents' Role in participation and satisfaction on beneficiary identification

Respondents' Role in participation and satisfaction on beneficiary identification	Response as a Percentage of total Respondents	
	Yes	No
Did you play a role in beneficiary identification?	39.7	60.3
Were you satisfied with the way the beneficiaries were identified	67.8	32.2

Table 4.8 shows that most of the respondents (57%) felt that projects implemented under drought risk management were giving benefits after the donor agency exit and that community members were maintaining most of the initiatives (70%) themselves.

Table 4.8: Sustainability of drought disaster risk management interventions

Sustainability element	Response as a Percentage of total Respondents		
	Yes	No	I don't know
Are the disaster risk management investments giving benefits after the donor agency exit	56.8	38.7	4.5
Are the community members maintaining the initiatives themselves	70.4	26.6	3.0

Chi-square test statistic to determine the relationship between community's participation and beneficiary identification was computed based on the hypothesis:-

H_0: Community participation does not play a role of identifying beneficiaries in drought risk management in Kilifi County

H_1: Community participation plays a role of identifying beneficiaries in drought risk management in Kilifi County.

Table 4.9: Chi-square test results on the role of community participation based on beneficiary identification.

	Chi-Square Value	Df	Asymp. Sig.
Who chose the beneficiaries	278.231	6	0.000
Did you play a role in beneficiary identification	8.447	1	0.004
Were you satisfied with the way the beneficiaries were identified	25.332	1	0.000

While examining who chose the beneficiaries, whether individuals participated and whether individuals were satisfied with the way beneficiaries identification, Chi square test results in Table 4.9 revealed that there was a significant role of community participation in beneficiary identification in drought risk reduction. At tabulated chi square critical levels, $\chi^2(6, N = 199) = 0.68, p = .995$ and $\chi^2(1, N = 199) = 0.00, p = .995$ the alternative hypothesis was accepted that states that community participation plays a role of identifying beneficiaries in drought risk management in Kilifi County.

4.5 Community participation and needs identification in disaster risk management

This variable sought to investigate the role of community participation in needs identification in disaster risk management in Kilifi County. Role of community participation was assessed using three key indicators, which were, intervention prioritization, involvement of community and needs of the community. Table 4.10 shows that most of the beneficiaries (60%) participated in the selection of the drought risk management in the county.

Table 4.10 beneficiaries participated in the selection of the projects

	Response	Percent	Valid Percent	Cumulative Percent
Did beneficiaries participate in selection of projects	Yes	60.3	60.3	60.3
	I don't know	12.1	12.1	72.4
	No	27.6	27.6	100.0
	Total	100.0	100.0	

Table 4.11 indicates that most of the respondents (39%) felt that the government did not play any role in drought risk management while 27% felt the government played a coordination role in the implementation of drought risk reduction in the county.

Table 4.11: Role of the Government agencies in drought disaster risk management projects

Government role	Frequency	Percent	Cumulative Percent
None	77	38.7	38.7
Coordination	54	27.1	65.8
Training	19	9.5	75.4
Regulatory	46	23.1	98.5
Capacity building	3	1.5	100.0
Total	199	100.0	

Table 4.12 shows that the role played by the NGOs in drought risk management was mostly was implementation (46%) and training (41%).

Table 4.12: Role of the NGOs in drought disaster risk management projects

Roles	Frequency	Percent	Cumulative Percent
None	12	6.0	6.0
Coordination	4	2.0	8.0
Training	82	41.2	49.2
Beneficiary selection	3	1.5	50.8
Capacity building	4	2.0	52.8
Facilitation	2	1.0	53.8
Implementation	92	46.2	100.0
Total	199	100.0	

Table 4.13 indicates that even though most respondents (52%) did not participate in needs identification during the initiation of drought risk management initiatives in the county, most were satisfied (57%) with the way needs were identified.

Table 4.13 Involvement and satisfaction of respondents on needs identification

	Responses in percentage of total Respondents				
	Yes	Somehow	No	Don't know	Total
Did you play a role in needs identification	42.2	2	52.3	3.5	100
Were you satisfied with the way the needs were identified	57.3	7	27.1	8.5	100

Table 4.14 shows that most respondents (46%) indicated that NGOs were mostly involved in needs identification while 29% of the respondents felt that the community was involved in needs identification.

Table 4.14: Who identified the needs of the community during the project initiation?

	Percent	Valid Percent	Cumulative Percent
NGO	45.7	45.7	45.7
Community	29.1	29.1	74.8
Chief	17.6	17.6	92.4
Area MCA	4.5	4.5	96.9
GoK	2.5	2.5	99.4
Area MP	0.5	0.6	100
Total	100	100	

Table 4.15 indicates that 46% of the respondents identified food security as the major need that was being addressed by the interventions whereas social and health needs ranked the least. Food security in the county was heavily rain fed and was highly prone to frequent droughts.

