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Pastoral Development in Ethiopia

Trends and the Way Forward

Esayas Nigatu Gebremeskel
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Foreword

This book is a call to act more strategically in an underserved sector. *Pastoral Development in Ethiopia: Trends and the Way Forward* draws lessons from 50 years of pastoral and agropastoral development investment interventions implemented in Ethiopia to outline more resilient, prosperous, and sustainable pathways for pastoral and agropastoral livelihoods in the future.

The book combines the results of an impact analysis of the development investments over half a century, a review of the existing thinking in pastoral and agropastoral development, and an assessment of the currently stark socioeconomic conditions affecting pastoral and agropastoral communities, to paint a compelling picture of present pastoral and agropastoral development trends in Ethiopia and evoke alternative pathways for the future.

Investments made over the past 50 years by the government of Ethiopia and its development partners, including the World Bank, the African Development Bank, and others, to develop the lowland pastoral areas have yielded modest results. Though more than 12 million pastoralists and agropastoralists in Ethiopia inhabit and act as custodians of about 60 percent of the country's land, lowland herding communities live in precarious conditions and face multidimensional deprivation. Their vulnerability to shocks is deep-seated, with a growing segment of poor and stockless pastoralists and agropastoralists.

The government of Ethiopia has shown continued interest in investing and developing the sector. The willingness of funding organizations such as the World Bank and the International Fund for Agricultural Development (IFAD) to support the government's effort to transform the sector is also high. However, before committing to new investment programs, it is key to take stock of what has worked well, what has not worked, and why, to improve the effectiveness of our development responses to dynamic challenges and deliver positive and sustainable change. That is what this book attempts to achieve.

Based on their review and analytical work, the authors propose policy and technology interventions, institutional and implementation modalities, and approaches that will inform future investments in pastoral and agropastoral areas of Ethiopia and beyond. It has already informed the design features of a new project — the Ethiopia Lowlands Livelihood Resilience Project — with a

total budget of US$451 million, co-financed by the International Development Association (IDA), International Fund for Agricultural Development (IFAD), and beneficiary communities. Moreover, this book will contribute to ongoing efforts to define resilient development pathways for more peaceful and prosperous pastoral and agropastoral communities in the Horn of Africa.

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Executive Summary

Over the past five decades, the Government of Ethiopia (GoE), with the support of key development partners, has made efforts to develop the lowland pastoral and agropastoral (PAP) areas of Ethiopia. These efforts ranged from exploitation of livestock resources and provision of basic services to combating drought and enhancing food security. Although some notable achievements arose because of these efforts (such as expansion of socioeconomic services, control of livestock disease, and enhanced trading opportunities), the impacts have been compromised by lack of clear policies and strategies and inadequate investment and support systems, as well as institutional fragmentation, violent conflict, and recurrent droughts. Competition for natural resource use and land alienation has intensified and curtailed mobility, the essence of pastoral livelihoods. Consumption poverty is dropping in pastoral areas, but multidimensional deprivation is still deep-seated in Ethiopia's lowland PAP areas, which are more vulnerable to shocks than the highlands. Recent joint reports by the GoE and development partners indicate that the drought-affected population receiving humanitarian assistance in PAP areas is on the rise. Traditional social support systems are also weakening. Consequently, different livelihood pathways are evolving, with a growing segment of poor and stockless pastoralists diversifying and a few wealthy herd owners becoming more commercial.

Despite the increasing factors of vulnerability and resulting pressure on pastoral livelihoods, opportunities remain high for developing pastoral livelihoods and enhancing pastoralists' resilience to disasters such as drought. National and global demand for livestock and livestock products are on the increase. In Ethiopia, livestock value chain development for meat and milk is improving and more aggregators, processors, and export abattoirs have entered the market. With the mushrooming of small towns, and the associated increase in construction and building of infrastructure, alternative livelihoods are opening up for young pastoralists. On the strategic side, the GoE has incorporated pastoral-related activities in its second Growth and Transformation Plan (GTP II). Development partners such as the World Bank, International Fund for Agricultural Development (IFAD), U.S. Agency for International Development (USAID), and others have expressed their continued support for PAP development.

Considering the challenges as well as the opportunities available in Ethiopia's PAP areas, the following six strategic pillars of development are recommended for future interventions to achieve drought-resilient, transformed, and sustainable PAP livelihoods, ecosystems, and institutions that would result in peaceful, inclusive, and prosperous PAP communities.

LIVELIHOOD SUPPORT

Livestock production and livestock extension services are key in enhancing production and productivity. Rationalization of the animal health service through public–private partnerships (PPPs) supported with mobile services is critically important. Improving livestock breeding through selection and improving livestock feed through increased fodder production are areas that merit close attention. Market opportunities need to be expanded and market linkages strengthened. Land tenure security shall be stepped up through the ongoing land use certification. Making the existing extension system work for the lowlands through capacity building and tailoring the appropriate extension packages for the PAP systems will help to unlock the full potential of the sector. Private- and technology-driven extension service delivery is an option to be considered in future PAP development.

