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Ministry of Federal and Pastoral Development Affairs

## Context Analysis of Pastoral and Agro-Pastoral Areas to Enrich and Update Draft Policy and Strategy Framework



By SEGEL Research and Training Consulting PLC  
[www.segelconsult.com/](http://www.segelconsult.com/)  
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## Acronyms

AU	African Union
CAHW	Community Animal Health Coworkers
CGIAR	Consultative Group on International Agricultural Research
CRGE	Climate Resilient Green Economy
CSA	Central Statistics Agency
DA	Development Agents
DP	Development Partners
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
ECX	Ethiopian Commodity Exchange
EPRDF	Ethiopian People Revolutionary Democratic Front
ESMF	Environmental and Social Management Framework
EU	European Union
EW	Environmental Warning
FAO	Food and Agriculture Organization
FDRE	Federal Democratic Republic of Ethiopia
FGD	Focus Group Discussion
FMD	Foot and Mouth Disease
GDP	Gross Domestic Product
GTP	Growth and Transformation Plan
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
HSDP	Health Sector Development Program
HTP	Harmful Traditional Practices
ICT	Information Communication Technology
IGAD	Inter-Governmental Authority on Development
ILRI	International Livestock Research Institute
IPCC	Intergovernmental Panel on Climate Change
KII	Key Informant Interview
LHS	Livelihood Support
LiDeSA	Livestock Development Strategy for Africa
MAT	Market Access and Trade
MDG	Millennium Development Goal
MoALF	Ministry of Agriculture, Livestock and Fishery
MoE	Ministry of Education
MoFPDA	Ministry of Federal and Pastoral Development Affairs



NGO	Non-Governmental Organization
NRM	Natural Resource Management
OWWDSE	Oromia Water Works Design and Supervision Enterprise
PADIF	Pastoral and Agro-Pastoral Development Investment Framework
PAP	Pastoral and Agro-Pastoral Policy
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PLC	Private Limited Company
PLRP	Pastoral Livelihoods Resilience Program
PRM	Pastoral Risk Management
PSNP	Productive Safety Net Program
RVF	Rift Valley Fever
SNNPR	Southern Nation Nationalities and People Region
SPIF	Strategic Program and Investment Framework
ToP	Transitioning out of Pastoralism
UNOHCR	Office of the United Nations of High Commissioner for Human Rights
USAID	United States Agency for International Development
WASH	Water Sanitation and Hygiene

## EXECUTIVE SUMMARY

Since 1970s, billions of dollars were spent on pastoral and agro-pastoral areas of Ethiopia in the form of research, development, and emergency food aid. Over the years, the development of these areas has experienced different policies and strategies with their own focus entailing social, economic, political, and ecological dimensions. The political dimensions followed the three distinct regime changes: the pre-1974 Imperial regime, the Derg/Military regime from 1974-1991, and the EPRDF regime from 1991 to present. Pastoral policies of the three regimes varied considerably, and these slow pastoral developments were not sustainable. As a result, the past efforts through planned development interventions have been marked by a long history of poorly performed projects and unintended consequences. The interventions were aimed at improving living conditions, security issue, and risk management capacities of the pastoralists although the plans were doomed to failure. In some cases, they even brought in unintended consequences eroding pastoralists' customary tenure system, social capital, and spelling ecological disasters. Consequentially human development and food security indicators for many pastoral and agro-pastoral areas are still among the lowest in the country. Although great improvements have taken place in the last decades, the education indicators, for example, primary and secondary school participation net enrollment ratio and pupil-teacher ratio in these areas are still below the national average. According to the data obtained from the MoE, in Afar regional state the figures corresponding to the primary school enrollment in 2016 was 61% for male and 62% for female while the national average for the year was 75.5% for male and 71.5% for female. The data obtained from a survey of health conditions in these areas exhibited a similar lower standard. For example, according to DHS (2016) death per 1000 Live Births in Afar for the past 10 years before the survey was 125 compared to the national average which was 78. Most pastoralists and agro-pastoralists live on the periphery of the country where they are, poorly connected to the main market centers and even emerging towns in pastoral areas. In recent decades, human population growth, rapid urbanization, the growing demand for livestock products, land use changes, and climate change are all testing the sustainability of the pastoralist production system. This is evidenced by the increasing number of people who are driven out of the pastoral livelihood system due to loss of their livestock, transitioning out of pastoralism (ToP)<sup>1</sup>. These people are engaged in environmentally destructive, low income generating, and socially disgraceful livelihood strategies to make their living. All in all, available documented research reports most generally show that pastoralists' livelihood has been in a perpetual decline rather than improvement.

Nonetheless, during the last two decades, considerable recognition has been given towards supportive policies for pastoralists and agro-pastoralists at national and regional levels. Articles 40, 41, 43, 44, and 89 of the FDRE Constitution have guaranteed pastoralists' and agro-pastoralists amongst others the right to equitable development, the right for exercising their life style, and getting special support. Different from the previous two regimes the current government has attempted to incorporate pastoral development in its national development plans to facilitate the execution of the rights of pastoralists and agro-pastoralists enshrined by the constitution. Pastoralist interests have been institutionalized with

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<sup>1</sup> A Literature Review Report on Understanding the Context of People Transitioning out of Pastoralism (TOPs) in Ethiopia. Jebessa Teshome and Zelalem Bayissa. Haromaya University 2014

the pastoralist standing committee established in the House of Peoples' Representatives. A State Minister dedicated to initiate and promote policies and strategies that can contribute to equitable development in the pastoral and agro-pastoral areas has been appointed for the newly established Ministry of Federal and Pastoral Affairs. There is also a directorate at the MoALF dedicated to provide extension service to these areas. Regional governments have also established institutions that closely support the development of these areas. A number of research and training institutions have also been established to generate knowledge and empirical evidence that are vital to influence the policy for enhancing the growth in these areas. There are also a number of policies (e.g. education policy, health policy, rural development policy, social protection policy, disaster risk management policy, environmental policy, etc.) that directly or indirectly address pastoralists and agro-pastoralists interests.

These positive developments, however, still require a more determined effort to address many more challenges that are still lingering in pastoral and agro-pastoral areas. During the last decades the frequency of droughts and flooding has significantly increased worsening the vulnerability, deteriorating the coping capacity and relative wealth of the people in pastoral and agro-pastoral areas. Traditional coping mechanisms that have enabled pastoralists to thrive in a harsh environment have failed to withstand the effects of changes on the pastoral way of life. Available evidence shows that the Ethiopian policy on pastoral and agro-pastoral areas is still based on the concept of 'carrying capacity' that assumes stable ecosystem, rather than the dynamics. The policy is influenced by the widely held view that communal land use is inefficient; its productivity is low and degrades the environment. Most importantly, the range of policies pursued so far envisage rapid socio-economic transformation policies based on sedentization, and hence had a tendency to neglect the importance of mobility of pastoralists as a sustainable rangeland management strategy. However, this is distorting the reality as settling pastoralists' problem in this way is unlikely to reduce their vulnerability. It has even contributed to the diminishing of grazing/browsing areas due to the promotion of sedentary livelihood options including increased cropping activities.

It was in light of this background that SEGEL Research Training and Consulting PLC was commissioned by Mercy Corps to undertake a study on pastoral and agro-pastoral context analysis that was aimed at enriching and updating the Draft Policy and Strategy Framework by MoFPDA which was presented and validated during the workshop conducted in January 2017.

The context analysis used extensive literature review, FGDs, KIIs, and workshops as a methodology to collect data and extract information for enriching the draft policy framework. The work was closely supervised by MoFPDA in collaboration with development partners and its technical Core Advisory Team (CAT) supporting the study through several quality control mechanisms. The findings of the study are reported extensively in each section of this document based on six pillars indicated as follows:

- **Livelihood:** All aspects of livelihoods of pastoralists and agro-pastoralists;
- **Disaster risks reduction:** Situations that include a major and widespread disruption to life and livelihoods of the community or society and overall vulnerability including local adaptation mechanism and community resilience to such situation;

- **Basic social services:** Access and utilization of basic services (Health, WASH, Education and other basic infrastructures) and social protection;
- **Governance and capacity building:** Public sector capacity building, governance and decision making;
- **Policy dialogue and advocacy:** Policy making process for pastoralism and pastoralists;
- **Conflict and Peace:** Local and cross border conflicts and insecurity, local conflict resolution mechanism and peace building;

The policy and strategic framework recommended by this study was guided by the vision of building drought-resilient, thriving, and a modern and market-oriented pastoral and agro-pastoral production system in which livelihood support and intervention are based on agro-ecological potential tailored to community needs, with nationally and internationally well integrated economy allowing majority of pastoralists and agro-pastoralists to sustainably realize a middle-income status. It acknowledges the two policy pillars that the MoFPDA draft policy framework is based: The first one anticipates all-inclusive maximum utilization of the surface and ground water potential and other natural resources of pastoral and agro-pastoral areas for people, animals, irrigation, and hydro-power generation and the other anticipates minimizing risk/vulnerability and building resilience of poor people to climatic shocks, particularly droughts and floods, through enhancing water harvesting and saving schemes and modernizing livestock and crop production. SEGEL study evidences show that complete sedentization is hardly the basis for a stable livelihood in the fragile ecology of pastoral and agro-pastoral areas and can become even a source of poverty, resource degradation, and conflict in the future. Hence, our policy recommendation has also taken a clear viewpoint stating that the commune program must not be the center of the policy framework rather just an option. We strongly believe that it is equally essential to positively recognize pastoral mobility as a core livelihood strategy and provide policy support since it is a key for sustainable range management that maximizes utilization of the spatial and temporal availability of rangeland forage resources. Based on the above basic principles, we recommend the following key policy issues and strategies to enrich the draft policy framework issued by MoFPDA in January 2017.

The main policy recommendations are:

<b>Policy 1: Transform the existing pastoral and agro-pastoral economy to conform to market-oriented economy.</b>	
<b>Strategy 1.1</b>	Creation of conducive environment and regulatory mechanisms to develop the market system, market institutions, functional value chain, market linkages, business development services, and benefit sharing schemes (public private partnerships, cooperatives, share companies) to enhance commercialization (local and export market) and industrialization of the livestock sector thereby contributing to create job opportunity for women and youth
<b>Strategy 1.2</b>	Provision of context specific financial services appropriate to pastoralists
<b>Strategy 1.3</b>	Support utilization of innovative ICT solutions and communication services
<b>Strategy 1.4</b>	Formalizing and regulating cross-border livestock trade
<b>Strategy 1.5</b>	Discouraging crop farming in the fragile ecosystem which is rather more suited to livestock production
<b>Strategy 1.6</b>	Promote commercial fodder production
<b>Policy Issue 2: Strengthening animal health service</b>	

<b>Strategy 2.1</b>	strengthen community-based animal health services
<b>Strategy 2.2</b>	Encourage private veterinarians and attract private animal health services
<b>Strategy 2.3</b>	Standardize lab facilities and required professional expertise from Woreda to National Level
<b>Strategy 2.4</b>	Encourage use of ethno-veterinary knowledge that exists in pastoral areas
<b>Strategy 2.5</b>	Integrate animal health and food safety standards
<b>Strategy 2.6</b>	Map out livestock disease prone areas and make them known to pastoralists
<b>Strategy 2.7</b>	Strengthen disease related information flow which is vital for mobility and marketing decision making
<b>Strategy 2.8</b>	For pastoralists who are close to border areas, information flow should be coordinated from both sides of the international border. Adoption of the IGAD and AU policy frameworks may play key role in this regard
<b>Policy Issue 3: Incentive package to attract and retain key professionals particularly at woreda level</b>	
<b>Strategy 3.1</b>	Provision of free basic services such as housing, health, water, electricity, and transport
<b>Strategy 3.2</b>	Further education
<b>Strategy 3.3</b>	Special salary and benefit structure
<b>Strategy 3.4</b>	Long vacation period
<b>Policy issue 4: Enhance the management of rangelands</b>	
<b>Strategy 4.1</b>	Promote ecologically sound water point development and distribution to efficiently utilize the temporal and spatial variability in the availability of forage.
<b>Strategy 4.2</b>	Conduct/update comprehensive land resource mapping, land use plan development. Ensure communal land tenure security with clear and enforceable laws to overcome the loss of important dry season grazing
<b>Strategy 4.3</b>	Increase availability and ensure sustainable management of water resources, and rangelands
<b>Strategy 4.4</b>	Enhance capacity of pastoralists and local governments in rangeland management
<b>Strategy 4.5</b>	Collaborate with research and higher learning institutions to conduct research to improve the management of rangelands and support the proper documentation and communication of research outputs
<b>Policy issue 5: Enhance access and provision of basic infrastructures and services</b>	
<b>Strategy 5.1</b>	Provide all-inclusive appropriate basic infrastructures and services for both humans and animals. Social services shall include road networks, mobile communication, electricity, energy, and ambulance services
<b>Strategy 5.2</b>	Encourage private sector involvement through direct investment or through public-private partnership
<b>Strategy 5.3</b>	Support local people to advance into higher education by increasing the quality of education through provision of better facilities and well-trained teachers
<b>Strategy 5.4</b>	Pastoralism need to be appreciated by sensitizing the education/curriculum to reflect and the pastoral and agro-pastoral realities
<b>Strategy 5.5</b>	Promote quality education through expansion of the current school feeding programs and boarding schools
<b>Strategy 5.6</b>	Adapt school calendar to the pastoral and agro-pastoral context
<b>Policy issue 6: Enhanced Resilience Building</b>	
<b>Strategy 6.1</b>	DRM policy must provide due attention to raise awareness of pastoral problems among the general populace
<b>Strategy 6.2</b>	Incorporate sustainable commercial livestock destocking into DRR system apart from periods of drought only. Support needs to include linking traders of pastoral areas to larger facilities

	such as fattening and abattoirs
<b>Strategy 6.3</b>	Focus on feed production and appropriate water point development
<b>Strategy 6.4</b>	Strengthen institutional and human capacity of the pastoral and agro-pastoral areas to respond to impacts of climate change
<b>Strategy 6.5</b>	Diversify sources of livelihood
<b>Strategy 6.6</b>	Design adaptable and context specific livelihood extension services
<b>Strategy 6.7</b>	Support use of traditional knowledge, coping mechanisms, and reduction of sole reliance on livestock through enhancing diversification of pastoral economy
<b>Strategy 6.8</b>	Design mechanism to augment understanding of pastoralists and agro-pastoralists on basic Meteorology (e.g. rainfall patterns and early warning signals); Support research of matching local forecaster meteorological forecast with NMA forecast.
<b>Strategy 6.9</b>	Support establishment of facilities for conservation of livestock genetic resources (e.g. Borana breed, Black head sheep, etc.)
<b>Strategy 6.10</b>	Build capacity of pastoralists and agro-pastoralists for drought preparedness focusing on wealth and opportunity creation
<b>Policy Issue 7: Conflict prevention and resolution</b>	
<b>Strategy 7.1</b>	Support traditional and indigenous practices for safer and legally regulated and protected inter and intra-community mobility
<b>Strategy 7.2</b>	Strengthen and scale up community-based peace building, conflict early warning, and response pilots and institutionalize conflict sensitive programming and implementation-Do-no-harm approach.
<b>Strategy 7.3</b>	Conflict management must enhance inter-regional and inter-governmental collaboration
<b>Policy Issue 8: Improved Capacity and Governance</b>	
<b>Strategy 8.1</b>	Improved coordination between federal state and regions. Although there are positive developments there is still a need for refinements of mandates. Rectify overlapping mandates between sector ministries and the MoFPDA. Coordination is also needed with development partners
<b>Strategy 8.2</b>	Strengthen pastoral civil society groups, local institutions and organizations
<b>Strategy 8.3</b>	Enhance governance of risk management, DRR plan and woreda risk profile
<b>Strategy 8.4</b>	Improve governance of resource use. Legally recognize the customary land tenure and institutions which take the local condition into account. Upscale communal land use certification which is underway in Afar and Oromia, as a means of protecting pastoral user rights
<b>Strategy 8.5</b>	Commune program should primarily focus on pastoral drop outs, but should also be open for others, without undermining the mobile production system.
<b>Strategy 8.6</b>	Ensure compatibility of mega projects with pastoral and agro-pastoral way of life
<b>Strategy 8.7</b>	Mega projects must be inclusive and participatory in planning and management and must promote benefit sharing by making pastoralists to be shareholders of mega projects; Cost-benefit analysis, environmental and social impact assessments need to be completed for future mega projects.
<b>Strategy 8.8</b>	Address cross-cutting issues such as gender, HIV/AIDS, HTP, Environment and generation of disaggregated data particularly in Oromia, SNNP, Gambella, and Benishangul Gumuz where the pastoralists and agro-pastoralists make up only part of the population.

# 1. INTRODUCTION

## 1.1 Background

Pastoralists in Ethiopia are mainly found in four lowland regions, Afar, Oromia, Somali, and the Southern Nations, Nationalities and People's (SNNP) regional states. Pastoral groups are also found in Dire Dawa, Gambella, and Benishangul areas (See Figures 1 & 2). The pastoral and agro-pastoral areas are characterized by a limited, variable, and unpredictable agro-ecological resource endowment that is generally hot and dry. The low and erratic rainfall that varies widely across space and over time is far from sufficient to support arable farming. The main livelihoods systems in these areas include pastoralism, agro-pastoralism, and those who have dropped out of pastoralism (Transitioning out of Pastoralism) and now survive on petty income-earning activities (Sara and Wekesa, 2008). Their livelihood strategies have evolved over centuries in response to the local environment and the hot and dry climate in which they live. Livestock production plays a major role in ensuring household food security for most pastoralists and agro-pastoralists. However, in recent years, they have also diversified into crop production, petty trades, beekeeping, wage, fishing, mining, handicraft, remittance, firewood and charcoal production, salt production, and incense collection as part of their coping strategy to climate change. The areas are also well endowed with natural resources such as wildlife, forests, medicinal plants, and many other wild products on which the people depend.

Pastoralists make optimum use of the dry lands by practicing a mobile and extensive livestock keeping system. Communal grazing, livestock mobility, and selective feeding are critical for the people's survival. Land access and use are governed largely by customary laws and institutions. The pastoral resource-use pattern is characterized by risk-spreading and flexible mechanisms, such as mobility, communal land ownership, large and diverse herds, and herd separation and splitting. The mixture of livestock is a system to manage risk. Although more vulnerable to diseases when compared with large stock, small stock like goats and sheep are cash buffers, for they have a high reproduction rate and they lactate during dry periods. Goats and camels can survive longer dry periods compared to cattle and sheep. The composition of livestock per family is determined by factors like personal preferences, ecological conditions, family size and available labor. All the while, they make maximum use of the available vegetation without degrading the environment. The agro-pastoralists practice rain-fed opportunistic farming and irrigation-based crop farming wherever possible besides keeping their livestock.

Pastoralists and agro-pastoralists in Ethiopia inhabit 63% of the country's landmass where they make a living out of, the otherwise unpromising semi-arid environment and where the rainfall supports hardly any crops. Nonetheless, their contribution to the national economy through supply of meat and milk, export earnings, and tourism is considerable. They raise a large proportion of the national herd, estimated at 42% of the cattle, 7% of the goats, 25% of the sheep, 20% of the equines and all of the camels (IGAD, 2016). All live animals and meat exports of the country are exclusively sourced from pastoral areas. In addition, over 70% of the wildlife parks and sanctuaries are found in pastoralist areas. These areas contribute significantly to the national economy roughly estimated at 12% of the GDP, but

no reliable economic data is available<sup>2</sup>. During the 2007 census, the population of pastoralists was 6% while agro-pastoralists made up just below 5% of the total population in Ethiopia (CSA, 2007). The communities generally live in isolated, remote, and underdeveloped areas scattered in more than 182 woredas. Human development and food security indicators for many pastoral and agro-pastoral areas are among the lowest in the country. In recent decades, human population growth, land use changes, and climate variability are all testing the sustainability of the pastoralist production system. Consequently, most pastoralists are driven out of the pastoral livelihood system because of loss of their livestock and environmentally destructive encounters, low income generation, and socially disgraceful livelihood strategies to make a living.

However, over the years, the development of these areas has experienced different policies and strategies with their own focus entailing social, economic, political, and ecological dimensions. The political dimensions followed the three distinct regime changes: the pre-1974 Imperial regime, the Derg/Military regime from 1974-1991, and the EPRDF regime from 1991 to present. The three regimes have had very varied pastoral policies characterized by slow links of pastoral developments that were not carried over to the next regime. Until recently, the areas were considered ‘unproductive’ and the inhabitants were politically and economically marginalized, leading to underdevelopment and correlate with global poverty. In addition, marginalization led to the development of misguided policies and conflict, which affected the sustainable livelihoods of pastoralists. As a result, the Past efforts through planned development interventions have been marked by a long history of poorly performed projects and unintended consequences such as eroding pastoralists’ customary tenure system, social capital, risk management strategies, and ecological disasters. Pastoralists supply very substantial numbers of livestock to domestic, regional, and international markets and therefore, make crucial contribution to the national economy (9%-16% of the GDP); even so, they are often undervalued.

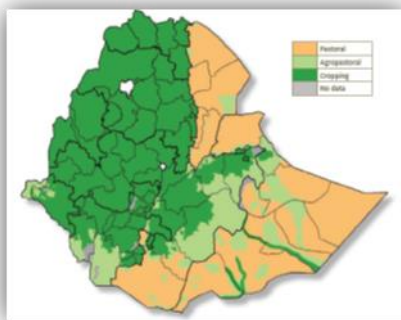


Figure 1: Pastoral population by type of livelihood zone

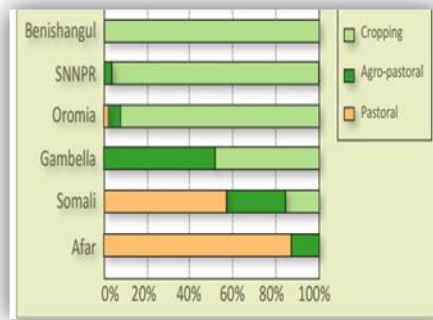


Figure 2: Pastoral population by type of livelihood zone

Source: CSA, 2007; Livelihood Atlas of Ethiopia, 2010

**Note:** Although Benishangul Gumuz is categorized as one of the agro-pastoral regions in many reports, by the regional experts on other issues of the livelihood Atlas of Ethiopia, the 2010 edition does not consider it as pastoralist or agro-pastoralist region as indicated in Figure 2 above.



Considerable recognition has been given to pastoral and agro-pastoral areas under the current regime. Article 40 (5) of the FDRE Constitution provided Pastoralists' the right to free land for grazing and cultivation as well as the right not to be displaced from their own lands<sup>3</sup>. Unlike the previous two regimes, the current government has attempted to incorporate pastoral development in its national development plans. Pastoralist interests have been institutionalized in the House of Peoples' Representatives in 2002 by way of forming a Pastoralist Standing Affairs Committee that brings together all members of parliament from predominantly pastoralist constituencies (Lister 2004). Government institutions such as the Ministry of Federal Affairs with a State Minister dedicated to pastoral issues, and pastoralist development institutions and programs of the regional governments and the research and training institutions in pastoral areas are among the notable government attention given to this part of the population.

Among the mandates of the recently reconstituted Ministry of Federal and Pastoral Development Affairs (MoFPDA) is to initiate and promote policies and strategies that can contribute to equitable development in the pastoral and agro-pastoral areas as well as the emerging regions, to prevent and resolve conflicts as well as to strengthen the relationship between the regional and federal states. Compliant with this mandate, and cognizant of the challenges and opportunities for Ethiopia's pastoral and agro-pastoral areas, the MoFPDA has been supporting a series of programs and projects designed to improve the lives and livelihoods of pastoral communities.

The MoFPDA as well as other development partners drafted a policy framework for pastoral and agro-pastoral areas in January 2017. The draft policy framework was reviewed on a workshop in July 2017. Based on the feedback, MoFPDA in collaboration with Mercy Corps and the USAID commissioned SEGEL Research and Training Consulting PLC to enrich the draft policy framework. MoFPDA led the study in collaboration with DPs under the technical support of its Core Advisory Team (CAT).

## 1.2 Scope

Policy is central to the success or failure in the development of communities. Likewise, policy can either promote or hinder economic and social development in pastoral and agro pastoral areas of Ethiopia. Specifically, the policy and institutional framework significantly affects equity, productivity and livelihoods. Effective policy analysis is informed and guided by deeper understanding of the context and broader consultations among stakeholders plays critical role.

The scope of this PAP areas policy gap analysis is guided by the objectives of the assignment. Implicit in the TOR, the policy analysis covers three interrelated activities: Context analysis; Regional Consultations and PADIF Development. The geographic focus of the context analysis includes Afar, Ethiopia Somali, Pastoral areas of Oromia and SNNPR, Gambela, and Benishangul – Gumuz regional states. The analysis

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<sup>3</sup> Article 40 (5) of Ethiopian Constitution

used appropriate participatory tools and techniques to understand the pastoral and agro-pastoral (PAP) livelihoods, vulnerability to poverty and resilience in the six regional states. The context analysis has been enriched by intensive desktop review of the existing policies, strategies and project/program lessons (state and non-state actors). The analysis captured regional variations to further inform region specific policies and strategic priorities and investment framework which are a stepping stone for the national level policy and strategic framework recommendations.

Basically, the scope of the policy analysis in general and this context analysis in particular focuses on the following six policy pillars which will further guide the development of PADIF:

- **Livelihood** This focuses on the different livelihoods of pastoral and agro-pastoral areas that depend on Livestock resources, Crop farming; Bee keeping, Tree and non-timber forest products, Trade and services. It also focuses on factors influencing food and nutrition security negatively or positively. This policy pillar assumes that pastoral issues must go beyond those related to livestock production, marketing and trade. A wide range of livelihood options are analyzed.
- **Disaster risks reduction:** This involves situations that include a major and widespread disruption to life and livelihoods of the community or society, from which most people are not able to recover without assistance from others, and the associated losses. It encompasses trends that curb the overall vulnerability to such situation and support local adaptation mechanism and community resilience.
- **Basic social service:** Assess the access and utilization of basic services (Health, WASH, Education and other basic infrastructures) and social protection; local ownership and sustainability, private sector involvement – lessons, challenges, opportunities, etc.
- **Governance and capacity development:** Public sector capacity building and governance (decentralization/federalism, public financial management, accountability and transparency at local levels, evidence-based decision making), Local governance (customary institutions) and decision making, and Capacity of pastoral organizations, coordination.
- **Policy dialogue and advocacy:** Policy making process for Pastoralism and pastoralists, the role of pastoralist and their organization in policy dialogue and advocacy for raising their voice to influence government action at local and national levels.
- **Conflict and Peace:** Local and cross border conflicts and insecurity, local conflict resolution mechanism and peace building. It also discusses on rangeland resource management and governance systems

### 1.3 Objective

The general objective of PAP areas Policy Analysis is to undertake a comprehensive analysis of pastoral and agro – pastoral areas development context, challenges and opportunities, emerging trends, and lessons, to help the Ministry of Federal and Pastoral Development Affairs (MoFPDA) in enriching and updating the draft pastoral policy and strategy document and prepare Pastoral and Agro-Pastoral Development Investment Framework (PADIF).

The specific objectives are:

1. Conduct a desktop review, synthesize available studies, and relevant reports of state and non – state actors’ development initiatives, peer reviewed or independent analysis report on pastoral and agro – pastoral areas development and humanitarian intervention, policy trends and coordination efforts to capture lessons learned, understand emerging trends, challenges and opportunities.
2. Conduct national and regional level consultations and field visits and with development partners, government sectors, private sectors, customary institution and community representatives to capture lessons, challenges, and opportunities on pastoral and agro pastoral development and coordination/harmonization efforts among stakeholders.
3. Produce final analysis document with policy and strategy recommendations and pastoral and agro – pastoral development investment framework which outlines the national and regional investment/development priorities with implementation approaches, expected results, resilience high level measurements framework, and coordination modalities.

As the first deliverables of the assignment, the first objective indicated above is the objective of this context analysis report.

## 1.4 Methodology

### 1.4.1 Study Approach

For this Policy Context Analysis, three categories of information (i.e., literature review, qualitative and quantitative) were collected. As a result, the study employed a mixed approach of research. The literature review retrieved relevant available scientific and grey literature on the topic being studied. The qualitative approach enabled to understand the social activities in a natural setting and collect subjective and personal information from pastoral community members, concerned government officials, and other stakeholders. The quantitative approach was employed to collect background socio-economic data and to document the socio-economic as well as governance activities of people in Pastoral and Agro Pastoral Areas. Thus, these approaches enabled the study team to collect both qualitative and quantitative information that supplement each other and ensure the validity and reliability of the information obtained. Throughout the process, secondary data was primarily an essential component of study process.

### 1.4.2 Data Collection Methods

#### 1.4.2.1 Secondary Data Collection Methods

The works of different researchers and well-known organizations were consulted to gather secondary data. A documentary research method was employed to gather the secondary data. This method helped the study team to collect both qualitative and quantitative information which could not be obtained through the primary data collection techniques. Hence, documents were gathered through formal literature search using a number of databases, complemented by a process of manual back-

search, as well as by snowballing techniques to identify additional literature. In addition, consultation with CAT members was carried out to highlight other documents for the study. These documents were screened, assessed and included in a robust analysis that included: articles that were published on academic journals; grey literature cited by published articles or recommended by country evidence specialists or interviewees, and published policy documents. Both grey and academic literature was included, but caution was made when including the grey literature.

Accordingly, more than 100 datasets were mapped corresponding to the search process and were assessed for the usefulness in generating understanding of policies, strategies and programs in PAP areas and their effective implementation. The data sets were then analyzed in the context of the literature pertaining to the existing data in PAP areas, and in line with the six policy pillars: Livelihood, Disaster risks reduction, Basic social service, Governance and capacity development, Policy dialogue and advocacy, and, Conflict and Peace. Thus, detailed analysis was made to examine which policies and strategies worked well and understand which ones didn't work and further extracted policy recommendations. Taken together, this study relied on the methodology outlined and benefited from primary data collection conducted in the study regions, zones, woredas and kebeles of Afar, Ethiopia Somali, Pastoral areas of Oromia and SNNPR, Benishangul – Gumuz, and Gambella.

#### *1.4.2.2 Primary Data Collection Methods*

The primary data collection methods include consultations and assessments at regional and federal levels in the six regional states, and their 15 respective woredas. A total of 28 KIIs and 40 FGDs were carried out. Federal level consultations included KIIs with CAT members as well as government Sectoral Ministries including Ministry of Education, Ministry of Health, Ministry of Finance and Economic Development, Ministry of Agriculture and Natural Resources and Ministry of Livestock and Fisheries (the two ministries are now merged), MoFPDA, Ministry of Youth and Sport, Ministry of Women and Children Affairs and Ministry of Civil Service. Furthermore, regional consultations were carried out in each of the capitals of six regional states of Ethiopia, namely, Afar in Semara, Ethiopia Somali in Jiggiga, Pastoral areas of Oromia in Adama and SNNPR in Hawassa, Benishangul Gumuz in Asosa and Gambella in Gambella town. In each regional consultation, representatives from regional Sectoral bureaus, opinion leaders, representatives from NGOs and other development partners, and, private sectors were engaged in both key informant interview and focus group meetings. The objective was to identify primary data on the successes, challenges and gaps of previous and existing pastoral and agro pastoral policies, strategies and programs operating in the target areas.

Key informants' interviews and focus group discussions were further held with experts and pastoral and agro pastoral communities at Woreda and kebele levels right at the village where the communities reside. H-Form' or usually called 'Rugby Post form'<sup>4</sup> was used to collect data from key informants and pastoral communities on the six policy pillars. The form was used to assist the study team to evaluate the performance of partnerships, programs, agencies, initiatives, and a range of social and environmental topics. Using the H-Form, participants assessed the strengths and weaknesses of

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<sup>4</sup> Tips for trainers: Introducing the 'H-form' - a method for monitoring and evaluation Susan Guy and Andrew S. Inglis, 2001 Scottish Participatory Initiatives,

pervious and existing policies, strategies and programs in PAP areas. Finally, participants reflected and suggested recommendations on the way forward to improve the situation on the issue discussed and evaluated by them. The method was very useful to capture data very easily and simultaneously from many experts and pastoral community members. It is important to note that the views of the individual experts and community members were not compromised and confidentiality is kept.

In addition, field observation is another method which was used in this study. The study team made field visits to the PAP kebeles to see the real living condition of the people and observe the physical cultural heritages on the ground. At the sites, discussions were conducted with the service users so as to have first-hand information. Note taking and photographing (as permitted by the PAPs) were important tools that were used to record information from observation during field visits. Field observations have had a significant value in the analysis and in the first draft and workshops' presentations as well as in the final report writing.

#### *1.4.2.3 Selection of Woredas and Study Participants*

Respondents for the primary data were selected purposively to obtain the required data. Community members who have ample information about the area and their communities were intentionally included after appropriate and relevant woredas from each region were selected (Figure 3 shows the selected woredas for data collection) In addition, vulnerable segments of the population such as women, youths, and elderly were selected and included in the study. The specific Woredas from the *Regions* were selected in consultation with stakeholders in an Inception Report validation workshop and after further verification by officials and experts of regional states. This enabled the consultant to be certain about the inclusion of sites that truly reflect pastoral and agro-pastoral communities in all six regions. The overall goal was to select pastoralist and agro-pastoral groups in the regions that might have faced different experiences and livelihood systems. Thus, to meet his objective, the selection of each of the Woreda under the study was done in collaboration with responsible government officials at Regional and Zonal level based on a clear understanding of the objective of the policy analysis assignment.

#### *1.4.2.4 Analyses and Validation*

This study has analyzed secondary data gathered from federal and regional offices as well as development partners. Policies and strategy papers from these offices were reviewed and examined. Information extracted from studies and research works of professionals involved in pastoral areas were also used in the analysis. In all the processes, primary data collected from stakeholders were analyzed and triangulated with desk review to augment the soundness of the recommendations.

After reviewing region specific findings, regional level consultative workshops were conducted at Jigjiga, Semera, Hawasa, Adama, and Gambella where the participants of the regional consultative workshops were invited from regional sector bureaus, Woreda Administrations, regional research centers, representatives of pastoralists, women representatives, NGOs, and experts of the regional Pastoral Area Development Commissions/Bureaus, and regional NGO/ development partners' staff. The study team presented a summary of the findings on the workshops. Based on this, the participants of the workshops

discussed in groups and in plenary while they also provided constructive comments on the reviewed policies and strategies related to pastoral area development. Their comments are incorporated in this document. In addition, national level validation workshops were carried out in the presence of stakeholders who participated in the regional workshops, representatives from federal government ministries, representatives from development partners and universities/ research institutions.

