

**DETERMINANTS OF SUSTAINABILITY OF DROUGHT SUPPORT PROJECTS
AMONG PASTORALISTS IN MAGINALISED AREAS: A CASE OF ISIOLO COUNTY,
KENYA**

JARSO IBRAHIM GOLLOLE

**A Research Project Report Submitted in Partial Fulfillment of the Requirements for the
Award of Degree of Master of Arts in Project Planning and Management, Of the
University of Nairobi**

2020

DECLARATION

I declare that this research project is a distinct scholarly work which has not been presented in this or any other institution for any award.

Signature: 

Date: 03/09/2020

JARSO IBRAHIM GOLLOLE

L50/7609/2017

This research project has been presented for examination with my approval as the university supervisor.

Signature: 

Date: 03/09/2020

Prof. Christopher M. Gakuu
Associate Dean, Postgraduate programs,
School of Continuing and Distance Education,
University of Nairobi.

DEDICATION

This research project is dedicated to all pastoralists who struggle in tough environments with changing climate to cope with and sustain their families as well as the project implementors in the arid and Semi-Arid Areas of Kenya for their resilience and determination to improve lives and livelihood of pastoralists beside the hardship they go through risking their lives to improve lives of others.

It is my hope and hope of pastoralists that one day they will realize their potential, their livelihood understood by government and they attain utmost desired meaningful development.

ACKNOWLEDGEMENT

I wish to register my acknowledgement to key people who have contributed to this research project either directly or indirectly. Firstly, I thank my supervisor, Prof. Christopher Gakuo for his utmost professional guidance in designing the topic and reviewing the development of this research project. His advice helped me in understanding research in project planning and management lenses.

Secondly, I wish to appreciate my lecturers in the Masters course at Isiolo Extra mural Center for diligently empowering me with knowledge and skills in project management. Their teachings in course work has enabled me to gain a better understanding of various concepts and principles of project planning and management from both theoretical and functional perspectives. Specifically, Dr. Kinoti whom I learnt a lot from.

I also wish to appreciate all the respondents who have accepted to participate in this research project. They include the Management Staff of REGAL-AG Project, Beneficiaries, Community Leaders and Government Officials. I believe their inputs will be enormous especially in providing relevant data useful for the study.

Lastly, I acknowledge my research assistants with whom I worked closely in data collection and data entry.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
LIST OF TABLES	ix
LIST OF FIGURES	x
ABBREVIATIONS AND ACRONYMS	xi
ABSTRACT	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of The Study	1
1.2. Statement of the Problem.....	5
1.3. Purpose of the Study.....	5
1.4. Objectives of the Study.....	6
1.5 Research Questions	6
1.6 Significance of the Study.....	6
1.7 Limitation of the Study	7
1.8 Assumption of the Study	7
1.9 Delimitation of the Study.....	8
1.10 Definition of Significant Terms Used in the Study	8
1.11 Organization of the Study	8
CHAPTER TWO	10
LITERATURE REVIEW	10
2.1 Introduction.....	10

2.2 Sustainability of Drought Support Projects	10
2.3 Resource Availability and Sustainability of Drought Support Projects	12
2.4 Institutional linkages and Sustainability of Drought Support Projects	13
2.6 Community Participation and Sustainability of Drought Support Projects.....	15
2.7 Project progress reporting and Sustainability of Drought Support Projects.....	18
2.8 Theoretical Framework.....	19
2.8.1 Policy Theory	19
2.8.2 The Resource Based View Theory	20
2.8.3 Program Theory.....	21
2.8.4 Theory of Hierarchy of Needs.....	22
2.9 Conceptual Framework.....	23
2.10 Summary of the Literature	24
2.11 Research Gaps	25
CHAPTER THREE	28
RESEARCH METHODOLOGY	28
3.1 Introduction.....	28
3.2 Research Study	28
3.3 Target Population.....	28
3.4 Sample Size and Sampling Procedure	29
3.4.1 Sample Size	29
3.4.2 Sampling Procedures	30
3.5 Research Instruments.....	30
3.5.1 Pilot Testing	30
3.5.2 Validity of Research Instruments	31
3.5.3 Reliability of Research Instruments.....	31

3.6 Data Collection Procedures.....	32
3.7 Data Analysis Techniques	32
3.8 Ethical Considerations	33
3.9 Operationalization of Variables	35
CHAPTER FOUR.....	37
DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS.....	37
4.1 Introduction.....	37
4.1.1 Questionnaire Return Rate	37
4.2 Background Information.....	37
4.2.1 Gender of the Respondents	37
4.2.2 Respondents’ Level of Education.....	38
4.2.3 Respondents’ Occupation	38
4.2.4 Respondents’ Age Bracket.....	39
4.3 Resource Availability	39
4.4 Institutional Linkages	41
4.5 Community Participation.....	42
4.6 Project Progress Reporting	44
4.7 Sustainability of Drought Support Project in Isiolo County.....	46
4.8 Multiple Regression Analysis	46
CHAPTER FIVE.....	49
SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS	49
5.1 Introduction.....	49
5.2 Summary of the Findings.....	49
5.3 Discussion of the Findings.....	51

5.3.1 Resource Availability and Sustainability of Drought Support Project in Isiolo County	51
5.3.2 Institutional Linkages and Sustainability of Drought Support Project in Isiolo County	51
5.3.3 Community Participation and Sustainability of Drought Support Project in Isiolo County	52
5.3.4 Project Progress Reporting and Sustainability of Drought Support Project in Isiolo County	52
5.4 Conclusions	53
5.5 Recommendations	54
5.6 Recommendation for Further Studies	54
REFERENCES.....	56
APPENDICES.....	60
Appendix I: Letter of Transmittal	60
Appendix II: Research Questionnaire	61

LIST OF TABLES

Table 2. 1: Research Gaps	25
Table 3. 1: Projects and Number of Project Managers	28
Table 3. 2: Target Population	28
Table 3. 3: The Sampling Matrix	30
Table 3. 4: Operationalization of Variables	35
Table 4.1: Questionnaire Return Rate.....	37
Table 4. 2: Respondent’s Gender.....	37
Table 4. 3: Respondent’s Level of Education.....	38
Table 4. 4: Respondents’ Occupation	38
Table 4. 5: Respondents’ Age Bracket.....	39
Table 4. 6: Influence of Resource Availability on Sustainability of Drought Support Project	39
Table 4. 7: Influence of Aspects of Resource Availability on Sustainability of Drought Support Project.....	40
Table 4. 8: Influence of Institutional Linkages on Sustainability of Drought Support Project	41
Table 4. 9: Influence of Aspects of Institutional Linkages on Sustainability of Drought Support Project.....	42
Table 4. 10: Influence of Community Participation on Sustainability of Drought Support Project	43
Table 4. 11: Influence of Aspects of Community Participation on Sustainability of Drought Support Project	43
Table 4. 12: Influence of Project Progress Reporting on Sustainability of Drought Support Project.....	44
Table 4. 13: Influence of Aspects of Project Progress Reporting on Sustainability of Drought Support Project	45
Table 4. 14: Trend of Aspects of Sustainability of Drought Support Project in Isiolo County	46
Table 4. 15: Model Summary	46
Table 4. 16: Analysis of Variance.....	47
Table 4. 17: Regression Coefficients	47

LIST OF FIGURES

Figure 1: Conceptual Framework	24
--------------------------------------	----

ABBREVIATIONS AND ACRONYMS

ASALs	Arid and Semi-Arid Lands
CPPs	Country Programming Papers
DFID	Department for International Development
GoK	Government of Kenya
IGAD	Intergovernmental Authority on Development
KFSSG	Kenya Food Security Steering Group
KNBS	Kenya National Bureau of Statistics
LDCs	Less Developed Countries
M&E	Project monitoring and evaluation
NDMA	National Drought Management Authority
OECD	Organization for Economic Cooperation and Development
REGAL-AG	Resilience and Economic Growth in the Arid Lands - Accelerated Growth
RoK	Republic of Kenya
RPP	Regional Programming Paper
SDGs	Sustainable Development Goals
USAID	United States Agency for International Development
WASREB	Water Services Regulatory Board
WHO	World Health Organization

ABSTRACT

This study examined the determinants of sustainability of pastoralist's drought support projects in Isiolo County putting into emphasis the case of REGAL-AG Project in Isiolo County, Kenya. Specifically, the study sought to determine the influence of resource availability, institutional linkages, community participation and project progress reporting on sustainability of Drought support project in Isiolo County. The study was based on the policy theory, the resource-based view theory, program theory and theory of hierarchy of needs. The researcher in this study applied descriptive survey research method. The target population included the Management staff of REGAL-AG in Isiolo including ACDI VOCA, Mercy Corps, World Food Programme (WFP), Merti Integrated Development Program (MID-P), relevant Government Ministries and the drought support project beneficiaries committee members. A sample of 99 out of 312 was established using the Nassiuma (2000) formula. Stratified and simple random sampling technique were used in this study. The study collected both primary and secondary data. The study used questionnaires to collect data. To enable the researcher, understand the data collected and assign meaning to the resulting statistics, an analysis of data was done to summarize the essential features and relationships of data to generalize and determine patterns of behaviour and outcomes. The completed questionnaires were reviewed for completeness and consistency before responses can be processed. Qualitative and quantitative techniques were used in the data analysis. Content analysis was done, while descriptive analysis such as mean, frequencies and percentages were used to analyse the data. Regression analysis using multiple linear regression model was employed to establish the significance of the independent variables on the dependent variable. Tables were used for data presentation. The research found that resources were not adequate undertaking the projects. The study also found that there are opportunities for learning and catalyzing commercial investments. The research established that the land where the project is being undertaken is provided by the community. The research also found that monitoring systems designed to ensure effectiveness. The study concluded that resource availability had the greatest influence on the sustainability of drought support project in Isiolo County, followed by community participation, then project progress reporting while institutional linkages had the least influence to the sustainability of drought support project in Isiolo County. The study recommends that all community members should be involved at all stages of project cycle so as to make the community to have a wide perspective of the as well as its importance and hence ownership. All management committees for drought support projects should develop bi-laws and constitutions governing such projects. Such constitutions will help in ensuring that management of such projects steer away from avoidable conflicts. This will give room for effective oversight by government bodies that will enhance effective management.

CHAPTER ONE

INTRODUCTION

1.1 Background of The Study

Droughts are complex processes involving the combination of multiple stresses that build vulnerability -often unevenly- over time and space. Drought emergencies concern not so much the quantity of rainfall as its distribution, and the lack of measures to store and manage it effectively. More fundamentally, these emergencies are a product of deeper vulnerabilities affecting people's livelihoods and well-being, the nature of which differs across the ASALs. Vulnerability to drought is recognized to be the product of inequalities in access to public goods and services (King-Okumu, 2019).

Droughts are not discrete events that strike at a given time and then disappear. Between 1975 and 2011 there were at least ten serious droughts in Northern Kenya, three of them in the last ten years (2008-9, 2010-11 and 2016-17). The number of people affected by repeated drought emergencies appears to be rising. According to the inter-agency Kenya Food Security Steering Group (KFSSG) an estimated 4.5 million people were affected in 2011, 3.8 million in arid and semi-arid lands (ASALs) and 700,000 in non-ASAL areas. The extent to which the rise in these numbers is attributable to the deepening vulnerability of drought-affected populations whose assets are progressively reduced each time a drought hits them, or to the growing severity of drought conditions, is a subject of debate (Government of Kenya, 2014). This study investigates factors influencing success of drought support projects in arid and semi-arid lands in Kenya.

Globally, flood and drought represent the most numerous and costly natural hazards in Canada. Examinations of historic records and future projections reveal that Canada has experienced changes in the magnitude, frequency, timing, and duration of floods and drought in the past century and that changes are expected to continue due to the impacts of climate change. As such, scientists, managers, and policy makers generally recognize that the assumption of stationary no longer remains past hydrologic conditions cannot be used on their own to represent and plan for the future. The impacts of climate change on flood and drought are highly complex, yet important to understand so decision makers and policy makers across Canadian jurisdictions can better plan and prepare for these changes.

in parts of Southwest Asia, rangelands have been reduced in size, in part because the widespread use of irrigation technologies, both in traditional and more recently in hi-tech forms, has allowed agriculture to colonize much larger regions of the rangelands. As a result, what rangelands remain are considerably more arid than those exploited by pastoralists in Sub-Saharan Africa. Indeed, drought conditions may be said to obtain most of the year. Responses to this have long since been developed through drought support projects, both in terms of species and the movement of resources. Today pastoralists throughout the North Africa and Southwest Asia have relatively sophisticated trucking systems (of water, feed resources and the animals themselves) that allow them to exploit areas that in Sub-Saharan Africa would be unavailable (Gerstenfeld, 2011). This is less true for pastoralists in the High Atlas and desertic steppes in Morocco, where constraints are similar to those in Sub-Saharan Africa.

Zimbabwe is a country that was once recognized as the bread basket of southern Africa (FAO, 2009; Miles, 2010). That status has however been lost over the years since the late 1990s and the country is now a net importer of staple grains in order to boost food security for the poor rural communities (Miles, 2010). It also now applies for urban households, many whom are food insecure and unemployed. The situation worsened after the land reform programme as many government support programs for SHFs have been discontinued due to lack of funds (Ministry of Agriculture, 2012). Therefore, yields dwindled and the agriculture is afflicted by droughts. The Zimbabwe Vulnerability Assessment Committee (ZIMVAC) advised that in 2012 the situation has worsened as compared to 2011 as the number of people in need of food aid actually doubled from 600 000 to about 1.2 million as a result of crop failures (Ministry of Agriculture, 2012). To help this situation and help the poor SHF in Zimbabwe, non-governmental organizations (NGOs) came up with a project to introduce more sustainable farming methods.