Table 4.15: Community needs to be addressed by the interventions

Community Needs	Frequency	Percent	Valid Percent	Cumulative Percent
Economic	32	16.1	16.1	16.1
Poverty	71	35.7	35.7	51.8
Food security	92	46.2	46.2	98.0
Social	2	1.0	1.0	99.0
Health	2	1.0	1.0	100.0
Total	199	100.0	100.0	

Table 4.16 shows that most of the respondents (57%) indicated that the interventions were able to address the needs of the community, whereas 19% felt that the interventions did not address the needs of the community.

Table 4.16: Interventions addressing the community needs

Did the interventions address the felt needs of the community	Percent	Valid Percent	Cumulative Percent
Yes	57.3	57.3	57.3
Somehow	22.6	22.6	79.9
No	19.1	19.1	99.0
I don't know	1.0	1.0	100.0
Total	100.0	100.0	

Chi-square test statistic to determine the relationship between community's participation and beneficiary identification was computed based on the hypothesis:-

H_0: Community participation does not plays role of community needs in drought risk management in identification in Kilifi County.

H_1: Community participation plays role of community needs identification in drought risk management in in Kilifi County.

Table 4.17: Chi-square test results on community participation based on needs identification.

	Chi-Square value	df	Asymp. Sig.
Were the interventions priority of the community	264.78	3	0.00
Who identified the needs of the community during the project initiation	192.27	5	0.00
What needs were to be addressed by the intervention	166.25	4	0.00
Did the interventions address the felt needs of the community	132.04	3	0.00
Did the beneficiaries participate in the selection of the projects	72.37	2	0.00
What is the role of the Government agencies in these projects	85.70	4	0.00
What was the role of the NGOs	341.90	6	0.00
Did you play a role in needs identification	161.54	3	0.00
Were you satisfied with the way the needs were identified	130.59	3	0.00

The Chi square test results in Table 4.17 revealed that there was significant relationship between community participation and its role on community needs identification in drought risk reduction in Kilifi County. At tabulated chi square critical levels, $\chi^2(6, N = 199) = 0.68, p = .995$; $\chi^2(5, N = 199) = 0.41, p = .995$; $\chi^2(4, N = 199) = 0.21, p = .995$; $\chi^2(3, N = 199) = 0.07, p = .995$ and $\chi^2(2, N = 199) = 0.01, p = .995$ the alternative hypothesis was accepted which states that community participation plays the role of community needs identification in drought risk management in Kilifi County.

4.6 Community participation and information dissemination in disaster risk management

This variable was assessed through five key indicators, which were information sources, community involvement in design of interventions, community access to project budgets, access to drought early warning information and access to feedback. Table 4.18 shows that most community members (52%) depended on the chief in the county for information while a few members of the community depended on local politicians for information.

Table 4.18 Sources of Information about drought risk reduction interventions

Source of Information	Percent	Valid Percent	Cumulative Percent
Friends	30.2	30.2	30.2
NGO staff	12.1	12.1	42.2
The chief	51.8	51.8	94.0
GoK staff	3.5	3.5	97.5
Politician	1.0	1.0	98.5
Public Notices	1.5	1.5	100.0
Total	100.0	100.0	

Table 4.19 shows that most people (17%) depended on chiefs for the provision of information and 63% depended on radio broadcast for information whereas 11% did not have access to drought early warning information.

Table 4.19: Source of drought early warning information in the community

Source of drought early warning information	Percent	Cumulative Percent
Early warning bulletins	4.0	4.0
Elders	4.0	8.0
Chief	16.6	24.6
Neighbor	2.0	26.6
Radio news	62.8	89.4
No one	10.6	100.0
Total	100.0	

Table 4.20 shows most community members (69%) were not initially involved in planning and design of drought risk management interventions, 88% did not have access to the project budgets, 91% did not have knowledge of the budgets, 84% were aware of the benefits of the projects and 57% were targeted by the interventions.

Table 4.20: Community involvement in intervention planning and design

Community involvement at planning and design	Responses as percentage of total Respondents'	
	Yes	No
Were you involved in the intervention planning and design?	31.2	68.8
Do you have access to the projects budget?	11.6	88.4
Did you know the amount of money invested in these interventions?	9.5	90.5
Do you have information about benefits of the interventions?	84.4	15.6
Were you targeted by this intervention?	56.8	43.2

Table 4.21 show that was a community feedback system that was driven by the local administration and was only made active at will. Most community members (56%) could assess drought information feedback whereas the adequacy of the feedback was relatively high (52%).

Table 4.21: Community involvement in negotiations and discussions on disaster risk management interventions.

Have you ever been involved in negotiations and discussions about Disaster risk management interventions in this area?	Frequency	Valid Percent	Cumulative Percent
Yes	71	35.7	35.7
No	118	59.3	95.0
I don't know	10	5.0	100.0
Total	199	100.0	

Table 4.22 shows that most community members (52%) felt that the chief provided feedback on disaster risk, 16% felt that the NGOs were instrumental in feedback provision whereas 13% felt

that there was no feedback given on drought disaster risk management. 6% felt that drought early warning bulletins by various stakeholder provided feedback information which was relevant only to the literate members of the community.

