SCHOOL OF CONTINUING EDUCATION

INDIRA GANDHI NATIONAL OPEN UNIVERSITY

MASTER OF ARTS (RURAL DEVELOPMENT)/MARD

DISASTER RESILIENCE CHARACTERISTICS OF PASTORAL COMMUNITY AND THE RELEVANCE OF SELECTED NON-GOVERNMENT ORGANIZATION (NGO) INTERVENTIONS: THE CASE OF MOYALE DISTRICT COMMUNITY, BORENA ZONE, OROMIA REGIONAL STATE, ETHIOPIA

BY

FEREW OLANA JAWO

(ENROLMENT NO. ID1361820)

MAY, 2018

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A THESIS SUBMITTED TO INDIRA GANDHI NATIONAL OPEN UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF ART IN RURAL DEVELOPMENT (MARD)

BY

FEREW OLANA JAWO

(ENROLMENT NO. ID1361820)

ADVISOR

DR. MENGISTU HULLUKA

MAY, 2018

ADDIS ABABA

DECLARATION

I hereby declare that the thesis entitled "DISASTER RESILIENCE CHARACTERISTICS OF PASTORAL COMMUNITY AND THE RELEVANCE OF SELECTED NON-GOVERNMENT ORGANIZATION INTERVENTIONS: THE CASE OF MOYALE DISTRICT COMMUNITY, BORENA ZONE, OROMIA REGIONAL STATE, ETHIOPIA" submitted by me for the award of the degree of Masters of Art in Rural Development, Indira Gandhi National Open University, is original work and it hasn't been presented for the award of any other degree or other similar title of any other university or institution.

Name: **Ferew Olana Jawo** Signature:_____

May 05, 2018

St. Mary's University

IGNOU, International Programs

Department of Rural Development

Addis Ababa, Ethiopia

CERTIFICATION

This is to certify that the thesis entitled ""DISASTER RESILIENCE CHARACTERISTICS OF PASTORAL COMMUNITY AND THE RELEVANCE OF SELECTED NON-GOVERNMENT ORGANIZATION INTERVENTIONS: THE CASE OF MOYALE DISTRICT COMMUNITY, BORENA ZONE, OROMIA REGIONAL STATE, ETHIOPIA" has been duly compiled by Mr. Ferew Olana Jawo under my supervision to fulfill the requirement for the degree of Masters of Art in Rural Development.

Name of Supervisor: **Dr. Mengistu Hulluka**

Signature:_____

Date: May 05, 2018

DEDICATION

This thesis manuscript is dedicated to my mother, Zenebetch G/Silasie, for her continuous support and prayer in the course of my study and success of my life since childhood.

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Acronyms

CLA	Cluster Level Association
CMDRR	Community Managed Disaster Risk Reduction
CoBRA	Community Base Resilience Analysis
CRED	Center for Research on the Epidemiology of Disaster
CSA	Central Statistic Authority
DAIE	Dorcas AID International Ethiopia
DDC	Data Distribution Center
DFID	Department for International Development
DPPC	Disaster Prevention and Preparedness Commission
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EM-DAT	Emergency Events Database
FAO	Food and Agriculture Organization (United Nations)
FEWSNET	Famine Early Warning Systems Network
FGD	Focus Group Discussion
GDP	Gross Domestic Product
HH	House Hold
IGA	Income Generation Activity
IPCC	Intergovernmental Panel on Climate Change
KII	Key Informant Interview
MoA	Minister of Agriculture
NGO	Non-Governmental Organization
OCHA	Office for the Coordination of Humanitarian Affairs (UN)
PSNP	Productive Safety Net Programme
PFE	Pastoralist Forum Ethiopia
SLF	Sustainable Livelihoods Framework
SHG	Self Help Group
SNNPR	Southern Nations Nationalities and Peoples Region
SPPC	Strategic Partnership Protracted Crisis
UNDP	United Nations Development Programme
UNISDR	United Nations International Strategy for Disaster Reduction
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene

Abstract

Pastoralist communities in the south and east parts of Ethiopia have been experiencing recurrent disasters that weakened the local adaptive mechanisms and made them less resilient and vulnerable. Particularly, the trend and frequency of drought is increasing without giving time to recovery. It rigorously deteriorated the resilience capacity of households and local institutions. Much has been done in the last couple of decades in the way of managing disaster risks. Nevertheless, despite substantial efforts of all concerned actors, the frequency and scale of adverse events and shocks have been increasing. This study was, therefore, initiated in the objective of identifying key building blocks of community resilience, evaluating the status of the community with respect to identified resilience dimensions, assessing the characteristics and strategies of disaster resilient households and also to examine the most highly rated interventions of the government and/or NGOs in building local disaster resilience. In the study, participatory qualitative approaches, namely focus group discussions and key informant interviews were employed. Moreover, secondary sources were reviewed to cross check and triangulate the data. The analysis of the findings indicated that drought and conflict are still the prevalent hazards of pastoralists that significantly contributed to livelihood losses and limited the development and prosperity of the locality. The top five statements that distinguishes the resilience characteristics of the community include: peace and security, human health care, food security, water for human and livestock consumption and education. The major characteristics of households that are relatively resilient could be summarized into having sustainable income obtained from small businesses that are less dependent on the weather and assets like livestock and shelter. Access to finance, off-farm income and education were found to be the primary driving factors to reaching a resilient status. It was the mixture of these characteristics that seemed to be key to allow households to spread risk across income sources. The community indicated that small business, credit/saving, supply of food/relief, education, women empowerment, and water development as the main interventions that made significant contribution in enhancing resilience of households. Therefore, the long and short term disaster reduction strategies should focus on these areas first to build resilience of pastoralists.

Key words: pastoralist, resilience characteristics, disaster, vulnerable

Chapter One: Introduction

1.1 Background of the Study

Ethiopia is exposed to a wide range of hazards associated with the country's diverse geo-climatic and socio-economic conditions. Drought and floods represent major challenges, as well as a number of other hazards adversely affect communities' livelihoods which include frost and hail, crop pests and diseases, livestock diseases, human diseases, local conflicts, landslides, earthquakes, urban and forest fires. Climate change is predicted to further increase exposure to climate-related and hydrological hazards. Ethiopia is vulnerable, given the importance of agriculture for the overall economy and the livelihoods of poor households, and the scarce diffusion of irrigation and water-shed management practices (FDRE 2013). Deforestation, poor management of land and water, depletion of key ecosystems and loss of bio-diversities have contributed to climate change, food insecurity and conflicts in the country (USAID, 2013). The vulnerability of Ethiopia to climate change impact is a function of several biophysical and socioeconomic factors. Although the name "Water Tower of Africa" has been given to Ethiopia, agriculture is overwhelmingly dependent on the timely onset, amount, duration, and distribution of rainfall. Over 90% of the food supply comes from rain fed subsistent agriculture and rainfall failure means loss of major livelihood source that always accentuate food deficit (Adgolign, 2006).

Ethiopia is home for about 12-15 million pastoralists who reside in 61% of the nation's landmass. The pastoral areas are estimated to comprise 42% of the national total livestock population (PFE, 2009). Although no country is immune from the potential impacts of climate change, the impacts are highly variable over space, capabilities and time. In particular, climate change and variability will present a significant challenge for developing countries particularly pastoralists (IPCC, 2007 cited in Akililu and Alebachew, 2009). The pastoral localities in the country are under the constant hit of recurrent drought which

results in huge amounts of livestock losses that are basis for the livelihood of the pastoralists.

Population growth, loss of prime grazing lands and an influx of refugees further threaten the way of life and survival of Ethiopian pastoralists (Abdulahi, 2005). High dependence on natural resources and climate sensitive livelihoods coupled with the existence of rampant poverty, weakening of local adaptive mechanisms and variable weather events put pastoralists in most vulnerable position (Akililu and Alebachew, 2009). The problem became severe in the arid and semi-arid regions, especially among the pastoralists in Borana zone that reside in periphery of the country where the recurrent drought is the major catastrophe.

Pastoralism in East Africa in general and the Borana in particular constitutes an old age tradition that historically proven capable of adaptation to arid and semi-arid region. “Thus, the Borana pastoralists are not single spectator in the face of this crisis” (Gemechu, 2002). They have developed different types and forms of indigenous survival strategies to cope with recurrent drought. They have been changing and adapting their livelihoods to changing environmental conditions for centuries. Recurrent droughts have been a major issue throughout history in the Borana pastoral lowlands, and strategies to cope with, and adapt to these droughts are embedded in communities’ traditional social structures and resource management systems (Riche et al., 2009). However, the weakening of local adaptive mechanisms due to different internal and external factors has made Borana pastoral community remain less resilient and vulnerable to recurrent drought.

Historical trends and factors in Borana lowlands show that, the frequency of drought is increasing from time to time without giving time to recover from previous drought shocks. This leads to the death of huge number of livestock which is the basis for pastoral livelihoods.

Much has been done in the last 30 years in the way of managing disaster risks. Large scale programs have been designed to mitigate the effect of drought by focusing on vulnerabilities, through household asset building, and public works for environmental rehabilitation and generation of livelihoods. Preparedness has been enhanced through the early warning system, the strategic grain reserve, and the development of standard guidelines for assessment and intervention. Humanitarian response currently count on an established risk financing mechanism, better coordination, and improved resource management and prioritization. A recovery strategic framework guides the community recovery from disasters and the protection of livelihoods (FDRE 2013).

However, despite substantial efforts by donors, governments, and civil society to mitigate and prevent disasters, the frequency and scale of adverse events, shocks and stresses has been increasing (MoA, 2013). Risk reduction programs should, therefore, include a strong component of resilience building to help communities overcome their vulnerability and cope with shocks and stresses (Frankenberger et al., 2012).

This study is, therefore, intended to assess context based resilience characteristics of households and the community at large in Moyale district of Borena Zone where an NGO, Dorcas AID International Ethiopia, is operational. It aimed at understanding the status of the communities in light of the identified resilience dimensions, evaluate the characteristics and strategies of disaster resilient households and also to examine the most highly rated interventions contributing to building local disaster resilience. The study believed to substantially contribute to ensuring efforts of achieving food security and household livelihood diversification and resilience to the impacts of disasters. It would have also relevance to a wide range of developmental and humanitarian efforts in various fields such as policy, planning, programme, M&E and research processes.

1.2 Problem of the Statement

Ethiopia is a country prone to droughts, floods, landslides, pests, earthquakes, and urban and forest fires. Estimates suggest that 80-85 percent of the populations are dependent on rain-fed agriculture for their livelihoods, exposing many people to the potential impacts of climatic-related events. Pastoralist communities in the south and east of the country, in particular, are susceptible to the changing climatic patterns.

Pastoral regions are the most arid and drought affected regions in the country. Substantial portions of the population are either food-insecure or chronically hungry. Borena zone is one of the pastoral locations that share similar characteristics. Within the locality, drought impact is exacerbated by chronic inter-clan and ethnic insecurity and conflict. The conflict is partly linked to scarce resources such as pasture for grazing and water, but it is also attributed to ethnic, and tribal tensions between tribes and groups, all exacerbated by the impacts of frequent drought.

According to Ayalew (2001), some of the major pastoral problems in Ethiopia are, the marginality of the area (arid and semi-arid) they occupy, unreliable rainfall, shortage of water, poor infrastructure, inappropriate development interventions, bush encroachment, interethnic conflict, and social service and market problems. The appropriation of pastoral communal resources by state, the expansion of protected areas, privatization of land, the encroachment of farming into grazing land, occurrence of recurrent drought, restricted mobility and famine are also the problems that the pastoralists are facing.

Resilience building will entail adjustments and changes at every level – from households, community to national and international. To cope with current and future drought stress, Borana communities must build their resilience by diversifying their livelihoods and adopting pastoral friendly technologies to cope with climatic impacts. Local coping strategies and local knowledge need to be used in synergy with government and local interventions by giving due attention.

But, in Borana pastoralist areas these indigenous coping mechanisms; have been weakening over time. For instance Gemado et. al. (2006), stated that "less application of indigenous ecological knowledge, the gap between traditional and formal systems, and trends of disobeying traditional rules and regulations were identified as current challenges for the Borana pastoralists". These challenges have resulted in adverse impacts on livelihoods and resilience capacity of Borana pastoralists.

In addressing risk and vulnerability, the government has shown a major commitment to change. The 2013 Disaster Risk Management Policy (which is accompanied by a new administrative structure) is to be commended, notable on account of marking a shift in orientation from crisis management to a forward-looking, multi-sectorial and multi-hazard disaster risk management strategy. In addition, the Productive Safety Net Programme, Ethiopia's largest social protection programme, and a major component of the Food Security Programme, as well as the Climate Resilient Green Economy Strategy (SWISS, 2015).

Even though various efforts were exerted by the government, as well as by national and international humanitarian organizations to minimize the crisis through resilience building, the scale, frequency, and number of people suffering by natural hazards has been increasing during the last few decades. As a result, the pastoral society is facing a rage of social, economic, political as well as climatic pressures, some of which are forcing people to abandon their former traditional livelihoods and to migrate. The early copping strategies of the people have been significantly eroded to the level that weakens the response capacity of households and local institutions. Hence, the community's dependency on external support to fulfill basic needs has increased year after year.

In such situation of protracted crisis the concept of resilience has been challenging for both developmental and humanitarian actors. Theoretically, "building resilience" offers the promise of helping households, communities and

broader systems to “bounce back” or “bounce back better” from the negative effects of catastrophic events, whilst maintaining opportunities for growth and sustainable development. Despite the implied potential, the process of identifying where and how to build resilience in practice remains largely elusive as different organizations have varying understandings and interpretations of the term. It encompasses multiple sectors and dimensions. In addition, several important aspects, such as governance or ecosystem, health are not easy to quantify. Furthermore, mapping and measuring the interplay among diverse and constantly changing components adds yet another complication to the process. Due to lack of consensus and consistency in terms of what resilience means and how to measure resilience, it is difficult to objectively monitor and verify the success (or failure) of numerous ongoing resilience building initiatives (UNDP, 2013).

By taking all these problems into account this particular research was conducted purposely in Moyale district, situated in Borena zone, where the recurrent drought and conflict have been the major catastrophes for long periods of time, in the aim of the objectives stated below.

1.3 Objectives of the Study

1.3.1 General Objective

The overall objective of the research is to assess the priority disaster resilience characteristics of Moyale community and review the significance of interventions made by selected non-governmental organization, DAIE.

1.3.2 Specific Objectives

1. Identify key disaster resilience characteristics of the community and households of Moyale district.
2. Assess the achievements of the community towards the identified resilience characteristics at the time of assessment.

3. Identify the major interventions of a selected NGO in building local disaster resilience in the study area.

1.4 Research Questions

1. What are the main characteristics/dimensions of disaster resilience in the context of the community in Moyale?
2. What is the capacity of the community in attaining the major characteristics of resilience?
3. Which ongoing factors/interventions have contributed to improve the resilience to disaster of the community?

1.5 Significance of the Study

The study area has been experiencing different types of disasters which deteriorated the coping capacity of the community. The trend and frequency of disasters has also been increasing and significantly altered the livelihood of the people and their resilience capacity. Therefore, assessing context based resilience characteristics of the community is very essential in order to evaluate the status of the community with respect to identified resilience dimensions as well as the characteristics and strategies of disaster resilient households and also to examine the most highly rated interventions of the selected NGO in building local disaster resilience. In addition, the study assesses the positive experiences by identifying the households perceived to be already resilient and examining what those households have or do differently that enabled them to bounce back (better) from past shocks or stresses. This evidence-based approach significantly improves the understanding of what resilience looks like in reality.

It also investigates the opportunities, constraints and factors affecting pastoralists' resilience capacity and recommend locally appropriate strategies. The households as well as communities in the study area will have the opportunity to share their local knowledge, strategies and experiences related to disaster resilience. The study will substantially contribute to ensuring efforts of

achieving food security and household livelihood diversification and resilience to the impacts of drought.

The finding of this research can play significant role to enhance and facilitate exchange of appropriate knowledge and information among local communities, field experts, key stakeholders, policy makers and researchers. This will help the adoption, dissemination and scaling out best resilience strategies to the larger pastoral community. These findings are of high relevance to a wide range of actors working in the area and will complement and supplement their developmental and humanitarian efforts significantly in various fields such as policy, planning, programme, M&E and research processes.

Furthermore, the best strategies and options derived from the finding will be valuable inputs for DAIE future programing in the area. It also enables the organization to design more context-relevant interventions and promote more evidence-based, cost-effective resource allocations. The organization consider itself as a learning organization and, after identification and implementation of the best strategies, DAIE will continue sharing the learnings and best experience to its stakeholders, partners and the communities in the future.

In general, the research will be engaged in documenting the processes and findings that will enhance the knowledge and skill of the pastoral community on resilience strategies for its effective implementation.

1.6 Scope and Limitation of the study

The study has been carried out as intended except the rearrangement of KIIs and FGDs schedule conducted in one of the sampled kebeles due to community meeting organized by woreda and kebele level government officials. During the period of the study almost all objectives and research questions were addressed. However, identification of resilience characteristic of the community and households, was limited in terms of time as it observes only the current factors that builds the distinguished characteristics. During data collection it was observed that a group of community was displaced from their residence areas as

a result of ethnic conflict. The situation might have some impact on the data collected as prevailing conditions usually dominate the thoughts of people participated in FGD and KII.

In relation to coverage, as indicated on the sampling frame the research area was limited to four kebeles because of resource constraints such as time and budget.

Even though efforts were made by facilitator who engaged in data collection to clarify the purpose of the assessment, it was observed to some extent that FGD and KII were responding questions with attitude that the result would bring some benefit or intervention. This is mainly because the data collectors were from DAIE Moyale project office.

Despite the limitations of this study, the findings have important implications for future research and effective program development in the area and other similar contexts.

1.7 Definition of Terms

1.7.1 Disaster

A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.(UNISDR 2009)

1.7.2 Resilience

There are various definitions of resilience and they broadly reinforce each other. UNDP (2013) defines resilience as: “an inherent as well as acquired condition achieved by managing risks over time at individual, household, community and societal levels in ways that minimize costs, build capacity to manage and sustain development momentum, and maximize transformative potential.”

The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and

efficient manner, including through the preservation and restoration of its essential basic structures and functions (UNISDR, 2009).