An estimated 12 million people live in Kenya's marginalized areas, which make up 75 to 85 percent of Kenya's land surface (GoK, 2014). Over the years, the 29 ASAL counties have faced recurrent drought, human conflict, and significant social, economic, and political marginalization. ASAL counties often record the lowest Human Development Indices in the country, and account for the majority of Kenyans projected to face food insecurity over the years. Livelihoods typically revolve around livestock keeping in a system known as pastoralism. Kenya's ASAL contribute to 70 percent of the total livestock herd (Imunya, 2014), 16 percent of

total milk production, 60 to 70 percent of the red meat consumed in the country, and over 20 percent to the gross domestic product. Resilience and Economic Growth in the Arid Lands - Accelerated Growth (REGAL-AG) was a six-year (2012–2018) Feed the Future funded project which is the focus of this study worked on building a more inclusive and competitive livestock value chain that increases pastoralists' resilience and stimulates economic growth in Kenya's arid lands in the face of persistent drought.

In the year 2015, world leaders from developed and developing countries, development partners and private sector partners gathered in Paris, France and unanimously adopted 17 Sustainable Development Goals (SDGs) with the slogan 'the future we want'. Climatic Action was goal number 13 which needed the governments all over the world to take action to combat climate change and its impact. Reduced rainfall as well as its erratic nature in the last decade complicate pasture and water availability in marginal pastoral areas (Kandler, Zimmermann & McAdams, 2014). Further, the pastoral communities have been affected by cyclic drought that had reduced herd size recovery and their potential to access food and other basic needs and no poverty and zero hunger is goal number 1 and 2 in the SDGs. For the purpose of this study, Resilience and Economic Growth in the Arid Lands - Accelerated Growth (REGAL-AG) was a six-year, 2012 – 2018, \$24.9 million Feed the Future funded project. REGAL-AG contributed to USAID's strategy of improving social stability and increasing economic growth in the arid lands, by building a more inclusive and competitive livestock value chain that increases pastoralists' resilience and stimulates economic growth in Kenya's arid land. REGAL-AG's goal was to build a more inclusive and competitive livestock value chain that increases pastoralists' resilience to drought and stimulates economic growth through: improving the enabling environment for livestock value chain development; improved market linkages, improved livestock productivity, expanding existing and develop new service and input markets and expanding existing and develop new livestock-related economic opportunities (Kanyanya, 2014).

The theory of change of REGAL-AG assumes that if economic growth and social stability is to be achieved in Isiolo County and beyond, then there has to be: increased competitiveness and inclusiveness in livestock related value chains in the arid lands; improved resilience of pastoral and Agro-pastoral communities to drought; and, catalyzed stakeholders within the livestock value chains who recognize and invest in a common vision that leads to change and collaborative

action (Gerstenfeld, 2011). This study investigated the success of the project in establishing competitive and inclusive livestock value chains that results in social stability and economic growth and improved for communities in arid and semi-arid lands.

If competitiveness and inclusiveness in the livestock-related value chain is to be realized, then behavior change among market actors—both women and men—must occur along the livestock value chain. This in turn will drive up investment opportunities and eliminate livestock value chain constraints, as well as mitigate against risks through building the capacity of Change Agents within pastoral communities. Underpinning REGAL-AG's approach is an understanding that livestock value chain competitiveness on its own is not sufficient to benefit all pastoralists, many of whom are not typical value chain producers, because they do not produce for the market. Rather, key to unlocking the benefits of forming a strengthened livestock value chains for pastoral producers lies in boosting the development of a more inclusive and resilient livestock market system. REGAL-AG's strategy brought together innovative approaches to pilot and scale up new business models, and to strengthen not only the competitiveness, but also the inclusiveness of livestock value chains for pastoralists—including poorer pastoralists (Karanja, 2014). By leveraging a market systems development approach, REGAL-AG designed activities that encompassed engaging communities and pastoralists as a first step of the project's activities of upgrading livestock markets, implementing market improvements at the community level, and buying-down the risk for potential investors. This study examined the extent to which the innovative approaches can foster resilience to drought(Colebatch, 2013).

The study focused on Isiolo County. This is because Isiolo was one of the Counties that benefited from the REGAL-AG Project together with Marsabit, Wajir, Garisa and Turkana Counties. Isiolo County is home to 158,716 persons (KNBS, 2018) and covers an area of 25,700 square kilometers. The poverty index data indicates that 69 percent of the Isiolo population is poor. Food insecurity emanates from the poor agro-climatic conditions in the district and thus coupled with chronic poverty, this places the community living in Isiolo at risk of perennial hunger and related malnutrition. These two factors adversely affect child growth and development during the formative and early stages of life. Based on the Kenya Food Security Steering Group (KFSSG) recommendations, food assistance coupled with non-food interventions like providing transport subsidies to livestock traders so that market price fluctuations in time of drought can be

mitigated and establish livestock market infrastructure to organize and secure livestock markets. The project implementation framework was unique as it focused on the markets in working on improving the resilience capacities of pastoralists to drought and related shocks in Isiolo County.

1.2. Statement of the Problem

The food security outlook in the world remains fragile due to successive seasons of failed rains, wildlife human conflict, livestock disease, above-normal food and non-food prices, and flooding. Reduced rainfall as a result of climate change and its erratic nature in the last decade complicate food availability in marginal areas. Further, communities living in such areas have been affected by the continued erosion of the potential to access food and other basic needs. There is therefore an utmost need for urgent and concerted efforts by the international community and national governments as well as the affected communities to strategically address the drought issue. It can be argued that pragmatic decisions and solutions ought to be devised and continually improved to curb further deterioration of the current situation (KFSSG, 2012). It is therefore essential that innovative programs be considered in different contexts in community-driven process of addressing drought in the marginal areas.

The arid and semi-arid lands of Kenya had experienced cyclic drought over years which led to massive livestock death which had crippled pastoralists economy rendering many destitute. The National/County government and development partners had pumped in money in form of many drought-support projects which has very little progress to show over years. USAID implemented Resilience and Economic Growth in Arid Lands-Accelerated Growth Project (REGAL-AG) from 2012 to 2018 in Isiolo County. The project applied market systems approach in working on improving resilience of pastoralists to drought and related shocks which had shown tremendous progress in the county with milk processing plants initiated in Isiolo town and 5 markets constructed in the other parts of the county (Mutimba, 2013). This study focused on undertaking assessments to understand the factors that influenced the sustainability of REGAL-AG project as best practice for other pastoralist's drought support projects to emulate in Isiolo County, Kenya.

1.3. Purpose of the Study

This study examined the determinants of sustainability of pastoralist's drought support projects in Isiolo County putting into emphasis the case of Isiolo County, Kenya.

1.4. Objectives of the Study

The objectives of this study were:

- a) To establish how resource availability, influence the sustainability of drought support project in Isiolo County.
- b) To examine how institutional linkages, influence the sustainability of drought support project in Isiolo County.
- c) To evaluate how community participation influences the sustainability of Drought support project in Isiolo County.
- d) To determine the influence of project progress reporting on the sustainability of drought support project in Isiolo County.

1.5 Research Questions

The study was based on the following research questions:

- a) To what extent does resource availability influence the sustainability of Drought support project in Isiolo County?
- b) To what extent do institutional linkages influence the sustainability of Drought support project in Isiolo County?
- c) How community participation does influence the sustainability of Drought support project in Isiolo County?
- d) To what extent does project progress reporting influence the sustainability of Drought support project in Isiolo County?

1.6 Significance of the Study

The government of Kenya has an obligation of ensuring that all citizens have ways and means of accessing food. Indeed, article 43 of the Kenyan Constitution (Republic of Kenya, 2013) states that every Kenyan has a right to be free from hunger and to have adequate food of acceptable quality. While the donor community in Kenya is currently supporting the government to feed drought-affected persons, they also endeavor to develop the government's capacity to address hunger in pastoral areas sustainably.

The findings might assist in reinforcing and supporting stabilization of livelihoods, protection and empowerment of vulnerable people especially women, minimize the risk of a recurrence of unrest in the area and enable the consolidation and promotion of human rights through well-planned project activities that encourage people to be more engaged in enhancement of livelihoods.

This study would be useful to the partners in development who are involved in drought support projects in Kenya. It also sought to establish best practices which can be replicated elsewhere in similar projects that would be considered as an option in future. Drought support projects are implemented by different partners with each playing a significant role. The outcome of the study also demonstrated the relationship and connectedness of the current partnership that would be significant in future collaborations by identifying aspects of implementation by respective partners.

For researchers and academicians, this study would add to the existing body of literature thereby acting as a source of reference. In addition, this study would provide areas for further research where future scholars can explore to widen the knowledge base on drought support projects sustainability. The findings of this study would be important to scholars in the field of drought support project sustainability hence promote drought support project sustainability in the future.

1.7 Limitation of the Study

Some respondents had their reservations on the project and did not want to respond positively to the enquiries because of their various reasons. To counter this, the researcher and the research assistant treated all respondents with utmost care and courtesy. There was also a limitation of language as most of the participants spoke in the language of the catchment area and the tools of collecting data were in English. To overcome this limitation, the researcher and the research assistant engaged the respondents in local language.

1.8 Assumption of the Study

The researcher assumed that the information that would be gathered from the respondents would be reliable and accurate and would lead to meaningful conclusions. The inclusion criteria of the sample were appropriate and therefore would ensure that all the participants would have experienced the same or similar phenomenon of the study. Additionally, the study assumed that the participants would have a sincere interest in participating in the research and would not have

any other motives when they agreed to be in this study. Finally, the study assumed that the authorities would grant the required permission to collect data.

1.9 Delimitation of the Study

The study focused on examining the factors that influence sustainability of drought support projects among pastoralists in arid and semiarid areas. The study specifically focused on resilience and economic growth project in Isiolo County, Kenya. The study sought to determine the influence of resource availability, institutional linkages, community participation and project progress reporting on sustainability of Drought support project in Isiolo County. The research was confined to areas where the drought support projects were implemented deep in the rangelands of Isiolo County. The target population included the Management staff of REGAL-AG in Isiolo including ACDI VOCA, Mercy Corps, World Food Programme (WFP), Merti Integrated Development Program (MID-P), relevant Government Ministries and the drought support project Beneficiaries committee members. The study was carried out in a period of four months.

1.10 Definition of Significant Terms Used in the Study

Community Participation: Taking part of community members in the activities of community drought support projects from the beginning to the end.

Institutional linkages: the act of involving both formal and informal institutions to plan and work together in an organized way to enhance service provision.

Project progress reporting: is a process of providing continuous feedback on progress of a project to help improve performance and achieve results. It establishes links between the past, present and future actions.

Sustainability: is the organizational, technical and financial capacity of programs to continue beyond (the program funding) period

1.11 Organization of the Study

This study was organized into five chapters. Chapter one gives an introduction on the thesis by describing the background of this research. It also describes the statement of the problem,

research objectives, scope and significance of the research, delimitations of the study, limitations of the study and the definition of significant terms. Chapter two reviews the literature based on the objectives of the study. It further looks at the conceptual framework and finally the summary. Chapter three gives a detailed explanation on the research methodology adopted to carry out the study. The chapter describes the research design, target population, sampling procedure, tools and techniques of data collection, pre-testing, data analysis, ethical considerations and finally the operational definition of variables. Chapter four presents analysis and findings of the study as set out in the research methodology. The study closes with chapter five which summarizes the main conclusions and recommendations of the research study as well as giving the possible future research areas.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explores the unique features/traits that affect the sustainability of drought support projects in Isiolo County. The chapter was structured into theoretical, conceptual and empirical review. The study also presents the knowledge gap the study sought to fulfill.

2.2 Sustainability of Drought Support Projects

Projects are designed and implemented to meet specific goals and achieve desired change. Ali (2011) describes a project as a set of coordinated activities with a specific start and finish time, pursuing a specific goal with constraints on time, scope and resources. Some projects require that their activities are sustained over time to ensure continued flow of outputs and hence achievement of the desired change which could be social, cultural or economic. Implementation of most projects may be successful but their sustainability may be a challenge (Busiinge, 2010).

It is estimated that nearly one billion people in the world go to bed hungry each night (USAID, 2010) due to various factors. Subsequently, it is essential that appropriate modalities, which foster context-specific interventions, are devised and adopted to boost food security. In October 2011, the world's population reached seven billion (OECD, 2013). This would imply that one in every seven persons go to bed hungry. There is therefore an utmost need for urgent and concerted efforts by the international community and national governments as well as the affected communities to strategically address drought disasters. This study was concerned with sustainability of drought support projects in an area that has already been identified to experience drought often.

The empirical evidence by Okoth (2016) suggests that sustainable drought support projects improvements have a variety of positive effects on people's livelihoods. A selection of the impacts reported in the SAFE-World projects and initiatives include: improvements to natural capital, including increased water retention in soils; improvements in water table (with more drinking water in the dry season); reduced soil erosion combined with improved organic matter in soils, leading to better carbon sequestration; and increased agro-biodiversity; improvements to social capital, including more and stronger social organizations at local level; new rules and

norms for managing collective natural resources; and better connectedness to external policy institutions; improvements to human capital, including more local capacity to experiment and solve own problems; reduced incidence of malaria in rice-fish zones; increased self-esteem in formerly marginalized groups; increased status of women; better child health and nutrition, especially from more food in dry seasons; and reversed migration and more local employment (Busiinge, 2010).