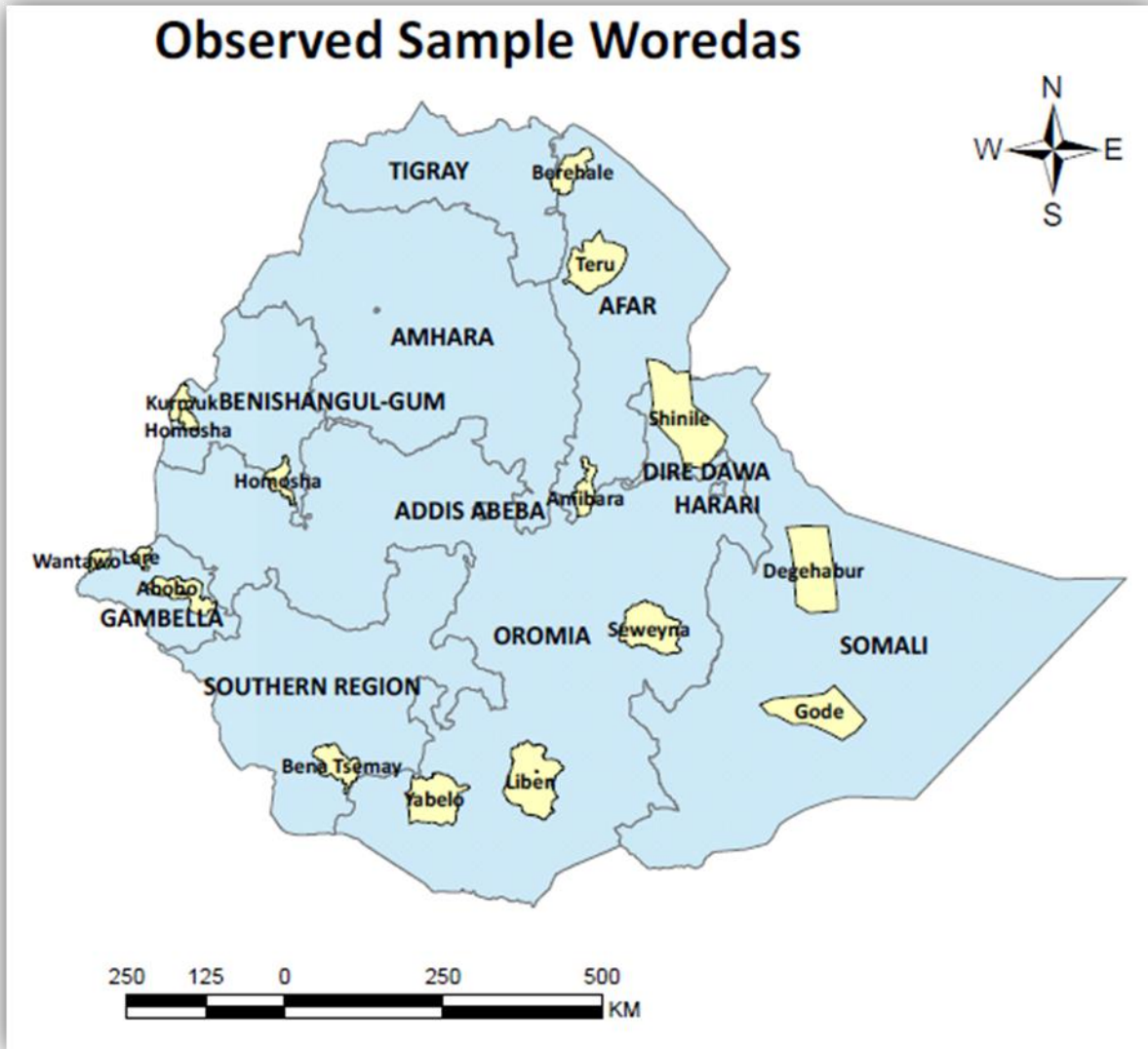


Figure 3: Location Map of the study areas in Ethiopia - Source: SEGEL, 2018

## 2. POLICY DEBATE AND ANALYSIS

### 2.1 Policy Assumptions

Since 1970s, billions of dollars were spent on pastoral areas of Ethiopia in the form of research, development and emergency food aid. However, documented research reports generally show that pastoralists' livelihood has been in a perpetual decline rather than improvement. The interventions

were aimed at improving living conditions, security issues, and risk management capacities of pastoralists although the plans were doomed to failure. Now every actor in pastoral areas asks: why are these pastoralists leading their lives in more deteriorated livelihood situations than before? Some ask about the future of pastoralism, while others ask 'can it still be considered as a viable economic activity' (Little et al. 2014). There are different debates and narratives regarding the causes and consequences of overall decline of the pastoral system and its future prospects.

On the one hand, the pastoral system is blamed for being ill-adapted and backward production and livelihood system, aggravating its own demise. It is often perceived as an outdated way of life, which is assumed to generate its own destruction and impoverishment (Little et al. 2008). Pastoralism is associated with inefficient land use, poverty, conflict, illegal trade and land degradation (Little 2013). Due to limited knowledge regarding the pastoral system or biases against it, policies against mobile pastoralism is officially promoted by the government for decades. This is partly reflected in strongly promoted sedentization and crop farming in marginal lands (Little et al. 2010).

On the other hand, population growth, increasing intensity of drought, negligence and inappropriate policies as well as lack of investment in pastoral areas dominate recent literature as the causes of vulnerability in pastoral areas. Recently, there is a trend of linking the problems of pastoral areas to powerful interest groups, rather than misunderstanding the system. Massive amount of money, powerful interests and personal benefits which can potentially lead to leasing out pastoral lands may point to the sinister motives and misguided policies. The political agenda of settling pastoralists for security reason exacerbated the problem and hid in the narratives of degradation, ignoring their livelihoods etc. The powerful, but harmful narratives about pastoralism still persist, indicating that it is vital to counter them with evidence-based narratives.

The record of policies in pastoral areas has been particularly poor. In some cases, policies have actively sought to disrupt pastoral livelihoods by restricting movement and encouraging settlement. An attempt to constrain existing livelihoods was one of the failings that made pastoralists poorer rather than enabling pastoralists. An approach which provides opportunities, even within an existing livelihood system, is likely to result in more people diversifying livelihoods away from pastoralism through trade or education (Sandford and Ashley, 2008). Policies and interventions have assumed that increased production will most effectively impact on the poor, rather than studying the multiple functions livestock perform and the need to address this in policy making. The strategies and constraints of the poor have been misunderstood and therefore policies have failed to influence them greatly. Policies and interventions have also frequently been unsuccessful at reaching the poor, either failing to target them or finding themselves subject to political capture by better-off households. Many of these failures can be attributed to the fact that policies and interventions have not sought to change the institutional environment or have failed to succeed in true institutional change' (Ibid).

Pastoral policies were influenced by the widely held view that communal land use is inefficient; its productivity is low and degrades the environment. Policies were informed by misleading but powerful theories such as 'cattle complex', 'tragedy of the commons', and 'land degradation narratives' (Anderson, 2002). It was widely believed that rangelands were undergoing land degradation and

desertification, with potential consequences of irreversible productivity decline, due to climate change, overgrazing, overstocking, and damaging soil management practices (Homewood, 2004).

The government's policy states its firm commitment to pastoral development. However, the underlining assumption of the policy promotes pastoral transformation based on assumptions of linear human development that passes from hunter-gatherer to pastoralism and then sedentary agriculture, with the ultimate goal of industrialization. The basis for such persistent assumptions is not clear but it seems to emanate from lack of knowledge regarding the origin and spread of pastoralism. Even though there are certain theories that support the above assumptions, there is evidence that points the origin of pastoralism to be more complex, and in some places originating after farming (Smith, 1992).

Available evidence shows that the Ethiopian policy on pastoral areas is still based on the concept of 'carrying capacity' that assumes stable ecosystem, rather than the dynamics (Little et al.2010). Furthermore, policy-making is conditioned and shaped by the political, social, economic, and historical context that the country intends to follow, with less concern for local context of pastoral system. Policy making is not linear and rational, but more complex, and is characterized by incremental, complex and messy processes, where overlapping and competing agendas, intertwined facts and values, implementation involving discretion and negotiation in the policy debate and formulation processes influence the whole processes (Wolmer, 2005). Knowledge, strong narratives, networks of influential actors, and political interest all have strong influence in making policy choices. It is on the basis of such facts that policies in pastoral areas are influenced by assumptions, narratives, powers of actors and interests. While professionals in pastoral areas basically argue in favor of mobility of livestock, the long-term objectives of the government of Ethiopia is to settle pastoralists along rivers and take-up crop cultivation. This is clearly stated in the introductory part of the draft policy statement (Ministry of Federal Affairs, 2008), and repeated in the current draft policy.

However, the team believes that the following questions have remained unanswered: who are the actors? Who can narrate the policy agenda? To what extent are we ready and capable of influencing the policy in the direction we need? Can we boldly inform the powerful political group the way out for pastoralism is a bit different from the way it has been tried so far? What are the underlying assumptions for the policy and on what concrete facts are those assumptions based?

In Ethiopia, the basic assumption of settling pastoralists is the dominant policy narratives to enable pastoralists' access infrastructure, control illegal cross border trade and problems of mobile systems. In reality, pastoral families in Ethiopia are less mobile, and more concentrated than the highland farmers. If service provision is an issue, shall we think of villagization of the highlanders as well?



According to Little and others (2010) 'the overall policy environment for pastoralism in Ethiopia still exemplifies many misunderstandings about pastoralism and its importance to regional and national economic growth. The current progress in understanding pastoral economies and their contributions to welfare and economic growth also is still at odds with official views of pastoralism as an economically arcane form of production and mobility as a cause of conflict and environmental abuse' (Little et al 2010). This is fundamentally important than lack of policy in pastoral area. Recognizing the economic contribution of pastoralism, the role of livestock in poverty reduction, foreign currency generation, and job creation even for people outside pastoralism is vital. Little et al (2010) estimates the GDP contribution of pastoralism to be more than 16 % rather than the commonly stated figure of 9 %. There is more now on the lack of practical actions than policy formulation, and in some cases clarifying contradictory policies and laws in pastoral areas.

Pastoralists themselves clearly state the policy biases and neglects.

The overall misunderstanding is also reflected in the objectives of pastoralists' production, and its wider implication. For instance, livestock has insurance value not only for the household who has the ability to liquidate their individual herds, but also from its ability to call upon assistance from fellow pastoralists in time of need through traditional social safety nets (Behnke and Metaferia, 2011). The authors confirm that about 10.5% of pastoral animals in Ethiopia are involved in livestock sharing networks through traditional assistance mechanism.

## 2.2 Opportunities and Challenges to Pastoralism: Contradiction

Despite the commitment of the government to transform pastoralists to sedentary agriculture, scholars still argue that pastoralism is a viable economic option in dry land regions, if appropriate and enabling policies are in place. Demand for livestock products is growing worldwide due to increased population, urbanization and the growing middle class in developing countries (USAID-Ethiopia, 2013). Department of Rural Economy and Agriculture (AU, 2014) predicts that the demand for livestock products will increase two to eight-fold between 2030 and 2050. This can be achieved if the challenges of climate induced vulnerability, scarcity of livestock feed, husbandry practices, and policy constraints related to land use, constrained mobility etc. are addressed. Livestock production in pastoral areas is

A pastoralist at Jabillo expressed the following in November, 2015:

The son is like his father. Government owned media talks the whole day and week about crop production and show a picture of bull for brief moments once in a while. If the government ignores livestock and pastoralism intentionally, what is wrong with young people to ignore pastoralism and migrate to urban centers, seeking casual jobs? He also asked a researcher who organized workshop at Yabello if he values livestock and if he sees pastoralism as viable livelihood option? Then the researcher answered positively saying 'I have been in this sector for the last 10 years because I value it; otherwise I should not waste my time'.

characterized by low reproductive performance attributed to input constraints such as feed, water, and veterinary services. In addition, the marketing system marred with irregularities, lack of infrastructure, credit sales that delay repayment, etc. is not well established.

One of the recent shifts in policy debate is the evolving nature of crop-livestock relations. For long period, the relationship between pastoral and agro-pastoral areas has been considered as competing for the same resources. This has been the trend in many African countries and highland areas of Ethiopia. This may be a policy option that facilitates the co-existence and complementarities of the two systems (UNOCHA, 2007). Scarcity of livestock feed in sub-Saharan African countries necessitated a new adaptation from pastoralists and agro-pastoralists so that they produce enough livestock feed. As a result, crop-livestock integration has become an important adaptation mechanism, where the two-production systems complementing each other, rather than competing for the land and labor (Herrero et al, 2012; Valbuena et al.2014, Powell, et al. 2004). Out of this, crop residues may account for as much as 60% of ruminant fodder in many mixed crop-livestock producers (Dixon, et al. 2010).

Even though crop–livestock–energy systems depend on the agro-ecologies, population density, producer and consumer demands and local markets, regulations, the long-term dynamism still requires further investigation. However, the indications are increased competition, slicing more lands from pastoralism, increasing pressure on land use with potential consequences for the environment as well as on the already dwindling pastoral economy (Dixon et al.2010)

One of the concerns is competing demand for crop residue as livestock feed, domestic energy source, and construction. This results in removal of a high proportion of above-ground biomass mixed crop–livestock farming systems, threatening soil fertility and future production potential (Dixon et al.2010). A more pressing concern is the loss of pasture land to expanding agriculture, national parks, and private investors and irrigation schemes that have put immense pressure on pastoral land. There are ample literatures on this (Gebre, 2001, Desta, et al. 2002, Tache, 2008). Some say that pastoralists are now confined to less than 50% of their land prior to 1970s. Of course, population has increased drastically in the last 30 years on this shrinking land. At national level, there is lack of land use policy that prioritizes land allocation for the right purpose. This is why researchers, policy makers, and development organization alike are concerned for the way out of such challenges.

### 2.3 Pastoral Transformation: A Need for Rethinking

Many pastoral communities are undergoing profound socio-economic and cultural transformations. On the one hand, government interventions are promoting integration of pastoralists into the national economy through sedentraization, privatization of communal lands, and infrastructural development. More and more people are taking up farming and diversifying their economic activities in addition to pastoral production. Population in pastoral areas is growing with diversified economic activities. The economic diversification is partly attributed to immigration of non-pastoral population and, is also the cause of increment of ex-pastoralists transitioning out of pastoralism. Little (2013) cautions the danger of such trend in further diverting attention away from pastoralists. The social organization and social support systems of pastoralists are also changing, owing to internal dynamics and external influences

(Tiki et al. 2011). Indigenous leadership is facing pressures from government administrations, while local safety nets are weakened due to declining livestock holdings caused by disease outbreaks, drought, and conflict. Conflict in pastoral areas itself is transforming, not only why conflict occurs, but also the intensity, scale and the use of modern arms. Therefore, there is a need to understand the complex dynamics, opportunities, and challenges. The opportunities created by the growing urban centers in pastoral areas require proper linkage of rural-urban economic relations.

## 2.4 Pastoral and Agro-pastoral Policy in Historical Context

An important feature of the pastoral policy in historical context is the introduction of international boundaries that changed the role and influence of traditional pastoralist institutions, and created national borders which divided well-established pastoral social, economic, and ecological units. Therefore, while in the pre-colonial period pastoralists moved relatively easily within these units, colonial border demarcation made these traditional movements being re-defined as 'cross-border' movements.

Even though Ethiopia was not colonized, our policy makers were trained based on the western range management science that emanated from such misunderstanding of pastoral system. In Ethiopian context, the unsettled land (Communal land used by pastoralists) was legally designated as no man's land and ready for development by government or private investor. Therefore, there was no policy regarding pastoralism, as it had no recognition as way of life, until early 1970s, when pastoral areas came to the attention of international NGOs, including USAID, World Bank, and EU which financed the study of rangelands in Ethiopia and initiated pilot projects. The subsequent development policies in the country are influenced by western range science in which density dependent decisions influence the policy and encourage settled agriculture. The extension services and provision of social services mainly focused on fixed locations, with very limited attempt of mobile education and health services.

### 2.4.1 The FDRE Constitution

The 1995 FDRE constitution enshrines relevant provisions under part three - Human and Democratic Rights. Particularly, the Constitution addresses the issue of pastoral and agro pastoral communities in the area of uses, fructose and abuses of property rights and the enjoyment of other economic, social and cultural rights in the following manner:

*"The right to ownership of rural and urban land.... is exclusively vested in the State and in the people of Ethiopia. This article affirmed that land is a common property, of the Nations, Nationalities and Peoples of Ethiopia and shall not be subject to sale or to other means of exchange." (FDRE Constitution Art. 40 (3))*

To give more emphasis for pastoral communities the constitution addresses the use rights of land:

*Ethiopian pastoralists have the right to free land for grazing and cultivation as well as the right not to be displaced from their own lands. (FDRE Constitution Art. 40 (5))*

Like any Ethiopian citizens the constitution provides the enjoyment of economic, social and cultural rights such as: to engage freely in economic activities and pursue a livelihood of her/his choice, to choose her/his means of livelihood, to equally access to publicly funded social services, and to design policies which aim to expand job opportunities for unemployed and the poor and shall accordingly undertake programs and public works projects. (*FDRE Constitution Art. 41 (1, 2, 3 & 6)*)

To make the full enjoyment of socio-economic rights, the FDRE Constitution imposes an obligation to allocate sufficient budget for the provision of public health, education and other social services (*FDRE Constitution Art. 41 (4)*)

In order to avoid unfair competition in the market and protect pastoral and agro-pastoral communities Article 41 (8) of the Constitution gives *'the right to receive fair prices for their products that would lead to improvement in their conditions of life which should be the objective that guides the state in the formulation of economic, social and development policies.'*

There are also other articles (e.g. article 25, 43, 44, 89) that are provided for all to benefit from development efforts without discrimination. Apart from this, the constitution considers other international conventions ratified by Ethiopia as parts of the law of the land (*FDRE Constitution Art. 9 (4)*). Due to this all international agreements that are ratified by Ethiopia like the ILO Convention NO. 167: focused on the protection of Indigenous people, and the 1960 International Convention on Economic Social and Cultural Rights, which propagates for the availability, accessibility, affordability and quality of basic services for all people without discrimination can be considered relevant legal provisions pertaining to pastoralists.

#### 2.4.2 The Current Land Tenure System of Ethiopia

Continuity and stability of land ownership is a crucial condition for sustainable development. Insecurity affects the perception, decision, and management of land users. Tenure affects virtually all decisions concerning land use systems. In Ethiopia, land tenure refers to the extent of the land use right only, as the ownership of all land in the country is vested in the nations, nationalities, and peoples of Ethiopia. There are three types of land tenure systems in pastoralist areas of Ethiopia: State, private, and communal. Private land holding refers to land held by small-scale farmers (agro-pastoralists) and investors. It involves the right to exclude others but it does not involve the right to sell land as this right is prohibited by the FDRE Constitution. The State holding includes national parks and reserves, forests, lakes, rivers or land used for the provision of basic services such as education, health, etc. Communal land holding portrays the dominant kind of holding in pastoralist community where land is communally used for grazing, woodlots, and other purposes.

The Ethiopian constitution states that 'Land is a common property of the nations, nationalities and peoples of Ethiopia'. Scholars argue that such provision opened the way for confiscation of pastoral lands. It is argued that secure land tenure promotes livelihood, avoids conflict and promotes sustainable resource sharing. There is a recent move to recognize communal ownership of land and issue land use certificate at communal level. This was complicated by existence of different interests from the

government and the communities, particularly how to demarcate the boundaries. The pastoral community identify boundaries either on clan basis (Somali and Afar), or use is at wider public (Borana), but differentiate the boundary on their own criteria. However, the government structure is based on arbitrary demarcation that does not recognize the traditional boundaries. There has been progress in recent months in Afar and Borana to accept the traditional boundary demarcation for land certification. This is a positive development, but it still requires closer follow-up, backed by rules and regulation that draws its legitimacy from the customary tenure systems. Little et al. (2010) also quote Yemane (2009) who identified a potential contradiction between the 1995 constitution and article 1194 of the Civil Code which states that immovable properties in Ethiopia which are vacant and without master shall be the property of the state.

### 2.4.3 The 2003 Rural Development Policy

The 2003 Ethiopian Rural Development Policy has sections on pastoral development initiatives. It reiterates the need to focus on livestock development, specifically recognizing the need to develop livestock feed and water supply. This was positive attempt, but these problems are more challenging today than when the policy was formulated<sup>5</sup>. This policy includes addressing market and marketing infrastructure challenges, market institutions, and the need for improving livestock production that fulfills the demand of consumers. Since the formulation of this policy, the marketing system has improved in terms of market infrastructure and access to markets in the Middle East, albeit seasonally. This policy also calls for settling pastoralists along rivers with possibility of using irrigation (MOFED, 2003). Referring to other subsequent policy documents, Muller-Mahn et al. (2010) found the unchanging situation of the government commitment towards transforming pastoralists to other forms of livelihood. This, as stated, assumes the unsustainability of pastoralism. Open policy support for sedentary agriculture enabled many in the area to grab land for private use (Napier and Desta, 2011), which in addition to other factors is constraining pastoral production system. The main contents of the policy are:

The 2003 RD Policy focus on pastoral areas was centered around livestock development, specifically recognizing the need to develop livestock feed and water supply. The long-term strategy aims to sedentarise pastoralists by developing irrigation and implementing settlement programs.

- Voluntary settlement along the banks of the major rivers as the main direction of transforming pastoral societies into agro-pastoral systems, from mobility to sedentary life, from a scattered population to small pastoral towns and urbanization.
- Complementing sedentraization by micro- and small-scale enterprises development in the urban centers and off-farm activities in the rural areas.
- Undertaking integrated development based on irrigation and focused on livestock production, complemented by static and mobile education and health services as well as rural roads, rural energy and water supply, rural telephone services etc.
- Co-ordinated and concerted federal support for program ownership by the Regional States and communities, with capacity building to enable them to lead development at all levels.

<sup>5</sup> We have to ask what we have achieved by the policies so far and ask is it a policy problem only?

This aborted draft policy envisions voluntary transition towards permanent settlement especially along the perennial river banks with government support is centered around irrigation through water harvesting at household levels and strengthen the constructions of multi-purpose dams to support irrigation which ultimately enable pastoral and agro-pastoral people pursue sedentary life with diversified and sustainable income.

- Allowing, enabling and coordinating the private sector and NGOs to play a positive role in line with the policy direction and within the framework of the broad program and strategy, after mobilizing their own resources.
- Tapping indigenous knowledge and skills on animal husbandry and rangeland management.
- It is obvious that this earlier policy document is more participatory, and inclusive of the pastoral system than the subsequent draft produced in 2008 by the same ministry. Mussa (2004) quoted an informant regarding the policy ‘the wind is now blowing towards the Pastoralists but

it has not yet rained’, meaning that there are some good things being said in government policy documents but the actual implementation is yet to be seen. But the subsequent policy draft is more disappointing as stated earlier for being more top-down and non-participatory

#### 2.4.4 Ministry of Federal Affairs, 2008 Draft Policy

Although it was not implemented, a policy document with a title “Draft Policy Statement for the Sustainable Development of Pastoral and Agro-pastoral Areas of Ethiopia” was issued by the Ministry of Federal Affairs in 2008.

The major policy issues in the draft policy document included:

- Encourage and support voluntary settlement of pastoralists and agro pastoralists along the river banks and support the expansion of irrigation development to diversify and sustain the livelihoods of pastoralists and agro pastoralists.
- Transform the pastoral and agro pastoral economy over time to conform to market-oriented economy;
- Reduce sole reliance on livestock through human capital development and diversification of sources of income;
- Improving natural resource management and utilization by reviewing existing land use policies and land tenure systems;
- Improving pastoral productivity by conservation of the environment, improvement of domestic animal genetic resources and other biodiversity;
- Improving market networks and providing appropriate social services to mobile pastoralists;
- Providing financial services appropriate to pastoralists;
- Reducing and managing risks such as droughts and floods that often reduce assets and increase food insecurity.

The consistent commitment of policy with regard to settling pastoralists lack adequate information and policy analyses regarding the assumption. Settling pastoralists along rivers, does not consider many factors that need to be fulfilled (Yimer, 2015). For instance, the size and fertility of the land available along river banks, ownership of lands, skills and psychological preparedness required to take-up new livelihoods are not properly detailed out. In addition, Yimer (2015) contests not only the settlement policy of Ethiopia, but also failure to acknowledge the critical importance of mobility.

Pastoral policies in Ethiopia suffer from knowledge gaps emanating from top-down approach. Little attention is paid to the views of pastoralists and policy advocates, research outcomes.

This later policy is more top-down approach, recommending by-passing the existing social system and pastoralists' indigenous knowledge.

#### 2.4.5 The Draft Pastoralist Development Policy Framework - 2017

This new draft policy is detailed and more coherent than its predecessors. The policy document was organized along two policy pillars in which the development strategy in the pastoral and agro pastoral areas is envisioned. Accordingly, one of the policy pillars anticipates all-inclusive maximum utilization of the surface and ground water potential and other natural resources of pastoral and agro-pastoral areas for people, animals, irrigation, and hydro-power generation. The other pillar anticipates minimizing risk/vulnerability and building resilience of poor people to climatic shocks, particularly droughts and floods, through enhancing water harvesting and saving schemes and modernizing livestock and crop production. Moreover, addressing the social and economic problems through the provision of appropriate basic infrastructures and services which fit to the pastoralist life styles for both humans and animals is given due emphasis in the pillars. The policy largely assumes settlement and crop production as the best strategies to improve the quality of life for pastoralists. The policy document includes 13 major policy statements that include voluntary settlement, improving water development and management, livestock sector development, promotion of modern agriculture linked to soil and water conservation, improving access and quality of health care services, Improving access and quality of education, developing integrated urban and industrial development in pastoral areas, infrastructure development, strengthening the development activities on environment, forest, and natural resource management, traditional conflict prevention and resolution, guarantee the development of peoples centered democracy and good governance, human resource development and implementation capacity building, eradication of harmful traditional practices and increase benefit for women and youth.

The general policy statement of the Federal Government in the short and medium term is to reduce pastoralist mobility, and in the long-term to sedentarize pastoralists, which is contrary to the customary rangeland management system. The land use proclamations of the regional governments are, in most cases, a direct copy of the Federal Policy and fails to contextualize pastoral issues. Possible loss of land use rights if individuals do not properly manage the land, or cause damage to the land, is underlined by land management rules. However, how this could be applied to communal pastoral lands remains unclear. There is also no specified institution responsible for the implementation and monitoring of the policies and proclamations to determine how effective they are.

IGAD Review Report, 2016

Generally, the core goal of the policy pillars is water centered sedentization and modernizing agricultural sector in pastoral and agro-pastoral areas. With this pillar the government envisions a stable pastoral and agro pastoral community through the facilitation of gradual and voluntary transition towards permanent settlement especially along the perennial river banks. Moreover, the provisions in the draft policy make sedentary agriculture the center of service provision or implicitly assume sedentary life for the development of infrastructure and provision of social services. The contradiction is that the draft policy recommends mobile school yet it discourages the pastoral way of life in the long-term.

However, discussions with woreda officials, community representatives, and stakeholders' consultation workshops show that the core targets of the policy should be livestock, pastoralists and their way of life and should aim at reducing vulnerability and building resilience. Therefore, making sedentary agriculture the core of the policy may not be a wise choice in dry land regions due to its rainfall variability, soil characteristics, and the potential for livestock production. The water centered development policy is good but the potential benefit and changes that could be brought by the result should not be overemphasized.

#### 2.4.6 Climate Resilient Green Economy (CRGE)

This overarching development policy aims to build a resilient economy to the negative impacts of climate change and would be achieved by 2025 with no net increase in emissions relative to today.

#### 2.4.7 Social Protection Policy (2012)

Social Protection is part of the social policy framework that focuses on reducing poverty, social and economic risk of citizens, vulnerability and exclusion by taking measures through formal and informal mechanisms to ascertain accessible and equitable growth to all. The Policy mainly contains coordinated protective measures to those susceptible to serious vulnerability due to natural and manmade risks and establish multifaceted social insurance mechanisms to prevent exposure to risks, strengthen earnings and improve livelihoods of citizens, improve employment opportunities and living conditions, and provide legal protection and support for those who are vulnerable to abuse and violence. In this policy, segments of the society vulnerable to different social and economic problems, especially, children, women, persons with disabilities, elderly, labor constrained unable to make earnings, and the unemployed who are living under difficult circumstances are given special attention. However, its implementation has still challenges mainly due to institutional capacity and resource constraints.

#### 2.4.8 Other National Policies of Indirect Relevance

As part of the Ethiopian population and based on Article 89 of the constitution, pastoralists and agro-pastoralists have the right to benefit from the provisions of all other policies including Environmental Policy, Energy Policy and the Biofuels Strategy, Agriculture and Rural Development Strategy, Water Resources Management Policy, Health Policy, Education Policy, Food Security Strategy and National Policy on Biodiversity Conservation among the major ones which need to be mentioned. EU Delegation to Ethiopia(2017) suggests a comprehensive and integrated policy approach in pastoral and agro-



pastoral areas, which include investment in infrastructure, provision of basic services (education, health, water, and communications), poverty alleviation policies focusing on economic diversification strategies through sustainable environmental management, decentralization, and participatory political decision-making, recognition of the cultural and economic values of pastoralism, recognition of socio-economic role of pastoralist women, recognition of the potential role of traditional institutions in peace-building and conflict management towards promoting sustainable peace in pastoral and agro-pastoral areas. Of course, such recommendations have been said differently at different times. It seems now the right time to be more action oriented, by allocating such duty to specific and responsible government agency, and other actors to support the action, where the government is lacking the necessary resources, including capacity gaps. But the question many ask is 'is there any genuine political commitment'

#### 2.4.9 Pan-African Policy Framework

The AU's flagship policy document on pastoralism is the Policy Framework for Pastoralism in Africa. The Framework is the first continent-wide policy initiative, which aims to secure, protect and improve the lives, livelihoods and rights of African pastoralists. While underpinned by the recognition of the critical role of livestock husbandry in the life of pastoral communities, the policy framework expands the scope to address other concerns of pastoral communities such as healthcare, education, land tenure, women's rights, governance, ethnicity and religion of pastoral communities. It recognizes the economic contribution of pastoralists to development and acknowledges the importance of indigenous institutions to land management. It also draws attention to aspects of pastoralism that transcend national borders, such as pastoral mobility, spread and control of livestock diseases, environment and conflict, which call for regional harmonization of policies. The Pan-African policy framework also aims to enhance the political representation of pastoralist women and men, integrate pastoral development policy into national policy frameworks, promote sustained conflict resolution, legitimize alternative models of service delivery in pastoral areas, maximize efficient livestock production by enabling pastoral mobility and securing access to rangelands, manage risk by institutionalizing drought management, and support the marketing of livestock and livestock products (Pan-Africa, 2010).

#### 2.4.10 United Nations Declaration on the Rights of People, 2007

The declaration acknowledges amongst others the control by indigenous peoples over developments affecting them and their lands, territories and resources that will enable them to maintain and strengthen their institutions, cultures and traditions, and to promote their development in accordance with their aspirations and needs. It also recognizes the respect for indigenous knowledge, cultures and traditional practices that contribute to sustainable and equitable development and proper management of the environment. Articles 1, 5, 10, 14, 21, 27, etc. are among the many articles that can be cited in this regard.

#### 2.4.11 Policy Gaps:

##### Land Use Policy

One of the policy deficits in Ethiopia is the lack of land use policy. The land use rights particularly communal land use in pastoral and agro-pastoral areas is still a hindrance that challenges the future of

the livelihood of pastoralists and agro-pastoralists. Land use in pastoral societies was traditionally governed by a set of rules and institutions to avoid degradation that was caused by overuse of the land. However, because such customary rules and institutions are weakened, traditional land management system is not as effective as it was. Developing land use policy benefits not only the pastoral areas but also the country in general. An extensive study on pastoralists' land use was conducted by Oromia regional state in 2007. The study identified and mapped lands in pastoral areas based on the potential and appropriateness for different uses. However, its implementation lagged behind. As many things have changed in pastoral areas since this study, it is important to update the information for Oromia and conducting similar studies for other regions to develop land use policy is important. In the highland areas such as Sululta where hay is produced and transported as a means to sustain pastoral herd during droughts, most of the lands have been taken by industries (Figure 4).

This is one of the major concerns in the country in general, and in the pastoral and agro-pastoral areas in particular. If land use policy is designed and implemented, it can also come-up with new livelihood options in pastoral areas, such as bee keeping, commercial hay production, and irrigated hay production.



Figure 4: Industries encroaching Sululta Prime fodder producing areas.

#### *2.4.9.1 Gaps in Policy Assumptions and Processes*

- Policy is based on certain assumptions. In Ethiopia, the policy assumptions for rural development are based on resources available in the higher potential areas or even non-existent resources. For instance, the policy assumes high rainfall and fertile soil in modernizing the agricultural sector using modern inputs such as fertilizers, selected seeds etc. The policy pays little or no attention to the challenges facing moisture deficient areas. In addition, it generally assumes labor availability without the appropriate skill.
- Policies of intensification are based on the assumptions that there will be enough inputs for the transformation of livestock sector. Based on the assumptions, the government always calls for reducing the number of livestock for pastoral households and focuses on quality rather than numbers. This partly emanates from lack of understanding the logic of extensive mobility and the

production objectives of pastoralists. There is also lack of appropriate extension services in pastoral and agro-pastoral areas (Yimer, 2015) to guide the gradual intensification of livestock sector.

- The policy intention of the government to promote livestock production and export on the one hand and encouraging privatization, commercial farming and irrigation projects in pastoral areas, on the other are at odd.
- The fallacy of perpetual decline of pastoral system allowed national governments either to neglect or design policy that is not participatory and aimed at changing the pastoral ways of life without the participation and consent of pastoralists. Neglect, marginalization, misconception, inappropriate policies are said to be the reflection of wrong assumption or misunderstanding and misinterpreting the system and its dynamics.
- The national policies are assumed to be implemented in a blue print manner for all regions without ensuring the compliance of these policies and strategies to the reality of the pastoral community, the Afar PASDEP and PSCAP of Somali Regions documents are a case in point (Wabekon, 2007).
- The needs and strategies of poor livestock-keepers may be different from the rich. This means enabling institutions for the poor may be different from wealthier counterparts. This is true for different geographical regions and social contexts. In some areas, the clan structure is strong and influential (like Afar and Somali), while in other areas clan role is embedded in the wider governance system (Borana). There should not be uniform assumptions and policy making processes.
- There have been strong top-down policy formulation processes, which the government influencing the process without adequate participation of the pastoralists in policy making, highly focusing on political acceptability and technical solutions, and biased towards agriculture. Genuine participation in the policy formulation process is necessary and important. Pastoralists should be engaged in identifying key problems, root causes prioritizing the problems and solution. The interaction between institutions and livelihoods is complex and it is critical that policies are built on the knowledge of pastoralists and agro-pastoralists on factors which constrain them. This can happen through genuine participation.
- Many of the root causes of vulnerability in pastoral areas reflect institutional constraints and disabling institutions, rather than technological and technical constraints which have traditionally been the focus of policies and interventions. For each constraint one must identify the institutions which facilitate or constrain efforts, and craft policies to moderate the views of these institutions.

#### *2.4.9.2 Recommendations*

##### **General Recommendation**

- Little et al. (2010) suggested policy options that are meant to sustain the efficient use of variable dry rangelands by protecting the importance of pastoral mobility without forcing pastoralists to sedentize; giving due recognition to indigenous tenure systems that insure pastoralists access to land and water resources promoting regional and domestic trade rather than mainly focusing international and high-risk markets. In this regard, the potential of the domestic market is found to be immense, which Little and Tiki (2015) considered as 'elephant in the room'. The linkage between center and periphery has been so weak, and less recognized by the government. There is a need to develop marketing system, market institutions, and functional value chain with all needed

regulatory and organizational set-ups of pastoral producers and consumers domestically and abroad. There is a need to specify the duties and responsibilities of market actors. The recent live animals marketing proclamation is a positive development in this regard. However, it is still not properly come into action.

- Harmonization of Sectoral policies is needed in Ethiopia. For instance, Ethiopia gives emphasis to promote livestock export, which originates from pastoral areas. But privatization of the rangelands, development of commercial farms etc. are promoted on the same land. This affects the already constrained production system and livelihoods. This is also in direct contradiction with the long established communal ownership of land.
- While there are positive gains concerning policies in pastoral and agro-pastoral, Sectoral policies such as agriculture, education, health, animal health, and environmental protection, it needs to take into account to take the peculiar social, ecological and livelihood settings of pastoral communities.
- Pastoralist area extension system was designed for highland context/agrarian communities but not for pastoralist context. So, pastoralist-oriented extension system has to be redesigned and developed.
- Some of the policy challenges emanate from ignoring or misunderstanding the production objectives of pastoralists, production and marketing decision, and the role of livestock in the overall lives of the pastoralists. There is a need to understand production objectives, map livestock routes in Ethiopia in order to understand their location and status, how herds are managed and why.

### **Recommendation to the Commune Program**

The range of policies pursued as indicated above had a tendency to neglect the importance of mobility of pastoralists as a rangeland management strategy, and instead envisaged rapid socio-economic transformation policies based on sedentraization. However, it is often argued that complete sedentraization is hardly the basis for a stable livelihood in the fragile ecology of pastoralism, and may become even a source of conflict, hence sedentraization

- should not be the center of the policy frame work but an option;
- should primarily focus on pastoral drop outs, but should also be open for others, without undermining the mobile production system;
- should be done based on resource mapping and land use plan. Build on already existing settlement areas. Somali region reported sign of degradation and resource conflict around commune program already. Hence there is a need to consider the needs of mobile pastoralists and who are willing to settle;
- should be considered as a safety net primarily for pastoral drop outs, but to be open for others, not undermining the mobile production system;

Furthermore, in the commune program

- diversification/crop production should be supported by natural resources potential, and science and technology to be adaptive to the changing and variable climate to be effective in the long term;
- should see the complementarity of state and non-state actors to improve services in the commune as well as mobile production system.