The United Kingdom Department for International Development's (DFID, 2011) definition also links resilience with long term development: "Disaster Resilience is the ability of countries, communities and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses - such as earthquakes, drought or violent conflict – without compromising their long-term prospects"

The IPCC (2013) defines resilience as the ability of a system and its component parts to anticipate, absorb or recover from the effects of a hazardous event in a timely and efficient manner, including ensuring the preservation, restoration, or improvement of its essential basic structures and functions.

1.7.3 Drought

A deficiency of precipitation over an extended period of time, usually a season or more, which results in a water shortage for some activity, group or environmental sectors (UNISDR, 2009).

Chapter Two: Review of Literature

2.1 Global and Regional Overview of Disaster

Disasters hit every part of the globe (developing and developed), causing deaths and destructions. Hurricanes, fire, earthquake, tsunami, flood, drought, volcanic eruptions, landslides, cyclones, wars, oil spills, acts of terrorism, just to name a few, are the natural and man-made disaster events that resulted in untold suffering to the millions of people worldwide. Disasters often entail sudden shocks that disrupt the livelihoods of communities, infrastructure and institutions (UNDP Ethiopia, 2011). Even without sudden shocks, communities affected by drought face slow-onset and persistent stress that affects their wellbeing. Climate change is one of the causes of such stress and takes a significant toll on the economic production and resilience of communities (USAID, 2013).

The global approach to adverse events, shocks and stresses originally focused on response. As it has become clear that risk reduction should be a higher priority, there has been an increasing focus on prevention, mitigation and preparedness (Frankenberger et al., 2012). However, despite the best efforts of donors, governments, and civil society to mitigate and prevent disasters, the frequency and scale of adverse events, shocks and stresses is increasing (MoA, 2013). Risk reduction programs should therefore include a strong component of resilience building to help communities overcome their vulnerability and cope with shocks and stresses (Frankenberger et al., 2012).

According to UNISDR Centre for Research on the Epidemiology of Disasters (CRED) Emergency Events Database (EM-DAT) in total more than one billion people affected by droughts in the period 1995-2015; that is more than a quarter of all people affected by all types of weather related disasters worldwide. The same report recorded that there was a total loss of US$ 1,891 billion from weather related disasters in the same period, which is equivalent to 71% of all losses attributed to natural hazards. UNISDR's 2015 Global Assessment Report

on Disaster Risk Reduction estimated that economic losses from disasters are now reaching an average of US$ 250 billion to US$ 300 billion each year.

As per the Intergovernmental Panel on Climate Change (IPCC) (2014), climate change and the resulting climate variability affect crop production in several regions of the world, with negative effects more common than positive, and developing countries highly vulnerable to further negative impacts. Increases in the frequency and intensity of extreme events such as drought, heavy rainfall, flooding and high temperatures are already occurring and expected to accelerate in many regions. Average and seasonal maximum temperature is projected to rise in the future, with an overall higher average rainfall in developing countries. These effects will not, however, be evenly distributed. Water scarcity and drought in already dry regions are also likely to increase in the future (Lipper et al., 2014).

The number of disasters reported in Africa has increased significantly since the 1970s. Over the last four decades, Sub-Saharan Africa has experienced more than 1000 disasters, with 300 disasters in the last five years alone. Since then more than 330 million people were affected by droughts, floods, cyclones, earthquakes and volcanoes in Africa (EMDAT, 2010). Drought and floods together account for 80 percent of loss of life and 70 percent of economic losses linked to natural hazards in Sub-Saharan Africa (African Union et al., 2008).

Droughts occur predominately in semi-arid and sub humid areas of the Sahelian countries, the Horn of Africa, and Southern Africa (World Bank/GFDRR, 2010). The same source indicated that natural disasters tend to have a greater impact on poor countries, thus countries with small and vulnerable economies, such as many small island states, land locked countries and many countries in Africa. Their ability to recover and reconstruct after a major disaster is often limited, further diminishing their ability to increase resilience to disasters. This cycle is often referred to as the “disaster risk–poverty nexus”. The vulnerability of the African continent to disasters is linked to its poverty and structural issues and is caused and expressed by:

- Limited fiscal space and options to access financing to invest in risk reduction and recovery
- An economic foundation based on rain-fed agriculture
- Weak infrastructure to manage resources and recover from disasters
- Weak governance structures and institutional capacities
- A limited knowledge base to forecast and respond to natural disasters

This vulnerability is further fueled by environmental degradation and climate change, which will likely increase the frequency and magnitude of extreme weather events

Climate change scenarios for Africa, based on the IPCC Data Distribution Centre (DDC) indicates that future warming across Africa ranging from 0.2°C to more than 0.5°C per decade. The mean annual temperature for Ethiopia will increase in the range of 0.9 -1.1 °C by 2030, in the range of 1.7 - 2.1 °C by 2050 and in the range of 2.7-3.4 °C by 2080 compared to the 1961-1990 normal (Belay, 2012).

Drought affects Africa more than any other continent, with EM-DAT recording 136 events there between 1995 and 2015 (some 41% of the global total), including 77 droughts in East Africa alone. Droughts take a high human toll in terms of hunger, poverty and the perpetuation of under-development (Below et al., 2007). They are associated with widespread agricultural failures, loss of livestock, water shortages and outbreaks of epidemic diseases. Some droughts last for years, causing extensive and long term economic impacts, as well as displacing large sections of the population. Consecutive failures of seasonal rains in East Africa in 2005, for example, led to food insecurity for at least 11 million people (Dilley et al., 2005).

According to the IPCC, “climate change is very likely to have an overall negative effect on yields of major cereal crops across Africa, with strong regional variability in the degree of yield reduction” (IPCC, 2014). Despite its potential

and on account of its vulnerability, in terms of the estimated level of food insecurity, Ethiopia is amongst the top five countries in Africa (GAR, 2015).

2.2 Disaster in the Context of Ethiopia

Ethiopia is the second most populous country in Sub-Saharan Africa. Agricultural activities provide employment for some 85 per cent of the population and supplies 70 per cent of the raw material requirements of local industries. The livestock sector alone is reported to contribute 12-16 per cent of total GDP and 8 percent of export earnings (Aboud et al, 2012). With a 2014 population of approximately 96.5 million people, Ethiopia has one of the lowest incomes per capita. Government has, however, been investing heavily in economic and social infrastructure, streamlining public services, revamping the tax collection system, and supporting small and medium enterprises (UNDP, 2015). It has also prioritized key sectors such as industry and agriculture, as drivers of sustained economic growth and job creation. The data, for 2012-2013, reveal that Gross Domestic Product (GDP) registered a growth rate of 9.7 per cent (UNDP, 2015). Agriculture contributed some 7.1 per cent to this figure which, while representing an increase over the two previous years, was still far below the 13.5 per cent figure recorded in 2004-2005.

Despite the successive year economic growth recorded as a result of the success of agriculture and rural centered development strategy being implemented in Ethiopia, besides drought, risks of other disasters like flood, human epidemics, livestock disease outbreak, crop pests, forest and bush fires frequency, scale and intensity have been increasing due to climate change. Weather forecast information issued about climate change also suggest that this situation is going to continue and aggravate in the future (FDRE, 2013). According to FDRE (2011), Ethiopia experiences three distinct seasons. The dry season (or bega) October through January. The belg season extends from February to May and represents the main rainy season for pastoral areas in the eastern and southern areas. The kiremt season is the main wet season for most parts of the country and extends

from June to September. The belg rains have been decreasing consistently since 1990s.

Multiple factors influence the country's vulnerability to natural hazards, including dependence on rain-fed agriculture, land degradation, and weak institutions. Ethiopia has a long history of recurring droughts which, since the 1970s, have increased in magnitude, frequency, and impact (GFDRR, 2016). Of all the hazardous events, drought has over many centuries' triggered famines that caused human losses of catastrophic proportions in Ethiopia. Although the country experienced its first drought-induced famine in the second half of the 9th Century, recorded history confirmed that recurrent famine coupled with disease epidemics claimed many lives and caused internal displacements unabated since the 13th century (Pankhurst, 1983, and RRC, 1984). In 1973/74, Ethiopia experienced one of its worst famines that claimed more than a quarter of a million lives and affected more than three and half million people in almost ten administrative provinces of the country (RRC, 1984). Pastoralists also lost 80 % of their herds (ibid).

Exactly ten years after the first great famine in recent history, another drought-induced famine struck in 1983/84. Not only did it affect eight million people in the entire country, but also it left an estimated million people starved to death. More particularly, famine took its heavy toll on highland farmers and lowland nomadic population (PDRE, 1989).

Since the catastrophic famine of 1983-1984, Ethiopia has endured at least six major droughts: from 1988-1989, 1999-2000, 2003, 2005, 2007-2008, and 2011-2012. Many of these droughts have affected the semi-arid and arid regions located in the eastern, southern and south-eastern lowlands, where pastoralism and agro-pastoralism remain the dominant forms of livelihoods (SWISS, 2015).

The 2011 Horn of Africa drought left more than 4.5 million people in need of food assistance. This is in addition to the 7.5 million people who were already

receiving food aid. Furthermore, pasture and water shortages caused massive livestock deaths in the south and southeastern parts of the country (GFDRR, 2016). The same document describes climate change studies show that vulnerability to cyclic hazards is increasing, especially among the poor. Moreover, due to climate change as well as additional human-induced factors, the areas affected by drought and desertification are expanding in the country. Recurrent drought and floods in particular have the most severe impacts on people's lives in Ethiopia (GFDRR, 2009).

Over the last 50 years the average annual temperature in Ethiopia has risen with 1 degree. There is no significant trend in precipitation for the country as a whole (Christensen et al., 2007). A study by Verdin et al, (2005) looked at seasonal trends in rainfall and they found that, nationally, the "Kiremt" rains (from June to September) have been fairly consistent since the 1960s but that the "Belg" rains (from February to May) have been decreasing consistently since 1990s. They argue that the decrease in the "Belg" rains may be part of a larger set of climatic changes in the Indian Ocean basin in which anomalies in the southern equatorial Indian Ocean lead to anomalous circulation, resulting in the reduction of rainfall over parts of the Greater Horn.

According to the IPCC, "climate change is very likely to have an overall negative effect on yields of major cereal crops across Africa, with strong regional variability in the degree of yield reduction" (IPCC, 2014). Despite its potential and on account of its vulnerability, in terms of the estimated level of food insecurity, Ethiopia is amongst the top five countries in Africa (GAR, 2015).

2.2.1 Disaster in Pastoral Areas of Ethiopia and Borena Zone

In Ethiopia livelihoods of most people are dependent on farming or pastoralism. Pastoralism, which is often found in lower rainfall areas, is characterized by long and short distance migration searching for pasture lands and water. As a result, welfare of pastoralist communities is directly related to environmental factors, such as scarcity of water and grazing lands which are able to pose

natural threats to pastoralist livelihood systems and anthropogenic conflicts arising from competition over such scarce resources as pasture lands and water. (ICSD, 2009).

The drier and hotter lowlands of the country are inhabited by pastoral populations comprising the whole of the Somali region (accounting for 57 per cent of the pastoralists in Ethiopia), the Afar region (26 per cent of pastoralists), and the Borena and Karrayu pastoralists which, together, account for about 10 per cent. The remaining seven per cent of Ethiopian pastoralists inhabit the lowlands of the Southern, Gambella and Beni Shangul regions (Yacob Arsano, 2000; Sanford and Habtu, 2000).

Pastoral production provides an immense contribution to the national economy by raising 40 per cent of the country's cattle, 75 per cent of its goats, 25 per cent of sheep, 20 per cent of equines and 100 percent of the camels (Yacob Arsano, 2000). The total direct economic contribution of pastoralism to the economy (through the production of milk, meat, hides and other items) was estimated at more than US$1.5 billion (Berhanu and Feyera, 2009). In the Borana zone alone, it is estimated that more than 40 percent of income is derived from the sale of livestock (ACSF-Oxfam, 2014): livestock exports from this region contribute significantly to national foreign exchange earnings. (Ethiopia Country Report, 2012).

The rainfall pattern is highly erratic in this area (FDRE, 1989). The overwhelming natural hazard facing the southern lowlands of Ethiopia is that of drought, accounting for 98 per cent of fatalities (Cordaid/Farm Africa, 2013). In addition to drought, the pastoralists face pests and poor access to improved crop and livestock varieties and markets (Lasage, A. et al, 2010). They are also vulnerable to loss of livestock and the need to migrate with their animals to regions less affected by drought (Lasage, A. et al, 2010). Human diseases such as malaria and animal diseases such as trypanosomiasis,

pasteurolosis, blackleg and anthrax are also important challenges to the livestock-based livelihood of the communities (Lasage, A. et al, 2010).

As the result of successive droughts, pastoral and agro-pastoral communities in the eastern and southern parts of the country have suffered considerable loss of livestock assets. The time between successive droughts has in many instances been too short for them to recover from the impacts of the earlier one (SWISS, 2015). Population growth, loss of prime grazing lands and an influx of refugees further threaten the way of life and survival of Ethiopian pastoralists (Abdulahi, 2005). Southern Ethiopia, where Borana Zone is located, experienced severe droughts in 2000 (Angasse A. & Oba G., 2007), 2006, 2008 and 2010–2011 (USAID, 2011). During the drought of 2000, 80% of livestock died (Angasse A. & Oba G., 2007). SWISS (2015) further reported that pastoralists and agro-pastoralists in Borana and the Somali region had not succeeded in recovering from the impacts of the 2008 drought before once again being impacted by the next drought event in 2011-2012 . The latter event affected the entire East Africa region, with some reports claiming this was "the worst in 60 years", threatening the livelihood of almost 10 million people (OCHA, 2011).

Other sources also confirm that the 2011 drought conditions have been caused by successive seasons with very low rainfall. Over the past year, the eastern Horn of Africa has experienced two consecutive rainy seasons which were severely below average. Analysis of rainfall in pastoral areas in Ethiopia and Kenya has revealed that rainfall over the past year was below average in all analysis areas, with 2010/11 being the driest or second driest year since 1950/51 in 11 of the 15 analyzed pastoral zones (FEWS NET, 2011).

In large areas of Borana Zone, overexploitation has led to falling groundwater levels and dry wells. Land degradation and deforestation decrease agricultural productivity through soil deterioration and erosion. Bush encroachment is another problem on pasturelands used for cattle. There have

been conflicts over declining grazing land as a result of climate change and environmental degradation (Lasage, A. et al, 2010).

Drought is a common phenomenon in many parts of Borana. The lowland parts are severely affected by recurrent droughts. Currently mean annual temperatures lay around 19°C in the zone. The warmest period in the year is from March to May, while the lowest annual minimum temperatures occur between the months of November and January (FDRE, 2001). In Borana communities droughts were recorded every 6- 8 years in the past, they now occur every 1-2 years (SCF, 2009).

Drought poses a major threat to pastoralism and rain-fed agriculture in Borana causing depletion/degradation to the natural resource base (rangeland pasture, water resources and maladaptive human practices in response to drought) and has much wider implications on the region's financial resources, education, health/levels of malnutrition, labour migration and livelihoods (SWISS, 2015). Droughts in the 1980s and 1990s resulted in the deaths of 37 and 42 per cent of all cattle, respectively. Over a period of 17 years, losses in the form of cattle mortality in Borana were valued at some US$300 million (Desta and Coppock, 2000). Taking the 2011 drought as an example, the Food and Agriculture Organization (FAO) estimates that the death rate of cattle, sheep and goats was 60 per cent, 40 per cent and 25-30 per cent (an average of 27 per cent), respectively (OCHA, 2011). In terms of environmental degradation, recurrent drought, combined with a ban on fire, has brought about an increase in bush encroachment of mainly native species. This, however, in turn has caused a significant depletion of available range/pasture resources in some areas. Studies suggest that bush encroachment has affected 52 per cent of the rangelands in the zone (OWWDSE, 2010).

2.2.2 National Policies and Strategies in Brief

The Government of Ethiopia has a long institutional history of addressing disaster risk management (DRM) and food security, starting with the

establishment of the Relief and Rehabilitation Commission (RRC) following the 1974 famines. Then, the structural reform was made to transform RRC to Disaster Prevention and Preparedness Commission (DPPC) for proactive engagement of disaster prevention with necessary preparedness ahead of time rather than dealing with crisis (relief) management in 1995. Further, the government transformed DPPC to Disaster Risk Management (DRM) to link the disaster management works with long term development works in order to address the underlying causes of hazards. This concept has influenced the policies, institutions and processes of humanitarian response in Ethiopia.

Since then, the country has taken a number of steps to shift to a more proactive approach to DRM, including:

- Establishing the Disaster Management and Food Security Sector (DRMFSS) in 2008 under the Ministry of Agriculture, which is responsible for the country's DRM activities;
- Updating the National Policy and Strategy on Disaster Management (2013), which provides a comprehensive DRM framework; and
- Developing a DRM Strategic Program and Investment Framework for government and donor interventions (2014).

To further advance the DRM agenda, priorities include:

- Enhancing understanding of risks through the development of risk profiles for all woredas (districts);
- Developing and strengthening building codes, land-use, and urban planning; and,
- Reducing risks by strengthening the Productive Safety Net Program; and establishing risk-financing mechanisms.

DRM as an approach has brought a shift in strategy from disaster management to risk management. The shift includes from conventional top-down to bottom-up, from centralized to local diversity and from blue prints to a learning process. In all these shifts, the emphasis is that, communities play a critical and decisive

role in disaster management. Past disaster management efforts did not focus on community participation or such efforts weren't institutionalized. By contrast, DRM focuses on community participation as central to manage risks. It ensures local ownership, addresses local issues and promotes social cohesion and mutual help. There are no instant answers or blanket solutions which DRM prescribes from the outset. Rather, it facilitates and builds the capacity of communities to understand their situation to assess their assets and strengths, and identify and define prior projects that can address risks affecting their livelihood. The new DRM policy mainly focus on decentralized multi-hazard multi-sector improved early warning system to proactively manage the disaster risk through empowering the local people and establishing Woreda Disaster Risk Profile (WDRP). It is with this intention that hotspot districts/woredas like Moyale have begun contingency plan update every year to make necessary preparedness to cope with likely happening hazards.

