



Addis Ababa University

College of Business and Economics

Department of Public Administration and Development Management

**Assessment of Ethiopian Pastoral Development Approach and Its
Impact on the Livelihood of households in Ewa Woreda of Afar
Regional State**

By

Ousman Yesuf

April, 2019

Addis Ababa, Ethiopia

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**A thesis submitted to the Department of Public Administration and
Development Management of Addis Ababa University in partial
fulfillment of the requirements for the Degree of Masters in Public
Management and Policy (MPMP)**

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Department of Public Administration and Development Management

This is to certify that the thesis prepared by Ousman Yesuf entitled “Assessment of Ethiopian Pastoral Development Approach and Its Impact on the Livelihood of households in Ewa Woreda of Afar Regional State”, which is submitted in partial fulfillment of the requirements for the Degree of Masters in Public Management and Policy (MPMP), complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Abstract

The study was aimed at assessing the implementation of Ethiopian pastoral development policies and their impacts on the livelihood of pastoralist in Ewa district, Afar region. The study assessed the livelihood assets possession of pastoralist in Ewa and government efforts to improve pastoral livelihood. Qualitative and quantitative data collection techniques were employed to collect data from various sources. A sample of 142 households and six key informants were selected and data was collected using household survey, focus group discussion and key informant interviews. The findings of the study indicated that possession of important livelihood assets such as livestock, land and water, access to health and education, finance and market etc., are either deteriorated or remained poor. It was found that 97.2% of the families experienced reduced livestock holding, only 38% of households claimed to own land and 14.8%, meanwhile, have lost their land. The vulnerability condition instead is steadily growing. Partly inappropriateness and partly poor implementation of state policies such as settlement and unconsented projects coupled other factors contributed for the decline of livelihood condition. Generally, pastoralists in Ewa district today are at the crossroads and need decisive actions with far-reaching significances. Collective and private land rights have to be granted, access to market, income generating activities, increasing livestock productivity through improved technologies and supplementing with crop cultivations need to be introduced. As many pastoralists see themselves to be an agro pastoralist for the future, properly planned voluntary settlement of pastoralists along the resourceful riverbanks is also commendable if the livelihoods of pastoralists in Ewa has to improve.

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Acronyms

ADLI	Agricultural Development Lead Industrialization
ANRS	Afar National Regional State
AU	African Union
AWD	Acute watery Dihria
BP	Before Present
CCI	Complimentary Community Investment
CELEP	Coalition of European Lobbies for Eastern African Pastoralism
CSA	Central Statistics Authority
DFID	Department for International Developments
DRM	Disaster Risk Management
FAO	Food and Agricultural Organization
FDRE	Federal Democratic Republic of Ethiopia
FGD	Focus Group Discussion
GDP	Gross Domestic Product
HABP	Household Asset Building Program
HPG	Humanitarian policy Group
HoPR	House of Peoples Representatives
HSDP	Health Sector Development Plan
IDS	Institute of Development Studies
IFAD	International Fund for Agricultural Development
IFRC	International Federation of Red Cross and Red Crescent
IGAD	Inter-Governmental Authority on Development
IIED	International Institute for Environment and Development
ILRI	International Livestock Research Institute
IRE	Islamic Relief Ethiopia
IRIN	Integrated Regional Information Networks
KI	Key Informants
LMP	Livestock Master Plan
MoA	Ministry of Agriculture

MoE	Ministry of Education
MoFA	Ministry of Federal Affairs
MoFED	Ministry of Finance and Economic Development
NGO	Non-Governmental Organizations
PFE	Pastoralist Forum Ethiopia
PSNP	Productive Safety Net program
SDPRP	Sustainable Development and Poverty Reduction Program
SLA	Sustainable Livelihood Approach
SLF	Sustainable Livelihood Framework
TLU	Tropical Livestock Unit
UK	United Kingdom
UNECA	United Nations Economic Commission for Africa
USAID	United States Agency for International Development
WISP	World Initiative on Sustainable Pastoralism

CHAPTER ONE

1. INTRODUCTION

1.1. Background

Pastoralism is the traditional way of life that centers on livestock herding for food, clothing, materials and trade (Kline, 2013). It is a complex natural resource management, economic and social system characterized by a set of practices and knowledge that permitted the maintenance of sustainable equilibrium among pastures, livestock and people (Nori & Davies, 2007; Rota & Sperandini, 2009).

Indeed, there are always debates regarding the viability of pastoralism as a livelihood system. While pro-Pastoralists argue that, it is an ecologically efficient, sustainable system, its opponents say the opposite. Pro-pastoralists say that pastoralism creates substantial economic value, is cost-effective, climate-resilient livelihood system (iied, n.d) and people living in such climatically harsh areas are better-off as pastoralists than as farmers (Davies & Bennett, 2007). The ardent supporters further claim that pastoralism is beyond the simple form of traditional herding and serves social, safety and ecological purposes (Nnamani, 2017). Further, this block claims, Pastoralism is, efficient, stimulates national, regional and international trade and provide raw materials for local industries like dairy (ibid). Pastoralism, according to this block, also claimed to provide various services to other sectors of country's economy such as investment opportunities in livestock for rural populations that do not have access to a reliable banking and savings system and insurance strategies. Finally, the sector creates jobs for pastoral communities and a wide diversity of actors involved in livestock marketing circuits and value chains for other products (Grandval, 2012; Nnamani, 2017).

The other block, on the other hand, believe pastoralism is ecologically fragile, resources are scarce and the dry environment along with variable condition constrains its productivity (iied, n.d) and hence pastoralism often is denigrated as being archaic (Grandval, 2012). Moreover, this block go farther and say that pastoralism can't be a sustainable source of livelihood because it is bound to a continued armed conflicts due to share of resources among different communities (Grandval,

2012). This block also view traditional pastoral livelihoods and land use systems as economically inefficient and environmentally destructive (iied, n.d). Besides Pastoralist lifestyle is criticized that it doesn't offer the guaranteed stability a regular lifestyle does, exposes to frequent loss of assets again and again and encourages short termism (Klien, 2013).

In spite of these debates, extensive pastoral production uses 25% of the world's land, fulfills 10% of global meat demand and supports 200 million households worldwide (Dong et al., 2016). In Africa, pastoralism, is found in all regions, occupy about 40 percent of the land mass and approximately 268 million pastoralists live all over the African continent, making the lifestyle a central part of Africa's culture, history and heritage (AU, 2010). According to the 2007 national census, pastoralism in Ethiopia comprises two thirds of the national land mass and support 15% of the population (CSA, 2007), provides up to 90% of the live animal exports, 80% of the annual national milk product and 33% of the agricultural and 16% of the national GDPs respectively (IGAD, 2017). Ethiopian pastoralists belong to different ethnic groups. 53% of them are Somalis, followed by the 29% Afars and 10% of Boranas (IGAD, 2017).

Afar is one of the nine administrative regions of Ethiopia and is located in the north-eastern lowlands. The region is characterized by the harsh climate with temperatures of up to 40°C (Rettberg, 2010). Annual precipitation ranges from 180 mm to 750 mm (USAID, 2017). Pastoralism is the dominant form of life style and majority of the 1,812,002 Afars who are the main inhabitants of the region depend on mixed stocks of livestock for their livelihood (CSA, 2013; Rettberg, 2010). However, since the middle of the 20th century, the study has been experiencing rapid socio-economic and environmental changes that are affecting, pastoralism, the dominant form of livelihood (Inkermann, 2015). Pastoralists are contested by Political marginalization, inappropriate policy approaches and deprivation of access to social services and infrastructures (Firehiwot & Yonas, 2015). Lack of access rural to finance, violent conflicts, development of irrigation and sedentarization projects (ibid) compounded by recurrent drought, flooding and other natural disasters critically challenged the livelihood condition of the Afar pastoralists.

Following the 1991 regime change, series of policies aimed at poverty reduction, were formulated and reforms were introduced. The federal system was celebrated to resolve the longstanding

pastoralists' problems including in Afar. The FDRE constitution (1995) made articles in the interest of pastoralists (Mohammed, 2004). The government pledged to address needs of pastoralists and improve their welfare. Pastoralist affairs standing committee and ministry of pastoral affairs were established in the legislative and executive body to voice the interest of pastoralists. The government implemented several pastoral community development projects (eds. Getachew et al., 2003) and its looked policies and programs are sentimental to pastoralists (Mohammed, 2004). Yet, the later measures taken were full of paradox against the constitutional declarations and promises. Sedentarization and changing pastoralist livelihood strategy into farming by establishing village centers (Firehiwot & Yonas, 2015; Lemessa, 2015) were advocated as a pastoral area development ways.

This study was carried out in Ewa Woreda, Afar Regional State. Pastoralism and agro-pastoralism is the predominant form of livelihood in the area. Commonly, the livelihood of pastoralists and agro-pastoralists, who are highly dependent on natural resources such as livestock and crops, are highly subject to manmade and natural catastrophes. In the area, both the federal and regional governments have been undertaking extensive interventions. In the study, effort is made to assess the livelihood condition of the study area, state efforts on developing the area and its impact on the local livelihood condition.

1.2. Statement of the problem

Regardless pastoralism is an important source of the national economy, complex, deep-rooted and multi-dimensional poverty that descends from the cumulative effects of human induced and natural calamities typifies livelihood of Ethiopian pastoralists (Dereje & Okoyo, 2015; Firehiwot & Yonas, 2015; Rettberg, 2010). Civil war, geographical isolation, vulnerability to shocks, health hazards, rapid population growth, and extreme environmental degradation (Assefa & Firehiwot, 2003; WB, 2006), state development endeavors of commercial farming and sedentarization are gruesomely disrupting pastoral livelihood systems in Ethiopia (Ayalew, 2001; Inkermann, 2015; Rettberg, 2010; eds. Yohannes & Mahmmud, 2015). Human development indicators and poverty rates among pastoralists are uniformly worse than non-pastoralists in Ethiopia due to these manmade and natural pressures (WFP, 2011; Beruk, 2004).

The Afar people are one of the biggest pastoral groups faced with natural and manmade challenges to ensure their livelihood (Rettberg, 2010). The overall poverty situation of Afar region stood higher than the national average (Dereje & Okoyo, 2015). Particularly in Ewa, where out of the 53,985 (CSA, 2013) population, 96% live in rural areas and engaged in pastoral and agro pastoral mode of life, lack of competitive and accessible livestock market, drought and degradation of range land combined with poor infrastructure and communication facilities are affecting local livelihood (IRE, 2017). This resulted in lack of access to productive assets, food crises and dependence on aid (Behnke, 2008; Firehiwot & Yonas, 2015; eds. Getachew et al., 2003; Lemessa, 2015).

This dire condition of Ethiopian pastoralists in general and those in Ewa in particular, is mainly associated to the adopted flawed policies. Because, policy promotes or hinders economic and social development by determining access to resources and therefore has a significant impact on equity, productivity and livelihoods (AU, 2010). The introduction of the federal system was much anticipated to address the enduring problems of the Afar and other pastoralist groups. Yet, the general tendency to view the pastoralist mode of life as a ‘backward’ and ‘wild’ that needs to be changed, led to the failure of policy makers to understand the complexity of their vulnerability and find appropriate solutions (Dereje et al., 2011; WFP, 2011; Beruk, 2004). Both the national and regional policy narratives portray the dry land of Afar as ecologically fragile, unproductive and environmentally destructive (iied, n.d). Rather, establishing village centers and sedentarization of pastoralists to start farming activities and change their livelihood were counted as chief national policy directions (Bido, 2014; Firehiwot & Yonas, 2015; Lemessa, 2015).

Despite both the regional and federal governments failure to understand pastoralism led to poor policies that undermined pastoral strategies (Kline, 2013), Scholars who support pastoralism as a viable dry land livelihood strategy debate that people living in such areas are better-off as pastoralists than as farmers (Davies & Bennett, 2007). studies also proved that that in Afar, revenues are higher in areas devoted to pastoral livestock than Sugar and cotton production, and pastoralism avoided environmental costs of damaging soils and creating weed infestations (expensive to rehabilitate) associated to large-scale irrigation and agricultural schemes (Dereje & Okoyo, 2015). Contrary to this, however, in Ethiopia, misperception and political marginalization ensued to the absence of pastoralists from policy making and failure to utilize their potential for development (Firehiwot & Yonas, 2015).

Alike others, Ewa is one of the resourceful areas in Afar region. It constituted 10% of the total cattle and more than 6% of the camel population of the region (IRE, 2017). However, against this potential for development, it is one of the poorest woredas in the region. Access to rangelands and water points is increasingly hampered by expansion of *Prosopis juliflora* and sedentary agricultural settlements (Inkermann, 2015; Sonneveld et al., 2017). Basic services of health, education, and animals' health care are seldom available (MoFA, 2010). Only one veterinary clinic, 11 veterinary posts and 12 personnel are available for 614,567 livestock population (IRE, 2017). However, Livestock diseases such as trypanosomiasis, pasteurellosis, blackleg and anthrax and human diseases such as malaria, respiratory infections and water-borne diseases are common (Ibid). Lack of good governance, access to financial institutions, violent conflicts and development initiatives irrigation are further jeopardizing the current and future livelihood of pastoral communities in Ewa woreda.

In spite of these facts, the government is determined to resettle and transform pastoral way of life into a sedentary form although there is no evidence it improves livelihoods or reduce vulnerability (Lemessa, 2015). It is undermining the benefits of pastoralist areas and squandered by policies and investments that seek to replace pastoralism with more capital-intensive modes of production (Lemessa, 2015; McGahey et al, 2014). As a result, Pastoralists in Afar, including in Ewa, are currently losing additional land to expanding state-owned and private commercial plantations in a manner that threatened their form of livelihood, pastoralism (Little et al., 2010).

This research, therefore, had attempted to assess the general livelihood condition of pastoral communities in Ewa; their possession of important livelihood assets were assessed, attempts made to identify sources of vulnerabilities. Besides state policies were observed how their implementation resulted in livelihood outcomes and either supported or challenged the pastoralist livelihood of the study area. The outcome of this study is expected to provide valuable information for designing development intervention by policy makers and development institutions working in the area of improving pastoralist livelihood. The study could also help as an input for further study in the area with related subject. In addition, the findings of this research will have valuable practical relevance in designing poverty reduction policy at local, regional and national level.

1.3. Objectives of the study

1.3.1. General Objective

The general objective of this study was to assess the Ethiopian pastoral development approach and its impact on the possession of important livelihood assets among the pastoral communities of Ewa woreda of Afar regional state.

1.3.2. Specific Objectives

Along with the above general objective the research is designed to address the following specific objectives:

- Assess the trend of possession of important assets that helps to diversify income and improve livelihoods in Ewa.
- Assess the availability of basic social services directly related to and fundamental for better living condition of pastoral communities in Ewa.
- Assess the main vulnerability factors, coping strategies and institutions that impact local livelihood in Ewa.
- Assess the implementation of key national and regional policies and their impact on the livelihood of pastoralist communities in Ewa.

1.4. Research Questions

1. What are the major livelihood assets of pastoralists in Ewa that are important to improve their livelihood condition now and in the future?
2. Is there any increase or decrease in the possession of these assets as a result of state intervention?
3. What are the major vulnerability factors affecting pastoralists' livelihood and what policies, strategies and institutions put in place to halt the impact of these factors?

1.5. Significance of the Study

Prominent arguments claim that mobile pastoralism is the essential adaptation strategy that enables people to establish livelihoods in many climatically challenging environments (Lemessa, 2015;

WISP, 2008). However, over the years, because of the depletion of natural resources precipitated by drought, conflict and other vulnerability factors, pastoral livelihood is incalculably affected. Pastoral communities have been neglected by policy makers and development agents for decades as marginalized community.

In spite of this, the Afar pastoralists were able to manage their natural resources and livelihoods through traditional institutions and knowledge by using different indigenous mechanisms to mitigate the impacts of vulnerability produced by those factors. Yet, much more work is needed to be done to influence the policy making process and create awareness that pastoralism contributes significant share of the national economy. Exploitation of indigenous knowledge, community consultation on development intervention and building of local capacity need to be given due attention to eradicate extreme poverty and institute better quality of life among the pastoralist groups including those in Ewa.

The study largely attempted to illustrate the significance of pastoralism to dry land environments and also assessed the livelihood condition of local communities against to the national and regional policy objectives. The information generated by this research will significantly contribute to the existing body of knowledge and serves as a basis for designing development intervention by policy makers and development institutions working in the area of improving pastoralist livelihood. The study could also help as an input for further study in the area with related subject. In addition, the findings of this research will have valuable practical relevance in designing poverty reduction policy at local, regional and national level.

1.6. Scope of the Study

A single research alone is unable to find out all rounded problems of a particular segment in a society. As a result, this study was limited to assessing the trend of important livelihood assets possession, vulnerability factors that are affecting pastoralist livelihood and the implementation of national policies and strategies and changes on the livelihoods of Afar pastoralists, particularly in Ewa woreda. In the study the attempt was to examine the local livelihood condition based on the concepts derived from the SLF of DFID and analyze the situation against the specific sector objectives. In doing so, the study attempted to correlate what is done on the ground with the overall national and regional sector wise policy objectives. The objectives were used as a parameter to

measure the accessibility of services on the ground. Hence, the scope of this study is limited to assessing the Ethiopian pastoral development approach and its impact on the possession of important livelihood assets among the pastoral communities in Ewa woreda, Afar region.

1.7. Limitations of the Study

Shortage of time and financial resources coupled with transportation and communication problems, it was not possible to carry out an extended and more detailed study. Hence, the result of the study is limited to the study area and making inferences to other areas will be difficult. Besides, getting kebeles and woreda specific data published by local authority was difficult and thus limited the study to depend on secondary sources such as articles and publications by other authors. Nevertheless, with all its limitations the finding of the study will serve as a good data source and motivates for further study on the subject.

1.8. Organization of the Thesis

The study is divided by five chapters. The first chapter is the introduction part. In this chapter, the justification to conduct the research, the objective and questions, significance, scope and limitations of the study are briefly discussed. In the second chapter, definitions, concepts and theories of pastoralism gained from various sources are reviewed and presented. Chapter three provided background information about the study area and discussed all the relevant methodological approaches and techniques that were employed in the study. The research design, sampling frame, sampling design and technique, source and instruments of data collection, and data analysis and interpretation techniques are outlined. Chapter four meanwhile is dedicated to present the results and discussions of the study using appropriate tools. The results of the study are discussed under most important subsections. The last, chapter five, presented conclusions and recommendations of the study.

CHAPTER TWO

2. REVIEW OF LITERATURES

2.1. Definition, History and Forms of Pastoralism

2.1.1. Definition of Pastoralism

Pastoralism is a form of natural resource management, adapted to ecosystems defined as marginal, characterized by inadequate, capricious and unpredictable agro-ecological resource endowment. It is also an economic, social and natural resource management system that keeps ecological balance between pastures, livestock and people. Mobility, flexibility, diversification, conservation, and mutual support are the key features that made pastoralism an adaptive strategy to the stressful dry land environment (De Haan et al., 2016; Nori & Davies, 2007; Rota & Sperandini, 2009). Some others defined pastoralism as animal husbandry, the branch of agriculture and in the dimension of livelihood, as a subsistence living pattern of tending herds of large animals and source of income (Abdi, 2003; Blench, 2001). ‘Pastoral system’ alternatively applies to refer the livestock grazing system occurring in rangeland areas (Otte and Chilonda, 2002).

In general, pastoralism is a system that involves a direct interaction between three systems in which pastoral people operate, i.e. the natural resource system, the resource users system and the larger geo-political system (Pratt et al., 1997 cited by Dong et al., 2016). The specific and different interactions among these three aspects of pastoral life define for these communities their livelihood strategies, vulnerability levels and capacities to adapt to changes and respond to shocks.

2.1.2. Forms of Pastoralism

Pastoralist take many forms to adapt a particular natural, political and economic environment. The types of livestock they keep also differs according to the climate, environment, water and other natural resources they have access to. However, the degree of movement is the most important parameter to identify different forms of pastoralism (Blench, 2001; Dong et al., 2016). Because, mobility is the key feature of pastoralism.

I. Nomadic Pastoralism

Nomads are exclusively livestock producers, grow no crops and simply depend on the sale of animals and their products for livelihoods (Blench, 2001). Nomadism involves high mobility and living in a succession of campsites along vertical or horizontal routes (Abdi, 2003). It is the common practice in regions with little arable land, typically in the dry lands and highlands of the world such as the Arabian Peninsula and Northeast Africa. In this pastoral system, the pastoralists follow a seasonal migratory pattern of a nomadic cycle varying from year to year (Blench, 2001; Dong et. al, 2016).