Sustainable drought support projects have the potential directly and indirectly to influence the health of rural people. In the first instance, improved food supply throughout the year has a fundamental impact on health, which in turn allows adults to be more productive, and children to attend school and still be able to concentrate on learning. In many drought-support projects, for example, raised beds in kitchen gardens have improved domestic food supply by producing a year-round supply of vegetables – and children are often the main beneficiaries. In some cases, a more sustainable drought support projects can also help to remove threats to health in the environment - such as consumption of mosquito larva by fish in rice fields in China (USAID, 2010).

It can be argued that pragmatic decisions and solutions ought to be devised and continually improved to curb further deterioration of the current situation (Okoth, 2016). It is therefore essential that innovative programs be considered in different contexts in community-driven process of addressing drought in marginal areas of Kenya. This study, attempted to demonstrate that specific features referenced in the study objectives indeed influence the sustainability as well as the quality of the resultant project outcomes.

Sustainability of drought support projects is a key desire for government, nongovernment and communities at large since a sustained project ensures continuous deliverance of benefits to the target beneficiaries for a long time (Kanyanya, 2014). Planning for sustainable activities calls for engagements of stakeholders and the target beneficiaries to create a better understanding and pave way for implementation of formulated activities. Pauline (2015) noted that the most important factor that contributes to drought support project sustainability is genuine involvement of target beneficiaries as equal partners and active participants since their experience and concerns intrinsically contribute to success of the project. The level of involvement of intended beneficiaries determines to a great extent establishment of a project, how successful a project

consolidates and how it responds in meeting arising needs. According to Pauline (2015), it is of great importance to involve target beneficiaries regarding decisions on project's planning stage, implementation, execution and closure.

2.3 Resource Availability and Sustainability of Drought Support Projects

Resources are critical in the smooth running of any project to put into place new infrastructure and rehabilitation of existing ones. The resources include and not limited to manpower, equipment and financial support that are necessary for ensuring smooth running of a project (Kemp, Parto & Gibson, 2013). Manpower resources comprise of skills and labor required to run the activities of a project. Efficiency, adequacy and availability of human resource support manpower avails helpful skills necessary for smoothly running a project. Support equipment in project sustainability comprises of set of tools required in achieving set objectives. Projects such as drought support projects benefits end users routinely and are expected to operate throughout for maximum sustainability. Occasional breakdowns are inevitable for such projects and availing maintenance equipment enhances correction of breakdowns. For project sustainability to be achieved, the funding organization needs to avail maintenance support comprising of equipment to the end user. In areas where project sustainability fails. Uyoga (2012) established that the end user is left with the responsibility of maintaining the project. Skills and equipment deficiency amongst end user contribute to failing of projects.

Orondi (2015) posit that financial resources contribute the highest factor in project sustainability. In financing and running a project, adequate funds are needed for the project to realize its intended benefits. Binder (2014) is on the agreement that financial support that involves soliciting for project maintenance funds contributes to project sustainability. Insufficient sources of funds to support running of a project leads to poor maintenance and has been cited as the main cause of failures of projects sustainability. Support resources play a key role in enhancing sustainability of drought support projects. For a project to benefit the end user for a long time, support from financiers and end user inputs are crucial. Deficiencies in support availability lead to sustainability failures of drought support projects.

Also, the success of any project largely depends on its human resource skills and capability. It is necessary to create new, modern and quality human resources that may effectively accomplish the goals of the drought support projects (Ball, 2012). The competitive position of any

organization equally depends on the kind of work force it has. This is also true for all projects including water supply projects. Development of human resources therefore becomes a daily affair of the organization. Okun (2012) argues that staff productivity is the output per staff over a given time period and is important in establishing efficiency of employees and in turn the entire system. Staff number has been found to be inversely related to operational performance while staff skills and ability are directly related to performance. Human resources are the intangible and invisible capital (intellectual capital) without which tangible assets in the drought projects may not make any economic sense (Gerstenfeld, 2011). Organizations that invest on employee development and empowerment are seen to be more proactive and effective in responding to market needs and satisfying customer needs. Moreover, capacity building of the employees cannot be overlooked in project reforms.

Technological advancement affects the efficiency and performance of all projects and therefore the impact of technology cannot be overlooked. Because of the ever-changing needs, trends and the very dynamic environmental factors, adoption of appropriate technology can give drought support projects a competitive edge (Kraai, 2012). Technology advancement in communication has broken boundaries turning the world into a global village. It has given new ways of professional and technical personnel operations in organizations of all levels. As a result, REG-AG should open up to technology to improve planning, executing and managing projects. They have opportunities to develop highly specialized auto-motives to provide support facilities to communities in a disaster (Gerstenfeld, 2011).

2.4 Institutional linkages and Sustainability of Drought Support Projects

It is widely accepted that institutional engagements from an early stage in the project process increases project ownership. However, ongoing motivation is important for continued participation (Orondi, 2015). Strengthening community decisionmaking and management capacity takes a long time and as a result, community managed projects may take a longer time to implement than the projects managed by conventional agents. Coordination of actors in project cycle increases the chance of project success and sustainability. World Bank impact evaluation of community water supply and sanitation projects in Sri Lanka, found out that active participation by project partners at all project stages increases project sustainability. National Drought Management Authority. (2014) points out that participation is assumed to have

the effect of empowering the citizens so that they can continue to give direction in public policies or programs and also direct future changes and put pressure on outside forces to support these changes. He argues that the location of participatory work is thus focused on the local level and depends upon local interests and capacity to engage in action for change for the success of the public policy or programs.

Institutional linkages also strengthen local organizational capabilities by building on traditional commitments to collective, as opposed to individualistic forms of economic and social organizations. He also notes that partners coordinating guarantees that collective organizations serve local needs, are based upon local skills and compatible with local cultures and thus help to eliminate foreign domination and dependency from the development process. Rita (2011) in particular critiques coordination of partners approaches to development, points out that an important principle of participatory development is the incorporation of local people's knowledge into programme planning and the supposition that the articulation of people's knowledge can transform top-down bureaucratic planning systems.

Spaulding (2014) points out that with increased coordination of partners in self-help projects; there was increased sense of ownership, and belonging by the local community members and also their willingness to take care of the existing projects in their respective areas. It was because of this participatory approach that the self-help movement becomes successful and later paved the way for nation-building through decentralization. Spaulding further points out that the rationale for coordination of partners has been thought to include being a means of enhancing empowerment, enhancing responsiveness to people's real needs, instilling a sense of ownership of programs by the local people, promoting sustainability, and making programs cheaper by allowing mobilization of local resources. Coordination of partners is also believed to promote more equitable distribution of the benefits that accrue from development activities.

Most countries in the region have a government institution responsible for leading and coordinating the implementation of disaster risk management. However, the form and structure of coordination arrangements varies from country to country. Kenya, for example, has a dedicated National Drought Management Authority (NDMA) (GoK, 2014). South Sudan has a Ministry of Environment and that of Humanitarian Affairs and Disaster Management. Ethiopia has established a Disaster Risk Management and Food Security Sector led by Minister of State

under the Ministry of Agriculture. Uganda and Somalia have higher levels of coordination that are coordinated from the Office of the Prime Minister.

In spite of the various strategies put in place to ensure sustainability of the Arid Lands Resource Management Project there remains some risk that the community will not be able to adequately maintain and continue to operate the facilities developed with the assistance of the project team (World Bank, 2011). Based on the statement it shows that there was doubt on the sustainability of project. While the self-evaluation of the responsible operation division of the bank rated the sustainability of the project as likely, the Operation Evaluation Department, an independent evaluation department of the World Bank, rated the sustainability of the project as non-evaluable. This meant that at that particular time of rating, there was no consensus on the sustainability of the project. Despite the rating of sustainability by the Operation Evaluation Department of the World Bank as non-evaluable there was an indication that if the project received support from the government, then the state of affairs may change (World Bank, 2010). The role of governments in the sustainability of projects is therefore critical. The ability to manage the factors associated with institutions/ government is equally important.

The outcomes of World Bank Group interventions is said to be a function of three factors; the World Bank Group's management of factors within its own control or institutional performance; the client's management of factors in its control (government, private sector client); and external factors, such as exogenous shocks or the performance of other partners (World Bank, 2011). At institutional level, performance within each institution consists of the strategic objectives the organization pursues; its priorities and deployment of resources; how it delivers its services and products; the organizational structures, management systems, and incentive frameworks it adopts; how it deploys its internal financial and human resources to best achieve its mission; and how it leverages its activities through coordination and partnerships across the World Bank Group and with external parties.

2.6 Community Participation and Sustainability of Drought Support Projects

Drought support projects target the households which are severely affected by drought in various areas. World Bank (2011) illustrates how targeting of food insecurity is done. It has two dimensions: Geographical and community-based using targeting guidelines and criteria. At the communal level, members of the community identify those who actually need the assistance

using localized criteria. This is a critical exercise since food assistance cannot be given to every person in a community unless there is a severe famine where people die in large numbers per day and an indication of a worse scenario is detected.

World Bank in a report of project performance report for Ethiopia illustrates how community members involved in emergency recovery projects target deserving beneficiaries. Households are identified on the basis of the following criteria: Chronically food insecure households that had continuous food shortages (three months of food gap or more) in the previous three years and who had received food assistance. Households that, in the last one or two years, suddenly became more food insecure as a result of a severe loss of assets and were unable to support themselves; and Households without family support and other means of social protection and support. Though criteria such as above are used in the targeting process, the community is also presented with what is known as self-targeting opportunity at the same time. This is because the cost (benefit) of participation is made an increasing (decreasing) function of one's pre-participation income or wealth, so that only the needy find project participation attractive. Self-targeting methods have been used by governments for a long time (World Bank, 2011).

Participant in the drought support project and the rationale are significant. Communities are made up of both male and female gender of varying age brackets. In certain cases, and due to compelling reasons, children of school going age find themselves working either in family entities or in communally owned projects as way of fending for their siblings or ailing parents. Rita (2011), writing about the rural livelihoods in India observes that despite there being an increase in the quantity of food grains being produced domestically; India has been unable to achieve food security. The group most adversely affected by this is women in agriculture: their contribution to farm labour is hardly recognized; they are remunerated poorly and they suffer from chronic energy deficiency. Although the writer argues that women are not remunerated, he does not state specifically how the remuneration ought to be quantified and by who. This is because; he does not indicate whether men indeed engage in other activities which contribute to the general wellbeing of the family. However, it is recommended that a study be carried out to establish if indeed there are cases of unequal contribution towards the household wellbeing by both men and women and if the same exists recommendations on how the situation can be remedied proposed.

Those who are targeted contribute labour geared towards creation of household or communal assets in exchange of food or cash (PMBOK, 2015). An important aspect which may need to be critically and evaluated is the extent to which beneficiaries as well as the general community own and sustain the completed projects once the donors as well as the implementation facilitators hand over the project to the community. This is essential because food aid and/or food assistance has a probable effect of prompting dependency and if unchecked it may erode a community's own strategy and initiatives (US, 2015).

In Malawi, communities identify their development needs and priorities and are encouraged to participate in activities that rehabilitate the environment and which link to food security challenges and opportunities. While this is a good way of addressing the localized food insecurity issues which often arise due to droughts, the author does not specify if there is an array of different interventions which communities can engage in or there is a limitation (US, 2015). The latter is based on the premise that the facilitators (donors) provide resources which necessitate the implementation and actual achievement of the desired outputs. Further, the fact that project activities may be limited within specific time-frames a concern related to the nature of interventions and/or activities which can be undertaken within such durations arises. As World Bank report of 2010 demonstrates in the case of Ethiopia's safety net projects emergency drought recovery projects are implemented in phases of 6-months each. This is a limitation in itself because it dictates on the type and volume of projects which can be designed and implemented at the community level (World Bank, 2007).

Engaging the community in its own development ensures that the proposed development will better target people's needs as per what would really suit them, incorporate local knowledge of the project, create grassroots capacity to undertake other projects and maintain facilities, distribute benefits equitably and help lower costs of the project. According US(2015), if the operation and maintenance program of water project is designed by the community, the program will function much better than when it is designed by outsiders. This is majorly because the community members form an attachment to the project and feel they own the project. And once they own the project, then community members will better take care of the water project so that it continues to offer them service even in the long term. Empowerment of community in management of donor funded water projects will lead to positive participation in the

sustainability and also during the stages of planning, implementation, development and maintenance of projects. This situation is supported by Orondi (2015) in the factors influencing sustainability of donor funded community water projects: a case of Kitui central constituency, Kitui County, Kenya. The study established that most of the community members were not involved in the implementation of the community projects in all the phases and that there was a strong positive correlation between community participation and sustainability of donor funded community projects.

2.7 Project progress reporting and Sustainability of Drought Support Projects

Project progress reporting is the continuous and periodic review and reporting of the project to ensure that input deliveries, work schedules, target output and other required actions proceed according to project plan (Nyaguthii & Oyugi, 2013). For the reporting process to be objective, it needs to thoroughly capture both positive and negative changes to the project reconciling perspectives of different stakeholders (including intended beneficiaries) through the use of different sources and methods. According to Oregon (2011), Progress reporting helps in assessing actual change against stated objectives, and making a judgement whether development efforts and investments were worthwhile or cost-effective.