2.3 Perception of Disaster Resilience

There are several definitions of resilience which depict the concept and broadly reinforce each other. Some describe 'Vulnerability' and 'resilience' as relative terms and opposite side of the same coin. They can be related to the ability of individuals, households and communities to withstand hazard and risk and can be explained form the point of physical exposure and economic and social conditions relating to people's livelihood (Pasteur, 2011).

To maintain well-being and withstand shocks, households should have various options in terms of capabilities and assets and this includes both material and social resources (Alinovi, et al., 2010). In effect, households with good asset base wealth could resist shocks in more effective way than those with limited asset. Basically, households with strong asset based wealth are able to send their children to schools, afford modern medication, purchase farm inputs and ensure food security. However, households with poorest asset base depend for their living on family labor and their financial and physical assets are very weak. In this regard, a larger proportion of the world's food insecure households live in

rural areas. Their vulnerability to stress and disaster is high. They basically lack the capacity and resource to recover (Odingo and Atieno, 2011). Especially, in sub-saharan Africa, frequent drought erodes farmer resilience and makes them vulnerable to food insecurity. As a consequence, during drought and food shortage seasons the poor become dependent on erosive coping strategies such as selling of productive livestock; eating of very little or unpleasant foods; selling of agricultural tools; selling of land; and borrowing with high interest rates will increase alarmingly (Pasteur, 2011).

Household income and level of vulnerability have inverse relation. As income level increases household vulnerability to external shocks will decreases. With this respect, the study by Doocy et.al (2005) pointed out that because of micro credit program vulnerability of women headed households to prolonged drought and food insecurity reduced significantly. Swain and Floro (2012) also confirm that community based group members vulnerability to external shocks have reduced significantly since they joined the groups.

Besides, micro credit schemes could improve the social capital of a given community. Mehta (2011) said that SHGs could improve social status and decision making ability of the poor by empowering them in various life aspects. According to him, SHG could play a crucial role in social change and bring institutional and attitudinal change among the society where the SHGs exist. Good institutions make social networking and access to important information easy. This in turn improves the resource mobilization capacity of a given community in adverse situations.

To this end, those households that are more socially networked are likely to have a wider range of livelihood strategies, greater levels of other forms of social capital, and greater overall capital. Therefore, they are more resilient. Besides good institutions, building resilience requires: integrated and complementary partnerships; networks and strategies; promotion of healthy ecosystems; effective formal and informal governance; gender equity; social protection. In this

regard, the projects must be implemented at sufficient scale and over a long time period (Frankenberg et al., 2012). Furthermore, Coates et al. (2007) say that enhancing access to adequate health care service for women; improving the quality of basic education for children and life skill training for women; improving access to clean and safe water, reduce the level of food insecurity in a community. In other words, appropriate project intervention in the area of health and sanitation and education can improve resilience and intern food security.

The concept of resilience is not immune to criticism however. Béné et al. (2012) do not agree on presenting resilience as an objective outcome. For them resilience is "a neutral characteristic which, in itself, is neither good nor bad" and it may or may not be related positively with wellbeing; one can be very poor and unwell and yet very resilient. Frankenberg et al. (2012) also argue that using chronic vulnerability to food insecurity and recurrent exposure to livelihood shocks as the only identification criteria for resilience project implementation must be revised. According to them policy makers should formulate resilience strategies based on the 'why' and the 'where' aspects of resilience than the 'what' aspect.

2.4 Theoretical Framework

There are a number of resilience models that are developed at different period of time. However, these models can be generally categorized in to two groups: models that attempt to capture and describe a system-wide approach to resilience (e.g., DFID, Technical Assistance to Non-Governmental Organizations [TANGO], Practical Action, Fraser, etc.); and models that attempt to define and measure the characteristics of resilience at a community level (e.g., Food and Agriculture Organization of the United Nations [FAO], Oxfam, Tulane University, etc.). This study, however, will apply CoBRA conceptual framework which was initiated by UNDP Drylands Development Centre (DDC) in 2012 (explained in detail below) as the researcher found it suitable to attain the defined objectives. The framework builds upon part of the both models. However, it also differentiates from these models in that it is designed to be a participatory and

community based methodology and a practical package that can be applied in many contexts.

TANGO/DFID: this is a widely cited model that comprehensively maps the components of and factors affecting resilience. It draws on livelihood models and climate change adaptation thinking in the inclusion of many factors. The TANGO/DFID model helps to conceptualize resilience as a dynamic process which ultimately coalesce to put households on positive or negative 'pathways.' (Frankenberger T.2012).

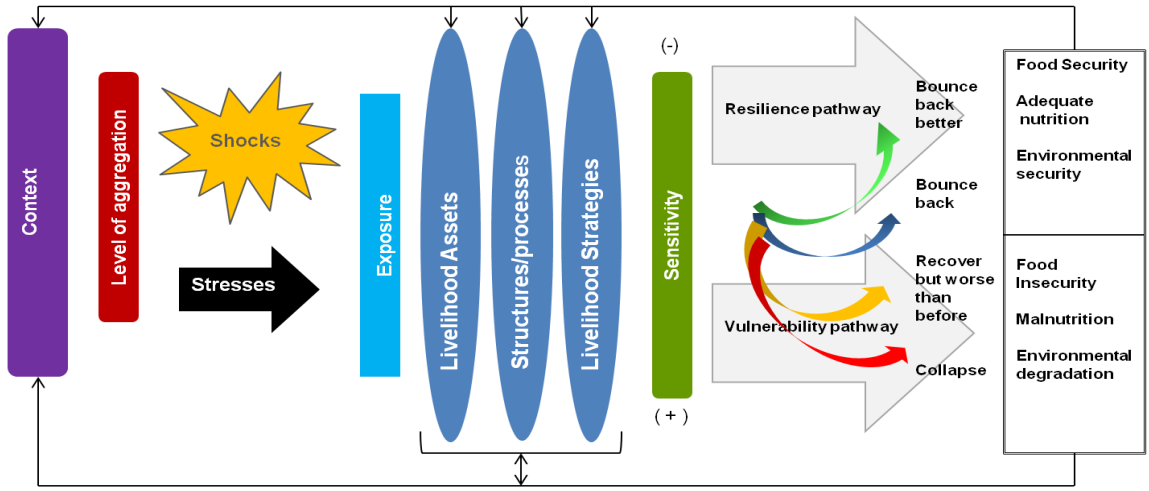

Figure 1: The TANGO Resilience Assessment Framework

Practical Action: Practical Action's Vulnerability to Resilience (V2R) framework highlights the key areas the affect a household or communities' ability to be vulnerable or resilient and the inter-relationships between them. The framework seeks to guide development programming in ways that address the core factors that underlay vulnerability. Building resilience is seen as a process that moves people permanently out of vulnerability. This is achieved by strengthening livelihoods, disaster preparedness, building adaptive capacity and addressing different areas of the governance environment.

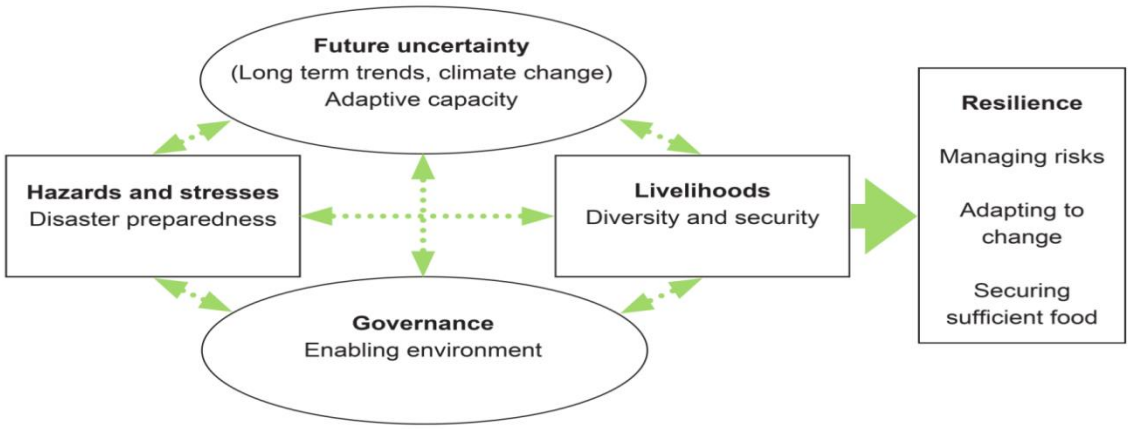

Figure 2: Practical Action-Resilience Framework

Fraser, et al. (2011): This model identifies three critical factors in influencing resilience; socio-economic assets, agro-ecosystem and institutional capacity. It recognizes that reinforcing benefits of all three in maximizing a household's resilience as characterized by its ability to adapt, food security and income. In the model, as illustrated below, it is argued that the pathway to resilience is not necessarily linear and households may be placed in all parts, and move in all directions, around the cube. The inclusion of agro-ecosystem dimension reinforces the importance of environmental health as part of systems resilience.

FAO: FAO's model involves development of a suite of latent variable indices that are derived from a number of observable indicators. These indices are then used to derive a single resilience index that is a weighted sum of the factors generated using Bartlett's scoring method and the weights are the proportions of variance explained by each factor.

CoBRA (Community Based Resilience Analysis): According to COBRA conceptual framework and methodology guide this framework was initiated by UNDP Drylands Development Centre (DDC) in 2012 following a decade of repeated drought-related disasters and most recent drought crisis (2010-2011) in the drylands of the greater Horn of Africa (HoA) that significantly affected the resilience capacity of the people. In this context, the term 'resilience' has gained much traction amongst Governments and other agencies working in the region.

Nevertheless, different organization have different understanding and interpretation of resilience. There is also a significant challenge in translating the resilience concept into practice on the ground even though substantial financial commitment has been made. The lack of consensus and consistency as to the most appropriate approach to measure resilience undermines the ability of stakeholders to objectively monitor and verify the success (or failure) of their efforts for programming to build resilience. It was in this context that UNDP in Collaboration with ECHO's Drought Risk Reduction Action Plan (DRRAP) developed and introduced a robust analytical tool, i.e., CoBRA through which to measure and understand resilience at the community and household levels. In particular, it focuses on assessing how communities define and experience resilience and linking these findings with development and humanitarian interventions for drought.

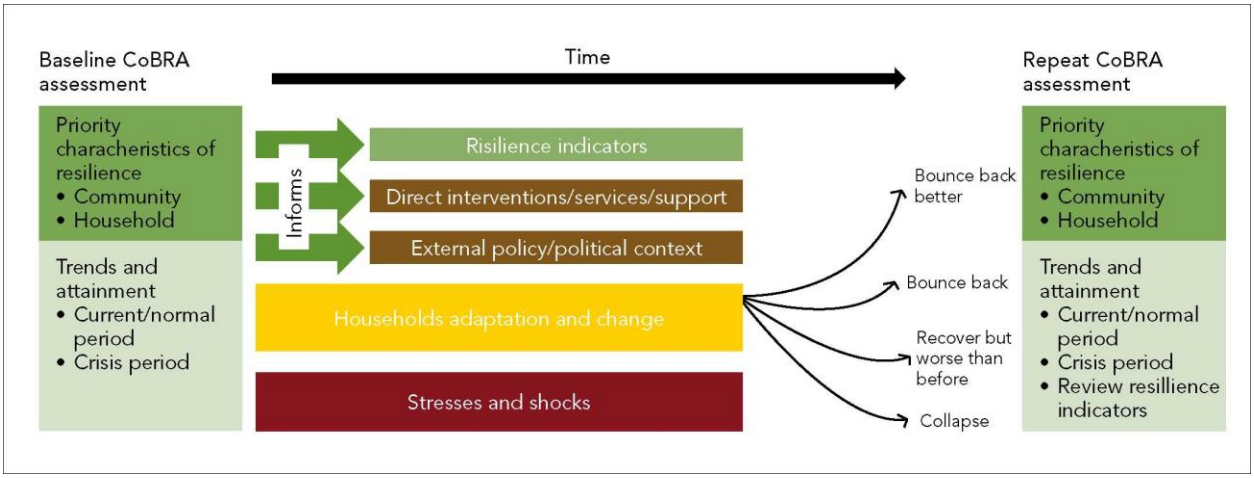

Figure 3. CoBRA Conceptual Framework

CoBRA is a tool which intends to measure and identify the key building blocks of community resilience, or "resilience characteristics", and assesses the attribution of various development/humanitarian interventions in attaining these resilience characteristics. COBRA examines resilience characteristics and levels in five sustainable livelihoods framework categories (i.e., physical, human, financial, natural and social) in a participatory and community-led manner.

CoBRA was devised as a conceptual framework and methodology for measuring and assessing the impacts of community-based DRR interventions on local resilience building. The findings are instrumental in informing the ongoing region-wide efforts to develop measurable composite resilience indicators of change. CoBRA assessment methodology is one of the first practical analytical tools developed to identify indicators for measuring community resilience.

Chapter Three: Research Methodology

3.1 Research Design

The study systematically applied qualitative data gathering techniques, in order to collect grass root level primary information. Furthermore, relevant secondary data were gathered and reviewed from local government offices and DAIE Head Office and Moyale project office. The information collected from these sources were cross-checked and triangulated to ensure consistency and reliability. The research involved the participation of community members benefiting from DAIE interventions, community and influential leaders, and non-beneficiary pastoralists. The assessment engaged DAIE project staff at the stage of data collection.

3.2 Universe of the Study

The study was conducted in Moyale district situated in Borena Zone of Oromia Regional State. The general overview of the zone and the district are discussed below.

3.2.1 Borena Zone

Borana is a predominantly pastoral zone located in the southern part of Ethiopia bordering Somali region in the east, Northern Kenya to the south, Guji zone to the northeast and SNNPR in the West. It has an area of about 63,939 km^2 and the largest of the 18 zones in Oromiya regional state situated in the arid and semi-arid southern lowlands. The zone is divided into fourteen districts (namely: Yabello, Teltele, Dire, Miyo, Moyale, Arero, Dugda Dawa, Bule-Horaa, Gelana, Abaya, Melka Soda, Dillo, Dhas, Guchi) and Yabello town is its administrative center which is found at a distance of 570 Km from the capital city, Addis Ababa. According to 2007 population and housing census result projection, the total population of Borena zone in 2015 is estimated to be 1,178,690 of which 1,061,766 are rural population (535,841 Male and 525,925 female). Moreover, the population is characterized by higher proportion of young ages (between age 0-15) and low proportion of old age (65 years and above), reflecting higher rate

of fertility. Regarding the climate condition, the zone has moderate temperate, sub-tropical and very hot tropical climate zones which account 10%, 20% and 70%, respectively. Borena zone experiences erratic types of rainfall that occurs twice a year. The main rainy season is locally called 'Ganna' from February to May which is expected to cover 60% and small rain season is 'Hagaya' from September to November that covers 40%. The average annual rainfall of the area ranges between 450-650m. Area of land covered by forest is 1.13%, which is by far less compared to national forest coverage which is 3%. Of this, wood land cover 63.3 %, shrub land 28.53%, grass land 1.12 and land under cultivation 3.4% and the remaining used for various purposes (BZFEDO, 2015).

The Borena population is predominantly a pastoral society where livestock provides the primary means of subsistence for living. In normal years the zone is one of the major sources of livestock supply in the local and international markets. During the recent years, however, Borena has repeatedly experienced complex humanitarian crises as a result of drought, flood, conflict and disease. More frequent and severe droughts and flooding are among the critical consequences of changing weather patterns in the Greater Horn of Africa. Massive livestock death due to drought has badly affected the livelihoods of the communities and the overall food security in the area. Many are barely able to produce enough food to sustain their families. The combinations of rangeland degradation, soil erosion, and high surface-run-off and low rainfall make livelihoods highly marginal. Wakening social systems such as natural resource governance, extension services, and conflict mitigation mechanisms compound high rates of vulnerability. Additionally communities have very little access to alternative means of livelihood and savings or credit facilities. As vulnerability to external shocks and stresses grow, communities resort to negative coping strategies, such as increased encroachment of grazing land for agricultural use or collection and sale of fuel wood and charcoal, undermining long-term sustainable livelihoods and local natural resources.

3.2.2 Moyale District

Moyale is one of the fourteen district found in Borena zone of Oromia Regional State of Ethiopia. The district shares border with Miyo and Guch woredas in the north, Ethiopian Somali Regional in the east, and north Kenya in the south and west. Moyale is divided into 17 rural and 2 urban administrative kebeles/villages and 771 km away from the capital, Addis Ababa. According to the district's 2017/2018 contingency plan the population of the locality is 204,380 (105,958 female) which is predominantly Borena and Gebra clans within the Oromo ethnic group with a majority of Muslim community. The district has a total of 1,130km^2 area. Hence, the population density is estimated to be 180 people per square kilometer, which relatively dense for pastoral zone (WBOFED, 2017). DAIE has been implementing its rehabilitation and development program in seven kebeles of the locality.

Altitude of the area ranges from 1150 - 1350 meters above sea level with semi-arid agro-ecology. The topography of the district is predominantly plain. Land use pattern is estimated as: 60% pasture, 21% forest, 9% arable, and 10% swampy, degraded or otherwise unusable. With regard to agro-climatic zone the area comprises 80% lowland (Kolla) and 20% midland (Woinadega). Similar to the zone, Moyale receives a bimodal rain pattern, namely Gana (the main rainy season) and Hagaya (minor rainy season). The amount of annual rain fall ranges from 500mm to 600mm. Moyale rainfall pattern can be characterized as erratic, unpredictable, and unreliable. Besides, it has declined in both volume of precipitation and duration which significantly contributed to alteration of the entire livelihood and ecological system. There are no rivers and streams that can be used as water source in the district. As per the district disaster prevention and preparedness office the rainfall condition has been inadequate during the past seven years with worsening conditions over the last two years. These most important concerns has led the government to initiate discussion on "Green Economy" with the community to which the response seems positive at this stage.

The weather condition of the locality is normally hot with annual mean temperature that ranges from 25 ^{o}C-37^{o}C and sometimes reaches as high as 41^{o}C. The higher temperature accounts for high evapotranspiration. The soil in the locality is sandy loam and clay with salty situation. Its water retention capacity is low except in clay dominated areas. As a result, the grass regenerates quickly upon rain and die immediately after the rain ceased. The vegetation cover consists of thorny bush shrubs and acacia species (Moyale district 2017 contingency plan).