Table 4.22: Drought disaster risk feedback mechanism

Drought Feedback source	Frequency	Valid Percent	Cumulative percent
Early warning bulletins	12	6.0	6.0
Elders	17	8.5	14.6
Chief	103	51.8	66.3
NGO staff	32	16.1	82.4
Radio news	6	3.0	85.4
No one	26	13.1	98.5
Other (Local politicians, church leaders etc)	3	1.5	100.0
Total	199	100.0	

Table 4.23 shows that most community members (56%) indicated that drought early warning information was provided timely and 52% felt that the feedback on drought risk management information was adequate only to those who could access it.

Table 4.23: Drought Early warning feedback characteristics

Feedback characteristics	Responses as percentage of total respondents		
	Yes	No	I don't know
Is the feedback timely?	55.8	21.6	22.6
Is the feedback adequate?	51.8	32.2	16.1

Chi-square test statistic to determine the relationship between community's participation and information dissemination was computed based on the hypothesis:-

H_0: The role of Community participation does not play a role of information dissemination in drought risk management in Kilifi County.

H_1: The role of Community participation plays a role of information dissemination in drought risk management in Kilifi County.

Table 4.24: Chi square test results on the role of community participation based on information dissemination

Test Statistics	Chi-Square	df	Asymp. Sig.
How did the information about intervention get to you? Through	248.65	5	0.00
Were you involved in the intervention planning and design	28.27	1	0.00
Do you have access to the projects budget	117.63	1	0.00
Did you know the amount of money invested in these interventions	130.26	1	0.00
Do you have information about benefits of the interventions	94.32	1	0.00
Were you targeted by this intervention	3.66	1	0.06
If yes in 28,do you know why you were targeted by this intervention	54.91	2	0.00
Do you know why the project came to this area	220.02	2	0.00
Where do you get drought early warning information from	322.58	5	0.00
Does the community in this area have forums to discuss on Disaster risk management	127.65	3	0.00
Who gives feedback about the deliberations of the community on Disaster risk management activities	250.79	6	0.00
Is the feedback timely	45.15	2	0.00
Is the feedback adequate	38.12	2	0.00
Have you ever been involved in negotiations and discussions about Disaster risk management interventions in this area	88.41	2	0.00
During the negotiations were you allowed to make your contributions	75.39	2	0.00

Table 4.24 showing the Chi square test results on a number of factors on the role of community participation based on information dissemination revealed that at $\chi^2(6, N = 199) = 0.68, p = .995$; $\chi^2(5, N = 199) = 0.41, p = .995$; $\chi^2(3, N = 199) = 0.07, p = .995$; $\chi^2(2, N = 199) = 0.01, p = .995$ and $\chi^2(1, N = 199) = 0.00, p = .995$ the alternative hypothesis was accepted which states that community participation plays the role of information dissemination in drought risk management in Kilifi County.

4.7 Community participation and ownership and Community Control in disaster risk management

This variable was assessed through four key indicators, which were ability of interventions to give benefits after donor exit, community members maintaining initiatives, value for money for the interventions and ability of interventions to vulnerability reduction. Table 4.25 shows that communities mostly (95%) contributed labour towards the implementation of interventions, 55% felt that the community funded some activities in drought risk management and there was equitable access (52%) of the project benefits.

Table 4.25: Community participation in control of drought disaster risk management interventions

	Responses as percentage total respondents			
	Yes	No	I don't know	Total
Are the youth involved in Disaster risk management activities in this area?	50.8	48.2	1.0	100
Does the community contribute towards the inventions?	95.0	3.0	2.0	100
Are there any community funded Disaster risk management interventions in this area?	35.7	54.8	9.5	100
Does the vulnerable groups benefit equally as the other members of the community from the interventions?	51.8	40.2	8.0	100

Table 4.26 shows that merry go round organizations were among the heavily funded by the community initiatives. Most people (75%) indicated that communities exerted more emphasis on village loans and saving association unlike the non-financial drought disaster risk management.

Table 4.26: Drought disaster risk management interventions funded by the community

Drought Disaster risk management interventions	Percent	Valid Percent	Cumulative Percent
Water	3.0	3.0	3.0
Agriculture	18.6	18.6	21.6
Education	1.5	1.5	23.1
Livestock	2.0	2.0	25.1
Other e.g. VLSA, Merry go round	74.9	74.9	100.0
Total	100.0	100.0	

Chi-square test statistic to determine the relationship between community's participation and galvanizing community ownership and control of interventions in drought risk management in Kilifi County was computed based on the hypothesis:-

H_0: Community participation does not play a role of galvanizing community ownership and control of interventions in drought risk management in Kilifi County.

H_1: Community participation plays a role of galvanizing community ownership and control of interventions in drought risk management in Kilifi County.

Table 4.27: Chi-square test results on the role of community participation based on community control of interventions.