II. Transhumance

Transhumance is a regular movement of herds among fixed points and explores the seasonal availability of pastures (Blench, 2001). There is strong association with higher-rainfall zones; if the precipitation is such that the presence of forage is not a problem, herders can afford to develop permanent relations with particular sites, for example by building houses (FAO, 2001).

Transhumance is often associated with the producing crops for herders' own consumption. In many temperate regions, where snow is likely to block animals' access to pasture, haymaking is an important component of the system (FAO, 2001). 'Make hay while the sun shines' is very significant advice in such systems; if the grass is not cut, dried and bundled during the summer, it may rot while being stored (Blench, 2001).

III. Agro pastoralism

Agro pastoralists are settled pastoralists who cultivate sufficient areas to feed their families from their own crop production. They hold land rights, use their own or hired labor to cultivate land and grow staples (FAO, 2001). While livestock are still valued property of agro pastoralists, their herds are smaller than other pastoral systems. Agro pastoralists make greater investment in housing and other local infrastructure and if their herds become large, they often send them away with more nomadic pastoralists (Blench, 2001).

2.1.3. Identity and Structure of Pastoralism

I. Features of Pastoralism

Mobility is a key feature qualifying pastoralism, with herds being moved in search of fresh pasture and water (Blench, 2001; Dong et al., 2016; Rota & Sperandini, 2009). Pastoralism is often the optimal subsistence livelihood, which is generally independent of any particular local environment (O'Neil, 2011). Adaptability and versatility are also the character of pastoral migration (Khazanov, 1994). By nature, pastoralists are flexible and adaptable and can swiftly switch management systems as well as operating multiple systems in one overall productive enterprise (FAO, 2001). For example, pastoralists sell their herds or move them to new pastures, diversify species and breeds and maximize stock numbers to reduce the effect of external factors such as drought and disease (Blench, 2001; Rota & Sperandini, 2009). A pastoral subsistence pattern (especially nomadic pastoralism) is very often an adaptation to an irregular climate to reduce the risk in semiarid open country (O'Neil 2011).

II. Social Structure of Pastoralism

The requirements of mobile grazing under extensive conditions have shaped the nature and structure of pastoral societies (Dog et al, 2016). The sociopolitical organization of nomadic society as a whole and many of its specific forms can and should be looked at from two angles: from within, as having risen directly out of the needs and particularities of the functioning of the society itself; and from outside, as having been stimulated, completely or partially, by the particularities and needs of its relations with the outside world (Khazanov, 1994).

According to Blench (2001) the basis of pastoral organization almost everywhere in the world is the clan, a set of patrilineal-related households traced in theory to an apical ancestor. The preservation of these genealogies is very important, especially to the aristocratic strata of nomad society. Because, as Khazanov (1994) points out, it legitimatizes their position. FAO (2001) stated that there are exceptions to this rule. The Tuareg, who had matrilineal descent groups in some areas and the subarctic peoples such as the Saami, Chukchi and Koryak who had neither unilineal descent groups nor elaborate genealogies. One of the most distinctive features of pastoralism in east and the horn of Africa is the system of age-sets. Among the Boran of Ethiopia, for example, men born within a seven-year cohort fall into a named age-set, which has rights and privileges

within society as well as acting as a powerful force for cohesion and a calendric system (Legesse, 1982 cited by FAO, 2001).

Conflicts arise from pasture and other factors can be mitigated by a variety of institutions and beliefs. For example, the needs of the community are reinforced by a system of ideology, “livestock fetishism” (Bonte 1981 cited by Blench, 2001), which reduces the inequity and promotes group unity. Moreover, these institutions and beliefs can sanctify the traditions of sacrifices, bride wealth giving, hospitality rules and animal lending, which not only reduce inequality of pastoral groups, but can also lessen the risk by permitting a wider dispersal of animals and by resolving labor bottlenecks (Salzman, 1978 cited by Blench, 2001).

Segmentary lineages and similar forms of sociable organization are also well adapted to the needs of pastoral societies (ibid). Self-reorganized organizations (such as livestock associations), elected bodies (such as community committees), and norms, rules, and regulations derived from the traditions and practices have run the pastoral production systems in the pastoral realm worldwide for a long time (Blench, 2001).

2.1.4. Pastoralism in the Contemporary world

Currently, pastoralism predominates in sub-Saharan and southern Africa, Central Asia, northern Europe, central South America, western North America, and Australia. In most of Europe, pastoralism exists in high mountains, in arid zones, or on poor soil lands, where intensive cultivation is physically not possible (WSIP, 2008) particularly in areas of European Alps and highlands, pastoralism is one of the major components of the agricultural sector (Biber, 2006 cited by Dong et al., 2016).

In Asia, grasslands comprise the largest contiguous landmass, stretching from the borders of Eastern Europe to the Pacific Ocean. It accounts for 25 % of the global rangelands. In this region, pastoralism is practiced to raise common livestock such as sheep, goats, horses, and cattle, and some specific livestock, including yaks, Bactrian camels and reindeer (Kerven, 2006). The economic, social, and political position of pastoralism in this region varies considerably between the countries across the region. In China, about 15 % of the total national population is engaged in pastoral production. In Mongolia, most of the population is pastoralist. In Kazakhstan and

Turkmenistan, a high proportion of the rural population (68 % and 43 % respectively) is engaged in raising livestock (Dong et al., 2016).

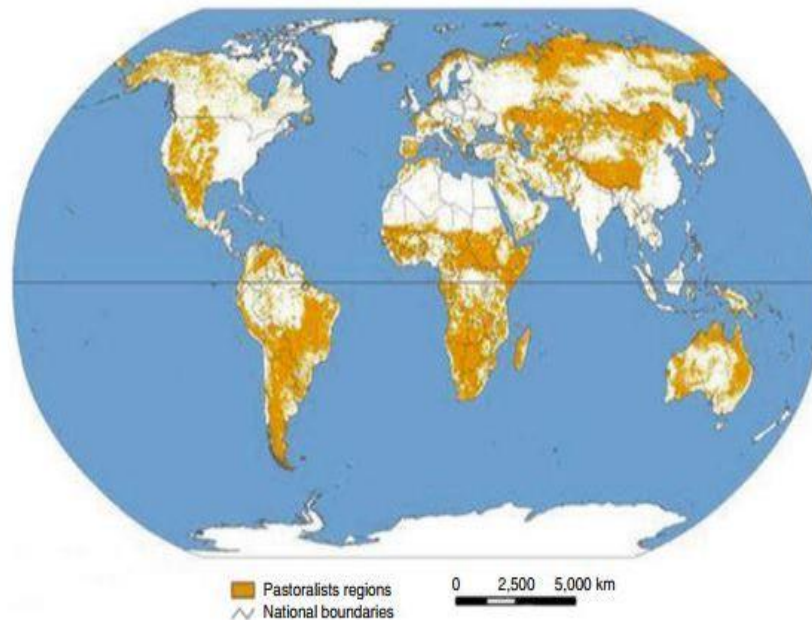


Figure 1: Pastoral areas in the contemporary world. Adopted from WSIP, 2007

Pastoralism is the major production systems in arid and semiarid areas of Asia (Gura, 2006). The ratio of dry lands to total land area is 45% in Afghanistan, 60% in Pakistan, 63% in Iraq and 55% in Syria. In the Himalaya of South Asian countries such as Bhutan, Nepal, India and Pakistan, pastoralism still provides the mainstay for the regional near-subsistence economy, as agricultural production is impossible because of low temperatures at high elevation and steep terrains in the mountainous areas (Dong et al. 2016).

In Africa, pastoralism is found across the continent. North Africa has vast areas of rangelands, mainly steppe and arid Saharan land (Dutilly-Diane, 2006 cited by Dong et al, 2016). In terms of rangeland size, Morocco and Algeria are the top countries. They have about 20 million hectares of steppe, accounting for more than 40% of the nation's territory. Tunisia ranks third in the size of rangelands, which cover 25% of the total territory (Ibid). In Eastern Africa, tens of millions of families are pastoralists or live in pastoral areas. The land mass of the pastoral areas cover as large as 80% in Kenya, 60% in Ethiopia, and 44% in Uganda and support a livestock population of 60%, 40% and 80% respectively (IGAD, 2017).

2.1.5. The Value of Pastoralism

Pastoralism has socioeconomic, ecological and cultural values; supports huge populations, provides tremendous food and ecological services and contributes to the subsistence economy of poorest areas (Dong et al, 2016). Despite the widespread opinion that pastoralism is not an economically viable or rational livelihood activity, it contributes significantly to the GDP of many developing country economies (Flintan, 2008).

In Kenya, the pastoralist sector has an estimated value of €750 million and an annual marketed value of €50–80 million. In Uganda, Pastoralists own up to 90% of the national herd, providing meat, hides, skin and milk for domestic and international markets (CELEP, 2017; IGAD, 2017). Pastoralism in Ethiopia comprises two thirds of the land mass of the country and support 12-15% of the population. The sector is estimated to contribute 40% of the cattle, 75% of the goats, 25% of the sheep, 20% of the equines and 100% of the camels' population of the country. It also provides 90% of the live animal exports and 80% of the annual national milk supply. Pastoralism contribute 33% of the agricultural and 16% of the national GDPs respectively (CSA, 2007; IGAD, 2010; PFE, 2008 Coppock 1994 cited by Solomon, n.d).

Pastoralism also supplies goods and raw materials to others working in both formal and informal supply chains, such as butchers, restaurant operators, traders and transporters. It is Subsistence and livelihood values for up to 20 million people in Eastern Africa (CELEP, 2017). According to (Wane, 2006 cited by Dong et al, 2016), the shares of agriculture in national GDP of Sahelian countries in 2003 were 31% in Burkina Faso, 38% in Mali, 20% in Mauritania, 39.9% in Niger, 17.6% in Senegal, and 45.6% in Chad, and the shares of livestock production in the national agricultural GDP were 24.7% in Burkina Faso, 41.6% in Mali, 70% in Mauritania, 29.8% in Niger, 37.3% in Senegal, and 11% in Chad (ibid).

2.2. Debates on pastoralism

Scholars like Hatfield and Davies (2006) argue that pastoralists are the best custodians of dry lands environments. Pastoralism has considerable economic value and latent potential in the dry lands, and is central to the livelihoods and wellbeing of millions of the world's poor. Pastoralism also sometimes has been described as a risk-averse system, with pastoralists running from one climatic event after another. However, this description is inadequate, and in contrast pastoralism can further

be seen as a system that pro-actively manages risk. Many pastoralists seek reliability in highly risky environments: they accept the variability of productive inputs and modify their herding and social systems appropriately (supporting... 2012).

Supporters of pastoralism as a viable dry land strategy further assert that as competition for land and water resources intensifies, there is a growing need to reevaluate the comparative social and environmental and economic advantages of extensive pastoral production systems. Economists operating in Sub-Saharan Africa have found that livestock is an engine for trade, farming, tourism and urban activities and experience in West Africa has also shown how pastoral societies can integrate with the state and regional institutions to create an effective system of governance (UN OCHA, 2007).

Scholars in the other block meanwhile contend that pastoralism cannot be a trustworthy means of livelihood amid the increasing pressure on the ecological environment upon which pastoralism is relied on. Authors like Sandford (2006) as cited in ODI (2010) argue that pastoralism as a livelihood is in a crisis as the people-livestock ratio is declining from time to time resulting from continuing increase in population and decreasing rainfall rates.

Accordingly, Sandford suggests that the livelihood strategy of pastoralists should be more diversified including the option of more sustained livelihood of rain fed or irrigated crop agriculture. Firehiwot and Yonas (2015) also discusses the sustainability of pastoralism in the context of Ethiopia and argues that the livelihood of pastoralism ought to change into a more sedentarized one since there is high level of poverty in the pastoral areas which can be explained in terms of high level of child malnutrition.

Generally, the debate in support of and against pastoralism as a viable livelihood strategy in the future of pastoralist communities is still on going and is unlikely consensus to be reached in near future. In the contemporary world, pastoralism topped the local, national and global agendas. The global issues of food insecurity, climate change, desertification, refugees, 'terrorism' and governance are more predominant in the pastoral areas than in any other places. Similarly, the exploration of oil and other minerals in such areas is also becoming both an opportunity and a threat (Firehiwot & Yonas, 2015).

2.3. The Concept of Livelihood, Climate Change and Vulnerability

2.3.1. Defining Livelihood

A livelihood is a means of making a living. It encompasses people's capabilities, assets, income and activities required to secure the necessities of life (IFRC, n.d). Chambers and Conway defined livelihood as the capabilities, assets of material and social resources and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Chambers & Conway, 1991).

2.3.2. Sustainable Livelihood

Sustainable livelihood refer to a livelihood that can cope with and recover from stresses and shocks of natural disasters and economic or social upheavals, maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Hussien & Nelson n.d; IFRC, n.d). The Sustainable Livelihood Approach (SLA) to development intervention has been a point of discussion since the late 1990s and formed a central concept of the UK's Department for International Development's (DFID) strategy during the 1990s.

Sustainable livelihood is an example of the "multiple capital" approach where sustainability is considered in terms of available capital (natural, human, social, physical and financial) and an examination of the vulnerability context (trends, shocks and stresses) in which these assets exist (Morse et al., 2009). Some of the capitals are straightforward i.e. buildings, machinery, land, cash etc. while some are social networks, knowledge and good health and so on. All are important although clearly the balance will change from household to household and over time (Krantz, 2001; Morse et al., 2009).

2.3.3. Conceptual framework of Sustainable livelihoods

The concept of Sustainable Livelihoods constitute the basis of different SLAs and has been adapted by different development agencies. The DFID Sustainable Livelihood Framework is the most widely used livelihoods framework in development practice (GLOPP, 2008). The DFID sustainable livelihoods framework is widely applied because it presents the main factors that affect people's livelihoods, and typical relationships between these. It provides a checklist of important

issues and sketches out the way these links to each other draws attention to core influences and processes; and emphasizes the multiple interactions between the various factors which affect livelihoods. It can be used in both planning new development activities and assessing the contribution to livelihood sustainability made by existing activities (DFID, 2000).

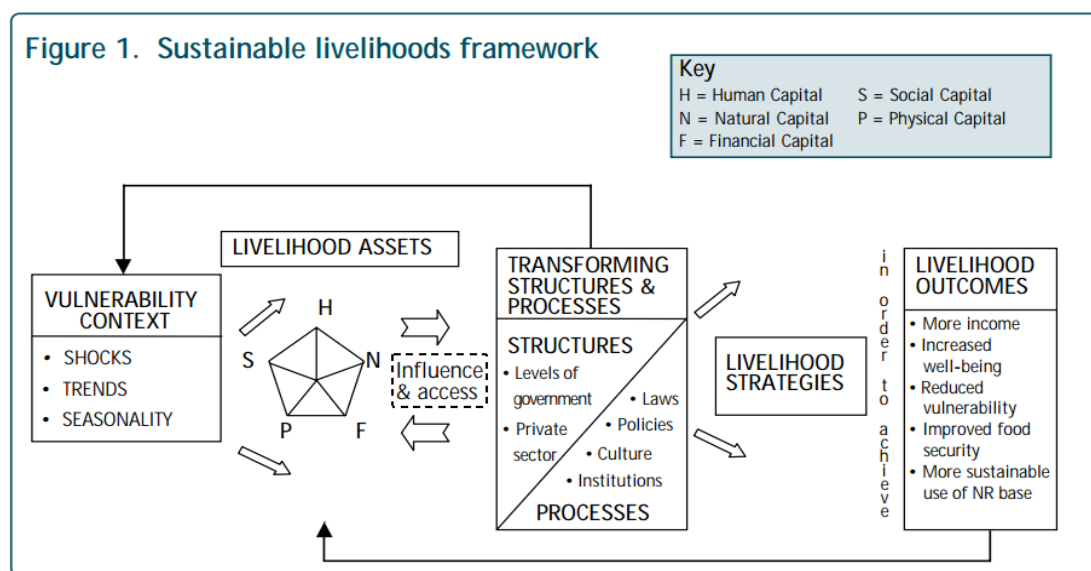


Figure 2: Sustainable Livelihood framework adapted from DFID, 2000

The DFID framework conceptualizes how people operate within a vulnerability context shaped by different constraints and opportunities, economic shocks and trends, how they draw on different types of livelihood assets in different combinations which are influenced by the vulnerability context, institutions and processes and how they use their asset base to develop a range of livelihood strategies to achieve desired livelihood outcomes.

2.3.4. Elements of the Framework

I. Vulnerability context

The vulnerability context frames the external environment in which people exist. Critical trends as well as shocks and seasonality, over which people have limited or no control, have a great influence on people's livelihoods and on the wider availability of assets. Yet, not all of the trends and seasonality are considered as negative (DFID, 2000). Vulnerability emerges when human beings have to face harmful threat or shock with inadequate capacity to respond effectively. It is the

degree of exposure to risk (hazard, shock) and uncertainty, and the capacity of households or individuals to prevent, mitigate or cope with risk (GLOPP, 2008).

II. Livelihood assets

As the livelihoods approach is concerned first and foremost with people, it seeks to gain an accurate and realistic understanding of people's strengths (here called "assets" or "capitals"). It is crucial to analyze how people endeavor to convert these strengths into positive livelihood outcomes. The approach is founded on a belief that people require a range of assets to achieve positive livelihood outcomes. Therefore, the SLF identifies five types of assets or capitals upon which livelihoods are built, namely human capital, social capital, natural capital, physical capital and financial capital (DFID, 2000).

III. Policies, Institutions and Processes

The importance of policies, institutions and processes cannot be overemphasized, because they operate at all levels, from the household to the international arena, and in all spheres, from the most private to the most public. They effectively determine access (to various types of capital, to livelihood strategies and to decision-making bodies and source of influence), terms of exchange between different types of capitals, and returns to any given livelihood strategy (DFID, 2000). Policies, institutions and processes have a direct impact upon whether people are able to achieve a feeling of inclusion and well-being.

IV. Livelihood Strategies

Livelihood strategies comprise the range and combination of activities and choices that people make/undertake in order to achieve their livelihood goals. It should be understood as a dynamic process in which people combine activities to meet their various needs at different times. Different members of a household might live and work at different places, temporarily or permanent (DFID, 2000). Livelihood strategies are directly dependent on asset status and policies, institutions and processes. Hence that poor people compete and that the livelihood strategy of one household might have an impact (positive or negative) on the livelihood strategy of another household.

V. Livelihood Outcomes

Livelihood outcomes are the achievements or outputs of livelihood strategies, such as more income, increased well-being, reduce vulnerability, improved food security and a more sustainable use of natural resources. When thinking about livelihood outcomes, the aims of a particular group as well as the extent to which these are already being achieved has to be understood (GLOPP, 2008).

2.3.5. Pastoral Livelihoods contexts

Livestock ownership is the mainstay of the pastoral economy. However, livestock are more than just a unit of production and determine social status and provide access to insurance in times of stress. In addition to livestock keeping, livelihood diversification has been essential to spread the risk of food insecurity and cope with the changing nature of hazards in pastoral areas (HPG, 2009).

Understanding the diversity of pastoral livelihoods is central to designing responses that are proportionate, well-targeted and obviate the use of negative coping strategies that undermine the long-term sustainability of livelihoods (ibid). Pastoral livelihoods are based on seasonal mobility and common property of natural resources -particularly rangelands, regulated by customary law and practices, customary institutions and leadership, all making use of local and indigenous knowledge (Segovia Declaration, 2007). Besides, pastoral livestock serves as transport, storage of wealth, means of social security and obligations, security against disasters, obtaining goods and services through barter and generation of cash through local trade or export markets (IGAD, 2017).

Besides to livestock rearing, pastoral livelihood is undergoing an economic transition through making money out of mixed sources. According to Yohannes (2015), the Somali pastoralists in Shinile, for example, are making a significant amount of money out of trade of other commodities besides to livestock sales. Particularly in the agro-pastoral areas, livestock, crop and trade are complementary activities across the wealth rank groups of pastoralists. Yohannes also stressed that Income from charcoal making is also the main means of subsistence for the medium and poor families in the area.