Livestock is the main economic stay of the people in the district. Cattle, goats, sheep and camels are common livestock types in the area. These livestock have been serving for both food consumption and income source to access food and none food items. With regard to crop production, maize and haricot bean are grown and with little experience of growing some types of vegetables. However, the use of improved technologies is at a very low stage. Crop and vegetable diseases are widespread. Besides means of family income, livestock raising is considered as symbols of pride and prestige. Tragically, successive years of drought have led to significant herd size reduction by more than 75 percent (DAIE, 2014).

According to the districts pastoral development office, problems associated to pasture, water, access to veterinary services, diseases, access to market have significantly reduced the production and productivity of livestock. Fundamental livelihood shift has been happening on pastoral life style owing to repeated multi hazard occurrences, mainly drought, conflict and livestock diseases. The shift has come when pastoralism become inefficient to support the whole life of pastoralists. The circumstances forced to seek an alternative livelihood that complement the existing once. As a result, crop cultivation, self-employment (leasing labor, petty trade, charcoal selling) and cross border trade (transporting and selling second hand clothes, fuel, shoes, detergents and edible oil) are emerged as alternative livelihoods. Initially, those alternative livelihood were emerged as temporary copping mechanism. Later on, the pastoral communities

have taken the copping mechanism practices as diversification of income sources. Pastoralists have been adapting these livelihood to withstand the ever changing climatic situation.

In a nutshell the community in the study area is highly vulnerable to different types of hazards, such as drought, resulting in food insecurity, aggravated environmental degradation, recurring ethnic conflicts, flooding during rainy season and migration in search of pasture and water for their livestock. Thus, the community had suffered from these hazards and their livelihood options are constrained by lots of interwoven and complex setbacks (Dorcas, 2014).

As indicated above Dorcas has implemented a "Strategic Partnership Protracted Crisis Program" in Moyale district addressing 720 households (a total of 5062 people) to build their resilience capacity in seven selected drought vulnerable Kebeles. Hence, this study was initiated to address these targeted households.

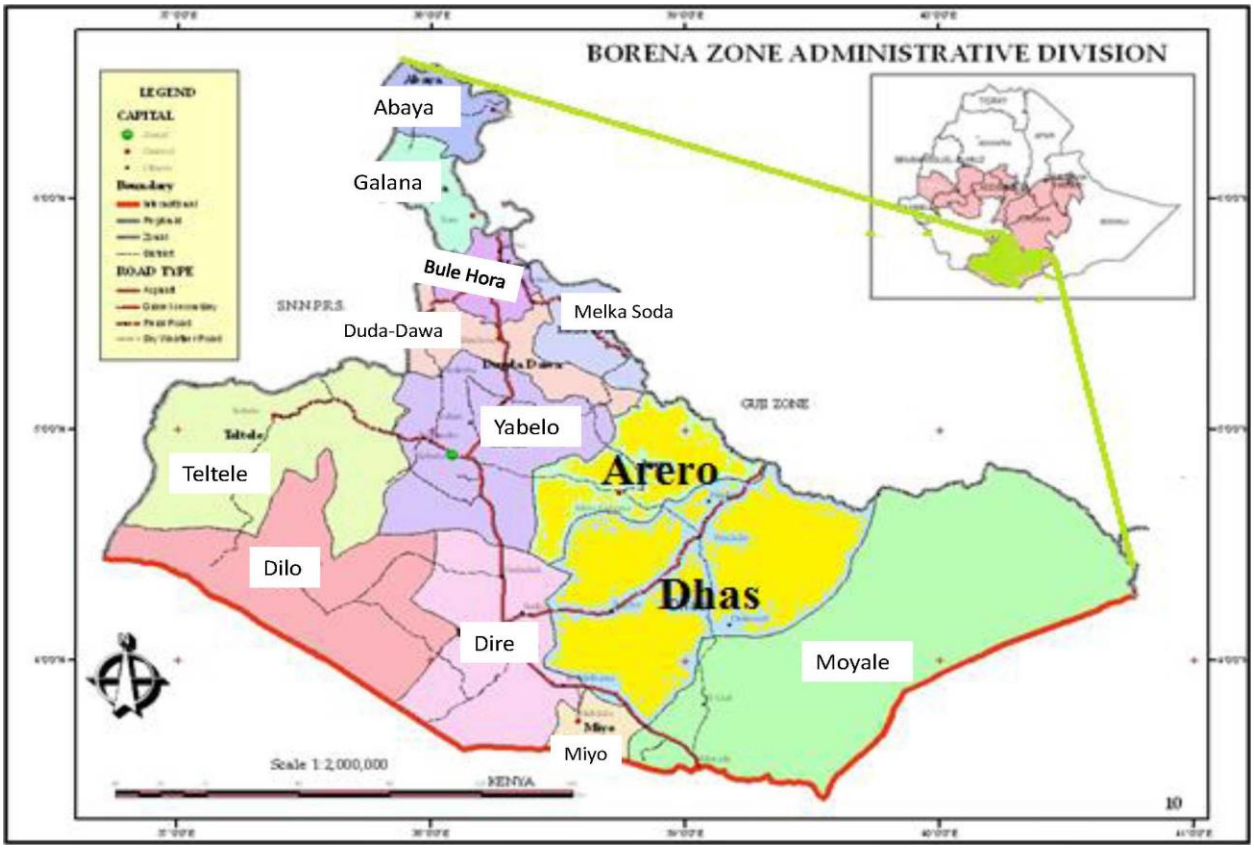

Figure 4. Geographic location of Moyale district in Borena Zone.

3.3 Research Methods

In order to gather the necessary information needed to achieve the objectives of the research, primary and secondary data sources were used. Data collection and analytic approaches applied qualitative enquiry. Mainly FGD and key informants interview (KII) were employed to collect the data. FGD discussions, which were guided by checklists appropriate to the objectives and participants, were used. The discussion were recorded by trained facilitators, which was changed into transcript for analysis.

3.3.1 Sampling Frame

In agreement with the research proposal, non-probability sampling was applied to properly use the conceptual framework and efficiently exploit available resources. The process of sampling depicted that the approach was suited for data collection and questioning as required. The sampling frame consisted seven kebeles of Moyale district where DAIE is operational. Of these kebeles four were selected after classifying the kebeles into two strata to ensure adequate representation. All kebeles in the sampling frame were first divided into two livelihood zones, pastoral and pastoral/petty trade (kebeles located in peri-urban areas). Accordingly, four kebeles fall under pastoral and the remaining three under pastoral/petty trade livelihood zone. Thenceforth, four kebeles, two from each strata, were selected for data collection.

In each of the four kebeles two FGDs were conducted by organizing the male and female group separately. In total, eight FGDs were carried out to collect the necessary information that was used for analysis. Furthermore, 16 KII were conducted with households considered relatively resilient after the identification of resilience characteristics during FGD. One FGD comprised an average of 14 people and the total number of participants in the group discussion were 112 household heads. All the respondents (totally 128 households) were purposefully selected so as to get the required data (Table 1).

Table 1. Demographic and livelihood data and number of FGDs and KIIs in the targeted kebeles

Kebele Name	Population	Livelihood Zone	Selected Kebele for study	#FGD	#KII
Bede	6110	Pastoral	√	2	3
Malab	6108	Pastoral			
Chamuk	6776	Pastoral			
Arbale	6141	Pastoral	√	2	3
Mado Migo	9509	Pastoral/petty trade			
Kabanawa	14017	Pastoral/petty trade	√	2	5
Shawabare	11910	Pastoral/petty trade	√	2	5
Total	**60,517**			**8**	**16**

The on-field data collection exercises were undertaken by a team of six facilitators, who were selected from Dorcas Moyale field office and a local NGO; and a supervisor, who was selected from the same organization. A day and half long training including a field-testing session on the tools and data collection methods (FGD, KII and woreda level secondary data collection) was organized prior to the actual work. Immediately after this activity, the assessment team was divided into two groups, where every group comprised two pairs of facilitators and a supervisor that follow, monitor and assist the facilitators in both groups. The supervisors and facilitators who were familiar with the local context jointly selected the locations and compositions of focus groups, using statistical data and criteria such as livelihood zones. In each focus group location, three to five KIIs were undertaken with a household perceived to be resilient, as identified by focus group participants during their discussions.

3.3.2 Data Source and Collection Tools

The study applied methodologies that supported to analyze community and household level characteristics of resilience, and identify the underlying factors or interventions that have the greatest impact on building resilience through

participatory qualitative approaches. Accordingly, focus group discussions (FGDs) and key informant interviews (KIIs) were used as data collection tools as well as document review.

Eight FGDs were carried out with men or women representative households screened from four target kebeles. Discussions at group level were conducted using key questions which were prepared aiming at collecting relevant information. In all FGDs conducted, similar steps were followed in order to generate information needed for the study. Primarily, main shocks or crisis facing the community were identified. Facilitation activities were done for members of FGD to agree on the definition of resilience in plain locally relevant terms. The activity helped facilitators to obtain basic information on the 'community', to which the FGD participants will be referring throughout the discussion.

FGD members are then encouraged to provide outcome statements that describe how their community would be if all households had achieved resilience status. Here members are initiated to freely list statements without limit. After the list of resilience statements were exhausted, the FGD participants had ranked them according to their importance. The ranking was facilitated by providing each participant with six beans and asked him/her to place the beans on graphic cards (picture exhibit different characters) that represent each statements as follows: 1) three beans on top of the most important card; 2) two beans on the second most important card; and 3) one bean on the third most important card. Finally, all the FGD participants have placed their beans, total scores were taken for all the statements. The facilitators then presented the two highest scoring statements and asked the participants to explain, with specific examples if possible, why they prioritized these statements as the most important for their community resilience (Figure 5).

Figure 5: FGD participants ranking resilience characteristics

The participants then asked to point out the households in their community who have attained most/many (if not all), or the highest number, of the prioritized and other resilience outcome statements both in normal and shock/crisis periods. The result was used to identify relatively resilient households which had participated in KII. Subsequently, the focus group discussants asked to describe the key common features of such households and what they have done to become or stay resilient, and assess whether the number/proportion of these 'resilient' households has increased, decreased or stayed the same over the past 5-10 years.

In order to identify development interventions that benefited the community in building resilience the participants were asked to list all types of interventions, services and actions that took place and helped their community, in terms of enhancing resilience, in recent years. These include interventions provided by the public sector, development or humanitarian partners, private sector, and/or spontaneous internal actions by the community members. The participants were also requested to discuss and jointly identify the top three most effective types of past/ongoing interventions/services/actions in building resilience and preventing them from dropping out during the shock/crisis period. For each highly-rated intervention, participants explained how the support contributed to the enhanced level of resilience statement directly or indirectly, and why it was so effective.

Furthermore, participants were asked to discuss and jointly identify the top three priority interventions/services/actions that should be implemented in the future to improve resilience, again explaining why and how they will help the maintenance and enhancement of resilience achievements.

Moreover, semi-structured interviews were undertaken with selected key informants identified as resilient households (three to five informants per site). Additionally, various secondary data sources such as Borena Zone and Moyale district physical and socio-economic profiles, contingency plans, and disaster risk mitigation plans, DAIE program document, and other assessment documents were gathered and reviewed. The information collected from the sources indicated above were cross-checked and triangulated for consistency and reliability.

3.3.3 Data Analysis

All data collected from all KIIs and FGDs were entered into standard excel spreadsheet formats for compilation, aggregation and analysis. Key tasks in the analysis of field data include:

- Mapping communities' resilience statements against sustainable livelihoods framework (SLF) categories (DFID 1999).
- Adding and weighing bean scores for all statements to get rankings of priority resilience characteristics overall and disaggregated by different groupings.
- Scoring the achievement of priority characteristics and plot on charts, according to the SLF categories.
- Disaggregating results as required between livelihood groups depending on sampling strategy.
- Compiling and aggregating the features and attributes of resilient households.
- Compiling list of ongoing and future priority resilience building interventions most frequently mentioned.

Chapter Four: Results and Discussion

The findings of the study is organized into nine sections in a manner of clearly illustrating and discussing research results. The first section provides information about the characteristics of people involved in the study. The second section attempts to provide the main shocks or crisis affecting the community in the study area as a whole or large proportion of households. The third section presents statements of the respondents that described characteristics of resilient community in their context. The fourth section explains the features of resilient households (HHs) both in normal and crisis period. The fifth section deals with major interventions to drive resilience building. Section six tries to provide composition and characteristics of resilient HH and section seven clarifies the pathways that these HH followed to build resilience. Section eight describes the past and ongoing priority resilience building interventions in the locality. Finally, section nine attempts to provide the contribution of NGOs in enhancing resilience capacity of the community.

4.1 Characteristics of FGD and KII participants

As indicated above the study sampled four kebeles out of the total seven intervention kebeles of Moyale district. The FGD participants and key interview informants were nominated from Kebenawa, Bede, Shewaber and Arbele kebeles. In each kebele two FGDs, men and women group separately, were conducted. A total of 112 people took part in the FGD comprising 55 male and 57 female (Table 2).

Table 2. Number of FGDs and participants by Kebele

Kebele	No. of FGD	No. of FGD participants		
		Male	Female	Total
Kebenawa	2	13	16	29
Bede	2	18	12	30
Shewaber	2	13	17	30
Arbele	2	11	12	23
Total	**8**	**55**	**57**	**112**

Again the KIIs, totally 16, were carried out in four kebeles of the study district similar to FGD. Taking the population size into consideration, 5 KIIs were conducted in Kebenawa kebele, 3 in Bede, 5 in Shewaber and 3 in Arbele. The interviews were carried out with nine male headed households and seven female headed households. The average family size of the interviewees is 10.5 (Table 3).

Table 3. Number of KIIs and participants information

Kebele	No. of KII	Sex of participant		Average number of HH member
		Male	Female	
Kebenawa	5	4	1	11
Bede	3	1	2	13
Shewaber	5	3	2	8
Arbele	3	1	2	10
Total	**16**	**9**	**7**	

4.2 Main Hazards and Crisis

Borana was known by non-mixed farming originally .i.e. livestock rearing. This livelihood has been eroding from time to time because of multi hazards such as drought, conflict and livestock diseases. An important shift has been coming on Moyale community livelihood due to pastoralism livelihood failure to meet food security that caused by aforesaid hazards, especially drought. The disasters'

history reveals that drought is recurring and deadly hit people's life and livelihood (Moyale 2018 Contingency Plan).

In all the FGDs conducted, drought and conflict were identified as the major hazards of the study area. The participants perceived these hazards as the most significant contributors to livelihood losses associated to pastoralists and as factors that significantly limit the development and prosperity of the locality. The two hazards were viewed as the most devastating shocks in terms of the number of people affected and frequency of occurrence. The discussants identified drought that occurred in 2010-2011 and 2015/16 as the most significant recent drought that killed significant number of livestock and contributed to the deterioration of traditional coping strategies. With regard to conflict, the FGD participants reported that it is happening between different tribes over resource competition, attitude of tribal supremacy and also unsettled land issues. According to Moyale district 2018 disaster mitigation plan, even though the occurrence of conflict is hard to predict, it might happen 2 to 3 times a year. Poor understanding of conflict resolution techniques, conflict insensitivity to various economic intervention and unclear administrative boundary demarcation are indicated as the major gaps. When major conflict happens about 35% of the population could be affected. At the time of data collection certain group of Borena has been displaced from three kebeles of the district as a result of conflict. The hazard has been considered as the most important factor that is limiting resilience capacity of the community. Due to this fact, the people viewed the current condition as bad because of the effect of conflict and also the erratic nature of rainfall which is expected every year.

Few FGDs also reported that human diseases (eg. Acute Watery Diarrhea) and livestock diseases are other hazards or crisis occurring in the locality. Therefore, fundamental shift has been happening on pastoral life style owing to repeated multi hazard occurrences.

4.3 Characteristics of a Resilient Community

As clearly stated above on the data sources and collection tools sub-section, the FGD participants identified as many characteristics as they could think of to describe a resilient community. Accordingly, each group provided 12 to 22 statements. The participants then had ranked and scored (please see above for details of the scoring techniques) the statements on the basis of importance.

4.1.1 Analysis for overall Respondents

For the purpose of clarity and comparison, resilience statements were grouped into five sustainable livelihood framework (SLF) categories in table 4.[1] Peace and security, health care for human being, food security, water for human and livestock consumption and education are highly ranked characteristics of a resilient community (see Appendix 3 for the detail). In all the FGDs, the statement addressing peace and security was ranked first showing that the stability of the community is a prerequisite to successfully accomplish and ensure the sustainability of any development efforts in the area. The community had understood well that conflict fundamentally undermines progress and development. Besides, they gave priority for this characteristics as it is a prevailing situation at the time of the study and existence of unsafe conditions such as tribal supremacy and unsettled regional boarder issues that still is considered a reason for the eruption of conflict anytime. The deterioration of peace and security could have considerable impact on the resilience of the community.

Even though it was ranked differently by each FGD, human health care scored the highest number (ranked 2nd). On prioritization of human health care , it was reported that there was a dearth of adequate health facilities as these facilities were few in number and less accessible, meaning most people have

[1] SLF presents the main factors that affect people's livelihoods and the typical relationships between them. It identifies five core asset categories or types of capital upon which livelihoods are built: financial, human, natural, physical and social. For further details on SLF, please refer to UK Department for International Development (DFID), Sustainable Livelihoods Guidance Sheets (London, DFID, 1999).

to travel long distance to access such facilities. Shortage of balanced diet and clean water was causing health problems which should be adequately addressed to make people more productive in their engagements. Household resilience can be seriously undermined by illness of a household member, leading to a significant loss of productive time and income, especially when health facilities and services are lacking or costly.

Sufficient availability of food both in quantity and quality to all family member at all time was also among the priority resilience characteristics that was mentioned by people involved in the FGDs. This could be linked to the disruption in precipitation patterns which often result in failure of agriculture which consequently causes food shortages and affect people's access to reliable food supply. It was also learnt that most households in the districts are regular recipients of food assistance through safety-net based interventions, which is named as Productive Safety-Net Program (PSNP). PSNP is a program run by the Ethiopian Government to address the needs of chronically food insecure households in selected woredas/districts in the country. It operates as a social security, targeting poor households in two ways: through public works on soil and water conservation, tree planting and rural road construction; and direct support to those who cannot work. In Moyale due to the mentioned reason the district has become the recipient of food aid almost every year to fill the food gap.