Millions of dollars are wasted every year on projects around the world that break, become abandoned and prove to be unsustainable. Effective, participatory and regular progress reporting of community development programs can improve management, accountability, participation, trust, learning, and efficiency and development impacts (United Nations, 2015).

Project progress reporting, is particularly important to sustainability since it allows an on-going review of project effectiveness. Ahmad and Talib (2011) gives examples of indicators to be monitored would be verifying that communities are maintaining an adequate Operation and Maintenance fund or a continued supply of spare parts to project area. Such indicators must be established early in the project and used in monitoring activities to assure that actions are carried out when needed. Project progress reporting should involve beneficiaries, giving them the opportunity to decide on the criteria of success. Evaluations should be done as a management tool to identify any deficiencies and to establish a course of action to remedy problems which results to sustainability (Christina, 2010).

In management of projects, progress reporting can be used to improve the way governments and private organizations achieve results and ensure project sustainability. This can be ensured through investing in strengthening a national project monitoring system is important as it will eventually save resources that may otherwise be spent in inefficient programs or overlapping activities supported by different partners (Demombynes. & Trommlerova, 2012). Project progress reporting systems are designed to inform project management of whether implementation is going as planned or corrective action is needed. A well-designed Project progress reporting system provides data on the progress of a project and whether it is meeting objectives (World Bank, 2010).

According to DFID (2010), progress reporting enables management to identify and assess potential problems and success of a project. It provides the basis of corrective actions, both substantive and operation to improve the program or project design, manner of implementation and quality of results (Karanja, 2013). In addition, it enables the reinforcement of initial positive results. It is a major aspect that cannot be overlooked because it determines the sustainability of any venture or project. According to World Bank (2011), one of the reasons for project failure is lack of project monitoring and control. The success and sustainability of any project or program largely depend on constant feedbacks about project on going activities.

A study done on influence of management practices on sustainability of youth income generating projects in Kangema District, Murang'a County, Kenya findings revealed that majority of the youth projects in Kangema were only evaluated twice a year and 23% had not been evaluated at all. project progress reporting is important in the sustainability of a project and therefore the frequency of project reporting should be enhanced in all the project stages (Karanja, 2013). This was also supported by views of Christina (2010) who argued that, progress reporting forms an integral part of all successful projects and without access to accurate and timely information, it is difficult if not impossible to manage an activity, project or program effectively.

2.8 Theoretical Framework

The study was based on the following theories; policy theory, the resource-based view theory, program theory and theory of hierarchy of needs.

2.8.1 Policy Theory

The theory was proposed by Colebatch (2002) and it revolves around formulation of policies, their implementation and project evaluation along assigning documents to a particular goal or issue. Further literature review on the theory reveals the important roles played by documents in defining purpose and direction of projects. According to Colebatch (2002), policies that govern formulation and implementation of projects have the ability of providing stakeholders a less complex method of governing a project. The relationship between policy and power (exercised primarily by the governments) is furthered by Smith (2004) where he claimed that formulated policies form a mechanism where social relations are mediated. In his argument, Smith(2004) revealed that policies aim at organizing relations socially by governing existing and future social practices. Additionally, policies outline positions objectively from where issues, systems and people create a relationship with world.

Ball (2012) advanced policy theory and disclosed that emergent discourses identifies stakeholders' position, field of action and sets boundaries on the outcomes of the intended policy. This perspective on policy formulation process surpasses the written document, voices heard and the context and combines in giving a particular agenda and stance legitimacy that supports a specific group to act authoritatively while at the same time marginalizing another group. The policy theory contributes to the study as it informed on how institutional linkages influence the sustainability of Drought support project in Isiolo County.

2.8.2 The Resource Based View Theory

The theory was proposed by Barney (1991). The theory suggests that the internal resources held by an organization influences sustenance of competitive advantage of the firm. According to the theory, ownership of non-imitable, rare, non-substitutable and valuable resources contributes to firms' optimal productivity that contributes to competitive advantage. The value characteristic of a resource means that a resource should have the ability of creating a valued strategy that lessens a firm weakness or surpasses that of the competitor (Barney, 1991). Similarly, the returns acquired from the adopted value strategy must be significantly higher than the investment costs associated with the resource (Ochelle, 2012). The rare characteristic of a resource means that its defined price has the ability of reaching the targeted future returns. Similarly, the inimitability of a resource enables a firm to have control over the resource which serves as source of competitive

advantage or sustainability. The author stipulates that when a resource highly unknown, it becomes more inimitable.

According to Bennett (2010) who supported Barney's theory, there exist different types of resources that a firm can possess and includes tangible, intangible and organizational capabilities. Tangible resources comprise of technological, financial, organizational and physical assets which are easy to identify in a firm. Intangible resources comprise of practices developed by organizations over time and contribute to results improvement. They are difficult to identify and cannot be easily copied by competitors. Organizational capabilities comprise of skills and competencies used to acquire outputs as a result of combining tangible and intangible resources. Availability of resources either knowledge based, potentially value-creating, non-substitutable or imitate ensures sustainability of firms that enhances productivity. The theory contributes to the study as it informs on the need of resource support and availability that enhances achievement of project sustainability. When resources are availed to a project, the target beneficiaries continue to reap benefits from the project for a long period of time.

This theory therefore posits that organizations therefore perform based on the degree of engaged resources. These resources could be the finances, participation of the community in terms of their time and concern and using their knowledge and skills in an effort to ensure that the drought support projects are sustainable in the long run. The theory was significant in explaining the influence of resource adequacy/availability on the sustainability of Drought support project in Isiolo County.

2.8.3 Program Theory

The theory was proposed by Mark (1990) and its evaluation capacity has grown and developed over the past decade. The theory proposes that a program/project should be well-designed to achieve its intended benefits and outcomes to the target beneficiaries. Similarly, the theory explains the extent to which interventions in project formulation and implementation are understood and their contribution to achievement of program/project's intended long-term impacts on beneficiaries. The theory provides a framework that brings together existing aspects of a project /program and clarifies on the prevailing issues that may hinder realization of set objectives. Additionally, the theory provides a basis for identifying existing gaps on the intended benefits of a project and how the gaps can be sealed.

Application of program theory in project formulation, implementation and in post-implementation practices offers helpful information that explains solutions to problems bound to hinder projects sustainability and provides alternative means of obtaining intended results and benefits of a project. Additionally, the theory can be used in making expansive decisions that culminates into solutions on problems facing a project. Every project calls for a close and continuous monitoring for it to achieve its long-term benefits to beneficiaries. Availability of relevant monitoring resources, framework and support contributes to sustainability of projects to the target beneficiaries. The theory is of relevant to the study as it informs on the important roles played by progress reporting towards sustainability of projects. Thus, it formed a basis in establishing the influence of project progress reporting on the sustainability of Drought support project in Isiolo County.

2.8.4 Theory of Hierarchy of Needs

This study is based on the Abraham Maslow (1954) theory of hierarchy of needs. Maslow needed to know what motivates people. Maslow believed that people possess a set of motivation systems unrelated to rewards or desires. Maslow stated that people are motivated to achieve needs one after the other in a hierarchy. The needs hierarchy states that a lower level need must be completely satisfied and fulfilled before moving onto a higher pursuit.

This five-stage pyramid model can be divided into basic (or deficiency) needs (e.g. physiological, safety, love, and esteem) and growth needs (self-actualization). The deficiency or basic needs are said to motivate people when they are unmet. Also, the need to fulfill such needs will become stronger the longer the duration they are denied.

In the case of drought support projects, the beneficiaries within the community of the drought support projects will commit and fully participate towards implementation of drought support project which will helps them accessing their immediate basic need which is food. The outcome is ownership and sustainability of the drought projects and they are in position to address future shocks and stresses on their own which is working towards meet higher level growth needs; Once these needs have been reasonably satisfied, the second level need on safety and security takes precedence. may be able to reach the highest level called self-actualization. It is good to note that according to Maslow every person is capable and has the desire to move up the hierarchy toward a level of self-actualization. Unfortunately, progress is often disrupted by

failure to meet lower level needs. Life experiences including divorce and loss of job may cause an individual to fluctuate between levels of the hierarchy. Maslow noted only one in a hundred people become fully self-actualized because our society rewards motivation primarily based on esteem, love and other social needs.

2.9 Conceptual Framework

A conceptual framework considers the theoretical and conceptual issues surrounding research work and form a coherent and consistent foundation that underpin the development and identification of existing variables (Creswell, 2013). The independent variables include resource availability, institutional linkages, community participation and project progress reporting while the dependent variable is the sustainability of Drought support project in Isiolo County. The conceptual framework is as presented in Figure 1.

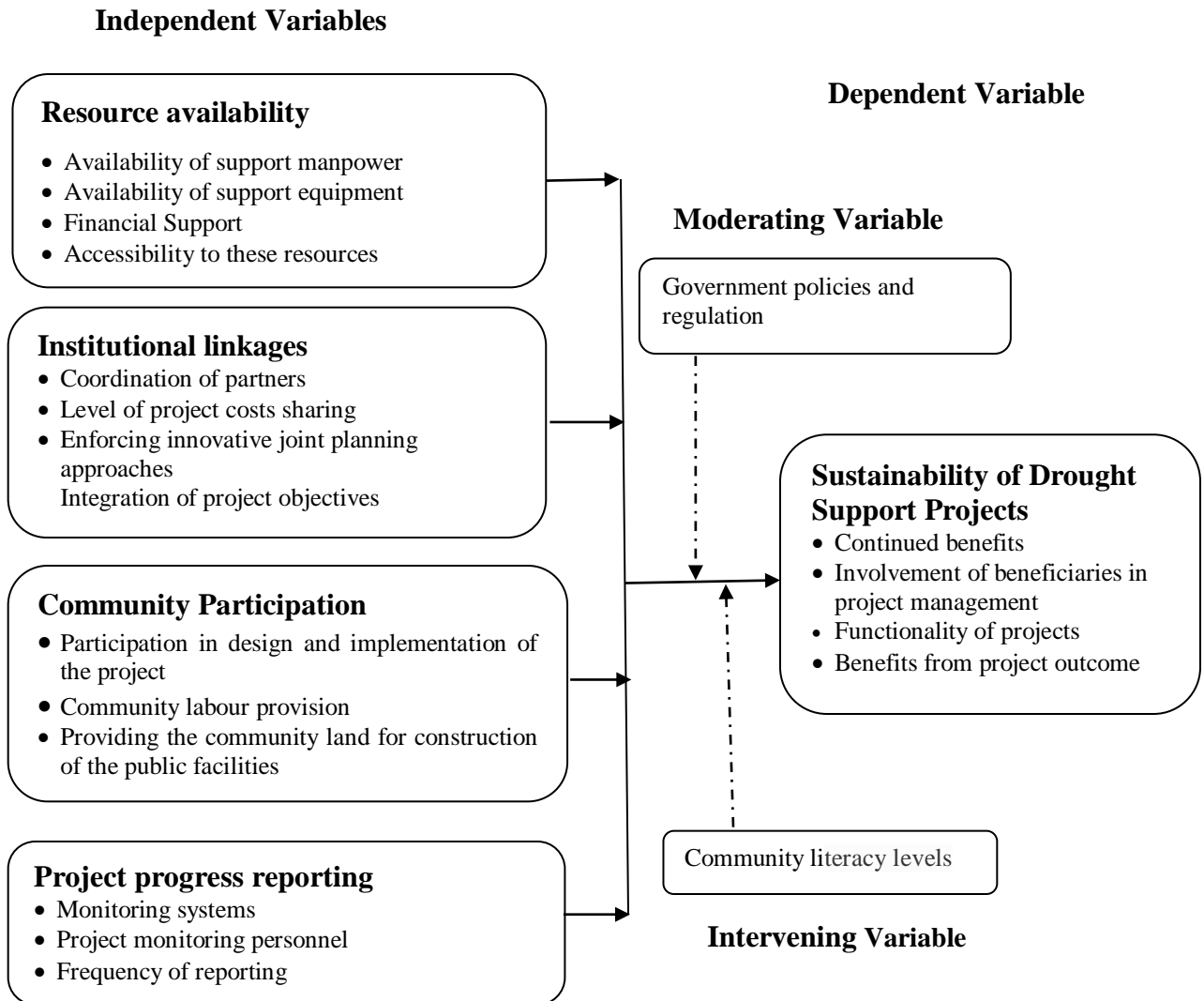


Figure 1: Conceptual Framework

2.10 Summary of the Literature

This chapter discussed in details the concept of sustainability of drought support projects. It brought to light that sustainability is a practice which when applied may lead in maintaining society resources without damage. Through sustainable development, communities in the world seek to achieve sustainability in their life and also improve it. Sustainability encompasses conventional approaches while adding a longer-term perspective. To achieve sustainability, efforts have been applied, while others have paid off, other efforts have not for lack of proper project management, resources and commitment of all stakeholders. This point out a clear lapse

in effort to attain sustainability in drought support projects. This study therefore sought to establish the influence of resource availability, institutional linkages, community participation and project progress reporting on sustainability of Drought support project in Isiolo County.