### 3. LIVELIHOODS

Livelihood is a means of securing necessities of life. It includes the capabilities, assets, and activities required for a means of living. Pastoralism, agro-pastoralism, and TOPs are the major livelihoods practiced in the Ethiopian pastoral and agro-pastoral areas. The livelihood of the pure pastoralists is exclusively based on livestock rearing. The livestock in the pastoral areas consist of cattle, sheep, goats, equine (mainly donkeys) and camels (mainly in Afar, Somali, and Borana and Karayu in Oromia). The survival, number, and condition of these livestock determine a household's wealth and ability to continue their traditional livelihood patterns. Mobility, usually within recognized and well defined long-standing migration routes, and the ability to access natural resources, such as pasture and water, are fundamental to the continuation of this livelihood.

Agro-pastoral livelihoods combine extensive livestock rearing and rain-fed cereal production (typically sorghum, wheat, and barley) for household consumption. The area under crop cultivation is mainly restricted by the availability of labor within the household and the ecology of the area. Mobility remains important also for these households. Diversification has always been an important part of household livelihood strategies, serving as a means of expanding and testing economic opportunities, spreading risk, building social and political networks, and dividing human, natural and physical capital across multiple sectors (Ellis, 1998). Households use combined or sequenced strategies of diversification, intensification and migration to cope or adapt to shocks (Hussein and Nelson, 1998, Scoones, 1998). Much has been written on the establishment of a diverse portfolio of assets and strategies as a critical part of sustainable rural livelihoods, and innumerable programs have been designed to help the rural populations to diversify their livelihood base. The key strategies of pastoral livelihood are mobility, herd accumulation, herd diversification, herd splitting, reserve of rich-patch vegetation areas, and redistribution of assets - a practice of pastoralists mutual assistance system in food, labor, and cash on a reciprocal basis in response to seasonal changes in the arid environment. Cycles of livestock accumulation, collapse, and rebuilding have also been the defining features of the pastoral way of life.

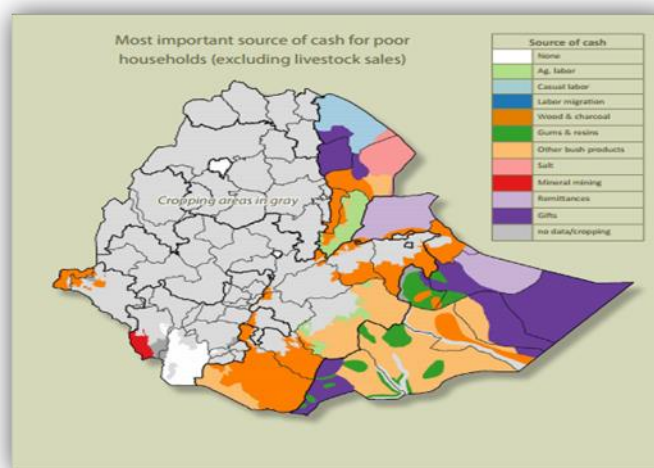


Figure 5: Most important cash sources for poor pastoralists

ToPs are households who have lost their livestock and now depend largely on the ‘sale’ of family labor. They are settled on the periphery of major urban centers and in the internally displaced person camps. The majority remain on the margins performing low-skilled labor-intensive activities, casual labor, collecting and selling of bush products.

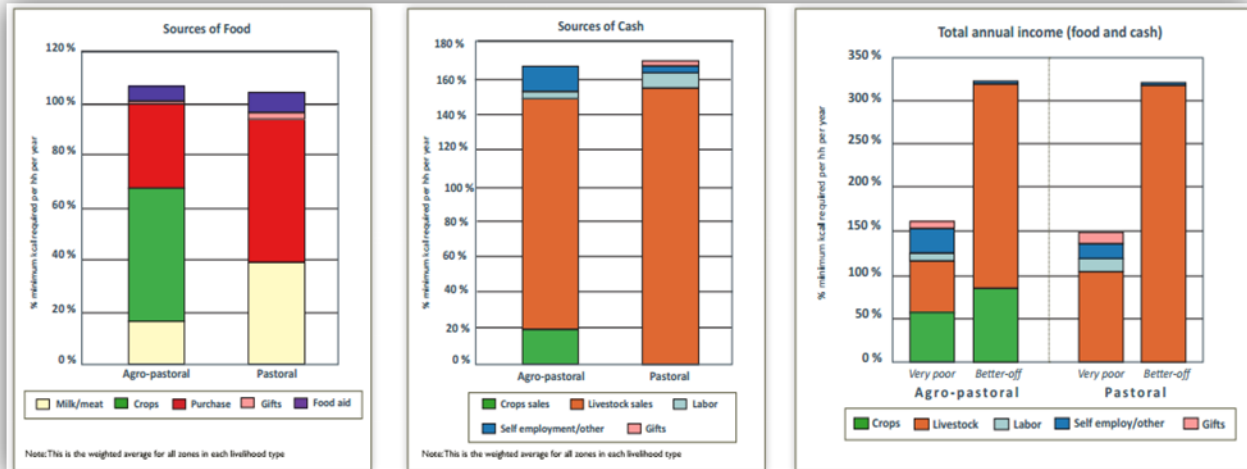


Figure 6: Sources of food, cash, and annual income in pastoral areas

Temporary droughts and low market prices may induce pastoralists to pursue alternative income generating strategies that threaten their natural environment, such as producing charcoal from the scarce vegetation if they cannot sell or feed their livestock (Toulmin 1994; Devereux 2006).

### 3.1 Livestock

The Ethiopian policy and strategy document on livestock development is indicated as one of the focus areas of the government. Livestock are the basis of pastoralist livelihoods, and they are also crucial to agro-pastoralists for whom cultivation gives greater or lesser rewards depending on the local rainfall conditions. To pastoralists livestock are insurance as they provide social links through bride wealth, inheritance, and as ritual objects. Livestock are a means of subsistence and prestige goods that enable individuals to establish social relations with other members of the society. Hence, any interventions in health, water and sanitation, nutrition, and education must take into account the importance and role of livestock in pastoral livelihoods and well-being. Livestock perform multiple roles: they also provide income through the sale of live animals and animal products, in particular dairy, and provide the household with food (milk, meat, blood).

The types of livestock kept by pastoralists vary according to climate, environment, water availability and other natural resources, and geographical area, and may include grazers (cattle, sheep, donkeys) and browsers (camels, goats). Cattle are found almost throughout the pastoral and agro-pastoral areas, often rivaling camels in numbers, and far outnumbering them in southern Oromia (Borana and Guji). In the far west of the country they often even outnumber sheep and goats (Gambella, Benishangul

Gumuz). Camels are adapted to hot temperatures, lowland bush terrain, especially in the rangelands in the eastern half of the country (Afar, and Somali). Pasture utilization is based on mobile grazing and browsing.

#### Appropriate extension services needed

'Our children and wives are becoming more pro-farming than pastoralism because pastoralist institutions and extension service providers are being led by people from farming community. This practice has to be reconsidered and improved' -Pastoralist elder from Borana. The quotation from this elder show the inappropriate extension services provided in pastoral areas.

Official statistics of livestock in pastoral areas is very scant. However, some rough expert estimates indicate that pastoral areas account for about 20 % of cattle, 40 % of sheep, and 40 % of goats, and 100% of camel in the country (Jabbar et al, 2007). Best use of rangelands in pastoral areas is achieved through the use of extensive pastoral livestock production with species diversification to use different ecological niches. Mobility enables pastoralists to take advantage of pasture resources that are only seasonally accessible and allows access to salt patches (critical for animal health) and other resources and services.

Government policy has been supportive of the livestock sector through a wide range official, regulatory, and institutional policies. As stated in the Rural Development Policies and strategies of the Ethiopian Government (2003), livestock focused development will constitute the basis for change and increase welfare among pastoralists.

The RDPS emphasizes the need to maximize the use of the local knowledge and skills in the planning and implementation of development programs in pastoral areas. Policies on improving veterinary services and the availability of feed, promoting credit access, and developing a credible certification system to enhance export are among the positive tangible steps taken by the government to support the sector. The livestock subsector is also one of the focus areas of the Ethiopian Agricultural Transformation Agency. Government commitment to the livestock sector can also be evidenced by the status given to the sector under in the newly established Ministry of Agriculture, Livestock, and Fisheries.

However, the policy translation in to actions is still limited and hence there are still hard realities that need to be tackled. Recent publications by researchers and development partners on pastoral areas report that the pasturelands are shrinking fast; the ratio of livestock to humans is on a perpetual downward trend. The livestock mortality rate is still very high due to many factors and the productivity of livestock in Ethiopia is among the lowest in the world. A host of factors that influence livestock productivity include, access to veterinary services, regular watering, feed supply constraints due to deterioration of grazing and browsing lands and lack of adoption of high-yielding breeds. Key informant interviews with experts in Afar, Somali, Borana, mention that, deterioration of grazing lands due to invasive species, and in recent years, the increased concentration of herds in certain areas due to restriction of mobility have resulted in the degradation of range lands over vast areas. According to a key informant, in Afar regional state only, *Prosopis juliflora*, an aggressive invasive woody species has

already covered more than a million hectares in the region rendering the vast pastoral range lands unusable.

### 3.1.1 Animal Health

Livestock diseases cause mortality, limits productivity, and affect human health (zoonosis) (Morton and Kreven, 2013). Many efforts have been made to control livestock diseases and provide adequate veterinary services in pastoral areas. Specifically, mass vaccination campaigns enabled the control or even eradication of killer diseases such as rinderpest. However, livestock diseases such as trypanosomiasis, pasteurilosis, caprinepleuropneumonia (CCPP), foot and mouth disease (FMD), black leg and anthrax; parasites such as ticks and inadequacy of facilities were among the reported animal health problems. In the last ten years alone, there have been repeated import bans from Middle East countries on livestock from east Africa due to concerns of RVF and other diseases.

The growing high value market in Middle East and North Africa is an opportunity for pastoral producers. However, access to these and other high value end markets is constrained by food safety standards and regulations of importing countries, which pastoral producers could not fulfill under the prevailing production and marketing conditions. The existing trend also shows that the local markets can easily be affected by food safety concerns. For instance, the recently published article on aflatoxin (Gizachew et al. 2016) sent unprecedented shockwaves among milk consumers and producers in Ethiopia and alerted policy makers who angrily refuted the result. Even though the impact of such findings on smallholder and commercial dairy farmers can be immense, the need to regulate the food safety and insuring consumers' safety is an unavoidable fact to the country.

The provision of veterinary services is an important strategy for assisting pastoralists to protect their livestock and maintain the benefits of livestock ownership. In pastoral communities where livestock are highly regarded as a capital asset, veterinary services can help to prevent sudden loss of livestock due to acute diseases which cause high mortality.

In terms of access to vet services, the Ethiopian government has undertaken many activities, including preparation of regulatory systems, training and deployment of Community Animal Health Workers (CAHW), and publishing Minimum Standards and Guidelines for CAHW System in Ethiopia that legitimizes CAHWs (Little et al. 2010). CAHWs have revealed their potential to significantly improve animal health in areas where professional service providers are thinly spread. In addition, Little et al (2010) summarizes the attempts of the government as:

- Proclamation No.267/2002 on the need for a veterinary statutory body in Ethiopia for certifying veterinary professionals and para-professionals, including CAHWs;
- Development of private veterinary pharmacies and CAHW networks in pastoral regions;
- Creation of the Animal and Plant Health Regulatory Directorate in the federal MoALF;
- Increasing recognition within the MoALF of the damaging impact on the private sector of free veterinary inputs during emergency/droughts;
- Wider use of veterinary voucher schemes during emergencies (mainly by NGOs)



While acknowledging these positive changes, there is still slow progress and inconsistencies between what policy states and what actually takes place in practice. Poor livestock health services remain one of the main constraints to livestock production in Ethiopia. According to Jilo et al. (2016), the national animal health service delivery in Ethiopia covers only 40-45% of the country's population. This low service coverage is attributed to lack of personnel, shortage of drugs and equipment, pastoral mobility, and highland oriented animal health service delivery. Hence, they suggest the need for policy reform to widen the role of private veterinarians to increase coverage. In this regard, FAO is encouraging the government to promote the role of private veterinary services across the country in pastoral systems and further define the public veterinary sector's regulatory role of disease surveillance, disease control policy development and implementation - instead of clinical service delivery since private pharmacies do not replace the regulatory and monitoring role of public veterinary services, but complement the system by supporting CAHWs to provide basic animal health services. However, as Gedlu, and Klooster (2011) mentioned, the sustainability of this system requires the standardization of selection and training of CAHWs and the establishment of private veterinary drug supply systems - work FAO has been supporting. But as observed during 2012-15 by researchers, the way drugs handled, prescribed, and administered require reconsideration (Tiki, 2014). For instance, vet drugs are sold on the market as maize or any goods, and no prescription is required. In the Somali and Oromia regions, FAO supported the development of a livestock disease control strategy document to enable the utilization of scarce resources by prioritizing approaches that involved private practitioners and CAHWs. Using this as a springboard, FAO is working to support the national livestock disease control strategy that will address the different roles of the public and private practitioners in Ethiopia.

Given the particular health risks posed by influxes of livestock from neighboring countries (e.g. Murule pastoralists from South Sudan and Felata pastoralists believed to have come from West Africa are cited by key informant experts in Gambella) and economic importance of pastoral livestock, there is a particular need for policy reform to address the delivery of veterinary services in trans-boundary areas and strengthening the quarantine services (Silkin 2005, findings from Oromia workshop). These trans-boundary diseases and trade challenges will be increasingly important in the future, especially if predictions of future climate variability are valid. In addition, the newly developed Livestock Master Plan provides a good direction on what actions are needed in the future regarding surveillance, vaccination, control and veterinary drug regulation and administration.

Paradoxically, pastoralists live in livestock disease prone regions with limited veterinary services. The multifaceted impact of livestock disease on pastoralists is detailed sufficiently (see Sandford and Ashley, 2010). Pastoralists either do not know the livestock disease prone zones or make decisions to move there when they have no options.

The extreme climatic conditions experienced in the pastoral lowlands are also cited as a challenge to retaining key experts in many pastoral areas. Poor infrastructure, the mobile lifestyle of pastoralists over the vast areas, high delivery costs, and reluctance among qualified vets to live in remote areas has hampered animal health service provision for Ethiopia's pastoralists. For example, a veterinarian who was assigned in Teru, in Afar regional state, has left after only three months of services. According to key informants, the absence of the basic lab equipment, medicine, other materials as well as inadequate

operational budget for the veterinary services in addition to the remoteness of the area were the reasons given for his departure. Staff mobility is also very limited and hence only occasionally do staffs venture outside their clinics to investigate outbreaks and render services.

### 3.1.2 Policy Recommendations

Integrating animal health and food safety standard becomes the main component of revolutionizing livestock sector in pastoral areas so that the objectives of building livelihood and ecological resilience are achieved. This requires thorough examination of the requirements, availability of production inputs, skill and knowledge gaps, infrastructural requirements, and access to finance to fulfill production inputs. Standardization of lab facilities at different levels is also another area the policy must support. Strengthening community-based animal health service is another area where the animal health policy should encourage.

Policy reform to widen the role of private veterinarians and attract private animal health services is another area for consideration. The policy should also encourage the use of ethno-veterinary knowledge that exists in pastoral areas of Ethiopia for its complementary role with modern veterinary medicine requires due attention.

The veterinary service policy needs to map the zones and work on ways of making such disease prone areas recognized by pastoralists. The prevalence of diseases in certain corridors affect not only mobile pastoralists, but also other neighboring herds, as interaction of livestock happens in markets, on mobility routes, and even when they return to their village. Disease related information flow is also vital for mobility and marketing decision making. For pastoralists who are close to border areas, information flow on both sides of the international border is vital. Adoption of IGAD and AU policy frameworks may play key role in this regard.

Government needs to design a policy that promotes the provision of conducive working environment and competitive salary and benefits in pastoral and agro-pastoral areas to retain key staff. In the long-term, it is vital to support the local people to advance into higher education by increasing the quality of education facilities and teachers right at the elementary level. Special attention should be given to enhance quality education through the expansion of the current school feeding programs and boarding schools. The private sector should also be incentivized to invest in animal health services. Government must also allocate adequate operational budget for the veterinary services and facilitate routine staff mobility outside their clinics to investigate outbreaks and render services in remote locations.

### 3.1.3 Resource Management

#### 3.1.3.1 Livestock Feed

Feed shortage in both quality and quantity is a major constraint affecting animal production in Ethiopia. Available information reveals that the country fulfills less than 70 % of its feed demand. Feed shortage is a critical constraint that limits the productivity of livestock production in lowland pastoralist and agro-pastoralist systems. For example, a report by Oromia livestock development agency estimate Borana

feed deficiency to be about 27 % (Mezmur et al 2015), whereas study by Oromia Water Works Design and Supervision Enterprise (OWWDSE, 2010) estimates the deficit as high as 58 %. Information from experts in the region and pastoralist respondents confirms the existence of huge gaps between annual demand and what the ecology can supply. A recent field report (Tiki, 2013) shows that demand for animal feed increased drastically in the last couple of years, without being accompanied by proportional increment in production hence inflating prices. The solution to feed shortage is a complex effort that requires understanding of why past efforts have not solved the problem. This calls for understanding fodder production and marketing in the context of whole production system- livestock production objectives, opportunities, constraints, actors, and policies.

Feed scarcity, high cost of feed, and feed price instability in the local and international markets necessitates the use of alternative and locally available feed resources (Salem, 2011). Livestock producers try to exploit all possible opportunities to cope with scarcity, expanding the feed base to previously little known and unconventional feed sources. Some of these have been in use for decades in certain areas, while they are being adopted by others very recently. For instance, household and horticultural wastes, thinning and leaf stripping from maize and sorghum, sweet potato vines and tuber, banana and enset plants are some of the less known feed sources (Tolera, 2008).

In Ethiopia, livestock for the export market originates from pastoral areas, mainly Borana (Little et al. 2015). But the region is characterized by scarcity of livestock feed that slows down growth rate, leads to low production and reproduction performance, delayed age of onset of puberty, long parturition intervals, low conception rates and low overall lifetime reproductive performance (Tolera 2008). Therefore, livestock production input such as feed supply should consider other complementary activities and strategic shifts towards commercialization of the sector. In this regard, promoting value addition in the form of fattening is one strategic move. If improved fodder production or access to commercial fodder is linked to livestock value addition and livestock marketing, it contributes to poverty reduction and enhances livelihoods of pastoralists.

Available information shows that, even under normal condition, livestock price in pastoral areas is less than 50 % of the terminal markets (Aklilu et al, 2013). The price substantially drops during droughts. Recent study in Borana shows that pastoralists sold livestock at less than 20 % of the normal prices during 2011 droughts (Tiki, 2013). Therefore, improving the feeding condition and promoting value addition has a huge potential of improving the gain for pastoralist producers. This value addition can take place in ranches, fattening grounds in urban centers, pastoral areas, and even at household level as it is evident in other regions in Ethiopia.

### *3.1.3.2 Fodder Production and Constraining Factors*

It is argued that technology can alter production system, costs of production, and market structure (Staal et al. 2008). According to Rangnekar (2011), farmers consider relative advantage, observable results, divisibility, simplicity/complexity and initial cost to compatibility of the technology. Low technology adoption, including improved variety is reported as the main challenge to solving feed scarcity. On the one hand, innovation capacity limitation of producers is cited as a cause of low

technology adoption (Hall et al. 2008). Limited attention of research institutions to promote adoption of technology they generated is another factor. In most cases, the reason for non-adoption blames the adopters, rather than questioning what lacks on the technology generation and extension sides (Rangnekar, 2011). The research works focused on technology generations, understanding agronomic and nutritional characteristics of feed resources, animal responses to the types of feeds and feeding practices, feed production, management, and utilization. According to FAO (2011), feed technology adoption is influenced by production objectives and level of commercialization.

The solution to feed shortage is a complex effort that requires understanding of why past efforts have not solved the problem. This calls for understanding of fodder production and marketing in the context of whole production system- livestock production objectives, opportunities, constraints, actors, and policies. The government of Ethiopia is focusing on improving food security and sustained economic growth. Livestock is considered as one strategic sector. However, the contribution of the sector, particularly from pastoral areas is not well acknowledged. As a result, attention given to feed improvement is mostly on papers, and not translated into action. Feed marketing lacks institutions, guidelines, and regulatory aspects. Value addition and commercialization component are missing or not well developed. Government institutions mandated to implement feed improvement have done little so far. Providing concrete information on the extent of feed scarcity challenge may assist policy makers to rethink about vulnerability of pastoral producers and the need for resilience building through asset protection.

### *3.1.3.3 Institutions, Regulations, Policies*

The contribution of livestock sectors to the national economy of Ethiopia is said to be well below its potential. This is mainly attributable to the malfunctioning of input-output markets (Gebremedihin et al. 2009), lack of policy attention, and subsistence production system. Livestock sector analysis by team of experts identified a number of policy issues and regulatory systems that require policy responses (Shapiro et al. 2015). In the highland areas, where rainfall is relatively abundant and transport system is better developed, access to land is constrained by competing demands for different uses (feed, food, and fuel) and institutional bottlenecks in allocating the land to investors. In the lowland areas, absence of road networks, under developed transport system, and ecological conditions (lack of moisture) constrain access to land that can be used for production of animal feed are the other challenges worth mentioning.

There is no designated land for fodder production or institutions that promotes fodder production and there is lack of legal framework for protecting fodder producing lands from encroachment by other land use practices such as urban expansion, crop production, and industrialization (Mezmur et al. 2015). Crop land is encroaching onto the existing grazing lands, exacerbating feed shortage (Assefa et al. 2013). The main bottleneck to the production of fodder is the absence of land use policy.

In most pastoral areas, solving livestock feed problem can be considered as half way to the overall solution. It is the fundamental and major causes of pastoralists' vulnerability to climate shocks, as well as market volatility. Whenever there is deviation of rainfall from normal, pastoralists incur huge asset loss and socio-economic disturbances. The land is already degraded, shrunk and overcrowded. There is a

need for livestock feed policy that increases availability and ensures the quality. The policy should be comprehensive enough to consider commercialized supply of animal feed at reasonable prices. Transporting livestock feed; especially hay and crop residue over 600 km is neither economical nor sustainable. The policy need to focus on the available and appropriate forage technologies that make use of locally available resources, including natural resource conservation.

#### *3.1.3.4 Range Management*

Ecologists have tried to explain management of African rangelands using different ecological theories such as equilibrium, disequilibrium, carrying capacity, and recently rangeland resilience. The issue of desertification, overgrazing, land degradation, all influenced the policy approaches.

Many have now come to the conclusion that African rangelands are characterized by variable environmental conditions and where the carrying capacity and limiting herd size may not be the primary management options. Human disturbance, role of culture and social systems are important component of the management issues (Homewood, 2004; Little, 2008).

Rangelands are crucial for human subsistence, livestock production, and wildlife habitats. Rangelands provide multipurpose use of the rangeland plants that include for food, feed, firewood, charcoal, timber for construction, traditional medicine, shade, spices, gums, resins, dyes etc. Trees that are protected include those used for rituals/meeting and praying place, shade, fodder, medicinal value and construction purpose. Planting new trees is not common among pastorals communities. However, in normal circumstances pastoralists don't cut trees without the approval of traditional law enforcement officials. Those who break the law are punished. It is not surprising, therefore, that to obtain maximum rangeland benefits, multiple values should be developed concurrently. Even when only grazing/browsing of livestock is emphasized, impacts on other values must be considered. In properly implemented grazing management practices, livestock are manipulated to meet a designated purpose (e.g. meat, milk, etc.) in a manner that does not impact other land uses adversely. The objective of range management should be to achieve the maximum level of livestock production that simultaneously is commensurate to maintaining or improving the condition of rangelands. To achieve proper use by livestock:

- Rangelands should be stocked with the proper number of animal units, and kind of animals that are best suited to the particular ecology
- Grazing should be permitted only during the proper season
- Grazing animals should be distributed appropriately on a rangeland

Currently shrinkage of communal grazing land has put immense pressure on the existing communal grazing land. For instance, Virtanen et al. (2011) estimated the Borana and Guji rangelands to be less than 40% of their size prior to 1960s. The remaining slice is threatened by land degradation caused by bush encroachment, deforestation, overgrazing, and poor farming practices. Increase in both human and livestock populations is placing pressure on the rangelands resulting in intensive degradation especially at watering points, along livestock paths and on hilltops. Land degradation and climate change have posed risks to the lives of people living in pastoral communities. Land alienation and fragmentation

are the other major problems of communal rangeland (ranches, crop production, enclosures, settlement). Similar trend of shrinkage is observed in Afar and Karayu areas due to expansion of irrigated agriculture, National park, and sugarcane plantation (Fratkin, 2014). The Afar pastoralists have been alienated from huge tracts of Awash valley basins since 1960s. Since 2005, more than 100,000 ha of land are taken for the new dam and sugarcane plantation (Fratkin, 2014). It basically takes the prime grazing land along the rivers and fallback areas for the dry season.

Bush encroachment is another main concern in all pastoral areas of Ethiopia. In general, degradation of

the rangeland eco-system is a serious threat to the pastoral areas of the country. *Prosopis juliflora*, *Acacia mellifera*, *Xanthium strumarium*, *Abutilon graveolens*, *Parthenium hysterophorus*, *Opuntia ficusindica*, *Althernanthera pungens*, *Euphorbia tirucalli* and *Amaranthus spinosus* are the major species that have invaded the rangeland. Many grass and herbaceous species have reportedly declined from the rangelands due to bush encroachment. A recent study by Forrest et al (2015) in selected location of Borana rangeland reveal that clearing the bush is capable of contributing to increased production of feed resources and reducing poverty. The authors termed the bush encroached land as 'forage deserts'.

Forrest et al., (2015) conclude that clearing significant amount of land from bush and converting this to managed fodder bank significantly enhance community resilience to drought shocks. Other strategic approach in matching the available grazing land with livestock population is diversifying the livestock species with the available vegetation type preferably for more camels and goats and de-stocking of male animals, old and unproductive females.

Pastoralists have mixed feeling regarding the effectiveness of rangeland rehabilitation efforts. A pastoralist explained this as: 'if someone is sick from chronic disease, every time he/she undergoes treatment, there could be some level of hope and recovery, but with further deterioration of the health and finally death. The same is true regarding the current rangeland rehabilitation efforts'. This

pastoralist explains the issue of rangeland rehabilitation from the perspective of piecemeal and fragmented efforts he has seen in the last three decades, which have not solved the problem. This

**Borana**  
Participant of the workshop from Borana acknowledge the diverse and complex problems the pastoralists are facing, but summarize it using the analogy of the Genale river that has nine tributaries as: *Galaanni sagal abbaan isaa Gannaale'*, literally translated as 'Genale river is a father of nine small rivers' i.e. nine small rivers converge to form one big river-Genale. This is to mean that pastoralists' problems are many, but it mainly revolves around two major issues namely: rangeland/pasture and Water Development. Participants suggested that the government need to consider construction of dams with community participation which can be used for human, livestock as well as irrigated fodder production. The uncoordinated and project-based efforts are said to be yielding limited and unsustainable results. Therefore, range and water management must make the core of the future development work.

means the current technique and practice of rangeland rehabilitation, such as bush clearing requires rethinking, probably from systemic approach to rangeland management. The quotation from the pastoralists also point to the existence of important local knowledge which has been ignored. Therefore, there is a need for comprehensive natural resource management policy, which also takes the local context and indigenous resource management practices into account. This has to take into consideration the 15th goal of Sustainable Development Goals: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Improving productivity and livelihoods in a sustainable way can only be achieved by safeguarding the productivity of the natural resource base on which the livelihoods and production systems depend. Hence, range improvement programs should integrate the conflicting needs of livestock, plant communities on the rangelands in question, and people with the multiple uses (ranches, crop production, enclosures, and settlement). Prosopis invasion, charcoal production, noxious bush encroachment, overgrazing, etc. are among the management challenges in rangelands.

#### *3.1.3.5 Land Certification and Compensation*

In Ethiopia, the national land tenure legislation arising from conditions within arable agriculture in the highlands is directly applied to the lowland pastoral rangelands. The Regional States do not have reformulated policies and proclamations/strategies in the context of pastoralism; instead, they just copied from that of the Federal Government without adding tangible values. There are different threats to land tenure security under which the land holder may lose the holding right. Most prominent ones are displacement because of private investment and eviction on account of the need to use the land for public purposes. It is clearly spelt in the laws of the different States that investors have the right to access rural land. If land is to be given to investors, particularly for agricultural purposes, it is likely that the best fertile lands or rangelands are given over to investors which push pastoralists to degraded and marginal lands. Similarly, the rural land use right could be terminated if that land is required for more important public use. Nevertheless, in accordance with the laws, any individual or organ that has lost land holding for public uses has the right to get compensation for his lost property and benefits. For the rural individual land holders, displacement compensation of the land is set to be 10 times of the average income secured from that land during the preceding five years. There is nothing mentioned about the communal resources of pastoral communities. Under the 1995 Constitution, the Proclamation (456/2005) has relaxed possible land transfer. While prohibiting sale and collateralization, the proclamation permits limited land leasing (rental arrangements) and inheritance rights to be exercised and limited forced land redistribution to only irrigation development. This proclamation was enacted for the purpose of ensuring tenure security; strengthening property rights of farmers; sustainably conserving and developing natural resources; establishing a land data base; and establishing efficient land administration in the country. The proclamation mandated the regional governments to carry out improvements to the land administration system, to implement land-use planning, and to give compensation for expropriated lands. Lately, the initiative to issue communal certificate to pastoral communities in Afar and Oromia potentially benefits pastoralists, as they can negotiate, get compensation or take any legal measure to protect their rights regarding their land.

### *Internal Dynamics of Land Tenure*

In Borana, there has been a tradition of preserving fodder (kalo) for calves and weak animals for dry season. This is at community level where adjacent settlements reserve a communal grazing land. There are rules that specify when; who and which type of animals can utilize the reserved grass. The recent development is enclosing grass reserve (kalo) at individual household level. Since enclosing grazing land for private use is not allowed by customary rangeland management, individuals use farming as pre-text to fence the land. After fencing the land with pretext of cultivating, individuals cultivate small proportion of the land and keep the remaining for growing fodder that they use during dry season (Tiki et al. 2011, Helland, 1998). A third level of kalo is emerging, linked to rehabilitating degraded or bush encroached rangelands. NGOs and government institutions involving in rangeland rehabilitation are encouraging another community managed semi-private dry season grazing reserves (Napier and Desta 2011). Under this condition, cut and carry is the main means to access the kalo. This idea is now linked to the ongoing Watershed management scheme and rehabilitating bush land by the government, where degraded rangelands are protected from interference for facilitating recovery.

While some argue against private enclosures, others praise the positive roles of enclosure in bridging a gap between dry and wet seasons (Tiki et al 2011, Napier and Desta, 2011). In other regions, the positive role of rangeland privatization is highlighted, but with further economic, social and political stratification (Neudet, 2015). Such stratification is also emerging in Borana and other pastoral areas where the social, economic and political influence of rich pastoralists who also involve in livestock trade is increasing. Despite the arguments against range privatization, it is growing faster than ever before. But there is lack of information regarding the extent of private enclosures, perception of pastoralists and potential roles they could play in increasing availability and access to fodder

A number of drivers are identified for the emergence of different types of enclosures in the communal rangelands (Napier and Desta, 2011). These include: increasing drought risk and the need for reserving feed for weak animals, land use and land cover change particularly bush encroachment and the need for managing land from cleared bush by NGOs, human and livestock population growth and increased resource competition, and commercialization of livestock (expansion of livestock markets) that necessitated commercially available fodder (Tiki 2013), and government policy that encourage private use right of land. More importantly, weakening of the customary range management rules is cited as main contributing factor to the emergence of private or semi-private enclosures (Napier and Desta, 2011). These emerging issues require new tenure arrangement. Unless supported by land use policy and some legal provision, of course with community participation, future resource use conflict will be inevitable.

#### **3.1.4 Livestock Watering**

Provision of adequate water for livestock is one of the most important aspects of rangeland management in pastoral areas. Available and potential sources of water always must be examined simultaneously with the availability of forage plants. Livestock consume more water in hot, dry seasons than in cool wet periods. Water requirements of livestock also depend upon the species and type of



animal and ecological condition of the rangelands. Nevertheless, in planning for water supplies, it is the maximum seasonal utilization that determines the amount of water that must be provided on a rangeland. In situations of extreme aridity, livestock are often forced to graze as long as 3 days between watering. Inevitably, cattle, sheep, and goats lose weight under these conditions. Cattle are particularly susceptible to water shortages because they should have water every day although the existing practice is 2-3 days intervals. Grazing as far as 25 km from their water source, livestock can develop an insatiable thirst, with death frequently resulting. In general, a daily requirement of 25 L of water per animal unit is the acceptable minimum amount per day. Water consumption rises when animal live weight or milk production is improved. Securing adequate water underpins the ability of households to earn cash income through water-dependent production activities such as livestock keeping. Households must balance the daily trade-off associated with gaining access to water - allocating time, labor, and money that could otherwise be spent obtaining alternative income, or caring for children, or attending school, or purchasing other essential goods. Water scarcity is especially prominent across Somali Region, where there are low rainfall levels and few significant aquifers (rocks that store and transport water beneath the ground). Borana in Oromia has also no known surface water and the wells are concentrated in limited areas. There is also no permanent river crossing the area. Livestock exert significant stress on the water base in this predominately lowland region. Groundwater availability is also a concern in regions such as Northern Afar.

#### *3.1.4.1 Policy Recommendation*

Livestock production input such as feed supply should consider other complementary activities and strategic shifts towards commercialization of the sector. In this regard, promoting value addition in the form of fattening is one strategic move. If improved fodder production or access to commercial fodder is linked to livestock value addition and livestock marketing, it contributes to poverty reduction and enhances livelihoods of pastoralists. The feedstock policy should also enable contract feedstock farming, potentially linked to cooperatives.

Improving the feeding condition and promoting value addition has a huge potential of improving the gain for pastoralist producers. This value addition can take place in ranches, fattening grounds in urban centers, pastoral areas, and even at household level as it is evident in other regions in Ethiopia.

There is a need for livestock feed policy that increases availability, as well as ensures the quality. The policy should be comprehensive enough to consider commercialized supply of animal feed at reasonable prices. Transporting livestock feed; especially hay and crop residue over 600km is neither economical nor sustainable. The policy need to focus on the available and appropriate forage technologies that make use of locally available resources, including natural resource conservation. The policy should also encourage public private partnership investments in commercial irrigated fodder production.

Pastoralists need to be supported through training by Pastoralists' training centers with DAs and other stakeholders working in the area with technologies that enhance feedstock availability and efficient utilization of feed. In view of this, herd management skills of pastoralists need to be strengthened

through training on important topics like camel/goats/cattle husbandry, pasture production and management, crop residue improvement and utilization, etc.

There is a need for policy that promotes ecologically sound water point development and distribution in the lowland areas to efficiently utilize the temporal and spatial variability in the availability of forage. This helps to avoid localized degradation, soil erosion, and gully formation that reduces the potential of an area to produce good quality forage. The Government of Ethiopia should strongly protect traditional herd mobility corridors as a strategy to utilize temporal and spatial variability in the availability of forage. Strong policy should be enacted to speed up the clearing of noxious bushes particularly the invasive species- *Prosopis juliflora*. Pastoralists should be trained on the use of controlled burning as a range management technique to increase production of good quality forage.