Agropastoralists can increase their crop production and productivity in rainfed agriculture through improved crop production technologies and introduction of drought-tolerant varieties. In areas where irrigation is accessible, either from rivers or underground water, small- to medium-scale irrigation can be used to produce cash crops or high-value forage crops. Critical factors in the success of rainfed or irrigated agriculture include appropriate advisory services, inputs, secure rights of access to land, integrated livestock enterprises, roads and communication infrastructure, and accessible markets.

Opportunities for diversification and alternative livelihoods within and outside pastoral areas using various pathways for building resilience based on livestock and non-livestock activities shall be taken into consideration. Skills development through technical and vocational education and training (TVET), access to financial services, and an improved enabling environment are essential for youth and women to engage in diversified and alternative livelihoods activity. Support shall be provided through business development training to help them engage in the economy of emerging rural townships through small and medium enterprises. In regions where opportunities exist, involvement in fisheries and environmentally friendly nontimber forest products is important.

INTEGRATED RANGELAND AND WATER DEVELOPMENT AND SECURE ACCESS TO KEY RESOURCES

To reverse ecosystem degradation and restore pastoral rangelands, soil and water conservation and gully control measures and participatory range rehabilitation initiatives must be adopted. More comprehensive and integrated participatory rangeland resource interventions are required than the current isolated and piecemeal efforts made by different agencies. Efforts to control and stop alien and native invasive species shall be intensified. Mobility, the essence of

pastoralism, could be encouraged and supported by appropriate policies for efficient use of range resources. Land use planning measures shall be designed to facilitate movement of herds and flocks through designation of dedicated migration corridors. Development of water interventions in pastoral areas, especially construction of boreholes and permanent water supply systems for both human and livestock consumption, is a critical element for building drought resilience among pastoralists. However, attention must be paid to avoid making the water points attract potential settlements, which might have devastating ecosystem effects.

TRANSFORMATION AND COMMERCIALIZATION OF THE LIVESTOCK INDUSTRY IN PAP AREAS

Livestock-based commercialization and improved market integration are pathways to transform the livestock industry in PAP areas. These involve improved family meat-milk production as well as small-scale fattening and reconditioning linked to medium- and high-scale feedlot operations that could supply meat and milk processing plants at the middle and high end of the livestock value chain. However, such a transformation pathway may favor large commercial herders at the detriment of small herders or stockless pastoralists, who will need support for alternative pathways for sustainable and resilient livelihoods. A favorable policy environment shall be created to attract the private sector, including the small and medium enterprises of youth and women, to bring livestock value addition (such as feedlots, meat and milk processing, and processing of hides and skin) closer to rangeland areas, so that employment benefits and other multiplier effects are captured within PAP areas.

ENHANCED ACCESS AND USE OF BASIC SOCIAL AND ECONOMIC SERVICES

Better access to health, education, safe potable water and communication facilities is directly related to pastoralists' and agropastoralists' capacity to work, earn, and diversify household income to improve their family's livelihoods and build resilience. Based on lessons learned, it is important to scale up the community demand-driven (CDD) development approach of the World Bank- and IFAD-financed Pastoral Community Development Project (PCDP) to expand coverage of basic social and economic services and improve their quality and durability in poor and remote pastoral areas. Provision of social services interventions in pastoral areas must also consider socioeconomic, institutional, and climatic factors, such as inadequate institutional capacity, peculiar periodic droughts, seasonality, and pastoral mobility.

ENHANCED SOCIAL PROTECTION AND DISASTER RISK MANAGEMENT

Social protection programs need to be a key component of an integrated resilience strategy in Ethiopia's dryland pastoral areas, where these programs can play two different but complementary roles. Recognizing the existing gaps,

a rapidly scalable and flexible safety net program is essential to act timely and effectively, as well as to build resilience at household level. Popularization of livestock/drought insurance, such as index-based livestock insurance (IBLI), can help build herders' coping capacity. Moreover, involvement of the private sector in drought preparedness, such as private forage production and marketing, shall be encouraged. It is essential to have in place a pastoral early warning system with contingency plans to improve anticipatory and adaptive capacity. Traditional safety net programs should be supported and encouraged.

Projects need to include conflict sensitivity planning using the existing framework before actual implementation of an intervention in a certain locality. Implementation could also promote indigenous conflict management systems for peacebuilding and conflict resolution to minimize issues that hamper livestock production, sustainable use of natural resources, and stability in program areas.