In addition, as a result of frequent drought that is negatively impacting the life and livelihood of the community, the FGDs stressed the consistent availability of clean water both for human and livestock consumption as one of the main characteristics.

Table 4: Highly ranked community resilience statements

SLF Category	Resilience characteristic (short statement)	Resilience characteristic (Full statement)	Bean score
Financial	Access to credit	The community would have access to affordable credit and would be saving money (through banks, microfinance organizations, community savings and credit).	13
	Diversified incomes / Entrepreneurship	Many households would be engaged in various income generation activities such as small businesses, and trading.	10
Human	Human health services	The people would have access to quality and affordable basic health care locally	76
	Food security	All households would be able to feed themselves well every day.	74
	Education from primary to higher level	All children would be able to complete primary/secondary/tertiary education.	51
	Early warning service	Every people would have access to disaster early warning information to help prepare for disaster and reduce risk	10
Natural	Forest management and conservation	Local rangelands and other natural resources would be well managed so they do not become degraded over time.	19
Physical	Water for human and livestock	The whole community would have access to sufficient, good quality water at all times of the year.	53
	Housing/Shelter	Everyone would live in good-quality housing	27
	Access to Market	The community would have easy access to markets to buy goods and sell their produce.	20
	Roads	There would be good-quality roads to the community	16
	Sanitation	Everyone would have good sanitation.	15
	Electricity	The community would have access to affordable electric facilities and supply	10
Social	Peace and Security	The whole community would enjoy continual peace and security.	239
	Community organizations and skills	The community would have plans and structures are in place to manage and address all major concerns.	11

Three peri-urba kebeles which are very close to Moyale town provided the highest score for education both primary and secondary (96% of the total score on education came from this kebeles) as compared to kebeles located far away. The people believe that education is imperative for livelihood diversification and creates better access to basic necessities. It also indicates that due to the major disasters occurring in the district, pastoralists were engaging in various income generation activities to build resilience and manage various shocks.

Figure 6 portrays the high to low ranked resilience characteristics used to illustrate a resilient community by all FGD participants in the study area. Moreover, when the scoring result observed by SLF category, social characteristics of resilience ranked most highly (259), followed by human (211) and physical characteristics (142) (see appendix 3 for detail).

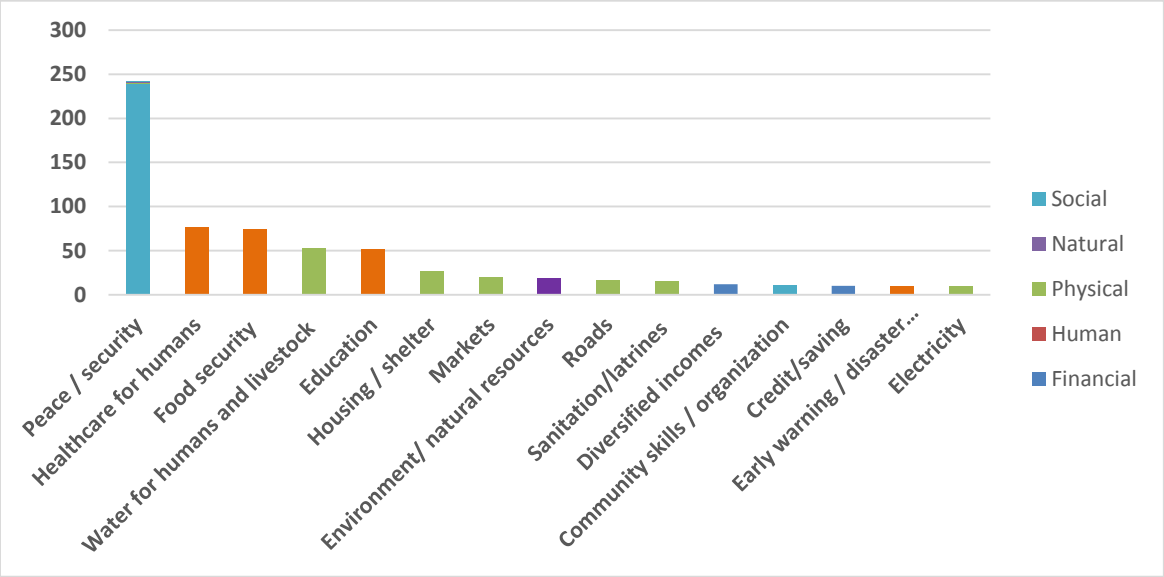

Figure 6, Top to the lowest ranking of resilient characteristic

Since livestock is particularly important in Moyale, it would seem that the stocking of large enough herds to sustainably support families would emerge as a top priority. This was however not observed during the assessment. Several factors likely explain this loss in importance of livestock among the Moyale residents. First, the pure livestock keeping tradition is slowly dying away as communities diversify into other forms of activities.

4.1.2 Analysis by Gender

Resilient statements were also analyzed according to gender group (male and female). While some similarities in priority statements can be observed among the groups, there were also some key differences. With respect to the first priority statement of resilience, peace and security, both gender provided almost similar score (see table 2) and marked that the recurrent eruption of conflict has meaningfully contributing to social and economic instability in the area in combination with other factors. The characteristics also illustrates that both groups have the understanding that long-term stability is important to attain all other resilience characteristics. As the districts is located at the border of North Kenya and Ethiopia's Somalia region and inhabited by different tribes, it is characterized by volatile security situation. In connection to human health care service the men and women group participants gave equal weight with a slight difference. The result depicts how much the community requires the existence of peace and availability of health services in the vicinity to withstand various calamities that the community is facing intermittently (Figure 7).

Nevertheless, the women groups were repetitively observed mentioning water as a priority resilience statement (70% of the score was provided by women). It was emerged as the third most important characteristics for women. This is to mean that access to reliable, sufficient, good quality water at all times of the year is imperative to build the resilience capacity of households. It was attributed to the fact that the water sources is quite low in the locality and water in earthen ponds and other sources dries up quickly following drought seasons resulting in scarcity of this resource for most months of the year. It also confirms that women are mainly responsible to fetch water, prepare food and take care of the family. However, among the resilience statements ranked from one to four by men FGD groups, water was not appeared.

Men ranked education (basic, higher level education and technical skills) as a second priority characteristics of resilience showing that how much the pastoral

livelihood has been affected by drought, which is hitting the area on yearly bases and people are opting for other means of living. Besides, it also indicates that livelihood diversification is vital to cope with the changing circumstances (Figure 7).

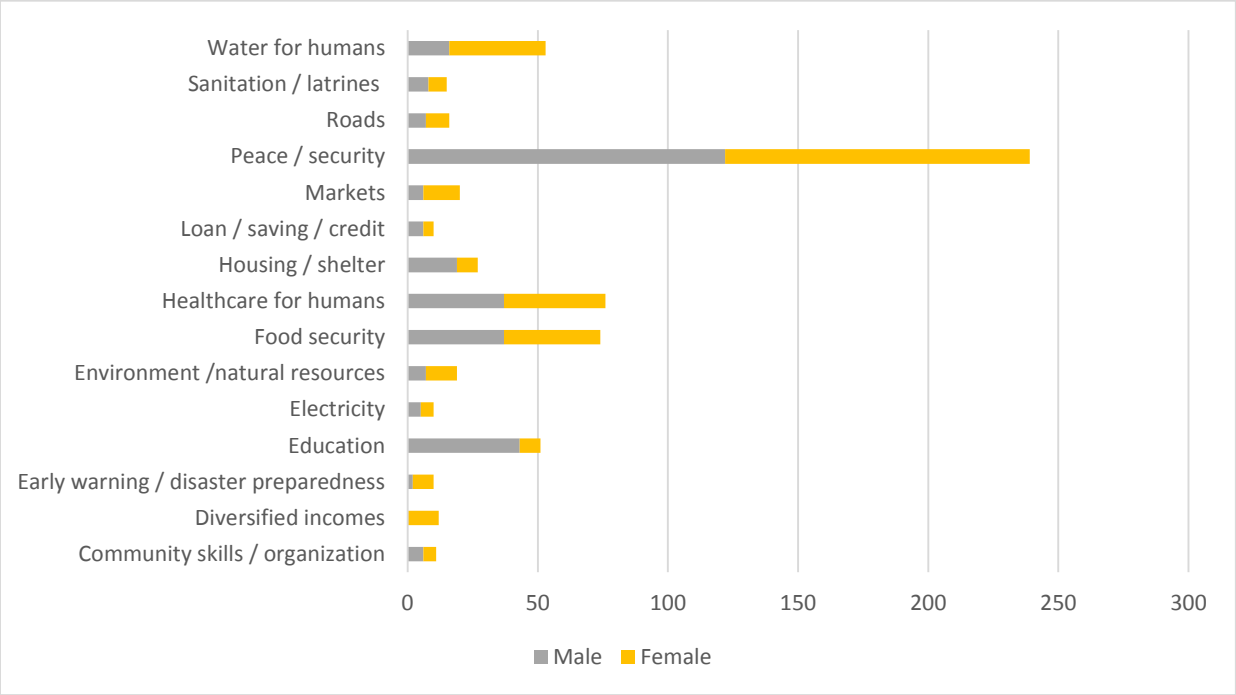

Figure 7: Major resilience characteristics by gender group

The most highly ranked resilience characteristics and their scores by gender group are presented in Table 5, which shows how differently women and men rate resilience characteristics.

Table 5. Top three resilience characteristics by gender

Gender	Resilience characteristics	Score
Women	Peace and Security	117
	Healthcare for human	39
	Water for human and Livestock	37
	Food Security	37
Men	Peace and Security	122
	Education	43
	Healthcare for human	37
	Food Security	37

4.1.3 Analysis by Livelihood

Prior to data collection period, the study area was divided in two livelihood zones, pastoral and pastoral & petty trade, in consultation with woreda pastoral development office and Dorcas field office. The later zone refers to those kebeles that are located near to the rural town, Moyale, and the residents of which engaged in various small business to generate income and augment their means of living. Following this division, data gathered from FGDs was analyzed for two livelihood groups to see the difference and similarities in prioritizing resilience characteristics. Figure 8 illustrates the percentage score given by the two livelihood zones for major resilience statements given by the FGD participants.

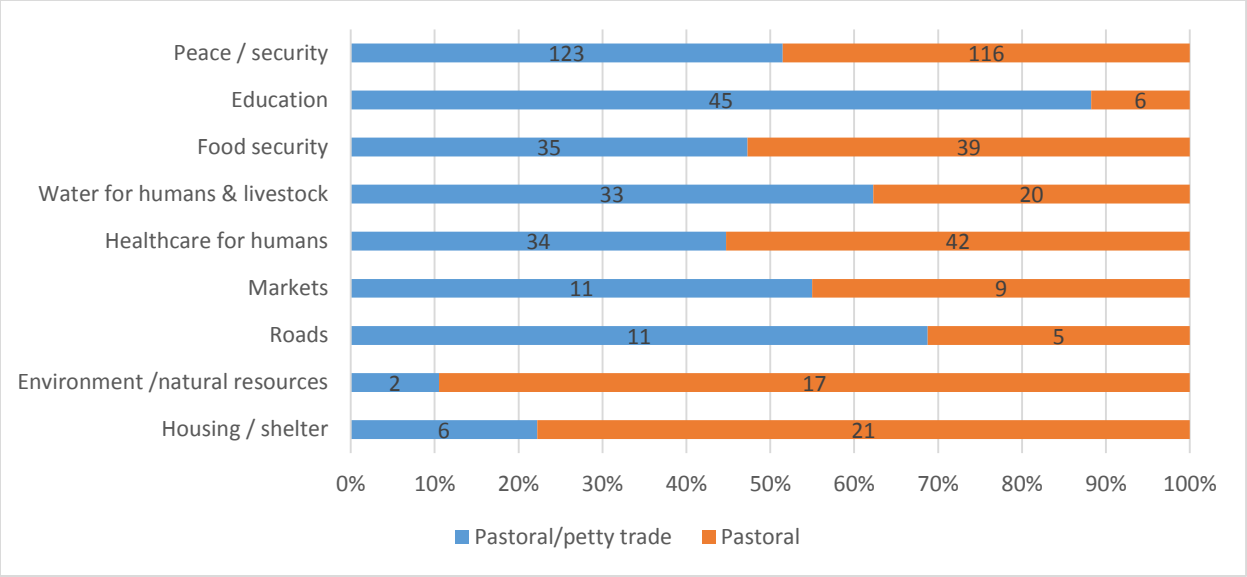

Figure 8: Percentage of priority resilience characteristics by livelihood zone

The analysis depicts that both livelihood groups placed a great emphasis on peace and security making the characteristics at the top of the list. This still indicates that peace and security is a pressing issue that needs to be given the highest importance in dealing with resilience of the community. The pastoral and petty trade livelihood group tended to mention education as the second priority resilience statement whereas the pastoral group put health care for human at the second place. As the people in the peri-urban groups live close to the town, the level of awareness on the relevance of education is higher than the other group. Besides, the community convinced that education at all levels are very crucial to improve livelihood through wage and self-employment. Many of the this groups were made up of pastoralists who were previously more mobile and had larger herds but have become sedentary as a result of insecurity as well as lack of water and pasture, livestock diseases, etc.

Both groups again placed food security as the third priority resilience statement (Table 6). The consistent availability of food to all people ranked as one of the higher characteristics. It indicates that repeated disaster that has been occurring in the area has affected their production system.

Table 6: Top-three-ranking resilience characteristics by livelihood zone

Livelihood zone	Top three resilience characteristics	Score
Pastoral	Peace and Security	116
	Healthcare for human	42
	Food Security	39
Pastoral and petty trade	Peace and Security	123
	Education	45
	Food Security	35

4.4 Features of Resilient Households (FGD)

Focus group participants were asked to describe the characteristics of households that were more resilient compared to others, that is, the households that had attained many or all of the resilience characteristics prioritized. The top characteristics of a resilient household, cited consistently by focus groups across all the kebeles, were: having a business and engage in own income generation activities (small business, trade, etc) or business less dependent on the weather; be food secure; having a member with employment or wage labour; households which have physical assets, particularly good quality shelter and owning livestock.

The above result largely related to diversification of risk, in the form of either alternative or reliable forms of income or significant assets that allow a family to absorb or mitigate the impacts of shocks and stresses.

Figure 9: Women group in focus group discussion

With low level of income and asset ownership, the poor have challenges in making personal investments to address causes of climatic vulnerability and ensure food security throughout the year. In contrast, resilient households appear to have more ability to capitalize on their income and assets to improve existing and expand new livelihood activities, which enable them to absorb or adapt to recurrent climatic shocks and maintain stability in food security both in normal and crisis periods. This trend may perpetuate the divide that already exists in the communities between the vulnerable and the resilient households.

Focus groups were further asked about whether the number of resilient households was increasing, decreasing or staying the same in the past years. The participants responded this question in two ways. Those FGDs from pastoral kebeles provided negative perspective mentioning that resilient households were significantly decreasing over that past five to ten years (Figure 10). They mainly indicated that conflict and climate change related shocks, which the district is experiencing for years, have contributed a lot in reducing the number. This has made most of the communities experience chronic food insecurity on a year-round-basis. The increasing prevalence of the recurrent droughts has had far-reaching consequences not only on food but also diminished available water resources. Erratic rains have resulted in acute food insecurity, malnutrition, and decline in herd size especially among the vulnerable members of the communities. Besides, the dependency of the pastoralist on sole means of living, livestock production, worsen the situation.

Whereas those FGDs from peri-urban kebeles expressed that the proportion of resilient households are gradually increasing (Figure 10). The justification behind the response reflects that the people took lessons in the last few years as the intensity of the disaster increased from time to time and become a yearly phenomenon. After losing a lot of valuable resources and assets in the elapsed consecutive drought seasons the people started to involve in alternative income sources in a way to diversify income and reduce risks. This is observed to have

contributed to the positive attitude regarding the increase in resilient households in the community. The relative increase in resilience is the result of the development efforts exerted by NGOs and different government offices. Even though there is a slow increment in the number, the participants expressed that much has to be done to spread income sources of households.

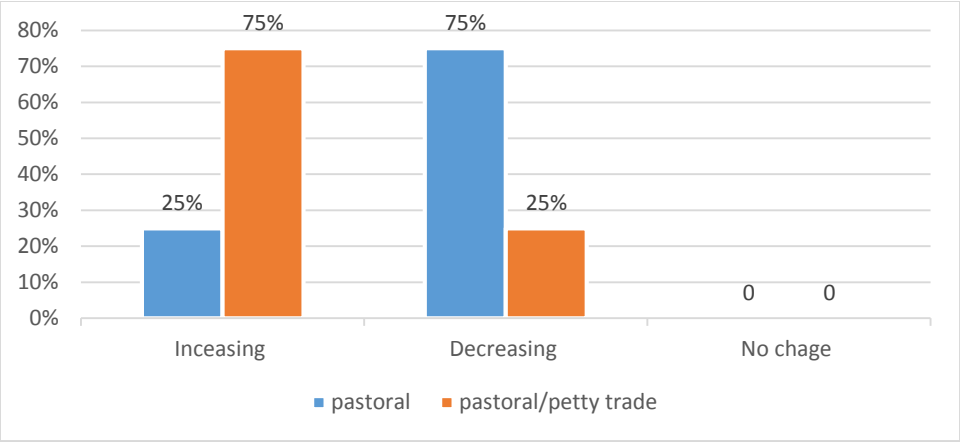

Figure 10: Change in Proportions of Resilient Households in the Communities

4.5 Interventions to Drive Resilience Building

Communities were asked to list any interventions/services/actions that took place and have made the most difference in increasing resilience in this community in the last five years. A reasonably wide range of sectoral, public, non-governmental interventions was mentioned. As shown in figure 11, the FGDs listed small business, credit/loan/saving, food and/or other relief item distribution, education, women empowerment, water and PSNP as the main interventions that were undertaken in the area and have made significant contribution in enhancing resilience of households.