Pastoral livelihoods in the Sahel historically were underpinned by systems of negotiated access to water and pasture that did not assign exclusive rights, and by reciprocal arrangements between

pastoralists and agriculturalists (Brooks, 2006 cited by Abarufa, 2011). Many of the inhabitants of the arid and semi-arid rangelands of sub-Saharan Africa gain their livelihoods from pastoral activities, using common property rangeland and water resources which are highly sensitive to climate variability to raise their livestock. They live under highly variable climatic conditions, with their herds subject to large variations in feed and water availability. Managing these strong fluctuations in pastoral livelihoods is the main development challenge facing agencies seeking to support pastoral development initiatives and pastoralist themselves (Barton et al., 2001 cited by Abarufa, 2011).

2.3.6. Livelihood condition of the Afar pastoralists

Pastoralism has been a significant economic sector in the Horn of Africa including Ethiopia (Getachew, 2001). Diversification of income making sources is an essential livelihood strategy of rural livelihoods systems in emerging countries (Barrett et al., 2001; Ellis, 2000; McPeak and Barrett, 2001). Many pastoralists try to retain flexibility in spite of intensified constraints and risks (Galvin, 2009). Davies (2006) and Davies and Bennett (2007) described Afar pastoralists as living in a “highly traditional society with strong institutions” that has received less development attention than many other pastoral societies in Africa. Since the 1990s, there have been increased attempts at understanding the livelihood diversification strategies of pastoralists practicing a combination of on-farm (i.e., crop and livestock), non-farm, and off-farm activities in response to increased uncertainty in the arid and semi-arid environments (Berhanu et al., 2007; Ellis, 2000; Tache, 2008). Berhanu et al. (2007), also explains how the Borana pastoralists in southern Ethiopia adapt a strategy of increased involvement in natural resource-based, non-pastoral income activities such as dry land farming. This is a response to both opportunities and constraints including the effects of shocks such as drought.

The Afar further survive through livelihood diversification strategies such as labour migration, opportunistic cultivation, by keeping multispecies of livestock, and also by keeping a number of goats and sheep for cash income (Helland, 1980; Hogg, 1997). However, it is not clear to what degree these livelihood diversification strategies will sustain the pastoral production system as climatic and socio-economic and institutional changes are rapid and substantial, difficult to anticipate and varying in complexity. It is also claimed by some, that policy makers’ lack of

accommodation of necessary preconditions for pastoral adaptation strategies has undermined the existing survival mechanisms of Afar pastoralists (Davies and Bennett, 2007). Sedentarization policy of governments, where seasonal livestock mobility and strategic use of key natural resources are crucial elements in sustaining pastoralism in dry environments where crop production is unsustainable. The concern here is (1) to what extent such crop-based livelihoods are sustainable in uncertain and dry environments, and (2) to what extent do people depend on such incomes.

2.3.7. Climate Change and Vulnerability of Afar Pastoralists

Climate change is only one of many challenges facing poor people. In order to effectively reduce vulnerability, climate change adaptation must form part of a holistic response which aims to build resilience of communities to withstand the range of shocks and stresses that they are exposed to (CARE, 2009).

For the past several years pastoral societies have experienced severe vulnerability to recurrent risks, shocks and trends that caused extreme livelihood deterioration and poverty. In order to sustain their survival pastoralists across the Horn of Africa have developed different adaptation and coping mechanisms. The way livelihoods changed, adapted or failed to adapt the challenges posed by the economic and ecological environment determines the food security status of the household (Sileshi, 2017).

Afar pastoralism has undergone profound transformations recently due to external appropriation of their prime grazing lands, particularly in the Awash Valley (Getachew, 2001). About 75,000 ha of their original land has been taken for commercial irrigated farms, a game park, and for urban settlements (Getachew, 2001; Rettberg, 2010). Events such as drought have further contributed considerably to the vulnerability (human and livestock losses) of the Afar, contributing to socio economic changes and weakening the role of traditional land management institutions. In the great famine of 1973/74 alone, the Afar lost 25% of their livestock and a third of their human population is believed to have perished (Gebre Mariam, 1991; Helland, 1980; ILCA, 1981). The major elements and events identified related to such processes include the land tenure changes in 1975 and 1991, and the settlement policy of the government. Continuous state intervention, on the one

hand, and lack of access to central government political and economic power on the other hand were mainly responsible for the change in the resource regime during the imperial and socialist regimes (Hundie & Padmanabhan, 2008; Omiti et al., 1999). Since 1991, the government embarked on a Program of decentralization of power that provides considerable opportunities and that has had profound influence on the direction of development in pastoralist areas. However, the local administrators require more power and resources to operate with their full capacity. At local levels, social institutions related to land and water management and rights, local governance and social cohesion have changed.

2.4. Policies and practices of Pastoralism

Dry lands land area shelters more than 2 billion people and two thirds of the global dry land area used for livestock production (Neely et al., 2009). Mobile pastoralism is an ancient form of land use, well-adapted to the problems of maintaining sustainable and productive livelihoods in dry lands today (HPG, 2009; Pastoralism...2003).

However, the sector had been subjected to maltreatment, misperceived and received least attention from different development agents until recently. It was argued that pastoralism was not regarded as a viable long-term lifestyle given that globalization, increasing competition for land resources due to population growth and climatic factors militate against its survival (IRIN, 2007). During the 1970s governments and development agencies used to view that pastoralism is backward and needed to be modernized using an intensive western livestock development model. Desertification was thought to be in large part the result of anarchic pastoralism and to threaten the future of the dry lands (Pastoralism..., 2003).

Hence, pastoral communities become increasingly vulnerable to food and livelihood calamities. Numerous explanations have been presented for this, including increased climatic shocks such as droughts and floods, man-made factors such as the ban on meat exports, rapid population expansion, overtaxing a finite natural resource base. However, no other reason is more central to the problem than the persistent cycle of inappropriate policy and practice. Policies that are neither consistent with needs nor responsive to the uniqueness of the pastoral systems are primarily to blame for pastoral vulnerability (HPG, 2009).

Discounting the very significant knowledge of pastoralists and the internal logic of their land use system, it was resonated that modern science would provide the solutions. Government suggested to play the main role, deciding investments and acting as overall land manager. It was also recommended to reduce the movement of pastoralists by providing services and resources, ignoring the wider ecological necessity behind mobility. A development model depending on a new and untested scientific approach, sedentarization, and a key role for government, underpinned the governments' policy directions towards pastoralism (Pastoralism...2003).

The inappropriate policy environment is a result of two critical and interrelated factors – a knowledge gap and a power imbalance (HPG, 2009; iied, n.d). Doubts originated on misconceptions about pastoralism also pushed of governments for policies that to do not take into account pastoralism as a reliable means of livelihood. Governments are often concerned pastoralism will collapse, driving millions of people into destitution at huge cost to national economies. Collapse would also make pastoral areas more insecure, with ramifications for political and economic stability. So they argue that policies to settle pastoralists and introduce them to modern cropping and livestock production or to choose different livelihoods are the best way to for pastoralism. (ibid).

Unable to sufficiently articulate the rationale of their livelihood and to organize themselves to influence policy, pastoralists have been absent from national, regional and international policy processes. The result has been inappropriate policies which undermine pastoralism. Driven by their misperceptions of pastoralism and their disapproval of a way of life that is not their own, policy-makers have persisted in inappropriate policies and interventions. Many do not understand and appreciate the rationale of pastoralism – why pastoralists do what they do – or their significant contribution to national economies. As a result, they see critical aspects of pastoralism, such as mobility and reliance on indigenous knowledge, as backward and inconsistent with the imperatives of a modern state and economy (HPG, 2009).

2.4.1. Policy Framework for Pastoralism in Africa

In fact, with appropriate support, pastoralism is the most cost-effective and climate resilient livelihood system for the dry lands. Even with a legacy of antagonistic policies, pastoralists are not just surviving but are creating substantial economic value (iied, n.d). The power imbalance

between pastoralists and other livelihood groups in the countries of the horn and east Africa is widely prevalent. This is demonstrated in the absence of pastoralists in key policy-making frameworks and their limited influence on policy processes and policy institutions. The power imbalance is explained in part by the fact that pastoralists tend to be minorities in most of these countries, often living in geographically remote areas away from the capital cities and the centers of political and economic activity, with few representatives in national politics or the civil service. The knowledge gap and power imbalance combined contribute to inappropriate policies (HPG, 2009). Inappropriate development policies, ineffective institutional settings, unfair market relationships and increased pressure on pastoral ecosystems add to other challenges, place many pastoralists in a situation of worsening vulnerability (AU, 2010).

Governance is at the center of societal development. Policy plays a critical role in guiding the choice-making process, identifying the problems to be addressed, establishing parameters and putting in place structures and institutions (HPG, 2009). Many past attempts to support pastoral development failed to recognize the strengths of pastoralism, and did not balance the need for greater pastoral representation and good governance, with appropriate technical approaches (AU, 2010). In Africa, Many attempts to support pastoral development failed to recognize the strengths of pastoralism, and did not balance the need for greater pastoral representation and good governance, with appropriate technical approaches (ibid).

Policies and laws that impact on pastoral livelihoods can be categorized into four. Policies on governance including constitutions and policies on decentralization, Policies on economic development focused on the commercialization and general modernization of agricultural and livestock production, Policies on peace-building, disaster management and security in an increasingly touching the interests of pastoralists and Policies on land and natural resource management that failed to recognize communal nature of pastoral land are the fundamental categories of policies that constrained pastoral development (HPG, 2009).

2.4.2. Overview of Ethiopian policies and strategies relevant to Pastoralism

2.4.2.1. The 1995 FDRE constitution

The 1995 FDRE constitution is the first in including the issues of pastoralists for the first time in the country. It also established first a department then ministry of pastoral development along the

federal affairs which coordinates and facilitates development in pastoral areas (Mohammed, 2015). The Constitution provided for pastoralists the right to free grazing land and not to be displaced from their own lands without their wish. It further suggested pastoralists to receive fair prices for their products that would lead to improvement in their conditions of life. These are some of the articles in the constitution which specifically reflect the position of the government regarding pastoralist interest.

2.4.2.2. ADLI

Ethiopia's existing realities reveal that there is an acute shortage of capital. In contrast, the country is endowed with a large number of working age population and a potentially cultivable land although land is still relatively scarce in some part of the country, particularly the northern and central high lands. It is believed that faster growth and hence economic development could be realized if the country adopts a strategy that help raise the employability of our labour resources and enhance productivity of land resources aimed at capital accumulation. Pursuing a development strategy that does not make extensive use of the manpower and intensive use of the land resources forfeits the considerable contribution that these resources could make to growth and capital accumulation.

ADLI is seen as a long-term strategy to achieve faster growth and economic development by making use of technologies that are labor using. According to ADLI, Extension of credit to the small farmer will gain importance with commercialization of agriculture, and give impetus to the establishment of rural banks. Cooperatives play important roles in facilitating input and output marketing as well as in promoting the provision of rural finance. The problem of food security and agricultural growth in pastoral areas is being conceived in terms of the development of the pastoral economy in its entirety. Unless industry (secondary-modern goods producing sectors) and services (tertiary-distributive and other services) grow in conjunction with agriculture (primary – agriculture and allied activities), it is not possible to ensure accelerated growth and sustainable development. In an agrarian economy such as Ethiopia, the resources for the development of the industrial sector need to be generated via primarily creating strong bondages between agriculture and industry and subsequently exploiting these linkages via the concerted efforts of non-state actors, particularly the non-peasant private sector (MoFED, 2002).

2.4.2.3. Rural Development Policy and Strategies

The Rural and Agriculture Development Strategy is one of the key policies of the FDRE. The policy is hoped facilitate rapid and sustained economic growth, diminish reliance on foreign aid, and promote the development of a market-oriented economy that will led to industrialization. The policy articulates land and labor are the key factors of production in Ethiopia and emphasizes on strengthening the agricultural labor force by upgrading farming skills and knowledge; supplying suitable technology; ensuring the health of farmers; using the land appropriately through land ownership; Proving development packages friendly to the ecological condition of areas; developing pastoral areas and areas with large and unutilized agriculturally suitable land and so on (FDRE, 2001).

The policy also desires to advance rural finance. particularly in increased agricultural investment and development of non-agricultural sectors; create strong agricultural marketing system; expand rural infrastructure through expansion of education and health services, rural road and transport services, drinking water supply, and other rural infrastructural services like telecommunications and electricity; strengthen non-agricultural rural development activities such as trade, marketing, finance, etc. for full utilization of development opportunities created by rural development, and build up rural-urban linkages (FDRE, 2001).

2.4.2.4. National Food Security Strategy

The federal government of Ethiopia has formulated a strategy to advance food security situation in the country. It is a special arrangement, which focuses on addressing vulnerability that exists in different parts of the country. The policy focused on addressing issues of the supply and the demand sides of the food equation in three components. The first component, economic growth and employment. The second component is establishing additional entitlement/access and target programs including supplementary employment/income schemes. The final component is strengthening emergency capabilities for monitoring, surveillance, early warning, and food and relief distribution in kind and cash (FDRE, 1996). Generally, the national food security program of the country aims enable chronically food insecure people attain food security and significantly improve the food security situation of the transitory food insecure people. Resettlement program, PSNP, HABP and CCI are the major national food security program components.

2.4.2.5. Micro-financing Business Proclamation

Access to finance has been recognized among policy makers as a magic bullet of development especially if it is inclusive. Inclusive finance is access to a range of quality financial services to the excluded people with low income and limited property collateral (Abebe & Kassahun, 2014). As micro-financing institutions play an important role in providing access to financial services for rural farmers and people engaged in other similar activities as well as in micro and small-scale rural and urban entrepreneurs, it is necessary to have an appropriate legal framework that further enhances the development and soundness of the micro-financing business. To realize this, the micro-financing institutions proclamation was issued with a purpose of collecting deposits and extending credit to rural and urban farmers and people engaged in other similar activities, and to micro and small scale rural and urban entrepreneurs (FDRE, 2009).

2.4.2.6. Disaster Risk Management

The new 2013 policy provides for a comprehensive framework of disaster risk management (DRM) measures, and is an amendment of the 1993 National policy on disaster prevention and management. The policy envisions to see capacity for withstanding the impact of hazards and related disasters is built at national, local, community, household and individual levels; and damages caused by disasters are significantly reduced

It includes general directions and major implementation strategies, including on a decentralized DRM system, early warning and risk assessment, information management, capacity building, and on integration of disaster risk reduction into development plans. The main objective of the Policy is to reduce disaster risks and potential damage caused by a disaster through establishing a comprehensive and coordinated disaster risk management system in the context of sustainable development.

Specific objectives of the policy are the following: (i) to reduce and eventually prevent disaster risk and vulnerability that pose challenges to development through enhancing the culture of integrating disaster risk reduction into development plans and programs as well as by focusing on and implementing activities to be carried out before, during, and after the disaster period to address underlying factors of recurrent disasters; (ii) to save lives, protect livelihoods, and ensure all

disaster affected population are provided with recovery and rehabilitation assistances; (iii) to reduce dependency on and expectations for relief aid by bringing attitudinal change and building resilience of vulnerable people; and (iv) to ensure that disaster risk management is mainstreamed into development plans and programs across all sector institutions and implemented at all levels.

2.4.2.7. Water Sector Policy & Strategy

The overall goal of Water Resources Policy is to enhance and promote all national efforts towards the efficient, equitable and optimum utilization of the available Water Resources of Ethiopia for significant socioeconomic development on sustainable basis.

The General objectives of water resources management policy are 1) Development of the water resources of the country for economic and social benefits of the people, on equitable and sustainable basis 2) Allocation and apportionment of water, based on comprehensive and integrated plans and optimum allocation principles that incorporate efficiency of use, equity of access, and sustainability of the resource 3) Managing and combating drought as well as other associated slow on-set disasters through, inter alia, efficient allocation, redistribution, transfer, storage and efficient use of water resources 4) Combating and regulating floods through sustainable mitigation, prevention, rehabilitation and other practical measures and 5) Conserving, protecting and enhancing water resources and the overall aquatic environment on sustainable basis.

Besides, the policy has developed fundamental principles that will guide an equitable, sustainable and efficient development, utilization, conservation and protection of water resources in Ethiopia. These are 1. Water is a natural endowment commonly owned by all the peoples of Ethiopia. 2. As far as conditions permit, every Ethiopian citizen shall have access to sufficient water of acceptable quality, to satisfy basic human needs. 3. In order to significantly contribute to development, water shall be recognized both as an economic and a social good. 4. Water resources development shall be underpinned on rural-centered, decentralized management, participatory approach as well as integrated framework. 5. Management of water resources shall ensure social equity economic efficiency, systems reliability and sustainability norms. 6. Promotion of the participation of all stakeholders, user communities; particularly women's participation in the relevant aspects of water resources management (FDRE, 2001).

2.4.2.8. FDRE Rural Land Administration & Use Policy

It is confirmed in the Constitution of FDRE that the right to ownership of land is exclusively vested in the state and in the people. Hence, it is necessary to sustainably conserve and develop natural resources and pass over to the coming generation through the development and implementation of a sustainable rural land use planning based on the different agro-ecological zones of the country. In accordance with this, it is deemed necessary to put in place legal conditions which are conducive to enhance and strengthen the land use right of farmers to encourage them take the necessary conservation measures in areas where mixed farming of crop and animal production is prevalent and where there is threat of soil erosion and forest degradation.

Thereof, in accordance with Article 55 (1) of the FDRE constitution, HoPR had formulated rural land use and administration proclamation. In the proclamation, it is clearly stipulated that Peasant farmers/pastoralists engaged in agriculture for a living shall be given rural land free of charge, particularly groups such as orphan children and women are granted the right to get and use rural land. Furthermore, it was also stated that, farmer, Semi pastoralist and pastoralist individuals have the right to get rural land from family by donation, inheritance or from the competent authority. Beside, an article of the proclamation stipulated that government being the owner of rural land, communal rural land holdings can be changed to private holdings as may be necessary. The proclamation further stressed that Even if Private investors, Government and NGOs and other social and economic institutions shall have the right to use rural land in line with respective policies and their development objectives, priority to peasant farmers/semi pastoralists and pastoralist shall be given (FDRE, 2005).

2.4.2.9. ANRS Rural Land Use and Administration Policy

The main goal of this policy is ensure the reliable and sustainable use and protection of the land and land related natural resources in the region through implementing a system of land administration in order to contribute to the improvement of the life of the people of the region. Ensuring the land use rights and obligations of pastoralists, agro pastoralists, investors, and other users; Avoiding land use related conflicts; Ensuring land is used for sustainable development through public participation and scientific land administration and use study; Development and

organization of information on land and land based resources, and strengthen the sources of information; and create a system of updating the information; Conducting in depth study on the traditional land use and administration system and develop its strong sides; Establishing government land administration and use institutions (with powers and duties); and Create the awareness of the people with respect to the land administration and use policy are the illustrated policy objectives (ANRS, 2008).

2.4.2.10. Health Policy of FDRE

Following the change of government in 1991, the new Government of Ethiopia put in place many political and socio-economic transformation measures. Among these, it developed a first national health policy, which was followed by the formulation of four consecutive phases of comprehensive HSDPs (FDRE, 2010).

The general policies of the Health sector policy is democratization and decentralization of health service system; development of preventive and promotive components of health care; development of an equitable and acceptable standard of health service system that will reach all segments of the population within the limits of resources; promotion and strengthening of inter-sectoral activities; promotion of attitudes and practices conducive to the strengthening of national self-reliance in health development by mobilizing and maximally utilizing internal and external resources; assurance of accessibility of health care for all segments of the population; close cooperation with neighboring countries, and regional and international organizations to share information and strengthen collaboration in all activities that contribute to health development including the control of factors detrimental to health; development of appropriate capacity building based on assessed needs; provision of health care for the population on a scheme of payment according to ability with special assistance mechanisms for those who cannot afford to pay; and promotion of the participation of the private sector and nongovernmental organizations in health care (FDRE, 1993).

In addition, democratization of the system; decentralization of decision-making, health care organization, capacity building, planning, implementation and monitoring; intersectoral collaboration; provision of health education; provision of promotive and preventive activities; human resource development; ensuring of availability of drugs, supplies and equipment; provision

of appropriate attention to traditional medicine; giving emphasis to health systems research; promotion of family health services; establishment of referral system; development of diagnostic and supportive services for health care; organization of health management information system; revision of health legislations; systematization and rationalization of health service organization; strengthening of administration and management of the health system for better effectiveness and efficiency; and financing of the health services through public, private and international sources are the Strategies adopted and employed to achieve the health sector policy objectives (FDRE, 1993).