2.11 Research Gaps

Various studies have been conducted and the following are the gaps existing in those studies

Table 2. 1: Research Gaps

Variables	Author and Year	Title of the Study	Research Methodology	Findings	Knowledge Gaps	The focus of the Current Study
Resource Availability	Mutiso (2015)	Determinants influencing sustainability of Agricultural projects in mwala sub county, machakos county	A descriptive survey research design was carried out	The study found that the farmers do not have enough finances to buy the necessary farm inputs, certified seeds, the right skills, and do not adopt the new technologies to increase harvest in their farms.	The study focused on farming and food productivity	The study established how resource availability influence the sustainability of Drought support project in Isiolo County
	Kinyanjui (2016)	Assessment of factors influencing sustainability Of peri urban water supply projects	Descriptive survey research design was employed	The study found that human resource was important and continuous improvements of services should be enhanced	The study did not have similar variables as the current study and also focused on water projects	The study established how resource availability influence the sustainability of Drought support project in Isiolo County
Institutional linkages	Nthenge (2014)	Factors influencing sustainability of donor funded water projects in	Descriptive survey	It was found that; all donor funded water projects were not sustainably	The study focused on the donor funded water projects Tana River County,	This study sought to examine the factors that influence sustainability of Drought support

		Tana River County, Kenya		managed	Kenya	project in Isiolo County.
	Onkoba (2016)	Determinants of sustainability of community based projects in Kenya: the case of Carolina for Kibera projects	Descriptive design	The study found that the greatest factor affecting the sustainability of the community-based projects lies with resource support	The study failed to establish the effect of Institutional frameworks on project sustainability	The current study evaluated how Institutional linkages affect the sustainability of Drought support project in Isiolo County
Community Participation	Mutuku (2015)	Factors which influence implementation of drought recovery projects in the Sub County.	The study adopted a descriptive research design	The findings revealed that the factors investigated (food ration, partners roles, community participation and gender mainstreaming) accounted for 42.1% variability in drought recover projects success in the Sub County	The study did not exhaust on the influence of community participation on the implementation of drought recovery projects in the Sub County	The current study evaluated how community participation affects the sustainability of Drought support project in Isiolo County
	Kanyanya (2014)	Factors influencing the sustainability of community water projects in Shianda Division of Kakamega County.	Descriptive survey was used	The study found that community participation influenced sustainability of CWPs in Shianda Division to a very great extent	The study took place in Kakamega county and did not focus on the sustainability aspect of projects	The study evaluated how community participation affects the sustainability of drought support projects. The study was done in Isiolo County

Project progress reporting	Nyaga (2015).	Factors affecting the sustainability of community food security projects in arid and semi-arid lands in Turkana county	Descriptive survey	it was established that need assessment on food security projects in Turkana County was not thoroughly done	The study did not focus on sustainability of drought support project	The study sought to assess the influence of project progress reporting on the sustainability of Drought support project in Isiolo County
	Umugwaneza (2016)	Role of monitoring and evaluation on project sustainability in Rwanda. A case study of electricity access scale-up and sector-wide approach development project (EASSDP)	Descriptive research design	The study found that accountability significantly correlate to the sustainability of projects in Rwanda.	The study did not focus on sustainability of drought support project	The study sought to assess the influence of project progress reporting on the sustainability of Drought support project in Isiolo County

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology that was used in this study. The first section describes the research design, target population, sample size and sampling procedure, research instruments, pilot testing, validity, reliability, data collection procedure and data analysis techniques. Further, the section discusses the ethical considerations and operationalization of the variables.

3.2 Research Study

The researcher in this study applied descriptive survey research methods involving quantitative research approach and design. Descriptive survey design was concerned with the what, where, when or how much of a phenomenon. This research design enabled the researcher to generate knowledge that might be used to describe or develop a profile of what was being studied.

3.3 Target Population

The target population included the Management staff of REGAL-AG in Isiolo including ACDI VOCA, Mercy Corps, World Food Programme (WFP), Merti Integrated Development Program (MID-P), relevant Government Ministries and the drought support project Beneficiaries committee members. Table 3.1 shows the projects and number of project managers while Table 3.2 shows the target population.

Table 3. 1: Projects and Number of Project Managers

Projects	Number of Project Managers
Resilience and Economic Growth in Arid Lands-Accelerated Growth Project	9
Kenya Livestock Market Systems Project	10
Emergency Drought Response project	8
Drought Resilience and Sustainable Livelihoods Programme in the Horn of Africa	11
EDE/Support to Drought Risk Management	12
KRDP-ASAL Drought Contingency Fund	7
Total	57

Source: National Drought Management Authority (NDMA) website (2020) and REGAL-AG Completion Report (ACDI VOCA 2018)

Table 3. 2: Target Population

Categories	Population	Percentage
Project managers	57	18.3
Community Leaders	89	28.5
Beneficiaries committee members	118	37.8
Government Officials	48	15.4
Total	312	100.0

3.4 Sample Size and Sampling Procedure

The following section discusses the sample size and the sampling procedures.

3.4.1 Sample Size

The sampling plan describes the sampling unit, sampling frame, sampling procedures and the sample size for the study. The sampling frame describes the list of all population units from which the sample was selected. Kratochwill (2015) observes that sampling involves selecting a given number of subjects from a defined population so as to represent the entire population. Stratified and simple random sampling technique was used in this study. From each category, representative samples were drawn through simple random methods. In this case the researcher selected randomly the respondents keeping in mind that every item in the strata has an equal chance of being selected into the sample. This method ensured that all the individuals in the target population had an equal chance of being included in the sample. This helped to eliminate the biasness.

To obtain the desired sample size for the study with the population of 312, Nassiuma (2000) formula was used since it's more precise than other formulas. The computation was as shown;

$$n = \frac{N (cv^2)}{Cv^2 + (N-1) e^2}$$

Where n = sample size

N = population (312)

Cv = coefficient of variation (take 0.6)

e = tolerance of desired level of confidence (take 0.05) at 95% confidence level)

$$n = \frac{312 (0.6^2)}{0.6^2 + (312-1) 0.05^2} = 98.74 \text{ (rounded to 99)}$$

The ration was therefore $99/312 = 0.32$. This was used across all the strata to get the sample for each stratum.

Table 3. 3: The Sampling Matrix

Categories	Population	Ratio	Sample
Project managers	57	0.32	18
Community Leaders	89	0.32	28
Project committee members	118	0.32	37
Government Officials	48	0.32	15
Total	312		99

3.4.2 Sampling Procedures

Sampling is the process of selecting a number of individuals for a study in such a way that the individual selected represents the large group from which they are selected. A sample size of between 10% and 40% is considered adequate for detailed or in-depth studies. The study selected the respondents using proportional stratified sampling. Stratified random sampling is unbiased sampling method of grouping heterogeneous population into homogenous subsets then selecting within the individual subset to ensure representativeness. The goal of stratified random sampling was to achieve the desired representation from various sub-groups in the population. In stratified random sampling subjects are selected in such a way that the existing sub-groups in the population are more or less represented in the sample (Creswell & Creswell, 2017). The study used proportional stratified random sampling to pick the respondents.

3.5 Research Instruments

The study collected both primary and secondary data. Primary data was collected using a questionnaire while secondary data was obtained from annual reports, journals and articles. Secondary data was obtained from company annual reports of the institutions and government authorities where possible. Data collection was via a questionnaire as this was an efficient and convenient way of gathering the data within the resources and time constraints. The structure of the questionnaire included structured and semi-structured questions as this provided the flexibility for specific and unique responses to some of the questions.

3.5.1 Pilot Testing

Cooper and Schindler (2013) indicated that a pilot test is conducted to detect weakness in design and instrumentation and to provide proxy data for selection of a probability sample. Pilot testing

provides an opportunity to detect and remedy a wide range of potential problems with an instrument. By conducting a Pilot test, it ensured that appropriate questions were asked, the right data was collected, and the data collection methods work. Ten questionnaires were administered to the pilot survey respondents who were chosen at random. The rule of the thumb is that 1% of the sample should constitute the pilot test (Creswell, 2013). The proposed pilot test was within the recommendation.

3.5.2 Validity of Research Instruments

Validity is the accuracy and meaningfulness of inferences, which are based on the research results (Kothari, 2013). Validity is also the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. The validity of the research instrument was established through consultation with research supervisor. The content of the questionnaire was examined to enhance validity. Expert opinion was requested to comment on the representativeness and suitability of questions and gave suggestions of corrections to be made to the structure of the research tools. This helped to improve the content validity of the data that was collected. Content validity was obtained by asking for the opinion of the supervisor, lecturers and other professionals on whether the questionnaire was adequate and to improve representation or sampling.

3.5.3 Reliability of Research Instruments

Reliability is concerned with the question of whether the results of a study are repeatable. A construct composite reliability co-efficient (Cronbach alpha) of 0.7 or above, for all the constructs were considered to be adequate for this study. Reliability of the data collection instrument was done using the split half method then be calculated using Spearman Brown correlation formulae to get the whole test reliability. If the sum scale is perfectly reliable, we expected that the two halves are perfectly correlated. A construct composite reliability co-efficient of 0.7 or above, for all the constructs, was considered to be adequate for this study (Rousson, Gasser & Seifer, 2012). The results of the reliability analysis are presented in the Table 3.4.

Table 3.4: Reliability of Measurement Scales

	Cronbach's Alpha
Resource availability	.818

Institutional linkages	.772
Community participation	.802
Project progress reporting	.862
Sustainability of Drought support project	.768

From Table 4.2, it was found that project progress reporting (reliability co-efficient=0.862) was the most reliable, followed by resource availability (reliability co-efficient = 0.818), then community participation (reliability co-efficient =0.802), the institutional linkages (reliability co-efficient =0.772) while sustainability of Drought support project (reliability co-efficient =0.768) was the least reliable. This illustrates that all the five variables were reliable as their reliability values exceeded the prescribed threshold of 0.7 as stated by Rousson, Gasser and Seifer(2012). Hence this indicates that the research instrument was reliable and therefore required no amendments.

3.6 Data Collection Procedures

The researcher sought permission from the relevant authorities including an authorization letter from the University of Nairobi and approval from the County Government of Isiolo. The researcher also sought for a letter of permit from the National Council of Science and Technology (NACOST). The study used questionnaires to collect data. The study used primary data which was collected by use of questionnaires and interview schedules; use of questionnaires was based on the fact that they were suitable for a descriptive study given that they were easy to administer, ensured fast delivery and the respondent could answer at their convenience. The questionnaires were self-administered through drop and pick later method. The researcher delivered the questionnaire and gave the selected respondent a maximum of 3 days after which the researcher collected the completed questionnaire for analysis. The researcher also assured the participants that the information they gave was treated with strict confidentiality. Secondary data was collected from documented sources such as library books, annual reports, magazines, journals and internet literature. For the main purpose of this research, the study collected primary data but also relied on the secondary data for the literature review.

3.7 Data Analysis Techniques

To enable the researcher, understand the data collected and assign meaning to the resulting statistics, an analysis of data was done to summarize the essential features and relationships of data to generalize and determine patterns of behaviour and outcomes. The completed questionnaires were reviewed for completeness and consistency before responses could be processed. Qualitative and quantitative techniques were used in the data analysis. Content analysis was done, while descriptive analysis such as mean, frequencies and percentages were used to analyse the data. Data representation was done through tables.

Regression analysis using multiple linear regression model was employed to establish the significance of the independent variables on the dependent variable. Data was organized and interpreted on account of concurrence to objectives using assistance of the computer package, statistical package for social scientists (SPSS) version 25, to communicate research findings. Tables were used for data presentation. Regression analysis was run to examine the relationship among the independent and the dependent study variables which are set out in the objectives of the study. The regression model was as below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y= Sustainability of Drought support project in Isiolo County

β_0 =Constant

X_1 = Resource availability

X_2 =Institutional Linkages

X_3 = Community participation

X_4 = Project progress reporting

$\beta_1, \beta_2, \beta_3,$ and β_4 = Regression co-efficient

ε =Error

3.8 Ethical Considerations

It is important to consider the ethical implications of study work. Many findings may be of a personal or potentially confidential nature, and as such, there was a responsibility to adhere to certain guidelines. Confidentiality and privacy of information collected were communicated to the respondents before the start of the interviewing process. The questionnaires didnot indicate

the identity of interviewees, because the disclosure of confidential information would have stigmatized the respondent.

The other ethical issue considered was the physical and psychological harm ethics. Creswell and Creswell (2017) note that physiological harm occurs when embarrassing questions are asked, expressing shock or disgust while using threatening statements or compelling people to do something they don't believe in. This was achieved through designing the questionnaires in a user-friendly manner that there was no physical or psychological harm. Any physical or psychological harm was established during pre-testing and corrections done to the questionnaire. Research assistants were retrained and sensitized on need to avoid physical and psychological harm to the respondents and even to oneself. To ensure informed consent; the questionnaires was only administered to respondents who had consented and were willing to participate in the interviews. The purpose of the study was explained to the respondents.

3.9 Operationalization of Variables

Table 3.4 shows operationalization of the study variables.

