



## The Gendered Drought Coping Mechanisms: The study Among Pastoralist Communities, in Shinile District, Somali Region, Ethiopia



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Masters of Professional Thesis

By

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## Table of content

|  |      |
|--|------|
| Permission to use .....  | ii   |
| Dedication .....   | iv   |
| List of Tables, Figures and Photos.....  | vii  |
| Abbreviations: .....   | viii |
| Chapter one: Introduction .....  | 1    |
| 1.1 Background.....  | 1    |
| 1.2. Problem Statement .....   | 2    |
| 1.3 Objective of the Study.....  | 2    |
| 1.4 Research Questions.....  | 3    |
| 1.5 Definition of key concepts.....  | 3    |
| Chapter Two: Literature Review.....  | 5    |
| 2.1. Drought and its Impacts on Pastoralist Communities of Ethiopia .....            | 5    |
| 2.2. Drought coping mechanisms.....  | 6    |
| 2.3. Household factors and drought coping options among pastoral communities .....   | 8    |
| 2.3.1. Intra household dynamics and decision making among pastoralist community..... | 8    |
| 2.3.2. Education among pastoral communities of Somali region .....                   | 9    |
| 2.4. External factors and drought coping options among pastoralist communities.....  | 9    |
| 2.4.1. Local Infrastructures .....   | 10   |
| 2.4.2. Institutional factors .....   | 10   |
| 2.4.3. Social network .....  | 11   |
| 2.4.4. Traditional weather forecast.....   | 12   |
| 2.4.5. Conflict .....  | 12   |
| Chapter three: Descriptions of the Study Area and the Research Methodology .....     | 14   |
| 3.1. Description of the Study Area .....   | 14   |
| 3.1.1. Location.....   | 14   |
| 3.1.2. Agro Ecological zone .....  | 15   |
| 3.1.3. Livelihood System in Shinile District.....                                    | 15   |
| 3.1.4. Demographic Structure.....  | 17   |
| 3.2. The Research Methodology .....  | 17   |
| 3.2.1. Selection of the study area.....  | 18   |
| 3.2.2. Focus Group Discussions (FGDs).....   | 18   |
| 3.2.3. Individual interview.....   | 18   |
| 3.2.4. Observation .....   | 19   |
| 3.2.5. Data Process and Analysis .....   | 19   |
| 3.2.6. Limitation of the study.....  | 19   |
| Chapter 4: Results and Discussion.....   | 21   |
| 4.1. Drought History and Trend for the Last 20 Years.....                            | 21   |
| 4.2. Activities Engaged by Pastoralist Men and Women to Cope up with Drought .....   | 24   |
| 4.2.1. Firewood and charcoal .....   | 24   |
| 4.2.2 Modifying the Consumption Pattern .....  | 25   |
| 4.2.3 Mobility .....   | 26   |
| 4.2.4. Temporary Migration to Nearby Cities.....                                     | 28   |
| 4.2.5. Contraband .....  | 29   |
| 4.2.6. Petty Trading .....   | 30   |
| 4.2.7. Social network and Support .....  | 31   |
| 4.2.8 Begging.....   | 32   |

|  |    |
|--|----|
| 4.3. Household factors and Drought coping options.....                             | 33 |
| 4.3.1. Gender Division of Labor.....   | 33 |
| 4.3.2. Access and control.....   | 37 |
| 4.3.3. Demographic Structure and Drought Coping Mechanism.....                     | 38 |
| 4.3.3.1. Family Composition and Family Size.....                                   | 38 |
| 4.3.4. Education and coping mechanism.....   | 40 |
| 4.4. External Factors and their Influence on household Drought Coping Options..... | 41 |
| 4.4.1. Local Infrastructure.....   | 41 |
| 4.4.2. Alternative livelihood options.....   | 42 |
| 4.4.3. Institutional factors.....  | 43 |
| 4.4.3.1 Drought Policy and Interventions.....                                      | 43 |
| 4.4.3.2 Availability of Food Aid.....  | 44 |
| 4.4.3. Predicting a Drought and Traditional Early Warning System (EWS).....        | 45 |
| 4.4.4. Conflict.....   | 46 |
| Chapter five: Conclusions and Recommendations.....                                 | 47 |
| 5.1. Conclusions.....  | 47 |
| 5.2. Recommendations.....  | 49 |
| References.....  | 51 |
| Annexes.....   | 56 |
| AnnexA: Summary of data sources.....   | 56 |
| AnnexB: Guideline for Focus group session with women/men pastoralists.....         | 57 |
| Annex C: Semi structured Guide questionnaire with pastoralist men/women.....       | 58 |
| AnnexD: Semi structured Interview Guide Questionnaire with the key informants..... | 60 |

## List of Tables, Figures and Photos

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### List of tables

|  | Page |
|--|------|
| Table 3.1 Livestock Population in Shinile District.....                                | 15   |
| Table3.2. Wealth characteristics in Shinile District.....                              | 16   |
| Table3.3. Seasonal calendar in Shinile District.....                                   | 17   |
| Table 4.1 Frequency and severity of the drought for the last twenty years.....         | 22   |
| Table 4.2 Comparison of different PAs on condition of mobility.....                    | 27   |
| Table 4.3 Activities involved by boys and girls in cities.....                         | 28   |
| Table 4.4. Gender Division of Labor.....   | 35   |
| Table 4.5. Gender Disaggregated Access to and control over Resources and Benefits..... | 37   |
| Table 4.6. Number of boys and girls going school in the study PAs from interview.....  | 40   |

### List of Figures

|  | Page |
|--|------|
| Figure 1.1 Conceptual frame work.....      | 3    |
| Figure 3.1 Location of the study area..... | 14   |

### List of Photos

|  | page |
|--|------|
| Photo 4.1 Man and Women carrying firewood.....               | 24   |
| Photo 4.2 Women selling Biscuit and tea.....                 | 30   |
| Photo 4.3 Focus Group Discussion with pastoralist men.....   | 33   |
| Photo 4.5 Focus Group discussion with pastoralist women..... | 33   |

### Definitions of Local terms

Birr: refers to Ethiopian currency according to the exchange rate of September 2010 1 birr equivalent to 0.0474856 EUR

Khat (catha edulis): refers to a mild stimulant commonly chewed in the Horn of Africa

Sahan: refers a man who is sent for pasture and water surveying or assessment

Dhowartoas : contribution system among neighbors to support each other

**Abbreviations:**

EWS: Early Warning System

DPPD: Disaster Prevention and Preparedness Department

FGDs: Focus Group Discussion

FHH: Female Headed Household

GOs: Government Organizations

HIV/AIDS: Human Immuno Virus/Acquired Immuno Deficiency Syndrome

HCS: Harargie Catholic Secretariat

MHH: Male Headed Household

NGOs: Non Government Organizations

PRSP: Poverty Reduction Strategy Process

PASDEP: Plan for Accelerated and Sustainable Development to End Poverty

PA: Peasant Associations

SC-UK: Save the Children- United Kingdom

STDs: Sexual Transmitted Disease

## **Abstract**

This study examines the gendered drought coping mechanisms among the pastoral community in Shinile District, Somali Regional State, Ethiopia.

The study employed both the primary and secondary data as its information source. As a means of primary data collection; Focus Group Discussion (FGDs) and interviews were undertaken in five Peasant Associations. Ten FGDs were done in two different groups one comprising six men and the other six women. Twelve pastoralist men and women and three key informants (two government officers and one NGO staffs) were interviewed. The secondary data from the literature on drought coping mechanisms by pastoralist men and women was also used to enrich the findings of the primary data.

The study shows that pastoralist men and women employed different drought coping mechanisms. But the coping mechanisms differ across the gender. Commonly employed coping mechanisms by the pastoralists women include: sale of firewood, modifying household food consumption, contraband (unlicensed trade), migration to cities, petty trades, and neighbor based social network, and begging. Whereas men pastoralists engage in: charcoal selling, wage labor, construction wood selling, clan based social network, livestock selling and mobility as their coping mechanism during drought.

The current drought coping mechanisms undertaken by pastoralist men and women in the Shinile District are, however, not efficient and sustainable. Because the coping mechanisms: are not environmentally friendly, have risk on health, have adverse impact on children education and concur with illegal act (e.g. informal trade). And, hence efficient and sustainable drought coping mechanism still essential.

The existing gender role and gender access and control limit the coping mechanisms employed among the pastoralist men and women. In addition, most of the pastoralist families in the study area are polygamous and have large family sizes that need more food. Since job opportunities in the district are limited to allocate the family labour, large family size in turn worsen the drought impact on the families by weakening their coping capacity. Moreover, for most households among the pastoralist in the study area, lack of education also constrains opportunities to diversify their livelihood. But the institutional support by NGOs and GOs during drought does not so far take into account such differences as well as specific needs among the pastoralist men and women in the district.

External factors like access to road, credit, lack of alternative livelihood skill and water and distance from cities are also the major constraints to diversify livelihood options to enhance pastoralists' coping mechanisms. Since pastoralist women of the study area have limited access and control and benefit over important resources, there is more effect on women during drought than men.

Finally, this study makes recommendations for efficient and effective drought coping mechanism in the study area. Accordingly, the both GOs and NGOs need to consider the following issues while designing drought coping mechanisms. First, the difference in interest and needs between the pastoralist men and women in drought coping mechanism should be taken into account. Second, before carrying out external drought coping interventions gender analysis is essential to deliver gender equitable service. Third, training on alternative income generating activities is important to strengthen the coping mechanisms of pastoralist men and women. Fourth, improvement in the local infrastructure such as roads and water supply are important to minimize the impacts of the drought as well as to enhance future coping mechanisms of the pastoralists.

## **Chapter one: Introduction**

### **1.1 Background**

In Ethiopia, Pastoral areas cover more than 62% of the country's land mass that are categorized as arid and semi-arid rangelands and keep over eleven million heads of animals (Kasshun, et al, 2008). This pastoral area constitutes 12–15 million of Ethiopia's 77 million people (Pantuliano and Mike, 2008). In addition the report by Kasshun et al, 2008 indicates that pastoralism employs about 27% of the total national population and contributes about 30% of the gross national product and 90% of the hard currency from live animal exports. Somali and Afar Regional States of Ethiopia are major pastoral habitat in the country, and to a lesser extent pastoralism is also practiced in other regions of the country (World Bank, 2003).

However, pastoral communities of Ethiopia have the lowest access to education and human health services in the country and these areas have the least developed infrastructure displaying their exclusion from mainstream development. Moreover, the livelihoods of pastoral communities are severely threatened by animal disease, drought and unfavorable terms of trade. (*Halderman, 2004*)

In line with this reality, Ethiopia's reiterated commitment toward pastoral community development during the Poverty Reduction Strategy Process (PRSP) initiatives is also reflected in the National Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) document. Accordingly, Pastoralist Livelihoods and Development is one of the seventeen sectoral policies, Strategies, and programs of the PASDEP. A range of tailored programs and policy were introduced to pastoralist areas. These are improving pastoral livelihoods and asset bases, addressing inadequacy/lack of basic social services, addressing institutional issues related to pastoralists focusing on gender development and putting in place land tenure and institutional policy. (Pastoralist Forum Ethiopia, 2009)

Despite the above measures taken by the government, Ethiopia pastoralist livelihoods systems are becoming increasingly vulnerable to drought, conflict, population pressures, and government policies on land tenure systems (Pantuliano and Mike, 2008). Among these, the vulnerability of pastoralists to drought is very complex and diverse, and mechanisms of coping with drought are constrained by the others. It is also claimed that drought as such is not making pastoralists vulnerable but rather the increasing marginalization of their drought response mechanisms (Devereux 2006).

According to Riché, et al.(2009) and Kassa,Beyene and Mangi,(2005),pastoralist drought response mechanisms are marginalized by increasing land degradation, conflicts over scarce resources, limited access to information, limited education, skills and access to financial services, markets required to diversity their livelihoods, inadequate government policies, and population pressures. These are not different for Shinile District of Somali pastoralist region, the study area which is one of poorest District characterized by the small ownership of livestock by households compared to other Somali pastoralist districts (Devereux 2006).

Shinile district climate is characterized as harsh, with droughts being frequent and severe. In addition, because of reliance on only one major rainy season, and the long period in between rains, this district is very susceptible to drought. In fact, there is a widespread perception that rain failures have become more regular, and even continuous during the last decade (Devereux 2006).

Recurrent drought and increase in temperature are considered as the main hazard in Shinile District resulting to decreased water and pasture availability.

These in turn has led to women travelling over long distances in search of water; decreased livestock disease resistance and productivity; decreased livestock prices and household incomes; food insecurity and malnutrition. These are mostly affecting children, women and elders. Moreover, there has been an increased, unusual community mobility leading to increased school drop-out mainly girls, interruption of development activities and increased human diseases and death. (Riché, et al, 2009)

Given this background, this study aims to examine the current coping mechanisms undertaken by men and women in coping with drought.

This research is part of the interdisciplinary pool of researches conducted by the Institute of Pastoral and Agro pastoral Studies, Haramaya University of Ethiopia; an institute the writer is working for.

## **1.2. Problem Statement**

Frequent droughts have been major issues throughout history in the Ethiopian lowlands, and strategies to cope with these droughts are embedded in communities' traditional social structures and resource management systems (Devereux, 2000). Accordingly, pastoralist community of Shinile Zone has been changing and adapting their livelihoods to the droughts for centuries (Devereux, 2006).

However, the extent of current drought, combined with additional environmental, social and political issues, is making many traditional coping strategies ineffective and unsustainable, amplifying environmental degradation and food insecurity, and forcing communities to rapidly find new livelihood strategies (Riché, et al, 2009). In addition, this study reveals that besides the traditional drought coping mechanisms like mobility, clan interdependence, entrusting livestock to relatives in non-drought prone areas and others they have been using, the pastoral community of Shinile Zone has vast knowledge on how to cope with the frequently increasing drought.

Study report by CARE International and Save the Children UK, 2010 assert that, in order to build a better and resilient pastoral community of Shinile Zone, government and development partners have to work together by building on the existing vast indigenous knowledge of drought coping mechanism. Similarly the study warns that urgent action is needed to help poor women, elder and children adapt to the severe impacts of the increasing frequent drought. In order to design effective and sustainable drought coping interventions and deliver gender-equitable services, government and development partners need to identify what men and women do during the drought periods, then develop strategies that take interest of men and women in to account.

However, there is lack of gender disaggregated information about drought coping mechanism in Shinile zone. Thus, this study aims to examine drought coping mechanism used by men and women.

## **1.3 Objective of the Study**

The study aims to contribute to gender sensitive knowledge required for interventions on drought coping mechanisms thereby reduce pastoralist men and women vulnerability to drought. The above objective will be realized through examining the gendered drought coping mechanisms among the pastoral community in Shinile District, Somail Regional State, Ethiopia.

## 1.4 Research Questions

In order to address the above study objective, a set of research questions are formulated to guide the research process. The main research question is:

What are gendered drought coping mechanisms among the pastoralist communities in Shinile District? The research addresses the following specific research questions:

- What activities are engaged in by pastoralist men and women to cope up with drought?
- *What household factors affect pastoralists' men and women drought coping options?*
- *What external factors affect the pastoralists' men and women drought coping options?*

## 1.5 Definition of key concepts

### Coping mechanism

Definitions

1. Coping mechanisms are range of short term strategies that are aimed at maintaining various objectives of household, including livelihood security, food security, health and status. Livelihood security and status are long term objectives in the strengthening of assets, incomes and social positions to maximize claims on resources. Food security and healthiness are more immediate objectives that entail finding sufficient food and income to meet the health and nutritional needs of household members(Adams, Cekan, and Sauerborn,1998)
2. Coping mechanism is a short-term response applied in a situation where a household is food insecure(Kasa et al, 2005)
3. According to Davies (1993), coping mechanisms are the bundle of poor people's responses to declining food availability and entitlements in abnormal seasons or years.

From the above definitions this study adopts the following definition of coping mechanism: Coping mechanisms are range of activities undertaken by household members in response to short term food insufficiency that occur as a result of drought.

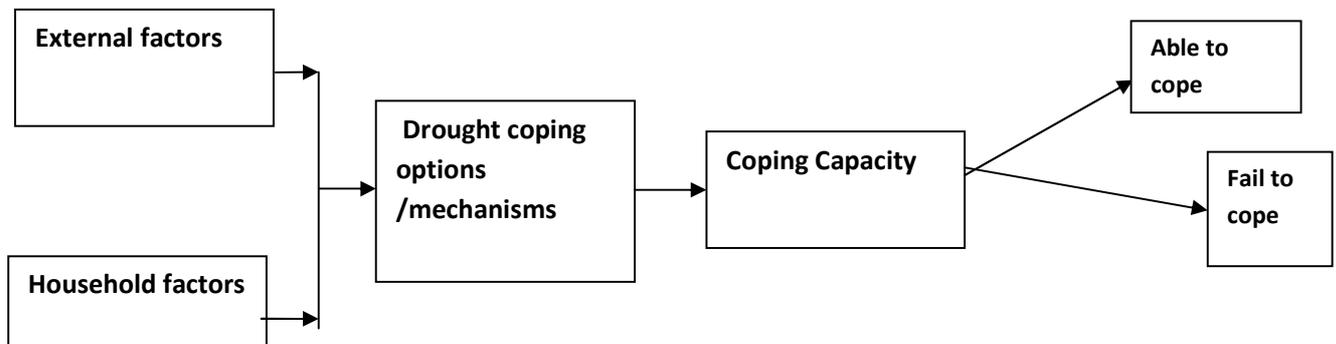


Figure1.1 Conceptual frame work

Drought coping options/mechanisms available to pastoralist men and women are determined by household and external factors. The coping options in turn determine their coping capacity.