The consecutive HSDPs were developed and implemented to support the overall socio-economic reforms of the country by improving the health sector service delivery. The first HSDP along with the national policy were developed based on critical reviews of prevailing national health problems and a broader awareness of newly emerging health problems in the country (FDRE, 2010).

2.4.2.11. Education and Training Policy

The general objective of Education and Training Policy is developing the physical and mental potential and the problem-solving capacity of individuals by expanding education in general and providing basic education for all in particular; bringing up citizens who can take care of and utilize resources wisely, who are trained in various skills, by raising the private and social benefits of education; cultivating citizens who respect human rights, stand for the well-being of people, as well as for equality, justice and peace, endowed with democratic culture and discipline; bringing up citizen who differentiate harmful practices from useful ones, who seek and stand for truth, appreciate aesthetics and show positive attitude towards the development and dissemination of science and technology in society; and cultivating the cognitive, creative, productive and appreciative potential of citizens by appropriately relating education to environment and societal needs (FDRE, 1994). Strategies employed to attain education and training policy objectives are change of curriculum and preparation of education materials accordingly; establishment of appropriate educational structure; development of appropriate educational measurement and examination techniques; engagement in teachers' training and overall professional development; use of local/mother tongue, national and international languages; integration of education, training,

research and development; supporting of education with inputs; change of educational organization and management; and financing of education (FDRE, 1994).

Besides, the Government of Ethiopia gave special attention to the development of education in pastoral areas and in the third Education Sector Development Plan (2005/2006 - 2010/2011). Alternative basic education program was incorporated as integral part of the education sector development plan given that it is critically important to measure in reaching the hard-to-reach remote rural and dispersed communities, pastoralists, and agriculturalist societies (MoE, 2005).

2.4.2.12. Livestock master plan and Animal health strategies

Improved animal health services could hugely increase livestock productivity and the earnings of their owners. Although the coverage and quality of such services are less than satisfactory, provision has expanded and improved across Ethiopia. The government has established a new authority to control and administer the quality, safety and efficacy of veterinary drugs, biological and animal feeds.

Establish a robust animal health information system, reducing the impact of livestock diseases, increasing the export volume of live animals, meat and meat products by strengthening the quarantine, inspection and certification system, Reduce the impact of zoonotic diseases on human health by controlling such diseases and ensuring the safety of animal products, Improving animal welfare by raising public awareness and introducing good practices, Improve the implementing capacities of Ethiopia's animal health services through the preparation, endorsement and implementation of various legal frameworks and Build an advanced animal health system by restructuring veterinary services are the general goals and objectives of livestock master plan and animal health strategy of Ethiopia (ILRI, 2015)

CHAPTER THREE

3. RESEARCH METHODOLOGY

Both quantitative and qualitative approaches were followed in this research. Primary and secondary sources of data available were collected by employing various data collection methods such as Household Survey, Key Informant Interview, Focus Group Discussion, Observation, and review of secondary sources.

3.1. Description of the Study Area

Ewa is one of the 32 districts in the Afar Region of Ethiopia. Part of the Administrative Zone four (Fante Rasu Zone), Ewa is located near the base of the eastern escarpment of the Ethiopian highlands and bordered on the south by the Administrative Zone one Chifra woreda, on the west by the Amhara region, on the north by Gulina, and on the east by Awra; part of its boundary with Zone one is defined by the Logiya river. Ewa district is located at a distance of 193 km from the regional capital, Samara. The district's capital, Allele Subula town is situated on the road that connects Awra and Chifra districts. Ewa has 10 rural and one urban kebeles.

In terms of geographical position, Ewa is located 12° 00' 0.00"N Latitudinal and 40° 09' 60.00"E Longitudinal positions (1)¹. Alike the other parts of Afar region, Ewa woreda is characterized by short rain fall and arid and semi-arid climatic environment. There are two agro-ecological areas in Ewa and its surrounding. The first one is the 'highland' areas of Yalo & Gulina which are adjacent to the Amhara and Tigray highlands. The altitude is over 800m above sea-level; rainfall ranges from 700-850mm per year. On the other hand, in the lowland areas rainfall is less than 500mm per year (IRE, 2017).

Based on the CSA (2013) population projection total population of Ewa was projected to be 57, 252 by 2017. Of whom 31,287 are men and 25,965 are women. The area coverage of Ewa is

¹ Adapted from <https://latitude.to/articles-by-country/et/ethiopia/316695/ewa-woreda>

1,463.89 square kilometers² and has a population density of 36.87. While 2,311 or 4% are urban dwellers, the 54,941 or 96% are predominantly pastoralist rural inhabitants. A total of 7,921 households were counted in this woreda, which results in an average of 6.0 persons to a household and 8,217 housing units (CSA, 2007). Age structure of the population shows that about 48.8%, 49.7% and 1.9%, respectively, are within the age of 0-14, 15-64 and 64+. Dependency ratio is 1.02 (0.981 young dependents and 0.038 old dependents) (CSA, 2007).

The Woreda is among the richest areas of the region in terms of livestock population, water and other natural resources. Ewa alone has 10% of the total cattle of the region and more than 6% of the camels of the region (IRE, 2017). However, due to lack access to pasture and water, inaccessibility of social services, drought induced livestock diseases and other challenges the production and productivity of the area is severely affected and livelihood condition of the local community fell in jeopardy.

Ewa was selected as the study area of this research for a couple of reasons. First and for most, the district has been accommodating various development efforts of both government, NGO and other actors. Programs like settlement that have a direct policy implication are under way.

Secondly, comparative to adjacent Woredas, Ewa has a potential resource the can help to improve local livelihood. The woreda is crossed by Ewa River and has arable land. Besides, the availability of huge livestock population and underground water is a driving factor to assess the policy's implementation and conversion of their resources for local development.

Thirdly, the woreda is one of the frequently drought affected areas and the paradox is that significant portion of its population is relied on PSNP for its subsistence apart from the potential for development. At last, Personally, I have been frequently visiting the area for many years due to works related to pastoral development. In those frequent visits have had the chance to witness the livelihood condition of local communities is deteriorating.

² Adapted from [https://en.wikipedia.org/wiki/Ewa_\(woreda\)](https://en.wikipedia.org/wiki/Ewa_(woreda))

These are the main reasons behind that pushed me to pick Ewa as my study area and assess the implementation of major policies that could influence the livelihood condition of pastoralists either way.

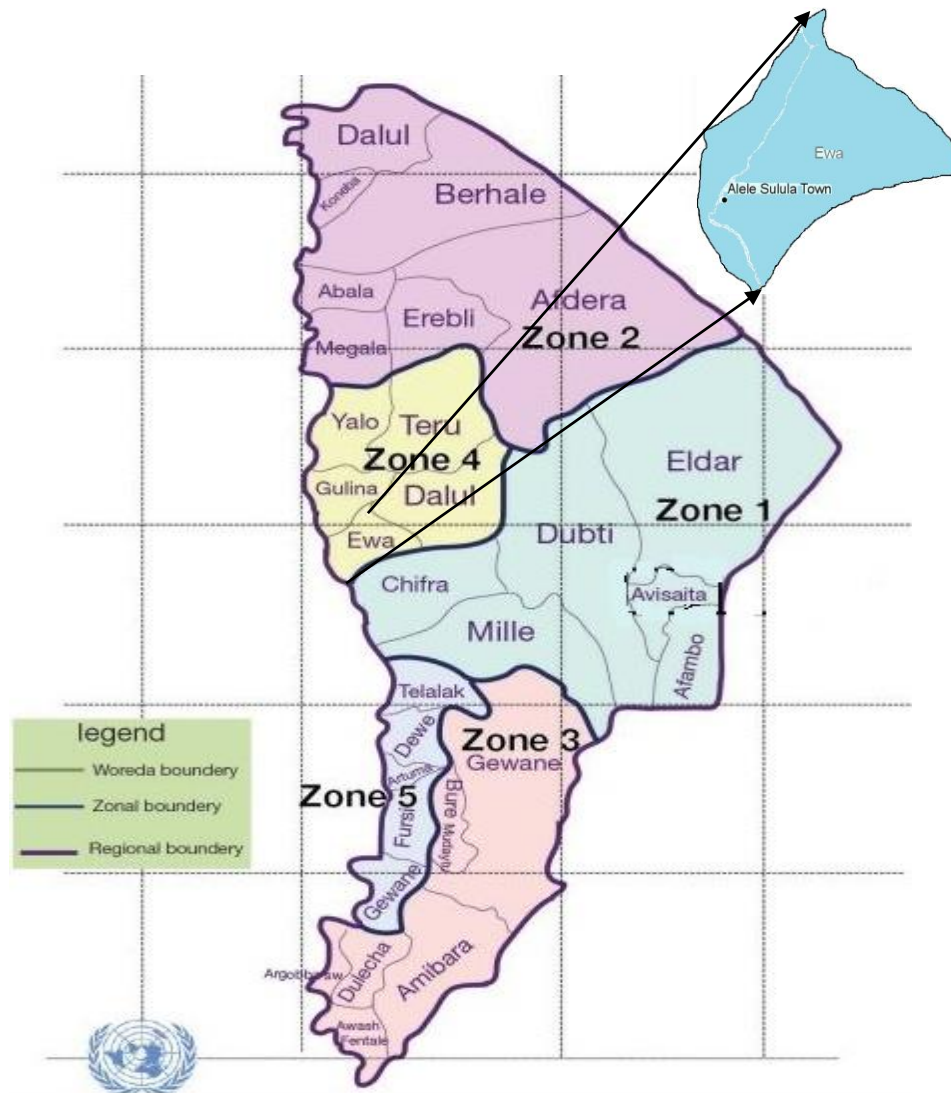


Figure 3: Map of the study area adapted from UN OCHA

3.2. Research Design

Implementation of policies in pastoral areas and their impact on the livelihood condition of pastoralist households had been regarded as the focus of analysis in this study. It attempted to attribute changes registered as a result of state pastoral policies in the selected woreda. To this end, descriptive study design was applied to produce the relevant data so as to assess the general livelihood condition in the target communities comparing against the overall state policy

objectives. For the purpose of reviewing state policy effects, four different kebeles with different state interventions were purposively selected and comparative analysis across these kebeles was made in the study. In doing so, the study attempted to see the intent and action of the government on the one hand and the perception and reaction of the community on the other hand.

The Data gathering and analysis process of the study was done using the SLF. The SLF is an integral part of the Sustainable Livelihoods Approach. SLF is applied for this study due to the fact that it is the most widely used livelihoods frameworks in development practice (GLOPP, 2008) and presents the main factors that affect people's livelihoods, and typical relationships between these. It also provides a checklist of important issues and sketches out the way these links to each other draws attention to core influences and processes; and emphasizes the multiple interactions between the various factors which affect livelihoods. It uses both for planning new development activities and assessing the contribution to livelihood sustainability made by existing activities (DFID, 2000).

SLF establishes itself in different important pillars or core concepts such as people- centered, holistic, dynamic, building on strengths, macro-micro links and sustainability. These core concepts are often situated in different contexts such as vulnerability context which is defined as trends, shocks and seasonality (variation in prices, production of food and other important inputs on which their livelihood depends) (See figure 2) (DFID, 2000).

Livelihood assets is another key context defining category in which people are the center. The SLF counts peoples' potential and actual capacities in the form of livelihood assets. Hence this category explains the context in terms of agency in the livelihood. These assets defined in terms of number of assets which can be human, social, physical, natural and financial. The purpose is to assess the probability for switch between different capitals (DFID, 2000). Hence, what is the nature of livelihood assets and capitals in Ewa Woreda of Afar Regional state? How these assets and capitals are utilized enough to transform the human condition in the area? Is the question to be addressed.

Transforming structures and processes is also a useful category which depicts the governance aspect of the livelihood context. Transforming structures and processes consists the institutions, organizations, policies and legislation that shape livelihoods (DFID, 2000). Structures can be described as the hardware (private and public organizations) 'that set and implement policy and

legislation, deliver services, purchase, trade and perform all manner of other functions that affect livelihoods. ineffective structures often constitute an obstacle to sustainable development and makes simple asset creation difficult in case of adverse structures impeding access to the application of a certain livelihood strategy (DFID, 2000). Processes constitute the ‘software’ determining the way in which structures and individuals operate and interact.

There are numerous kinds of overlapping and conflicting processes operating at a variety of levels – and like software, they are crucial and complex. Important processes for livelihoods are, for instance, policies, legislation and institutions, and also culture and power relations. They may serve as incentives for people to make choices; they may be responsible for access to assets; or they may enable stakeholders to transform and substitute one type of asset by another (DFID, 2000). Accordingly, what are the implications of governance/policy intervention on the existing livelihood assets in Ewa Woreda of Afar regional state? How do local/traditional power structures and state structures affect the nature of livelihood assets, the vulnerability of pastoralist communities?

The SLF as a framework has been broadly implemented in different contexts where the life of a community or a section appears vulnerable and demands the intervention of policymakers and donor agencies. This approach is more applied in natural resource management in rural areas and in reduction of urban poverty in cities (Firehiwot & Yohannes, 2015). In this research therefore, the framework is applied to assess impact of implementation of national policies by looking into the overall livelihood condition of pastoralist community of Ewa woreda. In so doing, the research focused to compare sectorial state policy objectives and the impact on community livelihood.

3.3. Sampling Techniques

3.3.1. Sampling frame

A sampling frame is a complete list of all the members of the population to be studied. The sampling frame considered for the study consisted list of all the 11 kebeles of Ewa district and the list of households inhabiting in the purposively selected four kebeles. For this research, Alele Subula, 1^{gna} Badule, Fernj Fagi and Sunuta kebeles were selected purposively for different reasons.

1gn Badule is located on the bank of Ewa River and is classified as an agro pastoral area. Whereas, Fernj Fagi houses pastoralists settled by the government settlement program, Sunuta Kebele is accommodating the huge underground water development and irrigation project of the FDRE. Aleleu Subula meanwhile is a suburb area of business and administration activities. As a result, these kebeles were assumed, because of the interventions, to reflect state policy implications and picked as sample kebeles. The four kebeles represent four distinct features and are fundamental to make a comparative analysis of state intervention that affects pastoralist livelihood.

3.3.2. Sample Size Determination

Sample size, from which information is collected, must be determined before the actual data collection is commenced. In this study, there were about 1,843 households living in the kebeles selected for this study. They are population of the study from whom a representative sample size is drawn. Once the complete list of households was received from the kebeles administrations, systematic random sampling process was followed to pick the sample respondents. The picking of the respective sample was in accordance of the listing order of respective kebeles on the roster number arrangement of listing was made.

Raosoft, an online³ sample size calculating software was employed to determine the sample size of the study. Accordingly, a total of 178 respondents were identified and 142 sample households were interviewed for household survey. The sampled households were proportionately selected from four kebeles. Time, costs and available facilities such as transportation were taken into account to determine the study sample size.

3.4. Methods of Data Collection

3.4.1. Sources and types of data

Multiple approaches were employed as methods of data collection. As far as the types of the data are concerned, both qualitative and quantitative data were collected to see the livelihood improving and diversification attempts made to improve the livelihood condition of pastoralists. The conversion of government's policy intent into praxis and the perception and reaction of local communities are analyzed based on the primary and secondary data collected to serve the purpose

³ <http://www.raosoft.com/samplesize.html>

of the study. A mixture of data collection methods applied to collect data from primary sources and secondary sources.

3.4.2. Primary data source

I. Household Survey

The household survey was carried out to assess the diversity of income sources and livelihood condition of pastoral communities in the study area. Besides, the household survey attempted to gauge the availability of basic social services to the targeted households in accordance of the policy objectives. Structured questionnaire that included close and open-ended questions was designed and disseminated to generate data from respondents. The household survey was carried out through enumerators. Four volunteer enumerators who are knowledgeable of English, Amharic and Afari languages were identified, oriented and deployed.



Figure 4: Partial pictorial view of the household survey

household demographic information, sources of livelihoods, livestock ownership, crop production information and availability of social services such as education, health, animal health centers, saving and credit association and vocational training opportunities, perception on government intervention and development activities, major effects of climate change on the pastoral production

system, major livelihood diversification strategies and supports received from development agencies etc. were the primary information collected during the household survey.

II. Focus Group Discussion and Key Informants Interview

The main purpose of focus group discussion is to draw upon respondents' attitudes, feelings, beliefs, experiences and reactions in a way that would not be feasible using other methods, for example observation, one-to-one interviewing, or questionnaire surveys (Payne, J. and Payne G., 2004 cited by Tewodros, 2011). Accordingly, Focus Group Discussions and Key informants interview were carried out with purposively selected people who reside in the selected kebeles. Two focus group discussions were held. Key Informants Interview was conducted with local knowledgeable people from study kebeles, district and government and NGOs experts who know about the area.



Figure 5: Observation of agro pastoralists engaged in crop production

III. Field observation

Direct physical observation at field level had been undertaken to gather firsthand information on the overall situation of the study area and the surveyed households. Engagement of households in different livelihood activities, the implementation of government programs and their impacts, the impact of natural shocks such as drought and the service delivery of different institutions were

observed. Moreover, various pictures have been captured for some of the observed situations. Information obtained by this method was very helpful to crosscheck information generated by other data collection methods.

3.4.3. Secondary Data Collection

Sources of the secondary information were published and unpublished materials found in print and softy copy formats. Important policy documents, articles, books, reports, baseline surveys and other periodicals were reviewed to gather information relevant to the study. The review had been embedded in the literature review section of the study. Besides, relevant information is quoted in various sections of the study when it is required to support the argument with secondary sources.

3.5. Methods of Data Analysis

Both qualitative and quantitative data analysis techniques were employed to analyze the data. Simple descriptive statistics like, frequency, percentile, table and charts were applied to analyze and interpret the data generated from household survey. The Statistical Package for Social Science (SPSS) version 24 and Microsoft excel packages were applied to compute and analyze the statistical data gathered from household survey.

The qualitative data generated from key informants interview, focus group discussions and observation were analyzed and described through Interpretative methods of data analysis techniques after sorted out, grouped and organized either to support or refute results gained from other sources of data such as household survey and secondary sources. Generally, the data were analyzed and sorted in accordance of the SLF adopted for this study.

CHAPTER FOUR

4. RESULTS AND DISCUSSIONS

In this section of the research, the results are discussed, analyzed and categorically presented according to the DFID SLF adopted for this study. Efforts were made to ensure that the collected data are presented in a systematic manner using both qualitative and quantitative approaches there by data are correlated and triangulated to clearly understand the subject matter.

4.1. Demographic Characteristics of Sample Households

Although it was not the purpose of the study, these set of data were intended to describe socio demographic condition of the sampled households and to weigh for any influence on the research. The profile of respondents including sex, age, level of education, family size and marital status, among others, are summarized and discussed as follows.

I. Sex

It was corroborated that, in the survey, information was collected from 93 males (65.5%) and 49 females (34.5%) respondents, with male respondents significantly more than female headed households.

Table 1: Distribution of respondents by sex

Category		N	%
Sex	Male	93	65.5
	Female	49	34.5
Total		142	100

Source: Own survey, 2018

II. Age

Regarding the age structure, it is stipulated that 52.1% of the respondents are between 31 and 45 years. The remaining 34.5% and 13.4% of the respondents fallen below 30 years and above 45 years respectively. This statistical summary tells that the majority of the respondents are in active, mature and productive age level which is important asset for the economic productivity and

livelihood improvement of people. Besides, this helps to see how state intervention is impacting the livelihood condition of different age groups in the community under the study.

Table 2: Distribution of respondents by age category

Age Category	sex					
	Male		Female		Total	
	N	%	Count	%	N	%
15-30	34	36.6	15	30.6	49	34.5
31-45	50	53.8	24	49.0	74.0	52.1
46-55	7	7.5	7	14.3	14.0	9.9
≥ 56	2	2.2	3	6.1	5.0	3.5
Total	93	100	49	100	142	100

Source: Own Survey, 2018

III. Marital status

The study also documented that 80.3% of sampled respondents are married. On other side, single and divorced respondents commensurate 4.2% and 5.6% respectively. A significant difference is recorded across male and female respondents regarding their marital status. While 89.2% of male respondents identified themselves as married, only 63.3% of their female counterparts are on similar marital status. It was also documented that 4.3% of male and 8.2% of female respondents are divorced. Further revealed is that 28.5% of women respondents are widowed and 6.5% of male respondents are singles. Marriage is one of the important assets social esteemed and the majority of respondents happened to be married which mean is that they have already owned one of the important factors in pastoral livelihood.