A lot of focus was also given for transformative capacity building interventions, which assist in creating a fundamentally new system so that the drought shock will no longer have any impact, i.e., the initiatives leading the local livelihoods less weather/rainfall -sensitive, such as off-farm economic activities. These include support in creating large/small-scale business and improving access to formal/informal loan, credit and saving facilities. It was

heartening to observe that those activities/interventions contributing to off-farm income generating activities were highly prioritized by communities across all the kebeles. The economic and social empowerment of women was also cited as the major intervention that support women in livelihood improvement. This is largely associated to the activities undertaken by Dorcas AID International/Ethiopia and other local partner to introduce Self-Help Group (SHG) that focused mainly on women.

Social protection initiatives such as distribution of food through PSNP program and other relief items that contribute to lessen the impacts of climatic shocks and stresses (e.g., food insecurity) by helping the affected households to keep meeting the immediate dietary and other basic human needs and preserve/restore essential basic community structures and functions were also prioritized under ongoing intervention. These interventions also help communities to protect development gains by providing alternatives to negative adaptation activities that would further erode their resilience.

Water interventions were prioritized for understandable reasons, predominantly for improving food security and livelihoods. It included any interventions that expanded water sources and water storage facilities that could provide clean water, in all villages within a reasonable distance sustainably throughout the year. Education was seen as a benefit in itself and one that would also lead to improved life chances, such as employment for children and youth. The education include skill trainings provided by public and private vocational skill trainings to equip people in various occupations (Figure 11).

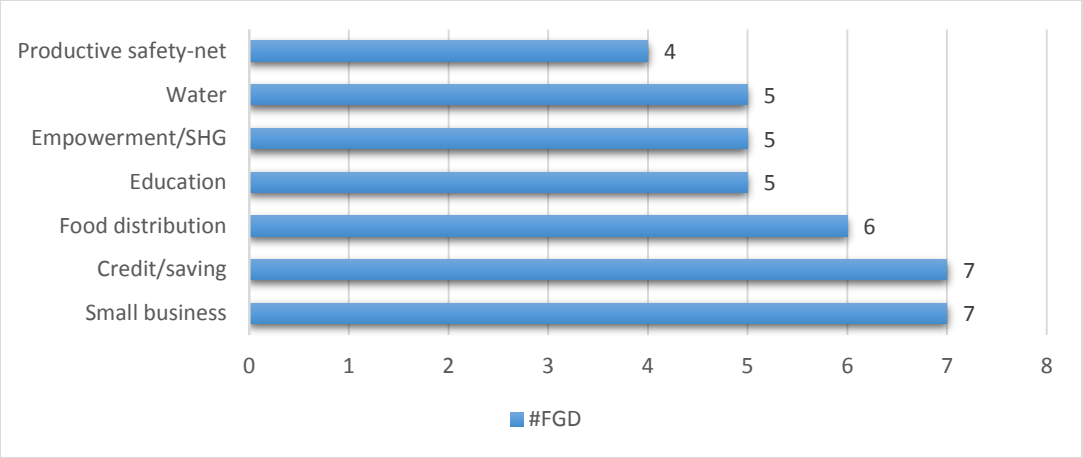

Figure 11, Top Resilience-Building Interventions Most Commonly Cited by Focus Groups

The groups were also asked to jointly identify the three most important services/interventions which they feel should be prioritized in the future for further resilience strengthening. The participants indicated similar interventions to those mentioned in the first list (business/SHG/saving & credit water, education, food security) by reasoning that the magnitude of intervention should be scaled up. Access to credit specifically village savings and loans schemes was also frequently cited. It reflects the power of credit in enabling households with depleted resources to start small businesses. In addition, they also stressed that more actions should be taken to ensure peace and security in the district and create safe and constant access to market including road construction for buying/selling goods.

4.6 Composition and Characteristics of Resilient Households (KII)

Key informant interviews (KIIs) composed of male and female headed households were identified by the participants of the focus group discussions (FGDs) as relatively "resilient". As indicated in section 4.4 the top characteristics of a resilient household cited by focus groups were: owning a business setup and engaging in own income generation activities (small business, trade, etc) or business less dependent on the weather; be food secure; having a member in the household employed as wage labour; households which have physical assets,

particularly good quality shelter and owning livestock. The selected households may or may not fulfill all the characteristics but considered as comparatively better than others. These households were quite diverse in terms of family size, ranging from four to 17 members. The overall average family size was estimated to be 10.5 persons per household, which was much higher than the average household size reported for Oromiya Regional State (with the average household size between 3.7in urban and 5.0 in rural areas) (CSA 2007).

When KII were asked about the highest level of education attained by HH members, the result was also dynamic, ranging from those which contain members who completed tertiary level of education to those whose members were all illiterate/received no formal education. However, it was found that the majority of HHs (i.e., 93.8%) have member(s) in formal education system and 81.3% of the HHs has at least one member who completed primary or higher education (Figure 12). Only one household among the key informant interviewees was found with all family members illiterate. Although the literacy rate is not a directly equivalent comparison, it suggests that resilient households have significantly higher education levels than average. Furthermore, the majority of school-age children in these households were reported to be in full-time education. In areas where very low proportions of the population have education, the educated ones were far better placed to access any job opportunities that arise. It is also obvious that education improves commercial and financial literacy, enabling households to engage better with markets and develop income generation activities (IGAs).

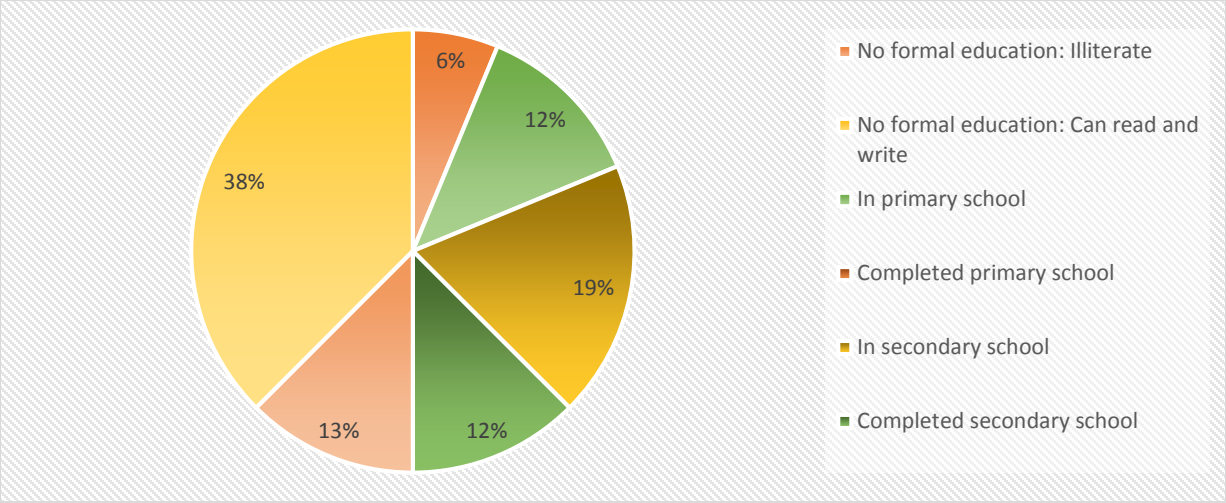

Figure 12: Highest Education Level within the Key Informant Household

All key informants had household member(s) engaged in one or more of the following activities: small business/self-employment, wage employment (casual or formal), and livestock raising/cattle fattening for sale or HH consumption. Figure 13 shows the percentage of households benefiting from different income sources. In all kebeles, the great majority of resilient households involved in multiple income sources. Many of the HHs have income sources from both agro-based activities (livestock) and cash-based off-farm activities (e.g., business, wage, remittance, rental income, etc.). About 88% of resilient households have diversified their income sources by involving in small businesses or self-employment that are less weather dependent.

Business activities conducted by the HHs encompass sale of livestock and their products, with livestock being particularly important in pastoral kebeles. Others included motorcycle and donkey transport hire, house rent, sale of charcoal, chat, water, retail business etc. Most wage earners were casual or temporary laborers carrying out local carpentry, construction of houses, road, etc. HHs that earn wages income through formal employment and informal activities constitute 31.25% and 50%, respectively (Figure 13).

The figure also depicts, even though the diversified income sources is mostly dominated by off-farm income sources it did not totally replaced pastoral

activities. Still about 70% of the households engaged in livestock production giving priority to animal that could cope with the changing severe weather condition. Moreover, the assessment result shows that no household is practicing crop farming owing to consistent drought that is occurring in the district. Additionally, none of the nominated "resilient HHs" live on subsistence basis.

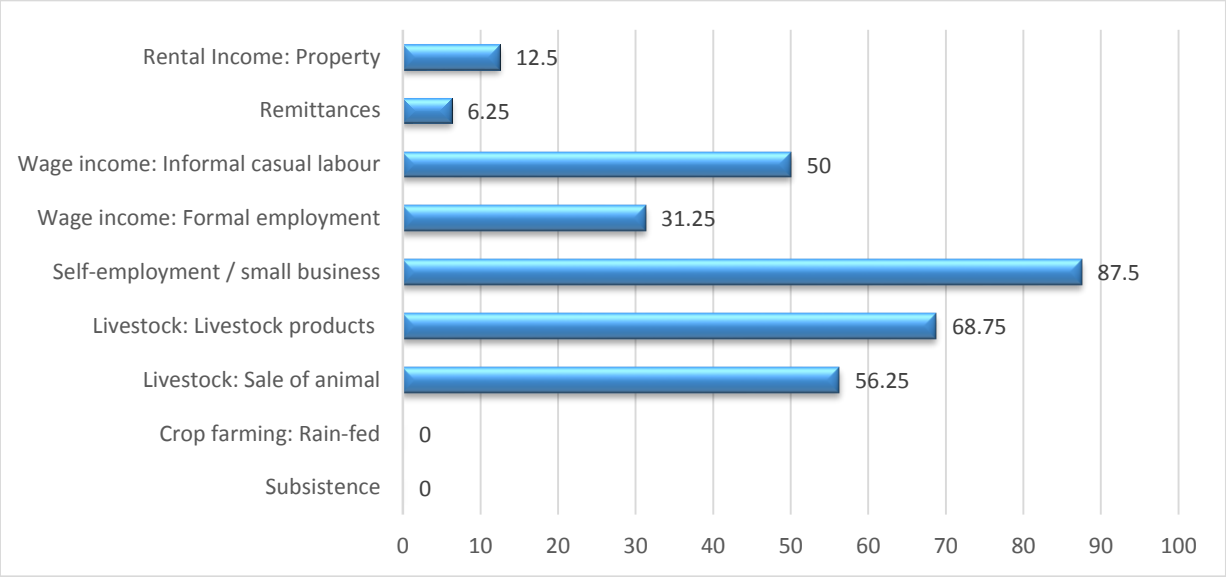

Figure 13: Sources of income/livelihood activities of resilient households (% of HHs)

In terms of the amount of gain, households selected as relatively resilient put the following income sources in order of importance as stipulated in the table below. Self-employment/small business/petty trade was placed first followed by livestock products and wage income through casual labour (Table 7).

Table 7: Three most important income sources of resilient households

Priority income sources	% of households
Self-employment /small business/petty trade	81.25
Livestock: Livestock products	50
Wage income: Informal casual labour	50

In all assessment sites, diversification of income sources emerged as the key strategy for resilience. These findings strongly reinforce the defining characteristics of resilient households cited by focus group participants and secondary information sources.

4.7 Pathways to Resilience of Selected Households

When KII respondents were questioned how they became and/or remained resilient, responses were similar in all assessment kebeles. Nearly all respondents mentioned their multiple income sources as the reason for their resilience. In particular, resilient households often cited non-farm income sources, which are generally less dependent on rain and thus less affected by drought. Majority of the interviewees started small businesses or self-employment by saving money earned through informal temporary labour, selling of livestock (particularly those sensitive to changing weather) at the early warning period of drought, renting of houses, and etc. The HHs became aware on the relevance of saving and engaging in alternative sources of income after acquiring community training on related topics by NGOs in collaboration with concerned local government offices. In addition to saving mentioned above, people exposed to training and those obtained awareness through practical experience from friends and neighbors organized into micro saving groups or self-help groups (SHGs) had begun practicing weekly saving. Group members started to access loan from their savings with minimum interest rate set by themselves to initiate small businesses. Some households involved in goat fattening, and in various types of petty trade, others purchased motorbikes or donkeys to provide transportation services, engaged in construction of houses to rent out and etc. Households engaged in livestock production had stated that they become resilient because they had changed the type of livestock from cattle to goat and camel rearing, which are relatively more drought tolerant and can survive with less pasture and water scarcity, as well as commanding better price in the market. A number of respondents had claimed that the support they received from NGO projects as factors to begin the pathway of resilient.

These households were either beneficiaries of restocking project or involved in a scheme like SHG formation as alternative income sources. Another frequently repeated theme was the use of one income source to expand or improve others and build assets. For example, households having a wage earner or petty business enterprise save income to start a new one or expand their business or purchase more livestock herds.

Figure 14 provides the list of the key factors contributing to the households' resilience, cited consistently by the key informants. Almost all KII HHs (94%) had indicated that access to finance, either formal or informal mechanisms, is the major element that supported them to commence diversification of their income through various methods. It is a critical building block of resilience not only to purchase necessities but also to start up, strengthen and expand on-farm and off-farm income generation activities. More than 80% of the interviewed HHs had indicated the importance of stable income secured throughout the year with off-farm activities such as small scale business, wage employment and casual labour opportunities. Half of the HHs (50%) mentioned the importance of livestock ownership, access to health services and cash/food support in building household resilience. Access to education was also highly valued by a number of respondents (63%) as academic skills and qualification often lead people to more diverse livelihood opportunities (Figure 14).

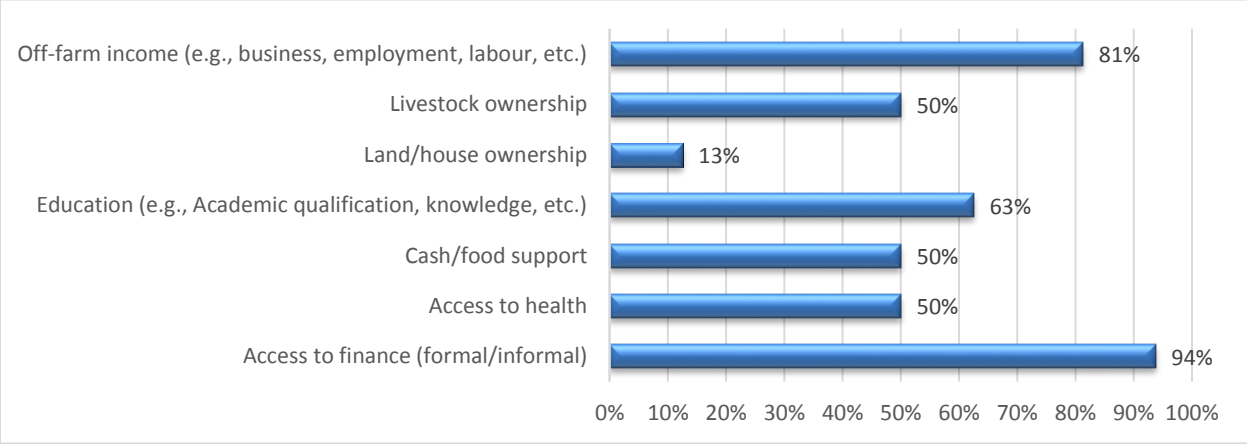

Figure 14: Key contributing factors for household resilience (% of HHs)

According to respondents the alteration of the livelihood system has made households in a positive spiral of income growth and asset accumulation. It also enabled them to keep more children in school for longer, buy and store animal feed.

Ability to cope with recent shocks and hazards

In terms of the pathway to the current resilient status, almost three quarter of the nominated "resilient households" (75%) perceived that they are almost always relatively resilient and have coped relatively better in comparison to the rest of the households, regardless of the drought types and intensity that their communities encountered in recent years (Figure 15). It was mainly due to their additional income sources and assets. Those with wage and business income noted that these income sources were not so affected by drought and therefore could be relied upon through these periods. However, 6% of the HHs felt that they are not necessarily always resilient. The respondents often pointed the increasing frequency and intensity of climatic hazards in recent years as the key challenge, threatening their household stability. The respondents also emphasized that conflict when erupted covering wider area, has a devastating impact on the live of the community.

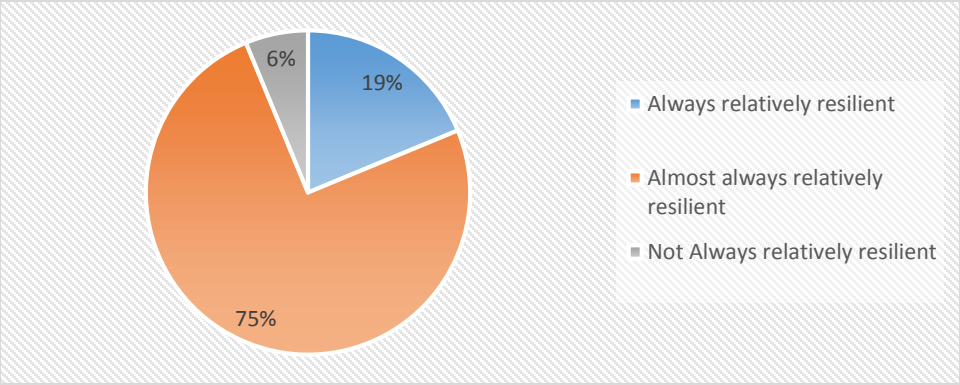

Figure 15: Duration of Perceived Households' Resilience

More importantly, many resilient households referred to the support provided by government and non-governmental organizations in awareness raising, training/capacity building, which educated and empowered them to undertake

these modern and innovative preventive action (e.g., diversification of economic activities, utilization of early warning information for timely destocking/destocking, storage of animal feed etc., construction of water infrastructures, access to saving and credit services).

4.8 Priority Resilience Building Interventions

KII HHs were also asked to indicate interventions and support that would best assist others in their community to become more resilient. Accordingly, interventions most repeatedly mentioned were justified on the basis of increasing productive assets and skills to expand their sources of income and stabilize/improve their livelihoods (Table 8).