### Household factors:

(a) *Intra household dynamics and decision making*: involves how decisions are made with regard to resource allocation. Such as who does what, who has access to and control over resources and benefits, and who benefits or suffers as a result the access and control decisions?

(b) *Demographic structure*: involves household size, household composition (age, gender) and education of household members

**External factors:**

Local infrastructures (proximity to market, road, water supply, and credit facility) ;alternative livelihood options; institutional factors (coping policy, GOs and NGOs interventions, and availability of food aid); conflict between or within clan; acceptance of expert weather forecast, and traditional early warning system that influence household's coping options and decisions

This study adopted household definition by Admas et al, (1998) that states, "Household is a dynamic institution comprised of individuals who share a common interest in its integrity, and who participate in the functions of production, reproduction and consumption."

**Gender:**

For the word gender, there are many definitions given by different authors, this study adopts the following definition of gender.

Gender is how a person's biology is culturally valued and interpreted in to locally accepted ideas of what it is to be a woman or a man. The gender and power relation relations between men and women are based on this socially constructed. Gender characteristics and related expectations of roles and responsibilities are changeable between and within cultures (Banden and Goetz, 1988)

**Access to, and control over resources:**

*"When considering the way in which resources are allocated between men and women (the 'gendered' allocation of resources), it is important to look at the difference between access to resources and control over them"*(March, Smyth, and Mukhopadhyay 2005).

Access: This is defined as the opportunity to make use of a resource.

Control: This is the power to decide how resources are used, and who has access to it.

**Gender division of labor:**

It is all types of work done by men and women. Among societies, men and women are allocated to different tasks, activities and responsibilities. This varies from society to society, and within a culture, also changes with external circumstances and overtime. The gender-based division of labor attributed in a given socio-economic setting determines the roles that men and women actually perform (March, Smyth,andMukhopadhyay2005).

## **Chapter Two: Literature Review**

In this chapter, information from literature which provides a background for the study is presented. First, you will find information about the current drought and its impact on pastoralist community of Ethiopian followed by the common coping mechanisms that have been undertaken by Ethiopian pastoralist communities. This will enable you to understand the situation of drought and how people have been dealing with it. After that you will find some of the household and external factors that influence pastoralists' coping options.

### **2.1. Drought and its Impacts on Pastoralist Communities of Ethiopia**

For the arid and semi-arid areas of the country, where rainfall is low at rain times and abnormally low every few years, drought is considered as a normal part of life. For instance, between 1978 and 1998 alone 15 droughts occurred in these areas (Brown and Teshome, 2007). As of pastoralists, their livelihoods are considerably adjusted to conditions of low and irregular rainfall (Devereux, 2006). On the other hand, impacts of drought on pastoralist communities of Ethiopia have been severe (ibid). For example, in Somali region the trend of animal mortality rate resulted from drought is increasing by about 20%, 40%, 60% and 80% of the total livestock population during 1930-1970, 1970-1990, 1990-2000 and 2001-2002/03 respectively (SERDP, 1990; ARPARI, 2005).

The problem is very serious in the arid and semi-arid areas of the country which is mainly the pastoral and agro pastoral areas (Gebremichael, 2009). Historically, the pastoralist experienced the drought every 5-10 years (Lautze, et-al, 2003) but recently drought has been occurring every 1-2 years (CARE International and Save the Children UK, 2010). For example, among the pastoral community of Borana, drought has been occurring every 1-2 years while it used to occur every 6-8 years this is indicated by the two major droughts that have hit the zone in 2006 and 2008 (Riché, et al, 2009). In addition, from 2007 to 2009, the two district of Somali region, Ayisha and Erer have had only 15 and 4 days of rain respectively (ibid). Between these periods the worst years in terms of drought were 2007 and 2008, which resulted in loss of a large number of animals (80% of cattle, 70% of sheep, 40% of camels and 30% of goats). Similarly, since 1993 pastoralists of Afar region have experienced major droughts every 2-3 years (DPPC, 2002).

Out of the total livestock death occurred in the pastoral areas of Ethiopia, more than 80% the death are caused by drought (Kassahun, 2003). The consequences from the loss of these livestock differs among different types of households and gender. For example, women-headed poorer households without large numbers of livestock and poorer households are more vulnerable to drought than others (Regassa, Givey, and Castillo, 2010). Other circumstances as outcome of livestock loss in times of drought turn pastoralist men to become idle and chew khat and leave women as the sole breadwinners (Devereux, 2006).

In addition, food shortages among pastoralist communities of Ethiopia mainly exist at the end of dry season or drought time, when milk availability is low and livestock are in poor conditions (SC-UK, et al, 2002). According to the study by Devereux (2006), in Somali Region the hungry season coincides with the hot dry season, which runs from January to March and is associated with heightened vulnerability and higher mortality rates than any other time of year. The food insecurity impact is higher for women than men due to their relative lack of ownership and access to several assets (Segnestam, 2008). Besides, drought exposes most children to risk of malnutrition. According to the report by UNICEF (2008), as a result of the recent droughts more than 6 million Ethiopian children are at risk of severe malnutrition.

Drought also makes the collection of water and firewood more difficult, laborious and dangerous (Wawire 2003). The report by Riché, et al, (2009) reveals that the growing distance travelled to fetch water and increasing work load among Ethiopian pastoralist can be harmful to the productivity and health of families, and can especially increase the vulnerability of women to poverty. In addition to the physical stress of the journey, the time pressure for these activities increases the burden of women to properly care for their children, and to engage in income-generating or other productive household activities. Moreover, the long walk required in search of fuel wood and water can also expose women to sexual harassments like rape and abduction (Pastoralist Forum Ethiopia, 2008).

Most recent studies in pastoralist communities of Ethiopia indicate that the number of schools dropouts has been increasing over time coinciding with the trend of drought (e.g. SC-UK, 2008; Gebremichael and Kinfu, 2009; Riché, et al, 2009; and CARE International, 2010). This is because school children, especially girls are taken out to help their mothers at home in fetching of water from distance and other activities (Regassa, et al 2010).

Moreover, the decrease in access to water and grazing areas during drought seasons in turn led to conflicts between different neighboring clans while they compete over these scarce natural resources (Regassa, et al 2010).

In response to these impacts, both the traditional and institutional coping mechanisms are undertaken (Senbeta, 2009). The common traditional coping mechanisms are mobility in search for water, using more drought tolerant livestock species, borrowing livestock and money from relatives, collecting and selling of wild foods (Riché, et al, 2009). Most institutional coping mechanisms include emergency aid, credit services, safety net, water distribution, awareness raising on saving and use of technology (Senbeta, 2009). However, because of the increase in drought frequency that aggravates its severity, both coping mechanisms are claimed to be not sufficient with the current drought.

## **2.2. Drought coping mechanisms**

Pastoral communities of Ethiopia have been responding in different ways to the effects of drought (see Kassa et al, 2005; Deveruex, 2006; Flintan, 2007; and Sara Pantuliano et al, 2009,). Some of the common pastoralists' coping options in response to short term food insufficiency are:

- a. mobility
- b. reducing the amount of food consumed during drought periods,
- c. eating wild foods and making market purchases
- d. Remittances from the diasporas,
- e. income diversification ( off-farm) activities
- f. borrowing food or money to buy food,
- g. Clan interdependence (eg. members of the same clan share food among themselves & entrusting some of their livestock to relatives who reside in non-drought prone areas)
- h. Food aid

Coping options of household is influenced by the existing situation of the household ('chronic or transitorily food insecure'), extent and source of the crisis, and economy (Kasa, et al, 2005).

For example among Borena pastoralists, the first coping option available to the poor and the destitute is wild food then social supports from their communities and food aid from external sources. Whereas, medium and rich categories of the society have the options of selling small ruminants and cattle and less likely look for social support and food aid (Gemtessa, Emanu and Tiki, 2005). In addition, study by Kasa, et al (2005) indicates that household's coping options depend on their assessment of constraints. Details about a few of these coping activities are discussed below.

### **Mobility**

Mobility in this study refers to distance traveled by pastoralists with their livestock in search of water and pasture on others' territory. Mobility is an inherent strategy of pastoralists. It allows pastoralist to utilize the available resources in a rotational manner, enables the vegetation on grazing lands to regenerate, search for water and forage and reduces risk of overgrazing. The search for water (for human and livestock consumption) and forage are intensified during drought. In normal times, mobility is to the nearby areas whereas in drought seasons the movement is far distance.

In normal dry seasons, only men and boys are mobile with livestock while women accompany them to construct a temporary dwelling then return home to take care of herds of milking and sick animals that remain behind. As drought increases, however, the movement is more frequent with the whole family members. Thus, moving and putting up the household's shelter intensifies the burden of women (Flintan, 2007). The decision regarding where and when to migrate is made by head of the household, who are mostly men.

### **Income diversification activities**

To meet the consumption needs during shocks like drought, pastoralist communities of East Africa increasingly involved in non-pastoral income generating activities. In addition, the pastoralists' livelihood stresses with the recurrent drought have challenged pastoralists' men sole traditional roles of earning income for household and more pastoralist women have involved in alternative income generating activities. (Little et al, 2001)

Traditionally, Somali pastoralist men who lose their livestock as a result of shocks do not want to engage in whatever necessary alternative income-generating activities. One consequence from this patriarchal view is that income-generating activities are categorized as high-status and high-return activities like livestock rearing and large-scale trading, which are kept for men and low-status and low-return activities like petty trading, collecting firewood, into which women are involved excessively (Devereux, 2006). Now a days, due to a combination of social pressure and economic stress that resulted from crisis (eg. drought, conflict), more pastoralists men are becoming involved in income generating activities that reserved for women before (ibid).

On the other hand, the recurrent drought is considered as an "opportunity" for pastoralist women. This is because it triggered the women to diversify their economic activities: engagement in petty trade and other small businesses so that economic power in the households may gradually shift in favor of the women (Gebre Michael and Knife, 2009)

### **Managing food consumption**

Households faced with a livelihood shock that weaken their access to food react in a number of ways. Accordingly, pastoralist communities of Somali region respond to food shocks through 'protected consumption' and 'modified consumption'. Protecting consumption requires buying or being given food to maintain food intake levels. Modifying consumption includes reducing or diversifying consumption, or 'reducing consumers' by migrating or sending some household members elsewhere. (Devereux, 2006)

Similarly pastoralist women of Afar region make dietary changes. For example they prepare *fura*, the root of a potato-like plant and *burie*, a powder made from flower, which is ground to make bread. In addition, while traditionally goat's milk is not drunk to any great degree, in times of drought it forms a large part of the diet, as goats are more likely to survive than cattle (Flintan, 2007).

Moreover, to supplement family food during food insufficiency season, pastoralist women of East Africa also collect wild foods, but with environmental degradation and land privatization, the availability of wild fruit is continually being reduced.

Although all members of household in pastoral communities of Ethiopia reduce their consumption in drought times, women may reduce their consumption levels more than men by eating last and least (Flintan, 2007).

### **2.3. Household factors and drought coping options among pastoral communities**

Household factors determine which household responds to which types of activities and who will share benefit or cost from the activities within the household (Little, et al, 2001). For instance, among pastoral community of Borena, poorer families can engage in wage labors, remittance, brewing and other petty trading and depend on livestock for less than 50% of their income. But the wealthiest families depend on livestock for 80% of their income. In addition, although milk trading is dominated by women in most pastoral communities, it is ranked as an activity for middle wealth groups while sale of charcoal and firewood are important for women from poorer households (Little, et al, 2001).

#### **2.3.1. Intra household dynamics and decision making among pastoralist community**

Like in most societies, pastoralist men and women control different areas of economic activities (Maddox, 1991). Women have access to livestock products and of its slaughter products. But the income they earn from the sale of livestock products goes to support of day to day consumption of the household. Thus, pastoralist women's capacity to build their own productive assets and entitlement to household resources are weak (Emana et al. 2007). Men have the final decision over the sale of livestock and control the earnings (Brockington, 2001).

The livestock accessed by women is mainly by "virtue" of their relationship to the men who control them that is their fathers, husbands, and sons. Women's control over livestock are usually weak and indirectly expressed (Brockington, 2001). In some pastoral communities women's rights over livestock that are obtained through de facto ownership are more powerful (ibid). Accordingly, amongst pastoralists in Borena Zone of Ethiopia, women have control over the income generated from sales of milk and butter. Women also involve in the collection and sales of firewood and charcoal, decide on how to dispose the income for purchases of food items. Men control and decide on the largest portion of the income since men sell high value livestock and trade incomes (Gamtessa, Emana and Tiki, 2005). In addition, pastoralist women of Eastern and Horn of Africa have few options to control productive assets and are unable to inherit property; they are also excluded implicitly or explicitly from community decision-making, which is firmly in the hands of male elders (Kipuri & Ridgewell, 2008).

Customarily, the division of labor among pastoralist communities of Ethiopia is mainly based on gender and age. Adult men mainly involve in herding and decision-making at the household and the community level. And young men besides herding they serve as defense for the family. Tasks of women are mainly related to caring, maintenance and reproduction of the herd in which domestic activities are left entirely for old and young women (Hassen, 2007).

The activities carried out by pastoralist men and women under normal conditions determine their respective responsibilities during the drought time (Wawire, 2003). For example, as women are assigned to take care of family members and manage small and sick animals left at the homestead, the burden of taking care of children and elders who rely on other household members and the wider community are on their shoulders.

Men are responsible for securing household livelihoods and maintaining the livestock by increasing herd mobility in order to utilise areas where there is enough pasture and water.

In addition, the long distance for fetching water and collecting firewood and grass for sale by women and girls during drought period increase their workloads dramatically. In fact, for some pastoral communities (eg.Afar) both men and women fetch water, but the purpose is different as men use it for livestock and women use it for domestic requirements including for weak and sick animals (Flinton, 2007).

The gendered access and control over resources which tend to be dominated by men also influences drought coping options for men and women.....

*'The greater diversity of income sources experienced by the male headed households may be translated into a lower vulnerability in times of drought since they thus have better opportunities to access capital to purchase food and other necessities. These strategies are not easily available to women since they in general are hampered by norms and traditions to seek a job outside of the farm or to own valuable assets (Segnestam, 2008). '*

### **2.3.2. Education among pastoral communities of Somali region**

Access to education is a main problem for pastoralist communities. To a certain extent this is because of high mobility coinciding with low population density of arid areas that make the public services delivery complex and expensive. Pastoralists are also politically marginalized with little power to influence government spending allocations. (Deveruex, 2006) This is not exception for Somali Regional State of Ethiopia, which has the second lowest gross enrolment ratio of primary schools in Ethiopia following Afar pastoralist. In Somali region, more than 85% of school aged children are not going to school. Due to Lack of schools physically located within villages, scarcity of teacher and limited opportunity of moving to major cities to access to education, children in most pastoral and agro-pastoral communities of Somali region are not enjoying their right to education. Physical access is a critical factor affecting enrolment and dropout rates as well as the ability of households to send and keep a child in school (Devereux, 2006). In addition, more than 80% of adults cannot read and write. In the rural areas, only 13% are literate with female literacy ranges from 1.2% to 7 % (ibid).

With regards to the impact of education on drought coping mechanism the study by Pandey and Bhandari,(2009) on rainfed rice farming in Asia shows household with lower level of education have less coping capacity thus more vulnerable to drought. In addition, the study by Roth(1991) depicts that education can lead to more diversification by increasing chance of getting waged labour and enabling to make informed decision about the money economy and other economic options.

### **2.4. External factors and drought coping options among pastoralist communities**

To lessen the vulnerability to drought and address the immediate consumptions need individual or households employ diversity of coping mechanisms (Rockstrom, 2003). This is because coping with the climatic impact of drought requires social, economic and institutional 'preparedness' (ibid). Cited by Paul, (1998) Watts, (1983) claims that households affected by hazard like drought respond in various ways based on economic position, social and political linkages involved. Accordingly, some of the external factors that can influence household drought coping options are discussed below:

#### **2.4.1. Local Infrastructures**

Cited by Admas, et al (1998 ,pp 275), Adams(1993), states that local infrastructure: access to water and road, market, proximity to city, and geographical location affect capacity of individuals or households to cope with threats to their livelihoods. For example, sale of animals at onset of drought among pastoralist communities in northern Kenya is constrained by distance to markets, little grass on trek routes to market, poor contacts with traders who tend to be based only in urban center markets (Barton and Morton, forthcoming).

Proximity to city provides better options for diversifications. For example, small rural market can provide opportunity for petty trading but do not offer types of employment opportunities that are found in regional or primary city centers. This is depicted by the comparison of Borena and North Kenya pastoralist where wage labour among pastoralists communities of Borena is infrequent than North Kenya pastoralists that are near to most big cities including Nairobi (Little et al, 2001).