INSTITUTIONAL CAPACITY BUILDING AND OTHER CROSS-CUTTING ISSUES

It is crucial to invest in human capital development and institutional capacity building, in both formal government and nonformal institutions, to institutionalize resilience building. Low institutional capacity is a key challenge to delivering service in PAP areas. Formal and traditional institutions and their leadership must also be strengthened to address implementation capacity constraints in PAP areas.

Future interventions shall pay special attention to mainstreaming gender and nutrition, promoting cross-cutting issues of women and youth employment, climate change and adaptation, and enhanced use of information technology (IT) for information access, market promotion, and access to finance. Future interventions would have activities centered on applied research, documentation of best practices, and knowledge management.

INSTITUTIONAL/IMPLEMENTATION ARRANGEMENT AND DEVELOPMENT APPROACH

Considering an autonomous and dedicated institution for PAP development, with political clout, robust technical capacity, and organizational presence at federal, regional, and *woreda* (district) levels, can help avoid the current institutional fragmentation. Such an institution can create a favorable enabling environment with which to attract private sector participation in PAP development as well as in the transformation of the livestock sector.

Despite the limited success of past development efforts, pastoral livelihoods remain susceptible to recurring droughts and conflict, which have weakened their resilience. This report strongly posits that a comprehensive and multisectoral approach is required to ensure that PAP livelihoods become sustainable and resilient by improving and transforming the use of livestock resources. Such a comprehensive and holistic approach will require reconsideration of the existing institutional arrangements, a strong monitoring and evaluation (M&E) system, an enabling policy framework, and human and institutional capacity building.

Abbreviations

AfDB	African Development Bank
ARPP	Arero Range Pilot Project
ASALs	arid and semi-arid lowlands
AU	African Union
BGMZ	Benishangul-Gumuz
CARE	Cooperative for Assistance and Relief Everywhere
CDD	community demand-driven
CEWARN	Conflict Early Warning and Response Mechanism
CIF	Community Investment Fund
CPP	Country Programming Paper
CSA	Central Statistical Agency
DFID	U.K. Department for International Development
DHS	Demographic Health Survey
DRM	disaster risk management
DRSLP	Drought Resilience and Sustainable Livelihoods Project
ELMT	Enhanced Livelihoods in the Mandera Triangle
ELSE	Enhanced Livelihood in Southern Ethiopia
EU	European Union
FDRE	Federal Democratic Republic of Ethiopia
FGD	focus group discussion
FLDP	Fourth Livestock Development Project
GDP	gross domestic product
GoE	Government of Ethiopia
GTP	growth and transformation plan
HoA	Horn of Africa
IDDRSI	IGAD Drought Disaster Resilience and Sustainability Initiative
IFAD	International Fund for Agricultural Development
IGA	income-generating activities
IGAD	Inter-Governmental Authority for Development
IIF	Innovation and Investment Fund
ILCA	International Livestock Center for Africa
IT	information technology
JIRDU	Jijiga Rangeland Development Unit

KfW	Kreditanstalt für Wiederaufbau
KI	key informant
LMB	Livestock and Meat Board
M&E	monitoring and evaluation
MoA	Ministry of Agriculture
MoALR	Ministry of Agriculture and Livestock Resources
MoFPDA	Ministry of Federal and Pastoral Development Affairs
NERDU	Northeast Rangeland Development Unit
NGO	nongovernmental organization
NIMES	National Integrated Monitoring and Evaluation System
NRM	natural resources management
PAP	pastoral and agropastoral
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PCDP	Pastoral Community Development Project
PCI	Pastoral Communication Initiative
PFE	Pastoralist Forum Ethiopia
PPP	public-private partnership
PRIME	Pastoralist Areas Resilience Improvement through Market Extension
PRM	Pastoral Risk Management
PRSP	Poverty Reduction Strategy Paper
PSNP	Productive Safety Net Program
RDP	Rangeland Development Project
RELPA	Regional Enhanced Livelihoods in Pastoral Areas
RESET	Resilience Building Program in Ethiopia
RM&E	results monitoring and evaluation
RPLRP	Regional Pastoral Livelihoods Resilience Project
RPP	Regional Programming Paper
RUSACCO	Rural Saving and Credit Cooperative
SC	service cooperative
SDPRP	Sustainable Development and Poverty Reduction Program
SERP	South-East Rangelands Development Project
SLDP	Second Livestock Development Project
SLE	Sustainable Livelihoods Enhancement
SNNPR	Southern Nations, Nationalities, and Peoples' Region
SORDU	Southern Rangeland Development Unit
TA	technical assistance
TAD	transboundary animal disease
TLDP	Third Livestock Development Project
TLU	tropical livestock unit
TVET	technical and vocational education and training
UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
USAID	U.S. Agency for International Development
WASH	water, sanitation, and hygiene