Test Statistics	Chi-Square	df	Asymp. Sig.
Does the community contribute towards the inventions?	340.29	2	0.000
What did the community contribute towards the interventions?	645.25	4	0.000
Are there any community funded Disaster risk management interventions in this area?	61.55	2	0.000
Which DRR interventions are funded by the community in this area?	394.74	4	0.000
Does the vulnerable groups benefit equally as the other members of the community from the interventions?	61.28	2	0.000
Are all the vulnerable groups represented in implementation of Disaster risk management?	119.47	2	0.000
Are the youth involved in Disaster risk management activities here?	93.78	2	0.000
Are the Disaster risk management investments able to give benefits after the donor agency has wound up?	84.10	2	0.000
Are the community members maintaining the initiatives themselves?	139.37	2	0.000

Table 4.27 showing the Chi square test results on the role of community participation based on galvanizing community ownership and control of interventions revealed that there was significant relationship between variables. At tabulated chi square critical levels, $\chi^2(6, N = 199) = 0.68, p = .995$; $\chi^2(5, N = 199) = 0.41, p = .995$; $\chi^2(4, N = 199) = 0.21, p = .995$; $\chi^2(3, N = 199) = 0.07, p = .995$ and $\chi^2(2, N = 199) = 0.01, p = .995$ the alternative hypothesis was accepted which states that community participation plays a role of galvanizing community ownership and control of interventions in drought risk management in Kilifi County.

Table 4.28: Correlation analysis on community participation based on galvanizing community ownership and control of interventions.

Correlations	Pearson Correlation	Sig. (2-tailed)
Does the community contribute towards the inventions	0.18	0.01
What did the community contribute towards the interventions	-0.05	0.49
Are there any community funded Disaster risk management interventions in this area	0.11	0.13
If yes to 39, which DRR interventions are funded by the community in this area	0.02	0.83
Does the vulnerable groups benefit equally as the other members of the community from the interventions	0.27	0.00
Are all the vulnerable groups represented in implementation of Disaster risk management	0.19	0.01
Are the youth involved in Disaster risk management activities in this area	-0.05	0.44
Are the Disaster risk management investments able to give benefits after the donor agency has wound up	0.07	0.31
Are the community members maintaining the initiatives themselves	0.07	0.31

Table 4.28 indicated that generally there was weak relationship between community participation in galvanizing community ownership and control of drought risk reduction in Kilifi County. Community contribution and youth participation in the control yielded weak negative correlations.

4.8 Focus Groups Discussions Results in Kilifi County.

Respondents confirmed that the beneficiaries of the drought risk reduction projects were selected based on criteria determined by the donors and the implementers of the interventions and the communities were not given the opportunity to discuss and amend the criteria. In most of the cases, the local administration was sensitized beforehand on the requirements by the implementers and lead in influencing the community. Most organizations had predetermined mandates and only targeted a certain cadre of beneficiaries in the community and as a result, community participation was used as a rubber stamp for predetermined beneficiary criteria.

Respondents also confirmed that community needs identification was carried out through assessments, which involved them passively. Some interventions were mooted by the administrative and political leaders, which were not priorities of the community. In fact, drought risk management was used as an instrument of political power, which elicited a lot of political influence among the community members sometimes at the expense of community participation.

Normally chiefs shared information with the community in form of advertisements during public meetings. There was little or no feedback on drought early warning information and community members depended on weather forecast information broadcast through radio, which was very global. It was also confirmed that there were no forums to discuss drought risk reduction at the community level. The respondents confirmed that they were not involved in the actual design and planning of drought risk reduction and were not privy to the project budgets.

The findings confirmed that community participation played a very insignificant role in galvanizing control and ownership of the projects. The FGD pointed out that quite a number of

government and donor-funded projects could not continue giving the same benefits after phases out. A few community-funded projects sprung up in the county but soon met their eventual death when political influence and corruption thwarted them.

Across all focus group discussions, it was clear that community participation did not have clear roles in drought risk management in Kilifi County and in many cases and mostly it was either coerced or implied by practitioners. Citing Kenya National Productivity Agricultural and agribusiness Project (KAPAP) the respondents argued that the project had the best model of community participation but it was not applied efficiently. They confirmed that their administrators had sensitized them on KAPAP community participation model that engages and involves grass root support among the smallholder farmers, respected community leaders, social cultural sages and community technicians.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter the researcher summarizes the findings of the study as well as comparing and contrasting findings realized to those of similar studies. In each case the researcher briefly states the findings and the general implications they have on role of community participation in the management of drought disaster risk management in Kilifi County. At the end of the chapter, the researcher draws conclusions based on the research objectives, states recommendations and highlight areas of further research.

5.2 Summary of findings

This study was conducted with the aim of identifying role of community participation in drought risk management in Kilifi County through four objectives based on community participation roles. Role of community participation in identification of beneficiaries was assessed using four key indicators, which were, communities participation in intervention identification, individual participation in interventions selection, targeted community groups in the beneficiary selection and criteria of beneficiary selection. Based on the responses, most of the community members were not individually involved in the selection of the interventions. Most of the interventions targeted women (63%), youth (3%), widows (3%), PLWDs (6%), elderly persons (6%), men (1%), widowers (1%) and others (2%). Most of the community members (47%) were involved in beneficiary identification through community committees, which were constituted in the presence of the administrators, the NGOs influenced most of the selection of beneficiaries (26%), the area chiefs influenced 24%, the disabled, men, and women influenced 1.0% while the

youth commanded paltry 1% of the beneficiary selection. 57% of the beneficiaries were selected based on vulnerability, 9.5% gender, 1.5% education, 6.5% capacity, 24.6% ability and 0.5% based on individual connection with NGO staff. Although 60.3% of the community members were not involved in beneficiary identification 67.8% were satisfied with the selection criteria. 56.8% of the community members felt drought risk management was sustainably managed because they were beneficial to the communities and the community maintained 70.4% of the initiatives. A Chi-square test statistic revealed that community participation played a significantly role of beneficiary identification in drought risk management in Kilifi County.