Similarly, the study by Riché, et al, (2009);Kassa,et al,(2005) shows that drought coping options of Borena pastoralists through livelihood diversification are constrained by, limited access to information, limited education, skills and access to financial services and markets. In addition, among Afar pastoralists, farming as alternative livelihood options are threatened by reduced in access to Awash River that is shortened by the growth of state cotton and sugarcane farms ( Flintan, (2007).

Moreover, for most pastoralist communities of Ethiopia, their peripheral locations relative to the central highlands of the country have exposed them to a defective marketing system. For instance, because of the peripheral location, most pastoralist communities in Afar, Somali, and Borana move across international borders for trade but the cross-border trade is categorized under illegal trade (Gebre Michael and Kinfe, 2009).

#### **2.4.2. Institutional factors**

The incorporation of pastoral issues in government policies and programmes and the development of pastoralist development policy are some positive policy changes that have been taking place towards pastoralists and pastoral development since 1994 (Mussa, 2004).However, there is a belief that the government policy which focuses on sedentary agriculture contradicts with actual system of pastoralism and does not take into account the actual situation. For example, the study by Kassa,et al (2005), indicates that the Somali Regional State policy, in which the government aimed to sedentarize the pastoralists adversely affects seasonal grazing pattern for two reasons: first settlements affect grazing land availability since pastoralists in the settlements will be forced to graze their livestock permanently around settlement areas without traveling farther. Second, the demand of settlers for firewood and permanent house construction may add pressure to the environment surrounding the settlers. Additionally, pastoralists traditionally herd mobility to cope with drought in Kajiado of Kenya is now threatened by land tenure changes that have squeezed pastoral livestock onto land areas that are too small to be sustainable for pastoral production (Mworia and Kinyamario ,2008).

In addition, in most pastoral areas of Ethiopia, many organizations mainly NGOs have been responding to drought hazards. These include commercial de-stocking, slaughter de-stocking, supplementary feeding of livestock, livestock treatment and vaccination, supplementary feeding of vulnerable groups, food aid distribution, human health interventions, water supply, market-support and restocking after drought. However, there is a belief that intervention lacks systematic application of best practice.

For instance, it lacks effective policy, institutional and legislative mechanisms to support timely livelihood support interventions, institutional inactivity and rigidity, poor coordination among the NGOs, too many NGOs doing the same things in the same location (Pantuliano and Mike Mike, 2008). In addition, those interventions that are designed to address drought hazard hardly focus on the issue of pastoralist's coping capacity. For example, drought intervention designed to counter drought trend among the Borena pastoralists have only focused on emergency response than addressing the reducing capacity of pastoralist to cope ( Flintan, 2007).

### **2.4.3. Social network**

Pastoralist communities have social networks that structured by obligations continued through gifts and loans (Oba, 2001). For pastoral livelihood system in Ethiopia, which is clan-based, participation in this social network is very important. This often serves as the joint purposes of resource management, social security during crisis and conflict resolution. For example, Borena pastoral community has different institutional arrangements whereby they share resources with neighboring groups (Guji and kin in Northern Kenya) and clans in the community. The resources that are shared are land for temporary migration because of conflict or drought, water and pasture. The institutions created within neighboring groups or different ecological zone, help during shocks (eg. drought and conflicts) which affect the whole community by serving as means of entrusting their animals, loan and other social supports. Other institutions serve as safety nets where by food items (eg. milk, meat, and grain) and remittance are shared among households and clans during difficult times (Temesgen, 2010).

The involvement in such kind of social networks has both privilege and responsibility. The privileges are using pasture and water in the territory of neighboring groups while maintaining own identities and culture and sharing of other resources during difficult times(eg. right to claim a certain number of cattle from other members of own clan and sharing foods). The responsibilities are contribution towards labour-intensive activities such as maintenance of wells and herding of cattle, as well as repelling attacks and providing protection during conflict (Wario ,2006).

Besides the clan linkage, marriage is one way of creating social and economic network among pastoralist communities. In addition, a household mainly women may deliberately create and cultivate a relationship with another household in its own community, or another ethnic group, for the sole purpose of creating a security (Taye, 2002)

The participations in the clan based social network are mainly based on gender and seniority. Men can take on leadership role while women are denied access. In addition, older women have access to decision making in community affairs while the contribution of younger women is limited to food preparation (Emana,Gemtesa, Tiki ,Rebu ,Asfaw,2007).

For poorer members of communities that have less developed social support networks, the severity of drought is high(Barton, Meadows, and Morton,2002).Another study by Emana,et al,(2007) states that because of their position in the community, low status clan and women in pastoral community of Ethiopia are discriminated in resources distribution and participation in community affairs. As a result direct they are denied access to natural, physical and social capitals which intensifies their vulnerability in times of crisis (drought and conflict).

#### **2.4.4. Traditional weather forecast**

Traditionally, pastoralists have long used indigenous methods to forecast seasonal climate events. This forecast is undertaken by elderly people who are perceived to be knowledgeable about astronomical and climate change. Some elders do the predictions by observing stars, wind and cloud arrangements while other do the prediction by considering the behavior of different wild animals, the flowering and seeding of some indigenous trees. Further they slaughter a goat to investigate the intestine alignments (known as 'numere' among Afar pastoralist) to predict the bad or good season. Then the elders warn their community about the situation and discuss what to do. Ethiopian pastoralist communities still highly value the knowledge of such elders (Gebremichael, 2009).

However, with increasing climate variability the traditional ways of predicting climate events are perceived as becoming less reliable. This in turn, *'raises the question of whether external, meteorology-based climate forecasts might better help pastoralists conserve livestock wealth and contribute to sustainable use of natural resources (Luseno et al.,2003).'*

Early warning is vital for early sale of livestock so as to reduce livestock loss, purchase of grains before the price increase, and looking for alternative options before household is affected by the shortage of food (Gebre Michael, 2009). On the other hand wealth among pastoralist communities determined by the number of livestock owned and livestock selling is believed to reduce the wealth status of household. For this reason, it is not a common culture for Ethiopian pastoralist to sell livestock prior to an expected drought (ibid). Similar to this, the study by Pantuliano and Mike (2008), depicts that effective EWS enable to notice food insecurity in an early stage of drought.

#### **2.4.5. Conflict**

For pastoralist societies conflict and insecurity are familiar. In Somali Region conflict and civil insecurity take various forms. This includes war (the legacy of the Ethiopia–Somalia war and Somalia's civil war); rebel or militia activity (conflicts between Ogaden National Liberation Front and government forces); inter-clan resource conflicts (over access to water, grazing and farmland); and inter-regional border disputes (with neighboring Oromiya and Afar). (Devereux, 2006).

According to Geberemariam(2005),most of the conflicts among pastoral community of Somali region are between or within clans not 'big' politics. These conflicts are mainly over productive resources (water and land-pasture for grazing). Conflict is in fact considered as common phenomena for pastoralist communities which are in part because the scarcity of productive resources and the pastoralist frequently move in search for water and grazing for their livestock (Devereux, 2006).

As consequences of the conflict between or within clans among the pastoralist communities, both are affected and responsible household incur costs. For the affected, the costs are death or injury of family members, loss of livestock and property, and restricted access to grazing and water points while a further cost of compensation is paid by those considered to be responsible for the conflict to affected party (Devereux, 2006).In line with this, the study by Eriksen et al.(2008), indicates that conflict, which is either military or social, can undermine the ability of household to cope with drought both during and after the conflict. For example in Kenyan dry lands, conflict and insecurity lead to loss of assets, migration, landlessness, and prohibition from key resources (eg.dry season grazing areas, forests and drought water sources). This in turn undermines the people's capacity to sustain livelihoods in the face of a drought in the short term and changes in the climate in the long term.

Moreover, when conflict and drought concur, the effect can be extremely severe on the population. For example, when this situation occurred in Darfur of Sudan, drought coping options were adversely affected because of highly restricted population movements, disruption of markets, limited trade options, and livelihood options were poorly remunerated and often associated with risk (Eriksen et al., 2008). In Somali region, the constraint in movement (eg.cross clan boundaries trade) as a result of conflict is higher for men than women. Because women who enter enemy clan territories are seen as less threatening than men and they can trade with other women across clans (Devereux, 2006). On- the other hand ,among the pastoral community of Karamoja ,Kenya as a consequence of conflict women are targeted as the mothers of future generations of 'enemies' and, as 'retribution'. Thus, while they gather wild fruits for food, they are victims of abduction, rape and murder. In addition, if death/injury occurs from conflict to family member, women's burden to support household also increase (Kipuri and Ridgewell, 2008).

### Chapter three: Descriptions of the Study Area and the Research Methodology

In this chapter, the study area is briefly described and the research methodology such as selection of study area, the sources as well as methods of data collection and limitation of the study are discussed.

#### 3.1. Description of the Study Area

##### 3.1.1. Location

The study area, the district of Shinile is located in the Administrative Zone of Shinile that is located in the north-west of the Somali Regional state, Ethiopia. The Shinile Zone borders the Afar zones 1, 3 and 5 (Afar Region) to the north-west, the Harerge zone (Oromia region) to the south, the Jigjiga zone (Somali region) to the south-east, and Djibouti to the north-east. It is located 517 Km east of Addis Ababa and at about 15 Km from Dire-Dawa. The rail way from Addis to Djibouti passes through the district. (SC-UK and DPPA, 2008).

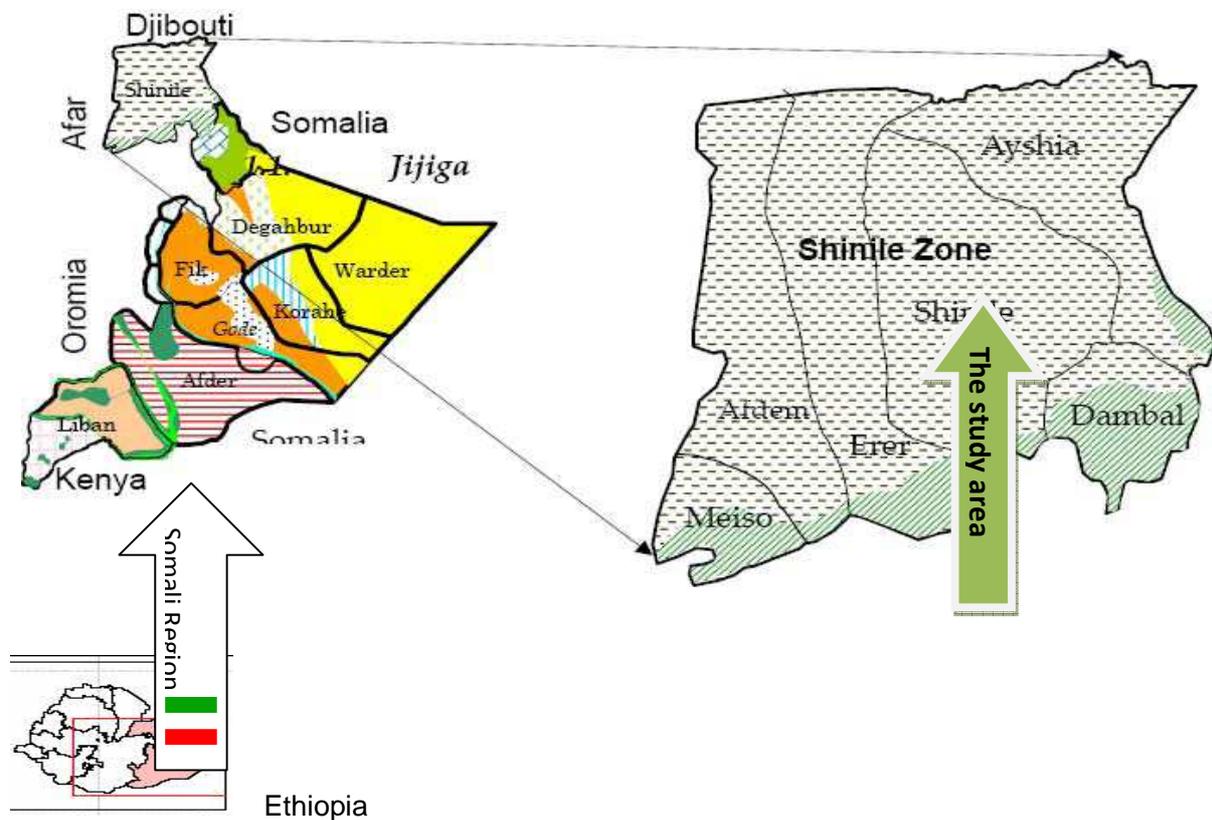


Figure 3.1: Location of the study area  
Source: SC-UK (2002) Shinile Pastoral Livelihood Zone

### 3.1.2. Agro Ecological zone

The area's altitude ranges between 950-1300 meters above sea level. The two rainy seasons in the area, which are equally important, are – *Gu or Dira* and *karan*. The *Gu* falls between late March and late May while the *karan* season is between late July to late September. In recent years, *karan* show better reliability. Annual average rain fall and the average temperature of the area are between 500-700mm and 27.50c respectively. Rainfall is higher in the southern foothills and much lower in the north-central plains. Moreover, the district is classified as lowland that falls within flat to gently sloping topography. (SC-UK,DPPB and Partners, 2002)

### 3.1.3. Livelihood System in Shinile District

About 85-95% of Shinile district population depends on livestock and livestock products for their livelihood and the rest, 5-15% are engaged in the mixture of crop production (both annual and tree crops), livestock production and cross border trade(SC-UK et al,2002). The pastoralists keep the full range of livestock sheep, cattle, goats and camels, of which goats and sheep are more predominant (see table 3.1 below).

Table 3.1: Livestock Population in Shinile District

| Animals by type | Number of Animals (TLU) |
|-----------------|-------------------------|
| Cattle          | 55000                   |
| Camel           | 60,000                  |
| Sheep           | 90,000                  |
| Goat            | 100,000                 |
| Total           | 305,000                 |

Source: District Agricultural Bureau report, 2008/9.

Sale of livestock is the main sources of income; camel rent is also important for wealthier households. But there is little demand for milk due to poor access to few urban and market centers; when abundant, much is consumed and given as gifts. Wealthier households use most of their cattle to make ghee. In dry season, the herd is divided into smaller groups, with sheep and milking animals staying with the core family(*xaas*)near villages, while hardier animals( cattle, camel and goats) are driven to further afield in search of water and pasture. In rainy season all livestock remains around the homesteads (SC-UK and DPPA, 2008).

People of the area also make a living by involving in informal locally trade called contraband - implying that it is unlicensed by the government of Ethiopia. Contraband trade goods include cloth and shoes (both second hand and new), non-food household items (e.g. electronics), and food items (e.g. oil). The goods are imported from Djibouti, transiting through Dikhil in Djibouti, Abdulqadir and Harirat in Somalia, and the destination is in Shinile Zone. These traders are either from pastoral or agro pastoral groups. Those that are full time involved in this trade and not involved in either pastoralism or agro pastoralism are few in number (SC-UK, et al 2002).

With limited local livelihood options, labour migration is one of the main coping options. However, employment opportunities at neighboring country and nearby cities, Djibouti and Dire Dawa respectively are limited to labour and informal services (such as portering or running a tea-stall). At the same time these activities are highly competitive and less paying as a result, migration does not generate significant flows of income and remittances back into the District (Devereux, 2006)

**Consumptions and expenditures:**

Cereals and sugar are the main sources of food and the main expenditure. Milk and milk products are the second most important food sources (SC-UK, et al,2008). Additionally, like other in places in Somali Region where consumption of alcohol is prohibited by Muslim religion, chewing khat is common among the pastoralist men than women in the study area. In drought times, men chew khat in response to the depression induced by losing their livestock. At this time, chewing khat is a sign of feelings guilt about being unable to support their families, loss of self-respect, being displaced to towns where they are effectively unemployed and idle, and susceptible to urban temptations. As a result, pastoralist men in the district are blamed for divorce and money troubles within households because of high expenditure on khat. (Devereux, 2006)

**Wealth classification:**

Among the pastoralist wealth is determined by number of shoats, cattle and pack animals owned by a household (see table 3.1 below).

Table3.2: Wealth characteristics in Shinile District (2004/05)

| Wealth group<br>% of HHs                    | Poor<br>30-35% | Middle<br>45-48% | Better of<br>20-23% |
|---|----------------|------------------|---------------------|
| Household size                              | 6-7            | 6-8              | 8-12                |
| Livestock holdings: (lactating in brackets) |                |                  |                     |
| Shoats                                      | 30-60(10-15)   | 70-100(20-25)    | 130-170             |
| Cattle                                      | 3-5(1)         | 8-10(2-3)        | 15-25               |
| Camels                                      | 3-5(0-1)       | 10-16(2)         | 20-40               |
| Donkeys                                     | 1-2            | 2-3              | 2-3                 |

Source: SC-UK and DPPD, 2008

**Seasonal activities among the pastoralist:**

The intensity of involvement in different livelihood activities varies depending on the seasons (see table 3.2 below).