1 Introduction to Pastoralism in Ethiopia

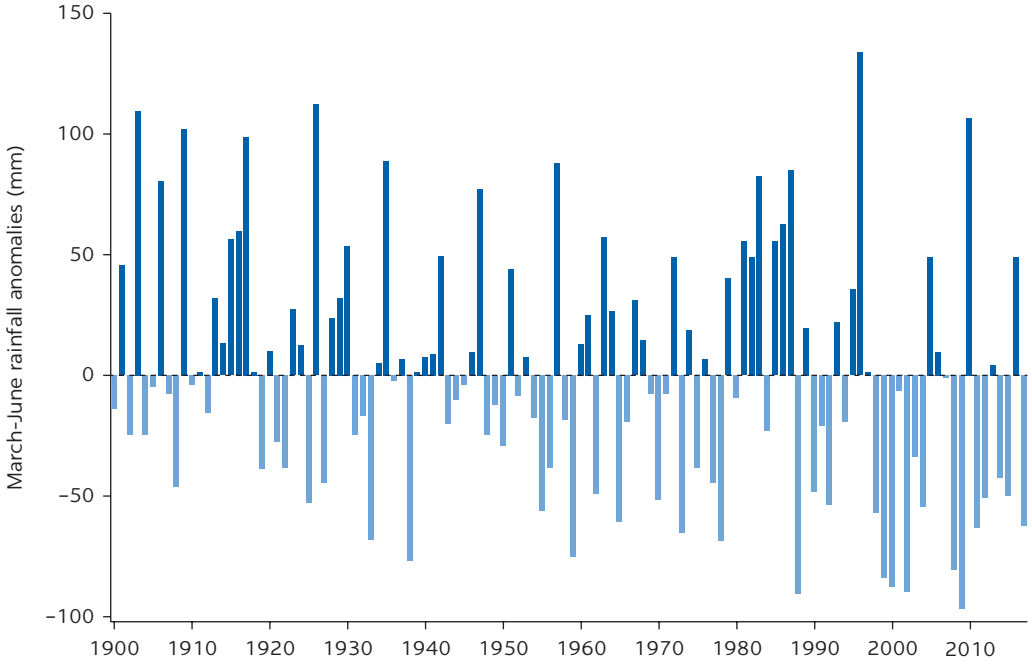
PASTORALISM DEFINED

Pastoralism is a complex interaction of people, natural resources, and livestock, predominantly practiced in arid and semi-arid lowlands (ASALs) and hot subhumid pockets (below 1,500 meters above sea level [m.a.s.l.]), which cover about 60 percent of the landmass of Ethiopia (Chanyalew 2015). Pastoralism is an economic activity, a land use system, and a way of life for people who derive most of their income or sustenance from keeping domestic livestock reared in conditions where most of the feed is natural rather than cultivated or closely managed (Sandford 1983).

Livestock are the backbone of pastoral economies and have cultural value, and pastoralists perceive themselves as "livestock people." Pastoralists' dependence on livestock has several consequences (Hogg 1997). Livestock are a form of pastoral capital, a stock that can reproduce itself without the intervention of any market mechanism. However, after a drought, reconstitution of that capital is a long and slow process, as many female reproductive stock would have died. Pastoralists are peculiarly vulnerable to fluctuations in the terms of trade between livestock and agriculture, particularly grains. In the dry season when milk yield declines—or at other times of the year when yields are generally insufficient—pastoralists depend on markets to buy grain in exchange for milk and meat. If the terms of trade are unfavorable, usually in dry or drought periods, pastoralists risk losing their reproductive as well as their nonreproductive capital to obtain grain.

As depicted in figure 1.1, pastoral areas are characterized by marked rainfall variability and the associated uncertainties in the spatial and temporal distribution of water and grazing resources for livestock. Over time, the variability in rainfall in pastoral and agropastoral (PAP) areas has increased, culminating in droughts that decimate livestock wealth and crop harvests. The end result is destitution and the increasing vulnerability of PAPs (Coppock 1994; Desta and Coppock 2002, 2004; Oba 2013).

FIGURE 1.1
Rainfall variability in Eastern Ethiopia, 1900–2010



Source: Funk 2018.

TABLE 1.1 **PAP population projection, 2014–17**

REGION	2014	2015	2016	2017
Afar	1,678,000	1,723,007	1,769,002	1,812,002
Somali	5,307,002	5,452,994	5,598,002	5,748,998
SNNPR	722,655	738,346	753,880	769,817
Oromia	2,022,309	2,074,007	2,126,327	2,178,734
Gambella	138,640	142,067	145,529	149,410
Total	9,868,606	10,130,421	10,392,740	10,658,961

Source: Computed from Federal Democratic Republic of Ethiopia (FDRE) Central Statistical Agency (CSA) Population Projection of Ethiopia 2014–17 for the *woreda* provided by the regions as pastoral *woredas*.