Role of community participation in community needs identification in drought risk management assessed through intervention prioritization, involvement of community and needs of the community. The study revealed that 60.3% of the beneficiaries participated in identifying community needs with strong influence of the implementers and 39% indicated that the government did not play a role in needs identification but 27% interventions implementation coordination. The findings indicated that the roles of NGOs were majorly implementation (46%), training (41%) coordination and capacity building each at 2%. Most of the respondents (52%) did not participate in needs identification during the initiation of drought disaster risk management initiatives in the county but most of them (57%) were satisfied with the way needs were identified. Most of the respondents (46%) indicated that NGOs were involved in needs identification while 29% of the respondents felt that the community was involved in needs identification. 46% of the respondents identified food security as the major need that was being addressed by the interventions whereas social and health needs ranked the least. Most respondents (57%) indicated that the interventions were able to address the needs of the

community, whereas 19% felt that the interventions did not address the needs of the community. The Chi square test revealed that there was relationship between community participation based on community needs identification role in drought risk management in Kilifi County. Therefore, the null hypothesis was rejected and the alternative hypothesis that community participation played a role of needs identification in drought risk management in Kilifi County was accepted.

Role of community participation in information dissemination in drought risk reduction was assessed through information sources, community involvement in design of interventions, community access to project budgets, access to drought early warning information and access to feedback. Most of the community members (52%) obtained drought information from the chiefs for information, friends (30%), NGO staff (12%), government staff 4%), public notices (2%) and a few members of the community depended on local politicians. Most of the community members (69%) were not initially involved in planning and design of projects on drought risk management, 89% did not have access to the project budgets, 91% did not have knowledge of the budgets, 84% knew the benefits of the projects and 57% percent were targeted by the interventions. Drought information feedback was 56% whereas the adequacy of the feedback was 52%. Chi square test results on the role of community participation based on information dissemination revealed that there was no significant relationship between variables. Therefore, it was concluded that community participation played a role of information dissemination in drought risk management in Kilifi County.

Analysis of indicators on the role of community participation in galvanizing community control in drought risk reduction indicated that 51% of the respondents felt that youth were involved in the

management of interventions. 95% agreed that communities contributed labour towards the implementation of interventions, 54% felt that the community funded some interventions and 52% felt that was equity in accessing project benefits. Merry go round organizations were among the heavily funded by the community initiatives. Much emphasis (75%) by the community was exerted on community financial institutions involving village loans and saving association unlike the non-financial drought risk reduction. Chi square test results on the role of community participation based on galvanizing community ownership and control of interventions revealed that there was a significant relationship between variables. Therefore, it is concluded that community participation played a role of galvanizing community ownership and control in drought risk management in Kilifi County. Based on these results, the null hypothesis was rejected and concluded that community participation played a role of galvanizing ownership and community control in drought risk management in Kilifi County.

5.3 Discussion

This study sought to determine role of community participation in drought risk management in Kilifi County. The study revealed that majority of the community members were not individually involved in the selection of the interventions and the design of the beneficiaries selection criteria of drought risk management. This confirms what Gladwell (2000) termed as an idea in good currency that community participation in beneficiary identification was by name but not practice and the communities were only involved in implementing a pre-set criteria. While Shileche (2012) emphasizes that effective disaster risk management was because of effective community participation role in identifying beneficiaries, interests, expectations and influence, the study reveals that there was predetermined criteria for beneficiary identification and the communities passively participated in effecting it. The study confirmed the argument by World Bank, FAO &

IFAD (2009) that drought disaster struck communities in their local setting and hence commanded a lion's share as planners, implementers, partners, and leaders of disaster risk management built on the interests of the most vulnerable community members as most of the interventions targeted women and other vulnerable groups. However, community members were involved in beneficiary identification through community committees constituted in the presence of the administrators where the NGOs and the chiefs influenced the selection of beneficiaries constricting community participation role. Although most of the beneficiaries targeted were the most vulnerable people, they were not practically involved in design of the identification and selection criteria. Most of the community members were not involved in beneficiary identification but most of them were satisfied with the selection criteria. A Chi-square test statistic revealed that community participation played a role of beneficiary identification in drought risk management interventions in Kilifi County confirming the claim made by ABS (2004) that coerced community participation yielded faster results which falls in the lowest rung of the Arnstein's ladder of therapy and manipulation in community participation.