Table 8: Priority Interventions Recommended by KII HHS to Build Resilience

Recommended interventions	% of HH
Business	93.75
Credit/loan/saving (Formal or informal)	93.75
Education	43.75
Empowerment	68.75
Food and/or other relief item distribution	25
Governance/Peace	25
Health	31.25
Job/Employment/Labor	25
Livestock: Qualitative & Quantitative	43.75
Livestock: Improved market access	25
WASH: Improved water & access to basic sanitation	37.5

Among the recommended interventions each key informant was asked to list up to three most important changes or interventions, which are perceived to best improve their communities' resilience and enable people in their communities to better manage future shocks and stresses and become resilient. Accordingly the discussion results were summarized as follows (Figure 16):

- Businesses (skill development, improved business environment): Interventions related to expansion of business opportunities and jobs were most widely cited (94% of the HHs). These interventions included business training, creation of new business opportunities and an enabling business environment including job opportunities, diversification of livelihood activities (both on and off-farm) etc.
- Credit/loan/saving (Access to formal or informal services): Interventions to improve access to formal and informal loan and credit services were equally highly rated (94% of the HHs). These include support in creating and improving the quality of village saving and loans associations/self-help groups/cooperatives. These were seen as an opportunity to inject capital into new and ongoing businesses enterprises already cited above. The key informants recommended that this practice be expanded in the future.
- Empowerment: interventions that include improved community organization, self-help groups, gender equality and etc. were chosen as relevant interventions for resilience building by 69% of the KII households. This particular intervention is prioritized by 86% of the women participated in KII.
- Livestock (quantitative/qualitative): interventions around livestock sector were also rated (44 %) as important building blocks of resilience, usually in relation to the support in expanding the herd, improving livestock management skills (including improved fodder/pasture, animal health etc.), restocking with more drought-resistant breeds and creating/expanding livestock markets.
- Education: intervention associated to education was cited by 44% of the households. The recommendation comprises primary to higher/tertiary levels constructions of new facilities and quality improvements of the existing institutions. The households also gave more emphasis on the importance of technical vocational education and training (TVET) centers that provide various types of short and long term trainings that are essential to begin businesses and earn income.

- WASH (Water for humans and livestock): improved water quality and quantity, access to basic sanitation interventions were cited by 38% of the respondents.

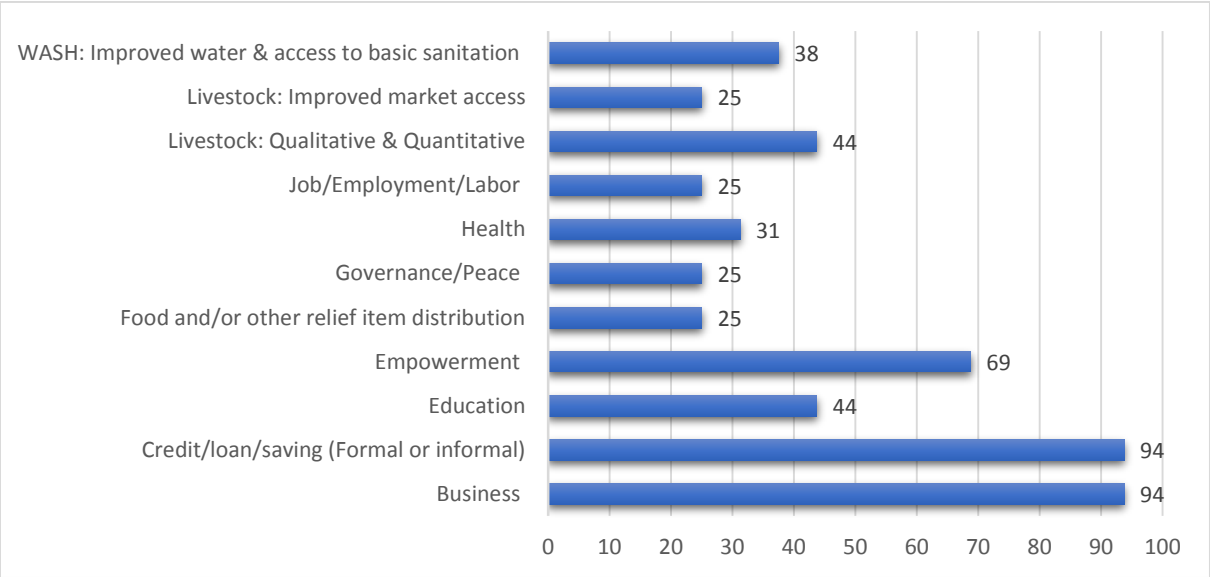

Figure 16: Table: Priority Interventions Recommended by KII HHs to Build Resilience (% of HHs)

In general the assessment depicts a clear preference for interventions that increase productive assets and business skills, and hence income. Even though many or all of these interventions were also mentioned by focus group participants, key informants generally rated them higher.

4.9 The Relevance of Non-Government Organization

At the time of data collection from nominated community members of Moyale district through FGDs and KIIs, several discussants explained that the role of NGOs take a significant share in building the resilience characteristics that were listed by households. As this study focused on the interventions of one of the selected NGOs, Dorcas AID International Ethiopia (DAIE), the report below summarizes the main project or activities implemented by the organization that are associated and contributed to enhancement of resilience capacity.

DAIE intervened in Moyale district by implementing a relief project following 2011/12 horn of African drought. The project was designed and undertaken through a local partner, EMWACDO (Ethiopian Mulu Wongel Amagnoch Church Development Organization), in the objective of alleviating the short term food shortage of vulnerable community members of the locality. It addressed 14,570 people with full package of relief food commodities fulfilling all the standard requirements of the government for three consecutive months. According to secondary sources, all targeted people were able to significantly reduce the risks related to food shortage as a result of the relief project. The risks of undernourishment, the well-being and human death were mitigated/prevented. The relief project supported target households not to sell their assets and purchase food items with high price. The distribution of food commodities had positive impact on the prices of food items and stabilized the local market situation. Besides, the intervention has remarkably minimized the number of people that could have migrated to adjacent district in search of food or job. It had also made valuable contribution to lessen school dropouts.

Based on DAIE principle of implementation which is linking relief, rehabilitation and development (LRRD) a community rehabilitation project entitled "Moyale Integrated Community Rehabilitation Project (MICRP)" was designed and implemented from 2012 to 2015 by the same partner in nine kebeles of the same location. Again, in the intention of scaling up of the good practices and successful interventions of the rehabilitation project, another program entitled "Strategic Partnership Protracted Crisis (SPPC)" project was designed to address needy beneficiaries of other seven kebeles of Moyale district for three years (2014 to 2017). This study mainly focused on the contribution of this project in resilience building of target households in the locality and also see the role of NGOs in improving livelihood of beneficiaries in the middle of multiple shocks.

The SPPC project specifically aimed at achieving the following four outcomes:

- Increased and diversified agriculture and livestock production;

- Increased disaster risk reduction, mitigation and preparedness (drought, and conflict);
- Increase alternative income sources available from off-farm activities, and
- General humanitarian and rehabilitation needs adequately fulfilled.

It was mainly intended to reflect the transition from supporting recovery to longer-term development with Community Managed Disaster Risk Reduction (CMDRR) approach. The project was designed to rehabilitating 720 poor and vulnerable households (equivalent to 5062 people) to improve their livelihood and resilience. Hence, a number of development interventions were implemented, such as, rehabilitation, improving livelihood, restocking of the livestock, income diversification, introducing high yielding agricultural inputs, construction of water schemes, and promoting saving and credit culture through SHG approach.

The project rolled out different capacity building schemes through delivering appropriate trainings to the communities to employ the main approach which is the formation of SHG (Self Help Groups) and CMDRR (Community Managed Disaster Risk Reduction) committee to improve beneficiaries' livelihood and ensure efficient management of the environment. At early stage of the project, 37 SHGs were established and nurtured, of which most of the members (720 HHs) created a simple and flexible system where they can easily access credit from their own collective saving. Moreover, after CMDRR awareness creation and action planning training seven DRR committees were organized in each kebeles, who prepared and implemented seven CMDRR plans in their areas of operation. The CMDRR structure found to be blameless approach designed in collaboration with local government offices, which deals with a participatory concept, and practice of reducing disaster risks through systematic efforts to analyze and reduce the causal factors of disasters. Reduced risks to disasters, improved care for the environment and minimize exposure to drought and conflict effects, wise management of land and improving preparedness have brought significant benefits to the community of the district. Furthermore, the project contributed

to increased access to safe and potable water sources through the construction of two ponds in two Kebeles of the district that serve 24,600 HHs and 62,700 heads of Livestock during dry season. The earthen ponds were constructed with adoption of new technologies and management system that involved the community. This consequently had improved the health, sanitation and hygiene practice of the community and increased water coverage; this in turn contributes to reduction in mortality and morbidity.

The restocking of goats and donkeys which was complemented with production and management training increased average number of livestock per household (total 370 HH benefited) which also attributed to the increased livestock feed and water reserves, rangeland improvements. In the project period, a total of 193 hectares of land was rehabilitated and 455 HHs participated in the rehabilitation work and uses of the rangelands. The project also supported establishment of five irrigation groups, who use pond water for the production of vegetable (a total of 103 HHs benefited). But this activity and similar intervention that are related to cereal crops did not last long due to shortage of water following erratic nature of rainfall in the area.

SHGs have shown encouraging improvements in the number of household members who earn money from off farm activities, number of households with small business types, and level of skills on planning, budgeting, expenditure, number of existing SHGs with functioning saving and credit schemes. The groups enhanced their capacity to a point where they are able to handle cross cutting issues such as gender and environment in a better way through own initiatives. As a result, the SPPC registered high level of acceptance,and applauses from the beneficiaries, especially for the paradigm shift that it has brought about in target communities, i.e. a shift from that of deep-rooted dependency in development to that of a strongly owned participatory development process. The majority of the beneficiaries were women and have acquired skills, developed self-confidence, and exercised their potentials in managing small businesses such as petty trade, milk marketing shops, milk

processing, fattening and generate income for their families. Many SHGs testified an increased in entrepreneurship skill, which had improved their income level sustainably. The local institutions (SHG, IGA and CMDRR committees) found to be effective in contributing to the sustainable and equitable use of resources, access to saving and credit services. It indicated that with minimal support, group members have continued after the end of the project intervention towards coping up disaster risks by themselves. Community members, who gained skills from Dorcas project and government staff started to replicate the outcomes. A review of performances of the entire project reveals the fact that there is clear evidence that SPPC project focused on the most vulnerable areas and communities.

Despite unfavorable climate conditions in most of the SPPC project catchment areas, it was observed CMDRR committees and individuals were making good use of the environment to meet their own short-term needs while compromising the need of others or for the longer-term impact. It was noted that working effectively with local communities and partners ensured local resource mobilization, community empowerment and enhanced ownership and sustainability of projects like it was observed under rangeland improvements and SHGs savings and loan activities, where members of groups save money and built fences around rangelands. In SHGs approach, focusing on women had double advantages: on the one hand, women's skills and capacity was developed as a result of the capacity building, they exercise leadership and their acceptance at community level increased. On the other hand, the income that a woman in a group earned from the small businesses directly goes to the household for the benefit of the whole family members.

In ensuring the continuity of the interventions, the project accomplished some important interventions such as building the capacity of the beneficiaries (which have now critical skills), organizing target beneficiaries in to business groups, facilitation groups to access loan from their own savings, equipping beneficiaries to efficiently utilize loans and manage various businesses, providing coaching

service until the groups become mature and independent. Furthermore, cluster Level Associations (CLA) were established at district level from the existing SHGs in different Kebeles (at least seven SHGs formed one CLA), which was a crucial activity to make the institutions sustainable. These are legal entities organized to provide technical and administrative supports to SHGs under their responsibilities, resolve problems, establish other SHGs in their areas, and provide loans to the groups and are crucial for sustainability of SHGs.

In general, the assessment conducted at the end period of the project conveyed that the majority of the households in the project considered themselves to be resilient to drought. There was significant shift in the proportion of households who consider themselves resilient to shocks. Hence, it is possible to conclude that the role of DAIE in enhancing HH resilience was creditable, despite the fact that there are many people in the district that need similar assistance to adapt the change in livelihood system caused by weather variabilities.

Nevertheless, with all the successes achieved by the project, duration of the project was inadequate (three years) to address more needy areas. The recurrent drought and instability due to conflict had also considerably hindered the achievements of the interventions.

Chapter Five: Conclusions and Recommendations

5.1 Conclusions

The study revealed that drought and conflict are the major hazards of Moyale district. The participants of the FGDs perceived the hazards as the most significant contributors to livelihood losses and factors that considerably limited the development and prosperity of the locality.

The FGDs and KIIs identified 22 statements that distinguishes the resilience characteristics of the community. The top five of these statements (in short form) include: peace and security, human health care, food security, water for human and livestock consumption and education. Moreover, when the result observed by SLF category, social characteristics of resilience ranked most highly, followed by human and physical characteristics.

Remarkably, peace and security was the first priority statement of resilience for both genders, which marked that the recurrent eruption of conflict has significantly contributing to social and economic instability in the area. Among the top three characteristics mentioned by both genders, water was ranked highly by women groups, and emerged as the third most important characteristics which confirms their related responsibilities. While the men ranked education (all level) as a second priority characteristics of resilience showing how much the pastoral livelihood has been affected by different catastrophes and people are opting for other means of living.

In terms of livelihood, both zones agree that peace and security should come first in priority order but the pastoral and petty trade livelihood group tended to mention education as the second priority resilience statement whereas the pastoral group put health care for human at the second place. This indicated that as the people in the peri-urban groups live close to the town, the level of awareness on the relevance of education is higher than the other group.

While describing the characteristics of households that are relatively more resilient, FGD participates gave emphasis to income and asset. The top

characteristics of a resilient household, cited consistently were: having a business and engage in own income generation activities (business less dependent on the weather); be food secure; having a member with employment or wage labour; households which have physical assets, particularly good quality shelter and livestock. It was the mixture of these characteristics in combination that seemed to be key, by allowing households to spread risk across income sources. In a similar fashion the KII stressed that access to finance, off-farm income and education are the primary driving factors to reaching a resilient status. They also mentioned access to multiple income sources as the prime reason for their resilience. Access to education and credit were intensely linked with having the means to realize higher income and obtain more assets, and hence were crucial driving factors to attain a resilient status.

FGDs from pastoral kebeles provided negative perspective mentioning that resilient households are significantly decreasing over the past five to ten years. They mainly indicated that conflict and climate change related shocks, which the district is experiencing for years, have contributed a lot in reducing the number. Whereas those FGDs from peri-urban kebeles expressed that the proportion of resilient households are gradually increasing. The level of optimism or justification behind the response reflects that the people took lessons on changing weather condition in the last few years and started to involve in alternative income sources in a way to diversify income and reduce risks.

A reasonably wide range of sectoral, public, non-governmental interventions were mentioned as interventions that made the most difference in increasing resilience. The participants, however, listed small business, credit/loan/saving, food and/or other relief item distribution, education, women empowerment, and water as the main interventions that were undertaken in the area and have made significant contribution in enhancing resilience of households. The KIIs prioritized the two top listed interventions similar to FGD but there is a priority difference afterwards as KII placed empowerment at the third place followed by education, livestock, WASH and health.

Among the selected key informants, it was found that the majority of HHs have member(s) in formal education system and 81.3% of the HHs has at least one member who completed primary or higher education. This gives lesson that those with education are far better placed to access any job opportunities, wage/self-employment.

In terms of the amount of gain, households selected as relatively resilient put the following income sources in order: self-employment/small business/petty trade, followed by livestock products and wage income through casual labour. Nearly all respondents mentioned their multiple income sources as the reason for their resilience. In particular, they often cited non-farm income sources, which are generally less dependent on rain and thus less affected by drought.

With regard to NGOs relevance in building the characteristic of community's resilience, several FGD members and KII households elucidated that different organization implemented various project in many thematic areas and have significant contribution in enabling the community to adopt to the changing weather condition and enhance resilience capacity. One of these NGOs is DAIE that introduced the SHG approach, promoted CMDRR interventions, constructed huge water sources and implemented relief projects at the time the intensity and magnitude of drought increased to minimize the risks on the community and the ongoing development endeavors. The NGOs have undertaken programs that encompassed both long-term and short-term interventions that support pathways of household to resilience building. Nevertheless, it was also mentioned that the number of people addressed by the NGOs are very small as compared to the total population of the district. Hence, scaling up of the good practices and successful interventions is imperative to reach the vulnerable groups.

5.2 Recommendations

Generally, the following recommendations that need due attention of all concerned were drawn from the information collected in the period of the study.

- The study clearly explained that the community well aware the reasons that deteriorated the livelihood of pastoralists and also factors that contribute to resilience building. Therefore, it would be vital to engage and take into account the suggestions and recommendations of the people prior to designing a development programs in the area. Failure to respond to the context or integrate the needs and priorities of the beneficiary would lead to minimum impact and similar cycle of development problem. Efforts to support change adaptation should be based on an understanding of what people are already doing on the ground, assessing the effectiveness of current strategies and plan for the long-term transformation.
- Peace and security must be the priority agenda of all development actors (community, government, private sector and NGOs) in the area. Working on peace building and conflict management process through well studied and applicable mechanism with the involvement of the community from different sects and tribes is crucial to reduce tension and bring stability. The multi-sectoral nature of causes and underlining factors that contribute directly or indirectly to insecurity ought to be understood and conflict prevention and peace building strategies should be in place to reduce the problem. Moreover, conflict sensitive programming will help to minimize the risks and the possibility of being the triggering or aggravating agent.
- In any development endeavor it would be commendable to mainstream DRR interventions which helps to conduct risks analysis through identification of hazards, community capacity, and underlining drivers of vulnerability and then design adaptation strategy.
- The study result conveyed, a balance between secure asset ownership and income base is considered as a key to HH resilience, given their complementarities and mutually reinforcing effects. Hence, planning of

forthcoming interventions should be based on the extent to which they build and diversify incomes and assets, either directly or indirectly. Diversity of household livelihood strategies through multiple income sources, both on- and off-farm, is extremely critical factor as it enables households to spread risk against various shocks/stresses.