Over the centuries, pastoralists have developed livestock management systems based on strategic mobility to access water and grazing resources and to respond to climatic variabilities. Side by side with pastoralism is agropastoralism, which combines extensive livestock production with crop cultivation for household consumption and income generation.

Most countries in the Horn of Africa (HoA), including Ethiopia, have large PAP populations (AU 2013). Livestock, which largely originate from PAP areas, are a major component of the economies of these countries, contributing 30–50 percent of agricultural gross domestic product (GDP). Pastoralists supply significant numbers of livestock to domestic, regional, and international markets, making crucial—but often undervalued—contributions to national and regional economies. Although the availability and accuracy of data on ASALs and pastoralism are problematic, pastoralism is clearly important to national economies and livelihoods in countries in the HoA (AU 2013).

PASTORALISM IN ETHIOPIA

Pastoralism and agropastoralism provide livelihoods for the more than 12 million Ethiopians who derive most of their income from keeping livestock, complemented with farming in the case of agropastoralists (FDRE CSA 2013). The major pastoral areas include Afar, Ethio-Somali, Oromia, and Gambella Regions, and Southern Nations, Nationalities, and Peoples' Region (SNNPR) (map 1.1). Small numbers of PAPs also reside in Benishangul-Gumuz (BGMZ) Region and Dire Dawa Administration.

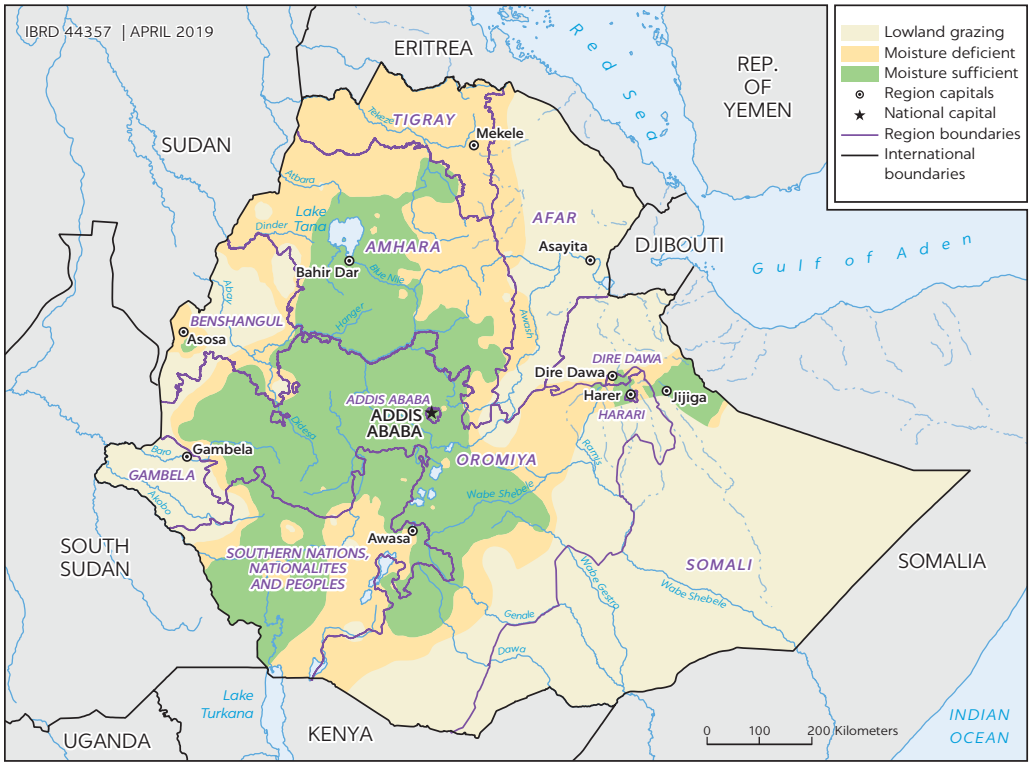
Table 1.1 and figure 1.2 show the growth in PAP population in what has been described as pastoral *woredas* in the five regions. The average population growth rate is about 2.6 percent, a high figure for pastoral areas, which are traditionally characterized by sparsely distributed populations covering vast areas.

According to the Livestock Sector Analysis (LSA) of the Ministry of Agriculture and Livestock Resources (MoALR), an estimated 44.3 percent of the national livestock population (cattle, sheep, goats, and camels) and 100 percent of the camels are raised in pastoral lowland grazing areas (table 1.2) (Shapiro et al. 2017).