**Table 3.3:** Seasonal calendar in Shinile District

| ACTIVITY   | January  | February | March   | April | May         | June | July          | August         | September           | October             | November | December |
|--|--|----------|---|-------|-------------|------|---------------|----------------|---------------------|---------------------|----------|----------|
| Seasons  | Jilaa (dry)  |          | Diraa' (rainy)  |       | Hagaa (dry) |      | Karan (rainy) |                | Jilaa (dry)         |                     |          |          |
| Rainfall   |  |          | Diraa' rains  |       |             |      | Karan rains   |                |                     |                     |          |          |
| Pasture and water availability   | [Line graph showing seasonal fluctuations]   |          |   |       |             |      |               |                |                     |                     |          |          |
| Milk Availability  | [Line graph showing seasonal fluctuations]   |          |   |       |             |      |               |                |                     |                     |          |          |
| Livestock Migration  | To foothills, Jijiga,  |          | Livestock around homes (may sometimes move to foothills in bad hagaa seasons) |       |             |      |               |                | Foothills, coastal, |                     |          |          |
| Cereal Purchase (safar trips)  | Purchase in Jilaa  |          |   |       |             |      | Purchase in   |                | Purchase in         |                     |          |          |
| Cow milk availability  | Cows are in milk only for six months - mostly reproducing in the Diraa' season and drying up in the Jilaa season |          |   |       |             |      |               |                |                     |                     |          |          |
| Camel Milk availability  | Camel milk are more available in the wet seasons and reduces significantly in the jilaa season.                  |          |   |       |             |      |               |                |                     |                     |          |          |
| Livestock sales  | Most in Jilaa season for food  |          |   |       |             |      |               | Fewer in Hagaa |                     | Most sales in Jilaa |          |          |
| Bush Product collection<br><i>(only for those around towns and railway line)</i> | [Checkered bars indicating collection periods]   |          |   |       |             |      |               |                |                     |                     |          |          |
| Involvement in informal cross-border trade "contraband"                          | The poor can make only 2-3 trine, the middle 3-4 trine not more and the better off is of a little higher         |          |   |       |             |      |               |                |                     |                     |          |          |
| Increased seeking of unskilled labour  | This is done by all poor round but involving in the illegal when people need complementary income                |          |   |       |             |      |               |                |                     |                     |          |          |

Source: SC-UK and DPPD, 2008

### 3.1.4. Demographic Structure

Shinile District has estimated total population of 102,516, of whom 47% are men and 53% are women and by religion all are Muslim (Central Statistical Agency, 2007). Rural inhabitants are estimated at 96,988 of which 77,591 are pastoralist. The district is primarily inhabited by the Issa clan of Somali people who are mainly pastoralist (SC-UK and DPPA, 2008).

### 3.2. The Research Methodology

This research is based on a qualitative study undertaken through desk study and case study as a method to effectively explore drought coping activities undertaken by pastoralist men and women and how these are influenced by external and household factors. The desk study was done to find theories from various literatures that are used to understand about drought situation and its impact in Ethiopia, coping mechanisms and external and household factors that influence household coping options. The review literature is not only limited to Ethiopian pastoralists, but also includes researches conducted on pastoralist groups in other East African countries. Based on the information gathered through desk study, check lists that served as a guide for semi-structured interviews and Focus Group Discussions (FGDs) to be conducted during field study were prepared.

### **3.2.1. Selection of the study area**

Field study was conducted in Shinile District of Somali Region of Ethiopia. The researcher selected the area because it is one of the districts in the region that is continuously affected by drought for a long period of time. Currently, drought and the continuous reduction of stocks have become part of life for the majority of pastoralists in the district.

At the start of the field study, list of PAs that highly are affected by drought was obtained from the district agriculture office. From the list Hore, Fedheto, Bisley, Ayeliso and Kalabadi PAs were selected. Hore, Bisley, Fedheto and Ayeliso were selected because they are the most drought affected areas, far from city and lack of water is main problem even in the normal times. Kalabadi is one of the district pastoralists PAs through which rail way and main road to Djibouti and DireDawa pass, has access to water, and is near to the city of DireDawa, and Shinile and is a village where pastoralists from other PAs come to take food aid. The researcher selected this PA to compare the coping mechanisms practiced in this PAs with other that do not have access to road, water and are far from cities

The researcher took four weeks for field works in Ethiopia. The first week was used for the collection of data from District Agriculture and DPPA concerning most affected PAs, drought situation of district, institutional factors, and others (e.g. translators). Two weeks were used for interview with pastoralist men and women and FGDs. And last the one week were used for data compilation.

Four translators (two male and two female) who are experienced and come from Issa tribes accompanied the researcher. These are from District Agriculture Office, DPPD and District Women Affairs office. The translators were crucial in reducing language problem of the researcher and creating empathy between the researcher and the respondents. Pastoralist men and women respondents were the main sources of empirical data. For data collection the following methods were used:

### **3.2.2. Focus Group Discussions (FGDs)**

Ten focused group discussions were done in two different groups one comprising six men and the other six women. In the women's group the researcher tried to include both women from female headed household (FHH) and male headed household (MHH). The ages of the female participants in FGDs with women ranges from 22 to 60 and all have at least two children. Male participants are of age between 25 and 60 and all are married. The discussions for men and women were carried out separately to allow women to speak freely, as they tend not to do this in front of men due to religious as well as cultural taboos.

FGDs were carried out for three purposes. These are to get information on drought situation and coping mechanisms for the last 20years, drought coping mechanisms used by men and women, the gendered access and control of resources and division of labour then the implication of these on drought coping mechanisms.

### **3.2.3. Individual interview**

Then, individual semi-structured interview was done with two persons (men and women) from each PAs and totally with six men and women for the entire PAs selected. To get unbiased data, equal number of men and women were selected. Almost all (about 90%) of the respondents are active with age groups between 25 and 45 and the rest 10% are between 45 and 58.

The entire respondents are married with family size ranges from 5 to 9. All the respondents are Muslim by religion. The interview was mainly meant to get in depth insight on drought coping mechanisms, household factors and its implication on coping mechanisms.

Key informant<sup>1</sup> interview was done with the district Women Affairs Officer, District Agriculture officer and Disaster Prevention and Preparedness Department (DPPD). The first two of these key informants are from government office and the other is NGO. This interview was done to identify government support for pastoralist women to cope with drought, to triangulate the information on drought situation, drought coping and institutional interventions.

#### **3.2.4. Observation**

Finally, observations were undertaken in order to find out the routine activities performed in a day by pastoralist men and women and to identify the local infrastructure (access to road and distance to cities and market). Personal observation was aimed to triangulate with the finding from the FGDs as well as interviews.

#### **3.2.5. Data Process and Analysis**

The analysis was started by describing and interpreting the drought situation for the last 20 years. Then information with regard to drought the current and better future coping mechanisms, external and household factors that can influence drought coping options are described and interpreted from gender perspective. In addition, information obtained from different literatures on the issue is compared with primary information collected in field on this study. Moreover, interesting quotes and in some cases conclusions are added.

#### **3.2.6. Limitation of the study**

There are several methodological limitations associated with this study. First, it was difficult to do according to the plan at some points. For example, it was planned to include all wealth categories (Poor, middle and rich) and polygamous in the FGDs with pastoralist men but after the first visit the researcher found these issue as sensitive. To counter this problem, the researcher tried to get information about the different wealth groups and family structures on coping mechanism through the participants in FGDs. In addition, the researcher couldn't get recorded data on drought trend and its impact and coping mechanisms for the last twenty years.

The other is related with using translator; sometimes the translators replied the questions by themselves instead of asking the pastoralists. In addition, they were less interested to accompany far distance PAs that do not have road for vehicles. As a result, within two or three days I had to find new translators with additional payments. In addition, one day there were debates in issues related with government interventions between one of the translators and pastoralist. These debates were because the translator did not agree with the response of one pastoralist man. Because of this, the pastoralist men refused to respond to any other question, and we took more than 2 hours in convincing them. This problem was solved with the help of the PA's chairman and other three translators.

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<sup>1</sup> in the report you will find that the Government staffs and key informants are interchangeably used it mean the same. But some times to emphasize that the response is only from government office, the term government staff is used.

The other limitation was related with poor road; four of the five PAs visited do not have road for vehicles except pedestrian (foot path) which is highly eroded. For this reason, we had challenging trips. For example, one day, after driving for 3 hours the tire of our car was damaged. Due to this, we were late by 2hours for our appointment with the PAs chairman and hence, the pastoralist that he organized for FGDs had left. The other day, because of the shock in car resulted from the poor road, one of the female translators who was 6month pregnant became ill and we had to stop the car to treat her.

The other limitation encountered is associated with the period in which the fieldwork was undertaken. As it was rain time for most surrounding high lands, flood was coming to the district. As a result we couldn't enter most PAs. For instance, one day after driving for 6 hours to Bisiley PA, we were forced to go back for another 6 hours and 12 hours were wasted from the limited time allotted to the study.

All these limitations have their own impacts on the outcome of the study. However, the researcher has tried to overcome the constraints and tried to present the real picture of the problem.

## Chapter 4: Results and Discussion

This chapter presents results from primary data that were collected through conducting 10 focus group discussions, 12 semi-structured interviews with pastoralist men and women and the key informant interviews. As this research focuses on drought coping mechanisms used by pastoralists men and women in Shinile district, this chapter starts with drought history of the district followed by coping mechanisms and factors that influence the coping options.

### 4.1. Drought History and Trend for the Last 20 Years

For the pastoralist of Shinile District, occurrence of drought is a common phenomenon. This is in agreement with findings by Devereux, (2006) who stated that drought is part of life and the main hazard for Somalia people. One of the main reasons for the drought, according to the finding through FGDs and literature review is shortage or irregular rain that leads to shortage of water in the area. The evidence collected through extensive literature review and the empirical findings of this study show that droughts is becoming frequent and sever<sup>2</sup> in Shinile district for the last ten years.

Based on the information from the key informant, comparing 1990s with 2000s, drought has become more frequent and severe in 2000s. As 80% of the population in the district are pastoralist and 10% are agro pastoralist, drought in these ten years have directly affected livestock and its products especially shoats and cattle. For example during these periods the District Agriculture Officer said 'there were households that had 250 or more livestock but were left with 10 to 20 livestock'. Different institutions responded to these impacts in livestock assistances; vaccinations and treatments and supplementary feeding. These are mainly by Non-government organizations (NGOs) while Government organizations (GOs) sometimes involved in vaccinations and treatments. But the supplementary feeding as response to drought in the district was given only in 2008 and 2009. In addition, there were destocking and restocking in 2006 and 2007 respectively. But there was no response in the district that targeted men and women differently.

Pastoralist men and women explained the frequency, severity and coping mechanisms of droughts for the last twenty years as indicated in (table 4.1) below. Each drought has been given name after its impact. In addition, the years of droughts mentioned in the table were estimated from how the pastoralists explained the events. For example, the pastoralist said that drought called "Masaltu" was occurred before 17 years. From this the researcher estimated the year as 1993. Same is true for others. Moreover, the coping mechanisms listed in the table were different for different PAs but the researcher prefers to discuss the common coping mechanisms in this section and the rest is discussed in detail in the following section.

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<sup>2</sup> For the pastoralist men and women in Shinile District ,drought is sever when:

- Drought wide spread within territory and neighboring places
- Many animals died and No/less animal products for food
- Price from sale of animals not enough to buy grains
- Difficulty to eat at least once in a day and social support decline

**Table 4.1. Frequency and severity of the drought for the last twenty years as explained by Pastoralists**

| Year | Name of drought                               | Why( reasons for the name)   | Coping options( listed in the order of priority)  |
|------|---|--|---|
| 1993 | Masaltu(men dropped their praying materials ) | There was no rain after long pray  | Mobility , contraband, clan support, selling of charcoal and firewood                               |
| 1997 | Hangole('nothing' )                           | After long collection of leaf from trees for animal food, trees became empty   | Collection of leaf, mobility, contraband, selling of firewood and charcoal, clan support            |
| 2001 | <i>soodaf</i> ("take it out")                 | Whenever a sheep became sick it was known that it is going to die, then they used to say <i>soodaf</i> meaning take it out because it will die<br><br>The drought was very fast and animals that died of thirst were abandoned to hyenas | Mobility, contraband, clan support, selling of charcoal and firewood, food aid                      |
| 2003 | Odayadila("the old man died")                 | Too many animals and old men died  | Mobility, contraband, food aid, selling of firewood and charcoal, clan support                      |
| 2004 | Yaba( "say nothing")                          | It was too hard to find water and all animals were dying including camel. So,they couldn't say anything  | Selling of firewood and charcoal, food aid, mobility ,clan support, contraband, temporary migration |
| 2005 | Dusana("unusual ")                            | There was no such kind of problem; everybody became poor because all their animals died. In addition, it was hard to find one who can help like before. " <i>Drought forced the people to 'eat each other'</i> "                         | Selling of firewood and Charcoal, food aid, little contraband                                       |
| 2006 | Awr awurfurar("camles are sold")              | Drought forced the pastoralist to sell their camels, the most important and expensive assets, but the money was not enough to buy grains   | Selling of charcoal and firewood,sale of camel, food aid, temporary migration,                      |
| 2007 | Bakti Wayna( "everything died")               | Almost all animals died. Then people were also drying because of hunger  | Selling of firewood and charcoal, food aid, temporary migration ,contraband                         |
| 2009 | Frifira(people migrate in every direction)    | No animals and government band the contraband, then people migrated<br><br>People were wondering( going here and there without job) because they couldn't do anything to cope with drought   | Selling of Charcoal and firewood ,migration, food aid   |

Source: Focus group discussion in Shinile district (July, 2010)

**Discussion:**

As explained in the above table, between 1993 and 1997 drought occurred within four years. Then it occurred within two years between 2001 and 2003. However, between 2003 and 2007 drought had been occurring every year. From this, it is possible to infer that drought is becoming frequent in the district. In addition, as explained by the pastoralists the impact of droughts that were occurred in 1993 and 1997 were shortage of water and leaf for animals respectively. For those droughts that were occurred in 2001 and 2003, pastoralists were more complaining about death of animals and old men respectively. In 2004 because of the extreme impacts of the drought they named it as Yaba (“say nothing”). For example, one pastoralist during the FGDs explained this as, “We did not have a word to explain how that drought affected our life; so we preferred to keep silent”. Moreover, to show that the 2005 drought made them not to help each other, they named it as Dusana (“unusual”), which means all household became poor and no one could help the other. To further explain the severity of this drought one pastoralist said, during this drought “people ate each other”. But this does not mean that they ate each other’s flesh, rather, it just means people were not supporting each other which were unusual for the pastoralist community. Therefore, it is clear to see that drought is becoming severe for the last ten years.

Regarding the impacts of the droughts, men and women have different views. Accordingly, in the FGDs with men, the issues of livestock death and decline in its price were continuously raised whereas in FGDs with women, shortage of foods and water were emphasized. This might be because men have control over livestock and women are responsible for household food.

Moreover, the coping options are changing. For instance, in 1990s and early 2000s, movement with animals was the main coping option. After 2004 firewood and charcoal and migration for jobs have been the main coping options. After mid 2000s, food aid and temporary migration have been an important drought coping options.

The pastoralists and district agriculture offices have different reasons for the increase in severity and frequency of drought. For example, most men and women said that ‘it is just the hands of ‘Allah’(God) and we can’t do anything’. Reasons for the severity, the pastoralist said is because of less time between droughts and recovery. Besides, the coping options are becoming limited. As a reason for decrease in drought coping options, both political and economical issues are raised by pastoralist men and women. For instance, the government banded unlicensed trade called contraband and put restriction on the sale of charcoal wood. In addition, employment opportunities like wage labour and working as house servant at cities of Dire Dawa, Djibouti and Jijga is becoming less. According to the interview with key informants from the district agriculture office, reasons for the frequency are climate change but more specifically for this district the extensive cutting down of tree for firewood and charcoal as coping mechanism has resulted in environmental degradation that may shorten the gap between successive droughts. As the reason for the severity, the key informants said that for each drought sale of firewood and charcoal used as coping mechanism has made the environment becomes bared. This in turn limits the environmental based coping options (e.g. firewood and charcoal, wild fruits) of the next droughts.

Although drought has been the common phenomena for the district, not all PAs in the district are equally vulnerable to drought. According to the information from District Agriculture and DPPA, the most affected PAs are Hore, Fedheto, Harkale, Warfuf, Bisley, Ayeliso, Gurgura and Biyogera.

As explained in chapter three the Wealth characteristics of household among the pastoral communities are determined by livestock ownership, with livestock of poor households twice less than middles’ and three times less than the better off (see Table 3.1). With few assets poor households are the most vulnerable and less able to recover from drought.

For instance, it is the culture of the society that the better off and middle support the poorhouse holds. As one of the coping mechanism these groups reduce the gifts in milk and milk animals and this adversely affect the poor households. Within the poor households women and other dependants (children and elders) are more vulnerable than men. This is because; pastoralist women in the district have no control over important household assets (e.g. camel, cattle and donkey) and community resources. In addition, within poor household women and children are expected to seek alternative options, selling firewood, collecting wild fruits, and begging. Finally, with reduction of animal products and shortage of food within household, old man and women and children are the first groups to become ill and finally die.<sup>3</sup>

## 4.2. Activities Engaged by Pastoralist Men and Women to Cope up with Drought

In the following sections, drought coping mechanisms among the pastoralist communities of Shinile are described in order of their importance among the pastoralist.