The study revealed domination of community needs identification by the influence from external experts and professionals although done in the presence of the community members. IISD (2007) argues that it was at the community level where disaster effects were felt most and community participation would play a very important role in needs identification. The results of the study confirmed the observation by IFRC (2011) that the community would undertake needs identification and goal determination contributing to safe and resilient community. The findings revealed that the project implementers who were majorly NGOs undertook the role of criteria determination for needs identification, implementation, and training of the communities, which

defies the Hyogo framework for action, which acknowledged both communities and local authorities had a role to play in needs identification for successful disaster risk management. Scott (2001) explains that community power involves deep acceptance of one another, complete inclusiveness and self-awareness which enables the community to understand itself better in terms of the circumstances that it finds itself in. World Bank (2010) confirms that the community offers each member the safety of knowing that they are accepted for whom they are and bring forth the best person can offer because they know their gifts of time, talent and ideas are acceptable. The study indicated that although the donor package in many cases did not require community contribution and assistance in technical description of needs, effective drought risk management needs profiling of the capacities of the communities. Most of the interventions were able to address the needs of the community and the youth were engaged in interventions which had monetary gains confirming the claim by Kenya (2007) that most of the youths were unemployed. The study revealed that there was significant relationship between community participation based on community needs identification and confirmed that there was a role of community participation in needs identification in drought risk management.

The establishment of disaster information system characterizes effective drought risk management, which is sensitive to the needs of the community. The study revealed that most of the community depended on the chiefs for information, not initially involved in planning and design of drought risk reduction, did not have access to the project budgets, did not have knowledge of the budgets and knew the benefits of the projects. The study revealed that most of the community received drought information feedback that was inadequate and untimely and confirmed that community participation would have a role of information dissemination in the

management of drought disaster risk management interventions only if the information was available at the community level.

Adato (2005) argues that instrumentalist foundation involving recognition that top-down, technocratic forms of development imposed on diverse local realities often resulted in project failure. The study revealed that control of interventions was dictated from above and the community were passive recipients. The youth were least involved in the control of drought disaster risk management interventions, the communities contributed labour towards the implementation of interventions and few interventions were funded by the community. Abrams (1971) argues that local community should be given an active role in the control of their interventions in order to own them and proposes that it were rational to give control of affairs and decisions to the people most affected by them. Communities own initiatives were heavily funded by the community where more emphasis was made in village loans and savings association unlike the non-financial drought risk reduction. The study revealed that there was a weak role of community participation in control of drought risk reduction.

5.4 Conclusion

Role of community participation in drought risk management is very important to the success and sustainability of the initiatives. The people and the community organizations inhabiting a particular local setup must be involved in considering their interests, appreciating the damages and the shocks caused by drought. Community members should be individually and collectively involved in making decisions and setting up the criteria for beneficiary selection in hazard profile analysis. During the assessments and data collection exercises, community members should be involved for them to provide key information that would aid project design. Effective disaster risk

management was because of effective community participation role in recognizing the existing variations in endowments, interests, expectations and influence of individuals and groups in the community. In the dispensation of the new constitution in Kenya, which holds the supremacy of the people paramount where, predetermined criteria for beneficiary identification that involve communities passively was unconstitutional. Drought disaster struck communities in their local setting and the communities commanded a lion's share as planners, implementers, partners and leaders of disaster risk management built on the interests of the most vulnerable individuals and groups in the community. Community committees play a significant role in organizing and interpreting the language and concepts of the experts during the design and planning of drought risk reduction therefore proper and democratically constituted community units would assist all stakeholders in all stages of the initiatives. Community participation was critical in needs identification because it was at the community level where disaster effects were felt the most and needs identification and the community would undertake goal determination contributing to safe and resilient community. Project implementers should facilitate communities and become learners of change as stipulated by the Hyogo framework for action. Community participation has power that involves deep acceptance of one another, complete inclusiveness and self-awareness. This enables the community to understand itself better in terms of the circumstances affecting their livelihoods and offers each member the safety of knowing that they are accepted for whom they are and bring forth the best they can offer because they know their gifts of time, talent and ideas. Donors should redesign their project packages to include community contribution of ideas, materials and assistance leading to profiling of community capacities. The establishment of disaster information system characterizes effective drought risk management, which is sensitive to the needs of the community that adequately gives information and feedback

to the community. It was plausible that drought risk reduction usurped huge budgets, which were not accessible by the community. Local community should play an active role in the control of their interventions since it was rational to give control of affairs and decisions to the people most affected by them. Communities own initiatives were heavily funded by the community where more emphasis was made in village loans and savings association unlike the non-financial drought disaster risk management because to was appalling and had a quick turnaround time to the community.

5.5 Recommendations

This study realized important findings on role of community participation that have a lot of influence on drought risk management and community resilience to drought. Based on the findings drawn, the following recommendations were given for improvement of the situations realized through this study.

The community, planners, professionals and the implementers of drought disaster risk management need to realize and rise to the awakening that drought affected people have the learning and the strength to develop coping and survivability capacities. The county and national governments should play a leading role in coordinating drought risk reduction to ensure that the basic fundamental rights of the citizens are guarded and upheld. The government agencies need to take a leading role in civic education and develop a common public engagement framework that recognizes the role of community participation to synergize the ambitions of the development partners to make them fruitful.