- Both the FGDs and KII highly emphasized that the availability and access to credit, facilitate income generation and diversified livelihoods system that would lead to resilience. Hence, access to credit and business skills should be given priority in a short term development intervention of the area.
- Taking the existing poor health facilities and their importance into consideration people participated in the study suggested that increase in availability and access to human health is vital in ensuring resilience. Hence, future interventions in the sector would be essential to meet the needs of the community.
- All levels of education is a critical building block of resilience not only to purchase necessities but also to start up, strengthen and expand on-farm and off-farm income generation activities. It is a powerful driver of development, a key pathway to access to a wide range of opportunities, and a strong instrument through which to build up asset/income bases and hence enhance resilience. Therefore, investment in expanding access to different levels of education (including secondary and technical, and vocational education and training) ought to be a primary intervention as access and education facilities are very minimal in the area.
- Women in the study area are given lower status due to various cultural and traditional believes and practice. Therefore, designing and implementing programs that are gender sensitive and focused on economics and social empowerment of women would have a significance in the efforts of building household resilience.
- Investment on water facilities both for human and livestock consumption following the potential of the area requires the attention of all concerned to

ensure that the whole community would have access to sufficient safe water at all times of the year.

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APPENDIX 1: Key Questions for FGD

Facilitators' Details			
0.1: Facilitation Group	0.2: Name	0.3: Telephone	0.4: Email

SECTION 0. WELCOME, INTRODUCTION AND EXPLANATION

1. Welcome and thank participants for their time.

2. Provide a brief introduction and explain the overview of FGD including, among others:

• This assessment is being carried out by a researcher, Ferew Olana in collaboration with Dorcas AID International Ethiopia. We are here today looking for general information that is relevant to the whole community, unrelated to any particular group, programme or service.

• The researcher and the organization wants to assist communities to realize your hopes and visions for the future. Everyone recognizes that much more needs to be done to support communities such as this one to improve living standards and withstand shocks such as drought. At the same time, some of what is being or has been done to support communities is more effective than other things.

• You have been asked to come and talk with us today as part of a wider assessment going on in Moyale to understand the issues that affect your community and how you all cope with shocks and crises.

SECTION 1: FGD COMMUNITY AND PARTICIPANTS INFORMATION

Question 1.1-1.7: Obtain basic information on the community and FGD participants

FGD Community Info	
1.1: Woreda Name	
1.2: Kebele Name	
1.3: Date of FGD	

FGD Participants Info				
1.4: # of participants				
1.5: Gender	1.5 a: # men		1.5b: # women	
1.6: Approximate age range				
1.7: Major livelihood activities (Check ALL the applicable ones)	Pastoral		Crop farming	
	Agro-pastoral		Other	
	Urban (business/trade/employment based)		Other	

SECTION 2: SHOCKS AND CRISES

Question 2.1: Ask the focus group what is the main shock or crisis affecting the community as a whole or large proportions of households (HHs) in the community (i.e. not problems that affect individual HHs e.g. death of a spouse). Please note multiple shocks/crises if the participants feel the community is equally negatively affected by more than one.

Shocks and Crises				
2.1: Type(s) of main shock/crisis facing the community (Check ALL the applicable ones		Drought		Animal Diseases
		Conflict		Human diseases
		Other		Other

Question 2.2: Ask the focus group to assess the status of the current period (last 12 months) in terms of the occurrence of the main recent shock/crisis.

Assessment of Current Period						
2.2: Status of current period (Check the most applicable one)		Good		Normal		Bad

SECTION 3: STATEMENTS TO DEFINE THE COMMUNITY'S RESILIENCE

Firstly, describe "resilience" to the focus group using the definitions agreed on the Assessment Field Team Training

Rewrite the definition here if helpful

Question. 3.1: Ask the group what their community would look like if everyone had achieved the described "resilience" status. Please note that this question aims to bring out the realistic and positive building blocks/ drivers to achieve context-specific "resilience" status in the community, not negative problems or unrealistic wish lists.

Question 3.2: Ask the group to consider which of all the statements made by the participants are the most important. In other words, if only three (3) of the statements could be achieved, which would they choose?

Question 3.3: State the two (2) highest scored statements and write them down. Then ask participants to briefly explain why the two priority statements are the most important for their resilience with specific examples, and note them. To gather the answers, facilitators provide participants with six beans each, and request every participant to place beans on the ground against the statements.

3.1: Statements (Check ALL the applicable ones)	Resilience (Short) Statements	3.2: Bean Scores
	01. Cash transfers	
	02. Community skills / organization	
	03. Diversified incomes / Entrepreneurship	
	04. Early warning / disaster preparedness	
	05. Education – Basic (Mandatory education)	
	06. Education – Higher (e.g. University, Collage, Technical, Tertiary, Adult)	
	07. Electricity	
	08. Environment / forest / tree / natural resources	
	09. Farm practices / inputs	
	11. Food for humans/food security	
	12. Governance / No corruption	
	13. Healthcare for animals	
	14. Healthcare for humans	
	15. Housing / shelter	
	16. Irrigation	
	17. Jobs / employment / wage labour	
	18. Land ownership	
	19. Livestock herds	
	20. Loan / saving / credit	
	21. Markets	
	22. Peace / security	
	23. Relief	
	24. Roads	
	25. Sanitation / latrines	
	26. Telecommunication	

3.1: Statements (Check ALL the applicable ones)	Resilience (Short) Statements	3.2: Bean Scores
	27. Transport / vehicles	
	28. Water for humans	
	29. Water for livestock	
	30. Women / gender empowerment	
	Others [Specify]	
	Others [Specify]	
	Others [Specify]	
	Others [Specify]	

Contributions of Statements on Resilience		
Rank	3.3a: Priority statements	3.3b: Explanations of why the statement is considered
1		
2		

SECTION 4: RESILIENT HOUSEHOLDS

Question 4.1: Ask the group to think of the HHs in their community that have attained most/many (if not all) of the statements made in Section 3 not only in normal period but also in a crisis period, and ask them to describe socioeconomic or other characteristics and features commonly observed among those HHs.

4.1: Characteristics of resilient HHs (Check ALL the applicable ones)	
	Be entrepreneurial and engage in own income-generating activity (e.g., small business, trade, etc.)
	Have a member who has employment / wage labour
	Practice irrigated farming
	Own livestock or have large herd size
	Have good quality housing/shelter
	Own / have secure access to (large) land
	Have transportation assets (e.g. bicycle, motorcycle, vehicle, etc.)
	Be food secure
	Others [Specify]
	Others [Specify]
	Others [Specify]
	Others [Specify]
	Others [Specify]
	Others [Specify]

Question 4.2: Ask the group whether, in general, the proportion of resilient HHs in their community has increased, declined or stayed the same in the last 5-10 years. Ask for reasons.

State of Change in Resilient HHs						
4.2a: Proportion of resilient HHs (Check the most applicable one)		Increased		Decreased		No change
4.2b: Reasons for increase /decrease/no change						

SECTION 5: INTERVENTIONS TO BUILD RESILIENCE

Question 5.1: Ask the group to list any interventions/services/changes/actions that took place and have made the most difference in increasing resilience in this community in the last five years. This list may not be limited to developmental/humanitarian support provided by the government or NGOs but could also include the communities' own efforts or those provided by the private sector (e.g. improved mobile phone coverage).

5.1: Long list of resilience building interventions (Check ALL the applicable ones)	
	a. Business (skill development, improved business environment, etc.)
	b. Credit/loan/saving: access to formal or informal services (village savings, micro-banks, etc.)
	c. Education: Hardware (construction/refurbishment of school facilities, etc.)
	d. Education: Software (staffing/quality improvement, scholarships, bursaries provision, etc.)
	e. Empowerment (improved community organization/self-help group, gender equality, etc.)
	f. Environment (natural resources management, land rehabilitation, reforestation, etc.)
	g. Farming: labour & non-labour inputs/technology/techniques and subsidy
	h. Farming: irrigation
	i. Farming: improved market access
	k. Food and/or other relief item distribution
	l. Governance/Peace (less/no corruption, decision-making/conflict resolution structure, etc.)
	m. Health: hardware (construction/refurbishment of health facilities, etc.)
	n. Health: software (improvements in health services and staffing)
	o. Housing (e.g. support in building safe and strong shelter)
	p. Job/Employment/Labour (e.g. increased formal/informal job opportunities)

5.1: Long list of resilience building interventions (Check ALL the applicable ones)	
	q. Livestock: qualitative (production improvement through fodder, animal health, etc.)
	r. Livestock: quantitative (increase herd size, restocking of livestock, etc.)
	s. Livestock: improved market access
	t. Road (construction, improvement, etc.)
	u. Social Assistance/Productive safety net (social cash transfer, cash for work, etc.)
	v. Telecommunication (e.g. mobile phone coverage extension)
	w. WASH: improved water quality and quantity (boreholes, taps, piping, tanks, dams, etc.)
	x. WASH: improved access to basic sanitation
	Others [Specify]
	Others [Specify]
	Others [Specify]
	Others [Specify]

Question 5.2: First, ask the group to jointly identify the three (3) most important PAST OR ONGOING interventions/services/changes/actions among those mentioned under Question 5.1, which have contributed to build their community resilience (as it has been defined and understood by this community). For each of the selected interventions, explain why: i.e. how and why it has most effectively built resilience.

Past/Ongoing Resilience Building Interventions		
Rank	**5.2a: Priority interventions**	**5.2b: Explanations of why the intervention was important/how it helped build resilience**
1		

2		
3		

Question 5.3: Second, ask the group to jointly identify the three (3) most important ADDITIONAL OR NEW interventions/services/changes/actions, which will contribute to building their community's resilience in the future. The answers may/may not be among those mentioned under Question 5.1. For each of the selected interventions, explain why: i.e. how and why it is expected to most effectively build resilience.

Additional/New Resilience Building Interventions		
Rank	**5.3a: Priority interventions**	**5.3b: Explanations of why the intervention is important/how it will help build resilience**
1		
2		

3		

SECTION 6: COMMENTS/INPUTS

Section 6: As facilitators wrap up the discussion, ask the group if they have any inputs relevant to the topic and/or comments related to the overall FGD.

6: Comments/inputs from participants

APPENDIX 2: KII Guiding Question

Interviewer's Details		
0.1: Name	0.2: Telephone	0.3: Email

Background Information	
0.4: Woreda Name	
0.5: Kebele Name	
0.6: Date of KII	

SECTION 0. INTRODUCTION AND EXPLANATION

1. Welcome and thank the key informant for his/her time.

2. Provide a brief introduction and explain the overview of KII including, among others:

• In order to help people in Moyale woreda more effectively, it is important to identify households that are doing well generally and able to withstand shocks and crises in your village without having to rely on external emergency support from the government, NGOs, etc. These households are often described as "resilient" (explain further as required). Your household has been identified as one such household.

We would like to ask you a few questions to help us understand what you and other household members are doing or benefiting from that enables you to do well in this community when so many others find it much harder to cope.

SECTION 1: KEY INFORMANT'S HOUSEHOLD INFORMATION

Question 1.1-1.5: Obtain basic information on the key informant's household (HH).

Basic Household Information				
1.1: Name of key informant				
1.2: Tel # of key informant				
1.3: Number of HH members				
1.4: Head of HH (Check one)		Male-headed		Female-headed

Question 1.5: What is the highest level of education attained by the member(s) in your household?

1.5: Highest education level in HH (Check the applicable one)		No formal education: illiterate
		No formal education: can read and write
		In primary school
		Completed primary school
		In secondary school
		Completed secondary school
		In tertiary education
		Completed tertiary education
		Other [Specify:]
		Other [Specify:]

SECTION 2: SOURCES OF INCOME/LIVELIHOODS

Question 2.1: Please state ALL sources of income in your HH generated by the HH members in a year, including seasonal sources. If the key informant HH's livelihood is purely non-cash subsistence-based, please check only "subsistence." Among these, please select up to three (3) sources that particularly contribute to your HH's ability to cope with shocks/crises facing the community.

2.1a: Sources of income/livelihood activities **(Check ALL the applicable ones)**		**2.1b. Priority sources** **(Check up to three [3])**
	Subsistence	
	Crop farming: rain-fed	
	Livestock: sale of animal(s)	
	Livestock: livestock products (e.g. milk, hides, manure)	
	Self-employment/small business/petty trade	
	Wage income: formal employment	
	Wage income: informal casual labour	
	Remittances	

	Rental Income: land	
	Other [Specify	
	Other [Specify	
	Other [Specify	
	Other [Specify	

Question 2.2: Does your HH receive social assistance/productive safety net (e.g. food or cash transfer) support regularly? Did your HH receive any relief (i.e. food/item) support in the past 5 years? If so, explain how often.

External Livelihood Support					
2.2a: Social assistance/productive safety net support (Check one)		Yes	[If yes, how often?		No
2.2b: Relief support (Check one)		Yes	[If yes, how often?		No

SECTION 3: PATHWAY TO RESILIENCE

Question 3.1: In previous discussions with members of your community, HHs such as yours were considered 'resilient'. What do you think are the key factors or characteristics that make your HH resilient?

3.1: Contributing factors to HH resilience (Check ALL the applicable ones)	
	Access to finance (formal/informal)
	Access to health
	Cash/food support
	Crop farming: techniques/technology/inputs
	Crop farming: irrigation
	Crop farming: subsidy
	Education (academic qualification, knowledge, etc.)
	Land ownership/access
	Livestock ownership

	Off-farm income (business, employment, labour, etc.)
	Remittance
	Access to finance (formal/informal)
	Other [Specify
	Other [Specify
	Other [Specify
	Other [Specify

Question 3.2: Please explain the steps or process that your HH followed in becoming resilient in the past 5 years.

3.2: Steps taken by HH to be resilient

Question 3.3: Please think of past bad years or shocks/crises which hit your community. Do you think your HH coped relatively better than other HHs in the community during these periods? Why?

3.3a: Duration of HH's resilience (Check one)		Always relatively resilient
		Almost always relatively resilient
		Not always relatively resilient

3.3b: Reasons for resilience duration	

SECTION 4: PRIORITY RESILIENCE-BUILDING INTERVENTIONS

Question 4.1: Based on your HH's experiences to date, what types of interventions/services/changes/actions would best enable other HHs in your community to also cope well with shocks/crises? Please give the three (3) most important things that could happen and explain why/how these would make significant differences.

4.1a: Priority resilience-building interventions (Check three (3)applicable ones)	
	Business (skill development, improved business environment, etc.)
	Credit/loan/saving: access to formal or informal services (village savings, micro-banks, etc.)
	Education: hardware (construction/refurbishment of school facilities, etc.)
	Education: software (e.g. staffing/quality improvement, scholarships, bursaries provision, etc.)
	Empowerment (improved community organization/self-help group, gender equality, etc.)
	Environment (natural resources management, land rehabilitation, reforestation, etc.)
	Farming: labor & non-labor inputs/technology/techniques and subsidy
	Farming: irrigation
	Farming: improved market access
	Food and/or other relief item distribution
	Governance/Peace (less/no corruption, decision-making/conflict resolution structure, etc.)
	Health: hardware (construction/refurbishment of health facilities)
	Health: software (e.g. improvements to health services and staffing)

4.1a: Priority resilience-building interventions (Check three (3)applicable ones)	
	Housing (e.g. support in building safe and strong shelter)
	Job/Employment/Labor (e.g. increased formal/informal job opportunities)
	Livestock: qualitative (production improvement through fodder, animal health, etc.)
	Livestock: quantitative (increase herd size, restocking of livestock, etc.)
	Livestock: improved market access
	Road (construction, improvement, etc.)
	Social assistance/productive safety net (social cash transfer, cash for work, etc.)
	Telecommunication (e.g. mobile phone coverage extension)
	WASH: improved water quality and quantity (boreholes, taps, piping, tanks, dams, etc.)
	WASH: improved access to basic sanitation
	Other [Specify
	Other [Specify
4.1b: Explanation for each priority intervention of why it is important/how it helps build resilience	
1.	
2.	

4.1a: Priority resilience-building interventions (Check three (3)applicable ones)
3.

APPENDIX 3. Complete resilience statements and scores

SLF Category	Resilience characteristic (short statement)	Resilience characteristic (Full statement)	Bean score	Total score
Financial	Access to credit	The community would have access to affordable credit and would be saving money (through banks, microfinance organizations, community savings and credit).	13	41
	Diversified incomes / Entrepreneurship	Many households would be engaged in various income generation activities such as small businesses, and trading.	10	
	Cash	The people would have enough money to fulfill all basic necessities and live in prosperity	9	
	Vehicles	It would be common to own a motorbike or other motor vehicle.	4	
	Health care for livestock	The community would have access to high quality and affordable animal health services, including veterinary services and vaccinations, whenever they need them.	3	
	Employment and Job	There would be many opportunities for jobs and other forms of/ paid employment through government, factories and other businesses.	2	
	Agricultural inputs	Farmers would be more productive and profitable (i.e., they would have access to inputs like	1	

SLF Category	Resilience characteristic (short statement)	Resilience characteristic (Full statement)	Bean score	Total score
		improved seed, fertilizers and good pest management system).		
Human	Human healthcare services	The people would have access to quality and affordable basic health care locally	76	211
	Education from primary to higher level	All children would be able to complete primary/secondary/tertiary education.	51	
	Food security	All households would be able to feed themselves well every day.	74	
	Early warning service	Every people would have access to disaster early warning information to help prepare for disaster and reduce risk	10	
Natural	Forest management and conservation	Local rangelands and other natural resources would be well managed so they do not become degraded over time.	19	19
Physical	Water for human and livestock	The whole community would have access to sufficient, good quality water at all times of the year.	53	142
	Housing/Shelter	Everyone would live in good-quality housing	27	
	Access to Market	The community would have easy access to markets to buy goods and sell their produce.	20	
	Roads	There would be good-quality roads to the community	16	
	Sanitation	Everyone would have good sanitation.	15	

SLF Category	Resilience characteristic (short statement)	Resilience characteristic (Full statement)	Bean score	Total score
	Electricity	The community would have access to affordable electric facilities and supply	10	
	Irrigation	Farmers would be irrigating land to improve the production of crops for consumption and sale.	1	
Social	Peace and Security	The whole community would enjoy continual peace and security.	239	259
	Community organizations and skills	The community would have plans and structures are in place to manage and address all major concerns.	11	
	Women empowerment	There would be equal participation of women in the community and needs of women are always addressed	9	