### 4.2.1. Firewood and charcoal

Sale of firewood and charcoal are the main income diversification activities for the pastoralist in the district. These are also the first and the main drought coping option for the pastoralists in which women are engaged in the sale of firewood while men sale charcoal. But for those PAs that are far away from cities both the firewood and charcoal are sold by men. In addition, the researcher observed men selling firewood in bulk at cities of Dire Dawa and Shinile using camels. However, women carry smaller quantity on their back and sell in nearby places. As a result men sell the firewood at much better price (40 to 60 birr per a camel load) as opposed to women who sell at 10 to 20 birr per back load (FGDs with women). Similarly, women do sell charcoal but mostly around their home unlike men who take to city using camel. Because of this women sell the charcoal at much lesser price (35-50 birr per sack) in the village than men who sell at 75-95 birr per sack at cities of Dire Dawa and Shinile (personal Observation).



Photo 4.1 Man and Women carrying firewood

When they do not have camel and donkey to carry firewood and charcoal in bulk, the pastoralists' men rent camel or donkey. Rent camel or donkey is also used by women mainly those from FHH. In this case the pastoralist men and women have to pay 50% of the selling price to the owner.

Selling of firewood and charcoal were previously the main coping options for poor household and women. In general men are engage in firewood selling when: drought occurs, they have no livestock and it is hard to find other jobs. But nowadays the pastoralists stated that there are no households that do not sell firewood or charcoal during the drought times.

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<sup>3</sup> FGDs with pastoralist men and women

There is gender division of labour with regard to making and selling the firewood and charcoal within a household (Table 4.4). But this varies from one PA to another. During drought since most people lose their animals, mobility with animals also becomes less. As a result, in most households men are engaged in charcoal making and cutting tree for firewood; whereas women do the selling. In this case women can use camel or donkey to transport the firewood and charcoal; but only if it does exist with the household.

**Box 1: Current division of labour within household without mobility.**

Previously when droughts came I moved to different places with animals in search of water and pasture. But I lost all my cattle during Dunsu( drought occurred in 2005) and I sold my all camels in Awr awurfurur (drought occurred in 2006) except one that I have now. After 2006, I couldn't find any other job because I only know about livestock. Thus, I and my two sons of age 18 and 16 cut trees for firewood and make charcoal. And my wife sells it at the city by using the camel and buy food for the family. (Interview with pastoralist man of age 45in Bisiley PA)

When men make charcoal and cut trees for firewood and women sell, income from the sale is fully controlled by men. In this case although the women can buy food for household after the sell, the amount and type of food to be purchased are determined in consultation with the man. But when women collect and sell the firewood by themselves, they can decide on how to spend the income on household consumptions. Moreover, the pastoralist men and women said that women from FHH collect and sell the firewood by themselves. Further they said, women from FHH not often sell charcoal, because they do not have a man to make charcoal unless they have boys of age more than 15 or relative man who can support in charcoal making.

**Discussion:**

As indicated from the above paragraphs of section (4.2.1), pastoralist men are more benefiting from the sale of firewood and charcoal than women. This is because, pastoralist men are mainly involved in the sale of charcoal that give better earning than firewood and have an opportunity to carry the firewood in bulk to sell at cities. Further, charcoal making is sole responsibility of men; as a result, women depend on men to sell charcoal as coping mechanism. This might be the reason for most pastoralist women especially those from FHH sell firewood than charcoal. This means that women from MHH can earn more income than women from FHH; since the latter do not engage in charcoal selling.

**4.2.2 Modifying the Consumption Pattern**

Pastoralists also exercise the coping mechanism by modifying their consumption patterns. Some of the options under this coping mechanism include: reducing consumption, changing type of food consumed and food rationing. These options are mainly organized by women.

Reducing consumption is done in two ways: One is reducing number of meal taken in a day. In normal times, most respondents agreed that food consumption among the pastoral community is two times in a day (breakfast and dinner), but some also said that they consume three times in a day. In severe drought time consumption is mostly once, and if the food is not enough for the entire family women may not eat at all (FGDs with pastoralist women).

The other is household splitting; like sending some of the children to work in cities or live with relatives so that amount of food required by the household is reduced.

With regard to the change in type of consumption, milk and milk products are replaced by purchased cereal food (e.g. sorghum). The pastoralist men and women also said that among poor and some middle, consumption of wild fruits is very important. In addition, in normal condition camel milk is consumed by adult and milk from shoats and cattle is consumed by children. In drought time, however, all household members consume the camel milk.

Women rationed food for their family members according to age and gender. But they still give the priority for their husbands. Children under age of 9 regardless of gender and boys who involve in cutting tree and herding are given priority next to husband. Girls and women eat less and last. During the FGDs with women in Hore PA, household food rationing was stated as follows:

### **Box 2: Household food rationing**



In drought times, we eat just not to die. The food that we get in a day is not enough if the whole family members eat based on their need. So, we have to prioritize according to the tradition. First we have to feed our husband because it is our tradition to do that. Then for boys who go with animals and cut trees for charcoal and firewood. Traditionally, women have to eat less than men and we teach this our daughters. Thus, during the shortage of food we can stay with less food or none than men.

### **Discussion:**

It is evident that women play vital role in modifying the consumption pattern of household in drought times. Similarly, the study by Admas et al. (1998) indicates that women are influential in controlling the food rationing during crisis times. Additionally, the amount of food consumed is gendered; by which eating less and at last is considered an accepted behavior to women particularly at drought times.

### **4.2.3 Mobility**

In the research area, when drought occurs elders send a person called “Sahan” to search better places for water and pasture. Then, each household gets information from their clan leaders where to move. After their decision where to move, pastoralists categorize their livestock in to three groups: mobile group (includes all camels, few cattle and goats), marketable group (includes sheep, weak cattle and goats) and milking group (includes Cattle, goats). Hence, it is with the mobile that the pastoralists move to minimize livestock mortality due to drought.

Mobility is the main coping option by pastoralist men. Women stay home and are responsible to milk animals. In normal and onset of drought, movement is within territory and neighboring places of Oromya region (e.g. Babile). When the drought becomes wide spread, the movement is far distance like Afar region but this movement is mostly accompanied by conflict. Nearby movements are undertaken by adult men whereas in case of far distance young men are taken out of school to accompany the adults. In addition, during the severe drought the whole family may move to different places. At this time women are responsible for moving and rebuilding the huts.

With regard to the current situation of mobility as a coping mechanism, pastoralists living in different PAs have different views (see. table 4.2 below).

**Table 4.2.: comparison of different PAs in Shinile district on condition of mobility**

| Response (PAs) | Mobility becoming less (% of participants in FGDs agree) | Mobility still important (%of participants in FGDs agree) | Remarks  |
|----------------|--|---|--|
| Hore           | About 15   | About 85  | This PAs is 85km far from city of Shinile  |
| Fedheto        | About 20   | About 80  | 65 km far from Shinile   |
| Ayeliso        | About 30   | About 70  | 63km far from Shinile  |
| Bisley         | About 70   | About 30  | 53 km far from Shinile.<br>Most livestock are died during the last five year drought<br>Contraband was common in the PA<br>80% of the households depend on food aid <sup>4</sup> |
| Kalabadi       | About 80   | About 20  | 30 km far from Shinile<br>Ethio- Djibouti rail way pass-through the village<br>Located on the main road from Dire dawa to Djibouti<br>Location for aid distribution              |

Source: focus group discussion among pastoralists' men and women in the five PAs visited, July 23 to August 16, 2010

**Discussion:**

As indicated in Table 4.2 above, participants in FGDs specifically in Bisley and Kalabadi disclosed that movement with livestock is declining through time in their PAs. The decrease in the number of livestock holdings and growing conflict with neighboring Afar pastoralists are among the reasons that reduce mobility among the pastoralists. In addition to this, access to food aid might also be a reason for decreasing mobility among the pastoralists.

But among the pastoralists communities of Hore, Fedheto and Ayeliso that are located in far distance from the Shinile city, mobility as coping mechanism is still important. However, mobility is still the main coping option for the richer and middle income households in all PAs.

<sup>4</sup> Key informant from DPPD

#### 4.2.4. Temporary Migration to Nearby Cities

As a response to shortage of food within household during drought, boys and girls migrate to cities of Dire Dawa and Djibouti. When the pastoralist men and women were asked about exactly their boys and girls do when they send them to cities, 64% (9/14) of the respondents replied that boys work as wage labourers, (locally called 'amali') and girls work as house servants. But about 36% (5/14) of the respondents replied that they do not exactly know what the boys and girls do. According to the information from the key informants, it was also learnt that girls and boys involve in commercial sex and informal contraband trading, respectively (see Table 4.3 below).

**Table 4.3: Activities involved by boys and girls in cities**

| Response  | Parents   |             | Government staff (N=2) | Remark  |
|---|-----------|-------------|------------------------|---|
|   | Men (N=6) | Women (N=6) |                        |   |
| Girls work as servant and men work as wagged labour           | 4         | 3           | 2                      | Common response during the FGDs   |
| Men work as unskilled labour. Sometimes involve in contraband | 0         | 0           | 2                      | Take money and help the people who are involved in informal business(contraband |
| Young women also work as commercial sex worker                | 0         | 0           | 2                      | Mainly in Djibouti  |
| We do not know  | 2         | 3           | 0                      | <i>"We only want that they are healthier and help us in our problem."</i>       |

Source: individual interview with pastoralist men and women key informants. August6, 2010

Temporary migration to cities, however, is done with large families with children of age 15 or more. But for family with only young children of age less than 15, husbands migrate to be wage laborers while the wives stay at home with their children. Women, who migrate during drought times, are mainly unmarried, divorced or widowed. The remittance is mostly controlled by men. In some households women also control remittance money. In general, temporary migration as a coping mechanism is employed by the poor and some middle income households.

#### **Discussion:**

As indicated in Table 4.3, pastoralist men and women did not agree that boys and girls, who go to cities for work, involve in informal contraband and commercial sex. This might be either they do not have information about jobs at cities or as a family they do not want to blame their children of these acts. Whereas, the government staff members highly emphasize the increase of these activities as coping mechanism. The government staff members stated that less employment opportunities and relatively high return are the main reasons for the young boys and girls to engage in informal contraband and commercial sex, respectively.

Since migration to cities is practiced by young boys and girls, all age groups as well as married women are not the direct beneficiaries from this coping option.

#### 4.2.5. Contraband

In all the PAs, contraband<sup>5</sup> is one of the main coping options. Contraband activities include: trade of second hand and new clothing, food items (e.g. sugar), and electronic items that are imported from Djibouti (SC-UK, et al., 2002). According to the FGDs with pastoralist men in Bisiley PA, the pastoralists stated that they better cope with drought when they could do contraband.

*Drought is not new for us but before when it occurred we used to import second hand cloths, food items and electronics from Djibouti and sell it to merchants in the cities of Dire Dawa. The profit was more than enough for our families' foods and other expenditure thus we did not recognize the impacts of drought as we do now.*

However, as contraband is unlicensed business and tax is not paid on the products, it believed to affect the country's economy. As a result, this activity is highly restricted by the government. Regardless of this, pastoralist men and women are still involved in this business especially in severe drought times. Pastoralist men are involved in this business in two ways. The first is by enabling traders' goods to cross the border by their camel. The second, they import high valued items such as: electronic, clothes and shoes (new and second hand). If the pastoralist men manage to escape the policemen, the profit from this activity is much higher. But it has high level of risk since it could be caught and confiscated by the policemen. Women are basically engaged in the import of food products like rice, oil, biscuits, and juices.

Nowadays, more pastoralist women are taking risk by doing the contraband business than pastoralist men in the district of Shinile. Contraband goods are entered to the country mainly in the evening. While the women are smuggling, it is common for them to get beaten or abused, goods being stolen or just being taken away by force. In addition, it was also learnt from the interview with the government staffs that there are cases where women are forced to have unsafe sex with men who promised to support their safe passage of goods. One woman who is involved in contraband whenever drought comes said.....

*Although the policemen are looking for us like a cat does when it waits for rats, we prefer doing contraband at the expense of our life to watching our children dying of hunger. The government calls it illegal but what can we do? We sell milk but in drought time we can't get much to sell. We also sell firewood but most households do sell in drought times. As a result, the price declines and we get less to cover our household consumption. So, we have to do what we know for the sake of our family's life.*

All the income obtained by women from the contraband business is used to purchase of families' food and 'khat' for men. During the FGD with women, it was learned that households that involve in contraband business are better off than others in food consumption.

#### Discussion:

Contraband as a coping option is a high return and risky business. By importing high value goods and renting their camels to other contraband traders, pastoralist men take higher risk and get higher return than women.

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<sup>5</sup> Contraband is an informal local trade that is not licensed by the government of Ethiopia.

This confirms to the finding by Fliton,(2007) that indicated men take more risks to get higher returns. On the other hand, although the risks from involving in contraband business are physical (e.g. beaten,HIV/AIDS) as well as financial (e.g. their goods taken way) for women, more women are doing the business than men in Shinile district. This is in contradiction with the findings on other pastoralist communities. For example other studies in East Africa indicated that pastoralist women are involved in less return and less risky income diversification activities than men (see Fraktin and Smith,1995; Little et al, 2001; Devruex,2006).

#### 4.2.6. Petty Trading

Petty trades like running tea-stalls, selling “injera”, and biscuits are also common in some of the PAs. The pastoralist men and women in the Kalabadi PA, for example, are more involved in petty trading. Most of the women who are involved in the petty trade are widows<sup>6</sup>. But petty trading is limited due to the lack of financial capital. For example, the women who sell “Biscuit” and tea stated that they do petty trading irregularly when the price from firewood is less. During the FGDs with pastoralist men and women, it was noted that some widows do involve in petty trade specifically when they lack adult man to cut tree for firewood in bulk. To do the petty trade, the widows move to different places where the main road and rail way pass through such as Dire Dawa. However, most of the participants in FGDs from all the PAs agreed that pastoralist men are less willing to do the petty trade.

#### Box 4: Life of a woman that joins the pastoralists in the study area by marriage

I am 25, I came from Oromiya region by marrying a Somali man. In my place I used to sell fruits but here this is not common. Rather most women are engaged in sale of firewood. I also start selling firewood after I came here. Because most women sell firewood in drought times than normal situation, price of firewood decline and not enough to buy grains for our foods. In this time, in addition to firewood, I sell “enjera” “biscuits” and tea to those who come to our village for food aid, wait for car to Djibouti and Dire dawa. (interview with a women in Kalabadi PA).



Photo 4.2 Women selling Biscuit an tea

#### Discussion:

As indicated above, among all the PAs visited Kalabadi is a PA where petty businesses are widely traded. The proximity of this PA to the cities of Dire Dawa and Shinile might have encouraged the petty trade activities. However, unlike the study by Devereux (2006), the petty trading is not a regular activity among the pastoralist women in the Shinile district. In his study conducted in the Somali region of Ethiopia, Devereux (2006) stated that most pastoralist women are engage in petty trade to diversify their income. Similar to the study by Devereux (2006), this study has identified that pastoralist men are not interested in petty trade. Because, it is considered as a low return or low-status activity that is reserved only for pastoralist women. For example, the attitude of men pastoralist from rural Gashamo toward the petty trade is quoted as:

<sup>6</sup> FGDs with pastoralist men and women

I'm not interested in doing minor things like selling tea. That's okay for women to do. If I was interested in something in that line, it would have to be on a big scale like a hotel or restaurant. You will never find a Somali man doing petty trading! I would rather prefer to starve than humiliate myself by doing women's petty trading (Devereux, 2006: pp 225).

#### 4.2.7. Social network and Support

During the FGDs, it was learned that pastoralists have many social support systems as a coping mechanisms. Women use a social network locally called "Dhowartoas" as coping mechanism. In this system, women form neighbor based group voluntarily by their own initiatives within their village to contribute food for vulnerable household. Men also use a social support system to help vulnerable households. These local social coping mechanisms used by men pastoralists are named differently depending on the type of support rendered to the vulnerable household. Accordingly, Maal (support in the form of money), Rai (support in the form of goats), and Keyel (support in the form of sorghum) are used by the pastoralist men.

During the FGDs with men and women it was noted that unlike the social network among pastoralist women, social support among men is clan based. That is, all Issa men are responsible to support their clan. For example, rich and middle income men, have to support poor household of their clan in money, livestock, taking some of their children while the poor also support their clan in labour. If a pastoralist man refused to discharge this responsibility when he is ordered by clan leaders, as a first punishment he will be tied on a tree and beaten by the elders. If the man refuses for the second time, he is considered as cursed, and elders declare that he does not belong to Issa. These are rules that exist but there are no such kinds of experience among the pastoralists so far<sup>7</sup>. This is because the pastoralist said that they respect the tradition and order of elders.