Table 3. 4: Operationalization of Variables

Objectives	Type of Variable	Indicator	Measuring of Indicators	Tools of analysis	Type of analysis
To establish how resource availability, influence the sustainability of Drought support project in Isiolo County	Independent	Resource availability	Availability of support manpower Availability of support equipment	Percentages Mean score	Descriptive statistics Regression analysis
To examine how institutional linkages influence the sustainability of Drought support project in Isiolo County	Independent	Institutional linkages	Level of involvement in project activities Level of project costs sharing Level of involvement in project decision making	Percentages Mean score	Descriptive statistics Regression analysis
To evaluate how community participation affects the sustainability of Drought support project in Isiolo County	Independent	community participation	Involvement in decision making Supporting the project Community labour provision Involvement in project leadership	Percentages Mean score	Descriptive statistics Regression analysis
To determine the influence of project progress reporting on the sustainability of Drought support project in Isiolo County	Independent	Project progress reporting	Monitoring systems, Project monitoring personnel, Monitoring reports, Frequency of reporting	Mean score	Descriptive statistics Regression analysis

To examine the determinants of sustainability of pastoralist's drought support projects in Isiolo County	Dependent	Sustainability of Drought support project in Isiolo County	Continued supply of support Resource Mobilization Community satisfaction Desirable project outcome	Mean score	Descriptive statistics Regression analysis
--	-----------	--	--	------------	---

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter deals with data analysis, presentation, interpretation and discussion. The first section in this chapter is on questionnaire response rate. The second section presents the background information of the respondents. The third section is on analysis, presentation and interpretation of the variables under investigation in line with study objectives. In order to simplify the discussions, tables that summarize the collective reactions of the respondents are provided.

4.1.1 Questionnaire Return Rate

The researcher targeted 99 respondents to respond to questionnaires. However, 79 questionnaires were returned fully filled giving a response rate of 79.4%. According Kratochwill (2015), a response rate of 50 percent or more is acceptable for analyses.

Table 4.1: Questionnaire Return Rate

Response	Frequency	Percentage
Response	79	79.4
No response	20	20.6
Total	99	100.0

4.2 Background Information

This section profiles respondents by their gender, level of education, occupation and age bracket. This background information is presented in form of tables.

4.2.1 Gender of the Respondents

The respondents were asked to indicate their gender. The results were as shown in the Table 4.3.

Table 4. 2: Respondent's Gender

	Frequency	Percent
Male	51	64.6

Female	28	35.4
Total	79	100.0

From the findings,(51) 64.6% of the respondents were male while (28) 35.4% were female. This favorable skewness towards men is not unique in pastoralist’s drought support projects. However, the fact that female respondents also contributed to the responses enhanced the quality of results obtained.

4.2.2 Respondents’ Level of Education

Additionally, the respondents indicated their level of education. The responses were indicated in Table 4.3.

Table 4. 3:Respondent’sLevel of Education

	Frequency	Percent
No schooling	3	3.8
Primary	15	19.0
Secondary	25	31.6
Certificate	11	13.9
Diploma	16	20.3
University Degree	9	11.4
Total	79	100.0

The findings reveal that (25) 31.6% of the respondents had reached secondary school level, (16) 20.3% had reached diploma level, (15) 19.0% had reached primary school level, (11) 13.9% had reached the certificate level, (9) 11.4% had attained a university degree while (3) 3.8% had gotten no schooling. This implies that the respondents were learnt enough to comprehend the subject under study and hence they gave correct information.

4.2.3 Respondents’ Occupation

The respondents were required to indicate their occupationthey were in. The findings were presented on Table 4.4.

Table 4. 4:Respondents’ Occupation

	Frequency	Percent
Government staff	6	7.6
NGO Staff	15	19.0

Community leader	24	30.4
Beneficiary Committee Member	34	43.0
Total	79	100.0

Results on Table 4.4 show that (34) 43.0% of the respondents were beneficiary committee members, (24) 30.4% of the respondents were community leaders, (15) 19.0% were NGO staff while (6) 7.6% were government staff. This implies that all the respondents were directly involved in the projects and therefore could give reliable information on the subject matter.

4.2.4 Respondents' Age Bracket

The respondents were required to indicate their age bracket. Their responses were displayed on Table 4.5.

Table 4. 5: Respondents' Age Bracket

	Frequency	Percent
20-30 yrs	22	27.8
31-40 yrs	17	21.5
41-50 yrs	25	31.6
51 – 60 yrs	15	19.0
Total	79	100.0

The findings reveal that (25) 31.6% of the respondents were aged between 41-50 years, (22) 27.8% were aged between 20-30 years, (17) 21.5% were aged between 31-40 years while (15) 19.0% were aged between 51 – 60 years. This implies that most of the respondents were above 40 years old and also that all the relevant age groups were represented hence the data collected was reliable and accurate.

4.3 Resource Availability

The study sought to establish how resource availability influences the sustainability of drought support project in Isiolo County. The respondents were required to indicate the extent to which resource availability influences sustainability of Drought support project in Isiolo County. The results were as shown in Table 4.6.

Table 4. 6: Influence of Resource Availability on Sustainability of Drought Support Project

	Frequency	Percent
--	-----------	---------

No extent	6	7.6
Little extent	9	11.4
Moderate extent	23	29.1
Great extent	26	32.9
Very great extent	15	19.0
Total	79	100.0

Table 4.6 reveals that (26) 32.9% of the respondents indicated that resource availability influences sustainability of Drought support project in Isiolo County to a great extent, (23) 29.1% indicated to a moderate extent, (15) 19.0% indicated to a very great extent, (9) 11.4% indicated to a little extent while (6) 7.6% indicated to no extent. This implies that resource availability influences sustainability of Drought support project in Isiolo County to a great extent.

The researcher also required the respondents to specify the extent that the aspects of resource availability influence sustainability of Drought support project in Isiolo County. The outcomes were presented on Table 4.7.

Table 4. 7: Influence of Aspects of Resource Availability on Sustainability of Drought Support Project

	Mean	Std. Dev.
There are always available human resources for undertaking project activities	3.418	0.520
There is adequate support equipment for undertaking project activities	3.101	0.946
The projects are financially supported	4.228	0.820
Project resources are easily accessed by the project management	3.785	0.911
The resources are not adequate undertaking the projects	4.772	0.800
The project stakeholders are trained in resource mobilization techniques	3.266	0.542

The findings show that the respondents strongly agreed that resources were not adequate undertaking the projects as shown by a mean of 4.772. Further, they agreed that the projects are financially supported as shown by a mean of 4.228; and project resources are easily accessed by the project management as shown by a mean of 3.785. Moreover, they were not sure whether there are always available human resources for undertaking project activities as shown by a mean

of 3.418; the project stakeholders are trained in resource mobilization techniques as shown by a mean of 3.266; and there is adequate support equipment for undertaking project activities as shown by a mean of 3.101.

The respondents were also asked to indicate the ways in which resource availability influences sustainability of Drought support project in Isiolo County. The respondents indicated that if operation costs are higher than the community's capacity to meet, then such drought support project can easily stall.

4.4 Institutional Linkages

The research sought to examine how institutional linkages influence the sustainability of drought support project in Isiolo County. The respondents were required to indicate the extent that institutional linkages influence sustainability of Drought support project in Isiolo County. Table 4.8 presents the findings.

Table 4. 8: Influence of Institutional Linkages on Sustainability of Drought Support Project

	Frequency	Percent
No extent	14	17.7
Little extent	18	22.8
Moderate extent	11	13.9
Great extent	26	32.9
Very great extent	10	12.7
Total	79	100.0

The results in Table 4.8 show that (26) 32.9% of the respondents indicated that institutional linkages influence the sustainability of drought support project in Isiolo County to a great extent, (18) 22.8% indicated to a little extent, (14) 17.7% indicated to no extent, (11) 13.9% indicated to a moderate extent while (10) 12.7% indicated to a very great extent. This implies that institutional linkages influence the sustainability of drought support project in Isiolo County to a great extent.

The research also sought to determine the extent to which aspects of institutional linkages influence sustainability of Drought support project in Isiolo County. The results were as shown on Table 4.9.

Table 4.9: Influence of Aspects of Institutional Linkages on Sustainability of Drought Support Project

	Mean	Std. Dev.
Coordination among partners within the scope of project	3.076	0.509
The project management enforces innovative joint planning approach	4.215	0.817
The project has improved enabling environment for livestock value chain development	4.291	0.822
There is an integration of project objectives through co-financing and co-creation	3.127	0.795
There are opportunities for learning and catalyzing commercial investments	4.620	0.978

As per the findings, the respondents strongly agreed that there are opportunities for learning and catalyzing commercial investments as illustrated by a mean score of 4.620. They further agreed that the project has improved enabling environment for livestock value chain development as illustrated by a mean score of 4.291; and the project management enforces innovative joint planning approach as illustrated by a mean score of 4.215. The respondents were not sure whether there is an integration of project objectives through co-financing and co-creation as illustrated by a mean score of 3.127; and whether coordination among partners was within the scope of project as illustrated by a mean score of 3.076.

On the ways that institutional linkages influence sustainability of Drought support project in Isiolo County, the respondents indicated that coordination of actors in project cycle increases the chance of project success and sustainability; gives direction in public policies or programs and also direct future changes and put pressure on outside forces to support these changes.

4.5 Community Participation

The research aimed to evaluate how community participation influences the sustainability of Drought support project in Isiolo County. The respondents were requested indicate the extent to which community participation influence sustainability of Drought support project in Isiolo County. The findings were displayed on Table 4.10.

Table 4. 10:Influence of Community Participation on Sustainability of Drought Support Project

	Frequency	Percent
No extent	3	3.8
Little extent	4	5.1
Moderate extent	11	13.9
Great extent	27	34.2
Very great extent	34	43.0
Total	79	100.0

From the results,(34) 43.0% of the respondents indicated that community participation influences the sustainability of Drought support project in Isiolo Countyto a very great extent, (27) 34.2% indicated to a great extent, (11) 13.9% indicated to a moderate extent, (4) 5.1% indicated to a little extent while (3) 3.8% indicated to no extent. This implies that community participation influences the sustainability of Drought support project in Isiolo Countyto a very great extent.

The researcher required the respondents to specify the extent that the following aspects of community participation influence sustainability of Drought support project in Isiolo County.The findings are as presented on Table 4.11.

Table 4.11:Influence ofAspects of Community Participation on Sustainability of Drought Support Project

	Mean	Std. Dev.
The community takes part in design and implementation of the project	2.975	0.858
Community have been providing labour in undertaking project activities	4.392	0.755
The land where the project is being undertaken is provided by the community	4.570	0.521
The community takes part in resource mobilization for the projects	3.975	0.959

The findings show that the respondents agreed that the land where the project is being undertaken is provided by the communityas shown by a mean score of 4.570; community have

been providing labour in undertaking project activities as shown by a mean score of 4.392; and the community takes part in resource mobilization for the projects as shown by a mean score of 3.975. The findings also reveal that the respondents were not sure whether the community takes part in design and implementation of the projects as shown by a mean score of 2.975.

The respondents moreover were required to indicate the ways that community participation influence sustainability of Drought support project in Isiolo County. The respondents indicated that their participation ensures that projects being designed borrow from their opinions being the end users and are those that are in line with their interests. This factor increases community ownership of drought support projects thus enhancing their willingness to effectively manage these projects after implementation.

4.6 Project Progress Reporting

The study also sought to determine the influence of project progress reporting on the sustainability of drought support project in Isiolo County. The respondents were required to indicate the extent that project progress reporting influence sustainability of Drought support project in Isiolo County. The findings were as shown on Table 4.12.

Table 4. 12: Influence of Project Progress Reporting on Sustainability of Drought Support Project

	Frequency	Percent
No extent	7	8.9
Little extent	4	5.1
Moderate extent	5	6.3
Great extent	42	53.2
Very great extent	21	26.6
Total	79	100.0

Table 4.12 reveals that (42) 53.2% of the respondents indicated that project progress reporting influences sustainability of Drought support project in Isiolo County great extent, (21) 26.6% indicated to a very great extent, (7) 8.9% indicated to no extent, (5) 6.3% indicated to a moderate extent while (4) 5.1% indicated to a little extent. This implies that project progress reporting influences sustainability of Drought support project in Isiolo County great extent.

The respondents were also required to indicate the extent that the aspects of project progress reporting influence sustainability of Drought support project in Isiolo County. The results were as presented on Table 4.13.

Table 4. 13:Influence ofAspects of Project Progress Reporting on Sustainability of Drought Support Project

	Mean	Std. Dev.
Project monitoring personnel are taken through a training on how to report progress of the project	3.481	0.913
The progress of the projects is frequently reported	4.354	0.720
Monitoring systems designed to ensure effectiveness	4.646	0.878
The project progress reporting is carried out within schedule	2.329	0.970
Project progress reports helps project managers in keeping track the implementation of the projects	3.696	0.853
Project progress reports provides project management with a strategy to plan for sustainability of the projects	4.127	0.824

The findings show that the respondents strongly agreed that monitoring systems designed to ensure effectiveness as expressed by an average score of 4.646. The respondents agreed that the progress of the projects is frequently reported as expressed by an average score of 4.354; project progress reports provides project management with a strategy to plan for sustainability of the projects as expressed by an average score of 4.127; and project progress reports helps project managers in keeping track the implementation of the projects as expressed by an average score of 3.696. The findings reveal that the respondents were not sure whether the project monitoring personnel are taken through a training on how to report progress of the projects as expressed by an average score of 3.481. Further, the respondents disagreed that the project progress reporting is carried out within schedule as expressed by an average score of 2.329.

The respondents were also required to indicate the ways in which the project progress reporting influence sustainability of Drought support project in Isiolo County. The respondents indicated that project progress reporting ensures that input deliveries, work schedules, target output and other required actions proceed according to project plan; and helps in assessing actual change

against stated objectives, and making a judgement whether development efforts and investments were worthwhile or cost-effective.