Table 3: Distribution of respondents by marital status

Marital status	Male		Female		Total	
	N	%	N	%	N	%
Married	83	89.2	31	63.2	114	80.3
Single	6	6.5	0	0	6	4.2
Divorced	4	4.3	4	8.2	8	5.6
Widowed	0	0	14	28.6	14	9.9
Total	93	100	49	35.5	142	100

Source: Own survey, 2018

IV. Family Size:

There are 793 people in the sampled families and family size index created based on family size.

The index ranged from one to four, and cut-off points were applied to create categories of households with 1-3, 4-6, 7-9 and ten and above family members. The family size data were captured and analyzed for the fact that they are one of the important factors that determine livelihood. While labor is inestimably important issue, the analysis helps to understand how state policy is playing its role of converting this productive labor into livelihood asset on the one hand and actions taken to deal with the ongoing population growth.

Table 4: Distribution of respondents by family size

Category	N	%
1-3	28	19.7
4-6	72	50.7
7-9	29	20.4
10+	13	9.2
Total	142	100.0

Source: Own survey, 2018

V. Education Level

Education plays a fundamental role for the development of a society through spread of knowledge and skill. As presented in table 5 below, 63.4% of male and 77.5% of female respondents are illiterates. In spite of lack of access to formal education, 12% of the respondents responded that they are capable of reading and writing. Further, 11.8% of them are either have attended or they are attending primary education. The remaining respondents claimed that they have achieved secondary and higher level of education.

Table 5: Distribution respondents by level of education

Education Level	Respondent's sex					
	Male		Female		Total	
	N	%	N	%	N	%
Illiterate	59	63.4	38	77.5	97	68.3
Read and Write	11	11.8	6	12.3	17	11.8
1-4 Grade	9	9.7	4	8.2	13	9.1
5-8 Grade	4	4.3	1	2.0	5	3.5
9-12 Grade	4	4.3	0	0	4	2.8
12+ Grade	6	6.5	0	0.0	6	4.5

Source: Own survey, 2018

This low level of educational accomplishment has its own impact on the livelihood condition of the local community in general and the sampled households in particular. Because, labor

production and productivity. Because education improves capabilities and is strongly associated with various socioeconomic variables such as lifestyle and income (IRE, 2018).

The survey further examined level of education completed at household level. In this case, the educational achievement of family members is assessed in line with the heads of households. Accordingly, 62.7% of the sampled households have a family who is attending a primary education. 14.2% of them meanwhile identified to consist of at least one family member who is attending a secondary education. It was also exhibited that 21.1% of the families do not have a family member who is attending education.

Table 6: Level of education completed in the family

Level of Education	N	%	Cumulative %
None	30	21.1	21.1
grades 1 -4	66	46.5	67.6
grades 5 -8	23	16.2	83.8
grades 9 -10	14	10	93.8
grades 11 – 12	6	4.2	98.0
TVET certificate & Diploma	3	2	100
Total	142	100	

Source: Own survey, May 2018

This, lower literacy rate recoded along with the analysis of availability of educational services and facilities indicated that the government efforts are either lower or approaches followed in the locality are entirely not convenient for the pastoralist communities of targeted areas.

4.2. Changes in Possession of important Livelihood Assets

The term ‘livelihood assets’, in the context of this research denoted assets fall under any of the five types of capitals identified by the DFID ‘s SLF discussed in the previous section. Land, livestock, and family labor constitute the main livelihood assets in north part of Afar region (Tsegaye et al., 2013). Accordingly, the research has assessed possession of assets that are important for pastoral livelihood associating with national policy objectives important to improving and diversifying pastoral livelihood.

4.2.1. Income contribution

Differences are exhibited between men and women respondents with regards to understanding their contribution to income condition of respective family. Three different questions with similar themes were asked to gauge how the respondents perceive their income contribution for the household. When asked whether they contribute in cash for the house, 79.6% of the male and 27.1% female respondents replied that they are contributing in generating cash. Yet, when they asked whether they have involvement in the farm activities, milking of animals and sales of livestock products, 81.6% of the female respondents responded 'Yes'. This indicates that, even though women respondents are making a contribution to the household income, their contribution still is going unnoticed and women themselves are either not aware of or undermined their contribution for the increment of household income.

4.2.2. Livestock Possession and productivity

Morton & Meadows (2000) noted that livestock are clear form of natural assets from which useful resource for livelihoods are derived. Livestock production is the backbone of pastoralist areas economy. The communities at large rely on their livestock production to fulfill their economic, social and cultural obligations.

Livestock are crucial assets in pastoral and agro pastoral systems in that they play vital role in generating income and creating job opportunities, ensuring food security, providing transport services and contributing to socio-cultural and environmental values (Samson & Frehiwot, 2014). They also serves risk management functions and are regarded as part of pastoral identity (Berhanu et al. 2007 cited by Bekele et al., 2013; Tewodros, 2011). For pastoral communities, losing livestock assets may prompt a collapse into lingering poverty and has a lasting effect on their livelihoods (Agrawal, 2008).

Accordingly, efforts were exerted to assess the livestock holding and productivity in the study. Irrespective of the quantity and type, 69.7% of the households reported to own livestock. Whereas the remaining 30.3% of households do not hold livestock. In spite of the fact that the majority of households claimed to own a kind of livestock animal, they have been experiencing a remarkable

decline in their livestock holding for the past five years. 97.2% of the families indicated that their livestock possession has been decreasing because of multiple factors.

Table 7: livestock holding condition of households

Livestock Ownership	Response	Respondent's sex					
		Male		Female		Total	
		N	%	N	%	N	%
	Yes	71	76.3	28	57.1	99	69.7
	No	22	23.7	21	42.9	43	30.3
Total		93	100	49	100	142	100

Source: Own survey, 2018

Analysis of qualitative and quantitative data gathered from the field corroborated that recurrent drought, human and animal disease outbreak, reduction in the availability of animal feed and water, social contributions such as marriage support, absence of alternative source of income among others are the factors behind the reduction of livestock possession among pastoralist households of Ewa and its surrounding.

The recurrent drought, particularly, had been singled out as the devastating factor that contributed for the decrease of livestock possession in the target areas. 72.6% of the sampled households have indicated that, the recurrent drought is the primary factor for death of their animals and the government response to halt the catastrophe was either late or inappropriate. Both the FGD and KI participants correspondingly opined that drought along with disease outbreak is the leading cause of livestock loss.

Table 8 Distribution of Households by livestock holding in TLU

TLU category	Men		women		Total	
	N	%	N	%	N	%
≤5	38	26.76	13	9.15	51	35.92
5.1-10	23	16.20	16	11.27	39	27.46
10.1-15	19	13.38	8	5.63	27	19.01
15.1-20	7	4.93	5	3.52	12	8.45
20.1-25	1	0.70	4	2.82	5	3.52
25.1-30	2	1.41	0	0.00	2	1.41
>30	3	2.11	3	2.11	6	4.23
Total	93	65.5	49	34.5	142	100.00

Source: Own survey, 2018

As depicted in table 8, the majority (63.38%) of the households own below 10 TLU per household. This clearly manifests livestock possession has significantly reduced and livelihood condition is being threatened. As a result, significant portion of the community is forced to depend on aid for subsistence. Woreda level annual report stipulated that in 2017/2018 alone, 23,970 quintals of cereals and 32,258 liters of edible oil were distributed for 11,902 individuals to curb the effect of the drought (Ewa...2018). Furthermore, 1,732 individuals were directly supported in the PSNP by distributing 10,390 quintals of food items between January and June, 2018.

Beside to the trend of decrease in possession, milk and meat production among the sampled households had been assessed. All of the respondents stated that they predominantly sale live animals and an income from livestock products such as meat and skin is not available. Meanwhile, the national livestock master plan sets out investment interventions on better genetics, feed and health services, which, together could improve productivity of livestock sector. The livestock master plan correspondingly proposed for a 7,762 million Ethiopian Birr (\$ 388.1 million) investment from the public and private sectors to improve productivity and reduce poverty, achieve food and nutritional security, and Contribute to economic growth (GDP) among the livestock-keeping households (ILRI, 2015).

Apart from this lucrative package, the plan appeared to be discriminatory and highland need driven. In spite of the fact that camel and goat are the main livestock types on which pastoralist livelihood relied on, the master plan had no or little attention to improve the productivity of camels and small ruminants. Of course, it was learnt that cattle-crash refurbishment, vaccination and restocking support efforts by NGOs operating in the area are underway. The annual woreda report of 2017/18 also stated that vaccination service is provided for 4,739 small ruminants.

Generally, absence of early warning systems, lack recovery support, absence of adequate financial resource, lack of trained personnel, and mobility of pastoralists and low level of commitment by the local administration are the major reasons influencing livestock productivity that could help improve the livelihood condition of pastoralists in the woreda.

4.2.3. Land ownership and crop production

Access to land and to the natural resources on it is as important to pastoralists as to arable farmers. (Helland, 2006). Of course, combining livestock and crop production among pastoral communities is adored by scholars and development practitioners to allow more intensive use of land and livelihood improvement than cropping or livestock husbandry alone. This is because crop residues and fallow lands offer better forage than natural range (ibid).

For centuries, pastoralists in Ethiopia's lowlands including in Afar have relied on traditional land tenure systems to survive but the legislation has failed to clearly define both private and communal rights to rangelands (USAID, 2017). Alike general social and political marginalization of pastoralists in Ethiopia, land tenure issues as they refer to pastoral resources and grazing lands are not given much attention in public policy (Helland, 2006). That has prevented pastoral communities including the Afar pastoralists from fully exercising their rights to land use and development (USAID, 2017).

Of course, following the fell of Derg to the EPRDF in 1991, pastoral communities' right to access land was constitutionally recognized and their involuntary eviction was declared illegitimate. Different provisions of the Constitution (1995) stipulated that pastoralists have the right to free land for grazing and cultivation as well as the right not to be displaced from their own lands. Alike the federal government, the ANRS also acknowledged this constitutional right of pastoralists and subsequently formulated its own regional land use and administration policy. The ANRS land use and Administration policy (2008) recognized that rural lands in the region are mainly administered under clan leaders and emphasized on the importance of both private and communal landownership in order to sustainably develop the animal husbandry and farming activity and improve the livelihood condition of pastoral societies. The policy also envisioned to ensure the land use rights and obligations of pastoralists, agro pastoralists, investors, and other users; Avoid land use related conflicts and ensure that land is used for sustainable development.

In spite of these mouth-watering approaches on the paper, the pastoralists and agro pastoralists in Ewa district have no or little access to both communal private land. Besides, individuals have no equal use right to lands because of the fact that land is administered by clan leaders under the traditional land administration and use system. Further, investors who want to initiate a private

development activity have to negotiate with clan leaders in order to access to land and determine the amount of payment need.

Survey results showed that the praxis of landownership in the pastoral communities of Ewa is far from the realization of the policy objectives and exercising constitutional rights. Table 9, depicts that among the sampled households located in four kebeles of Ewa District, only 38% of the households provided a positive response in regards to their land ownership irrespective of the tenure type.

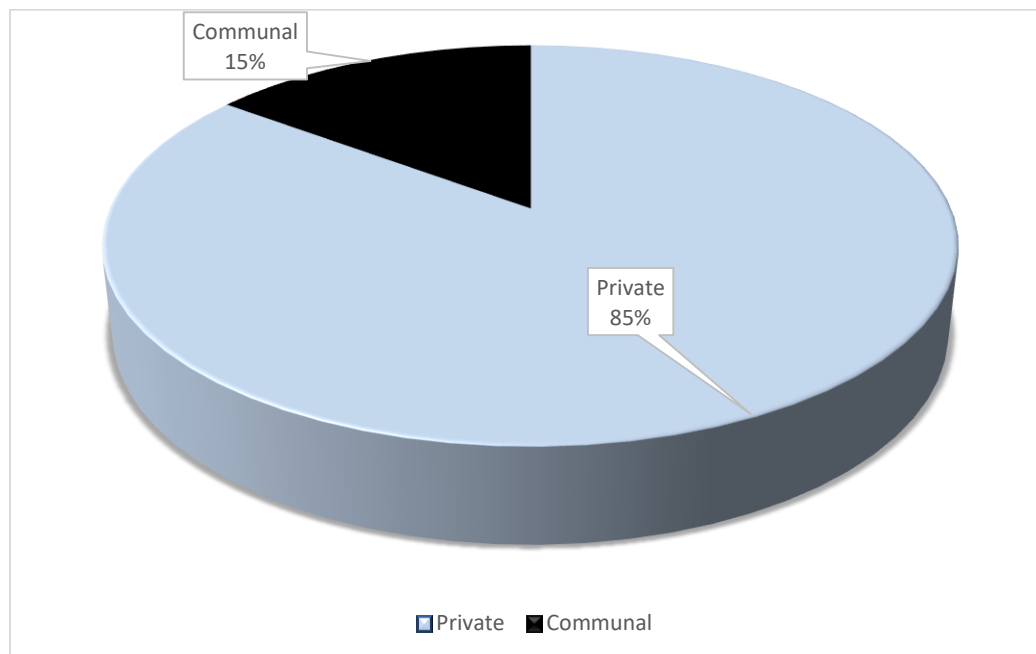
Table 9: Distribution of households by land holding condition

	Response	N	Percent	Cumulative %
Ownership of land	Yes	54	38.0	38.0
	No	88	62.0	100.0
	Total	142	100.0	

Source: Own survey, 2018

Further probing of the households showed that among the households who answered to own a land, 85% them own a private land and 15% of the respondents said their land ownership is clan based or communal.

Chart 1: Land tenure type of households



Source: Own survey, 2018

Interestingly, detailed analysis revealed that while the majority of the private land holders are households who had been settled by the government settlement program and individuals who voluntarily started a sedentary way of life along the bank of Ewa River. 32.6% of the sampled private land-owning households, are located in Ferenj Fagi Kebele of Ewa district and they are settled by the villages' establishment program that led to private land ownership. Whereas the 60.9% majority of the private landholder respondents are situated in 1st Badule kebeles of Ewa district. Meanwhile, all the respondents in Sunuta village responded they neither own a private or a communal land and fertile land is exclusively owned by the government due to the irrigation program.

In connection with this, respondents were also probed about their landholding history including if they had a land before but now lost that possession. 14.8% of the sampled households replied they had either private or clan land holding. But, right now they have lost that holding and their livelihood condition is threatened. Displacement in search of pasture and water, conflict and the introduction of water and irrigation development projects are the chief factors behind their loss of possession.



Figure 6: an agro pastoralist in Badule keble engaged in crop production

Particularly the Sunuta irrigation project that has taken extensive size of arable land is frequently mentioned as an indication of state policy failure. Information from different sources indicated that the project had a plan to provide access to fodder, crop production and knowledge to transfer to the local community. Unfortunately, the interruption of this project and subsequently failure to fulfill these commitments coupled with restriction of movement led to worsen the livelihood condition of pastoralists in Sunuta area.

In addition, the study found out that only 28.2% of the landholders or 9.1% of the sampled households are engaged in crop cultivation so as ensure food security and improve their livelihood. Reduction of livestock and livestock products, motivation to earn additional income, establishment of settlement along resourceful areas and shortage of animal feed are recurrently quoted reasons that drove those people to be engaged in cultivation along with their livestock herding.



Figure 7: An Afari agro pastoralist in Badule Kebele engaged in fruit production

However, apart from the national rural development strategy of the country that Pledged to work on upgrading farming skills and knowledge; supplying suitable technology and prove development packages are friendly to the ecological condition of areas, many of the respondents complained that lack of technical support, absence of provision of agricultural inputs such as improved seeds

and fertilizers, absence of extension services and inaccessibility of arable land due to lack of transportation, are hindering the people from engaging in crop production that could create an opportunity of income diversification.

Generally, in spite of the fact that both the FDRE constitution and the ANRS land administration policy clearly stipulates that pastoralists will have both private and communal land ownership, the praxis shows the other. Government failed intervention forced displacement of communities, access to grazing areas is restricted. Moreover, understanding their rights of land possession and subsequent engagement in utilization of the land to improve their livelihood in the pastoral societies of Ewa remained unabated.

4.2.4. Access to water

Along with a wide range of other assets, water is the most significant natural resource widely consumed by pastoral societies. Water is a fundamental natural asset and its accessibility plays a crucial role for pastoral livestock and rangelands management (Davies et al., 2016). Indisputably, water development enables the provision of a vital resource to sustain humans, animals and plants in Ethiopia's arid areas where pastoralism is the dominant form of livelihood (USAID, 2017).

The Ethiopian water resources management policy also noted that the water resources of the country have to be developed for economic and social benefits of the people on equitable and sustainable basis (FDRE, 2001). The policy document further indicates allocation of water will be based on comprehensive and integrated plans and on optimum allocation principles that incorporate efficiency of use, equity of access and sustainability of the resource. Furthermore, it is proposed to make water available for livestock in nomadic and other special areas. And it was planned to target 1, 243,000 population in Afar region through water supply and sewerage development program by end of 2016 (FDRE, 2002).

However, the Policy pledged to promote the availability of water nearer to pastoralists by facilitating the supply of human and livestock water, information from survey and FGD in this research told a different story apart from the policy commitments. As shown below in table 12, sampled households were questioned how they fulfill their household water demand for different purpose. 60.6% of the respondents are consuming river water, 14.8% are earning their entitlement

through water tracking program and another 14.8% of the sampled households are getting water from communal hand pump for drinking and cooking purposes. The results show access to improved drinking water is one of challenges in the study area of Afar region.

Table 10: Major drinking water sources of households

Source of drinking water	N	%	Cumulative %
Birkad	3	2.1	2.1
Communal hand pump/tap	21	14.8	16.9
River	86	60.6	77.5
Ponds or Dams	11	7.7	85.2
Water Tracking	21	14.8	100.0
Total	142	100.0	

Source: Own survey, 2018

In some of parts of the study area, the infrastructure of hand pumps and pipe water lines do exist. However, it was evident that they are not operational because of issues associated to breakdown, absence of maintenance and lack of care taker. Particularly, in Alele subla and 1^{gna} Badule vilages, residents are compelled to collect river water apart from the fact that there are facilities. Whereas in Ferenj Fagie kebele, people are getting water trucked from another area.

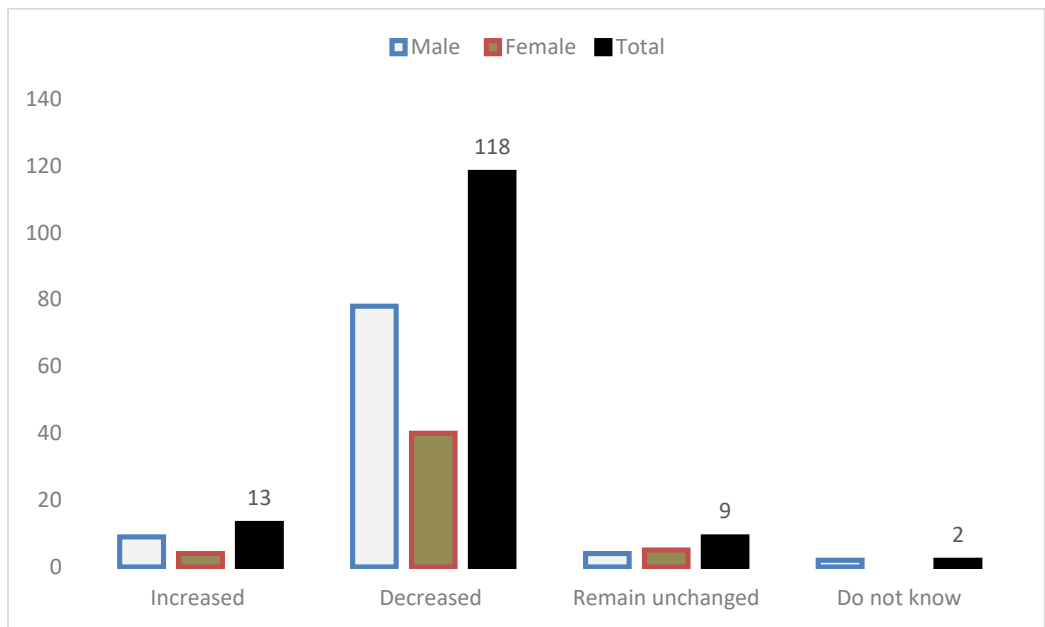


Figure 8: A woman captured fetching river water for home consumption

Besides drinking and cooking, river water is serving as the main source of water for other purposes. River water predominantly serves as the main source for washing bodies, clothes and items, livestock and irrigation purposes. Aside from being the main source, river water observed to be dirty, far from villages and unreliable because of seasonality.