The family structure among the pastoral community of Shinile is 'extended family' system; the different generation of family together or in neighboring homes (see SC-UK et al., 2002). This family system means that resources are freely shared among the extended family and hence facilitating the social support. There is an adage among the Issa pastoralists which strengthen the social support:

*Indeed an Issa saying 'iisuha sahay loomaqaato' (you do not need to carry your own food when journeying through Issa land), promote Issa's generosity and spirit of sharing (SC-UK et al., 2002: pp 10).*

#### **Discussion:**

One can infer that social networks and supports are features of Shinile pastoralist communities. In line with this, the studies by Devereux, (2006) shows that Somali pastoral communities are constructed around complex social networks that serve many social and livelihood-related functions. Though the social networks and supports are common trend among the Shinile pastoralist, they are crucial during times of drought and help to minimize the effects of drought on poorer households. For example, the finding by Pantuliano and Mike, (2008) shows that social network is important to strengthen clan solidarity that provides protection against hazards. Moreover, it is clear from the above points that social supports among men are obligations and clan based as opposed to women that are based on willingness. This is in line with the study by Taye, (2002) that show women deliberately create and cultivate a relationship with another household in its own community or another ethnic group which is for sole purpose of creating a security

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<sup>7</sup> FGDs with pastoralist men

#### 4.2.8 Begging

From the discussion with pastoralist men and women, begging is the last coping option that is done mainly by old women who cannot collect firewood and do not have supporters (e.g. children). Culturally they said that Issa clan does not ask support from other clan thus these old women beg only from Issa clan who live in cities. For example, in FGDs with pastoralist women in Kalabadi PA explained this as follows:

*Culturally it is shame for Issa to beg for food while other Issa is eating at his/her home. Thus, there was no begging among Issa no matter how difficult the situation was. But now drought is becoming yearly and makes every household in our village weak and people even do not have something to eat for themselves. Thus, now it is not uncommon to find old women begging for food.*

However, in Hore PA, pastoralist men and women denied that old women beg for food in drought times. They said, ".....no! We don't have beggar in our villages. We support each other; we do not let our people fall in this condition."

During the FGDs in all the PAs, almost all the pastoralists' men and women argued that Issa men do not beg for food or money. For this one of the pastoralist women in FGDs said, ".....men beg means he is dead because he has to work. When he is ill or old we do not let him beg because it is shame for our clan."

#### **Discussion:**

As indicated, begging is not culture for the pastoralist communities of the study area but due to the decrease in social support resulted from increase in frequency of drought, it is becoming one of the coping options in the district. However, it is gendered since it is more associated with women than men. In addition, begging as a coping options are more practiced in PAs that are near to city (e.g. Kalabadi) than far PAs (e.g. Hore).

#### 4.2.9. Preferred Future Coping Mechanisms: Discussions

Both pastoralist men and women agreed that all the current coping mechanisms are not sufficient for their household to meet food required during drought times. This is because of the following reasons. First, coping mechanisms of pastoralists vary depending on the frequency of the drought occurrence. For example, firewood and charcoal selling were efficient when drought occurred less frequently. But when it occurs every year, sale of firewood and charcoal can lead to deforestation (Eriksen et al., 2001). Deforestation in turn may harm sustainability of pastoralists by degrading their environment. Specifically for example extensive cutting of tree limits the future coping options that depend on natural environment (e.g. firewood and charcoal, wild fruits). Second, consumption reduction as a coping mechanism is not also sustainable. Because continuous consumption reduction results in to: malnutrition, lose of capacity for disease resistance and finally to death (Eriksen et al., 2001). Third, as indicated above, during the temporary migration to cities some young women practice commercial sex and women who involve in contraband trade have also a possibility to unsafe sex. In this case, the possibility of being affected by HIV/AIDS and other STDs is high. In line with this reality, the finding by Coast (2004) shows that rural-urban migration has always aggravated the spread of HIV/AIDS. In addition, since migration to city for work is the main responsibility of young men and women, it can increase the school dropout. Moreover, contraband is not feasible; as it is highly banded by the government. Finally, the decrease in the number of livestock, widespread of drought within the territory, and conflict are making mobility less feasible coping mechanism.

Partly because of the reasons indicated above, practices of coping mechanisms by the pastoralists in the Shinile district may not be sustainable. Therefore, better coping mechanisms need to be identified to minimize the impact of the drought. Many options could be recommended depending on the specific situations and agro ecological differences that may exist among the pastoralists. However, taking the options that are considered as sustainable by the pastoralists is relevant. For example, during the FGD in all the PAs visited, men pastoralists suggested irrigation agriculture, temporary migration to cities of Djibouti and Dire Dawa for work like construction and guard, animal fattening, livestock destocking and restocking, livestock diversification (more camels and goats), and pasture enclosures. However, the coping option through irrigation farming could be costly to pastoralists as it requires water pumps.



Women pastoralists also suggested many coping mechanisms as relevant in case future drought. Accordingly, income diversification such as: buying and reselling cereals, butchering, petty trade, milk selling through collection center, saving and credit, and education for children are the main coping options suggested by pastoralist women.

### 4.3. Household factors and Drought coping options

In this section potential household factors that influence drought coping options are discussed. These are gender division of labour, access and control, demographic structure and education of household.

#### 4.3.1. Gender Division of Labor

In Shinile district both men and women have defined roles and responsibilities in all the three gender roles: productive, reproductive and community roles (see Table 4.4). But the role and responsibilities are not rigidly defined.

**Table: 4.4. Gender Division of Labor in Shinile Pastoral Community**

| Activity                            | Normal Conditions |       |      |       | Drought Conditions |       |      |       |
|-------------------------------------|-------------------|-------|------|-------|--------------------|-------|------|-------|
|                                     | Men               | Women | Boys | Girls | Men                | Women | Boys | Girls |
| <b>Productive activities</b>        |                   |       |      |       |                    |       |      |       |
| Herding Cattle                      |                   |       | X    |       |                    | XXX   | XXX  |       |
| Herding camel                       | X                 |       | X    |       | XXX                |       | XXX  |       |
| Herding shoats                      |                   |       | X    | X     |                    | XX    | XX   |       |
| House Construction                  |                   |       |      |       |                    |       |      |       |
| Big house                           | X                 |       |      |       |                    |       |      |       |
| Temporary Hut                       |                   | X     |      |       |                    | XX    |      |       |
| House Moving                        |                   | X     |      |       |                    | XX    |      |       |
| Maintenance and Veterinary services |                   |       |      |       |                    |       |      |       |
| Camel                               | X                 |       |      |       | X                  |       |      |       |
| Weak animals                        |                   | X     |      |       |                    | XXX   |      |       |
| Shoats                              |                   | X     |      |       |                    | X     |      |       |
| cattle                              |                   | X     |      |       |                    | X     |      |       |
| Slaughtering                        |                   |       |      |       |                    |       |      |       |
| Camel and cattle                    | X                 |       |      |       | X                  |       |      |       |
| Shoats                              |                   | X     |      |       |                    | X     |      |       |
| Milking cattle and goats            |                   | X     |      |       | X                  | X     |      |       |
| Milking camel                       | X                 |       |      |       | X                  |       |      |       |

| Activity                              | Normal Conditions |       |      |       | Drought Conditions |       |      |       |
|---------------------------------------|-------------------|-------|------|-------|--------------------|-------|------|-------|
|                                       | Men               | Women | Boys | Girls | Men                | Women | Boys | Girls |
| Livestock Marketing                   | X                 |       |      |       | XX                 |       |      |       |
| Cutting tree for firewood             | X                 |       |      |       | XX                 |       |      |       |
| Making charcoal                       | X                 |       | X    |       | XX                 |       | X    |       |
| Sale of firewood                      |                   | X     |      |       | XX                 | XXX   |      |       |
| Sale of wood for construction         | X                 |       |      |       | XX                 |       |      |       |
| Sale of charcoal                      | X                 |       |      |       | XX                 | X     |      |       |
| <b>Reproductive activities</b>        |                   |       |      |       |                    |       |      |       |
| Household work                        |                   | X     |      |       |                    | X     |      | XX    |
| Food Preparation                      |                   | X     |      | X     |                    | X     |      | XX    |
| Childcare                             |                   | X     |      |       |                    | X     |      |       |
| Collecting Fuel wood for domestic use |                   | X     |      |       |                    | XXX   |      | XXX   |
| water collection                      |                   | X     |      | X     |                    | XXX   |      | XXX   |
| Purchasing food items                 |                   | X     |      |       |                    | XX    |      |       |
| <b>Socio-political activities</b>     |                   |       |      |       |                    |       |      |       |
| Participating in clan meetings        | X                 |       |      |       | X                  |       |      |       |
| Participation in community actives    | X                 | X     |      |       | X                  | XX    |      |       |
| Traditional leadership                | X                 |       |      |       | X                  |       |      |       |
| Participation in funerals             | X                 |       |      |       | X                  |       |      |       |
| Wedding                               |                   | X     |      |       | X <sup>8</sup>     | -     | -    | -     |

Source: Focus Group Discussion in Shinile District (August, 2010)

### Discussion:

As indicated in table (4.4), workloads of women and girls increase in drought times. For example, herding cattle is a task of boys in normal conditions. But during the drought women also accompany

<sup>8</sup> But the pastoralist women said that it is not common to have wedding in drought time

boys in watering and pasture. And the distance women and boys take for these activities in during drought is estimated to be three times more than the distance boys take in normal conditions. In addition, on average, the distance for fetching water by women and girls and collecting firewood for domestic use by women is estimated to be three times more during the drought than the normal times.

In normal times herding shoats is done by boys and girls of age between 7 and 15 within their village, but in drought times women replace the girls and do the task with boys. This is because in drought times the distance for water and pasture is estimated to be three times far than the normal times, and the pastoralist do not send girls to these places for fear of being raped. When women leave for herding during drought with boys, girls do the household works. As indicated in Table 4.4, boys and girls have to support their families in the extra workload of drought times. This could be one of the reasons for the children's school dropouts.

Discussions were conducted with pastoralists in order to identify how the gender division of labour during drought and normal conditions, affect their coping options. As stated by the pastoralists, their coping options are limited due to gendered divisions of labor (see Box 5).

#### **Box 5: Women's workload and its impact on their coping options**

I had been selling sorghum before I came to this village. As animal products decline in drought time, pastoralists consume sorghum. Thus, I know I can get market if I start to buy sorghum from Dire Dawa city and trade in this village. But I do not have time to do this, because during drought times, my husband goes with animals for water and pasture. And hence, all housework including herding, fetching water, and collecting firewood and others are on my shoulders. (Interview with a woman, who came from Shinile city by marriage, in Hore PA.)

Children and elders, who are unable to supply their own need relay on other household members and the wider communities both in normal and drought times. As they are responsible to care for family members, women are compelled to take more burdens. This increases their workload that in turn affects diversification activities (see Box 6).

#### **Box 6: Life of a woman with young children and dependent elders**

I am 26, I have three children of ages 2,4 and 6. In drought times, my husband makes charcoal and cut trees for firewood. Then I sell the firewood and my husband sells the charcoal. As the income from these is not enough for household food, I have started selling food products (e.g. pasta and sugar) in this village. But walking to Dire Dawa to shop the food products takes more than a day. I have dropped the business now because with the responsibility of taking care of these young children and mother-in law who is blind, the task was challenging. (Interview with women in Ayeliso PA)

Most of the coping options for men and women are related with gendered tasks and responsibilities. For example, women are responsible in food preparation and distribution. As a result they have vital role in household food rationing during the drought times. Men are usually considered as providers; one who brings income to the family. Even though men are responsible to bring income to their household, they do not like to involve in low paying activities. In this regard, about 20% of pastoralist men who participated in FGDs indicated that they do not want to sell firewood. Because selling firewood has low return and is also considered as women's job.

*“.....I used to count lots of money. Thus, I do not want to involve in tasks of women by selling firewood for little money. Rather I just prefer to stay at home and wait what my wife and children give me.”(From what one pastoralist man said during the FGDs)*

Gender divisions of labour also limit the opportunities of women pastoralists in Shinile district in finding alternative livelihood activities outside their home during drought times. This is in contrary with the finding by Deveruex, (2006) that Somali women are not prohibited from working outside the home. In Fedheto PA, the women during the FGDs said:

*Most of our tasks are within household, herding cattle and sell of firewood at nearby places. We do not do any other trades because these are activities that may force us to stay in the cities over night which is against our religion and traditions. Such types of tasks are ok for men because for them it does not matter how long they stay outside.*

Moreover, when researcher asked the pastoralist men if they involve in petty trade like sale of tea, enjera, and other food products, one of the pastoralist men in Hore PA replied as “.....hahah...that is business done by widows. Even we do not allow our wives sit on street and look for buyers leave alone us. “

#### 4.3.2. Access and control

Access to and control over the resources and benefits among the pastoralists in the Shinile district varies across the gender (see.4.5).

Table: 4.5. Gender Disaggregated Access to and control over Resources and Benefits

| Resources and Benefits                                  | Normal Condition |       | Drought Condition |       |
|---|------------------|-------|-------------------|-------|
|   | Men              | Women | Men               | Women |
| <b>Livestock</b>  |                  |       |                   |       |
| <input type="checkbox"/> Camel                          | A/C              | A     | A/C               | -     |
| <input type="checkbox"/> Cattle                         | A/C              | A     | A/C               | A     |
| <input type="checkbox"/> shoats                         | A/C              | A     | A/C               | A     |
| <input type="checkbox"/> Donkey                         | A/C              | A     | A/C               | -     |
| <b>Livestock product</b>                                |                  |       |                   |       |
| <input type="checkbox"/> Milk                           | A                | A/C   | A                 | A/C   |
| <input type="checkbox"/> Butter                         | A                | A/C   | A                 | A/C   |
| <input type="checkbox"/> meat                           | A                | A/C   | A                 | A/C   |
| <input type="checkbox"/> Hides and skins                | A/C              | A     | A/C               | A     |
| <b>Weather Forecast Information</b>                     | A/C              | A     | A/C               | A     |
| <b>Benefits</b>   |                  |       |                   |       |
| <input type="checkbox"/> Paid work (e.g. wedged labour) | A/C              | A     | A/C               | A     |
| <input type="checkbox"/> Income from sale of livestock  | A/C              | -     | A/C               | -     |
| <input type="checkbox"/> Priority getting food          | A/C              | -     | A/C               | -     |
| <input type="checkbox"/> Food aid                       | -                | -     | A/C               | A     |
| <input type="checkbox"/> Cash for work                  | A/C              | -     | -                 | -     |

Source: Focus Group Discussion with pastoralist men and women and key informants (August 2010).

A= access, A/C= access and control

## **Discussion**

As indicated in table 4.5 above, type of resource that pastoralist men and women have access to and control over resources and benefits in normal conditions determine what they access and control during the drought times. For example, women lose access on camels' products and donkey for carrying water during the drought times. This is despite of the fact that women do have access on the same during normal times. This is because in drought times, men leave home for mobility with camel and donkey. With regard to the benefit, food aid benefits are available in drought times and controlled by men though women access the food. The cash for work is a benefit from external intervention that is aimed to develop local infrastructure in normal times is fully accessed and controlled by men.

Once the access and control profile was compiled, the researcher initiated a further discussion to find out how gender access and control affects drought coping options. During the FGDs with pastoralists (men and women) indicated that gendered access and control affect their coping options. For instance, men own camels that enable to transport both charcoal and firewood in bulk to cities and hence, can sell at better price. Whereas women use their back to carry firewood and they can't travel long distances. And thus they are forced to sell at nearby places for much lesser prices. During the FGD one woman, for example, explained this as: 'We use our back to carry firewood, thus we can't transport in bulk to cities where we get better price.'

During the FGDs with women, it was stated that they have access to and control over livestock products. But these are the first to decline in drought times. As a result, the pastoralist women cannot sell livestock products to get their income. For instance, they said, "We women sell milk and other livestock products and the income is spent in household consumptions. In drought times, these products are highly declined and not enough to market." This in turn can reduce their drought coping capacity.

Within a household both men and women involve in a decision to sell livestock. However, men have the final say. Thus, while the animals are weak in drought times, women cannot sell or slaughter at the absence of men.

### **4.3.3. Demographic Structure and Drought Coping Mechanism**

#### **4.3.3.1. Family Composition and Family Size**

According to the interview with government staffs, interview with pastoralist men and women, family structures among the pastoralist communities of Shinile are largely polygamous except for young and poor families who are not in a position to support extra families. The household's level to engage in polygamy varies among different wealth groups. For example, in a richer household, up to four wives exist while two wives are common in middle and some poor households.

During the FGDs with pastoralist men and women, it was learnt that the number of family members vary across the households largely based on the wealth status. All the wealth groups have some of their family members staying away while the rich and middle groups have other members staying with them. The rich may have 2 to 3 members staying away mostly in Djibouti and Dire Dawa and have 1 to 3 members of children from poorer relatives and herdsmen. The middle may have 1 to 2 children staying away, either working or living in the towns' and also have one living with them. Among the poor and very poor households those staying away are 1 to 2 and 1 to 3 members respectively, but they have no members staying with them.

Additionally, the information obtained from the report of SC-UK et al. (2008) shows the family sizes among the pastoralist communities of Shinile depend on the wealth categories of the households. Accordingly, 8 to 12 members for rich, 6 to 7 for middle, 6 to 8 poor and 4 to 6 members for very poor.

It was difficult to get gender and age disaggregated data concerning each pastoralist household. But from the responses of twelve respondents during individual interviews, the number of boys and girls within a family are almost the same and age of children living with family varies from 0 years to 20 years. In addition, both during individual interviews and FGDs with women, it was observed that 2 or more dependent children (age less than five) were following each woman.

The FGDs with pastoralist women indicated that households with most members of children with age of 12 or more years have higher coping capacity. In addition having more girls than boys also contributes to the coping capacity. In general, the pastoralist women stated that the higher the number of the family size, higher will be the coping options. But in the situations where there are no additional jobs to assign the household labor, higher family size reduces the coping capacity. To support their argument with regards to the age, women emphasized the opportunity of sending some to cities to reduce consumption, and hence decrease their work burden. With regard to gender, women argued that girls work more but consume less whereas boys consume more since they additionally expend for khat.