4.7 Sustainability of Drought Support Project in Isiolo County

The research aimed at establishing the trend of aspects of sustainability of Drought support project in Isiolo County for the period of the last five years. The results were as shown on Table 4.14.

Table 4. 142: Trend of Aspects of Sustainability of Drought Support Project in Isiolo County

	Mean	Std. Dev.
Drought support project have continued to benefit the community after completion	4.253	0.745
Resources are mobilized for maintenance of the project	4.127	0.872
The community is satisfied with the outcomes of the projects	2.937	0.862
There is adequate involvement of beneficiaries in project management	3.658	0.561
The projects have continued to function	2.000	0.820
Benefits from project outcome are desirable	4.114	0.877

The results show that the respondents agreed that the drought support project has continued to benefit the community after completion as illustrated by a mean of 4.253; resources are mobilized for maintenance of the project as illustrated by a mean of 4.127; benefits from project outcome are desirable as illustrated by a mean of 4.114; and there is adequate involvement of beneficiaries in project management as illustrated by a mean of 3.658. The respondents were not sure whether the community is satisfied with the outcomes of the projects as illustrated by a mean of 2.937 and also disagreed that the projects have continued to function as illustrated by a mean of 2.000.

4.8 Multiple Regression Analysis

Regression analysis was applied to determine the relative importance of resource availability, institutional linkages, community participation and project progress reporting with respect to the sustainability of drought support project in Isiolo County. The findings were presented in Table 4.15, 4.16 and 4.17.

Table 4. 35: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.875	0.766	0.753	2.059

The outcome of Table 4.15 found that adjusted R-Square value is 0.753, which indicates that the independent variables (resource availability, institutional linkages, community participation and project progress reporting) explain 75.3% of the variation in the dependent variable (sustainability of drought support project in Isiolo County). This implies that there are other determinants of sustainability of pastoralist's drought support projects in Isiolo County attributed to 24.7% unexplained.

Table 4. 16: Analysis of Variance

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1068.88	4	267.220	60.596	1.32E-22
Residual	326.33	74	4.410		
Total	1395.21	78			

Table 4.16 revealed that p-value was 1.32E-22 and F calculated was 60.596. Since the p-value was less than 0.05 and F-calculated was greater than F-critical (2.4953), then the overall model was statistically significant.

Model coefficients provide unstandardized and standardized coefficients to explain the direction of the regression model and to establish the level of significance of the study variables. The results are captured in Table 4.17.

Table 4. 174: Regression Coefficients

Model	Unstandardized Coefficients		Standardize	t	Sig.
	B	Std. Error	d Coefficients Beta		
(Constant)	0.951	0.317		3.000	0.004
Resource availability	0.882	0.352	0.713	2.506	0.014
Institutional linkages	0.633	0.281	0.617	2.253	0.027
Community participation	0.799	0.296	0.734	2.699	0.009
Project progress reporting	0.713	0.233	0.638	3.060	0.003

As per the SPSS generated table above, the equation ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$) becomes:

$$Y = 0.951 + 0.882X_1 + 0.633X_2 + 0.799X_3 + 0.713X_4$$

The findings showed that if all factors (resource availability, institutional linkages, community participation and project progress reporting) were held constant at zero sustainability of drought support project in Isiolo County will be 0.951. The findings presented also show that taking all other independent variables at zero, a unit increase in the resource availability would lead to a 0.882 increase in the score of sustainability of drought support project in Isiolo County. This variable was significant since the p-value=0.014 was less than 0.05.

The findings also show that a unit increase in the score of institutional linkages would lead to a 0.633 increase in the score of sustainability of drought support project in Isiolo County. This variable was significant since p-value=0.027<0.05. Further, the findings show that a unit increase in the score of community participation would lead to a 0.799 significant increase in the score of sustainability of drought support project in Isiolo County since p-value=0.009 was less than 0.05. The study also found that a unit increase in the score of project progress reporting would significantly lead to a 0.713 increase in the score of sustainability of drought support project in Isiolo County. The variable was significant as p-value=0.003 was less than 0.05.

Overall, it was established that resource availability had the greatest influence on the sustainability of drought support project in Isiolo County, followed by community participation, then project progress reporting while institutional linkages had the least influence to the sustainability of drought support project in Isiolo County. All variables were significant since their p-values were less than 0.05.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the findings of the study, discusses and draw conclusions and recommendations based on the study objectives and research questions. The study key objective was to examine the determinants of sustainability of pastoralist's drought support projects in Isiolo County; with specific focus on the influence of resource availability, institutional linkages, community participation and project progress reporting on sustainability of drought support project in Isiolo County.

5.2 Summary of the Findings

The study sought to establish how resource availability influences the sustainability of drought support project in Isiolo County. The study found that resource availability influences sustainability of Drought support project in Isiolo County to a great extent. The research found that resources were not adequate for undertaking the projects. Further, the research found that the projects are financially supported; and project resources are easily accessed by the project management. Moreover, the study found that there are always available human resources for undertaking project activities; the project stakeholders are trained in resource mobilization techniques; and there is adequate support equipment for undertaking project activities. The study also found that resource availability would lead to a 0.882 increase in the score of sustainability of drought support project in Isiolo County. This variable was significant since the p-value=0.014 was less than 0.05.

The research sought to examine how institutional linkages influence the sustainability of drought support project in Isiolo County. This study found that institutional linkages influence the sustainability of drought support project in Isiolo County to a great extent. The study also found that there are opportunities for learning and catalyzing commercial investments. It was also established that the project has improved enabling environment for livestock value chain development; and the project management enforces innovative joint planning approach. The study found that there is an integration of project objectives through co-financing and co-creation;

and whether coordination among partners was within the scope of project. The study also found that a unit increase in the score of institutional linkages would lead to a 0.633 increase in the score of sustainability of drought support project in Isiolo County. This variable was significant since $p\text{-value}=0.027<0.05$.

The research aimed to evaluate how community participation influences the sustainability of Drought support project in Isiolo County. The research found that community participation influences the sustainability of Drought support project in Isiolo County to a very great extent. The research established that the land where the project is being undertaken is provided by the community; community have been providing labour in undertaking project activities; and the community takes part in resource mobilization for the projects. The study also found that the community takes part in design and implementation of the project. The research also found that a unit increase in the score of community participation would lead to a 0.799 significant increase in the score of sustainability of drought support project in Isiolo County since $p\text{-value}=0.009$ was less than 0.05.

The study also sought to determine the influence of project progress reporting on the sustainability of drought support project in Isiolo County. The research found that project progress reporting influences sustainability of Drought support project in Isiolo County to a great extent. The research also found that monitoring systems designed to ensure effectiveness. The study further found that the progress of the projects is frequently reported; project progress reports provides project management with a strategy to plan for sustainability of the projects; and project progress reports helps project managers in keeping track the implementation of the projects. The study also found that the project monitoring personnel are taken through training on how to report progress of the project. Further, it was found that the project progress reporting is carried out within schedule. The study also found that a unit increase in the score of project progress reporting would significantly lead to a 0.713 increase in the score of sustainability of drought support project in Isiolo County. The variable was significant as $p\text{-value}=0.003$ was less than 0.05.

The research aimed at establishing the trend of aspects of sustainability of Drought support project in Isiolo County for the period of the last five years. The study found that the drought support project has continued to benefit the community after completion; resources are mobilized

for maintenance of the project; benefits from project outcome are desirable; and there is adequate involvement of beneficiaries in project management. The research found that the community is satisfied with the outcomes of the projects and that the projects have not continued to function.

5.3 Discussion of the Findings

This section gives a discussion of the findings by linking them to the literature. Discussions of the findings were for resource availability, institutional linkages, community participation and project progress reporting.

5.3.1 Resource Availability and Sustainability of Drought Support Project in Isiolo County

The study found that resource availability influences sustainability of Drought support project in Isiolo County to a great extent. These findings are in line with Kemp, Parto and Gibson (2013) who state that resources are critical in the smooth running of any project to put into place new infrastructure and rehabilitation of existing ones. The resources include and not limited to manpower, equipment and financial support that are necessary for ensuring smooth running of a project.

The research found that resources were not adequate undertaking the projects. Further, the research found that the projects are financially supported; and project resources are easily accessed by the project management. Orondi (2015) posit in relation to the findings that financial resources contribute the highest factor in project sustainability. In financing and running a project, adequate funds are needed for the project to realize its intended benefits. Moreover, the study found that there are always available human resources for undertaking project activities; the project stakeholders are trained in resource mobilization techniques; and there is adequate support equipment for undertaking project activities. The results conform to Uyoga (2012) who established that the end user is left with the responsibility of maintaining the project. Skills and equipment deficiency amongst end user contribute to failing of projects.

5.3.2 Institutional Linkages and Sustainability of Drought Support Project in Isiolo County

This study found that institutional linkages influence the sustainability of drought support project in Isiolo County to a great extent. This is consonance with Orondi (2015) noted that it is widely accepted that institutional engagements from an early stage in the project process increases project ownership. However, ongoing motivation is important for continued participation. The

study also found that there are opportunities for learning and catalyzing commercial investments. It was also established that the project has improved enabling environment for livestock value chain development; and the project management enforces innovative joint planning approach. The study found that there is an integration of project objectives through co-financing and co-creation; and whether coordination among partners was within the scope of project. The findings correlate to Rita (2011) who stated that institutional linkages also strengthen local organizational capabilities by building on traditional commitments to collective, as opposed to individualistic forms of economic and social organizations. He also notes that partners coordinating guarantees that collective organizations serve local needs, are based upon local skills and compatible with local cultures and thus help to eliminate foreign domination and dependency from the development process.

5.3.3 Community Participation and Sustainability of Drought Support Project in Isiolo County

The research found that community participation influences the sustainability of Drought support project in Isiolo County to a very great extent. This is in line with Mathews (2008) who stated that community participation is essential because food aid and/or food assistance has a probable effect of prompting dependency and if unchecked it may erode a community's own strategy and initiatives. The research established that the land where the project is being undertaken is provided by the community; community have been providing labour in undertaking project activities; and the community takes part in resource mobilization for the projects. This is accordance to Co-Intelligence Institute (2009) who found that the community takes part in design and implementation of the project. Engaging the community in its own development ensures that the proposed development will better target people's needs as per what would really suit them, incorporate local knowledge of the project, create grassroots capacity to undertake other projects and maintain facilities, distribute benefits equitably and help lower costs of the project.

5.3.4 Project Progress Reporting and Sustainability of Drought Support Project in Isiolo County

The research found that project progress reporting influences sustainability of Drought support project in Isiolo County to a great extent. This is accordance to Oregon (2011) who noted that progress reporting helps in assessing actual change against stated objectives, and making a judgement

whether development efforts and investments were worthwhile or cost-effective. The research also found that monitoring systems designed to ensure effectiveness. The study further found that the progress of the projects is frequently reported; project progress reports provides project management with a strategy to plan for sustainability of the projects; and project progress reports helps project managers in keeping track the implementation of the projects. World Bank(2011) argues that project progress reporting systems are designed to inform project management of whether implementation is going as planned or corrective action is needed. A well-designed project progress reporting system provides data on the progress of a project and whether it is meeting objectives. The study also found that the project monitoring personnel are taken through training on how to report progress of the project. Further, it was found that the project progress reporting is carried out within schedule. The study findings conform to United Nations (2015) who state that effective, participatory and regular progress reporting of community development programs can improve management, accountability, participation, trust, learning, and efficiency and development impacts.

5.4 Conclusions

The study concluded that resource availability influences the sustainability of drought support project in Isiolo County significantly. The study concluded that drought support projects benefit end users routinely and are expected to operate throughout for maximum sustainability.

The study deduced that institutional linkages significantly influence the sustainability of drought support project in Isiolo County. The research concluded that good partnership and collaborations sustain effective project implementation. Drought recovery project is also about partnership so all participants in the project should play their roles effectively to ensure implementation of projects become successful and impact positively on the community

The study deduced that community participation influences the sustainability of Drought support project in Isiolo County significantly. The study concluded that participation of community team understand their situation more and can well plan and design the best projects which will benefit them and methodology.

The research concluded that project progress reporting significantly influences the sustainability of drought support project in Isiolo County. The study concluded that progress reporting is an

integral part of all successful projects and without access to accurate and timely information, it is difficult if not impossible to manage an activity, project or program effectively.

5.5 Recommendations

The study recommends that all community members should be involved at all stages of project cycle. This will make the community to have a wide perspective of the project as well as its importance and hence ownership. That way, the community takes initiative to both implement and sustain the drought support project. There is need to greater rapport between project beneficiaries and partners.

The county government should be on the fore front to support the community with the necessary ideas, technical knowhow and resources so that the community could be able to address their food insecurity. Isiolo County should therefore partner up with the National government. All management committees for drought support projects should develop bi-laws and constitutions governing such projects. Such constitutions will help in ensuring that management of such projects steer away from avoidable conflicts. This will give room for effective oversight by government bodies that will enhance effective management.

Sources of project financing whether government, non-governmental organizations or community member's contributions influence sustainability of community water projects. There is need for adequate funds in order to sustain drought support project according to the designs and plans. The systems and technologies established should be those that do not need heavy financial investments during operation and maintenance that may be beyond the capacity of the community members.

The study also recommended that drought support project beneficiaries should be informed of progresses regularly by the management to improve their knowledge on conservation and protection of facilities from mismanagement and destructions.