There is a need for a comprehensive natural resource management and land tenure security policy with clear and enforceable laws to overcome the loss of important dry season grazing. The policy must strive to support the increased availability and promotion of sustainable management of the water resources, land and grazing and browsing areas in the rangelands. It should also be geared towards enhancing the capacity of pastoralists in rangeland management skills and the strengthening local government institutions to monitor progresses. Development programs focusing on rangeland management is often low or negligible. Hence, in addition to strengthening its support, government needs to design a policy that encourages development partners to invest in the improvement of rangelands. The socio-cultural dynamics of the pastoral communities and its impact on the rangelands and natural resource management system must be supported by empirical research.

### 3.1.5 Livestock Marketing

Many pastoral producers reside far from urban centers and relevant market centers. They also have difficulties meeting the quality standards expected by both urban and export markets. Specifically, the requirements for quality animals make access to physical infrastructure useless for pastoralist, unless they produce the required product (IGAD, 2008). This is further aggravated by frequent drought and lack of feed in nearby markets (Tiki, 2015). Pastoralists, therefore, face particular constraints in accessing new markets and suffer reduced demand for products as a consequence of the changing structure of livestock product markets.

Increasing awareness among herders to make livestock production market-driven is among the major focus areas mentioned in Rural Development Policies and Strategies of the Ethiopian Government. Putting in place an efficient marketing system for animals and animal products is indicated as critically important for sustainable development as well as for the improvement of herders' commercial culture. By producing for the market, pastoralists enter the cash economy which logically leads to more specialization and efficiency. As part of putting in place an efficient livestock marketing system in the pastoral areas the first focus area is to increase livestock/especially cattle off-take. In this regard, cooperative marketing can enable pastoralists to meet quality, safety standards, and supply of the quantities demanded by larger buyers. These will improve standard of living because by selling their livestock asset pastoralists obtain cash to buy cereal, food, medicine (both for the pastoralists and their

livestock), send their children to school, and finance other essential expenditures that require cash. In addition, the cash income generated at the market improves access to consumer products and long-term investments (e.g. Adriansen, 2006; Riseth and Vatn, 2009).

Marketing also contributes to the ecology because it can enable pastoralists to exercise proper livestock management, because pastoralists can destock livestock in times of drought and buy (restock) after the drought (Turner & Williams, 2002). This helps pastoralists to adjust their livestock population to available feed resources making their production more sustainable against changes in climatic conditions (Verbeke et al, 2009; Adriansen, 2008).

Barrett et al. (2004) indicates that when pastoral households in Ethiopia participate in livestock markets, they do so in relatively small volumes and at varying rates over time. In pastoral areas, livestock is sold to meet family cash needs to purchase food and clothes and to pay educational and medical expenses (Hurissa and Jemberu 2002; Gebremedhin, Hoekstra, and Jemaneh 2007). Barrett et al. (2004) discussed several reasons for the limited nature of market off-take from the pastoral areas. First, with banking services largely lacking there are few investment opportunities in the pastoral areas, making live animal herd-building the primary means of storing wealth. Second, because most of the resources required for livestock production are free, pastoralists have limited demand for cash income. In the event that pastoralists need cash income, the need is usually met by selling a few animals, which are less productive in terms of milk and breeding. Pastoralists' market participation is also limited by other factors, such as high transaction costs. Given their distance from markets, there are a number of intermediaries that require payment for their services, which erodes the profits from selling animals (Devereux 2006). Transport costs are very high and the infrastructure is inadequate, as are the financing and information systems that traders also need. The infrastructure development needs to consider the existing local, regional and global condition. There is increased urbanization in different pastoral areas, fast changing information technology and the need for access to electricity to stay connected with the global conditions.

Umar and Baulch (2007) detail how transaction charges are not limited to transport alone but also include local taxes and the costs of holding, fodder, and water while a buyer is found. For small-scale traders with little working capital, accessing markets is particularly difficult unless they are willing to operate on a credit-based system with local traders or cooperatives (Umar and Baulch 2007; Gebre Mariam et al. 2010; Hashi and Mohamed 2010). Also limited access to market information and the reluctance of pastoralists to commercialize cattle due to social importance are mentioned as reasons for the low off-take rate (ILRI, 2013). Therefore, pastoralists are more inclined to build larger herds and flocks for cultural prestige, to accumulate wealth or pay dowries (social functions), and as drought-coping mechanisms than to build a large herd for increased commercial off-take. Public support for pastoral livestock markets has been less substantial, even though livestock production contributes significantly (estimated between 9-16%) to the national GDP (Little et al, 2010). Hence, the speedy implementation of the policy of improving market networks and the restructuring of the pastoral and agro pastoral economy in a market-oriented manner is vital. Moreover, the provision of financial services appropriate to pastoralists is critical to enhance the integration of pastoralists to the mainstream market of the country.

Fulfilling disease free zone requirement for meat export has been argued as an impossible venture

#### Informal Credit, Borana

In Borana livestock marketing value chain, the suppliers, who mainly are small-scale traders or pastoralists/traders, provide a large proportion of their operational capital as credit to large-scale traders. Such reverse credit from poor to better-off individuals in Borana is not well defined and operates on a more informal basis. This credit operation traverses social and geographic boundaries and the informal rules lack the means of enforcing market agreements, either through a legally-binding document or culturally-imposed sanctions, such as pressure from clan elders or other customary leaders. If there is a written contractual agreement, the violators can be traced and brought to court even though there is no guarantee of this happening. However, many local traders and pastoralists do not ask for a formal written agreement because it may be interpreted as outright display of mistrust by the other party and would be very difficult to legally enforce

under current condition (Little et al. 2010). However, alternative approaches: commodity-based approach (Rich et al, 2009), and promotion of cross border trade (Little et al. 2010) have been suggested to increase the viability of pastoral production. This requires proper input supply (veterinary services, proper disease surveillances and control, feed supply, and market infrastructure, including facilitation of border posts for customs and other legal requirements). In addition, access to financial institution is important, which currently bankrupted many small traders and pastoralists through reverse credit (Tiki and Little, forth coming).

Properly functioning market institution with functional service providing sectors reduces costs of bargaining by providing market information and ensuring enforcement of contracts. Market institutions must increase competitiveness of producers, reduce their transaction costs and help them understand better how to add value. Creation of enabling environment includes infrastructures, services, policies, and institutions and regulations that influence the operation of marketing value chains, and competitiveness and prospects (USAID, 2013).

The Ethiopian government considers meat and live animal export as a main source of foreign currency.

The government plan in the first GTP was to earn about 1 billion USD from livestock export by 2015. However, Future agriculture (2014) policy brief show that the actual gain was less than 25% of the plan in 2014. Trends from six-year export data during 2005-2011 (Table 1) also show the same trend. However, pastoral areas, which are sources of these export animals are less recognized or ignored. Available information shows that formal live animal and meat exports are almost exclusively sourced from pastoral areas (Little et al. 2015; Little et al. 2010). But this area is highly affected by recurrent drought, shortage of animal feed, water scarcity, lack of veterinary services and infrastructure. The

contradiction is that if the production is not improved and sustainable supply not maintained, Ethiopia cannot maintain trade relations with the importers. The issue of improving competitiveness with other exports such as Brazil and Australia also remain unresolved. The issue of traceability, disease control, and food safety also remains concern. The increasing price in the global market (see Table 1) and volume of export (see Figure 7) are encouraging to move in the positive direction. Earnings from live animal export is also increasing (see Table 2)

Table 1: Average export prices for different species in the last eight years (in USD)

Species	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13
Cattle	179.92	176.98	239.37	430.04	465.87	444.34	418.47	433.18
Camel	242.92	253.48	337.3	454.7	460.77	469.21	502.19	697.2
Small stock	28.34	30.61	39.74	43.23	39.66	47.95	62.41	94.4

Source: Meat and Dairy Technology Institute

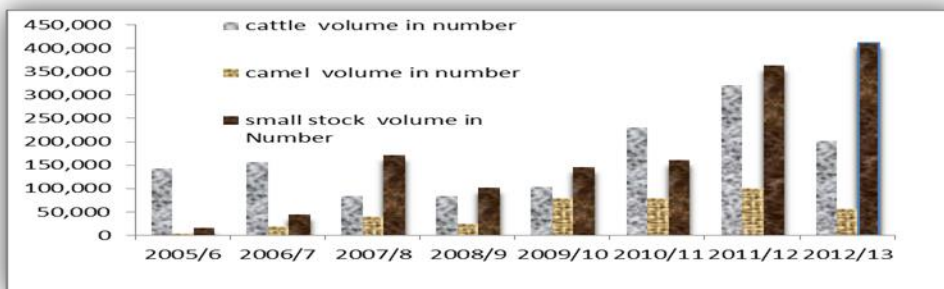


Figure 7: Volume of export (2005/6-2012/13) Source: Meat and dairy institute

In addition to the neglect of the sector, government taxation system is blamed for affecting the marketing system. Pastoralists and small traders in Borana reported in 2014 that paying taxes on unsold animals have been considered a disappointment (Tiki, 2014). The government policy regarding livestock marketing is blamed for focusing on tax collection, border control and foreign currency earning (Little et al. 2010). As suggested by Halderman (2004) a decade ago, it may affect government revenue in short term, but long-term benefit of tax reduction in terms of poverty reduction and improvement of pastoral livelihood is high.

There has been a consistently strong policy narrative of surplus production in the pastoral areas and consequent potential for an export market. The policy narrative today adds that there is increasing demand for livestock products in the world. Over the last four decades, there have been a variety of different and changing strategies as to how to develop markets to produce the required off take, with emphasis shifting from private to public to quasi-private approaches and which largely ignored the informal side of the market. Reviewing the last 40 years of changing responses to the export narrative, one can see considerable shifts in the mandates of responsible organizations. One is established and another is dissolved, and the discontinuities created market interruptions (Wolmer, 2005). Formal

market is also becoming stronger as a result of increased international demand and greater recognition by government. But it faces a number of significant constraints. The bureaucratic requirements are heavy; an exporter has to have contacts in a range of different offices, has to spend considerable amounts on certificates and permits and uses up considerable time on these interactions. For instance, Exporters in Ethiopia need to have financial clearance from National Bank (based on LC), production related aspects with the Ministry of Agriculture, for health issues with Veterinary Department and Ministry of Trade. Despite the neglect, earnings from live animal export, meat, hide and skins as well as other livestock products rank the fifth in the country (Behnke and Metaferia, 2011).

Table 2: Live animal export and foreign currency earning (2005/06- 2010/1)

Species	2005/06		2006/07		2007/08		2008/09		2009/10		2010/11	
	No	Val (000) USD	No	Val (000) USD	No	Val (000) USD	No	Val (000) USD	No	Val (000) USD	No	Val (000) USD
Cattle	143,499	25,819	156,247	27,652	83,356	19,953	84,275	36,242	103,010	47,989	230,605	102,473
Camels	3,882	943	19,410	4,920	39,926	13,467	25,179	11,449	79,439	36,603	79,908	37,258
Sheep	12,857	414	33,553	1,121	140,290	5,729	97,527	4,254	137,576	5,649	146,655	7,491
Goats	3,105	76	11,363	316	31,197	1,205	5,182	222	11,319	433	14,507	650
Others	32	8	12,702	2,498	2,875	512	2,520	525	2,408	34	366	6
<b>Total</b>	<b>163,375</b>	<b>27,259</b>	<b>233,275</b>	<b>36,507</b>	<b>297,644</b>	<b>40,865</b>	<b>214,683</b>	<b>52,691</b>	<b>333,752</b>	<b>90,708</b>	<b>472,041</b>	<b>147,877</b>

Source: Meat and dairy institute, 2012

The current export market depends on the Middle East countries. Demands from those countries are seasonal and depend on religious calendar. The local market is also affected similarly by seasonality. When seasonality coincides with climate shocks, pastoralists become more vulnerable to climate risks.

### *3.1.5.1 Market Infrastructure*

Recently government and NGOs have invested in market center development and feeder roads. Building and regularizing feed markets, improving availability of consumer goods in markets next to livestock markets, ensuring regular and strategically defined market days, and moving market transactions from dyadic negotiation to auctions were suggested earlier (Little et al 2010). In this regard, the government issued live animal marketing proclamation in 2014, even though the practical implementation is still at early stage or in some cases resulted in market disruption, as cattle were detained considering traders as illegal.

#### Access to market: SNNP

The pastoral areas of this region have huge livestock potential, even taking the official statistics. However, there is no access to livestock market, to the extent some practicing a barter system. In addition, the pastoralists lack access to extension services that also include producing quality animals for the market.

Mobility and markets play key roles in contemporary pastoral risk management. Mobility is necessary to find scarce grazing and water, while markets are required for selling animals before their body conditions deteriorate by drought related scarcities (Little et al. 2012). But less is known about pastoralists decision making when drought is approaching, the choice of either to move away from market centers in search of pasture and water or stay nearby and risk the loss of animals. The links between pastoral producers and end markets in the Middle East need to be strong for reducing such risks, one of such links being feedlot operators. But the marketing relations between pastoralists and feedlot operators are characterized by uncertainty, long value chain and mistrusts. The infrastructures and institutions

needed to facilitate this export market are either missing or inefficient. Specifically, access to finance, modality of market relations, and rights and responsibilities of the actors require policies and regulations.

#### *3.1.5.3 Information Technology/Market Transformation*

The provision of accurate and timely market information is vital for pastoralist producers. One of such attempts was LINKS financed by USAID. Though its current status is not so clear it was a good initiative. In addition, access to information technology is important to get information on input supply and output markets. Access to information technology such as mobile phone is acknowledged by pastoralist producers and traders alike. A recent publication by Debasu et al. (2016) confirms the vital roles the mobile phone is playing in information exchange regarding resource availability, sourcing animal feed, inquire market information, rainfall conditions in other areas and even facilitating connection between family members separated for herding. The functionality of such services is linked to other important services- electricity. Very few of the pastoral settlements have access to electricity to recharge their mobile phone batteries. They travel hours to get diesel run generator services, which is very expensive. The expansion of such services creates opportunities for investment as well. Figure 8 below confirms the need for increased access to electricity.



Figure 8: Mobile battery recharging services in Borana, Harobake

**Source:** Photo by: Waktole Tiki (2013)

#### *3.1.5.4 Summary of Barriers to Marketing*

The following summary provides the major marketing barriers of pastoralists reported on articles published by Fratkin et al, 1994; Davis and Hatfield, 2007; Turner and Williams, 2002;

- Market exchange is largely secondary because livestock production by pastoralists is usually subsistence aimed at producing food for household members;
- Direct marketing of livestock is dominant rather than slaughtering livestock for processing;
- Livestock is moving from place to place due to mobility in search of pasture and water;
- Livestock holds greater cultural and social meaning to pastoralists as compared to other marketable commodities;
- Lack of marketing skills undermines the competitive advantage of pastoralists at the global livestock marketing system;
- High transaction costs (costs of information search, trekking, and negotiation) and poor access to information and formal markets;

Moreover, the potential for establishing linkages in the marketing system (between pastoralists and other chain members) has seldom been used for policy making for pastoralists (Nori, et al, 2005). To this end, most of the projects that involve collective-action groups focus on merely solving production constraints and ignore marketing factors (Musemwa et al., 2005). Marketing is still considered as an emergency exercise to facilitate destocking in times of changes of climatic conditions such as drought (Nori, et al., 2005; Morton & Barton 2002) rather than long term-oriented set of activities that can enhance sustainability of pastoralists. As a consequence, livestock marketing to pastoralists was not



considered as a function for creating, communicating, and delivering value to customers in a way that benefit the pastoralists and other stakeholders (Kolter & Keller, 2006).

### *3.1.5.5 Policy Recommendation*

Supporting the development of a true market orientation competence and strengthening market integration should be an important policy objective. It should help pastoralists fulfill market requirements (e.g. Quality and food safety standards) that may constrain their market integration. In this regard utilizing innovative ICT solutions and communication services e.g. for market information, access to finance, pasture availability, mobile banking and cash transfer (e.g. Prime's HelloCash platform) is vital. The policy must support the establishment of microfinance institutions and the development of financial products adapted to the needs and conditions of pastoral and agro-pastoral communities.

The policy must address market linkage, formalizing cross border trade, and abolishing reverse credit sale. It should promote value-added livestock production and trade (e.g., fodder production, improved breed (selection), meat processing, and local feedlots. To fulfill market requirements by pastoralists, the policy must promote linkage of pastoralists with livestock feed processors through contract farming or participatory producer cooperatives (Delgado 2003). Facilitating transaction for livestock and development of market centers in pastoral areas can stimulate other businesses. Fulfilling market requirements enhances pastoralists' market integration to increase their income levels, as well as contribute to the supply of animal protein. In turn, increased market integration can facilitate timely destocking and restocking in communal lands, according to the changes in the natural environment. This shift could reduce the pressure the pastoralists place on the natural environment in their desperate efforts to generate sufficient income. Moreover, the policy must support diverse marketing system combined with reducing local vulnerability. Addressing constraints facing feedlot operators can be equated partly with investing in improving pastoral viability, as it plays key roles in connecting to high value end markets in the Middle East and North Africa. The policy needs to support the introduction of auction in regionally and/or nationally centred markets (adapting ECX approaches with its credit supply experiences) and must promote export standard abattoirs close to pastoral areas.

The Policy must enhance investment in rural infrastructure such as roads, radio and other means of communication in the pastoral areas would help increase market access and allow information sharing for early warning.

### 3.2. Crop Production/Rain-fed and Irrigation

Uncertain climatic conditions, reduced access to grazing land and water, and reduced mobility affect the sustainability of livestock systems in Ethiopia. As a result, pastoralists and agro-pastoralists look for other sources of income to reduce their vulnerability to changes. This is stated in the government policy which aims to reduce the sole reliance on livestock through human capital development and diversification of sources of income. Crop production is one of the major sources of income diversification available to pastoralists and ironically one of the most important competitors to the pastoralist way of life. According to key informants, where there is reliable rainfall or irrigation scheme crop cultivation can be used as a coping mechanism against drought and as a source of income, reduces the need for livestock sales for purchasing food and crop residue for livestock feed. However, they also warn that crop cultivation if not managed properly can undermine their ability to cope with drought because cultivated areas usurp key grazing areas and, of course, yields little or no food when rainfall is low.

In some rangeland areas, opportunistic crop production is introduced as diversification of means of livelihood. This is supported with extension programs of governmental and non-governmental development organizations. Pastoralists who lost their herd in severe droughts also resort to this way of life when they fail to rebuild their herd. This trend is currently observed in the southern rangelands of Ethiopia. Cropping is expanding into the rangelands with concomitant decline in the grazing areas. As it is happening anyway the government policy should aim to strengthen its extension support to maximize the benefits from this intervention.

#### SNNP

Pastoralists and agro-pastoralists in this region are the most diverse in terms of ethnicity, language and sources of livelihoods. For instance, communities such as Dimme have cultivation skills compared to Bodi, Mursi and Bacha who lack the skills, but live in the same district- Salamango. But the mega projects such as sugar factories and government settlement and agricultural development schemes treat them the same way, rather than consulting each of them separately and designing development programs that suit their unique socio-cultural and livelihood needs. There is also variation in natural resource potential. Settlement schemes do lack the required infrastructures and social services, which were promised prior to the implementation of the schemes. Some respondents say that the scheme also lack participatory decision making from the sides of the pastoralists.

### 3.3 Non-Timber Forest Products

In Afar and Somali regional states the sale of gums and resins typically provide a significant income for poorer households. Gum Arabic and other resins are very widely present but they are collected and sold only by a minority of people. The local market is especially for incense resins. Frankincense is a particularly valuable but rare and localized item notably in Somali. Gum Arabic is the most exported item. Table 3 below shows data from 2 years honey production by traditional and modern beekeeping in Afar and Somali regional states. As can be observed from the table, if this livelihood option is supported, it has a big potential in reducing vulnerability and improving the livelihood of the pastoral and agro-pastoral community.

**Note:**

Crop farming is increasing, be it internally-motivated or encouraged by the government, as partial fulfillment of household food security. Fuel wood and charcoal sales are becoming the top alternative income sources for the pastoral communities. Protecting wildlife for the benefit of biodiversity and tourism is the center of government interest. However, these economic activities are strongly contributing to land degradation and require attention from policymakers.

Table 3: Number of beehives (in'000) and honey production (in'000kg) (Source EPA, 2003, Partial)

Region	1988/89				1989/90			
	Traditional		Modern		Traditional		Modern	
	Number	Yield	Number	Yield	Number	Yield	Number	Yield
Afar	2.20	6.0	-	-	1.30	2.80	-	-
Somali	1.40	5.30	0.06	0.10	1.20	3.70	-	-

In addition to the above livelihood options, fishing (Gambella, SNNPR), beekeeping (SNNPR), petty trade, daily labor, mining, Salt production (Afar, Somali, Borana), handicraft (SNNPR, Benishangul-Gumuz), tourism (SNNPR, Afar) are growing as livelihood options.

### 3.4 Policy Recommendation

Policies that stimulate diversification may help pastoralists to sustain their livelihood. However, the policy and strategies for diversification must support the design of adaptable and context specific livelihood extension services- e.g. adaptable crop varieties, technologies targeted to enhance specific livelihood options, BDS and market linkages and benefit sharing. The policies and strategies should ensure that land resource potential/ land use planning based livelihood diversifications-not to be in conflict with other forms of land use plan & livelihoods. They should also enable pastoralists that opted out to enter into urban life and to different livelihoods.

## 4. DISASTER RISK MANAGEMENT (DRM)

Disasters have a strong and mostly negative impact on livelihood assets, leading to increased vulnerability, reduced food security, and more fragile institutions. It is more pronounced on women and children who are often unduly exposed to risks and can be among the first casualties of shocks. Disaster risk management is the systematic process of using administrative directives, organizations, and operational skills and capacities to lessen the adverse impacts of hazards and the possibility of disaster. It involves activities and measures for prevention, mitigation and preparedness (UNISDR, 2009). DRR encompasses all actions taken to reduce disaster losses by addressing not only the hazards that cause disasters but also people's vulnerability to them. DRR is about systematically incorporating risk reduction considerations into all development and humanitarian policy and programming. DRR interventions need to build capacity to withstand hazards both before and after they occur. Mainstreaming DRM is essential if the frequency and impact of disasters is to be reduced and the vicious spiral of poverty and vulnerability they precipitate and reinforce reversed. Drought is a major external shock and a primary trigger of livelihoods crises. Recurrent drought is a primary stressor affecting pastoral production systems in the Horn of Africa (Tiki et al, 2013). A recent study shows that in the last three decades alone, droughts affected three times more people than any other natural hazards combined (Dinkelman, 2015). Since the middle of the 20th century, the magnitude, frequency, and intensity of droughts have significantly increased and pastoralists in the dry lands of Ethiopia have been faced with an increasing number of critical challenges (Simone, 2010).

Trends indicative of climate change, such as recurrent drought, floods, erratic rainfall patterns, and high temperatures are among the manifestations of these challenges reducing fodder and range productivity. All of these impacts lead to decreased livestock productivity, herd mortality, crop failure in agro-pastoral areas, food insecurity, and increased conflicts over scarce resources. If these climate trends continue as projected, the capacity of pastoralists to adapt to their harsh environment and their resilience in the aftermath of severe droughts may be pushed to the limit in some areas of Ethiopia. Food insecurity, which has been a structural problem to sedentary farmers in the highlands of Ethiopia, has now become an important problem to the pastoral and agro-pastoral communities who inhabit the lowland areas and depend on livestock rearing for their livelihood (Belay et al 2005). Extended dry season and recurrent drought very often results in critical decline in quantity and quality of feed and shortage of water leading to decreased productivity and increased mortality of animals. Also, in some regions, invasive species (e.g. *Prosopis juliflora* in Afar and *Acacia dypanolobium* in Borana) are severely reducing or eliminating viable grazing areas. During severe drought the whole herd may be decimated and deprive pastoralist milk and other dairy products which are the main source of food for the children. This problem occurs as the livestock are moved to far off-places in search of pasture and water as these resources get depleted because of drought or even because of seasonal variation in the distribution of pasture and water.

## 4.1 Climate Change in Ethiopia

Ethiopia's food crop and livestock upon which millions depend are underpinned by its natural resources - land, water, and forests. However, Ethiopia is among the most vulnerable countries to climate risks in Africa. Climate change is both a cause and a direct consequence of rangeland degradation. Nearly all pastoralist areas suffer from inadequate, erratic and unevenly distributed rainfall. Its high vulnerability derives in large measure from the country's heavy dependence on rain-fed, subsistence agriculture. According to the country's National Adaptation Program of Action (2008), climate change in Ethiopia will bring changes in precipitation patterns, rainfall variability, and temperature, which could increase the frequency and occurrence of floods and droughts. Data show mean annual temperatures increasing by 1.3°C between 1960 and 2006. Mean temperatures are predicted by the IPCC to continue to rise in the range of 0.9-1.1°C by 2030, 1.6-2.0°C by 2050, and 2.5-3.5°C by 2080. Average national rainfall has not been decreasing on an annual basis, but the Spring/*belg*/ rains, which fall from March through May, and constitute the main rains for the southern regions of Ethiopia, have seen increasing variability and extremes. Southern Ethiopia has experienced severe droughts in 2006, 2008, and 2010-2011.

Drought and climate variability are part of the natural cycle in lowland Ethiopia, and pastoralist communities do have an array of traditional coping mechanisms and resiliencies. However, the increased frequency of extreme weather and droughts threatens to overwhelm these economic and social coping mechanisms and resiliencies. Due to changes in the climate, Ethiopia has faced recurrent droughts across its different parts. This has been more observable particularly since the 1970s. The pace of change in the pattern of climate and different forms of environmental hazards exceed the capacity of national and local institutions to cope with or mitigate the effects of such changes. This is especially true in drier, more fragile rural areas where drought, seasonal floods and malnutrition have become increasingly common.

The population size of Ethiopia and the impact of the activities of the growing population have increased dramatically over the last decades. There are frequent changes in the climate. These changes are often followed by droughts. Human induced climate change is feared to lead to unprecedented level of global warming in the next few decades. Climate models suggest that Ethiopia will see a further warming of 0.7°C and 2.3°C by the 2020s and between 1.4°C and 2.9°C by the 2050s (World Bank, 2008). The current population (over 87 million) is growing annually by 2.6% and is expected to be more than double by 2050 (CSA, 2008). The country is extremely vulnerable to the impacts of climate change. The impact may potentially hold back economic progress or reverse the gains made in development, and thus exacerbates social and economic challenges (IPCC, 2007).

The country's vulnerability to climate change is further enhanced by high levels of poverty, rapid population growth, and reliance on rain-fed agriculture. In addition, high levels of environmental degradation, chronic food insecurity, frequent natural drought cycles, etc. may also be other factors that can contribute to the country's vulnerability to climate change (CRGE, 2011). Recurrent droughts and floods in Ethiopia have resulted in loss of life and property as well as in the displacement of people. Drought frequency is predicted to increase, placing stress on already vulnerable food production systems. Rapid population growth and inappropriate traditional farming and management practices put

intense pressure on the country's soil, water and biodiversity resources. Extensive cultivation, overgrazing, deforestation, etc. are all instances of poor management practices all adding to the national challenge of responding to climate change (Belay et al, 2013).

## 4.2 Major Climate Change Risks in Pastoral Areas

Climate change is a major driver for critical ecosystems particularly the dry land areas where pastoral communities are found. Pastoralists are on the frontlines of climate change and are currently the most affected population. Adverse weather conditions, periodic drought, and the intensity, frequency and magnitude of weather related changes are inherent features in pastoral areas. The term 'non-equilibrium environment' has been coined to describe such areas (Ellis and Swift, 1998). Frequent droughts result in loss of pasture and water, and sometimes, in death of many animals and people. To mitigate the adverse effects of drought, pastoralists have to move livestock to better rainfall areas sometimes confronted with spread of livestock diseases and conflicts along the migratory routes. For instance, during the 2010/11 drought, some pastoralists completely lost their herds to drought and have since been thrown deeper into the trap of poverty. Some of those who lost their herds have been trying to restock through cattle rustling leading to more ethnic animosities and loss of human life.

## 4.3 The Humanitarian Impact of Climate Change

Climate change has not come in isolation, but hand in hand with a number of other challenges to pastoralist communities. Failed rains have been accompanied by increasing competition over resources, conflict, livestock disease and livestock losses, hunger, and displacement and sometimes human losses. Environmental degradation, population growth and new administrative boundaries or the hardening of old ones have changed the context in which the pastoral production system is struggling to survive, increasing pastoralist vulnerability to climatic shocks. Climate change has therefore hit pastoralist communities particularly hard. Growing weather extremities and failed rainy seasons over the last years have led to dwindling livestock and livestock products – pastoralists' key livelihood asset. This has led to low pastoralist purchasing power and poverty in a context of sky rocketing food prices over the last years, as well as increasing malnutrition among children and lactating mothers who have limited or no access to food.

## 4.4 Adaptive Strategy and Capacity

Adaptation is important to improve sustainability of pastoralism to maintain the capacity to deal with current or future changes (Morton, 2007). Resource scarcity puts into motion the many adaptive strategies that pastoralists have developed over many generations. They have adopted a myriad of different coping strategies to survive ranging from skipping of meals, to the consumption of wild fruits, and selling of firewood and charcoal. Many pastoralists have migrated to urban areas in search of casual labor, joining the cities' growing number of unemployed. For years, some have been

Afar pastoralists practice a voluntary social exchange system in which everyone contributes livestock, food and other items to households considered to be most in need in their communities

dependent on PSNP and emergency food aid. While such unsustainable, short-term interventions might have prevented death from hunger among the most vulnerable, they have also prevented the empowerment of pastoralist communities and undermined the potential to build local capacities necessary for a viable livelihood. Hence, a better understanding of traditional coping strategies which include livestock adaptation, mobility, diversification of livestock species and breeds, reserve of rich-patch vegetation areas, maximization of stock numbers, splitting herds, and redistribution of assets can enhance preparedness and build much-needed resilience of vulnerable communities. Homann et al (2008) also reported that frequent droughts and shortage of grazing land have prompted Borana pastoralists in Ethiopia to adopt camel husbandry and hybrid cattle breeds that can tolerate grazing pressures. Camel husbandry in particular has enhanced pastoralists' sustainability through providing milk during dry seasons and improved the efficient utilization of poorly vegetated grazing lands. Enhancing the coping capacity of pastoralists with the aim of building robust and resilient production system has to be part of the national government policy.

## 4.5 Existing Government Policies and Programs in Disaster Risk Management

### 4.5.1 Policies

National Policy and strategy on Disaster Risk Management – In Ethiopia: The National Disaster Risk Management Policy seeks to reduce risks and the impacts of disasters through establishment of a comprehensive and integrated disaster risk management system within the context of sustainable development. Accordingly, it has developed a DRM Strategic Program and Investment Framework ('DRM-SPIF') which aims to provide a comprehensive and integrated disaster risk management system in Ethiopia. Instead of emergency response, it emphasizes on the need to protect the lives and livelihoods of vulnerable populations when a crisis threatens to overwhelm their coping capacities. This disaster risk management system is meant to manage all stages of a disaster: prevention (avoiding disasters by addressing vulnerabilities), mitigation (minimizing potential disaster impacts through disaster risk management), preparedness (ensuring readiness through strengthening early warning system, building logistic capacity, maintaining adequate resource reserves and taking other precautionary measures), response (saving lives and livelihoods), recovery (immediate post-crisis assistance), and rehabilitation (building capacities to withstand future crises).

### 4.5.2 Programs

DRM Strategic program and investment framework (SPIF) – The DRM SPIF envisions a future where, disaster risk is prevented, mitigated, and forecasted to enable effective response. A culture of risk reduction is built at all levels.

Ethiopian Disaster risk management country plan environment and social management framework (ESMF) - The objective of the Ethiopian DRM Country Plan is to strengthen institutions in disaster risk reduction, improve early warning capacity and improve disaster recovery efforts. Three component activities are mentioned in this policy, namely, Woreda Disaster Risk Profiling, Contingency Planning and Regional Connectivity Implementation.

Pastoral Livelihoods Resilience Program (PLRP) – is a project-based program designed to contribute to poverty reduction, food security, and sustainable economic growth through enhanced rural incomes in pastoral areas. Natural resource management (NRM), Market access and trade (MAT), Livelihood support (LHS), and Pastoral risk management (PRM) for pastoral and agro-pastoral households with small herds and flocks are the major activities mentioned in the program document.

Productive Safety Net Program – this program is in its fourth phase. Its current phase objectives are to enhance resilience to shocks and livelihoods and improve food security and nutrition of rural households vulnerable to food insecurity. It contributes to achievement of four policy objectives of the Ethiopian government, namely, GTP, social protection policy, disaster risk management, climate-resilient green economy and National Nutrition Program.

With climate change and increased climatic variability, drought will remain a constant hazard. In this context, it is clear that unless disaster risk is reduced and the resilience of communities is built, crises in the dry lands of the Horn of Africa will continue rising in scale as populations grow. Given the inevitable and chronic nature of drought in the region, the necessity of integrating disaster risk reduction (DRR) in all aspects of development and humanitarian policy and programming cannot be denied. Unfortunately, as the 2011 drought crisis in the region demonstrated, DRR efforts to date are clearly inadequate. The Intergovernmental Authority on Development's (IGAD's) Ending Drought Emergencies initiative provides governments in the Horn of Africa with a fresh impetus to re-examine and revise policy and programming from a DRR perspective. Under this initiative, IGAD created the Drought Resilience Platform with the key objective to mobilize resources, encourage knowledge management, and formulate common regional goals and strategies.

#### 4.6 Findings from the KII, FGD, and Workshops

Drought is identified as the top climate risk in all pastoral and agro-pastoral areas. Although the DRM policy and programs are comprehensive, the implementation according to the KII, and FGD findings is still very slow. Current EW system is just one way and lacks timely response. It ignores traditional knowledge. Information dissemination on climate risks is inadequate. Pastoralists coping capacity such as mutual assistance, resource sharing, etc. have been eroding over the years. Institutions that mobilize responses are weakened. External aid (PSNP) nowadays has become principal coping strategy in many pastoral areas.

#### 4.7 Policy Recommendations

There must be a DRM policy focusing only on pastoral areas. The policy must provide due attention to the increased awareness of pastoral problems among the general populace. It shall also support use of traditional knowledge and coping mechanisms, and the diversification of pastoral economy. The policy must consider the development of DRR plan and Woreda risk profile for each pastoral and agro-pastoral area. The policy must strengthen the information flow in both directions. The policy needs to focus on building resilience that focuses on wealth/asset creation. The policy should incorporate commercial livestock destocking into DRR system with lessons learned from previous experiences, with due emphasis on public private partnership approach (transport subsidy), improved access to credit,



incentives for consistent livestock off-take, not just during periods of drought, especially for traders of pastoral areas and linking pastoralists to larger facilities such as fattening and abattoirs. The policy shall enhance innovative coping mechanisms such as species diversification, provide extension support for more drought resistant livestock species and crop varieties and put in place Index-based Livestock Insurance system, etc. There has to be policy support for selected livestock genetic resources such as Borana breed, Black head sheep, etc.

It is important that pastoralists have some understanding of rainfall patterns and early warning signals in order to adapt the situation and decide a strategy on their herd management. Research is needed to match wisdom of local forecaster with NMA information. Adaptation is important to improve the sustainability of pastoralism to maintain the capacity to deal with current or future predicted change (Morton, 2007). Homann et al (2008) reported that frequent droughts and shortage of grazing land have prompted Borana pastoralists in Ethiopia to adopt camel husbandry and hybrid cattle breeds that can tolerate grazing pressures. Camel husbandry in particular has enhanced pastoralists' sustainability by providing them milk during dry seasons and enhancing efficient utilization of poorly vegetated grazing lands.

Policy support for selected livestock genetic resources: e.g. Borana breed, Black head sheep, etc.

Severe restrictions on the traditional mobile pastoral production system which is a result of inappropriate policies made increasing number of pastoralists unable to cope with and recover from drought and other shocks. In this setting, pastoralists increasingly face poverty and hardship which lack of alternative livelihood options has to offer. Emergency relief on its own will not reduce pastoral vulnerability. Hence, a different approach is needed to build capacity for drought preparedness in pastoral areas, which focuses on wealth and opportunity creation by investing in and promoting the development of pastoral areas.