#### **Box 7: Pastoralist women's argument with regard to Family Compositions and Size**

When you have children of age 15 or more, they can go to city of Dire Dawa or Djibouti to work as waged labor or servant. That enables us to get income or they can help us in household works and other. In addition, at this age, relatives in the cities of Dire Dawa or Djibouti are voluntary to support children in their education because the children of this age can support them in household activities. When these children leave home, we have less worry about their consumption.

Girls work both within household and outside but they consume less and they understand mothers' problems than boys. In fact, boys work with their fathers in collecting firewood and charcoal specifically in drought times, but they need more food and money for khat.

More children are blessing because they support us in different ways; some go to cities and bring money to family, and others do livestock related activities and the rest do household and other non-farm activities. But now days there are no jobs at cities, and we have lost our livestock in droughts. Thus, we only do firewood and charcoal production for selling. In this kind of situation, large family is burden for us because they need more food which is the main problem in drought times.

Men pastoralists do have similar argument with women pastoralists regarding age and family size to coping capacity. But pastoralist men differently argued that boys are stronger to cope with drought impacts. In addition, they stated that the boys support their families during drought times by doing activities that generate income (e.g. waged labour and charcoal making).

#### **Discussion:**

Most household among the pastoral community have large family size. For Shinile pastoralist, this study find out that polygamy is related with wealth. In other words, those pastoralists with higher wealth level can have more than one wife. Because, to have more than one wife Issa pastoralist man has to prove for the clan leaders that he can support the extra families and treat the wives equally. This is in contrasts with the finding by Gebremichae et al, (2009) which show that polygamy is practiced among most pastoralist men of Ethiopia as a drought coping mechanism.

Because having two or more wives that live in different location gives a breathing space for pastoralist men (Gebremichae et al, 2009).

With regard to the impact of polygamy on household coping capacity, the study by Flinton (2007) shows that polygamous households among Borena pastoralists have less capacity of coping with drought because of their limited resources to share among many family members. Women are highly affected than men in this situation because it often leads to the temporary break-up of households with wives returning to their parent's homes and conflict between wives as each tries to secure enough food and water for her own children (ibid).

It is indicated that pastoralist men and women have a view that large family need more food and hence makes the coping capacity in drought times difficult. And women believe that coping is better with more girls than boys but men said the reverse. On the other hand, a finding by Pandey and Bhandari (2009) shows that: a family with more productive age, large family size and more boys has more coping options. From this, the researcher inferred that it is not possible to conclude whether large or small family size and more girls or boys are potential for coping with drought in the case of Shinile. But depending on the context (e.g. availability of income generating activities), these factors can influence coping options.

#### 4.3.4. Education and coping mechanism

Education increases the chance of making better decisions and more diversification (Roth, 1991). According to the information from the FGDs with pastoralist men and women, pastoralists believe in the importance of education and want to send their children to school. However, the information from interview with pastoralist men and women indicate that very few of the pastoralists' children are going to school. Out of the seventy children (age of 20 and less) of the twelve households interviewed, thirteen children (19%) are going to school. Some of these are living with their relatives in cities.

**Table 4.6. Number of boys and girls going school in the study PAs from interview**

| Response  | Boys | Girls | Remark  |
|---|------|-------|---|
| Each respondent from two household said three out of their seven children                             | 4    | 2     | Three are living with relatives in the city of Dire Dawa<br>Three including the two girls are learning within their villages  |
| Each respondent from three household said two out of their nine, eight, and six children go to school | 5    | 1     | These go to schools within the villages   |
| One out of five children from one household   | 0    | 1     | living with her uncle living in Djibouti  |
| The rest six households responded that none of their children are going school                        | 0    | 0     | Children have to help them in household and with income generating activities like charcoal and firewood<br>Schools are too far from their villages<br>No school (eg. Biyogera) |

Source: individual interviews with pastoralist men and women, August 2010

**Discussion:**

This study also finds out that boys and girls are taken out of school in drought times. For example as explained in section 4.2.3, in severe drought times, boys have to leave school to accompany men in distance places in search of water and pasture. In addition, girls have to do all the housework while women do herding cattle and goats in drought times (see section 4.3.1). Similarly, the recent finding by Regassa, et al (2010) indicates that taking children out of school is one of the coping mechanisms among the Ethiopian pastoralists. Because they can assist in search for fuel or cutting trees for fuel wood practiced (Regassa, et al., 2010).

With regard to adult education, only 25 % (3 out of 12) of the respondents can read and write. Concerning the education, women are more disadvantaged with none of the respondents went to school. The study by Little et al (2001), show that learning how to read and write is important for pastoralists to make informed decision regarding money economy and other economic options.

**4.4. External Factors and their Influence on household Drought Coping Options**

This section deals with potential external factors that influence drought coping options and discuss the main key findings. These are local infrastructure (access to road, distance to cities, credit facilities), alternative livelihood options, drought forecast and Early Warning Systems (EWS), conflict, and institutional factors.

**4.4.1. Local Infrastructure**

The nearest market for all villages visited is Shinile which is on average 45-60km far away. The researcher asked how they go to cities and they explained that they walk to market. Accordingly, adult men and boys walk for 4 to 5 hrs to reach the nearest market (Shinile) whereas women walk for 5 to 7 hrs. Except Kalabadi where the main road and rail way pass through, all the other PAs visited do not have access to road.

During FGDs with pastoralist women, difficulties related to the infrastructure were raised. The main ones are related to the access to roads and distance to the markets to: purchase cereals, carry firewood, sell milk and undertake income diversification activities. Pastoralist men in all PAs also explained death of animals in a way to market, less access to information about livestock market, lack of access to veterinary and other public services (e.g. school, health center) as the main problems related with infrastructure. In most PAs visited (e.g. Hore and Biseley), water is the main problem which is intensified during droughts. In these PAs, women and girls invest more than 6 hours a day for fetching water during drought times. But the shortage of water is differently emphasized among the men and women pastoralists. Pastoralist men emphasized its impact on farming options while women emphasized the impact of time invested in fetching water.

**Discussion:**

Access to infrastructure is important to cope with the drought. The study by Panuliano and Mike, (2008) shows that access to roads, provisions of water along stock routes and security along the market routes are important. Because it facilitates for: early destocking through sell, buying grain for food and diversification of livelihoods (Panuliano and Mike, 2008). However, among the pastoralist communities in Shinile district, infrastructure are poorly developed that limited the pastoralists' drought coping options. For instance, among the pastoralist the abundant milk in wet season is consumed by household members and the rest is given as gifts. Because there is less demand to sell within villages and poor physical access to cities and market centers.

In addition, PAs with a better access to the infrastructure have better opportunity to do petty trading though their financial resource is limited. The case in point from the Shinile district is the Kalabadi PA which is closer to cities and has better connection to main road and railway.

#### **4.4.2. Alternative livelihood options**

When the researcher asked about other activities besides pastoralism, pastoralists especially men repeatedly raise the issue that they only know how to handle livestock related activities. In addition, although they believe in the importance of education, only 25% of the adult men and women I contacted can read and write. All the PAs visited are more than 45km far from main cities.

In FGDs with pastoralist men and women, it was noted that the pastoralist have an idea about what they can do as better coping mechanism but lack of access to essential credit service is claimed by the pastoralist as their limitation. For instance, from the response of pastoralist in Besiley, Kalabadi and Ayeliso PAs, it was identified that pastoralist men want to do animal fattening by providing alternative feeding and then to sell the animals at better price. But they said these require money and they can only do it if they get support from GOs and NGOs. In addition, in most PAs when the pastoralist women were asked about the alternative livelihood options, they replied that they want to do income generating activities mainly petty trades. Yet, the pastoralist women raised lack of money as one of their constraints besides the workloads and gender roles. Moreover, one of the government staff said that the pastoralists do not have saving practice for investment on income generating activities.

*“.....the pastoralists do not save. When one gets money from remittance of children or relative living abroad, he/she spends on luxury items (gold and cloths) and the rest is shared with neighbors. They do not think of investing on something else for further income. Regardless of the amount, money does not stay more than few days. After which they start looking for food aid”*

In general from the discussion with pastoralist men and women, the alternative livelihood options for pastoralist the study area are waged labor, house servant, and unlicensed trade

#### **Discussion:**

As indicated above, most of the PAs visited are far away from cities and this may limit the opportunity of involving in many alternative livelihood options. In line with this, the finding by Little, (2001) on income diversification in East Africa, indicates that pastoralists living within a 39-kilometre distance to cities have up to eleven different possible livelihood diversification activities as opposed to the seven activities of those living more than 40Km away from cities. Additionally, it was explained in section 4.3.4 above that education is important for livelihood diversification (Roth, 1991). But to diversify their livelihood activities, the pastoralist men and women in the study area lack of education. Moreover, it is clear that access to credit is another main factor that limits alternative options. In line with the importance of micro credit, the finding by Haile,(2003) shows that access to microfinance scheme provides opportunities for income diversification activities and coping with difficulties that enable to improve food security in bad years. However, although credit service for the poor through microfinance used as a poverty alleviation tool in the country (ibid), it is not clear why credit service is absent among the pastoralist in the district. But, since the pastoralists have no saving practice<sup>9</sup> and are mobile, repayment of the credit might be a problem.

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<sup>9</sup> GOS staffs

### 4.4.3. Institutional factors

#### 4.4.3.1 Drought Policy and Interventions

Institutional response to drought in Ethiopia is regulated by the 1993 National Policy for Disaster Prevention, Preparedness and Management (Government of Ethiopia, 1993). According to this policy, each district is responsible to develop drought contingency plan that includes fodder production, pasture development, water supplies, veterinary care, markets and mobile slaughters. However, a key informant from district agriculture office said that there is no drought contingency plan in Shinile district because drought is becoming frequent and hence, less time to plan. Because of this most interventions are emergency measures. Besides, the role of government offices in the district with regard to drought coping is limited to animal health services. NGOs such as Save the Children UK and Hararghe Catholic Secretariat (HCS) intervene drought coping mechanisms of the district in livestock related assistance, supplementary feed, destocking through selling, restocking, vaccination and treatment.

With regard to pastoral development policy the following was articulated by Ethiopian government.

Phased voluntary sedentarisation along the banks of the major rivers as the main direction of transforming pastoral societies into agro-pastoral system, from mobility to sedentary life, from rural to small pastoral towns and urbanization(FDRE 2001: 5).

The researcher steered a discussion with regard to the above government policy to find its impact on drought coping mechanisms. Accordingly, in all the FGDs with pastoralist men and women, it was noted that pastoralist men who live in Kalabadi and Bisley PAs and pastoralist women in all PAs are in favor of sedentarisation as opposed to many findings that indicate pastoralists as resistant to sedentarisation. These pastoralist men and women have different reasons for their preferences of the policy. Women are attracted to sedentarisation because they will get better education for their children, government support them in the provision of water and income diversifications and reduce workloads (e.g.no frequent construction and removing huts). Whereas, the pastoralist men prefer sedentary way of life because they can do farming. For example, in FGDs with pastoralist men Bisley, one man stated about sedentary as:

*Sedentary limits our mobility but currently most of us have lost our livestock in drought and are left with few. Movement with few animals is not feasible, and doing farming for our food is becoming important. Thus, if government supports us with water pumps we better do farming while we settle.*

However, in other PAs like Hore,Ayeliso and Fedheto about 80% of pastoralist men who participated in FGDs, believe that sedentary way of life negatively affects the pastoralists' livelihoods. Because they said, it is their main livelihood that they have been doing for century and the only thing they can better do with the irregular rain of their areas.

#### **Discussion:**

Drought coping interventions by the institutions are focusing only on livestock that are mainly owned by men. In other words, with focusing mainly on livestock, the interventions can favor men over women. Further, the interventions do not consider women's need and alternative income diversification activities. In general, the responses are emergency than pre-planned, may not enable pastoralist strengthen their own capacity to cope with droughts. This is in line with most studies (e.g. Kasa et al,2005; Flintan, 2007), that shows most interventions on drought are focus on emergency and fail to address the reducing coping capacity of pastoralist in Ethiopia.

Women are in favor of sedentary than men this might be because while men leave home for mobility or the whole family move, the work load of women increase(see4.2.3. and 4.3.1 above). In those PAs (Kalabadi and Bisley) where sedentary life is preferred, its importance is attached with external support (e.g. public service). Besides, one point that must be seen is that, geographical location of Kalabadi PA is near to cities and the pastoralists have exposure to these places. Further, this study was undertaken after the consecutive severe droughts that occurred for the last five years (2004 to 2009) which result many pastoralists households in Bisley PA lose their livestock and hence, is becoming less mobile. And the pastoralists in Bisley are highly depend on food aid (see table 4.2). Therefore, preference to sedentary or mobility may influenced by distance from city, number of livestock owned by household and availability of food aid.

#### **4.4.3.2 Availability of Food Aid**

Food aid is given for poor household with 12 kg per person within the household in every two months. The allocation is based on the criteria drawn up by drought response committee. According to the report for 2009/10 by DPPD, out of the total 96,988 rural population in the district, 88,304(91%) depend on food aid. Besides, it was learned that food aid is becoming the main coping option in Shinile district.

Food aid is given in the name of household head and women control the aid only if they are a household head. When the food aid is given within a village wives accompany their husbands to help in carrying but not when aid is given at cities or different villages. During the field visit there was food aid distribution in one of the PAs and the researcher observed more men than women taking the food. In addition, after they took the aid some pastoralists were observed selling part of it to merchants who were standing outside the gate where aid was given. And the researcher raised the issue during the next FGDs with pastoralist men. They replied as (see Box 8)

#### **Box 8: Pastoralist men and food aid**

Although the amount of food that we got is not enough for our family, we need to sell part of it; in order to cover our expenses of khat, transport and others that we incur while we stay out of our village during the food rationing. This is because, human being not only need food to live. In fact, we do not deny that the food aid saves our lives but cannot fulfill all our needs. We can better meet our needs if we have jobs that enable us earn income. (FGDs with pastoralist men in Ayeliso PA)

#### **Discussion:**

It is stated that food aid is given to the poor household but from the figures above (91%), one may argue that it is not only the poor household who are beneficiaries. And hence, food aid distribution is not well targeted by income or assets at household-level in the district. In addition, considering household heads as representatives for the food aid given to household favored men than women. For example, pastoralist women do not have control the benefits from food aid<sup>10</sup> and pastoralist men sell parts of the food aid for their expenditure of khat. During the FGDs with pastoralist women in Ayeliso PA, the women complain about food aid given to men as quoted below:

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<sup>10</sup> see Tables 4.5

Women are the one who are responsible in preparing household food and we know how much is needed in the household than men. But men represent the household in taking the aid. As a result sometimes they sell part of the aid for *khat* and that affects the whole family.

Similarly, the finding by Devereux, 2006, shows that most Somali Region women complain about the sale of food aid by men to buy *khat*.

Our problem is that the men always get the food aid. When my husband gets it, he sells half and uses the money to buy *khat*. It would be better if the food is given to the women, since food is our responsibility. There isn't a single woman who would sell food aid to buy *khat*. If she sells, it will be to buy other food items for the home, especially the children.

As women and girls are the ones who eat less and last (see box 2), it is likely that they are the first to be affected by the reduction of households' food consumption level.

Moreover, Shinile pastoralists' dependency on food aid is increasing. This confirms the finding by Gebere Michael and Kinfe, (2009) that shows food-aid supports have to exist in Somali Region. But the FGDs with pastoralist men and women show that it is not the most preferred option. In line with this study Devereux, (2006) shows that Somali pastoralists are looking for different forms of support than food aid. These are safety-net assistances which include cash transfers, livestock restocking support for diversification, and investment in education and health (ibid). Though food aid is given as emergency response to cope with drought, the pastoralist dependent on food aid can adversely affect the initiatives to look for alternative livelihood activities and hence, limit coping options. For instance, since they know can get food aid, pastoralist of Shinile district do not save remittance money for further income diversification activities.<sup>11</sup> Similarly, the study by Panuliano and Mike, (2008: pp 44) shows that:

*Food relief is the opium of pastoralists, given by the government and donor agencies to ensure that pastoralists do not think of alternative livelihoods and become dependent on food aid so that they can be easily controlled by the international community and the regional government. It is expensive and it does not help make pastoralists stronger in the long term.*

#### **4.4.3. Predicting a Drought and Traditional Early Warning System (EWS)**

According to the information during the FGDs, elders among the pastoral communities of Shinile have traditional ways of forecasting if drought is going to occur; after which they call clan meeting (all are men) for the early action. First, if the main rain called 'Karan and diraa' fails to come within a given year, the pastoralists forecast that drought is going to occur. Second, they predict the occurrence of drought by considering the heavy wind, examining stomach of slaughtered goats, observing animals' behavior. Third, they predict from observed historical trends of drought occurrence. Concerning the last way of forecasting one elderly man in FGDs said 'in the past, drought occurred every five to six years. Now days, however, it has so irregular that it comes every three, one or two years. So it has become difficult to predict as we used to do'.