The pastoral sector is a source of livestock meat and milk destined for domestic consumption and export markets. Thirty-four percent of the national red meat, 38 percent of total milk, and 21 percent of cow milk is produced by PAPs in lowland grazing systems (Shapiro et al. 2017). About 20 percent of plough oxen used by surrounding highland farmers come from pastoral areas. Overall, the

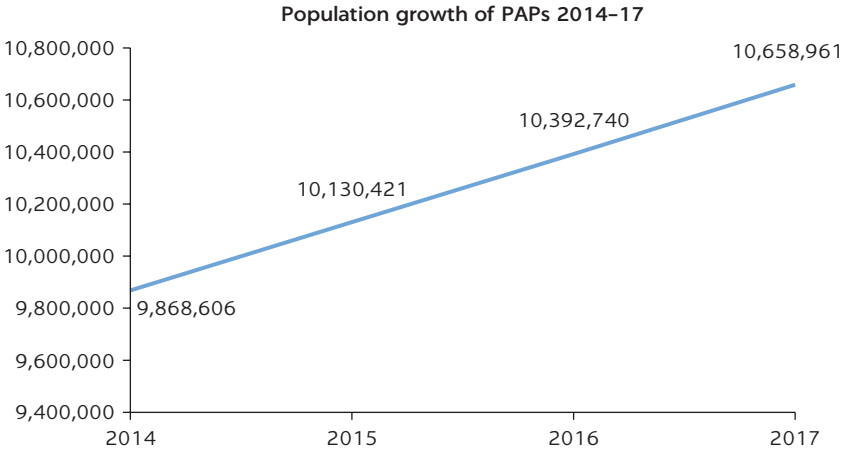
MAP 1.1

Major livestock production zones in Ethiopia



Source: Based on Shapiro et al. 2017.
Note: Moisture Sufficient and Moisture Deficient are areas in the highland crop-livestock system, and Lowland Grazing zones are PAP areas.

FIGURE 1.2
Growth in PAP population in Afar, Ethio-Somali, Oromia, SNNPR, and Gambella Regions, 2014–17



Source: Computed from Federal Democratic Republic of Ethiopia (FDRE) Central Statistical Agency (CSA) Population Projection of Ethiopia 2014–17 for the *woreda* provided by the regions as pastoral *woredas*. See table 1.1.
Note: PAP = Pastoral and Agropastoral.

TABLE 1.2 **Distribution of Ethiopian national livestock herd over lowland PAP and highland mixed crop–livestock systems, 2013/14**

SPECIES	NATIONAL (#)	LOWLAND PASTORAL AREAS (#)	HIGHLAND MIXED CROP–LIVESTOCK (#)	PERCENTAGE IN PASTORAL AREAS
Cattle	55,212,210	15,293,782	39,918,428	28
Sheep	29,361,124	12,214,228	17,146,896	42
Goats	28,951,303	20,257,218	8,694,085	70
Camels	4,500,000	4,500,000	—	100
	118,024,637	52,265,228	65,759,409	44.3

Source: Adapted from FDRE CSA 2013/14 and Shapiro et al. 2017.
Note: PAP = Pastoral and Agropastoral; — = not applicable.

output of the livestock sector, which largely originates from PAP areas, contributes 12–16 percent to Ethiopia's GDP and 30–35 percent to its agricultural GDP. The sector also supplies Ethiopia's leather industry, one of the largest sources of foreign currency (MoA 2012).

The entire regions of Afar and Ethio-Somali can be classified as PAP. In Oromia, SNNPR, Benishangul-Gumuz, and Gambella Regions, pastoralism and agropastoralism are practiced in a few zones and *woredas*. Although common climatic, social, and economic features are shared by most of the pastoral areas of Ethiopia, they are not homogenous. Heterogeneity arises in the level of aridity, in vegetation cover, in the dominant species in livestock holdings, and in the extent of their integration with the market economy and level of livelihood diversification.

PASTORALISM AND AGROPASTORALISM IN AFAR

Afar Regional State is the fourth largest region (100,860 km^2) in Ethiopia, located in the northeastern part of the country. It shares boundaries with Tigray, Amhara, Oromia, and Ethio-Somali Regions. It also borders Djibouti and Eritrea, which also

have significant Afar populations. Given their geographic location and ethnic similarity, cross-regional and cross-border interactions and access to grazing resources and markets are important for Afar PAPs. Out of the 1,812,002 rural Afar citizens, about 80 percent are pastoralists and the remaining 20 percent are agropastoralists (FDRE CSA 2013). Most of Afar Region has a harsh and dry landscape largely covered by desert scrubland. The encroachment of an invasive alien plant species, *Prosopis juliflora,* is a serious problem for Afar PAPs, who rely on grazing and farmlands. The region has two rainy seasons: *karma,* from mid-June to mid-September (main rainy season); and *sugum,* from mid-March to April (short rainy season), which is bimodal throughout the region, but scanty and erratic. Afar pastoralists are transhumant, meaning they have home bases and move out seasonally to manage their livestock production system. The Afars keep cattle, camels, and small ruminants. The Awash, Mille, and Logia rivers cross the region. The Awash river Valley is an important grazing area for livestock and also provides opportunities for irrigated agriculture. Large commercial farms and dams block the Afars' access to traditional dry season grazing areas and watering points. The invasion of *Prosopis* and periodic conflict with the *Issa* (Somali Ethnic Groups) over grazing land has limited and constrained the Afars' access to traditional grazing areas. The Afar PAP economy is poorly diversified and not well integrated with the market.