Government should provide policy support to traditional practices of livestock adaptation in pastoral areas that include mobility, diversification of livestock species and breeds, reserve of rich-patch vegetation areas, maximization of stock numbers, splitting herds, and redistribution of assets that are used as strategies by pastoralists.

- Scant attention has been given to local forecasters by NMA
- No down scale of local meteorological forecasting stations (high range)

## 5. SOCIAL SERVICES IN PASTORAL AREAS

Every citizen has a right to services such as health, education, clean water and sanitation. Social services are essential to expand and diversify the livelihoods of pastoralists and enhance their ability to respond to shocks (Humanitarian Policy Group, 2009). However, social services in pastoral and agro-pastoral areas are either inadequate, or inappropriate. Existing information shows that more than 70% of the social services infrastructures in pastoral and agro-pastoral areas of east Africa are not useful to residents because they are the extension of the services developed for sedentary population (Ibid). Despite significant progress in basic social services over the last 15 years, Ethiopia still ranks among the countries with the lowest services. In terms of access to clean water, Ethiopia is ranked 174 out of 186 countries and 161 in terms of access to improved sanitation (Donnenfeld et al. 2017). Provision of other social services in pastoral and agro-pastoral areas is said to lagging behind the country average. The coverage and service quality are also far lower than that of the other areas in the country (AUC, 2013). The same holds true for basic infrastructure in pastoral and agro-pastoral areas compared to the other areas.

### 5.1 Health Services

Health service is one of the basic human rights that every human being is entitled to. The international, regional and national legal instruments imposed the provision of health service primarily on the Government. Taking this in to account, Article 41(4) of the 1995 FDRE constitution-imposed obligation on the government to provide health service. To execute its obligation, the government of Ethiopia designed and implemented the health policy and Health Sector Development Plans (HSDPs) since 1997 in four phases. Due to this, a series of progress has been made during the last decade. The strategic government action of Ethiopia has done remarkably well in meeting most of the MDG targets. To mention just some achievements, a 67 % drop in under-five mortality from the 1990 estimate contributed to an increase in average life expectancy at birth from 45 in 1990 to 64 in 2014. A 69 % decrease in maternal mortality from a high estimated base of 1400 per 100,000 live births is another notable achievement. An improvement in contraceptive prevalence rate from 3% to 42% has led to a drop in total fertility rate from 7.7 in the 1990s to 4.1 in 2014.

Concerning pastoral and agro-pastoral areas, there is also now a Pastoralist Health Promotion and Disease Prevention Directorate which is entirely dedicated to improve health conditions of the pastoralist populations. However, there is still a gap on the provision of health service among pastoral and agro-pastoral areas. The main reason for this are remoteness, dispersed settlement, pastoral mobility and poor infrastructure which are considered to be constraints to delivering both curative and preventive health services (Morton and Kerven, 2013).

Pastoral and agro-pastoral areas of Ethiopia are said to have the least coverage of health services (see Figure 9). Even if health facilities are built, there is lack of qualified staff, medicines, medical equipment, electricity, and other facilities (EU Ethiopia delegation team, 2017). The contradiction is that pastoralists

live in riskier environment, exposed to diseases, accidents and less hygienic conditions that require serious attention. Notwithstanding this reality, pastoralists mostly rely on ‘indigenous doctors’. For instance, the 2016 DHS revealed that most of the regions that have pastoral and agro-pastoral populations are characterized by high child mortality (e.g. Afar, Somali, and Benishangul-Gumuz regions).

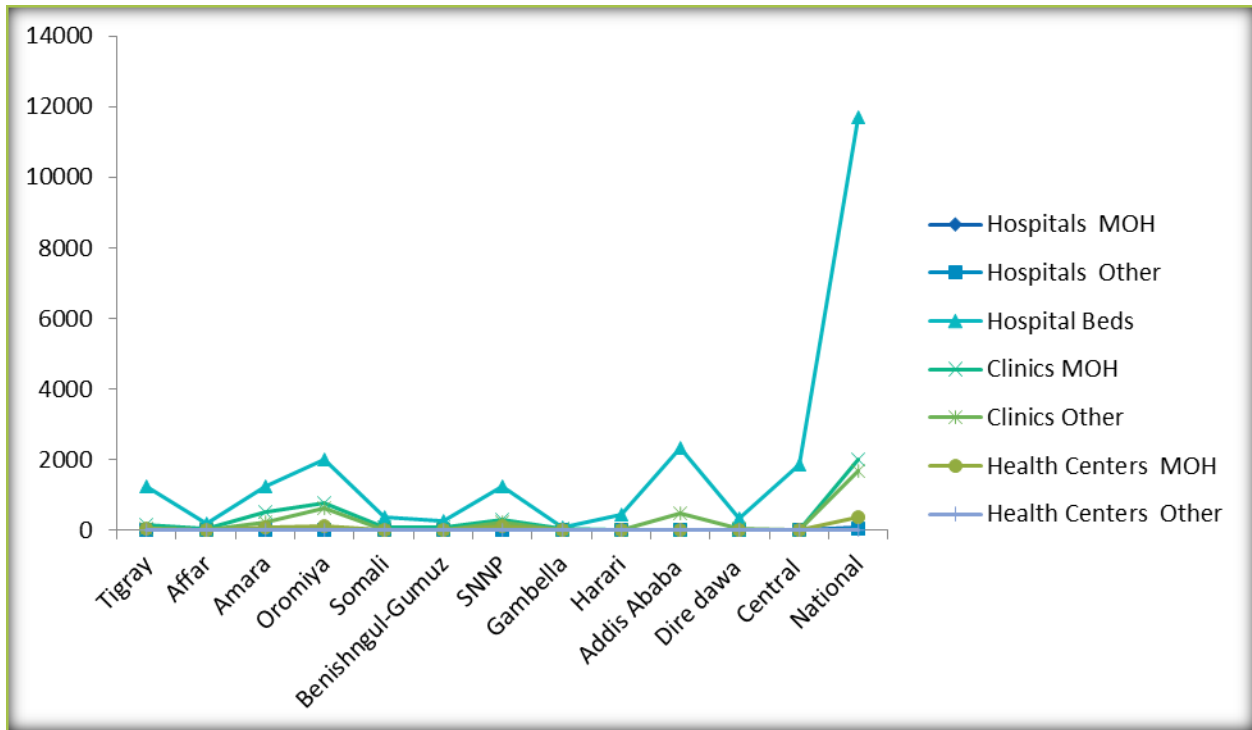


Figure 9: The 2002 Health Service Coverage of Ethiopia (Source: CSA, 2002)

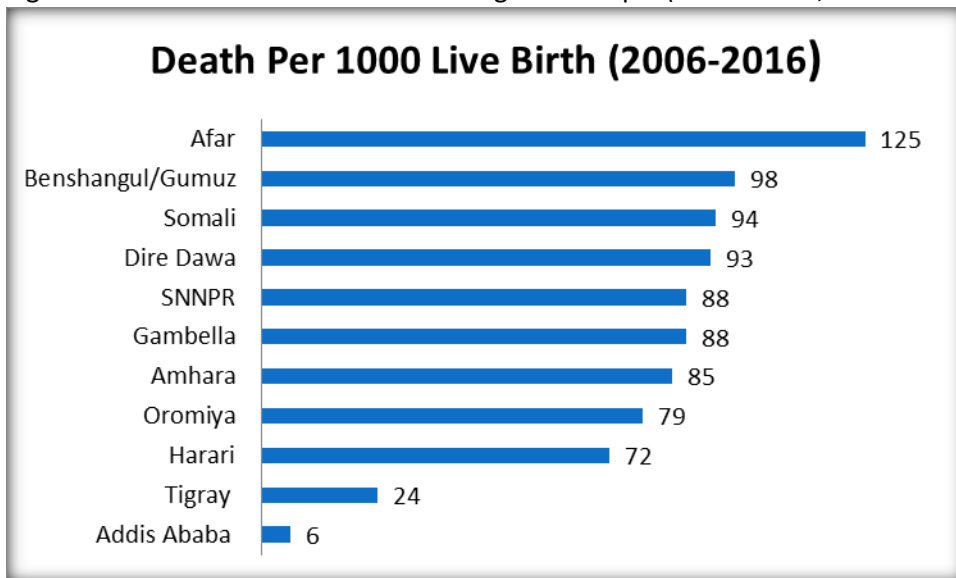


Figure 10: Death per 1000 Live Births for 10 years Preceding the Survey (Source: DHS, 2016)

Ethiopian health policy, mainly focusing on the preventive aspect is comprehensive, yet less specific on pastoral and agro-pastoral areas. The health policy should consider the peculiarities of the ecology, social system, and geographical locations. For instance, the coverage of community-based health extension worker is far less than that of the other parts of the country. As pastoral communities move with herds, particularly during droughts and unexpected conflicts, the health policy that assumes stationary service delivery may not fulfill their health service needs. However, mobile health service is equally problematic, as the number of patients in the remote herding areas may not warrant such huge investment. The policy should think of integrating different services, such as road networks, mobile communication, electricity and possible ambulance services. As the national health policy focuses on prevention, it should take the pastoral context into account so as to integrate the preventive aspects into the education policy and give chance to pastoral children to be trained as Community Health Extension Workers.

Table 4: Antenatal, Postnatal care and Contraceptive Use in Somali and Afar Pastoral Regions of Ethiopia (%)

	Afar Region	Somali Region	National Average
Antenatal Care	40.8	34.5	67.9
Postnatal Care	33.3	34.5	90.0
Contraceptive Use	31.7	5.7	42.0

**Source:** EU Ethiopia Delegation Report, 2017

The Ethiopian health policy contents include democratization and decentralization of the sector, prioritization of the preventive component of health care and equitable distribution of health care. However, no specific attention has been given to pastoral and agro pastoral areas. The decentralization of health is also adversely affected by other centralized services, such as electricity.

### 5.1.1 Policy Recommendation

- Investment framework to integrate road networks, mobile communication, electricity and ambulance services;
- Policy that consider peculiarities of the ecology, social system, and geographical locations;
- Nutrition;
- Policy on encouraging private sector involvement through direct investment or through public-private partnership;

## 5.2 Water Development

Water development entails provision of vital resource to sustain humans, animals and plants in pastoral and agro-pastoral areas. For centuries, pastoral and agro-pastoral communities have developed a sophisticated network of water resources – including rivers, rainwater and groundwater. They have also had complex customary institutions through which they coordinate development and manage access. This system, with its own physical and its institutional components ensured availability and amicable exploitation of water resources without the need to jeopardize other resources, particularly

avoiding high concentrations of animals, which can threaten the health of the rangeland and livestock itself and which can lead to conflict. Within the past 40 years, non-pastoral actors, namely, government, development agencies and nongovernmental organizations (NGOs) especially inspired by the 1973 drought,) have tried to contribute to water development endeavors with both positive and negative consequences. Hand-dug wells along rivers give communities much-needed access to clean water, whereas oversized ponds encourage sedentarization and overconcentration of people and livestock in potentially vulnerable landscapes.

The central objective of the Ethiopian water resources management policy is to “enhance and promote all national efforts towards the efficient, equitable and optimum utilization of available water resources of the country for significant socio-economic development on a sustainable basis” (Water Governance Center, 2013). The fundamental principles of the policy are:

- Water is a natural endowment commonly owned by all the people of Ethiopia;
- Every Ethiopian citizen shall have access to sufficient water of acceptable quality to satisfy basic human needs;
- Water shall be recognized both as an economic and social good;
- Water resources development shall be underpinned on rural-centered, decentralized management, participatory approach as well as integrated framework;
- Management of water resource shall ensure social equity, economic efficiency, system reliability and sustainability;

If we look at pastoral and agro-pastoral areas based on these few points, they are underserved at best and neglected at worst. Water in general is a scarce resource and hence is in short supply and of poor quality. Some pastoral areas in Somali and Afar are well endowed with big rivers crossing the regions, while Borana is devoid of such rivers. The available water is unevenly distributed, influencing rangeland management and utilization. Pastoralists cope with scarcity through spacing the watering frequencies and herd mobility, depending on the sources of water in different pastoral areas. Some of the earlier water development schemes were blamed for ignoring pastoral indigenous range management knowledge and said to have led to unnecessary concentration of human and livestock population in the fragile environment leading to undue resource competition and degradation.

The policy also sets standards for gauging coverage of water supply in rural and urban areas.

According to water governance center (2013), the Ethiopian environmental policy has incorporated provisions on water resources sectors. For instance, it states the need to involve water resource users in the management of water policies, programs and projects; and the need to ensure consideration of environmental health hazards in the design, construction and use of dams and irrigation systems.

Information gathered from field and stakeholders’ workshop from all pastoral and agro-pastoral regions show that there were significant water development efforts over the past three decades. These include boreholes, big ponds, cisterns, and motorized pumps. However, the focuses have been on construction of water points (increasing coverage) and irrigation schemes development with less concern for appropriateness and sustainability. The water schemes either lack proper planning to create sense of

ownership by the beneficiaries or institutional and technical capacity development at local level to manage the facilities after the handover of the project. As a result, majority of the schemes are reported non-functional.

Two very comprehensive studies have been undertaken reviewing water investments in pastoral areas of Ethiopia: one by Magda Nassuf and Mulegeta Belayhun (2010) and other by Nathalie Gomes (2006). Additional reports on the same subject have been published as RIPPLE Briefing Papers: Tucker (2009) on the economic benefits of access to water, and Nanki Kaur et al. (2010) assessing the effectiveness of adapting to climate change in the water sector. They found that water points had been constructed with little knowledge of other natural resources in the area and how people use them. There was a need to contextualize water within broader Landscape.

### 5.2.1 Policy Recommendations

- Policies for sustainable water development that take into account NRM and sustainable livelihood options through community participation;
- Policy and investment framework for improved operation and maintenance;
- Coherent approach to water development through increasing partnerships and better communication between stakeholders;
- Selection of appropriate technologies which are simple to construct, maintain, and obtain spare parts;
- Policy to focus on institutional and technical capacity development of local artisans to decrease dependency on external support;
- Policy on encouraging private sector involvement through direct investment or through public-private partnership;

### 5.3 Education

Evidence shows that education directly affects pastoralists' capacity for positive aspects of diversifying their livelihoods and enhances their risk management capacity. However, Provision of education in pastoral and agro-pastoral areas lag behind with gender disparities on education so wide. In addition, some contents of the education systems are not compatible with children learning pastoralist skills and culturally alienate them with negative messages about pastoralism and agro-pastoralism (Morton and Kerven, 2013).

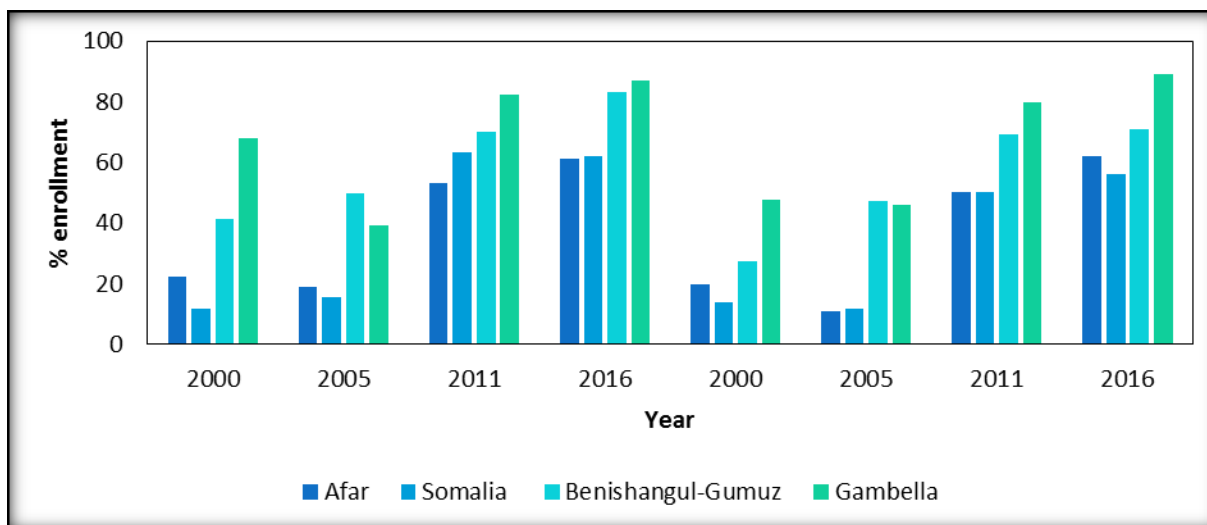


Figure 11: Primary School Participation, Net enrolment ratio (%)

Source: DHS, 2016

Almost all the literatures on pastoral and agro-pastoral areas reveal that pastoralists are under served and have limited access to education. Research findings reveal that family having their member with secondary and post-secondary education and those with stable employment in the formal sector can improve welfare and help households cope with natural disasters (Little et al.2010). It is also documented that families having educated members in urban areas manage drought risks better than others. For higher-paying positions and meaningful political participation, secondary and even post-secondary education is usually required. Owing to lack of education, pastoralists and agro-pastoralists are underrepresented in the formal labor market and political positions at policy making level (Little 2013); even those representing pastoralists are said to have lacked theoretical and conceptual understandings to challenge the powerful interest groups and policy makers.

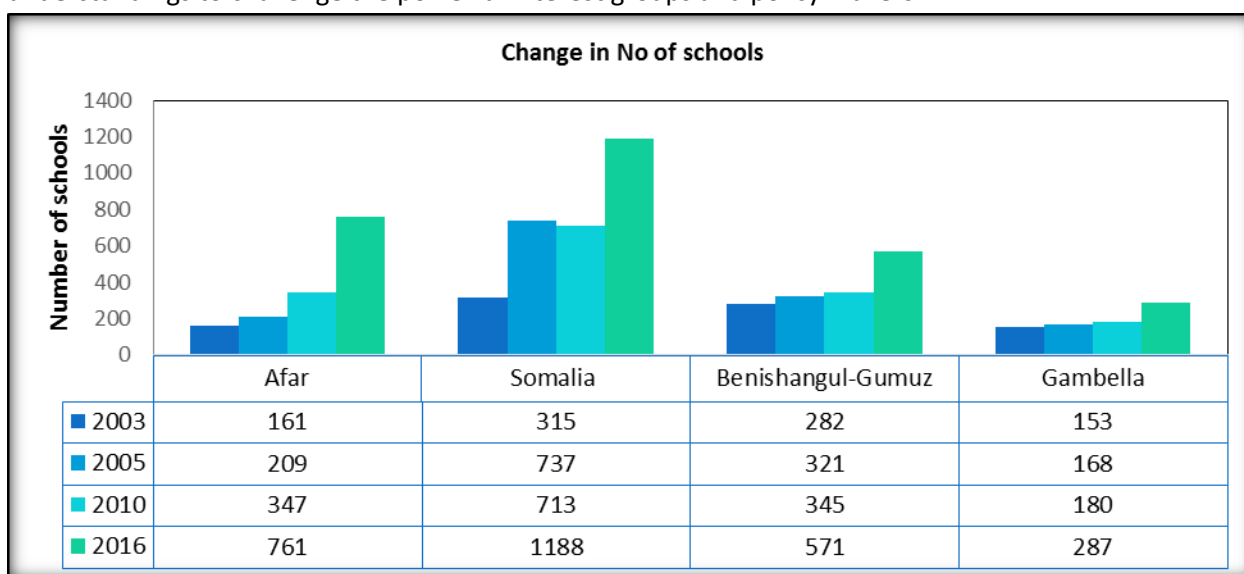


Figure 12: Number of Schools in Pastoral and Agro-pastoral Areas

Source MoE, 2017

In the draft pastoral area development policy document (2008), the government acknowledges the challenges of education in pastoral areas. For instance, the gross primary enrolment ratio, for Afar, and the Somali regions were 13.8%, and 15.1%, respectively during (2004/05, which, of course, has improved since 2003. For instance, the enrolment ratio has reached more than 60% for these regions in 2006 (see Figure 11). Using other education indicators, such as literacy rate, dropouts and repetitions, the pastoral areas are still lagging behind the national average. For instance, pupil teacher ratio has shown insignificant change during 2003-2016. Despite substantial increment in the number of teachers, the proportional increment of student enrolment impacted on the ratio of pupil-teacher in the area. To change this situation, the government has been investing in the expansion of education and increase access to people residing in the remote areas. The number of schools has doubled in the last two decades (see figure 12), with proportional increment of teachers. However, low education participation and marked disparities in provisions and participation was evident between pastoral and agro-pastoral vis-avis other communities.

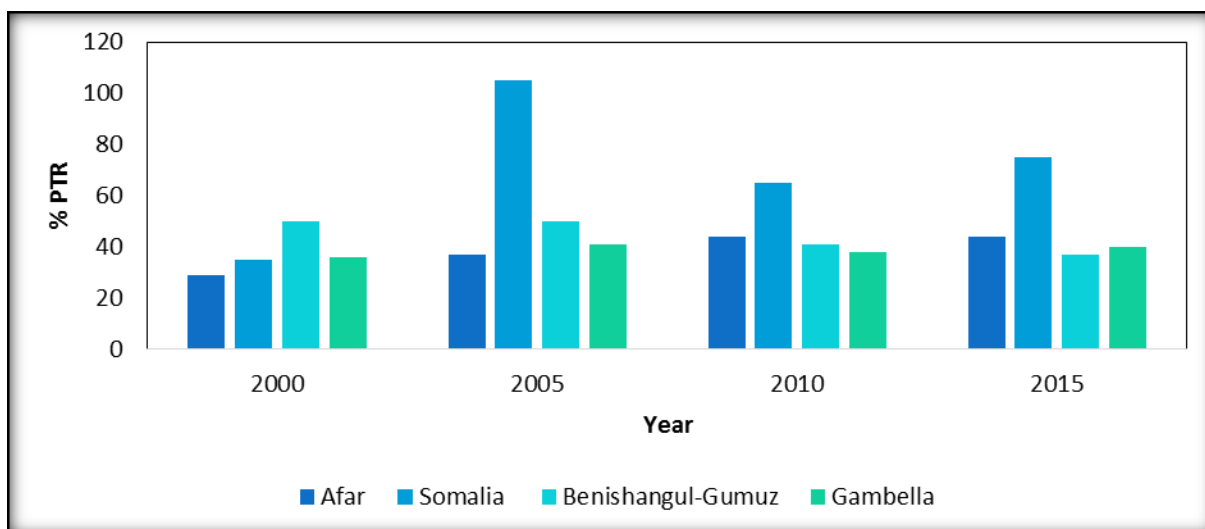


Figure 13: Pupil Teacher Ratio in Pastoral and Agro-pastoral Areas

Source: MoE, 2016

Drought and other natural disasters are frequently cited as disrupting the education. Therefore, there is a need for flexible education policy for pastoral areas with school calendar that fits the local context. In addition, including pastoralism in the curriculum, may aware the future generation on the features and characteristics of pastoralism and rationale of mobility.

In addition to designing appropriate educational calendar and modality that meet pastoral context, scholars argue that the curriculum and methods of delivery need to consider the pastoral context. Curricular success depends on the extent in which the context reflects the local reality, the extent in which the delivery method considers the pastoral conditions, and the extent in which the modality fits into the need for mobility (Kratli, 2001). The goal of education should be to empower pastoralist and



agro-pastoralists, to increase their political representation and capability to function in a globalized world. This requires planned and targeted approach rather than mass education, which could be very expensive. It is argued that education that despises and belittles pastoral culture and herding has lesser acceptance rate or at least contribute to the disruption of pastoral livelihoods by draining young labor. This is true that pastoralists for long complain school dropouts for ignoring herding just to remain idle. Therefore, the education in pastoral and agro-pastoral area need to appreciate livestock keeping as important venture while it also includes ways for transforming the business to a more resilient and less risky livelihood systems.

In some countries, education is used as a means to promote settlement, because attending school assumes staying at certain areas. Boarding school is also tried in different countries, including Ethiopia. But the education should be designed on the regional and local context. The success of Mongolia in providing education since 1940 was a good example which saw the country jumping from 2% literacy rate to over 90% in 20 years (Kratli, 2001). The policy promoted boarding schools, construction of schools in every settlement, and competitive payment for highly motivated teachers, mostly from nomadic background.

School construction and retaining teachers require provision of basic services such as water, mobile network, and at least certain centers where recharging mobile battery is possible, or supply of solar energy. Mobile school may be considered a failure in many countries, with the exception of Iran. In some countries, radio-based distance education was implemented. Regardless of the modality and policy to be designed, there is a need to understand, the barriers to education services and school attendance. Understanding the problems from pastoral side that make them to withhold their children from school (the need for labor, mobility, cultural issues, isolation etc.), and delivery related problems (accessibility, quality, relevance etc.) are important.

The current Ethiopian education policy solves certain constraints to pastoral and agro-pastoral education discussed in the earlier days: such as language, design of primary school curriculum in a way it reflects local context, cultural alienations etc. However, there is lack of teachers in mother tongue in the elementary schools of many regions, such as Benishangul-Gumuz, and pastoral and agro-pastoral areas of SNNP. Gender disparity is also high in pastoral areas such as Somali and Afar. For instance, data from DHS (2016) confirm this for the secondary education (Figure 14)

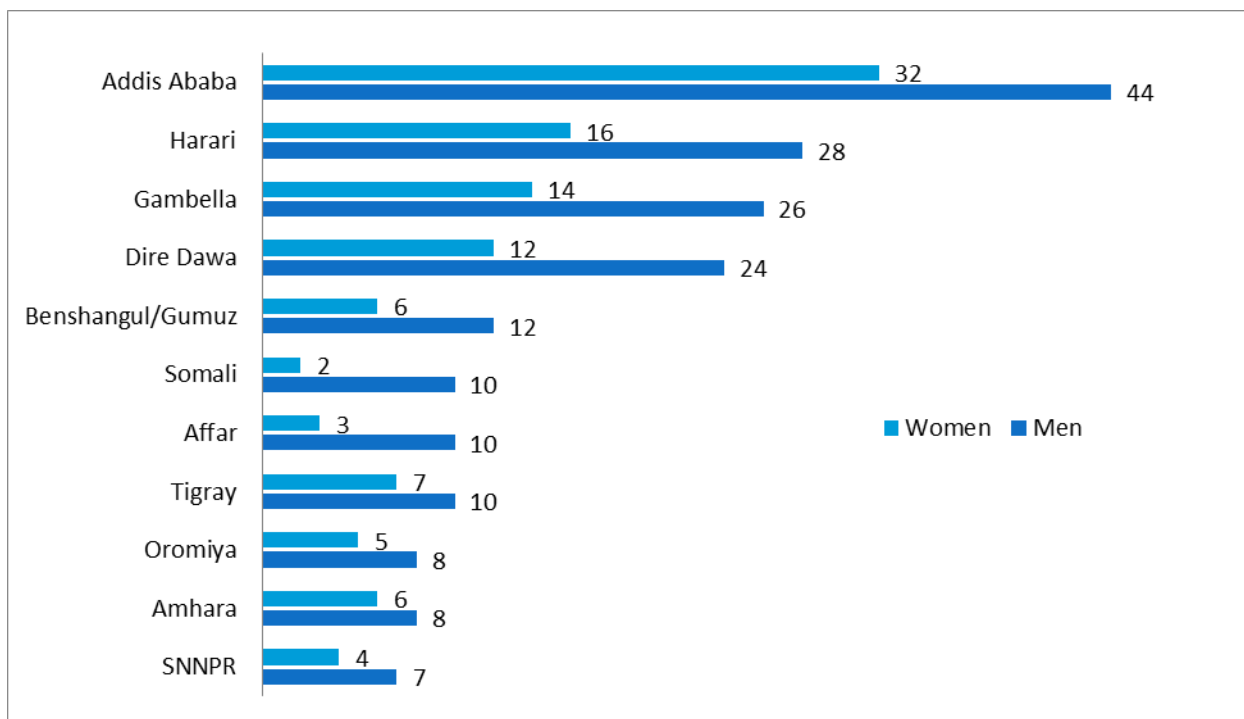


Figure 14: %age of Women and Men Age 15-49 with Secondary Education Completed/Higher

Source: DHS, 2016

### 5.3.1 Policy Recommendations

There is lack of comprehensive service delivery policy that considers the pastoral and agro-pastoral context. As the education system and government policy tacitly despise mobile pastoralism and promote sedentary agriculture, pastoral children may develop indifference to the education system itself. Therefore, pastoralism needs to be appreciated in the education/curriculum provided. The transition to agriculture and other livelihood option, if necessary should take normal transition, as it happened in many other countries. The curriculum should reflect the reality of the environment where pastoralists do live.

- Engaging on service provision focusing on pastoral resources/livestock and livestock production, fodder production, incense
  - Goal of education should be to empower pastoralists, increase their political representation, and potential to act in a globalized world;
  - Curriculum and methods of delivery need to consider the pastoral context;
  - Develop context based and flexible academic calendar;
  - School construction and sustaining teachers need the provision of basic services such as water, mobile network, and at least certain centers where charging mobile battery is possible;
  - Context based functional adult literacy;
- The linkages between regional university and research/ training institutions vs. pastoral communities needs to be improved

- Policy on encouraging private sector involvement through direct investment or through public-private partnership

## 5.4 Road /Transport

Most pastoralists and agro-pastoralists live on the periphery of the country, poorly connected to the center and emerging towns in pastoral areas. Despite recent progresses, many communities are still isolated, and prefer to trade across the border and get services from the other side of the border. Meanwhile, there is a growing need to link different market centers to the urban centers. The current transportation system also requires a policy to transport animals in accordance with the global standards for the safety of the animals as well as stringent international standards for food quality and safety. While utilizing the opportunity created in the Middle East where the demand seems overweighing the food quality standard set by European countries, a policy is needed to increase quality and quantity to achieve competitive market prices, that generate enough and sustainable income for the producers.

The policy assumption of the government that centers itself on settling pastoralists is also reflected on the policy of infrastructural development. For instance, the draft policy document of 2008 envisages the provision of infrastructure such as road, electricity and others to focus on potential areas for future settlement. Such preconceived policy direction, may prove costly, if the communities are not made part of the policy development aiming to influence their destiny. The contradiction in the document is that it contends the intervention to be realized with full participation of the pastoralists. However, if there is real participation, it should start from formulating the guiding policy with pastoralists and proceed to the other subsequent strategies and programs. IGAD policy initiative confirms: 'Policies are effective and have a positive impact on the ground, at least in the medium to long term, when they are participatory, evidence-based and supportive of household livelihoods strategies' (Pica-Ciamarra et al., 2011).

Ethiopia exports live animals mainly through port Djibouti, which has no facilities for loading animals on to ships, so cranes are used to load individual animals. The means of transporting animals from source market in lowland areas to feedlots in Adama and then to Djibouti are inconvenient and tremendously expensive. There are no designated double bed trucks which can transport more animals at a time. The country is using trucks that transport a maximum of 30 animals (Wolmer, 2005). Therefore, improving access to road and upgrading the transport system require well informed policy.

Road is at the center of all development efforts. Pastoral and agro pastoral areas have the least coverage of road networks. Some of the regions such as Benishangul-Gumuz have big rivers which need construction of big bridges to connect different Kebeles and woreda. However, the region claims that constructing bridges on such big rivers is beyond its capacity. This is attributed to centrally allocated budgets and the way revenues are collected. There may be a need for policy revision regarding how the revenue collection is managed between federal and regional governments., Frequent revision of the criteria for centrally allocated budget is also suggested, as some of the indicators used (for instance population size) shifts quickly in some places. Unless road services are improved many pastoralists and

agro-pastoralists remain isolated. This affects service provision, linkage to market and pastoralists' capacity to cope with and manage risks.

## 6. GOVERNANCE AND CAPACITY BUILDING

### 6.1 Decentralization versus Centralization

Despite successful decentralization of certain administrative aspects in post 1991 Ethiopia, policy making remained effectively centralized, mainly dominated by policy advisors and policy makers who are from the highland regions, with less understanding or even biased attitudes to pastoralism (Halderman, 2004). The policy framework together with regional legislation envisages devolution of power - the decentralization of political, administrative, legislative and financial power to regional governments, and reallocation of intergovernmental responsibilities in which regions are fully empowered to handle local judiciary, development and service delivery activities. However, either from lack of commitment or capacity limitation, there are gaps in the decentralization of power, particularly in interpretation and implementation of the national level policies in a way they fit the local context.

Discussion held with some regional officials in BG confirms that the centralization of certain social services such as electric power supply, telecommunication and revenue collection clearly constrained the provision of not only those centralized services, but also others that are highly dependent on them.

#### Decentralization and Service Provision

Despite the political and administrative decentralization to regions, the provision of key social services such as electricity and telecommunication services remained highly centralized. In addition, construction of highways, and roads that require huge budget remains the mandate of Federal government. Moreover, the way budget is allocated to the regions is one of the main concerns of regions such as BG. According to regional official at BG, centralized service provision of electricity and telecommunication and skewed budget allocation have affected the provision of other services such as health, water and even education. As the regional officials have no mechanism of influencing the services provided by federal government, prerequisite services which are directly and indirectly connected to such services are either delayed or not provided for years. There should be revision of such centrally administered service provision mandates and processes.

For instance, lack of electricity affected the provision of health, education, and mobile services whereas budget constraint impacted on the infrastructural development such as road.

Many years of debate on socio-economic and political marginalization has led to the establishment of different institutions that are considered to be representing pastoralists. Institutions such as Pastoral Development Commissions, Ministry of Federal Affairs and Pastoral Areas, Pastoralists' Extension Team in the Ministry of Agriculture, Pastoral Standing Committee have been created in response to complaints pertaining to pastoral marginalization. These

institutions and committees have been participating in policy dialogues and advocacy works regarding developments of pastoral areas. These positive developments still require refinements of mandates as there are overlapping mandates and resource competition in some aspects rather than complementing one another<sup>6</sup>. The relevant services need to be given to the mandated bureaus (for instance, education related activities need to be managed and undertaken by the authorized and competent authority).

Capacity building for pastoral institutions, policy advocates, and institutions representing pastoralists is vital to enable them articulate the needs of pastoralists in the policy arena, influence policy makings and implementation in the direction that really reflect the need of pastoral communities. The annual celebration of pastoralist day is a good initiative, but the relationships between different pastoral groups and regions need to be formalized so that they voice together concerns regarding policies (develop strong regional and national networking).

## 6.2 Governance

Mearns (1996) defines governance as the exercise of legitimate authority within a local group through endogenously evolved sets of rules, and the government as the formal exercise of control, through law and coercion, over a community by a constituted state. In line with this, others argue lack of governance, and political marginalization as a source of pastoralists' exposure to risks through resource alienation, insecurity and poverty (Little et al. 2008). The political marginalization emanates from the way pastoralism is perceived, understood and characterized by policy makers, development actors, and to some extent researchers. The history of relations between pastoralists and African governments particularly during the twentieth century is one of encapsulation of pastoral and agro-pastoralists communities rather than incorporation (Fratkin, 1997). The political marginalization has led to resource alienation, specifically land (Elias and Abdi, 2010). Resource alienation has been the center of policy debate, research agenda, and development issues. Since politics and economic systems, it supports are at the center of policy making, the political marginalization resulted in the neglect or at best left pastoralists with little policy attention (Fratkin, 1997). In the process, the traditional institutions and governance system have been weakened and their capacity to manage risks substantially declined.

Citing the late prime minister's speech on 13 pastoral day celebration held in Jinka on 21 January 2011 and reviewing the policy of irrigation schemes and dams in lowland areas mainly used by pastoralists and agro-pastoralists, Fratkin (2014:96) termed the Ethiopian pastoral and agro-pastoral policy as the most 'extensive and draconian in Africa and possibly in the world'. The concern for the author is not only land alienation, but forceful relocation and planned settlement. 'In addition to denying Afar herders seasonal access to the river, the plantations are dumping toxic chemicals into the water, the water level is decreasing and migrants from the highlands are benefiting from job opportunities not available to the less educated Afar. As land alienation due to increased irrigation schemes, sugar factories and other developments in lowland areas has severely reduced the livelihood and mobility of pastoralists and agro-pastoralists, designing a policy of inclusion into the system is important. As pastoralists lack the skills, business acumen and psychological preparedness for such shift, there is need for a policy that

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<sup>6</sup> The question is why we did not achieve the required policy outcome?

governs the relationships and inclusion into the inevitable transition of land tenure and access rights. In addition, big projects should plan for mobility corridors enabling the community to travel to pockets of grazing areas or water points.