The lack of access to water is adversely affecting other aspects of pastoralist livelihood. Poor health condition and the incidence of AWD in the area was the frequently mentioned adversary effect of lack of access to clean water. Besides, respondents who owned a land are not engaged in crop cultivation. The absence of adequate water, allied with lack of agricultural inputs and cultivation skill is the factor behind low level of crop cultivation.

Chart 2: Accessibility of water in the past five years



Source: Own Survey, 2018

FGD participants and sampled households addressed in the survey unanimously emphasized that water accessibility is threateningly reduced for the past five years. Particularly as of 2015, the scarcity of water had shown an unprecedented decrease subsequent to the El Niño induced drought and nothing is being done by the government to ensure availability of water both for human and animals except little effort by NGOs. It was also indicated that lack of proactive approach by the government and NGOs towards rehabilitation, maintenance and development of new water sources

coupled with the seizure of water resourceful areas by government projects, has exacerbated the water scarcity problem of the study areas.

4.2.5. Natural Resource, Range Land and Fodder Production

The supply of good quality animal feed determines the efficiency of livestock production and reproduction, and the economic benefits derived from livestock based operations (Makkar et al., 2018). Like other pastoral communities elsewhere, natural pastures, woody plants and crop residues are the major feed resources for livestock in the study area.

The natural resource feed plays a central role not only in the supply of feed for animals among the pastoralists of Ewa, but also helps to improve their livelihood condition by maintaining the local ecosystem and biodiversity safe, adaptation to drought and flood vulnerability and serving as alternative source of income. Table 9 presents respondents' reaction about the availability of sufficient natural feed for their livestock. 90.1% of the households said natural feed resource is degenerating across time and unable to supply the required feed for their animals. The remaining 9.9% whereas didn't provide their response.

Table 11: Availability of natural resource feed

Availability of natural resources feed for animals	Response	Male		Female		Table
		N	%	N	%	%
	Yes	0	0	0	0	0
	No	80	56.3	48	33.8	90.1
	N/A	13	9.2	1	0.7	9.9
	Total	93	65.5	49	34.5	100

Source: Own survey, 2018

Based on review of relevant documentary sources, surveying the sampled households and extensive discussions with FGDs, recurrent drought, deforestation and charcoal production, invasion of *Prosopis juliflora*, the Sunuta ground water development and irrigation project, the absence of clear land tenure, overgrazing and conflict with adjacent clans, lack of natural resource management works, inappropriate site for settlement are the rudimentary factors contributed for the degeneration of natural resource feed availability in the study area.

In addition, respondents hinted that supplying animals' fodder is their top third expenditure and potentially influencing their living condition. Similar studies carried out in the adjacent areas of Ewa substantiated the claim of respondents that fodder is one of the main expenses. According to a baseline survey carried out by IRE (2018), 32.76% household expenditure is invested on livestock including fodder.

Supplying necessary inputs and providing a skill development training and substituting the purchase of fodder by own production is a widely advocated strategy to fulfill the raising fodder need. The Ethiopian LMP (2015) also outlined that inadequate and poor access to quality forage seed and cuttings is constraining the livestock sector productivity and pleaded for policy intervention that promotes forage production.

In connection with this, for further comprehension, the survey probed sampled households about the availability of important inputs of fodder production, if they had the chance to attend a training and engaged in production to support the natural resources feed. Accordingly, 87.3% of the respondents didn't attend a fodder production training and 12.7% of the respondents reported that they have attended a fodder production training. Besides 38% of the respondents claimed to own either private or communal land but only 3.5% of the respondents are involved in producing fodder. All the respondents who have reported for fodder production said they have used it to feed their own animals and managed to generate small amount of income from fodder sales.

Table 12: Fodder Production of households

Respondents	Repose	N	%	Cumulative %
engaged in Fodder production	Yes	5	3.5	3.5
	No	137	96.5	100
	Total	142	100.0	100

Source: Own survey, 2018

4.2.6. Human Capital

Human capital as well is, one of the crucial resources among pastoral societies as it is for other segments of a society. By human capital we mean the pastoralist people along with their skills and abilities (Flora and Flora 2008, cited by Jenet, 2017). Benefits of bigger family size, possession of productive labor, crowd herding ability, health, traditional healing and medication skill, water and

pasture management knowledge were pointed out during focus group discussions as some of the essential human capital dimensions of Afar pastoralists.

I. Household size

70.4% of the sampled households comprises six and below member. 20.4% of the sampled households are made up of 7-9 individuals. Only 9.9% of the households have reported to consist 10 and above individuals (table 4). In The pastoralist communities of Ewa heads of the male household heads and their sons are mandated to herding of animals, defending the community, resolving conflicts and other social obligations. Whereas female members of the study area are tasked with construction of the Afar ari (traditional hut), milking of animals and owning an income from its sale, cooking of food items etc. It's learnt that people are enjoying the benefits of larger household size both in normal and hardship times apart from the economic burden it brings. Diversification of income and sharing of household workload are extra advantages mentioned by them. Further, having a lot of children is a source of social prestige and a contribution to strengthen the clan they belong to. This division of labor that exists in the study area is considered as a valuable asset since people engaged in different tasks are likely to earn income for the family from various sources.

II. Possession of Skills

Possessing special skills is a valuable human asset among the pastoralists of Ewa alike their counterparts elsewhere in the region. Skill such as traditional animal healers, traditional midwives, weather forecasting individuals, and skilled fighters are socially respected and owning these and other skill has social prestige and financial rewards.

Table 13: Distribution of respondents by possession of skills

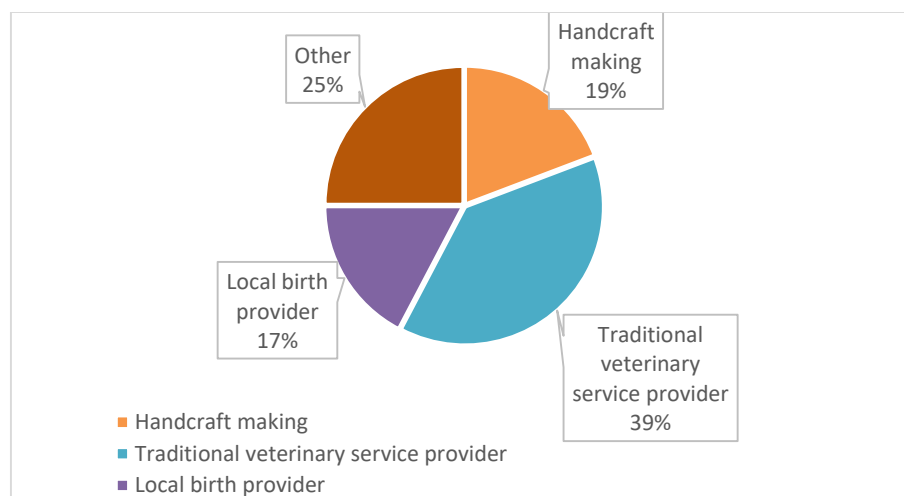
Possession of cash generating skills	Respondent's sex					
	Male		Female		Total	
	N	%	N	%	N	%
Yes	39	42	13	26.5	52	36.6
No	54	58	36	73.5	90	63.4
Total	93	100	49	100	142	142

Source: Own Survey, 2018

The above table depicts people were asked what kind of skills they have that could be converted into cash to help them to improve their livelihood. Accordingly, 36.6% of the people from the total sampled respondents' identified to acquire at least one type of skill and the wide majority of 63.4%

negatively responded. The following figure further elucidates that 39% of those who confirmed to possess a kind of skill said they own a traditional animal medication skill, 19% said they have a handcraft making skill and 17% of them claimed to be a traditional midwife service provider.

Chart 3: Types of skills owned by respondents



Source: Own survey, 2018

Training: training is one of the invaluable assets that helps individuals to develop or acquire skills. 32.4% of the respondents proclaimed that they were able to attend at least one type of training in the past five years. Health and hygiene, family planning, reproductive health, livestock disease management, rangeland and natural resource conservation and awareness about harmful practices/FGM are the frequently mentioned subjects of training. The training was organized by the government and NGOs operating in the area.

Table 14: Distribution of respondents by type of training attended

Training type	N	%	Cumulative %
Health, hygiene and family planning	19	41.3	41.3
Livestock production and disease management	3	6.5	47.8
Rangeland and Natural resource management	7	15.2	63.0
Crop production and management	5	10.9	73.9
About harmful practices/FGM	11	23.9	97.8
Other	1	2.2	100.0
Total	46	100.0	

Source: Own survey, 2018

The entire respondents who were able to attend a training acclaimed the trainings were helpful and had a remarkable contribution in their livelihood. Besides, through discussions held with the key informants from two NGOs and one government officers along with the focus group discussion helped to understand that government, NGOs and other stakeholders were undertaking extensive trainings, sensitization workshops, forums and mobilization activities to build the local capacity in a range of issues. Moreover, changes such the discussions helped to learn that state efforts in capacitating indigenous skills is resulting in positive results. As a result, the number of mothers delivered through midwives for example showed an increase. The woreda level report stated that the number of mothers who are having a safe birth is increasing because of the efforts made to introduce trained mobile midwives besides to the conventional facilities.

4.3. Access to Basic Social Services

4.3.1. Education

In Ethiopia, Pastoral societies including the Afar have sustained a long period of state negligence. There was little or no infrastructure and petite provision of basic social services like education. In recognition of this fact, the FDRE paid special attention to the development of education in pastoral areas and in the third Education Sector Development Plan (2005/2006-2010/2011) mainstreamed pastoral education as a priority in all sub-sectors of the educational system.

However, even if both the federal and the ANRS governments as well as different development agents claimed they are making substantial endeavors to provide pastoralists with access, equity and quality education, national and regional studies indicate that what remains to be done is by far greater than what has been achieved. The national education sector statistical summary (MoE, 2016/17) displays with 11.7% preprimary and 66% GERs for primary education, Afar region stood last among the nine regions and two city administrations. The Ewa woreda sector offices annual report of 2017/18 stipulated that the GRE for both formal and alternative education programs is 49.53% of primary education.

Accessibility of education, compared to other services, wildly reflected among all sources of information in this study. In spite of different opinion regarding the distance between the village and the nearest school, all (100%) respondents of the survey reported the accessibility education

institution. 77.5% of the sampled respondents reported the availability of a primary school near to their village and 22.5% of the surveyed individuals acknowledged a secondary school is also available besides the primary school. access to primary education is relatively better availed social service to the pastoral communities.

Table 15: Access to educational institution

	School type	N	%	Cumulative %
types of School is available to the community	Preprimary School	0	0	0
	Primary School	110	77.5	77.5
	Primary & Secondary School	32	22.5	100.0
	Total	142	100.0	

Source: Own survey, 2018

However, only 30.8% of the sampled households are sending children to schools despite that they have a school aged child in their house. In-depth discussions outlined plenty of bottlenecks that hindered the expansion of quality education and lower enrollment rate in the areas. The long period of marginalization, downtrodden economic status of local community, deterrent impact of mobility and lack of temporary learning spaces and absence of sufficient mobile schools as stipulated in the national pastoral education strategy, vulnerability of pastoralist areas, distance between water points and villages and subsequent mobility of families into water points in the area, lower level of awareness, early marriage and the like are some of the factors associated to lower level of enrolment rate in the study areas.

Of course, it was observed that educational facilities and formal schools are better availed in settlement areas of Ferenj Fagi kebeles and the suburb area of Alele Subula. Since education is the determining factor that influences other forms of livelihood such as health and income generation, providing quality and equitable education is vital to all societies, including the underprivileged people living in developing regions. Education fills not only socioeconomic but also political gaps, which, in turn, fosters local, regional and national development (Petros, 2015). The provision of education to all citizens has become not only a national issue but also an international agenda linked to humanity. Primary education is assumed to be the basic tool for welfare of the nations through improvement of productivity and reduction of poverty (Debebe, 2014; Kadzamira & Rose, 2003 as cited by Birhanu, 2017). Hence, the government has to strengthen the existing efforts and introduce new strategies and approaches such as expanding vocational training access so that the

education program will have a meaningful impact in improving the living condition of the Ewa pastoralist in particular and the Afar pastoralists in general.

4.3.2. Health Care

Alike other social service, the accessibility of health care service, determines the productivity and development of pastoral societies. However, health services utilization among pastoralists in Ethiopia, including the Afar pastoralists, is quoted to be inadequate and poorly equipped, being scarce, inaccessible, and inappropriate to the pastoralist way of life (Nejimu & Hussein, 2013). The Ethiopian national health policy on other hand gives a high priority to the democratization and decentralization of the health service systems (FDRE, 1993). The health objectives set in HSDP-II for this group of communities were to establish an appropriate health service delivery for the pastoralist population and increase coverage and utilization of health services in pastoralist population (FDRE, 2005). In line with this, the assessment on the availability of health services in the study area illustrates 92.3% of the households reacted that human health facilities are built in the nearby to their village.

Table 16: Response on the availability of health facility

	Response	N	%	Cumulative %
Access to health service providing facilities	Yes	131	92.3	92.3
	No	11	7.7	100.0
	Total	142	100	

Source: Own Survey, 2018

In addition, efforts were put to understand the composition of health facility types which are providing service for the pastoral communities of Ewa. 62.7% of the sampled households reported health post are available in their villages. Whereas, while 15.5% of the sampled households indicated a health clinic exists in their neighborhood. The remaining 21.8% mentioned the accessibility of private health clinics along with the government one.

Tale 17: Distribution of health facilities in the study area

		N	%	Cumulative %
Type of health facility	Government Health post	89	62.7	62.7
	Government Health clinic	22	15.5	78.2
	Government & private clinic	31	21.8	100.0
	Total	142	100	100

Source: Own Survey, 2018

The review of Ewa woreda annual report also depicts health service is one of the widely accessed social service in the area. The report illustrated that accessibility in infant and child immunization, provision of highly nutritional food items, health extension service and family planning services are remarkably improved and coverage is reached 97% to 99%.

However, other services such as delivery at health facility, absence of ambulance service, provision of necessary medical supplies and medicines, lack of trained personnel are frequently mentioned health drawbacks in Ewa and its surrounding. In terms of quality of service delivery, majority, 62%, of the respondents believed the quality of the service is below the standard. Peculiarly, the pre and post-natal care service is extremely low. Even if the woreda report acclaimed the ANC and PNC service coverage reached 97% and 57% respectively, 77.5% of the sampled households complained that the nearby health facilities have no a room of pre and post-natal care for mothers. The trained midwives are available in Ewa town and because of lack of ambulance services, mothers are forced for extended labor and delivery is usually at home using a trained traditional midwives.

Table 18: Availability of ANC and PNC in nearby health facility

Specialized unit for pre and post-natal care for mothers in the health facility		N	%	Cumulative %
	Yes	32	22.5	22.5
	No	110	77.5	100
	Total	142	100	

Source: Own Survey, 2018

Visual observations of health facilities by the researcher also support the claim by the community. In spite of the claim by the local administration for the success in health sector, the fact is that the health facilities are not well equipped, lack the proper hygiene and often are closed. Without doubt this is negatively affecting the community in reducing productivity and exposing for unnecessary extra costs.

4.3.3. Agricultural Extension Services

Agricultural extension work in Ethiopia began in 1931 with the establishment of the Ambo Agricultural School which is one of the oldest institutions and the first agricultural high school offering general education with major emphasis on agriculture (Kassa & Dawit, 2017). With this

long history the sector in Ethiopia has gone through radical policy shift in the past 50 years, from feudalism to Marxism to a free market system (Kassa, 2005).

However, when measured against its long history of introduction to the Ethiopian agricultural sector, the agricultural extension service couldn't attain to the levels expected. Even though the national agricultural extension strategy aspires to transform smallholder farmers from subsistence to commercial agriculture through delivery of market-oriented extension services, behavioral changes, creating demands for improved agricultural technologies and farm management practices, build farmers, women and youth resilience to cope with climate and drought changes through use of climate smart technologies and best practices (MoA, 2014), accessibility of services among pastoral societies in general and the Afar pastoralist in particular remained petty.

Access to agricultural extension services in Afar is 2%, the lowest in Ethiopia (World Bank, 2010). This demonstrates that the provision of the service is extremely poor in the country in general and Afar region in particular. This weakness to deliver extension service in the region is evidently admitted in the national extension service strategy. The strategy accepted that packages are not sufficiently designed to meet diverse farmers' need, the limited extension services on livestock and Poor extension services for pastoral communities (MoA, 2014). The survey and extensive discussions undertaken helped to noticeably see the agriculture extension service in the study area is almost unavailable.

When we look at access to this service in the study area, only 6.3% of the households confirmed to get agricultural extension service. 93.7% the respondents, who are the absolute majority of the sampled households said they never have had access to agricultural service. Surprisingly, the majority of the respondents were aware of the concept itself and had required explanation of what it mean is let alone accessing. As presented below in table 19, natural resource and rangeland management and crop production inputs such as seeds and pesticide are the main agricultural services availed for the target communities. This poor level of agricultural service in return is a clear manifestation of state discrimination its policies and the state, often referred to, is highland driven and its policies are not convenient to the potential available in the low land of the country.

Table 19: Type of agricultural extension service accessed

Type of Service	N	%	Cumulative %
Natural resource management	3	2.1	2.1
Livestock or crop production inputs	6	4.22	6.3
No Extension service	133	93.7	100
Total	9	100.0	

Source: Own Survey, 2018

They have got experts supports and advices, for example, in livestock production and disease control, crop production and management, natural resource conservation and management and also received inputs like livestock medicine and fertilizers. To sustain a market-led and pluralistic extension system that improves the lives and livelihoods of Ethiopian smallholder farmers, agro-pastoralists and pastoralists, the government policy has to be inclusive and look the potentials each region has.

4.3.4. Animal Health Care

Improved animal health services and livestock productivity are enormously correlated variables. The provision of animal health services to pastoral and none pastoral livestock populations in Africa including Ethiopia has never been an easy task. According to Sollod and Stem (1991), most of the difficulties comes from the attempts to transfer an inappropriate western model veterinary establishment that lacked mechanisms to function under nomadic and transhumant conditions. Hence, they concluded that appropriateness is the central problem to the development of veterinary medicine in Africa.

Furthermore, in pastoral areas of Ethiopia, relationships between herders and government veterinary staff were often characterized by mistrust at best and open hostility at worst. In this situation, comprehensive vaccination of cattle in marginalized, dry land areas do not take place (Catley, 2002). According to MoA (2013), the contribution of the livestock sector to the national economy is small mainly due to widespread occurrence of infectious and parasitic animal diseases.

In Ethiopia, efforts were made to establish a robust animal health information system, reduce the impact of livestock diseases, raise public awareness about animal welfare and introduce good practices, improve the implementing capacities of Ethiopia's animal health services and Build an

advanced animal health system (MoA, 2015). However, the efforts are not as fruitful as anticipated and the annual loss of animals due to disease mortality remained unabated. The annual loss due to mortality ranges from 8–10% for cattle, 12–14% for sheep, 11–13% for goats and 56.9% for poultry (MoA & ILRI, 2013). Only 45% of the country is served by animal health delivery systems. With woreda's submitting disease outbreak reports is 5% for pastoral and agro pastoral areas, disease surveillance and reporting is poor and irregular (Ibid). Livestock disease like brucellosis are widely prevalent in the study areas of Ewa and its surrounding (Wesinew et al., 2013). This has caused in the fluctuation of animal and meat exports of pastoral areas from year to year (Yacob, 2002).

As deliberated above, livestock is the predominant form of financial asset of Afar pastoral societies including in Ewa. Yet, unlike other forms of assets, livestock is easily susceptible to multifarious damaging factors ranging from looting to drought and disease epidemics. In notion of this, 126 of the sampled household who have reported to own a livestock were asked about the occurrence of frequent disease outbreak and obtainability of health service for their livestock. The following table below presents that 69.8% of the respondents have access to animal health service ranging from conventional type of veterinary facilities to traditional treatments.