PASTORALISM IN ETHIO-SOMALI

Ethio-Somali Regional State (ESRS) is the second largest region in Ethiopia at approximately 280,000 km^2, located in the southeastern part of the country. With a population of 5,748,998 (FDRE CSA 2013), the region is inhabited by one of the largest pastoral communities in the HoA and the largest in Ethiopia. About 70 percent of the region's citizens are pastoralists who keep cattle, camels, and small ruminants. The region has the longest national frontier, bordering Somalia, Djibouti, and Kenya. It also has a long border with Oromia and Afar Regions. Cross-border and cross-regional access to grazing resources and markets are critical for Ethio-Somali herders. The region is known for its blackhead sheep and its vibrant cross-border livestock trade. The region has two rainy seasons: *gu*, from March to May; and *deyer*, from October to December. The area is dry with scanty and erratic rainfall, but is also exposed to flooding. The vegetation cover is dominated by browses mixed with savanna-type grassland. Bush encroachment (in particular, *Prosopis*) in some areas and big gullies are becoming serious problems for PAPs. Ethio-Somali herders practice a transhumant system with a home base that involves seasonal movement. The three big rivers in the region (Wabeshebele, Genale, and Weybe) are used for irrigation, grazing, and livestock watering. Ethio-Somali PAPs are better diversified and have a more market-integrated economy compared to other pastoral areas in Ethiopia.

PASTORALISM IN GAMBELLA

Gambella Regional State is located in the southwestern part of Ethiopia, bordering Oromia and SNNPR Regions and Sudan to the west. Most of Gambella is flat, with a hot and humid climate. Gambella's population has diverse livelihood systems. Almost 100 percent of the Nuer zone, which is covered by savanna-type vegetation, is PAP. Short distance mobility is an important resource management

tool in the Nuer pastoral system. Nuer pastoralists move toward the Baro River during the dry season and return to their homestead during the wet season. Informal cross-border livestock movement and trade are very common. Livestock disease, in particular trypanosomiasis and other transboundary animal diseases (TADs), is the most critical challenge for livestock production in the region. The Nuer cattle breed is perceived to have a certain degree of tolerance to trypanosomiasis, which calls for further studies for verification and confirmation. This breed is also good for milk production (Stein 2011). The Fellatas who seasonally cross the border from Sudan in large numbers put pressure on natural resources and transmit TADs to herds in Gambella. Gambella has a human population of about 360,000, in addition to a refugee population of 419,000. Refugees, whose camps are located in seven centers in four *woredas*, compete with the local people for the available natural resources and services. PAPs in Gambella have a poorly diversified economy and are not very connected to markets (see appendix A for a detailed description of PAP livelihoods in Gambella Region).

PASTORALISM IN OROMIA

In Oromia Regional State, pastoralism is practiced in 7 zones and 42 *woredas*, covering 152,070 km^2 of predominantly savanna-type grassland that supports cattle, camels, and small ruminants (Oromia Pastoral Area Development Commission 2018). The PAP areas are scattered across the region. The region's total PAP population is about 2,178,734 (FDRE CSA 2013), of which the larger proportion is agropastoralists (MoARD and USAID 2010). Rainfall is scanty and erratic, ranging from 400 to 600 mm. The short rain or *haggaya* is from September to November; the long rain, called *ganna*, runs from mid-March to May. The pastoralists in Oromia are transhumant. The Borana zone in southern Oromia, home of the Boran cattle breed, hosts the largest PAP group in the region. The vegetation cover is dominated by savanna. PAPs in Oromia are less diversified and less market integrated than the Ethio-Somali. Invasive species such as *Acacia drypanalobium* are becoming a big challenge for Borana herders (Coppock 1994; Desta 1999; Ebro 2009).

PASTORALISM IN SNNPR

SNNPR, located in the southwestern part of Ethiopia, has 14 zones, of which, 3 have PAPs spread over 12 *woredas*. For example, out of the 8 *woredas* in South Omo zone, 6 are pastoral and support a huge livestock population. South Omo zone has about 1.6 million cattle, 1.4 million sheep, and 2.84 million goats (FDRE CSA 2013/14). Pastoralists in SNNPR are transhumant and move seasonally in search of grazing areas and water. They keep cattle and small ruminants. Their economy is very poorly diversified and not very integrated with the market. Livestock diseases, including trypanosomiasis and TADs, are a serious problem for those living close to the riverine areas and bordering Kenya.