In general, proponents of pastoralism, who believe pastoralism is still and will in the future remain viable livelihood, attribute pastoral vulnerability to inappropriate policies (land alienation, restriction of mobility, neglect in infrastructure and social service provision, and biases against pastoralism).

### 6.3 Indigenous Governance System

At grassroots level, there are customary settings of natural resource governance, a full range of

According to the United Nations Declaration on the rights of indigenous Peoples, Article 27, 2007, States shall establish and implement, in conjunction with indigenous peoples concerned, a fair, independent, impartial, open and transparent process, giving due recognition to indigenous peoples' laws, traditions, customs and land tenure systems, to recognize and adjudicate the rights of indigenous peoples pertaining to their lands, territories and resources, including those which were traditionally owned or otherwise occupied or used. Indigenous peoples shall have the right to participate in this process

customary institutions, customary leaders, customary laws and procedures developed in strict association with the natural resources for pastoral livelihoods (Watson, 2003). The customary governance system is either clan based or includes the wider social group such as Gada system in Borana, a complex system of generational classes producing a well-trained leadership through a long ceremonial and political training process. A pan-Borana assembly, *Gumi Gayo*, convenes every eighth year and make or amend customary laws, while the *gada* institution takes the role of custodianship of the laws (Legesse, 1973). The Borana are organized into cross-cutting social organization that have responsibilities of resource governance, political mandates, and oversee the cultural practices. Gada defines rules, obligations and authorities, and also provides a framework for socio-political stability over long times.

Other pastoral groups such as Somali and Afar have their own governance system, clan and sub-clan playing vital role in resource governance. There are a large number of specific customary rules and regulations concerning access to and management of underground water, rivers, ponds, and rules for sustainable use of grazing area, protection of well sites, of ceremonial grounds, religious and ethical values protecting all creatures. Labor and livestock are key resources that clans mobilize in order to build governance capacity and develop the clan economy.

The customary resource management system is by definition based on an ecosystem approach, since individual pastoral families need differential access to all resources at different time/stages that is why mobility is one important component. The manner in which government structures work with customary institution to promote resource governance, participatory and inclusionary management system is not clear.

FAO (2016) argue that the economic and ecological importance of pastoralism is compromised by weak governance of tenure. Borana pastoralists repeatedly alleged that the formal alienation of valuable grazing and water resources by the regionalization policy of the Ethiopian Federal Government was a direct denial of their rights to fodder and water (Homann, 2008), while Afar and Karrayu pastoralists also complain loss of grazing lands to different development schemes in the region (Fratkin, 2014). Recently, the constructions of mega projects in pastoral and agro-pastoral areas are also raising concerns among the indigenous communities.

Policy that promote land use changes contradicting pastoralism, and introduction of livelihoods such as crop cultivation, at least at initial stage do not favor pastoralists and agro-pastoralists who lack knowledge, skills and motivation to engage in farming. A policy that contradicts communal ownership and encourages privatizations (including ranching, irrigation schemes and national parks) reduces available land for pastoralists at formal institutional level.

FAO (2016) recommends the duty to adhere to responsible governance and international human rights principles for the management of pastoral land, with transparent, accountable, and honest governance

system. In many of the local offices, the principles that ensure good governance are seen printed on the walls. A missing link is implementing the principles. Lack of competent, committed and responsible personnel in pastoral and agro-pastoral areas may point to the weak governance. Even though the challenges of governance in pastoral areas are the reflection of the national level, it is more serious in the peripheries.

Transparency, public participation and access to information by pastoralists in public decision-making allow them to influence decision-making related to their lands through generating legitimate, adaptive and resilient solutions (FAO, 2016). FAO details about 11 principles that ensure good governance in pastoral areas.

The findings from discussions held with the community and regional workshops reveal that pastoralists

### Indigenous Governance

- Policy needed to strengthen the synergy of formal and customary institutions.
- Legitimize indigenous governance systems of rangeland resources: recognition of communal land rights (communal certification and enforcement)
- Value local knowledge as they complement scientific knowledge to inform decisions and development initiatives
- Land use/planning policy and implementation that recognizes the rights of pastoralists and improves their production system
- Policy to focus on physical and human capacity building for government implementing agencies based on the gaps.
- enabling policy environment for pastoral mobility – free access to dry season grazing areas and water points.

and agro-pastoralists have rich indigenous knowledge and governance system of resource management, conflict prevention and resolution. However, they have not been made part of the policy making process. According to one of the prominent Gada leaders who participated in Adama workshop, the government recognizes their role only when there is serious conflict. He says that pastoralists have not been involved in any policy dialogue; their institutions have not been accorded the right places as they are marginalized from playing important roles in resource governance, conflict resolution and peace building.

## 6.4 Cross Border Issues

The pastoralist zone in the HoA spans the boundaries of nation-states. Pastoral communities are found in the lowlands of Ethiopia, in the whole of Somalia, in the Northern and Eastern part of Kenya and on the borders of Tanzania and Uganda (Abdulrahman, 2006). Pastoralists cross borders for different reasons. Cross-border movement enables pastoralists' access water and pasture, market and other social services. Since social services in pastoralist areas are very scarce, many pastoralists seek these services across borders thereby cementing their cross-border ties, which is already strong because of social and kin relations that stretch across these borders. But the policy and practice so far are defining cross-border movement as illegal and the focus has been on controlling the movement. In addition to its benefit to economic actors, legalizing cross border trade benefits the government as it makes borderline control easier to implement. In this regard, AU, and IGAD policy frameworks have valuable recommendations. Both advocate for cross-border livestock trade and pastoral mobility, based on the consent of the neighboring countries. Pro-poor Livestock policy initiative (Halderman 2004) also emphasizes the need for easing and legalizing cross-border trade not only to benefit pastoralist, but also the national government to generate revenue from taxes and foreign currency from export. Participants of FGD at Assosa call for policy that regulates cross-border trade and movement of people and animals.

### *Why Mobility for Pastoralist?*

The intention of the Ethiopian government to settle pastoralists along major rivers and piped water supply systems (as envisaged for areas without river) are said to be against the culture and production systems of pastoralists. It is also often argued that complete sedentarisation is hardly the basis for a stable livelihood in the fragile ecology of pastoral and agro-pastoral areas and may become even a source of conflict. Halderman (2004), and others consider pastoral sedentraization as emanating from lack of proper consultation with pastoralists, development advocates and research organizations. In addition to its enabling role for pastoralists to access resources opportunistically; mobility helps to avoid diseases and conflict. Mobility is the basis for efficient use and protection of rangelands, and, that mobility is crucial factor for appropriate adaptation to climatic and other trends (AU, 2013). Moreover, mobile pastoralists are said to be economically better off than sedentary agriculturalists (or at least settled former pastoralists (Little et al. 2008; Fratkin, 1997; Yimer, 2015). Cross-border movement enables pastoralists' access water and pasture, market and other social services. In addition to its benefit to economic actors (producers, traders, transporters, etc.), legalizing cross border trade benefits



the government in terms of tax revenue collection, and controlling vast borderlines which is costly and difficult to implement.

Cross border trade is also praised for reducing overgrazing and degradation. Based on long term research in North Kenya and Southern Ethiopia, Little et al. (2008), found livestock mobility to be critical to the overall productivity and sustainability of pastoralism. This cannot be implemented without proper recognition and support to customary land tenure systems that enable access to common resources. While the modes of mobility and routes are evolving, understanding its rationale, the need to access markets and other social services, are important.

Yimer (2015) cites the success of Mali in recognizing mobility and mobility routes for pastoral community, designating the route as public domain and protected from encroachment. Pastoralists organize themselves to split herds and move animals to distant grazing areas, to control access to communal grazing areas, to manage the watering of livestock, and to ensure security. Partly for these reasons, pastoralists have very strong social organizations and leadership. Eastern Africa pastoral tradition dictates that land is a communal resource.

#### Views regarding mobility and commune programs

- ✚ “Pastoralism without mobility like a fish without water” – Afar pastoralist,
- ✚ “Where is it written, in the Quran or the Bible, that the only way to modernize pastoralists is to shift to crop farming? Couldn’t we industrialize the livestock sector which is best suited to the agro –ecology to benefit us and the nation on export earning?” -Afar Government Official.
- ✚ “If commune program is going to use the traditional crop production system which has been there for over 3000 years and failed to ensure food security for poor highland farmers, it will not also make pastorate dropouts. If we want to ensure pastoralists’ food security, we should support them with improved technology” Afar Government Official
- ✚ “We want to see improved and modern mobile pastoral production system in 20 years from now, which will also be seen as way of life by our children”. - Borana Government Official
- ✚ “We need livestock-based extension service, why are we given crop-based extension service?” Borana Government Official

## 6.5 Capacity Building

The results achieved by billions of dollars investment in pastoral areas of East Africa has been debated for long. Most literatures highlight different reasons for the failure, one being institutional capacity

limitation in implementing the development policies and programs. The erosion of the capacity of indigenous institutions to effectively govern their resources and maintain peace is another concern (WISP, 2008). Pastoral development in Ethiopia faces a number of capacity constraints. These capacity gaps evident at institutional level (including facilities, resource allocation, and organizational structure), individuals that fill the institutions (skills, knowledge, and experiences), and community/individual pastoralist level to access the critical resources needed for their livelihood, manage risks, cope with changes and enhance resilience. Careful capacity-building processes can provide durable, cost-effective, and low-risk options for improving the human condition in marginal lands. This echoes the view that filling gaps in human development is the key for progress in Africa's pastoral areas. Findings of quasi-experimental based research by Coppock et al. (2011) confirm that capacity-building package helped people become more resilient and better managed risks associated with the 2005-2008 droughts. But identifying the capacity gaps and the needed packages are important.

The challenge varies by regions. For instance, Afar lacks institutional capacity to plan and implement program (Nicol and Otulana, 2014). This is also true for Somali, Benishagul-Gumuz and Gambela (Fratkin, 2014). Even though the Oromia pastoralists are part of the wider Oromo society, the production system and perceptions held by highlanders regarding pastoralism equally affect policy formulation and implementation. The southern are ethnically different with fewer members of their children in the influential policy making positions.

Pastoralists are transforming socially, economically and culturally. In the face of such transformation they may lack the critical skills required for up-taking the new livelihood options, calling for the need to enhance the adaptive capacity of pastoralists (WISP, 2008). For instance, pastoralists who are involved in farming basically lack the skill for farming. There is a great number of pastoralists involving in livestock trade. However, they lack basic skills of the business, including how to manage relationship with their trading partners (Tiki, 2015). The capacity building of the pastoralists should focus on legitimizing pastoralist governance of rangeland resources, improving their Governance capacity and ensuring equity in the operation of customary institutions (WISP, 2008). Capacity building would fundamentally alter the well-being of people through diversified livelihoods, increased incomes, and reduced hunger (because of an increased ability to purchase food).

The success of policy and development initiative does not depend solely on its technical viability, but the existence of competent institutions and enabling environment. Institution in this regard can be both organizations, as well as 'rules of the game' which influence actions. Organizations with competent experts play important roles. When we talk of rules it may be formal, as laid down in legislation; or informal determined by experience, history or culture. Rules govern access to resources, transactions between individuals and collaboration. By explicitly building on understanding of institutions and how they impact differently on different social groups, policies can be expected to achieve their objectives better (Sandford and Ashley, 2008). The typologies of institutions relevant to pastoral development are detailed by Sandford and Ashley, (2008), which spans from locally developed informal institutions to the international ones that affect pastoralists through trade regulations, setting standards and restricting free mobility of commodity across the globe. For the pastoralists to act in this highly competitive and skewed global market, it is high time for the pastoralists to be able to equip themselves with the needed

skills, knowledge and dynamism. Pastoralists need to deal with international standards, market requirements, financial barriers, border restrictions etc. Strengthening the capabilities of pastoral communities enhance the effort to poverty eradication, sustainable livelihoods, social stability, self-determination, rural development, as well as the environmental sustainability of the resources on which they depend (FAO, 2016).

However, with the exception of few universities that included pastoral issues in their faculties, there is lack of educational institutions that produce competent manpower for pastoral areas and provide training for pastoralists as well. Professionals working in the pastoral areas mostly originate from highland areas and pass through the formal agricultural focused education/training systems. Different extension workers are graduated from centrally managed training centers with a focus on agriculture. Lack of capacity in terms of required number and quality of institutions, working systems, and human resources as well as infrastructure is considered as the major challenges to policy implementation in Ethiopia in general and in the pastoral areas in particular. It is well recognized that the pastoral areas fall below others in terms of human resource capacities and infrastructure. The policy document suggests training and employment as remedy.

Unfortunately, unless a special training program that focuses on local context is designed and special incentive mechanism is put in place, staff retention will remain to be challenging. Piecemeal and project-based approaches that do not consider long term and sustainable capacity building approach will not bring about the required change in pastoral areas.

Policy formation processes tend to involve limited consultation, are complex, lengthy and the decision-making processes opaque. The poor are rarely consulted, often have limited ability to organize themselves and are unable to create or maintain the kind of pressure needed to ensure favorable policies (Sandford and Ashlay, 2008).

## 6.6 Policy Recommendation

There are different organizations mandated with production, marketing, and regulatory aspects of animal health. In addition, different agencies such as ministry of trade, industry, and national bank play different roles in the export trade. There is also shift of mandates from one ministry to the other at different times. For instance, Future Agriculture Policy Brief (2014) noted the mandate of overseeing live animal markets shifted twice between the Ministry of Agriculture and Ministry of Trade since 2005. This simply calls for coordinated and harmonized policy approach, and create ground for coordinated action, rather than putting agencies in direct competition for resources.

- Policy to enable co-existence of mega projects with the pastoral way of life (with benefit sharing);
- Inclusive and participatory planning and management of mega projects;
- Policy to promote pastoralists (region) to be shareholders of mega projects;
- Policy to set aside some irrigated land from mega projects to fodder production to meet the needs of pastoralists;
- Skill development and employment for ToPs;
- By-products need to benefit pastoralists – policy to force this change;

- Cost-benefit analysis and environmental and social impact assessments need to be completed for future mega projects;
  - Policy to inform linkages between universities/ research institutions and Sectoral ministries
- As a means to improve governance, resource use and risk management, recognitions and encouragement of the customary tenure and institutions that take the local condition into account is important. It is known that communal land ownership certification, as a means of protecting pastoral rights, is underway in Afar and Oromia. This should be supported at national and regional level, with important policy and legislative framework.
- Decentralization of the political power should be real, with proper capacity building activities (organizational, manpower, and material). The Political commitment should go beyond rhetoric. In this regard, considering AU policy framework on pastoral area development is important.
- Generation of disaggregated data particularly for regions with partial pastoral and agro-pastoral population (e.g. Oromia, SNNP)
- The inadequate resource allocation for staffing, logistics, and facilities that constrain government institutions to implement the policies and proclamations in the pastoral areas should be improved.
- Pastoralism and policy support for industrialization of the livestock sector should be the center of the policy
- Women play important roles in the livestock production. However, pastoral women are burdened with workloads of the production and reproduction roles, having limited decision-making power pertaining to livestock. The policy has to address the cross-cutting issues, including gender disparities, equity, etc.
  - The government need to recognize and legitimize pastoralists resource governance and work to enhance indigenous governance capacity;
  - Recognition of communal land rights (communal certification and enforcement (scale up the pilots in Oromia and Afar)
  - Enabling policy for herd mobility to access key resources and fall-back areas.
- policy to integrate indigenous knowledge and scientific knowledge for a better and more integrated governance system
- Policy and strategies that show long term vision and goals of pastoralist livelihood has to be in place taking into consideration:
  - Addressing cross-cutting issues such as gender, HIV/AIDS, HTP, Environment;
  - implement IGAD/AU policy framework for cross-border livestock trade, livestock mobility, and trans boundary disease surveillance and control;

## 7. CONFLICT, CONFLICT RESOLUTION AND PEACE BUILDING

Resource and land related conflicts ranging from simple misunderstandings to livestock rustling and kidnapping are common in many pastoral areas. Small disputes escalate quickly and result in deaths and displacement of whole communities. They also create conflict between the wider community and owners of individual enclosures. Conflicts confine pastoralists to specific areas, leading to the overuse of nearby resources, which in turn causes rangeland degradation. This scenario has intensified land degradation resulting in losses to the productive potential of the rangeland. It in turn leads to frequent famine, lower household incomes, increased pastoral migration, and increased social unrest in affected areas, particularly in southeast Ethiopia. Over the past 50 years, pastoral livelihoods have been severely constrained by multiple violent conflicts over natural resources and contested political claims, as well as increasing government development interventions such as the expansion of commercial irrigation agriculture and sedentization projects (Ayalew 2001, Said 1997). Due to the massive loss of community-held grazing areas the mobility under conditions of a generally growing population, processes of impoverishment, and increasing vulnerability have become characteristic of large parts of pastoral population in Ethiopia (Devereux, 2006). The most important adaptive strategy remains the mobility of pastoralists. However, the combination of more people with more animals competing for the use of ever shrinking pastures and water sources does produce conflict. Inter and intra-clan conflicts over rangeland resources mainly grazing land and water points have partly contributed to the decline in the rangeland resources. This phenomenon not only reduces the resource, but also costs human and livestock losses as well as destruction of properties.

When administrative boundaries are used to try to regulate these, resulting in actual or perceived differential benefits for different clans, strong and potentially explosive grievances are very likely to arise. The inter clan conflict stays for a shorter period of time and is often solved through traditional social organization. This usually happen among the big clans in the different pastoral Regions including the Afars, Somali, Borana, the Nuers and the different major clans in South Omo. On the contrary, the tribal (clan) conflict between two major pastoral clans has far greater consequences and the effect could be observed on property, lives and resources. For example, the Afar and Isas are considered to be traditional enemies. As a result, the use of the Alidege plain (Zone 3 of Afar Region) which is over 75,000 ha of good grazing land has been precluded and currently considered as buffer zone for most parts of the year. Similar conflicts occur between the Borana and Somali, the pastoral groups of Southern Omo, the Nuers and other major clans in their surrounding (Beruk and Tafesse, 1998; PADS, 2005). The resultant effect of the conflicts is that human and livestock lives will be lost and consequently, the use of the resources will be denied to both clans or inter clans or benefit the victor at the cost of the loser. Most people survive conflict and crisis not through international interventions but by relying on their own efforts, adaptations, networks and systems. By the same token, some of the greatest suffering and repercussions of conflict and crisis arise from the damage done to these systems and the institutions that support them.

## 7.1 Conflict

Conflict is widespread in the arid and semi-arid zones, and often overlaps with extreme poverty and food insecurity. Resource use conflict is highly prevalent and sometimes complex. The conflicts have been between different ethnic pastoral groups, as well as within ethnic groups. Conflict has devastating consequences on the lives and livelihoods of pastoral society and the economy of the country as whole. Gain over the control of scarce and strategic resources, particularly water and pasture which is further exacerbated by different factors are among the major causes. Most of these conflicts have been going on over a long period of time, with very little attention paid to resolving them. Customary conflict resolution methods are weakened and ignored. They are not intentionally supported and included in the development process to build and monitor peace among communities who share resources. Conflict is often seen as endemic to pastoralist communities, partly because productive resources are scarce and as a consequence, people move continually in search of water and grazing for their livestock (Devereux, 2006). Age sets and generation systems, the ritual proving of manhood through combat and livestock raiding. Captured livestock may form the basis for marriage and bride wealth payments, and their redistribution buys social and political influence, orchestrating further raids. Refugee influx (Gambella and Benishangul).

## 7.2 Conflict Resolution and Peace Building

Inter and intra -clan conflicts over rangeland resources mainly grazing land and water points have partly contributed to the decline in the rangeland resources. This phenomenon not only reduces the resource, but also costs human and livestock losses as well as destruction of properties. The inter clan conflict stays for a shorter period of time and is often solved through traditional social organizations. This usually happen among the big clans in the different pastoral regions including the Afars, Somali, Borana, the Nuers and the different major clans in South Omo. On the contrary, the tribal (clan) conflict between two major pastoral clans has far greater consequences and the effect could be observed on property, lives and resources. For example, the Afar and Isas are considered to be traditional enemies. As a result, the use of the Alidege plain (zone 3 of Afar Region) which is over 75,000 ha of good grazing land has been precluded and currently considered as buffer zone for most parts of the year. Similar conflicts occur between the Borana and Somali, the pastoral groups of Southern Omo, the Nuers and other major clans in their surrounding (Beruk and Tafesse, 1998; PADS, 2005). The resultant effect of the conflicts is that human and livestock lives will be lost and consequently, the use of the resources will be denied to both clans or inter clans or benefit the victor at the cost of the looser. Most people survive conflict and crisis not through international interventions but by relying on their own efforts, adaptations, networks and systems. Indigenous conflict resolution and management are proven as less complex and time saving, and participating parties in conflict solve their own problems and handle their affairs in a relative way more acceptable to them. However, the role this important institutions play in solving the disputes is becoming weak with time. By the same token, some of the greatest suffering and repercussions of conflict and crisis arise from the damage done to these systems and the institutions that support them.

### 7.3 Findings from KII, FGD and the Workshops

In many pastoral areas conflict was identified among the top priority still at large in pastoral areas. Particularly conflict on resource use (Pasture, water, etc.) is mentioned as the most prevalent in many pastoral areas visited during the field visit. The conflict reported in Gambella is not between the pastoralists in the region but with Murule tribes coming from South Sudan who also practice cattle rustling in addition to the competition for grazing lands.

### 7.4 Policy Recommendations

Policy must be designed to strengthen customary conflict resolution and management mechanism. It should support the traditional and indigenous practices for safer and legally regulated and protected inter and intra community mobility. Traditional institutions are good at enforcing rules for sustainable use of rangelands especially when they are clearly recognized as the beneficiaries. The policy on conflict management must enhance the inter-regional and inter-governmental collaboration.

## 8. REFERENCES

- Abdulrahman A. 2006. Cross-Border Livestock Trade and Small Arms and Conflict in the Pastoral Areas of the Horn of Africa: Case study from Southern Ethiopia and Northern Kenya. Paper prepared for the IASCP's 11<sup>th</sup> Biennial Conference.
- Aklilu, Y., Little, P.D., Mahmoud, H., and McPeak, J. 2013. Market Access and Trade issues Affecting the Dry lands in the Horn of Africa. Brief Prepared by a Technical Consortium Hosted by CGIAR in Partnership with the FAO Investment Centre. Technical Consortium Brief 2. Nairobi: International Livestock Research Institute.
- Anderson, D., 2002. *Eroding Commons: The Politics of Ecology in Baringo, Kenya 1890-1963*, Oxford, James Currey.
- AU, Department of Rural Economy and Agriculture, 2010. *Policy Framework for Pastoralism in Africa: Securing, Protecting and Improving the Lives, Livelihoods and Rights of Pastoralist Communities*, Addis Ababa, Ethiopia
- Assefa, D. Nurfeta, A. and Banerjee, S.2013. Assessment of Feed Resource Availability and Livestock Production Constraints in Selected Kebeles of Adami Tullu Jiddo Kombolcha District, Ethiopia, *African Journal of Agricultural Research*, 8(29): 4067-4073
- Behnke, R. and Kerven, C. 2013. *Counting the Costs: Replacing Pastoralism with Irrigated Agriculture in the Awash Valley, North-eastern Ethiopia* IIED Climate Change Working Paper No. 6
- Behnke, R. and Metaferia, F. 2011. *The Contribution of Livestock to the Ethiopian Economy – Part II*, IGAD LPI Working Paper No. 02 – 11
- Belay,S. Zaitchik B.F, and Ozdogan M. 2013. *Agroecosystem Analysis of the Choke Mountain Watersheds, Ethiopia*. *Sustainability*. Vol. 5:592–616
- Belay et al 2005. *Coping with Drought among Pastoral and Agro-pastoral Communities in Eastern Ethiopia*, *Journal of Rural Development* 28: 185-210
- Central Statistical Agency (CSA). 2015. *Agricultural Sample Survey 2014/2015, Report on Livestock and Livestock Characteristics (Private Peasant Holdings), Volume II*, Addis Ababa
- Central Statistical Agency (CSA). 2012. *Agricultural Sample Survey 2011/2012, Report on Livestock and Livestock Characteristics (Private Peasant Holdings), Volume II*, Addis Ababa
- Central Statistical Agency (CSA). 2008. *Federal Democratic Republic of Ethiopia Population Census Commission Summary and Statistical Report of the 2007 Population and Housing Census*



- Climate-Resilient Green Economy (CRGE), 2011. Green Economy Strategy of Ethiopia, Editor. Ethiopia's Climate-Resilient Green Economy Addis Ababa, Ethiopia. Federal Democratic Republic of Ethiopia, p. 188
- Climate-Resilient Green Economy (CRGE) 2011. Green Economy Strategy of Ethiopia, Editor. Ethiopia's Climate-Resilient Green Economy Addis Ababa, Ethiopia. Federal Democratic Republic of Ethiopia, p. 188
- Dejene, M. Bediye, S., Alemu, D., Kitaw, G., kehaliw, A., Assefa, G. and Tadesse, G., 2014. Livestock Feed Marketing in Ethiopia: Challenges and Opportunities for Livestock Development, *Journal of Agricultural Sciences and Technology*, 4: 155-168
- Detlef Muller-Mahn, Simone Rettberg and Girum Getachew. 2010. Pathways and Dead Ends of Pastoral Development among the Afar and Karrayu in Ethiopia, *European Journal of Development Research*, 22, 660–677
- Department of Rural Economy and Agriculture African Union Commission. 2014. The Livestock Development Strategy for Africa (LiDeSA) 2015 to 2035: The Roadmap to a Successful Livestock Sector
- Dixon et al. 2010. Feed, Food and Fuel: Competition and Potential Impacts on Small-scale Crop–Livestock–Energy Farming systems: An Assessment Commissioned by the CGIAR System -wide Livestock Program, ILRI (International Livestock Research Institute)
- Donnenfeld, et al. 2017. Key to the Horn: Ethiopia's Prospects to 2030
- Elias, E. and Abdi, F. 2010. Putting Pastoralists on the Policy Agenda: Land Alienation in Southern Ethiopia, *IIED, gatekeeper*, 145
- Ellis F. 1998. Household Strategies and Rural Livelihood Diversification. *The Journal of Development Studies*, 35, 1-38
- FAO.2016. Improving Governance of Pastoral Lands: Implementing the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security
- FAO. 2011. Successes and Failures with Animal Nutrition Practices and Technologies in Developing Countries. *Proceedings of the FAO Electronic Conference, 1-30 September 2010, Rome, Italy*
- Federal Democratic Republic of Ethiopia Ministry of Federal Affairs .2008. Draft Policy Statement for the Sustainable Development of Pastoral and Agro Pastoral Areas of Ethiopia, Addis Ababa

- Forrest, B.W., Coppock, D.L., Baily, D., and Ward, R.A. 2015. Economic Analysis of Land and Livestock Management Interventions to Improve Resilience of a Pastoral Community in Southern Ethiopia, *Journal of African Economies*, doi: 10.1093/jae/ejv0211-34
- Fratkin, F.2014. Ethiopia's Pastoralist Policies: Development, Displacement and Resettlement, *Nomadic Peoples* 18: 94–114.
- Fratkin, F. 1997. PASTORALISM: Governance and Development Issues, *Annu. Rev. Anthropol.* 1997. 26:235-61
- Future Agricultures. (2014). Pastoral Livestock Trade and Growth in Ethiopia, Policy Brief no.72
- Gedlu Mekonnen and Gijs van 't Klooster, *New Agriculturist*: Date Published: November 2011
- Gizachew, D., Szonyi, B., Tegegne, A., Hanson, J., and Grace, D. 2016. Aflatoxin Contamination of Milk and Dairy Feeds in Greater Addis Ababa Milk Shed, Ethiopia, *Feed Control*, 59: 773-779
- Gomes, N. 2006 Access to Water, Pastoral Resource Management and Pastoralists Livelihoods. Lessons Learnt from Water Development in Selected Areas of Eastern Africa (Kenya, Ethiopia, Somalia). FAO LSP, Rome.
- Halderman, M. 2004. The Political Economy of Pro-poor Livestock Policy Making in Ethiopia, Pro-poor Livestock Policy Initiative Working Paper no.19
- Herrero, M., Thornton, P.K., Notenbaert, A., Msangi, S., Wood, S., Kruska, R., Dixon, J., Bossio, D., van de Steeg, J., Freeman, H.A., Li, X. and Rao, P.P. 2012. Drivers of Change in Crop–livestock Systems and their Potential Impacts on Agro-ecosystems Services and Human Wellbeing to 2030: A Study Commissioned by the CGIAR System wide Livestock Program. Nairobi, Kenya: ILRI
- Hesse, C., and S. Cavanna. 2010. "Modern and Mobile: The Future of Livestock Production in Africa's Drylands." UK: International Institute for Environment and Development (IIED) and SOS Sahel International
- Homewood, K. 2004. Policy, Environment and Development in African Rangelands *Environmental Science and Policy* 7: 125–143
- Humanitarian Policy Group, 2009. Social Protection in Pastoral Areas. HPG Synthesis Paper, Humanitarian Policy Group, Overseas Development Institute, London, United Kingdom.
- Hussein K. and Nelson J. 1998. Sustainable Livelihoods and Livelihood Diversification. *Working Paper 69*. Brighton, UK: Institute of Development Studies

- IGAD, 2016. Policies and Proclamations Relevant to Pastoral Areas Land Management for Ethiopia, Kenya and Uganda. IGAD Regional Pastoral Livelihoods Resilience Project (RPLRP), Review Report | December 2016
- Intergovernmental Panel on Climate Change, 2007. Impacts, Adaptation and Vulnerability (Contribution of Working Group II to the Fourth Assessment Report, Geneva
- International Livestock Research Institute (ILRI), 2013: Review of Past Policies and Strategies for Livestock in Ethiopia, Ethiopian Livestock Master Plan Background Paper
- Kamara, A. M. Kirk, and B. Swallow. 2004. In Property Rights and Land Use Change: Implications for Sustainable Resource Management in Borana, Southern Ethiopia, *Journal of Sustainable Agriculture*, 25(2):45-61
- Kaur, N. et al. 2010. Adapting to Climate Change in the Water Sector. Assessing the Effectiveness of Planned Interventions in Reducing Local Level Vulnerability, RIPPLE Working Paper 18. Addis Ababa
- Kebreab, E. Smith, T. Tanner, J. and Osuji. P. 2005. Review of under-nutrition in Smallholder Ruminant Production Systems in the Tropics, in A.A. Ayantunde, S. Fernández-Rivera and G. McCrabb(eds.). *Coping with Feed Scarcity in Smallholder Livestock Systems in Developing Countries*
- Kula, J., Nejash A., and Jemal, A. 2016. Insufficient Veterinary Service as a Major Constraint in Pastoral Areas of Ethiopia. *Journal of Biology, Agriculture, and Health Care*. Vol. 6, No. 9
- Lister S. 2004. *The Processes and Dynamics of Pastoralist Representation in Ethiopia*. Brighton, UK: Institute of Development Studies (IDS)
- Little, PD, and Tiki, W. 2015. The “Elephant in the Room” Issues in Pastoralism Research: An Informal Conversation, ILRI Campus, Nairobi Kenya, March 13, 2015
- Little, P., Tiki, W., and Debsu, D.N. 2015. Formal or Informal, Legal or Illegal? Cross-border Livestock Trade in the Horn of Africa, Submitted, *Journal of Border Studies* 30(3):405-421
- Little, P. D., Mahmoud, H., A., Tiki, W., and Debsu, D. N. 2012. To Sell or Move:” Some Preliminary Observations about Herder Decision-making During a Prolonged Drought” Research Brief, Colorado State University
- Little, P. 2013. Reflections on the Future of Pastoralism in the Horn of Africa
- Little, P. John McPeak, Christopher B. Barrett and Patti Kristjanson. 2008. Challenging Orthodoxies: Understanding Poverty in Pastoral Areas of East Africa, *Development and Change* 39(4): 587–611

- Magda N. and Mulegeta Belayhun 2010 Synthesis of Existing Knowledge and Experience on the Provision of Water Supplies in Pastoral Communities in Ethiopia, RIPPLE, Addis Ababa
- Mearns R. 1996. Community, Collective Action and Common Grazing: The Case of Post Socialist Mongolia. *J. Dev. Stud.* 32(3):297-339
- Mekasha, A., Gerarrrd, B., Tesfaye, K., Nigatu, L., and, Duncan, A. 2014. Inter-connection between Land Use/Land Cover Change and Herders'/Farmers' Livestock Feed Resource Management Strategies: A Case Study from Three Ethiopian Eco-environments, *Agriculture, Ecosystems and Environment* 188: 150–162
- Mezmur, D., Diba, D. and Guru, M. 2015. Feeds and Feeding Roadmap Development: Status of Feed Production and Feed Balance in Oromia Region, Oromia Livestock and Fishery Resources Development Bureau, Addis Ababa
- Ministry of Finance and Economic Development. 2003. Rural Development Policy and Strategies of the Federal Democratic Republic of Ethiopia, Addis Ababa
- Mohammed Mussa.2004. A Comparative Study of Pastoralist Parliamentary Groups: Case Study on the Pastoral Affairs Standing Committee of Ethiopia, Addis Ababa, Ethiopia
- Napier, A. and Desta, S. 2011. Review of Pastoral Rangeland Enclosures in Ethiopia, PLI Policy Project, Feinstein International Center, Tufts University
- Nicol, A. and Otulana, M. 2014. Contested Margins, Complex Pathways: The Afar Triangle in the Horn of Africa, Future Agriculture Working Paper 094
- Pantuliano, Sara and Mike Wekesa 2008. Improving Drought Response in Pastoral Areas of Ethiopia Somali and Afar Regions and Borana Zone of Oromia Region. Overseas Development Institute, London
- Pica-Ciamarra, U. Nouala, S. Kim, S. 2011. Livestock and Livelihoods in the IGAD Region: A Policy and Institutional Analysis, IGAD LPI Working Paper No. 01 – 11
- Powell, M.J., Pearson, A.R., and Hiernaux, H.P. 2004. Crop-livestock Interaction in the West African Dry lands, *Agronomy Journal*, 96:469-483
- Rangnekar D.V. 2011. Change in Animal Nutrition Research Paradigm Needed to Benefit Resource-poor Livestock Producers in Countries like India, In FAO. 2011. Successes and Failures with Animal Nutrition Practices and Technologies in Developing Countries. Proceedings of the FAO Electronic Conference, 1-30 September 2010, Rome, Italy. Edited by Harinder P.S. Makkar. FAO Animal Production and Health Proceedings. No. 11. Rome, Italy