There is a need to enhance community communication and feedback mechanism in the county. The county information and communication infrastructure was wanting and the available channels of communication do not effectively deliver information to the communities. The

county government needs to encourage public-private partnership in establishing local media station that effectively gives information to the communities. There is also a need for the development agencies to scale up extension services in the area through community based technical assistants to promote uptake of new drought risk reduction technologies to elevate community livelihood productivity beyond subsistence.

There is a need to educate men and youth to get involved in drought risk reduction without leaving only women to participate. Developmental agencies and the government need to create awareness among the male population on the importance of participating in drought risk reduction.

In order to sustain the efforts so far realized in community participation it is necessary to improve community drought early warning system, as it was necessary for the success of the initiatives in the county. There is need to set up an integrated drought early warning stations fully furnished with facilities so that many people can get drought warning information early, timely and adequately. Development partners need to assist the county to form community committees on disaster risk management at the sub counties and train them adequately to become community drivers of drought disaster risk management planning and management.

5.6 Suggestions for future research

This study is of its kind in contributing to the body of knowledge on drought risk reduction. It is evident from the study that it is necessary to conduct further studies to identify the role of devolution on drought risk reduction. Similarly, this study was more of descriptive in nature; further studies should deeply evaluate the metrics of successful community participation on disaster risk management. Equally, based on the findings of this study, it may be necessary to evaluate the effects of indigenous drought early warning systems on drought risk management.

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APPENDICES

Appendix A: Informed Consent Letter

"**Role of community participation in the management of Drought Disaster risk management interventions in Kilifi county Kenya."**

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You are being requested to take part in this research study. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please take time to listen and kindly feel free to ask the researcher if there is anything that is not clear to you.
The purpose of this study is purely academic and all the information you may give will be treated with the utmost confidentiality. Your expected time commitment for this study is thirty minutes of question and answer. The risks of this study are minimal. The questions in the survey are not intended to upset any respondents. Just in case you feel compromised, feel free to terminate the interview.
There will be no direct benefit to you for your participation in this study. However, It is hoped that the information obtained from this study may help inform Kilifi County Government, National Government, NGOs and other stakeholders on the role of community participation in the mplanning and management of Drought disaster risk management in Sokoke ward of Ganze Sub County.
Should you have any questions about the research or any related matters, please contact the researcher on +254 735 253 651 . Your participation in this study will be voluntary and no monetary compensation will be advanced to you for your participation in this study. You are at liberty to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form.

Respondent's declaration:
By signing this consent form, I confirm that I have understood the information and have had the opportunity to ask questions. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and without cost. I voluntarily agree to take part in this study.

Signature _____ Date _____
Thank you.

QUESTIONNAIRE

Serial Number

Appendix B: Individual Questionnaire

.

Interview Date		Name of enumerator	
Name of respondent			
Location		Sub-location	

			Enter code
A. Background information			
1. Marital status	1. Male 2. Female		[ ]
2. Age	1. 10-19 yrs 2. 20-29 yrs 3. 30-39 yrs 4. 40-49yrs	5. 50-59yrs 6. 60-69yrs 7. 70-79yrs 8. 80+	[ ]
3. Highest level of education	1. No education 2. Primary	3. Secondary **4.** Tertiary	[ ]
4. Are there drought disaster risk management interventions in this area?	1. Yes 2. No	3. I don't know	[ ]
5. Give three drought disaster risk management interventions in this area	1. Agriculture 2. Livestock 3. Water harvesting 4. NRM 5. Income generation	2. Capacity building 3. Education 4. Agro-marketing 5. Microcredit 6. Food security	[ ] [ ] [ ] [ ]
6. Which are the implementing agencies	1. NGO 2. GoK	3. CBO 4. Individuals	[ ]
B. Beneficiary Identification Role			
7. Who identified the need for the interventions?	1. NGO 2. GoK 3. Area MCA 4. Religious leaders	5. CBO 6. Community 7. Chief 8. Area MP	[ ] [ ]
8. Were you involved in the selection of the interventions?	1. Yes	2. No	[ ]

9. Who is mostly targeted by the intervention (s)	1. Everyone in the community 2. Youth 3. Widows 4. PLWDs 5. Elderly 6. Children 7. Schools 8. Health facilities	10. Women 11. PLWAs 12. Widowers 13. Girls 14. Boys 15. Other; specify _____	[ ]
10. Who chose the beneficiaries?	1. NGO staff 2. The chief 3. The disabled 4. All community members	5. Men 6. Women 7. The youth 8. Widows 9. children	[ ]
11. The beneficiaries selected based on what?	1. Gender 2. Vulnerability 3. Education	4. Connection with agency staff 5. Capacity 6. Ability	[ ]
12. Did you play a role in beneficiary identification	1. Yes	2. No	[ ]
13. Were you satisfied with the way the beneficiaries were identified?	1. Yes	2. No	[ ]
C. Needs identification Role			
14. Were the interventions priority of the community	1. Yes 2. Some how	3. No 4. I don't know	[ ]
15. Who identified the needs of the community during the project initiation?	1. NGO 2. GoK 3. Area MCA 4. Religious leaders	5. CBO 6. Community 7. Chief 8. Area MP	[ ]
16. What needs were to be addressed by the intervention?	1. Economic 2. Poverty 3. Food security	4. Social 5. Political and governance 6. Health	[ ]
17. Did the interventions address the felt needs of the community	1. Yes 2. Somehow	3. No. 4. I don't Know	[ ]
18. Who were the priority beneficiaries of the Disaster risk management interventions	1. Men 2. Women 3. Children 4. Pastoralists 5. Farmers 6. Girls	7. Youth 8. PLWDs 9. Widows 10. PLWAs 11. Business people 12. Boys	[ ]
19. Did the beneficiaries participate in selection of the projects?	1. Yes 2. I don't Know	3. No	[ ]
20. What was the role of the Government agencies in these projects?	1. None 2. Coordination 3. Training	4. Regulatory 5. Capacity building 6. Criticism	[ ]