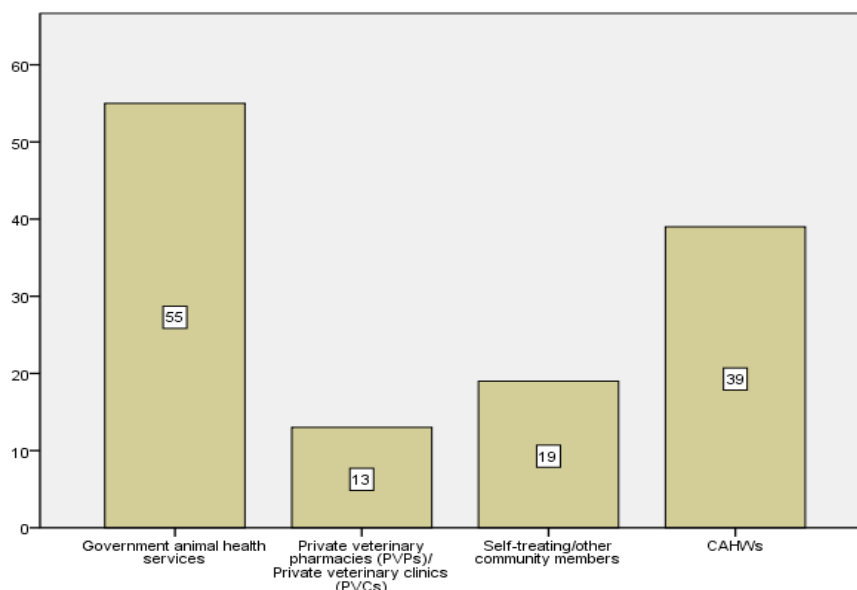
Table 20: Access to animal health facility

	Response	N	%	Cumulative %
Access to Animal health Facility	Yes	88	69.8	69.7
	No	38	30.2	100.0
	Total	126	100.0	

Source: Own survey, 2018

However, all the respondents reported that, particularly, the government animal health facilities, are not providing the required services. Long distance between the villages and the health facility, absence of trained personnel, inaccessibility and lack of transportation, lack of medicines and treatment detergents, lack of electricity and refrigerators, are among others factors contributed to the insufficiency of the service

Chart 4: Distribution of households by animal health facility they frequently visit



Source: Own Survey, 2018

46.5% of the individuals commented that they have to travel above 10km to access the nearest animal health facility in Ewa town. 29% of them mentioned the closing of health facilities and absence of health workers as the primary challenge in relation to getting animal health service. Meanwhile, 57% of the respondents pointed out besides to the long distance and lack of trained personnel, scarcity of drugs and repeated referral to private veterinary clinics are undermining the availability and quality of animal health service in the study area.

In connection with this, the survey also assessed the households if they had experience of animal loss in the past 12 months. 26.8% of the respondents reported they have experienced animals' death precipitated by one or more animal disease. Plus 26.1% of the respondents picked animal disease as the precarious contest they are encountering along with other challenges such as drought and absence of food and water in their effort to ensure better livelihood.

Generally it is understood from the above discussions illegal administration of drugs without vets, remoteness or non-availability of health posts, absence of input, lack of animal health experts, absence of transportation and electricity, frequent contact with livestock from the neighboring

Amhara region are some of the factors affecting the animal health service delivery of Ewa pastoralists thence impacting the pastoralist livelihood.

4.4. Access Financial Resource

4.4.1. Access to Saving and Credit

Pastoral livelihoods are dependent on their environments, which are subject to regular shocks such as droughts and floods. This often causes pastoralists to sell their livestock under pressure when prices are at their lowest. By establishing savings and credit schemes it is possible for pastoralists to sustain their assets since it can provide to them an income buffer. (Lemlem et al. cited in (Eds.) Ridgewell & Flintan, 2007). For pastoralists saving and credit institutions can have two major benefits. They stabilize income and consumption. Not only minimizing sale of livestock during drought when prices are low but also savings allow pastoralists to have more regular income and consumption patterns (Flintan, 2008). In addition, during better times these schemes can offer capital that can be used to diversify income sources and reduce vulnerability and improve pastoral livelihoods (ibid).

Over the years the Afar pastoralist have been finding it increasingly difficult to cope with the regular environmental crises that justifies the need for improved livelihood security and diversification. People are engaging in making crafts such as furniture, bracelets, knives, milking bowls, sandals and spoons baskets, brooms, goatskin storage bags, fans, milking vessels, necklaces, sleeping mats to sell and earn income so as to cope with the challenges (Flintan, 2008). However, this requires provision of financial services which can support them in dealing with finance related problems in a well-organized manner and therefore eliminating the worry in their lives (Ouma, 2017).

In this aspect, financial access of the respondents was assessed. The government states that access to financial service has to be availed for pastoral societies as the rest of the country. In line with this, the government has issued a micro-financing institutions proclamation with a purpose of providing service such as collecting deposits and extending credit to rural and urban farmers and people engaged in other similar activities, and to micro and small scale rural and urban entrepreneurs (FDRE, 2009). Accordingly, regional level saving and credit institution are

established and started providing the saving and credit service. But, the praxis of delivering these services, unlike to other areas, is far away in the pastoralist area of Ewa and its surrounding. Even not only micro finance institution, but also conventional types of institution such as banks and insurances are seldom available. In the survey, it was only 21.8% of the households reported for a regular saving. Among those, only 6.3% of them are saving in the bank and 15.5% of the respondents acknowledged for home-based saving.

Table 21: Savings practice of households

	Saving Institution	N	%	Cumulative %
Access to saving Institutions	Bank	9	6.3	6.3
	At home	22	15.5	21.8
	Do not Saving	111	78.2	100
Total		142	100	

Source: Own Survey, May 2018

Inaccessibility of financial institutions including banks, saving and credit institutions, microfinance associations, low level of income, remoteness of the nearest bank (35km), absence of transportation, low awareness and tradition, interruption of electric and network systems are some of the factors tallied by the households for the lower level of saving habit.

With regard to access to credit service, alike to the saving service, it is nearly null or scanty. 97.2% of the respondents said they have no access to credit service. Unavailability of financial institution which could facilitate access to credit service to engage in a new business or that supports their ongoing income generating activities, the inconvenience of the criteria and failure to comply with are the leading factors that made the pastoralists to have less access to credit service.

Table 22: Access to credit services

	Response	N	%	Cumulative %
Access to credit	Yes	4	2.8	2.8
	No	138	97.2	100.0
Total		142	100.0	

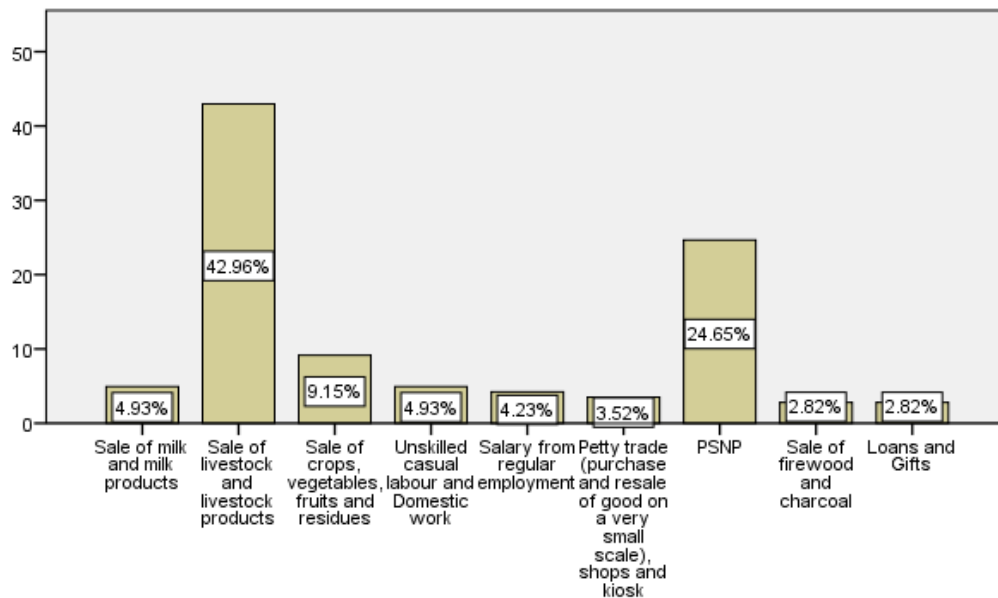
Source: Own Survey, 2018

4.4.2. Diversity of Income Sources and Expenditures

Enhancing voluntary sedentary life along the banks of the major rivers, transforming pastoral societies into agro-pastoral systems, from mobility to sedentary life and from scattered population to small pastoral town and urbanization are the main directions of pastoral development policy of Ethiopia. In strengthening sedentarization, government decided to enhance micro and small-scale enterprise development in the urban centers and off-farm activities in the rural areas (Bido, 2014). This helps to transform pastoral way of life and enable the pastoral societies engage in a new business so that they can diversity source of income.

In connection with this, the study has examined efforts made to diversify the income source of target communities. Consequently, the majority of the respondents reported for lack of multiple source of income and dependence on single source. Only 32.4% of the sampled respondents provided affirmative response by indicating their families earn an income from more than one source.

Chart 5: Main sources of income for sampled households



Source: Own Survey, 2018

Livestock and livestock products are the dominate source of income (42.96%). The next main sources of household cash income are the PSNP cash transfers (24.65%) and sale of crops and

vegetables (9.15%). Milk sales accounted for a minor portion (4.93%) of livestock-related income. In fact, it is not culturally appreciable to sell milk in some parts of Afar, and marketing this perishable good is not easy in the more remote and arid areas of Ewa. Unskilled casual labor (4.93%), salary from regular employment (4.23%), petty trade (3.52%), Sale of firewood and charcoal and handicraft sales (2.82%) and income from gifts and loan (2.82%) are the additional sources of income identified by the sampled households.

Recurrent drought, expansion of alien plant species, animal disease outbreak, absence infrastructure and access to market, shortage of inputs, lack of marketable skill, limited knowledge to initiate a business and absence of required support from stakeholders are some of the alleged factors behind the less diversification of income.

In connection with income source, household expenditure level was also evaluated. Results displayed that 100% of households indicated food and household consumables expenditure is the dominant expenditure type of their household. Meanwhile human and animal health problems, fulfilling of animal fodder, education materials expenses, social contributions and Khat consumption are the main expenditures significantly influencing household livelihood.

4.4.3. Market condition

Access to markets is generally poor. All (100%) of the respondents reported the nearest market is located in Ewa town, the suburb area of Alele Subula. Lack of and poor quality roads, lack of transportation, lack of information about markets, and the long distances to major markets are some of the factors contributing to poor market access in the area. Some of the kebeles are very far away from the towns and some of them are not accessible. Their pack animals have been affected by drought and they have no other means of transportation and it is very difficult for them to go 30 to 40 kms to access the market given the harsh weather condition specially during drought season and weakened body condition of their pack animals.

The accessibility of the roads can be hindered by rain and flood as well during wet season since there are seasonal rivers that cross between some of the kebeles and the town, to where they usually go for market. As a result, they do face difficulties to access the market either to sell their livestock or purchase different items including food items from the market.

4.5. Vulnerability, Risks and Coping Strategies

4.5.1. Vulnerability

The main hazard affecting livelihoods in Ewa and its surrounding is drought, which results in reduced livestock production, reduced livestock prices due to poor body condition and increased food prices. Livestock is vulnerable to diseases such as trypanosomiasis, pasteurellosis, blackleg and anthrax. Human diseases such as malaria, respiratory infections and water-borne diseases are common. Since pastoralists are dependent on the neighboring regions of Amhara and Tigray for the supply of food, they are vulnerable due to rainfall failure in these areas, which results in food shortages, high food prices and lack of markets for livestock.

In normal years the movement of livestock starts in October and is generally to the closest grazing areas. But in bad years there is migration to different grazing areas inside the zone and also movement to the neighboring regions of Tigray and Amhara. As per the discussion held with the pastoral office, there is conflict over resource in the border to Amhara and Tigray regions during the dry season. The government is implementing settlement in some parts of Ewa but these settlements also lack the necessary social, economic and geographical merits. Through in-depth discussions in FGD and Key informant interview along with surveying the households, concerted effort was put to identify the main coping strategies of local communities for various vulnerabilities. And the following are the found out to be the main risk minimization strategies.

4.5.2. Risk Minimization and Coping strategies

- **Livestock migration to highland areas:** this includes the movement of livestock to the highland areas adjacent regions where water and pasture is available.
- **Increased livestock sales:** destocking is one of the key risk minimization strategies. The pastoralists in Ewa sale their livestock during crisis of drought and epidemic in order to avoid unnecessary loss.
- Purchase of fodder for lactating breeds from the areas that grows fodder for marketing purposes.
- Slaughtering of calves, herd splitting, increased gifts in the form of food and cash

- Traditional restocking mechanisms referred to partially compensate for losses in bad years and cushion against drought risks

4.5.3. Main Coping Strategies

- Increased inter-household social support
- Reducing non-essential expenditure on items such as tobacco, coffee and clothes
- Reducing food consumption and adjusting eating habits
- Consumption of wild foods
- Slaughtering of livestock for meat consumption
- High expenditure on staple food purchases
- In extreme cases, migration to towns in search of social/economic support

4.6. Future of Pastoralists

Bearing in mind the natural pressures and socioeconomic forces that are threatening pastoral livelihood, the study has examined how the pastoralists themselves see their future. Astonishingly, 50.7% of the sampled households would like to mix livestock rearing with the crop production and see themselves in agro pastoralism. Whereas 19.7% of them would like to transform themselves into trader and 12.7% would like to get employed in different sectors and serve their community.

Table 23: Future of households

	Category	N	%	Cumulative %
Future Plan	Agro pastoralist	72	50.7	50.7
	Employee	18	12.7	63.4
	Merchant	28	19.7	83.1
	Pastoralist	24	16.9	100.0
	Total	142	100	

Source: Own Survey, 2018

CHAPTER FIVE

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusion

Pastoralists are among the main contributors to the national economy of Ethiopia in the form of domestic and international export of livestock and livestock products. Inhabiting in the 60% land mass of the country, Pastoralism contribute 33% of the agricultural and 16% of the national GDPs respectively.

However, as presented in the previous section, the pastoral societies in Ethiopia in general and in Afar in particular have been faced with the multitudes of challenges ranging from policy-related problems to the natural pressures. Hence, this study primarily aimed to document the livelihood condition of pastoral societies and provision of social services such as education and health comparing to the objectives of national and regional pastoral development policies and strategies.

Pastoralists' livelihoods largely hang on the interaction between three prominent pillars; the natural resource, livestock population and the people. The effect on one of these pillars can affect others. So, harmonized effort is needed. For effectiveness of livelihoods in general, there are five livelihood assets upon which one can engage in livelihood activities. Results of the study corroborated that, in many of the indicators, the general livelihood condition of pastoral communities of Ewa are under high pressure.

The discussion in the previous section vividly displayed that pastoral livelihood assets have been steadily sustaining shocks that indiscriminately affected the local livelihood. The study has spent some efforts to investigate the existing livelihood improvement practices, challenges encountered and policy supports provided. The social and cultural norms of the community which are responsible for shaping and perpetuating this livelihood condition have been also assessed and presented so as to have a better understanding of the interplay between different factors that have a determining role in improving or deteriorating livelihood.

Despite the study indicated 70% of the household's own livestock that supports their livelihood, they also have been experiencing a remarkable decline in their holding; the major natural capital of land holding is exhibited among 38% of the sample households only. More than 2/3 (67%) of the population remain non-diversifying. Livestock based income still remains the single and most important source of livelihoods, with 42.96 % of the respondents out of the total specified it as the primary source of income. Significant portion of the households in the area also found out to depend on aid to fulfill their subsistence.

Alike the income side of the study, the provision of basic service understood to be minimal. For the pastoralists like Ewa who are located in drought prone area and their livelihood resources are at greater risk, financial services significantly support their efforts for better livelihood. However, efforts to increase accessibility of financial services are scanty and government efforts are found insignificant. While access to educational facility is better, enrollment of school aged children is recorded to be below 50%; there is only one secondary school and in Kebele's like Sunuta, students have to travel up to 35 km to get the nearest secondary school. Against the statement of national pastoral education strategy, mobile schools and temporary learning spaces are available less than 10 for primary schools and none for secondary schools. Health and agricultural extension services are also either substandard or totally unavailable in some parts of the study area.

The study indicated that partly, and of course, predominantly, the state policy formulation and implementation are playing a negative role than working to transform the livelihood of community. While the area is full of abandoned resources such as livestock, the government and other agents failed to transform this resource into what can be beneficial to the community. Works related to livestock production and marketing, such as, organizing pastoralist to for their own livestock cooperatives and supply to other areas, facilitation access to financial credit, provision of trainings and creation of market linkages, among others could have been done to efficiently utilize the livestock resource. And while there is a policy for some of these, new policies for others also could have been introduced.

Because, as underlined in the AU policy framework for pastoralism, Policy plays a decisive role in realizing better quality of life among the pastoralist communities either through introducing new approaches or strengthening the existing system. The empowerment of the pastoral community in

decision making, supporting mobility, revitalizing of the customary institution, planning beyond local boundaries and introducing pastoralist tailored social, financial and market facilities, require proper state policy support, and are the foundation for sustainable development.

Consistently claiming to be an ardent adherent of developmental state the Ethiopian government presents itself as agent of the growth and transformation of the country. However, in countries like Ethiopia, where the absolute majority of the population inhabits in rural areas, the idea of growth and transformation thence an all-inclusive development cannot be attained unless efforts are entailed to the transformation of the livelihood of rural section of the society.

Of course, glimpse of government development strategies and practices, by and large, indicate that there are enabling spaces that support the pastoral community. However, gaps exhibited in interventions that resulted in undesirable outcomes such as increased vulnerability to risks, loss of important assets such as land, environmental degradation and food insecurity. Moreover, the shift away from mobility of livestock to sedentarization and dropouts from pastoralism are undesirable consequences encountered as a result of unconsented state interventions. There is also a shift of replacing and marginalization of indigenous knowledge and local innovation with modern western style of technologies.

Generally, to promote livelihood resilience of Afar people in response to both the 'pushes' away from the pastoral livelihood and 'pulls' of urban and agricultural life, diversifying their income generating activities and increasing availability of services in line with building resilience and local capacity is necessary.

5.2. Recommendations

Pastoral development initiatives are devised and implemented with the aim of enhancing the community's adaptive capacity thereby to reduce their vulnerability and address community needs. However, climate change, conflict and poor state policy formation and implementation compounded with other factors put the livelihood of Ewa pastoralist at risk. To improve this and improve the livelihood condition of the communities in general, the following are some of the recommendations that need to get due attention by all concerned.

- The existing government development strategies and practices with their limitations, by and large, indicate that there are enabling spaces that support the pastoral community. Hence, the government and all development actors need to fully act and implement policies and strategies formulated both at federal and regional level to improve the food security situation of pastoralists.
- Connect pastoralists to domestic and international livestock markets. Policies and investments are needed to connect pastoralists to markets. Greater investment is needed in local-level processing and value addition, both to improve local revenue capture and to provide employment opportunities in pastoral areas.
- Strengthen property rights and governance over rangeland resources. Rights and governance over rangeland resources should be strengthened through capacity building and awareness-raising for better application of national laws, building institutions for natural resource management, and empowering pastoralists through knowledge sharing and respect for Free, Prior and Informed Consent.
- Some of Sectoral policies such as Agricultural Development Led Industrialization (ADLI – the general development policy of the Ethiopian government) is biased towards the highland agricultural production system and does not adequately address the pastoral and agro-pastoral production systems. Hence, revising and adopting a development policy that equally address the needs and problems of pastoral societies has to be the long-term direction of the government.
- Local traditional systems, knowledge and practices that have significant impact in customary resource management need to be revitalized and empowered.
- As more than 90% of the population in Ewa are pastoralists focus more on improving livestock production and productivity like animal fodder production around riverine, addressing the animal health issue through capacity building of animal health facilities and personnel as well providing on spot livestock treatment in collaboration with local government and CAHWs has to be considered.
- Ewa has high potential of livestock resources. Hence, strengthening the livestock marketing by maintaining the existing limited livestock market centers and establishing

new ones, establishing livestock Cooperatives and creating market linkage with areas of high demand is recommended.