- Rich, K. M., Perry, B. D. and Kaitibie, S. (2009). 'Commodity-based Trade and Market Access for Developing Country Livestock Products: The Case of Beef Exports from Ethiopia'. *International Food and Agribusiness Management Review*, Volume 12, Issue 3
- Salem, H. B. 2011. Spineless Cactus (*Opuntia* spp.) in Low-input Production Systems in Dry Areas, in FAO. *Successes and Failures with Animal Nutrition Practices and Technologies in Developing Countries*. Proceedings of the FAO Electronic Conference, 1-30 September 2010, Rome, Italy
- Sandford, J. and s. Ashley. 2008. *Livestock Livelihoods and Institutions in the IGAD Region*, IGAD LPI Working Paper No. 10 – 08
- Scoons, J. 1998. *Sustainable Rural Livelihoods: A Framework for Analysis*. IDS Working Paper 72. Brighton: IDS
- Shapiro, B.I., Gebru, G., Desta, S., Negassa, A., Nigussie, K., Aboset, G. and Mechal, H. 2015. *Ethiopia Livestock Master Plan*. ILRI Project Report. Nairobi, Kenya: International Livestock Research Institute (ILRI)
- Staal, S. J. Pratt, A. N. and Jabbar, M. 2008. *Dairy Development for the Resource Poor Part 2: Kenya and Ethiopia Dairy Development Case Studies* PPLPI Working Paper No. 44-2
- Steven J. Staal, Alejandro Nin Pratt, and Mohammad Jabbar .2008. *Dairy Development for the Resource Poor Part 1: A Comparison of Dairy Policies and, Development in South Asia and East Africa*, PPLPI Working Paper No. 44-1
- Susan G. and Andrew S. I., 2001. *Tips for Trainers: Introducing the 'H-form' - a Method for Monitoring and Evaluation*. Scottish Participatory Initiatives
- Tiki, W. 2013. *Climate Variability and Livestock Marketing in the Horn of Africa: Opportunities and Challenges*, Paper Presented at IFPRI Workshop on 'Impact of Climate Extremes', Washington DC, December, 2013
- Tiki, W., Oba, G. and Tvedt, T. 2011. *Human Stewardship or Ruining of the Cultural Landscape*, *The Geographical Journal*, 177: 62–78
- Tolera, A., Assefa, G., Geleti, D., Gizachew, L., Mengistu, A., 2012. *Feed Resources Availability and Quality*. In: Tolera, A., Yami, A., Alemu, D. (Eds.), *Livestock Feed Resources in Ethiopia: Challenges, Opportunities and the Need for Transformation*. Ethiopian Animal Feeds Industry Association, Addis Ababa, Ethiopia, pp.37–46
- UNISDR, 2009. *United Nations International Strategy for Disaster Reduction*
- USAID 2013. *Agricultural Growth Project - Livestock Market Development Value Chain Analysis for Ethiopia*, AGP-Livestock Market Development Project AID-663-C-12-00009, Addis Ababa

- Virtanen, P. Palmujoki, E. and Gemehu, D. T.2011. Global Climate Policies, Local Institutions and Food Security in a Pastoral Society in Ethiopia, *Consilience: The Journal of Sustainable Development*, 5(1): 96-118
- Valbuena, D., Tui, S. H., Erenstein, O., Teufel, N., Duncan, A., Abdoulaye, T., Swain, B., Mekonnen, K., Germaine, I. and Gérard, B. 2014. 'Identifying Determinants, Pressures and Trade-Offs of Crop Residue Use in Mixed Smallholder Farms in Sub-Saharan Africa and South Asia', *Agricultural systems*, [Http://Dx.Doi.Org/10.1016/J.Agsy.2014.05.013](http://dx.doi.org/10.1016/j.agsy.2014.05.013)
- WABEKBON 2007. Review of Development Policies and Strategies Related to Pastoral Areas in Ethiopia, Report for PCDP, Addis Ababa, Ethiopia
- Water Governance Center. 2013. Issues Paper Water Governance Capacity Awash Basin, Central Ethiopia review on Content, Institutional, Relational layer, The Hague, The Netherlands
- World Bank. 2012. Identifying Investment Opportunities for Ruminant Livestock Feeding in Developing Countries, Washington Dc 20433
- World Bank, 2008. A Country Study on the Economic Impacts of Climate Change, Environment and Natural Resource Management, Sustainable Development Department, Africa Region, Development Prospects Group, Report No. 46946-ET
- Yemane, Beruk. 2009. Evolution of Policy Paper in Ethiopia, 1991-2009. Unpublished Background Note for Pastoral Economic Growth and Development Study, Addis Ababa, Ethiopia.
- Yimer, M. 2015. Policies and Strategies for Pastoral Development in Ethiopia; the case study of Borana Pastoral Communities, *International Journal of Research* 2(2): 965-985

## ANNEXES: Report on Regional States

### i. Afar Regional State

#### 1. Introduction

The Afar Regional State is located in the north eastern part of Ethiopia. The region, with an area of about 270,000 km<sup>2</sup> (CSA, 2008), is situated between 39°34' and 42°28' East Longitude and 8°49' and 14°30' North Latitude. It shares boundaries with Eritrea in the northeast, Tigray in the north-west, Amhara in the south-west, Oromia in the south, Somalia in the south-east and Djibouti in the east. Administratively, the region is divided into five zones and 32 Districts. In 2017, Afar's estimated total population is 1,812,000 with a rural population of 1,466,002 people (CSA, 2013) where more than 80 % of the rural communities are classified as pastoralists and the remaining 20 % agro-pastoralists (CSA, 2007). Most of the Afar Regional State has a harsh, dry landscape and is largely covered by desert scrubland. The climate of the region is characterized as arid and semi-arid. It remains dry and hot throughout the year. The lowland "*kola*" zone covers more than 99 % of the region with average annual temperature ranging from 23 °c to 33 °c with the hottest months reach up to about 45 °c. The region gets very little, irregular and erratic rains in two rainy seasons - *karma* (main rainy season), and *sugum* (short rainy season), bimodal throughout the region. Annual precipitation ranges from as low as 180 mm in the northeastern desert to 750 mm in the southwest. This makes crop cultivation very difficult with rain fed agriculture in most of the Region. Shallow, salty lakes and long chains of volcanoes are found in the north. Lakes Abbe, Bil, Afambo, and Adebhel which are connected to the last section of the river Awash, are located in the region. They form an important habitat for river and Lake Fauna. Within the southern stretches of the region, the Awash River Valley offers a lush alternative to the northern deserts. The Awash River, Mille and Logia, which are tributaries of the Awash River traverse the region. The Awash River valley provides opportunities for irrigated agriculture and is an important permanent grazing area for animals throughout the region. Other notable landmarks include, the place of Origin of Human Kind Lusi, the Awash and Yangudi Rassa National Parks, the Ertale active Volcano, and the Dalol Depression that are main tourist attractions in Ethiopia.

The Afar pastoralists practice transhumance, having home bases and satellite camps to manage their livestock production system in the prevailing climatic conditions. In the Afar Region, the introduction of large commercial farming blocked access to the traditional dry season grazing areas. For many years Afar remained in conflict with introduced commercial farming. After the change of government in 1991, about 15000 hectares of land was returned to the Afar. The regional government commissioned a consultant to study and recommend how Afar pastoralists can use the land. The conclusion was to sedentarize the Afar pastoralists. This recommendation, however, has not yet been implemented. The Afar people have not yet been fully integrated into irrigated agriculture. In some areas, Afar pastoralists give out land to outsiders for sharecropping although such practices are not recognized legally. A new development is the invasion of the land by the noxious plant *Prosopis*. In many areas, Afar pastoralists have found it difficult to make use of the land for livestock production or crop cultivation. *Prosopis* pods are liked by goats but the plant forms thorny thickets which prevent free movement of either humans or animals. How best the former grazing land can be used is now a matter of concern.

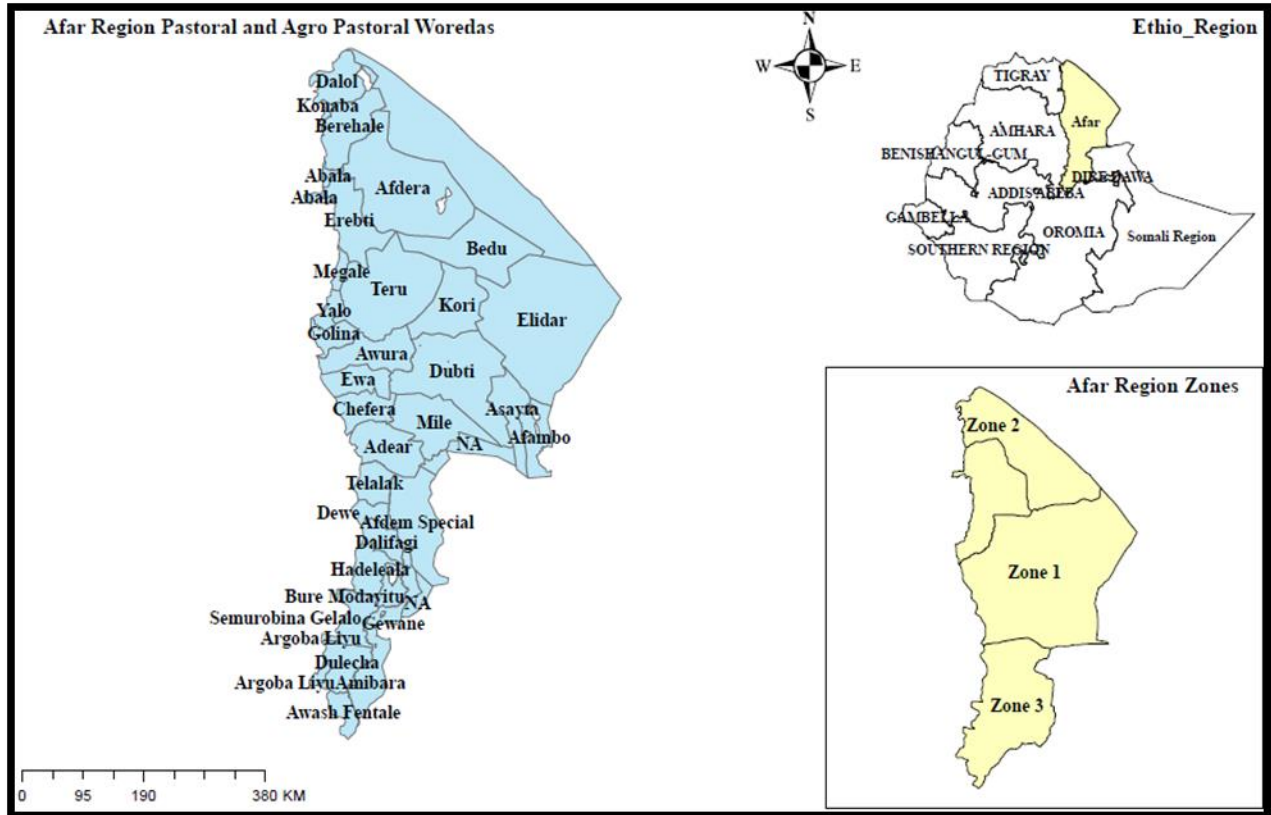


Figure 1. Map of Afar Regional State. Source: SEGEL, 2018

**2. Livelihood**

The major livelihood of the rural community in the region is livestock rearing with limited irrigation agriculture along the river basins and low-lying riverine areas. The Afar community engages in subsistence livestock production for its economic, social and cultural values. Transhumance is the norm, with most of the herd (and some of the household) moving between dry season and wet season grazing areas and water resources. The Awash River Valley is critical as a source of grazing and watering in the dry season and in drought years. Browsers (camels and goats) are more successful and plentiful in most zones than grazers (cattle and sheep) due to severe limitations on pasture. The communities engage in opportunistic crop production in 26 woredas where irrigation is possible, using run-off from the highlands in the west, and rain fed cropping in a very small area in the southwest. Cotton production is also typical to the region. Milk is a major (and culturally-important) source of calories, provided by camels, cows, goats, and sheep. Purchased staple cereals (maize, wheat, and sorghum) are financed with sales of livestock. Staple food purchases comprise the biggest proportion of expenditure. The rest goes on household items, clothes, social services and inputs. Strong communal and social support systems bind people together. The PSNP food aid is also an important part of livelihood for many poor households covering almost half of their annual food requirement. Commerce, especially of salt, is another area of occupation. Women make handcrafts for their own consumption and sale. The youth are organized in SME and cooperatives.



## 2.1. Marketing

Livestock marketing is fundamental to the household economy. Camels, cattle, goats and sheep are sources of income in all parts of the region. Milk (in the form of ghee or cheese) is also sold in small amounts. In some areas, households also grow crops (mostly irrigated) for sale, like peppers, onions, tomatoes, sorghum, maize etc. Terminal markets are found in Djibouti and in the highlands of Ethiopia (Tigray and Amhara), Addis Ababa, Sudan and Saudi Arabia. The lowland-highland connections, with livestock traded up the escarpment from Afar and staple cereals traded down, are a central dynamic within Afar's market system. Tigray and Amhara regions supply the major cereals such as maize and teff. While households decide to sell their livestock or crops (in the case of agro-pastoralists) depends in large part on proximity to either the highland escarpment on the western border, or to Djibouti on the eastern side, or to roads and markets linked to Addis Ababa. Livestock & grain price fluctuations are manifested by reduced livestock prices due to poor body condition and increased food prices. There is a limited local labor market (servicing, commercial and state-run farms along the Awash River and to a smaller extent the salt trade). The labor markets in Saudi Arabia, the United Arab Emirates, and Djibouti, are also important. Men from many households send back remittances to Afar from these countries.

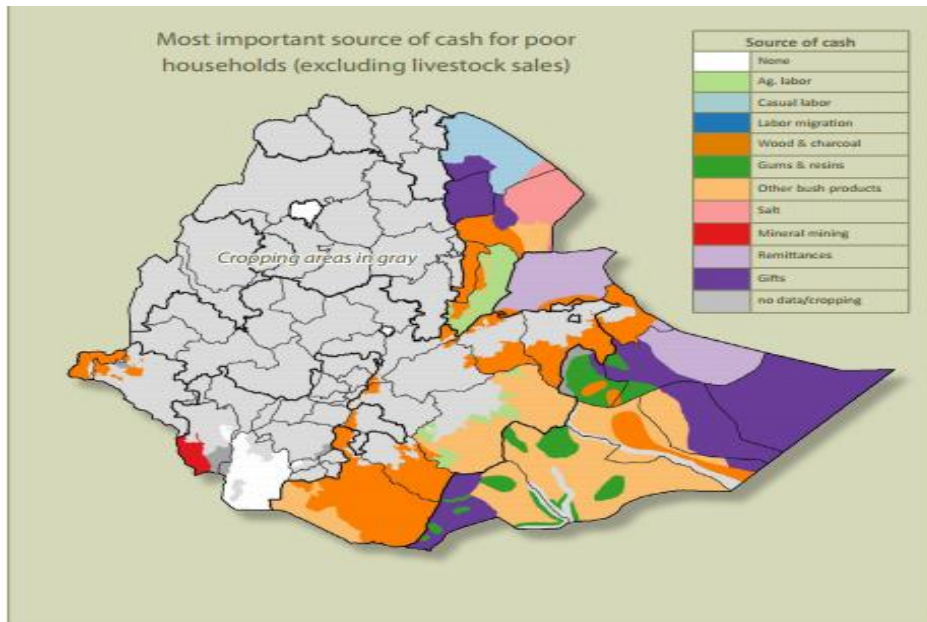


Figure 2. Important cash sources for poor pastoralists

## 2.2. Range Management

The Afar sustains their production system through the indigenous institutions *Medaa* and *Adaa*. *Medaa* is the customary legal system that makes decisions and governs the management and use of the rangeland (conflict resolution, natural resource management - livestock and rangelands), mutual assistance, external relationships, and emergency situations - drought). *Adaa* is the set of rules (customary laws) set by the *Medaa* - Afar elders strongly emphasize that *Adaa* governs all the Afar, irrespective of their clan (*kedo*) affixation or area of residence, or changes in national politics. In Afar, no activity is supposed to be undertaken on rangelands belonging to clans unless the elders and clan

leaders permit it: Increasingly, these decisions are made in collaboration with government officials. There are three types of forage resource area used by the Afar:

- Dry season grazing and browsing areas within a day's herding distance from permanent camps
- Much more extensive wet season forage resource areas up to 100km from the camps
- Emergency forage resource areas used only in years of severe forage shortage (for example, the Chefa and Borkena valleys).

Currently shrinkage of communal grazing land has put immense pressure on the existing communal grazing land due to expansion of irrigated agriculture, National park, and sugarcane plantation, and Prosopis invasion. The Afar pastoralists have been alienated from huge tracts of Awash valley basins since 1960s. Since 2005, more than 100,000 ha of land have been taken for the new dam and sugarcane plantation. It basically takes the prime grazing land along the rivers and fallback areas for the dry season. This loss of land has been compounded by the spread of Prosopis spp., commonly known as mesquite, from the farms into the surrounding rangelands. This plant, originally was introduced to stabilize the banks of irrigation channels, now infests more than 700,000 hectares.

### **3. Disaster Risk Management**

The Afar Regional State is prone to both natural and man-made hazards that have led to mortalities, displacements and loss of properties. Among these, flood, drought, border dispute and disease epidemics have deteriorated the humanitarian situation in the region. The region has been experiencing drought with increased frequency in recent years. When multiple seasons of rainfall failed (e.g. 2001-2003) pastures disappeared, water sources dried up, and livestock had nowhere to go. In these years, herd sizes shrank significantly; poorer households lost almost all of their livestock. It typically takes 3-7 years for households to fully recover, assuming the subsequent years have decent rainfall. Chronic failure (late arrival, early cessation, or non-appearance) of the long rains in the period from March through May have had disastrous consequences on the livestock and the livelihood of the population. Flood is also another risk which has been observed along the Awash River and in the western part of Afar bordering the Amhara and Tigray regional states. Livestock diseases such as anthrax (geno), trypanosomiasis (deta lekoma), calf diarrhea (korbahi), mange mite (agara) are common during the dry seasons.

Synergic effect of inadequate health services, inadequate infrastructure, poverty especially among rural communities, lack of alternative means of income especially in marginal areas, inadequate public awareness of disease risks, illiteracy, lack of appropriate marketing for their product, poor management of natural resources, deforestation, invasive species and widely practiced harmful traditional practices are characteristics of most of the Regional State.

#### **3.1. Coping Strategies**

Risk-minimizing strategies include the extended duration of seasonal migration, migration to distant areas, and intra-household interdependence. Herds contain multiple types of livestock, some more resistant to drought (like camels and goats) and some with faster rates of reproduction (sheep and goats), and others with higher productivity in good years (cattle). Households spatially split up livestock

holdings to minimize the effects of localized drought, and they move animals to permanent or more productive grazing areas in different seasons. Migration in search of casual labor is very common for poor households. The labor requirements associated with herding multiple groupings of livestock result in a need for large families, and hence, the practice of polygamy amongst had better off households with larger herds. Having more than one wife is both a symbol of wealth and a prerequisite for generating that wealth. Social systems are in place for resource sharing, borrowing, lending and gifting. Better off households are expected to provide assistance to poorer households; in return, large clan systems are strengthened, providing a source of extra communal labor and mutual protection. Households try to maximize herd sizes and keep a high proportion of productive females. This increases the chances that at least some animals will survive in years of drought, and it helps to speed up recovery rates. Pastoralists are well-suited to coping with the typical good season-bad season pattern.

#### **4. Basic Social Services**

Social services such as schools, health, and veterinary services are limited. The remotest and least accessible districts have the least number of social services. Areas closer to the major towns, roads and bordering the neighboring regions of Amhara and Tigray have better access to these services.

##### **4.1. Health sector**

During the last decade, there has been significant improvement of the health service coverage in the Regional State. In the region, there are currently 6 Hospitals, 97 Health Centers, and 392 Health Posts. Samara University has college of Medicine and Health Sciences; there is also a nursing school. Many trained traditional birth attendants are engaged in the sector. Waiting rooms made of customary materials are very common in the region. However, the health service accessibility and infrastructure (equipment, technology, and skilled labour) are still low. Service centres are constructed far from the community. The institutions are not well equipped. Mobile health service that considers the mobility of pastoralists is still lacking. The health centers that exist are under-equipped and under-staffed. The harsh climatic conditions mean that skilled government officers are reluctant to work in these areas. There is no Institutional setup to create local skilled personnel. Human diseases such as malaria and water-borne diseases are very common in most of the Regional State

##### **4.2. Education**

There is a notable improvement in educational coverage in the region. However, schools are limited and lack both equipment and teaching staff particularly that teach in mother local language. Inadequate educational infrastructure (special needs, boarding schools, pedagogical materials based on pastoral context, mobile schooling). There is lack of sustainable school feeding programs. Institutional setup to create localized pedagogical materials based on pastoral context is lacking. The region lacks adult literacy program and Inactive F/PTC. There is insufficient skilled training to the community. The few health centers and clinics that exist lack essential drugs and are poorly equipped and under-staffed.

##### **4.3. Water sector**

Water coverage such as water harvesting, ponds; and micro dams has been improved. Water is scarce as run-off water dries up in the sandy plains and lakes. Land is owned communally, but access to pasture and water is free. Water is mainly accessed through hand-dug wells, ponds and in some woredas from

seasonal rivers. During the dry season there is migration to neighboring regions. Implementation capacity (manpower, study, design, contractors, technology (satellite-based water mapping, alternative energy,) is inadequate. Borehole Treatment for salinity is practiced to make the water drinkable. Water construction did not consider the livestock with no water trough around water points.

#### **4.4. Roads and other infrastructure**

Although some are not in a good condition (e.g. Teru woreda is the least accessible due to its poor road network.), most of them in the zone are accessible all the year round. Roads connecting woreda to woreda and kebele to woreda are still very limited and are mostly seasonal. Access to markets is generally poor due to lack of and poor-quality roads; lack of transportation; lack of information about markets, and the long distances to major markets. Access to electricity is mainly limited in the major towns along the highway connecting Addis to Djibouti. Mobile phone connection is possible in almost all woreda towns but internet services are limited to major towns in the region.

## ii. Gambella Regional State

### 1. Introduction

Gambella is one of the nine Ethiopian Regional States. It is located in the south west Ethiopia between the geographical coordinates  $6^{\circ}28'38''$  to  $8^{\circ}34'$  North Latitude and  $33^{\circ}$  to  $35^{\circ}11'11''$  East Longitude. The Region is bounded to the North, North East and East by Oromia National Regional State, to the South and Southeast by the Southern Nations and Nationalities People's Regional State and to the Southwest, West and Northwest by the Republic of South Sudan. Gambella is a region with large agricultural and pastoral land. The region is crisscrossed by several rivers (Baro, Akobo and Gilo being the major ones) that are tributaries of the White Nile, and as such part of the geopolitically very important Nile River Basin. The confluence of the rivers is located at the most western point of the border, then becoming the Sobat River and later White Nile River. The river had perfect navigation conditions and had, therefore, always been considered perfect to become a main corridor for trade (imports and exports) between the neighboring countries.

Agro-ecologically, the region is dominantly lowland (Kolla) with a few midlands (Woina Dega). It is composed of two administrative zones and eight woredas, and the area of the region is 29,783 square kilometers with estimated population of over 307,096 inhabitants (CSA 2007). Within the region, Gambella National Park covers approximately 5061 square kilometers or 19.6% of the Region's territory. The topography of the region is divided in to two broad classes, which are the lower piedmonts between 500 to 1900 m.a.s.l and the flood plains of below 500 m contours. Baro, Gilo, Akobo and Alwero are the main rivers crossing the Gambella region. The survival and identity of the people of Gambella are strongly tied to the land and the rivers that run through it. No or very limited NGO presence in pastoral areas in Gambella.

The Region has huge potential for agricultural productions and possesses enormous arable land suitable to both small-scale and large-scale commercial farms. A few years ago, the Ethiopian government identified the Gambella region as one of the most suitable for agricultural investments and classified most parts of the area in the region as underutilized regions in Ethiopia. Since the mid-2000s, government has awarded thousands of hectares of most fertile lands of Gambella region to foreign companies and some of the world's most wealthy individuals to export Rice, Cotton, Seesam etc., often in long-term leases and at bargain prices. Currently, around 1.2 million hectares of potential land is made available for agriculture companies that meet Ethiopian government requirements (Rahmato 2011).

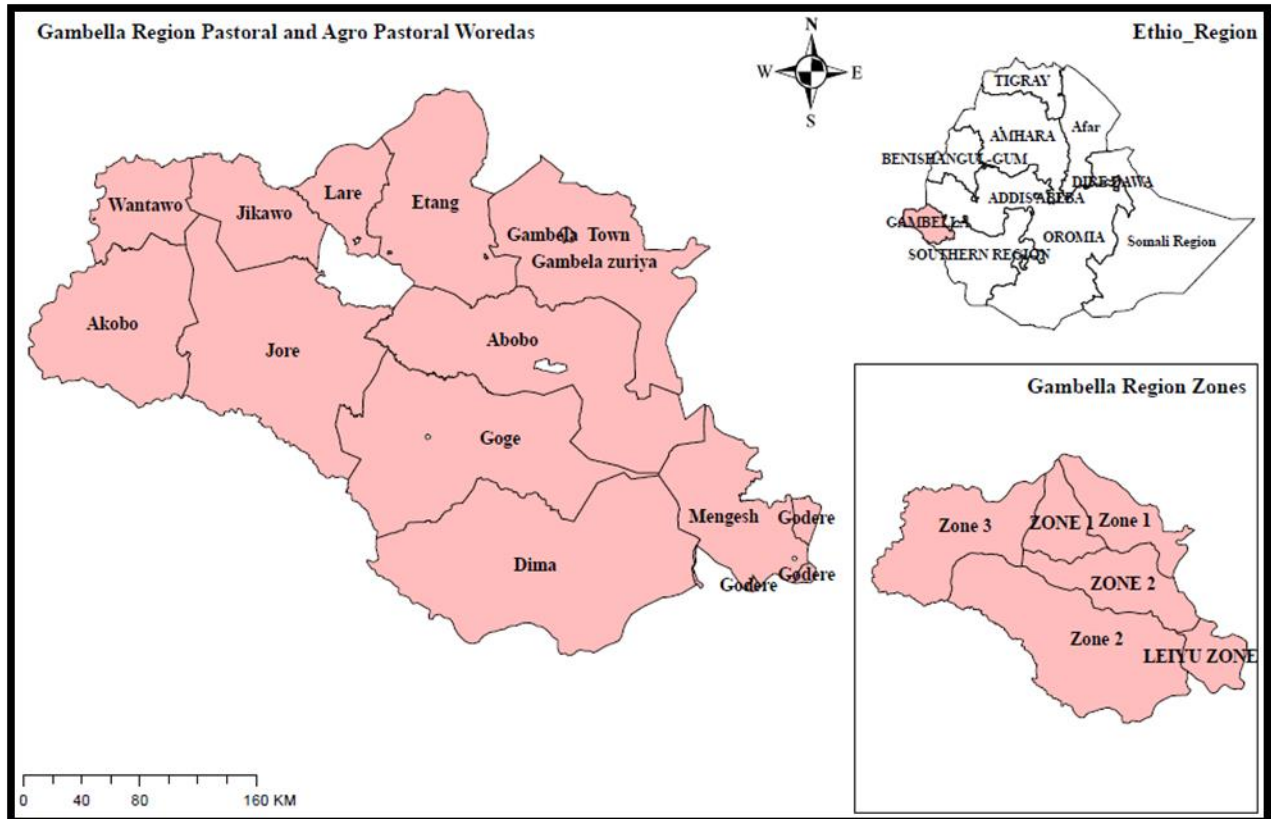


Figure 1. Map of Gambella Regional State. Source: SEGEL, 2018

## 2. Livelihood

Livelihoods in Gambella include subsistence agriculture (Anuak and highlanders mainly), pastoralism and agro-pastoralism (Nuer), fisheries (Anuak) and beekeeping (Mezhenger). The livelihoods of three main groups – Anuak, Nuer, and Highlanders – living in the lowlands areas of the region are very much linked to the use of water and land resources. Recession riverside agriculture on the river banks in the period after the floods is common, particularly maize and sorghum, and is widely practiced by Anyuaa people along the Baro, Gilo and Akobo rivers. As the region is generally not self-sufficient in cereal production, alternative sources such as fishing are important sources of food. Wild food consumption is part of the daily dietary intake given the still partly untouched bush land and natural forest resources. Most of the Nuer population reside along the Ethio-Sudanese border (Akobo and Jikawo, sand part of Itang woredas), where it is too dry for rain fed agriculture. Therefore, livestock constitutes the primary source of income. The Nuer move back and forth with their livestock on a regular basis between the inland (during the rainy season) and the river banks (during the dry season). Cattle, sheep, and goats constitute the main livestock in the region. There is no camel in the region. In recent years, there is steady growth in construction and infrastructure. Growing investment, a flourishing of the private sector, rapid urbanization, and an expanding livestock trade (Gambella market) and exchange economy are characteristics of the contemporary Gambella Regional state.

### **2.1. Livestock Health**

Livestock clinics are established in each kebele. However, there is scarcity of pharmaceuticals in all livestock health centers. Professional veterinarians are not enough. Cross-border grazing (Murule, Felata) is a major health risk for the livestock in the region.

### **2.2. Livestock Feed**

The feed for livestock usually comes from open woodland and riverine areas during the rainy season and savanna grasslands near Baro River during the dry season. There is no other feed to supplement the cattle diet. Most of the woredas have adequate pasture and water for livestock, though the resource base shrinks each year.

### **2.3. Livestock Marketing**

There is a huge livestock potential in the region, but the markets are not well developed and linked to the mainstream market both locally and in the export market. The market chain is very long and does not benefit the pastoralists. There is a contraband market to South Sudan

## **3. Disaster Risk management**

Over grazing, recurrent drought, flood, increased livestock and human population, erratic and low rainfall conflict due to cattle raid, livestock diseases, and restricted seasonal mobility are among the major vulnerabilities of the pastoralists and agro-pastoralists in the Region.

## **4. Basic Social Services**

The implementation of commune program since 2003 E.C makes school, health centers, water, sanitation, accessible, affordable and available in everyday life. The physical infrastructure of school, health, water, has been improving, but there is quality problem in the construction. The health extension workers provide service at the grassroots level and they are getting on job training to improve their capacity. The education coverage (availability of primary and secondary schools) has improved during the last decade. The gender parity in the region is improving. Drinking water provision has improved although there is frequent failure of the water pumps.

Like the other regions, there is a remarkable improvement in educational and health coverage in the region. Challenges of other regions are also rampant here: limited and lack both equipment and teaching staff; inadequate educational infrastructure (special needs, boarding schools, pedagogical materials based on local context); poor health infrastructure and qualified staff, and lack of sustainable school feeding programs. Institutional setup to create localized pedagogical materials based on the context of the region is lacking. Lack of Adult literacy program and inactive F/PTC and insufficient skilled training to the community are critical problems in the region. The few health centers and clinics that exist lack essential drugs and are poorly equipped and under-staffed.

#### 4.1. Education

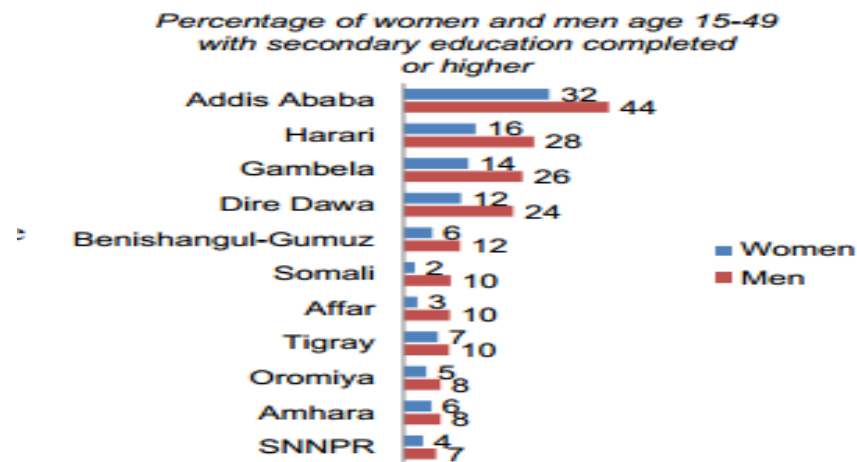


Figure 1: Secondary Education by Region (Source: DHS)

#### 4.2. Health

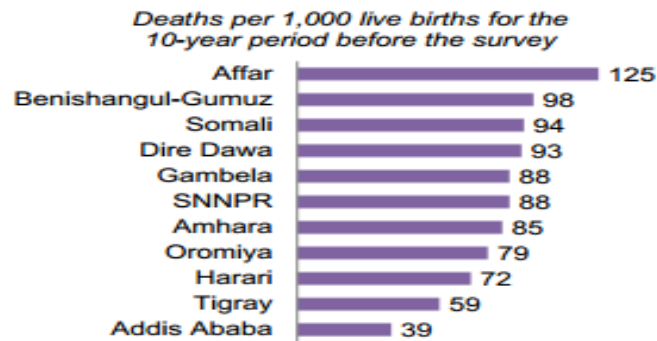


Figure 2: Under 5 mortalities by region (Source: DHS 2016)

#### 4.3. Trade and Micro Finance

The rural communities usually supply the agricultural products including cattle to the Gambela market/ Lack of financial institutions for credit service e.g. in Lare there is no private or governmental financial institution. Job seeking young and women social groups are engaged in milk processing, dry forage supply, fish production etc. in the form of association. The road infrastructure to transport marketable goods is limited (Woreda to Woreda; Kebele to Kebele)

#### 5. Conflict and Conflict Resolution

Land and water resources are abundant in the Gambella region but this has not prevented resource-based conflict in the region. Conflict and cooperation have historically characterized the socioeconomic and political dynamics between the three main groups: Anuak, Nuer, and Highlanders. Main Sources of conflicts in the region are: Natural resource: grazing land, water, fish hunting sites, theft: livestock and



fishnet, tribal conflict, and abduction. Transmission of disease, scarcity of water, and forage are also contributing to conflict in the region. Conflict and cooperation have historically characterized the socioeconomic and political dynamics. In times of competition between uses and users' conflicts had been usually addressed through traditional conflict resolution mechanisms. However, the efficiency of the traditional mechanisms to resolve conflicts among different sectors of the population were disrupted or dismantled, and not necessarily replaced by an efficient new way of dealing with the new types of conflicts.

### iii. Oromia Regional State

#### 1. Introduction

Oromia region has 42 pastoral and agro-pastoral woredas in seven zones. Unlike Somali and Afar, which are predominantly pastoral regions, the Oromia pastoral and agro-pastoral area is part of the main regional state where agriculture is predominantly the source of livelihoods. However, the people of Oromia are the pioneers to establish the pastoral area development commission. As any other peripheral and pastoral areas of Ethiopia, Oromia pastoral areas have limited access to basic social services such as education, health, road, electricity, and water supply. However, mobile network coverage and communication is growing fast even though connections are said to be erratic. In addition, lack of access to electricity is said to be constraining access to other services such as mobile phone, health services, and ICT services. Each of the pastoral and agro-pastoral woredas has diverse resource potentials, agro-ecology, and different challenges and opportunities. Good practices reported from the region in livestock management include setting aside of dry & wet season grazing area; communal enclosure for calves and weak animals; pond rehabilitation (water management); hay making and crop residues storage

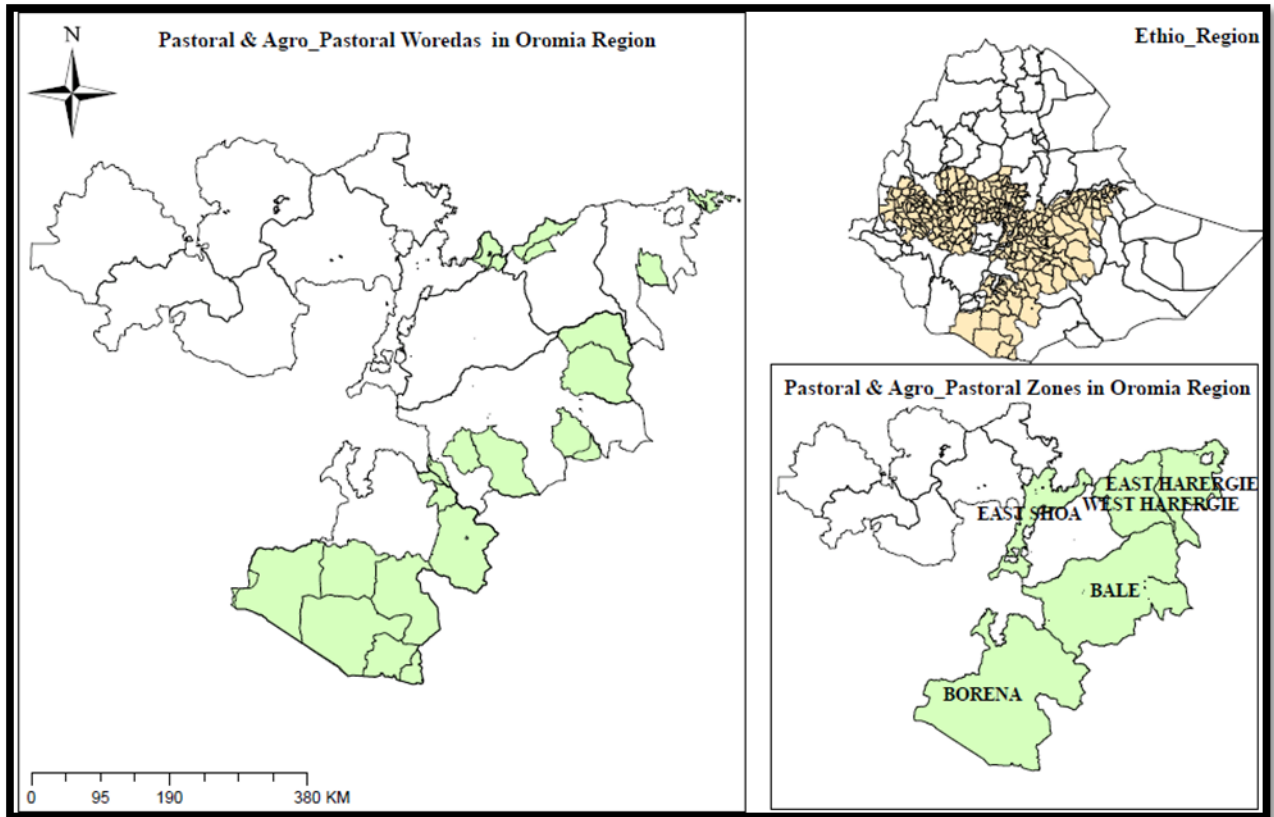


Figure 1. Map of Oromia Regional State and the pastoral areas in the region. Source: SEGEL, 2018

#### 2. Major Findings from Consultative Workshop, GFD & KII

Borana, one of the main pastoral areas, is frequently affected by drought, characterized by erratic rainfall and lack of permanent surface water that challenges livestock production and livelihoods of the people. However, this zone has a better access to livestock market and livestock genetic resources

preferred by export markets. Indigenous resource governance system is well structured, relatively strong, and provides an opportunity to build on the existing institution. It had been effective in disaster risk reduction, conflict resolution and promoting peaceful resource sharing. The participants of consultative workshop, KII, and FGD confirm that the region has been vulnerable to natural hazards and indigenous knowledge and governance system that had been effective in the past in resource and risk management have been weekend, marginalized and ignored in policy making, development planning, and execution. As one of the aba gadas from Guji says, the government recognize the role of gada leaders when it faces challenges and it is unable to solve it. There is no proactive participation of community leaders in development planning as well as peace building. Pastoralists and community representatives strongly argued regarding the need for strong institutions that represents pastoralists and mandated with pastoral development. For instance, a speaker\_said 'we know that we have the Ministry of Fisheries (referring to ministry of livestock and fisheries) and Water (referring to ministry of water, irrigation and energy). He continued, if that is so, why don't we have an independent ministry for pastoralists and/or agro-pastoralists?