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<sup>11</sup> See section 4.4.2...from GOs staffs response

The researcher also raised further question concerning the importance of effective EWS for drought coping options. Accordingly, the participants in FGDs with pastoralist men explained that its importance is related with mobility that it enables to find better place for water and pasture on time and sell animals at better price before they become weak.

In addition to what men mentioned, women stressed its importance to store livestock products (eg.ghee), make gradual reduction of household food consumption. Although pastoralist men emphasized importance of EWS that enable to sell livestock while they are in a good condition, it is not their culture to sell livestock before expected drought occurs.<sup>12</sup>

EWS is also undertaken by Save the Children UK in the district which is based on the weather forecast from metrological expert. The researcher asked which one will be accepted if the forecast by elders and expert differs, after argument within the group majority of them replied that the elders' forecast is more acceptable. This is because they said elders know from their experience and such type of forecast has been working among the pastoralist for centuries. But according to the response from the district agriculture office, institutional EWS that is based on the expert weather forecast is becoming acceptable among the pastoralist.

#### **Discussion:**

Though traditional warning system is the most reliable for the pastoralist in the district, the current Irregular occurrence of drought is challenging its effectiveness. With regard to this, the study by C. Pratt (2002) in pastoralist communities in Northeastern province of Kenya shows that the increase in severity and frequency of drought over the last decade has made drought forecasting from historical trend less reliable than it has been in the past.

#### **4.4.4. Conflict**

The information from the pastoralist men and women shows that, pastoralist in the study area have frequent conflicts with Afar and Meisso of Oromya Region that are perceived as the dispute to control resources. Specifically, the conflict with Afar is over Awash River and struggle to control contraband route. Concerning these conflicts, the study by Devereux, (2006) in the Somali Region shows that many pastoralist men are killed on both sides. The pastoralist in the study area said that because of the conflicts with Afar and Meisso pastoralists, they have limited places to move for water and pasture and have difficulty to trade contraband that worsen the impacts of drought.

#### **Discussion**

It is clear that, conflict with the two pastoralist community, Afar and Meisso, hampered drought coping options of Shinile pastoralist. These are specifically mobility and contraband. This confirms the finding by Eriksen et al, (2008) that shows, conflict worsen drought impact; because it limits coping options by restricting population movements, disrupting markets, limiting trade options, and leading to asset loss.

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<sup>12</sup> Interview with key informant from district agriculture

## **Chapter five: Conclusions and Recommendations**

### **5.1. Conclusions**

The objective of the study was to examine the drought coping strategies of pastoralist men and women in Shinile district. The study found out that drought is considered as a 'normal' event that has been occurring in the district. Over the last ten years, drought has been more frequent, severe; but its coping options have been limited among the pastoralists of Shinile. The main reason for increase in frequency of drought from the perception of the pastoralist is "work of God" but from the perception of key informants, it is the extensive cutting of trees. With regard to limited coping mechanisms, pastoralists stated that less time to recover from the droughts, government strict rules on contraband and charcoal selling, and limited employment opportunities at cities are the main reasons.

Men and women pastoralists of the district have different ways of coping with drought. Despite many pastoral drought coping options that the researcher identified during the desk study, drought coping mechanisms observed in the district are limited. Currently, the first and common drought coping options for all the PAs visited are sale of firewood and charcoal. Although not always clearly divided between men and women, the main coping mechanisms by women are sale of firewood, modifying household food consumption, contraband trade, begging, migration to cities, and forming neighbor based social network (e.g. "Dhowartoas"). Coping mechanisms by men are sale of charcoal, working as daily labour, sale of construction wood; sale of livestock, clan based social networks, and mobility.

The current coping mechanisms are not efficient and sustainable. Because they can result in: environmental damage (e.g. firewood and charcoal), likely exposure to risk of HIV/AIDS and other STDS (e.g. migration and contraband), school dropout (e.g. migration and mobility), and government restriction (e.g. contraband). In addition, the mobility is also becoming less feasible due to the decrease in the number of livestock in most households. Most importantly, these coping mechanisms are becoming more inefficient due to the increase in frequency and severity of drought. Future coping mechanisms suggested by pastoralist men were agriculture, temporary migration, animal fattening, destocking and restocking, pasture enclosures, livestock diversification and irrigation farming. Women also suggested income diversification activities, butcher, petty trade, sale of milk, saving and credit, and education for children.

The gender access to and control over resources as well as division of labour in the household determine the drought coping mechanisms undertaken by pastoralist men and women. For example, the increase in work burden of women during the drought times and their sole responsibility in reproductive activities adversely affect their diversification options. This study also found out that the gender role among the pastoralist forbid women from working outside their home to cope with drought. This is in contradiction to what is reported in other study in the region (See Devereux, 2006). Further, the existing gender role limits pastoralist men's option of doing petty trading as coping mechanism. Moreover, because of their power in access and control of resource in households; pastoralist men have better coping capacity (e.g. sale of firewood and charcoal at better price) than women in the district.

Concerning the demographic structure, the pastoralist communities of Shinile are mostly polygamous and have large family size. Having more than one wife is considered as sign of wealth among the pastoralist men in Shinile. On the other hand, the pastoralist men and women believe that having large family size worsens the food insecurity during the drought times.

In actual fact, this affects women more than men. Because, women are responsible for preparing family's food and taking care of family members.

The level of education can limit drought coping options of the pastoralists in Shinile. For example, only 25 % of the respondents can read and write. In addition, the numbers of children who are going to school are very few. The educations are limited due to boys and girls are taken out of school to help their parents, schools are too far from their villages and lack school in some villages.

Limited access to infrastructure like road to markets is one of the main constraints for the pastoralist coping options (e.g. Sale of milk livestock). These mainly affect women because they have limited access to camel and donkey to use for transportation (e.g. carrying water, firewood and charcoal). Distance to water also affects the coping options among the women pastoralists. As women and girls are responsible in fetching water; they are more affected by the increase of distance for fetching water in drought times. Moreover, the pastoralist men and women have limited skills for alternative livelihood options apart from pastoralism.

Absence of credit service is another main constraint that limits the coping options for the pastoralist in the district. But while the government is promoting microcredit as a means of poverty reduction in the country, it is not clear why microcredit is not available among the pastoralist in the district. However, this can be because the pastoralists saving practice is poor and are mobile which can pose challenges to credit service providers in following the repayment.

There is an institutional policy guide for response to drought that is important for pre- action to reduce the severity. But because of the current frequent drought, which gives less time to plan according to the policy guide, it has not been implemented in the Shinile district. As a result, the interventions are based on emergency measures that cannot strengthen the coping capacity of pastoralist men and women. Besides, most of the drought coping interventions are provided by NGOs while the role of GOs is very limited. Further, both GOs and NGOs have not considered the difference of need and interest between men and women among the pastoralist of Shinile District. Sedentary based coping mechanism was preferred by most women than men but can only be viable with external supports (e.g. water pumps, education). In addition, pastoralist men in different PAs have different opinion about sedentary versus mobility which can be influenced by distance from city, number of livestock owned by households and availability of food aid.

In response to food insufficiency, food aid as a coping mechanism is becoming more frequent in the district. But the food aid is not enough and the pastoralists' need go beyond the food aid. Most men represent households at food aid collection centers, though women are responsible in household food preparation. As a result, part of the food aid is sold by men pastoralists to meet their personal needs such as khat. This tendency has affected the households' food consumption level. But dependency on food aid still hinders the pastoralists from looking for alternative livelihood options (e.g. income diversification activities).

Traditionally EWS to drought is more acceptable than meteorological based forecasts among the pastoralist of the Shinile district. But because of the irregularity and frequency of the recent droughts, traditional based forecasts are becoming less effective.

Finally, the study found out that Shinile pastoralist conflict with Afar and Meisso pastoralist has an adverse impact on the two main coping options, mobility and contraband business.

## 5.2. Recommendations

Drought is a natural phenomenon to which pastoralists can have little power and means to control its effects. But its occurrence is sadly increasing in its frequency. As a result, appropriate coping mechanisms need to be sought to minimize its negative impacts (e.g. household food security) on pastoralists. Based on the finding, this research makes the following short term and long term recommendations as to how to improve the drought coping mechanisms among the pastoralists. But it should be noted that though the researcher tried to make specific recommendations as much as possible, answering “who has to do what” as an institutional drought coping intervention is beyond the scope of this study. Thus, some recommendation might look very general.

### Short- Term Recommendations:

- a) Emphasis on the differences between interest and needs of the pastoralist men and women is crucial for the future interventions on drought coping mechanisms. As a result, future interventions should take into account different recommendations by the pastoralist men and women based on their preferences of coping mechanisms.
- b) External institutional interventions to drought impact by both GOs and NGOs have not, so far, considered the difference in role and responsibilities between pastoralist men and women. For the future interventions, gender analysis (e.g. who is doing what), should be done before carrying out any interventions among the pastoralist communities in the Shinile district. Such analysis is crucial to deliver gender-equitable service as well as to undertake effective (and sustainable) drought coping interventions.
- c) Pastoralists level of drought coping mechanism is related to the size of their family. For example, household food distribution is less when the family size is large. This in turn reduces the coping capacity of the pastoralists. As a result, the awareness raising and training on Family Planning needs to be undertaken to the pastoralists. This is particularly true to reduce the mindset of pastoralist men about having two or more wives (polygamy).
- d) Priority should be given for women in receiving food aid for the household in Shinile District. Because men could misappropriate part of the food aid for their personal consumption (such as khat).
- f) The current food aid does not meet all the need of pastoralist men and women. Besides it hinders the pastoralist men and women from looking alternative livelihood options by increasing dependency on the food aid. Because of this complete substitution of food aid with cash for work is essential. This trend can increase the labor forces' involve in preparing water damedes, digging shallow wells, construction of road and schools and other infrastructure. But such programs (cash for work) need to consider the workload of pastoralist women.
- g) There is a need to provide training on alternative income generating activities for pastoralist men and women. This will help them broaden their skills and knowledge in creating alternative income generating activities by themselves in addition to their main livelihood, that is, pastoralism.
- h) Existing social self help groups called locally, "Dhowartoas" are important for the pastoralist women coping mechanisms to the drought. But for their enhanced role support in credit and savings is required to strengthen them.
- i) The role of GOs in the drought response should be enhanced. In this regard, government needs to promote the public private partnership to give synergy to the existing interventions and implementation of drought contingency plan. This can for example, include for effective drought contingency plan, the GOs should develop a strategy by which traditional EWSs are supported with expert weather forecast.

**Long-Term Recommendations:**

a) There is need to develop the local infrastructure to facilitate the coping mechanisms of pastoralists. Because access to road, water and market are main factors that limit the alternative options for the pastoralist.

b) In addition to lack of physical access to school, there are also high school dropouts among the boys and girls of pastoralists due the fact that parents need their children to support them in labor (e.g. mobility, household work). If intervention that allow boys and girls work after school is introduced within villages, they can help parents without leaving school. And hence, interventions that allow boys and girls to work in their par time within villages need to be introduced among the pastoralist communities of Shinile District.

c) Ways of providing access to credit to pastoralists need to be designed. Lack of credit institutions among the pastoralists in the Shinile district could be also related to their mobility. Research that can find compatibility in the lifestyle (e.g. mobility) of pastoralists with the credit access is important.

d) Although sedentary way of life is preferred by most women than men, men living in different PAs have different view on the issue. This may require research to identify preferences among the pastoralists for sedentarisation versus mobility and the reasons behind the preferences.

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## Annexes

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### AnnexA: Summary of data sources

| the data was required:       | Topic on which information/ data gathered                                | source   |
|------------------------------|--|--|
| for back ground information  | <i>Situation of drought current in the district</i>                      | District Agricultural Office<br>DPPA office<br>Pastoralist men and women                           |
| to answer sub question one   | activities of pastoralist men and women to cope with the current drought | Pastoralist men and women<br>Women affairs officer<br>District Agriculture Officer<br>DPPA officer |
| to answer sub question two   | <i>House hold factors and drought coping mechanism</i>                   | Pastoralist men and Women  |
| to answer sub question three | External factors and drought coping mechanisms                           | Pastoralist men and women<br>District Agricultural Officer<br>DPPA officer                         |

## **AnnexB: Guideline for Focus group session with women/men pastoralists**

1. What methods do you use to know whether drought is going to occur or not?  
a) Traditional forecasters) b) Radio or expert c) self.....  
Which signs  
Why do you prefer the method you use?
2. What are the differences you observed between the droughts that has occurred in 1990s and 2000s (the last 10 years)? a) Is their differences in the coping activities between these periods? If yes, what causes the difference?
3. What coping activities did you take in case of drought occurrence? The current ones? Rank in terms of what commonly used?
4. What are activities that men/women do with regard to livestock production, domestic reproduction and community during drought time?
5. What are the activities of boys/girls in relation to coping mechanisms?
6. Do all activities listed in Q2, Q3 and Q54 enabled you to get sufficient food? If no why?
7. In your opinion what activities are the best coping mechanisms for future?
8. What household resources (e.g. income) do pastoralist men and women have access and control over?
9. How household decisions are made with regard to allocation of household resources to cop up with drought? Who decide in which types of activities?
10. Have you ever received support from GOs and NGOs during drought? If yes what kind of support? If not, why not? How does this affect coping to drought?
11. Government policy? How this policy affects coping activities
12. What are the nearest market and city to your village? How long does it take? How does this affects coping activities?
13. What is the distance to what water sources? How does this affects coping activities?
14. Social network (relation with clan and different clan and neighboring).Do you support each other among your clan during drought? If yes what are the privileges and the responsibilities to get the support?
15. Is there any conflict among or within clan? If yes with whom and how does this affect your coping activities?

### **Annex C: Semi structured Guide questionnaire with pastoralist men/women**

This interview questionnaire is meant only for research purposes. The objective of the interview is to conduct research in drought coping activities. For this purpose your genuine responses to each of the interview questions are highly useful. Your responses will be confidentially used for this research purpose. I highly appreciate for your willingness to participate as a respondent in this interview.

#### A. General background information

*The following questions relate to your background as a pastoralist.*

1. Clan support
  - a) Yes
  - b) NoIf yes to the above question:
  - a) In livestock
  - b) Milk
  - c) Money
  - d) Other activities (specify).....
2. Have you involved in activities that aimed to maintain your clan relations?
  - a) Yes b) NoIf yes.
  - a) I contribute to my clan members
  - b) I join clam meetings
  - c) Other(specify).....
3. Marital status.
  - a) Single
  - b) Married . If married number of wives or husband \_\_\_\_
4. Age of the respondent \_\_\_\_\_years
5. Gender: Male\_\_\_\_ Female.\_\_\_\_
6. Respondent's education level \_\_\_\_\_
  - \_\_\_ a. None
  - \_\_\_ b. Primary
  - \_\_\_ c. Other (specify) \_\_\_\_\_
7. Family size (number of people in a household) \_\_\_\_\_
8. Number of children. \_\_\_ a) Number of boys\_\_\_ b) Girls \_\_\_\_\_
9. Age of the children
  - a) Below age of 5 .....
  - b) 6 - 12 years old.....
  - d) 13 -18 years old.....Do your children are going school? If yes, where? How many of boys and girls? If not, why?
10. Livestock types possessed and number.
  - a) Camels \_\_\_\_\_
  - b) Cattle \_\_\_\_\_
  - c) Goats \_\_\_\_\_
  - d) Sheep \_\_\_\_\_

#### **B. Alternative activities**

1. Apart from livestock rising do you have other income generating activities?
  - \_\_\_ a. Yes
  - \_\_\_ b. NoIf your answer to 1.bove is no, why not?  
If your answer to 1. Above is YES answer question 14. and 15 below
2. Which type of additional activities are you engaged in to generate income?

- a. Cropping \_\_\_\_ b. Livestock trading \_\_\_\_ c. Petty trade \_\_\_\_  
d. Charcoal production \_\_\_\_ e. Other (specify) \_\_\_\_ f) non- farm employment
3. Since when did you start additional activities? \_\_\_\_ Years.

**Drought and coping related questions**

1. What methods do you use to know whether drought is going to occur or not?
2. In your opinion trends of droughts occurrence for the last 10 years in your district:  
a) Is very frequent b) Less frequent c) Not frequent d) No Change?  
What are the indicators for drought to be severe?
3. Other than livestock and livestock products like milk, on which resources do you have access and control?
4. What are your responsibility with regard to productive activities (e.g. income diversification and livestock production), household reproduction (E.g.in relation to food, children etc.) and community (e.g. Create and maintain social relations of your household, maintain kinship, clan member etc.)
5. What are the duties you expected to accomplish in drought time in relation to the responsibility you list under Q4?
6. Do you have access to credit?
  - a) If yes, from where? Do you decide purpose for which the money used?
  - b) If no, why?

#### **AnnexD: Semi structured Interview Guide Questionnaire with the key informants**

1. How the situation of drought in your district?
2. What makes it different what used to?
3. What are the drought coping mechanisms practiced by the pastoralist in the district?
4. Are these coping mechanisms are effective with the current drought? if yes/no, why ?
5. What are the roles of your office related to drought coping mechanisms?
6. Is there a policy related with the drought coping mechanisms? If yes, what is this?
7. Do you consider both men and women as your target group? If yes the women who take part, are they from male headed household or female headed household? Why?
8. Do you think the existing gender role influence the coping activities undertaken by man and women? IF yes, in what ways?