5.6 Recommendation for Further Studies

Future studies should investigate the impact of drought support projects among families in drought-stricken areas. Further, there is need to assess or even compare the impact of similar

projects and other drought support project in other parts of the country. There is also need to find other determinants not covered by this study.

REFERENCES

- Ahmad, S.M. & Talib, A.N. (2011). External factors that inhibit community participation in development. *International Journal on Economic and Resources*, 1(1), 16-22.
- Ali, I.A. (2011). *Factors influencing sustainable funding of non-governmental organizations in Kenya: A case study of sisters' maternity home (Simaho) in Garissa, Kenya*. Unpublished Master's thesis, University of Nairobi, Kenya.
- Ball, S. J. (2012). *Politics and policy making in education: Explorations in sociology*. New York, NY: Routledge.
- Bennett, N. (2010). *Sustainable Livelihoods from Theory to Conservation Practice: An Extended Annotated Bibliography for Prospective Application of Livelihoods*. Victoria, Canada.
- Binder, D. (2014). *Sustainability of Water Service Delivery in Rural Environment: Past Approaches and the Way Forward*. New Jersey: Emerging Markets Group, Ltd.
- Bowling, A. (2009). *Research methods in health*. Buckingham: Open University Press.
- Busiinge, C. (2010). *The Impact of Donor Aided Projects through NGOs on the Social and Economic Welfare of the poor: What do donors want? Case study*. Kabarole Research & Resource Centre, Uganda Martyrs University.
- Christina, L. (2010). *Evaluation of NGO International Development and Humanitarian work, briefing on practices and debates in evaluation*. Water Aid.
- Colebatch, H. K. (2002). *Policy*. Buckingham: Open University Press.
- Colebatch, H. K. (2013). Policy analysis, policy practice and political science. *Australian Journal of Public Administration*, 64(3), 14-23.
- Cooper, D. R. & Schindler, P. S. (2011). *Business research methods*. Singapore: McGraw-Hill.
- Creswell, J. W. & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Hoboken: Sage publications.
- Creswell, J.W. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. (4th Ed.). Lincoln, NE: SAGE Publications, Inc.

- Demombynes, G. & Trommlerova, S.K. (2012). *What Has Driven the Decline of Infant Mortality in Kenya?* Policy Research Working Paper 6057: The World Bank Africa Region.
- DFID, (2010). *Sustainable Livelihood*. London: DFID.
- Donaldson, S. I. (2012). *Program theory-driven evaluation science: Strategies and applications*. Routledge.
- Gerstenfeld, A. (2011). A study of successful projects, unsuccessful projects, and projects in process in West Germany. *IEEE Transactions on Engineering Management*, 23(3), 116-123.
- Government of Kenya (2014). *National Policy on Disaster Management*. Nairobi: Government Printer.
- Imunya, H. G. (2014). *Determinants Influencing Sustainability of Orphans Donor Funded Project of Church Based Organisation in Kenya: A Case of Zoe Ministry*. A Master's thesis, Kenyatta University, Kenya.
- International Association for Public Participation (IAP2), and the Co-Intelligence Institute, 2009. *Core Principles for Public Engagement*.
- Kandler, C., Zimmermann, J. & McAdams, D. P. (2014). Core and Surface Characteristics for the Description and Theory of Personality Differences and Development. *European Journal of Personality*, 28(3), 231-243.
- Kanyanya, L. O. (2014). *Factors influencing sustainability of community water provision in Shianda division, Kakamega county-Kenya*. A Doctoral dissertation, University of Nairobi.
- Karanja, G. (2013). *Influence of management practices on sustainability of youth income generating projects in Kangema District, Murang'a County, Kenya*. Unpublished Masters Thesis, University of Nairobi.
- Karanja, G. (2014). Influence of management practices on sustainability of youth income generating projects in Kangema District, Murang'a County, Kenya. *International Journal of Education and Research*, 2(2), 1-12.
- Kemp, R., Parto, S. & Gibson R. B. (2013). Governance for sustainable development: moving from theory to practice. *International Journal Sustainable Development*, 8(2), 39-61

- King-Okumu, C. Drought impact & vulnerability assessment: a rapid review of practices and policy recommendations; UNCCD: Bonn, 2019; p 65.
- Kothari, C. (2013). *Research Methodology: Methods and Techniques* (3rd ed.). New Delhi: Age International Publishers.
- Kraai N. (2012). *Sustainability of National Development Agency funded projects, Best Practice*. Parktown North.
- Kratochwill, T. R. (2015). Single-case research design and analysis: An overview. In *Single Case Research Design and Analysis (Psychology Revivals)*, 1(2), 13-26.
- Lewis, J. (2015). *Fundamentals of project Management*. New York: Amacom.
- Mark, M. (1990). From program theory to tests of program theory. *New Directions For Program Evaluation*, 1990(47), 37-51.
- Matthews, David. "*Connections 2008: Focus on Communities*." Kettering Foundation, 2008
- Mutimba, E. M (2013). *Determinants of Sustainability of Donor Funded Projects: The Case of Selected Projects In Ganze Constituency In Kilifi County, Kenya*. Unpublished Master's thesis, University of Nairobi, Kenya.
- National Drought Management Authority. (2014). *Tana River-Monthly Bulletin, A National Population Conference, Managing Population to achieve vision 2030*. Final Report. KICC, 15-17th November, Nairobi Kenya.
- Nyaguthii, E. & Oyugi, A. (2013). Influence of Community Participation on successful implementation of Constituency Development Fund Projects in Kenya: Case Study of Mwea Constituency
- Ochelle O.G. (2012). *Factors influencing sustainability of community water Projects in Kenya: A case of water projects in Mulala division, Makueni County*. Msc Thesis, University of Nairobi.
- OECD (2013). *Governance for Sustainable Development: Five OECD Case Studies*. Paris: OECD.
- Okoth, A. O. (2016). *Determinants of Sustainability of Health Projects: A Case of Public Hospitals in Nairobi County, Kenya*. A Master's Thesis, University of Nairobi.

- Okun, M. A. (2012). *Factors affecting sustainability of donor funded projects in arid and semi-arid in Kenya: a case of Marsabit Central District*. An Unpublished Master's thesis, Kenyatta University.
- Oregon, P. (2011). *"Project sustainability manual" How to incorporate sustainability into the project cycle*. Mark O. Hatfield School of Government, Portland State University Programme 2010- 2014.
- Orondi, V.C. (2015). *A Study on Factors Affecting Financial Sustainability of Christian Industrial Training Centres*. Eldoret: Moi University Press.
- Pauline, M. (2015). *Food projects and how they work*. [<http://www.sustainweb.org/>].
- PMBOK. (2015). *A Guide to the Project Management Body of Knowledge*. Project Management Institute, Inc. Fourth Edition.
- Rita, C. (2011). *An Investigation of the Factors That Affect Sustainability of Community Based Projects in Bomet County*. An Unpublished Master's thesis, Kenyatta University, Kenya.
- RoK. (2013). *Ministry of Devolution and Planning; County Development Profile*. Nairobi: Government Printer.
- Smith, D. E. (2004). *Writing the social: Critique, theory and investigations*. Toronto: University of Toronto Press.
- Spaulding, D. T. (2014). *Program evaluation in practice: Core concepts and examples for discussion and analysis*. Hoboken: John Wiley & Sons.
- United Nations. (2015). *Development programme evaluation office -Handbook on Monitoring and Evaluating*. <http://web.undp.org/evaluation/documents/handbook/me-handbook.pdf>
- US (2015). *Sustainability Projects for United States | Sustainable Measures*. Retrieved from <http://www.sustainablemeasures.com/projects/sus/sustainability/5>
- USAID (2010). *Drylands livestock development programme*. USAID.
- Uyoga, C.A. (2012). *Factors influencing sustainability of donor funded educational projects in Kenya: a case of free primary education programme in Korogocho slums*. Unpublished Master's thesis, University of Nairobi, Kenya.
- WASREB Impact Report. (2012). *A performance Report of Kenya's Water Services Impact Report*. Nairobi: WASREB
- WASREB. (2012). *Water and Sanitation Coverage*. Sub-Sector Issue No 3. Nairobi: WASREB

WHO. (2012). *Reducing Risks, Promoting Health Life*. World Health report Geneva.

World Bank. (2010). *World Development Indicators*. Washington, DC: The World Bank.

World Bank. (2011). *Monitoring & Evaluation Capacity Development*. The World Bank Group.

<http://go.worldbank.org/1FASV17ECO>

APPENDICES

Appendix I: Letter of Transmittal

Dear Sir/ Madam,

RE: ACADEMIC RESEARCH PROJECT

I am a student at the University of Nairobi currently pursuing a Master's degree programme in Project Planning and Management. I invite you to take part in a survey aimed at establishing determinants of sustainability of Drought support project in Isiolo County. A questionnaire has been designed and will be used to gather relevant information to address the research objective of the study. Information collected will be treated confidential and was used specifically for academic purpose only. Strict ethical principles will be observed to ensure confidentiality and the study outcomes and reports will not include reference to any individuals.

Thank you in advance,

Yours Sincerely

JARSO IBRAHIM GOLLOLE

Appendix II: Research Questionnaire

Kindly answer the following questions by writing a brief answer or ticking in the boxes provided.

SECTION A: Background Information

1. Gender of respondent (Please tick appropriate)

Male () Female ()

2. What is your level of education? (Please tick appropriate)

No schooling () Primary () Secondary () Certificate () Diploma () University Degree ()

3. What is your occupation? (Please tick appropriate)

Government staff () NGO Staff () Community leader () Beneficiary Committee Member ()

4. Please Indicate your age bracket

20-30 yrs [] 31-40 yrs []
41-50 yrs [] 51 – 60 yrs []

SECTION B: DETERMINANTS OF SUSTAINABILITY OF DROUGHT SUPPORT PROJECT IN ISIOLO COUNTY.

Resource Availability

5. To what extent does resource availability influence sustainability of Drought support project in Isiolo County?

Very great extent [] Great extent [] Moderate extent []

Little extent [] No extent []

6. Please indicate the extent that the following aspects of resource availability influence sustainability of Drought support project in Isiolo County? Where:

5- Strongly agree; 4-Agree; 3-Not sure; 2-Disagree; 1- Strongly disagree

	1	2	3	4	5
There are always available human resources for undertaking project activities					
There is adequate support equipment for undertaking project activities					
The projects are financially supported					
Project resources are easily accessed by the project management					
The resources are not adequate undertaking the projects					
The project stakeholders are trained in resource mobilization techniques					

7. In what ways does resource availability influence sustainability of Drought support project in Isiolo County?

.....

Institutional linkages

8. To what extent does institutional linkages influence sustainability of Drought support project in Isiolo County?

Very great extent [] Great extent [] Moderate extent []
 Little extent [] No extent []

9. Please indicate the extent that the following aspects of institutional linkages influence sustainability of Drought support project in Isiolo County? Where:

5- Strongly agree; 4-Agree; 3-Not sure; 2-Disagree; 1- Strongly disagree

	1	2	3	4	5
Coordination among partners within the scope of project					
The project management enforces innovative joint planning approach					
The project has improved enabling environment for livestock value chain development					
There is an integration of project objectives through co-					

financing and co-creation					
There are opportunities for learning and catalyzing commercial investments					

10. In what ways does institutional linkages influence sustainability of Drought support project in Isiolo County?

.....

Community participation

11. To what extent does community participation influence sustainability of Drought support project in Isiolo County?

- Very great extent [] Great extent [] Moderate extent []
 Little extent [] No extent []

12. Please indicate the extent that the following aspects of community participation influence sustainability of Drought support project in Isiolo County? Where:

- 5- Strongly agree; 4-Agree; 3-Not sure; 2-Disagree; 1- Strongly disagree

	1	2	3	4	5
The community takes part in design and implementation of the project					
Community have been providing labour in undertaking project activities					
The land where the project is being undertaken is provided by the community					
The community takes part in resource mobilization for the projects					

13. In what ways does community participation influence sustainability of Drought support project in Isiolo County?

.....

Project progress reporting

14. To what extent does project progress reporting influence sustainability of Drought support project in Isiolo County?

Very great extent [] Great extent [] Moderate extent []
 Little extent [] No extent []

15. Please indicate the extent that the following aspects of project progress reporting influence sustainability of Drought support project in Isiolo County? Where:

5- Strongly agree; 4-Agree; 3-Not sure; 2-Disagree; 1- Strongly disagree

	1	2	3	4	5
Project monitoring personnel are taken through a training on how to report progress of the project					
The progress of the projects is frequently reported					
Monitoring systems designed to ensure effectiveness					
The project progress reporting is carried out within schedule					
Project progress reports helps project managers in keeping track the implementation of the projects					
Project progress reports provides project management with a strategy to plan for sustainability of the projects					

16. In what ways does project progress reporting influence sustainability of Drought support project in Isiolo County?

.....

Sustainability of Drought support project in Isiolo County

17. What has been the trend of aspects of sustainability of Drought support project in Isiolo County for the period of the last five years? Where, 5 = greatly improved, 4= improved, 3= constant, 2= decreased, 1 = greatly decreased

	1	2	3	4	5
Drought support project have continued to benefit the community after completion					
Resources are mobilized for maintenance of the project					
The community is satisfied with the outcomes of the projects					
There is adequate involvement of beneficiaries in project management					

The projects have continued to function					
Benefits from project outcome are desirable					

Thank you