Participants of the workshop in Adama stated the pastoral problems as diverse and complex, but possible to summarize it. He used the analogy of the Genale river that has nine tributaries, but finally make river as: Galaanni sagal abbaan isaa Gannaale', literally translated as 'Genale river is a father of nine small rivers' i.e. nine small rivers converge to form one big river-Genale. This is to mean that pastoralists' problems are many, but it mainly revolves around two major issues namely: rangeland/pasture and Water Development. Participants suggested that the government need to consider construction of dams with community participation which can be used for human, livestock as well as for irrigated fodder production. For instance, during the recent drought many pastoralists had bought feed/fodder by themselves and were able to save their livestock. There is also a need to address the uncontrolled expansion of unpalatable invasive species that already reduced to grazing lands substantially, and constrained livestock mobility. The uncoordinated and project-based efforts are said to be yielding limited and unsustainable results. Therefore, range and water management must make the core focus of the future development work.

Access to basic social services have been limited, quality is poor, and not timely. For instance, health service coverage is poor, primary healthcare facilities are limited, shortage of human resource for health, lack of essential drugs and supplies, inadequate access to safe water supply, poor hygienic practices and low access to household sanitation facilities; poor access to adequate and diversified food etc. The same is true for other social services. Specifically, access to electricity, mobile network, and water are the poorest compared to the highland regions of Oromia.

Pastoralists raised drought management as top priority, which they say, is the cause of vulnerability through its impact on pasture and water. Even though Borana is considered relatively better connected to market, it is fragmented, unpredictable, and seasonal.

## **2.1. Suggestions by participants**

- Provision of quality education with flexible academic calendar that fits pastoral context

- Gada System should be promoted for tourism business attraction as one of UNESCO's registered heritage
- Gada as institution should be recognized and pastoralists should be represented in all policy matters
- Industrialization of livestock sector through transformative enterprises like export abattoirs and tanneries need to be established close to the pastoralist communities. Public media outlets have to work more on pastoralist areas livestock promotion and livestock market information/price.
- alternative livelihoods should be adjusted for pastoral drop-outs and for those in need of diversification out of pastoralism
- Research needs to be tied with land use policy and development,
- Given staff turnover as a result of tough environment in pastoralist areas, human health extension services and others to include local youth for potential sustainable service provision
- Building resilient pastoral system requires concerted efforts. The pilot project of Index based livestock insurance in Borana has contributed to the coping capacities of the pastoralists and to build resilient pastoral economy. It also played roles in psychological preparation for pastoralists, says zonal representatives. But, this project is small scale and covers few households. Scaling up the project is important. Like the same project operates in Kenya assisted by Kenyan government, the Ethiopian government should share experiences from neighboring country.
- Pastoralist area extension system was designed for the highland context/agrarian communities, but not for the pastoralist context. So, pastoralist-oriented extension system has to be redesigned and developed.
- Pastoralists in the Oromia region have established social safety nets that assist the needy members during droughts and other natural disasters. This has been weakened due to resource limitation and other factors. The future resilience building should encourage this indigenous insurance system.

Future research is recommended at different forums on the following issues:

- Feed availability, potential for development and the role of private sector
- identify capacity gaps, and provide solutions
- Interaction and possible synergy between Formal and informal institution;
- how to synchronize Customary and conventional laws

#### **iv. SNNP Regional State**

##### **1. Introduction**

There are twelve pastoral woredas in three zones of the southern nations, nationalities and people regional state. These pastoral areas share a number of characteristics such as lack of access to social services including education, health, road network etc. However, there are also variations in natural resource potential. Pastoralists such as Mursi, and Surma have rich forage resources, but limited access to water while other areas have relatively better water resources. On the institutional and capacity side, offices at woreda and zonal level are under staffed, and the existing staffs lack the necessary education. There is lack of trained teachers to teach children in their mother tongues. There is lack of other professionals such as animal health workers. The development policies and practices in the area also lack local participation, and are said to be impositions, negatively affecting access to grazing lands, instigating conflicts and increasing risks of exposure to displacement. Settlement schemes lack the required infrastructures and social services, which were promised prior to the implementation of the schemes. Some respondents say that the scheme also lacks participatory decision making from the sides of the pastoralists. Pastoralists in southern nations nationalities and people regional state are also socially, ethnically, and culturally diverse. They also vary based on their livelihoods; some such as Dimme have cultivation skills compared to Bodi, Mursi, and Bacha who live in the same district, Salamango. But, the mega projects such as sugar factories and government settlement and agricultural development schemes treat them the same way, rather than consulting each of them separately and designing development programs that suit their unique socio-cultural and livelihood needs. There is information regarding government initiative to implement settlement schemes around the newly established sugar factors: in the new scheme, compensation is paid over a long period until pastoralists are trained and start irrigated farming on a sustainable basis. They are provided with appropriate training either to work in farming or to get employment in the factory. The pastoral areas of the region have large livestock population. This resource can be utilized to enhance pastoralists' livelihood, generate foreign currency and contribute to the national economy. But, there is lack of access to market. This is not only for livestock, but also for the commodity needed by pastoralists. Some community still rely on barter system, an indication of the highly under developed market system.

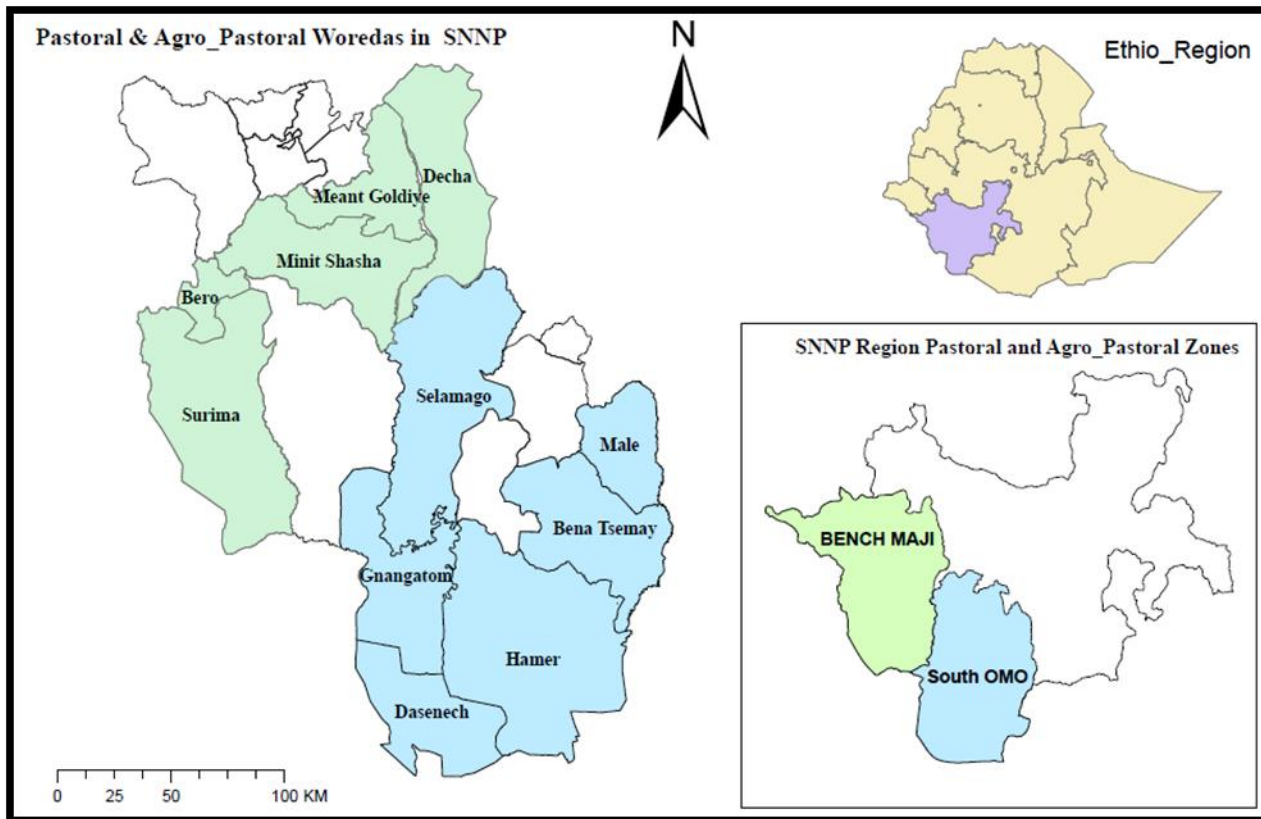


Figure 1. Map of SNNP Regional States. Source: SEGEL, 2018

## 2. Major Problems

Some of the problems in the area:

- Prevalence of HTP
- Prevalence of livestock disease, livestock raid by opposing groups from Kenya.
- Mega projects-shrinkage of grazing land and conflict
- Limited or lack of access to livestock market
- drought
- flood

## 3. Opportunities

- Rich natural resources
- Huge livestock potential
- diverse cultural settings

## 4. Recommendation

- a. policy should support to the traditional and indigenous practices for safer and legally protected inter and intra-community motilities;
- b. compliment to traditional knowledge and customary laws with scientifically informed knowledge and laws should be paid

- c. The expansion of mega projects should be participatory and acceptable by pastoralists. If land alienation is inevitable, there should be a mechanism of making pastoralists part of the project, rather than creating enmity. One suggested way is through inclusion of pastoralists affected by the project as shareholders.
- d. The short-term actions to ensure pastoralists food security and disaster risk reduction efforts should not undermine the need to create sustainable and viable livelihoods pastoralist. The plans should include short, medium and long term on the basis of resource potential (natural, social, human and financial capital) need to be identified and utilized accordingly.
- e. Provision of improved livestock feed;
  - Creating market linkage and livestock commercialization should be strengthened.
  - Develop land use policy and communal land certification that protect the right of pastoralists, promote integrated rangeland management;
  - promote diversification and alternative livelihood opportunities;
  - Provision of basic social and economic services;
  - Social protection and risk management;
  - address cross-cutting issues such as nutrition, HTP, and gender

## v. Somali Regional State

### 1. Introduction

The Somali Region is one of the most eastern and second largest regions of the nine Ethiopian regions. It is located in the south-western part of the Ethiopia. It is divided into 9 zones, 68 Woredas and 4 town administrative woredas. The total population was estimated to be 5,451,028. About 86% of the population lives in rural areas, and are mainly pastoralists and, to a lesser extent, agro-pastoralists. The State has three big rivers, namely Wabeshebele, Genale and Weybe, which could be utilized for irrigation. Most Somalis are traditionally pastoralists whose life and survival revolves around livestock, with people constantly moving about in the interests of their livestock. Cross-border livestock export is extremely important— principally to Somalia, Djibouti, and Kenya, and, more recently, to the Sudan. While cross-border exports from Ethiopia into Kenya and the Sudan are destined mainly for the domestic markets in those countries, Ethiopian exports to Djibouti, Somaliland, and Puntland are mostly re-exported to the Middle East.

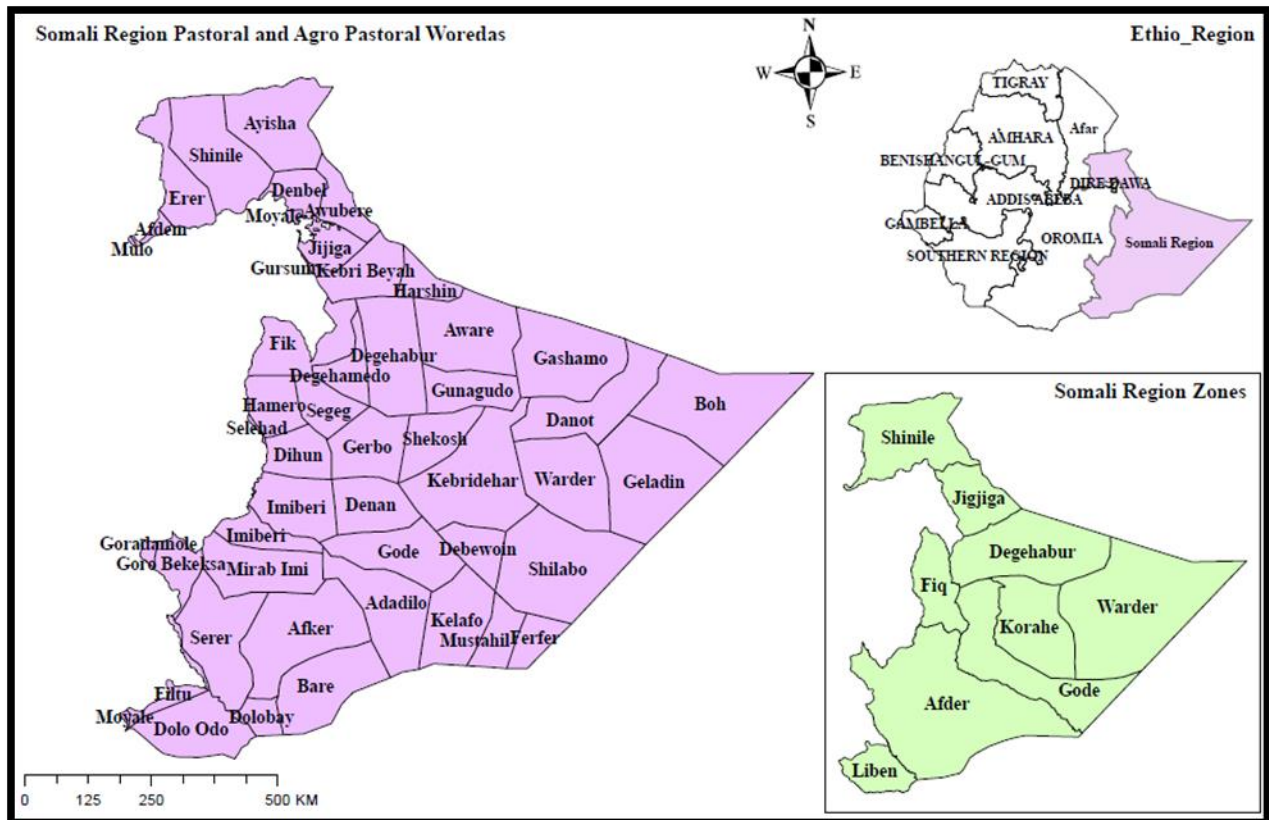


Figure 1. Map of Somali Regional State. Source: SEGEL, 2018

### 2. Livelihood

The Somali Regional State is known for its livestock resources. Livestock-dominated livelihoods and dependence on cross-border trade are sources of wealth for most of the Somali people. Although small in scale, the Somalis practice crop production as well. The major crops cultivated in the region are sorghum and maize. Wheat and barley are also harvested in a smaller amount each year. Commercial activity is another occupation that is significantly exercised in the region. Rural livelihoods in the SRS are



changing; the region is witnessing large-scale transition in the form of rapid social, economic, and political transformation caused by changes in the political landscape at the national and regional level, increasing scarcity of resources, the adoption of farming as a complementary livelihood system, and increasing resource use conflicts. The most visible manifestation of this transition is in the shift away from pastoral activities towards more agro-pastoral and farming activities.

The state of Somali is known for its livestock resources from which most of the Somali people earn their livelihood. The region is estimated to have about 15.2 million domestic animals out of which sheep constitute for 53% (nearly 8 million in number). Goats and cattle are the second and third most important domestic animals in the State accounting for 20% (3.1 million in number) and 15% (2.3 million in number), respectively. Camels are actually the most important animals in the day to day life of the pastoralist Somali people, and they constitute for about 9% (1.3 million in number).

Most Somali are pastoralists though there are some agro-pastoralists and pure farmers, and about 14% are urbanized. Survival revolves around livestock, with people constantly moving about in the interests of their livestock. Wealth is determined by livestock holdings, particularly camel and shoats. Sales of livestock and livestock products are an important source of income. Milk sales also increase with wealth. Cross-border livestock export is extremely important. In recent years, farming as a complementary livelihood system has been adopted. Bush products are collected and sold mainly by the poor. All wealth groups collect and sell gums and resins. Most expenditure is on food (water can also be expensive). Relationship between the wealth groups is a key issue to survival—the lending of milking animals during good years is an important part of the symbiotic relationship between rich and poor. Remittances have income

### **3. Disaster Risk Management**

Animal diseases, severe frequent drought, high prices for staple foods, conflict and insecurity, decline in markets for livestock are the major risks mentioned. Communities located in the low-lying areas along the river in Mustahil and Kelafo are also affected by regular flooding caused by heavy rainfall in the highlands. The floods destroy crops and livestock, but they also provide an opportunity to practice flood recession agriculture. Furthermore, poor coordination of the grass root level communities and government institutions has hampered the information flow and accuracy and response from the concerned bodies. Late declaration and responses to disasters and centralized authority in disaster declaration and less media coverage are among the drawbacks mentioned in disaster risk management. Lack of linking response systems with development issue and vulnerability were seen as areas to be considered in the new policy document. Over the last decade, Somali traders and pastoralists have faced a succession of livelihoods shocks, including three severe droughts, two bans on Somali livestock imports by Saudi Arabia (following outbreaks of Rift Valley fever in the Horn of Africa), a ban on 'contraband trade' imposed by the government of Ethiopia and bans on the use of Somali currencies inside Ethiopia.

### **3.1. Coping strategies**

Pastoralists in the Somali Regional State tend their cattle, camels, small ruminants, and donkeys through seasonal movements between the wet season grazing areas in the interior and the dry season grazing areas along the river banks. Distant migration with animals, attaching small herds to larger herds, reducing consumption, reducing spending on non-essential items, and splitting the household are among the coping strategies reported.

## **4. Basic social services**

### **4.1. Health**

In the Somali Regional State, there are 13 Hospitals, 172 Health Clinics, and 1069 Health posts. The number of health workers has increased significantly during the last 10 years. Home deliveries of mothers have been reduced. Midwives were trained for each kebele.

### **4.2. Education**

The importance of education in offering alternative livelihoods to young people needs to be stressed. The future educated children will be well placed to support their parents. The linkages between regional university and research/ training institutions vs. pastoral communities needs to be improved

### **4.3. Other Services**

#### **Credit facility**

Loan service doesn't take into account the region's 'Islamic Culture'. For example, most banks including CBE said there is interest free loan but the actual practice is zero. CBE has 'Islamic Window' Service, but it is not functioning properly.

## vi. Benishangul-Gumuz region

### 1. Introduction

The majority of the people in the region depend on agriculture. But, agriculture is characterized by traditional farming practices such as shifting cultivation and low level of productivity. The other livelihood sources include livestock rearing, hunting and gathering, fishing, honey production and collection, traditional gold mining, handcrafts, petty trade and selling wood products and charcoal. In Kurmuk woreda, sheep and goat herding are the major livestock keeping practices in the Woreda. According to the information obtained from key informants, there is no significant livestock rearing in the region because of the high prevalence of Trypanosomiasis, In Guba area, livestock production is practiced, following some transhumant pattern, the livestock staying away during dry season and returning during rainy season. The people are not properly utilizing the livestock products because the cattle are partly wild. It requires understanding of mobility patterns, the extent of their contribution to the economy, as many of the cattle remain away with their calves, and the disease constraint, which is common in Nile basin.

The region has many big rivers suitable for irrigation. Some of the rivers can be used for irrigation without big investment. But, people lack awareness in using the water for irrigation. Even if they produce some fruits and vegetables, access to market is constrained by lack of road and transport services. The region has huge potential for fruit production such as mango, and Banana. But the less accessible areas produce and consume as much as they could, and the rest is wasted. In addition, mango disease is one of the main challenges in the region.

### ***Resource potential***

The region has large fertile land and land related resources, such as minerals. The ecology of the region is diverse, production potential varies, and factors that constrain livelihoods are not the same everywhere. There is a good potential for bee keeping in many woredas, but it is not an economic activity used to generate income for the livelihood of the people due to lack of bee keeping culture in the region. Bamboo is one of the resources with huge potential for development in the region, but the so called 'charcoal investors' are making charcoal from it. Its multipurpose uses have to be realized. There is a need for natural resource development policy and strategy that is region specific. In addition, the region has a huge potential manpower. Hand craft is one of the old livelihood strategies, including making from hides and skins. As the prices of hides and skins plunge, farmers are now throwing it away. If supported, handcrafts can be a good source of income and diversification. Bee keeping is one of the potential areas in the region but the use of pesticides has hugely affected bee production. In addition, deforestation is also affecting the bee production. The production in the region is not market oriented, except for growing trends of sesame production. The production constraints include expansion of exotic weed, declining fertility, limited access to production technologies (tractors, inputs etc.).

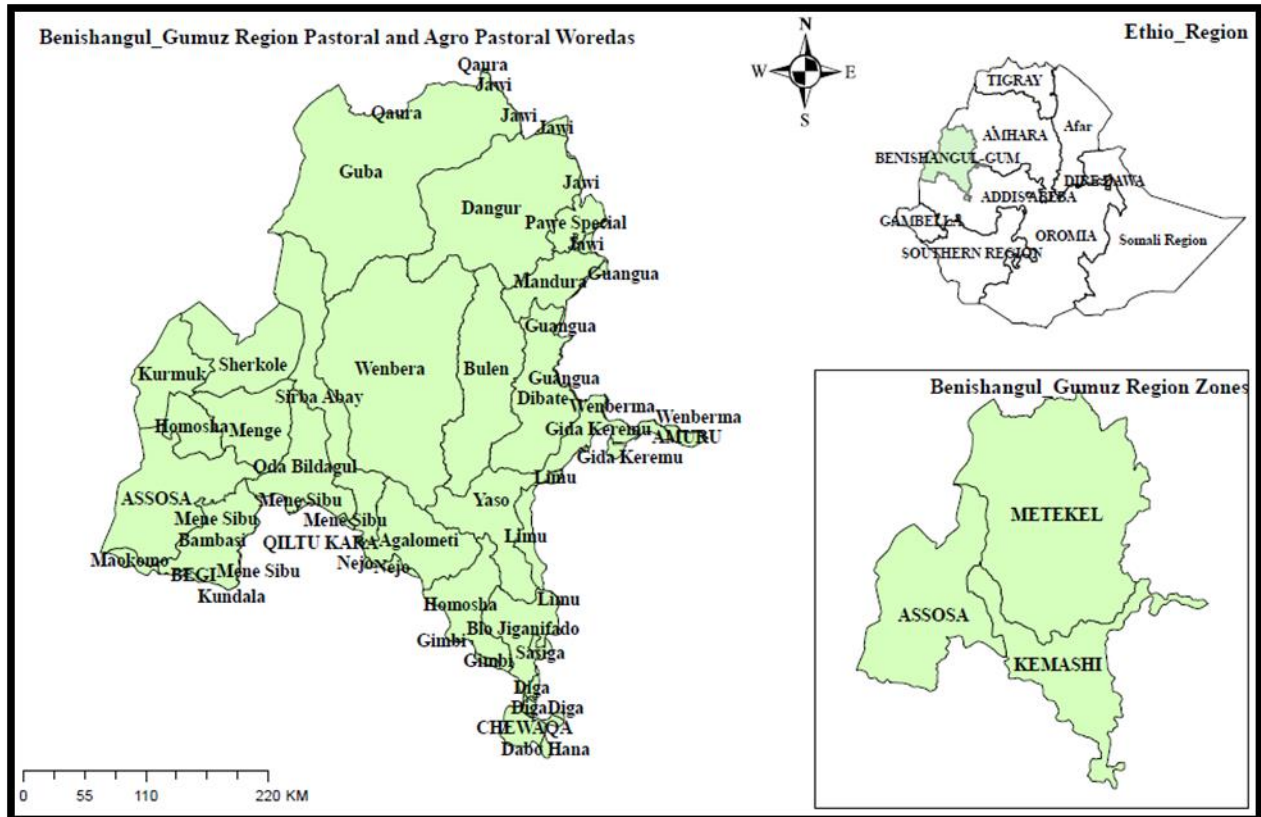


Figure 1. Map of Benishangul Gumuz Regional State. Source: SEGEL, 2018

**2. Education**

The construction of schools (coverage of primary school) is promising, but the more we move up in the grades, the dropout is very high. As mentioned by participants, gold mining is the main attraction for the young people dropping out of schools. On the other hand, this traditional mining is full of risk, less productive, and exploitative. It is also environmentally destructive as the mining does not follow the set standards of rehabilitating the land.

A participant representing education bureau suggested that the education policy needs to reconsider the TVET program so that students could join. Rather than focusing on low scoring students from grade 10, students should be introduced at lower level regarding the importance of joining vocational education and encourage brilliant students to join TVET, and create their own jobs, or contribute better for the development of the country. One way of doing this is revising the policy and including vocational education into grades 9 and 10.

In addition, the education policy leaves pre-school services to investors. Investors work where there are facilities and provide for those who can pay. This is not accessible for many of the rural poor. This has its contribution in keeping the children of the poor in poverty. Out of 80,000 pre-school age children in Assosa woreda alone, less than 25% have access to pre-school education. Practice oriented adult education strategy, which is in progress, is a positive development and needs to be encouraged.

In addition, lack of qualified teachers in the local language is another constraining factor to implement the local language as medium of instruction. There is also a question regarding whether generalist or specialist is needed at primary level. School packages that include preventive health care, sanitation etc. are not fully implemented due to lack of resources and educated personnel. Secondary schools are not well equipped, and there is a need for support (books, computers, laboratory equipment) and teachers.

### **3. Water**

Water supply in the region is very low. There is no budget, no road to move construction machineries, and some of the machineries stuck for a year at certain place during the rainy season. The region has huge potential, but only very limited villages have access to potable water. According to the information we got from FGD and KII, improvement has been registered in Kurmuk woreda on water supply service though the water supply coverage in the Woreda. However, there is a limited supply of water as only small numbers of households have access to water supplied by hand pump. Those who get the water have to move for an average of 20 minutes to reach at the pump site. Due to variations in access to shallow ground water, the pumps are not uniformly distributed in all the rural areas.

### **4. Road**

Providing basic infrastructure like roads to the community lags far behind other regions in the country. As the region is crisscrossed by many perennial rivers that flow throughout the year, and constructing bridges are beyond the capacity of the region, many communities remain stranded for many months during the long rainy season. Budget affects the number and quality of man power, material purchase, accessibility and implementation of road project. Even to build roads using local participation, there is a lack resource to buy small equipment. Most kebeles are not connected with roads and the existing ones are only dry weather roads with very poor quality of construction. From 475 kebeles, only 202 are accessible, road density is 42/1000kms, according to the information we got from the regional expert roads authority. From 74 kebeles in Assosa zone, only 30 have access to road. Many of these Kebeles are disconnected during the rainy season due to lack of bridges. This is particularly serious in woredas along the border with the Sudan. This constrains the provision of other services. Participants argue that there are huge differences in livelihoods between those who have access to transport service (road) and others who remain disconnected due to lack of road networks and transport services. The available roads are damaged, and they are in poor conditions due to lack of maintenance. The quality of the constructed roads is also poor because of the capacity limitation of the region. As a result, truck owners are not willing to provide transport services.

### **5. Governance and Decentralization**

The political decentralization does not bring changes when important services remain centralized, and the service providers are not either accountable to local authorities or not responsive to the demand of the people. The best example raised by participants is the provision of electricity. "It is managed by central government, its distribution is biased, and the coverage is so poor", says the participant of group discussion that was held at regional level. This impacted on other services such as health, water, mobile services etc. Telecommunication is also managed from the center. Since the region has no mandate to plan and implement the expansion of these services, the problem will persist constraining other

important services such as health and education. The same is true for road construction. Since constructing big bridges on most of the big rivers are beyond the capacity of the region, our people has remained disconnected from the market, social services and even from their relatives across the rivers. Veterinary services are the same, as dealing with tsetse fly belts is difficult for the region (lack of financial and competent manpower, laboratory facilities etc.). Those issues are now raised by the community as lack of good governance. In addition, the supply of electricity is said to ignoring some of the villages of the indigenous people of the region (needs to be verified) and may be source of conflict between what participants considered as settlers (Assosa area) and the indigenous community. There is lack of equity in the region regarding social services. "It is urban biased", says a participant. Access to solar energy is also limited.

## **6. Risks and disasters**

Benishangul-Gumuz region is prone to different hazards such as livestock diseases, crop pests, wildfire, droughts, hailstorms and winds, and conflict affecting the livelihoods of the community. The main pests and diseases affecting crop production are armyworm, bollworm, termites, stalk borers, and weeds (Striga). Army worm and boll worm affect maize and sorghum while termites affect all types of crops, fruit trees and seedlings. Trypanosomiasis and pasteurellosis are the main diseases affecting the livestock production. Trypanosomiasis mainly affects cattle, pasteurellosis affects goats and sheep. The disasters have negative impact on the livelihoods of the people and the food security of the regional population. The participants say that disaster profiling has been done in the region and can be used to develop policies and strategies, but there is no actively operating early warning system, even though the structure exists

## **7. Institutional capacity in managing resources and disaster risk reduction**

It is fairly possible to say that institutional capacity of the Woreda offices is highly understaffed both in terms of the numbers of required staff and the qualifications needed. In most cases, one or two staffs are placed and their duties are limited. The Woreda workers are further incapacitated by lack of facilities: transport, finance, and communication facilities. Institutions lack the capacity and have given the mandates of many bureaus at a time, for instance a single bureau is organized land administration, environmental protection, and natural resource management. In addition, institutions are over stretched, trying to cover more than they could.

The region is relatively fertile, productive and most of the production constraints can be improved with investment. But investment that the region requires such as infrastructure, social services, and access to inputs are very limited. Most of them are beyond the capacity of the region. The region's budget is mostly for salary of civil servants. The civil servants supposed to be in rural areas and provide professional assistance are barred from doing so due to lack of road, transport and budget. The production therefore remained subsistence, or even the local people are food insecure.

The micro-finance in the region complains of capacity limitations, lack of awareness of the services users, and lack of infrastructure to reach the beneficiaries. The service deliveries need to be digitalized to reach the remote residents. For example, it requires access to mobile phones to reach them. It also

requires access to electricity for the farmers to remain connected. The micro-finance gives credit to purchase bulls. As livestock disease is highly prevalent, and there is no property insurance, the loan in certain cases is plunging the farmers into poverty.

### **8. Importance of policy revision**

A participant from finance bureau says that some of the policies overstayed while there was a need for revision. For instance, population policy has not been revised since the transitional period. It had 15 years strategy, but we have not revised the strategy after it was expired. Attaining 44% family planning was the target. We achieved this, and we have no more targets now. “It is not revised”, argues a participant of FGD. The population growth and the natural resource we have today are not compatible. For instance, 48% of Ethiopians are considered as working ages, but we have no policy and strategy to accommodate such huge working population. This old population policy soon can be a source of mismatch between the labor supply and demand. The population policy also goes with implementing institutions. In different regions, the government agency dealing with population issue is a case team or a department. There is a mismatch between what it should do and the attention given to the sector.

In addition, “Criteria used for allocating budget requires revision as it disfavors the emerging regions such as BG”, argue a participant in FGD. According to this informant, most of the problems can be solved if enough budgets are allocated and the capacity of the implementing agencies is built. According to the regional officials, the budget allocation from federal government is based on old population data. Due to mega projects in BG, the demographic characteristics has changed and put pressure on the existing resources.

### **9. Cross border trade**

According to trade bureau representative, many livestock cross to Ethiopian borders. This has impacts on local producers by substantially reducing market prices. On the other hand, it also introduces trans-boundary animal diseases. There is also cross-border regulation that has been in place for more than 15 years. According this regulation, a trader can import a good valued at 2000 birr and an individual can cross the border with goods having 200 birr. Under the current exchange rate, this buys very limited item, but the people on the border have many socio-economic and cultural links across the border.

### **10. Villagization**

“Dispersed settlement was considered as the main cause of food insecurity due to lack of access to modern social services, production inputs and output markets”. (A regional food security officer). Villagization was supposed to solve most of the constraints to access social services. The policy of relocating people through villagization and resettlement reintroduced by the current government in 2003 (Daie, 2012). Resettlement and villagization schemes were implemented during Imperial and the military regime. The stated objectives were similar: reducing poverty, transforming the rural economy through the provision of basic services, including agricultural mechanization etc. The same is stated by the current government. What makes the difference here is that it is within the region, supposed to be voluntary and again promised not to repeat the mistakes committed under the previous regimes. Under the military regime as well as the current government, much has been promised regarding social

services (schools, human and livestock health facilities, water supply, electricity, markets etc.). While promise was made not to repeat the past mistake when the resettlement and villagization schemes were reintroduced in 2003, the actual implementation seems facing similar problems (Daie, 2012). For instance, discussion with BG regional officials confirms this worry. According to representative of food security and villagization bureau, the planned villagization was completed a year ago, but the provision of basic services is lagging behind. The fear is that the villagized farmers may leave the new settlement and go back to their previous places. There are many other irregularities observed during the implementation: site selection problem, distance between farm land and new village, and the absence of important resources closer to the new village (pasture land, wood for energy etc.).

Food security enhancement scheme incorporates collecting dispersed settlement into villages with the assumption of providing packaged services such as water, sanitation, health and education, electricity, mobile phone services, and road connections. Many of the packages are lacking in most of the new villages and we fear they may return. Experts say that failure to provide the promised packages may force people to return to the previous villages.

Furthermore, there is problem from the settlers' side. The settlement/villagization scheme partially targeted irrigation potential areas. But the people are not using the scheme while in other areas the infrastructure is lacking. The potential irrigation areas have not been utilized.