21. What was the role of the (NGOs)?	1. None 2. Coordination 3. Training 4. Beneficiary selection	5. Regulatory 6. Capacity building 7. Criticism 8. Facilitation 9. Implementation	**[ ]**
22. Did you play a role in needs identification?	1. Yes 2. Some how	3. No 4. I don't know	**[ ]**
23. Were you satisfied with the way the needs were identified?	1. Yes 2. Some how	3. No 4. I don't know	**[ ]**
D. Information Dissemination Role			
24. How did the information about interventions get to you? Through;	1. Friends 2. NGO staff 3. The chief	4. GoK staff 5. Politician 6. Notices	[ ]
25. Were you involved in the interventions planning and design?	1. Yes	2. No	[ ]
26. Do you have access to the project's budgets	1. Yes	2. No	[ ]
27. Did you know the amount of money invested in these interventions?	1. Yes	2. No	**[ ]**
28. Do you have information about benefits of the interventions	1. Yes	2. No	[ ]
29. Were you targeted by this intervention?	1. Yes	2. No	
30. If yes in 6, do you know why you were targeted by this intervention?	1. Yes 2. No	3. N/A	[ ]
31. Do you know why the project came to this area?	1. Yes	1. No	[ ]
32. Where do you get drought early warning information from?	1. Early warning bulletin 2. Elders 3. Chief 4. NGO staff 5. Neighbor	6. Radio news 7. TV news 8. Newspapers 9. I don't get information	[ ]
33. Does the community in this area have forums to discuss on Disaster risk management?	1. Yes 2. No	3. I don't know	[ ]
34. Who gives Feedback about the deliberations of the community on Disaster risk	1. Early warning bulletin 2. Elders 3. Chief	6. Radio news 7. TV news 8. Newspapers	[ ]

management activities?	4. NGO staff 5. Neighbor	9. No one	
35. Is the feedback timely?	1. Yes	2. No 3. I don't know	[ ]
36. Is the feedback adequate?	1. Yes	2. No 3. I don't know	**[ ]**
E. Ownership and Control Role			
37. Have you ever been involved in negotiations and discussions about Disaster risk management interventions in this area?	1. Yes	2. No 3. I don't know	[ ]
38. During the negotiations were you allowed to make your contributions	1. Yes	2. No 3. I don't know	[ ]
39. For Disaster risk management interventions to come in this area, who proposes them?	1. Community 2. Chief 3. Government staff	4. Elders 5. NGO staff 6. Politicians 7. I don't know.	[ ]
40. Are you involved in the planning and implementation of this project?	1. Yes	2. No	[ ]
41. Does the community contribute towards the interventions?	1. Yes	2. No 3. I don't know	[ ]
42. What did the community contribute towards the interventions	1. Labour 2. Funds 3. Trainings	4. Materials 5. Nothing 6. Information	**[ ]**
43. Are there any community funded Disaster risk management interventions in this area?	1. Yes	2. No 3. I don't know	[ ]
44. If Yes to 39, which DRR interventions are funded by the community in this area?	1. Water 2. Agriculture 3. Health	4. Education 5. Livestock 6. Other	[ ]
45. Does the vulnerable groups benefit equally as the other members of the community from the interventions?	1. Yes	2. No 3. I don't know	[ ]
46. Are all the vulnerable groups represented in	1. Yes	2. No 3. I don't know	[ ]

implementation of Disaster risk management		
47. Are the youth involved in Disaster risk management activities in this area?	1. Yes 2. No 3. I don't know	[ ]
F. Impact of Community participation in Disaster risk management		
48. Are the Disaster risk management investments able to give benefits after the donor agency has wound up?	1. Yes 2. No 3. I don't know	[ ]
49. Are the community members maintaining the initiatives themselves?	1. Yes 2. No 3. I don't know	[ ]
50. Is there value for money in these projects?	1. Yes 2. No 3. I don't know	[ ]
51. Have these projects contributed to Poverty reduction in this area?	1. Yes 2. No 3. I don't know	[ ]
52. In your own opinion the level of vulnerability is lower or higher for the past 10 years?	1. Yes 2. No 3. I don't know	[ ]

Thank you for your time!

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