- Establishing new and strengthening existing saving and credit micro finance institutions
- Support small irrigation schemes along the riverine through providing improved seeds and farming tools to agro pastoralist.
- Introduce Interest free credit
- Establish community managed disaster risk reduction initiatives

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Appendix

Questionnaire for the Structured Household Survey

SECTION A: IDENTIFICATION

01	Region _____	Woreda _____	
02	Zone _____	Kebele _____	
03	Livelihood Zone	1) Pastoral 2) Agro-pastoral 3) Sedentary Farming	
04	Respondent's sex	1) Male 2) Female	
05	Are you, the respondent, Head of the household?	1) Yes 2) No	
06	Relationship of respondent to head of household (if not you are head of the household)	1) Spouse 2) Parent 3) Child 4) Sibling 5) Other (specify) _____	
07	What is the Name of head of Household? (if not you are the head)		
08	Marital status of the respondent	1) Married 2) Single 3) Divorced 4) Separated 5) Widowed	
09	Educational level of the respondent	1) Illiterate 2) No formal education but read and write 3) 1-4 grade 4) 5-8 grade 5) 9-12 grade 6) 12+	

SECTION B: HOUSEHOLD CHARACTERISTICS

Please tell me about all the people who normally live in your household, including family members, other relatives and non-relative family members such as residing domestic workers/servants, other employees, etc. Start with yourself, then the head of the household (if it is not you), spouse and children, then other relatives and non-relative family members.											
No.	01: What is the <i>person's</i> name? <i>Please list the names of household members in the following order:</i>	02: What is [NAME]'s relationship to the household head?	03: Is [NAME] male or female? 1	04: How old is [NAME]? <i>Estimate if age is unknown</i>	05: What is the highest level of education completed by [NAME]?	06: Can [NAME] read and write?	07: Is [NAME] currently a student?	08: Does [NAME] has access to off farm income?	09: Does [NAME] contribute to the household income in cash?	10: Does [NAME] work on the household's livestock/farm activities?	11: Is [NAME] currently married?
01											
02											
03											
04											
05											
06											
07											
08											
09											
10											

SECTION C: MAJOR LIVELIHOOD ASSETS

A) NATURAL CAPITAL

01: Do you or any members of your household own any livestock, including large livestock and small ruminants? 1) Yes 2) No

02: If the answer is 'Yes, How many animals your household owned? (If 'none', write '0')

Category	Camel	Cattle	Goat	Sheep	Equine (e.g. donkey)
Female calve/kid/lamb (≤ 12 mth)					
Male calve/kid/lamb (≤ 12 mth)					
Female not yet given birth (> 12 mth)					
Matured lactating female					
Matured dry female					
Young and matured male (> 12 mth)					
Pack male camel					
Plough oxen					

03: How do you describe the trend of your livestock possession for the past five years?

1) Increased 2) Decreased 3) No change

04: If reduced, what do you think the factors were /are? (Multiple response possible)

1) Frequent drought 2) Disease outbreak 3) Shortage of feed and water 4) Destocking 5) Other

05: Do you have sufficient natural feed resources (grazing, crop residues and by-products) to feed the animals? 1) Yes 2) No

06: If No, how do you feed the animals? _____

07: Have you received animal fodder preparation training support? 1) Yes 2) No

08: If yes, who provided the training support?

1) Government (Woreda) 2) NGO 3) Private Investor 4) Self trained 5) Other, Specify

09: Do you think the training helped you to improve your capacity to provide food for your animals? 1) Yes 2) No 3) No Change

10: If yes, please list out some of the improvements _____

11: Have you faced with incidence of livestock diseases in the last 12 months? 1) Yes 2) No

12: In your opinion, what are the most critical challenges related to your livestock management?

13: Do you own land? 1) Yes 2) No

14: If yes, do you cultivate this land? 1) Yes 2) No

15: If 'Yes', specify size of land holding profile (*if none write '0'*)_____

16: What are your reasons for cultivating crops?

- 1) Reduction of livestock products
- 2) to earn additional income
- 3) to supplement livestock feed
- 4) due to settlement
- 5) others, specify_____

17: If you are not cultivating your land, why not? (*Multiple responses possible*)

- 1) Not interested / no need to produce
- 2) No seeds
- 3) Too arid and no supplementary irrigation inputs
- 4) No inputs (pesticide, fertilizer, etc.)
- 5) No money
- 6) No labor
- 7) Other (specify)

18: Have you ever owned a land but now lost the possession? 1) Yes 2) No

19: If you have lost your land possession, what was the reason behind?

- 1) Government settlement/villagization
- 2) Irrigation Program/commercial farming
- 3) Private investment on the land
- 4) Infrastructure Developments
- 5) Others, specify_____

20: when you lost your possession, have you received compensation? 1) Yes 2) No

21: was it sufficient for you to start a new form of livelihood? 1) Yes 2) No

22: If no, how did you manage to cope with? _____

23: How do you describe the natural range cover? 1) Increased 2) Decreased 3) No Change

24: If your answer is decreased, what do you think the reasons are? (*Multiple answers possible*)

- 1) Lack of rainfall
- 2) Overgrazing due to high livestock population
- 3) Invasion of alien plant species
- 4) Use of grazing land for crop production and other investment
- 5) other, specify _____

25: Did it affect your crop production and livestock rearing? 1) Yes 2) No

26: Which water sources do you use now and for which purposes?

Water sources	Water uses (please tick ✓)					
	Drinking	Washing household items	Washing body	Washing clothes	Livestock	Irrigation
Birkad						
hand pump						
communal tap						
motorized borehole						
shallow well-protected						
shallow well-unprotected						
River						
stream						
protected spring						
unprotected spring						
gravity schemes						
Ponds						
Dams						
Other (specify)						

27: Who developed these water sources?

- 1) Woreda (Government)
- 2) NGO

- 3) Private Investor in the area/Kebele
- 4) Own Force (Local community)
- 5) Other_____

28: How do you compare your present water access to that of 5 years ago?

- 1) Improved
- 2) Decreased
- 3) Remain unchanged
- 4) Do not know

29: How far you have to go to collect water?

- 1) Less than 1km
- 2) 1 to 5 km
- 3) 6 to 10 km
- 4) 11 to 15 km
- 5) Over 15 km

30: Do your households and other households in your community have access to sufficient and safe water for human? 1) Yes 2) No

31: Are there any problems with your water supply? 1) Yes 2) No 3) Don't know

32: If yes, what are they? (*Multiple responses possible*)

- 1) It is dirty
- 2) It is expensive
- 3) Management issues
- 4) Caretaker
- 5) Breakdown of hand pump
- 6) It is irregular
- 7) It dries up in short periods
- 8) Water treatment
- 9) It is a long way
- 10) Other (Specify)_____

B) HUMAN CAPITAL

01: Do you have any special knowledge and skill? 1) Yes 2) No

02: If yes, what kind of knowledge and skill you have?

- 1) Handcraft making
- 2) trained local veterinary service provider
- 3) Local birth provider
- 4) Other specify _____

03: Have you obtained a sort of training in the last five years that helps you to diversify your livelihood sources? 1) Yes 2) No

04: If yes, what kind of trainings? (Multiple response possible)

- 1) Health and hygiene
- 2) Livestock production and disease management
- 3) Rangeland management
- 4) Crop production and management
- 5) Natural resource management
- 6) About harmful practices/FGM
- 7) Family planning and reproductive health
- 8) other, specify _____

05: Who provided the training for you?

- 1) Woreda (Government)
- 2) NGO
- 3) Community volunteers
- 4) Self trained
- 5) Other, Specify _____

06: Did the training helped your to improve your livelihood? 1) Yes 2) No

07: If your answer is yes, please list some of the improvements? _____

08: Are there other community members who have attained a vocational training? 1) Yes 2) No

09: If your answer is yes, who provided them the training?

- 1) Woreda (Government)
- 2) NGO
- 3) Community volunteers
- 4) Self trained
- 5) Other, Specify_____
- 6) Do not know

10: Is there an education and training institution in your village? 1) Yes 2) No

11: If your answer is yes, what it is? (Multiple answer possible)

- 1) Primary School
- 2) Secondary school
- 3) TVET (training institute)
- 4) College/university
- 5) Other, specify_____

12: Who built the education institution?

- 1) Woreda (Government)
- 2) NGO
- 3) Community
- 4) Private Investor
- 5) Other, Specify_____

13: Do you think it is contributing you in improving your livelihood condition? 1) Yes 2) No

14: How far the educational institute is from your village?

- 1) 15 minutes
- 2) 15 to 30 minutes
- 3) 30 min. to 1hr
- 4) 1hr to 2 hrs.
- 5) Above 2 hrs.

C) FINANCIAL CAPITAL

01: Do you have a regular saving? 1) Yes 2) No

02: If your answer is yes, where do you save your money? _____

03: If you are not saving, what is your reason or factor behind?

- 1) There is no such culture
- 2) I have no extra money to save
- 3) I do not want it
- 4) other specify, _____

04: Do you have access to credit services? 1) Yes 2) No

05: If your answer is no, why?

- 1) No credit service in the area
- 2) not interested
- 3) Failure to qualify the requirement
- 4) Requirement not convenient
- 5) other, specify _____

06: Are you or any of your family members take part in saving and credit? 1) Yes 2) No

07: If yes, what motivated you to join the saving and credit scheme? _____

08: Would you like to continue to be a member in the group? 1) Yes 2) No

09: If your answer is yes, then explain why? _____

10: If you are making a saving, would you like to use your savings to set up your own new IGA/business? 1) Yes 2) No

11: If the answer is yes, what kind of IGA/business would you like to set up? _____

D) MAIN SOURCES OF INCOME

01: From which of the following source your income comes from?

Source of Income	1=Yes; 2= No
Sale of milk and milk products	
Sale of livestock, livestock meat, hide and skin and other livestock products	
Sale of poultry and egg	
Sale of food crops, cash crops, vegetables, fruits, residues	
Unskilled casual labour (agricultural labour ⁴ , construction, brick-making)	
Skilled casual labour (e.g. carpentry, masonry, brick laying) and Handicrafts	
Livestock herding, driving and watering ⁵	
Domestic work/servant	
Salary from regular employment (receiving a salary from regular job)	
Petty trade (purchase and resale of good on a very small scale), shops and kiosk	
Restaurant and Services (hair dressing, health care, etc)	
Fodder production & marketing	
Remittances (i.e. money sent by someone living outside the village)	
PSNP	
CFW	
Unconditional cash transfer	
Sale of firewood and charcoal	
Sale of mineral	
Loans and Gifts including Zakaa	
Other sources of cash income (specify)	

02: Do your sources of income have been diversified in the last five years? 1) Yes 2) No

03: If your income sources diversified, what new IGAs/businesses you have started in the last five years? (*Record all type of IGAs/businesses*)

1) _____

2) _____

⁴Checklist for agricultural labour: clearing fields, preparing land, digging, planting seeds, weeding, harvesting, threshing, stores etc.

⁵If performed for another household and paid for in food/ cash by that household

04: How much start-up capital did you invested in each Business?

05: What was the source of your start-up capital? (*Record all sources of start-up capital*)

1) _____

2) _____

06: Are inputs/supplies for your business easily obtainable? 1) Yes 2) No

07: Are there any value additions coming out of your activities? 1) Yes 2) No

08: If yes, explain the value additions you are doing? (*Take note*)

1) _____

2) _____

09: Is marketing for your products easily available and reliable? 1) Yes 2) No

10: If No, why? (*Take note*): _____

11: What is the estimated monthly profit from your IGAs/business? _____

12: Is this activity pays more in terms of profit? 1) Yes 2) No

13: What change observed in your household income compared to before the business?

1) _____

2) _____

14: What are major constraints/problems that you face in running the business?

1) _____

2) _____

E) FODDER PRODUCTION

01: Are you or a family members participated in Fodder production and marketing? 1) Yes 2) No

02: If yes, what motivated you to join the Fodder production and marketing group? _____

03: What is the legal status of your Fodder production and marketing group?

1) Formal registered cooperative

2) Informal group

04: Do you have access to land for fodder production? 1) Yes 2) No

05: If yes, who is the owner of this land?

- 1) Own land
- 2) Members' contributed land
- 3) Leased/rental land
- 4) Other (specify)

06: Do you have access to improved fodder seeds? 1) Yes 2) No

07: Have you produced fodder in the last 6 months? 1) Yes 2) No

08: How much money you earned from the sale of fodder in the last 6 months? _____

SECTION D: ACCESS TO OTHER BASIC SERVICES

01: Do you have access to animal health services when you need it? 1) Yes 2) No

02: If yes, which of the following animal health service providers are available to you at present?

- 1) Government animal health services
- 2) CAHWs
- 3) Private veterinary pharmacies (PVPs)/ Private veterinary clinics (PVCs)
- 4) Self-treating/other community members
- 5) Traditional Healer
- 6) Other (specify)

03: How much does it costs you to get treatment for you animals? _____

04: How do you afford to cover these expenses? _____

05: How long is the distance between your residence and nearest animal health facilities? _____

06: Do you consider this service close to you and your community members? 1) Yes 2) No

07: Are the Government animal health services always available to you and community in this kebele? 1) Yes 2) No 3) Don't know

08: If not, where and how do your animals get treatment? _____

09: Do you obtain extension service? 1) Yes 2) No 3) Don't know

10: If yes, what kind of services you have obtained?

- 1) Livestock production
- 2) Crop production
- 3) NR management
- 4) Livestock or crop production inputs
- 5) others, specify

11: Did you obtained improved agricultural technologies? 1) Yes 2) No

12: If yes, what kind of improved agricultural technologies you have obtained? (Multiple Response)

- 1) Improved animal breeds
- 2) Improved crop varieties
- 3) Farm implements
- 4) Fertilizer and Pesticides
- 5) Livestock medicines
- 6) Others, specify _____

13: From who did you obtain these technologies?

- 1) Woreda (Government)
- 2) NGO
- 3) Cooperative union
- 4) Private Investor
- 5) Other, Specify_____

14: Are you a member of community based association operating in your area? Yes 2) No

15: If yes, what kind of association is it?

- 1) Livestock marketing
- 2) Women dairy cooperatives

- 3) Crop production cooperative
- 4) Irrigation water management committee
- 5) Other, specify _____

16: Is there health service providing facilities in your village? 1) Yes 2) No

17: If your answer is yes, what it is? (Multiple answer possible)

- 1) Health post
- 2) Health clinic
- 3) Hospital
- 4) Private clinic
- 5) Other, specify _____

18: Who built it?

- 1) Woreda (Government)
- 2) NGO
- 3) Community
- 4) Private Investor
- 5) Other, Specify _____

19: How far it is from your village?

- 1) 15 minutes
- 2) 15 to 30 minutes
- 3) 30 min. to 1hr
- 4) 1hr to 2 hrs.
- 5) Above 2 hrs.

20: Does it have the necessary facilities to provide the required service? 1) Yes 2) No

21: The health facility has a specialized unit for pre and post-natal care for mothers? 1) Yes 2) No

22: How do you rate the service delivery standard? 1) High 2) Medium 3) Poor

SECTION E: EXPENDITURE

1) How much money did your household spend in the **last 12 months** on the following items?

Expenditures	ETB
Food and household consumables	
Water	
Power (fuelwood, charcoal, lighting, etc.)	
Education/schooling (transport/uniforms/fees/rent/supplies)	
Medical expenses (transport/medicine/health fees)	
Clothing	
Household items (furniture/bedding/utensils etc.)	
Livestock purchase, including restocking	
Livestock inputs (feed/water/feed/seeds, animal health, water, labour)	
Purchase property like house, machine and other	
Land rent	
Farm inputs (tools/water/fertilizer/seeds, pesticide, water, labour)	
Home improvement (corrugated roofing etc.)	
Remittance given out	
Social obligations (weddings/funerals/other contributions)	
Invested in business, retail, petty trade, other IGA	
Debts or loan repayment	
Transport	
Taxes	
<i>Khat</i>	
Other key expenditures (specify)	

2) In comparison to all the expenditures mentioned - last 12 months, what proportion of your total household expenditure was spent on the following?

Item	Score	
Food and household consumables		

Education/schooling		
Healthcare expenses		
Clothing		
Business, retail, petty trade, other IGA		

3) Own Opinion

1	Compared to other households of your village, in which wealth group is your household?	1= Extremely poor (poorest) 2= Poor 3= Middle 4= Better off 5= Difficult to answer	
2	Main important problems of your household in order of priority	1= Food 2=Income 3= Clothes 4= Medical care 5= Education 6=Housing 7=Others	
3	Compared to 1 year ago: what is your current economic situation?	1=Better 2=No change worse	
4	Why?		
5	What are the major hazards affecting the livelihood in your locality?	1=Flood 2=prosopis juliflora 3=Livestock diseases 4=Human diseases 5=Drought 6=Pests and herb infestations 7=Other (specify)	
5	Where do you see yourself in the future?		

Focus Group Discussion Guiding list

1. Perception in village settlement, infrastructure development and Land Management

- a) Over all awareness about village settlement program
- b) Was the settlement voluntary or forced?
- c) Does it have sufficient infrastructure and social services?
- d) Who used to own the land before? Where are those people now?
- e) Did it help the residents to improve their livelihood?
- f) Major opportunities it brought for the improvement of livelihood condition of the communities
- g) Major challenges it posed on the livelihood undertaking (besides constraints to access natural resources) of the communities
- h) What traditional knowledges and systems the community has to range land management?
- i) What are the particular features of the local range land management system?
- j) Do you think they are effective and efficient?
- k) How do you compare the local range land management system to national range land management policy?

2. Irrigation and commercial farming

- Is there a large scale and commercial farming program in your locality?
- Who is developing the irrigation and the farm?
- Who used to own the land?
- Have those people received appropriate compensation?
- Did it created an employment opportunity for the local people?
- What other opportunities it brought to the community?
- What challenges it imposed on the livelihood of the local community?

3. Perception to climate change and its impact on pastoral livelihood

- Awareness about change in climate
- What does climate change mean to you?
- What are the manifestations of climate change in your community?
- In your opinion, what are the reasons for climate change

- Do you know about Ethiopian climate change policy
- Do you have a traditional weather prediction system?
- Describe previous and current traditional weather prediction system. (its accuracy, the kind of information generated, its purpose, dissemination strategy and users of the information)
- In your opinion, the government's approach to climate change considers the traditional knowledge and practice?
- What are changes observed in temperature of the area over the last 30 years?
- What are changes observed in rainfall of the area over the last 30 years?
- Describe the situation of drought over the last 30 years. (frequency, damage on human and livestock, resilience of the community, and more vulnerable sections of the community)
- Describe the situation of flooding over the last 30 years. (frequency, damage, resilience of the community, vulnerable sections of the community)
- Describe how all these changes affected the livelihood condition of the local community

Checklist for Key Informants (among NGOs)

- Do you think households in this locality have diversified livelihoods, including nonagricultural strategies?
- How many NGOs you know are operational in these areas?
- How do you see the role of NGOs in improving the livelihood condition of local people
- In your perception, is the local administration has the necessary organization and man power to deliver national pastoral development policy objectives?
- Do you think your intervention are appropriate and helps the local community to improve their livelihood?
- Did your intervention take into account local knowledge and practices into account?
- What are your key livelihood interventions?
- How much invested in terms of Money so far?
- How do you compare the livelihood condition of the target beneficiaries compared to prior to your intervention?
- Do you have any policy constraint to make livelihood improvement intervention among the pastoral communities of Ewa?
- What are the social, political or economic factors which make people within the community more vulnerable in terms of their livelihood?
- What are the key challenges for NGOs and other CBOs to be operational in these areas?

Checklist for Woreda Pastoral Development Office

- Is there a local developed or adopted pastoral livelihood improvement policy?
- Are there local institutions capable of executing national and regional pastoral development policy?
- How it look like the structure of local administrations?
- Do local plans or policies support climate resilient livelihoods?
- Are there extension services being provided for the pastoralists?
- Infrastructure development of the locality
- Estimated annual budget for the woreda (at least the past five years)
- What efforts have been made to promote local knowledge and skill in improving local livelihood
- Which other institutions are engaged disaster risk management and livelihood improvement at local level?
- Have the effects of projects such as settlements, irrigation and commercial farming being reviewed and evaluated?
- Is the local government capable of responding to disasters and reinstate local people into their livelihood forms?
- Do local planning processes are participatory?
- What livelihood groups or economic sectors are most vulnerable?
- What are the most important institutions in facilitating or improved livelihood?
- What are the factors constraining livelihood improvement of the local people?