PASTORALISM IN DIRE DAWA ADMINISTRATION

Dire Dawa is one of the administrations in Ethiopia that practices pastoralism and agropastoralism. It has a total population of 125,643, currently dependent on

422,398 livestock resources comprising 72,070 cattle, 209,725 goats, 56,537 sheep, 67,692 camels, and 16,374 donkeys. According to an assessment, the total feed resources available in Dire Dawa Administration can only satisfy 61 percent of the maintenance requirements and 52 percent of the production requirements of the existing livestock, a serious feed shortage that needs critical attention. Frequent drought and recurrent livestock wealth losses, shortage of livestock feed, land degradation and natural resource depletion, poor infrastructure network, poor access to markets and market information, and the absence of pastoralist-friendly extension services to address the service requirements of the community are some of the major challenges the PAPs are facing (FDRE Dire Dawa Administration 2016).

PASTORALISM IN BENISHANGUL-GUMUZ

BGMZ Region shares a long border with Sudan. The region is divided into three zones—Metekel, Assosa, and Kamashi. The lowland areas of Assosa and Kamashi are endowed with savannah-type grasslands suitable for livestock rearing. The high infestation of livestock disease, mainly trypanosomiasis, has historically discouraged inhabitants from engaging in livestock rearing and encouraged them to switch to crop cultivation. The prevalence of livestock disease is aggravated by the Fellata pastoralists from Sudan who cross the border each year with their large herds of cattle, sheep, and goats, carrying TADs. Despite the formidable challenges of livestock disease in the region, tens of thousands of agropastoralists make their living keeping cattle, sheep, and goats. The *Abigar* cattle, which are common in the region, are a hardy breed that can withstand frequent disease outbreaks, drought, seasonal feed and water shortages, and high temperature and heat loads. These cattle can survive, produce milk, and reproduce even under trypanosomiasis disease pressure (Stein 2011). The major livestock production challenges include the Fellata herders' cross-border movement, which leads to competition for available grazing resources and brings diseases; conflict when resources are dwindling; water for livestock during the dry season; forage lignification; poor road networks; and poor access to livestock markets. (see appendix A for a detailed description of PAP livelihoods in BGMZ).

CURRENT SOCIOECONOMIC INDICATORS AND VULNERABILITIES

Basic services (education, health, water) in PAP areas

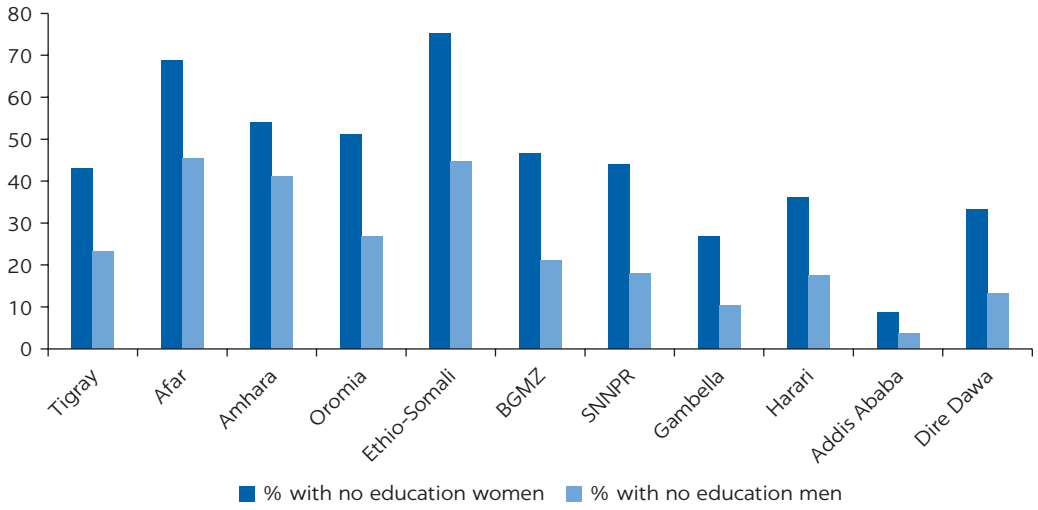
Ethiopia's pastoralist areas have historically experienced a lack of development efforts substantially directed to human capital development interventions. This was particularly an oversight in rangeland development projects (RDPs) before the Pastoral Community Development Project (PCDP). The post-1991 regionalization and decentralized administrative restructuring paved the way to somewhat narrow this gap by recognizing the importance of refocusing efforts in favor of education, human health, and water supply and sanitation services.

Pastoralist children's participation in primary education has grown steadily. The PCDP constructed and equipped primary schools, complementing the efforts

of the Government of Ethiopia (GoE) to improve access to education for pastoral children (Flintan et al. 2018). The highest percentage change in primary school gross enrolment rate between 2000 and 2014 was achieved in the pastoralist regions of Ethio-Somali (516.2 percent) and Afar (235.8 percent). However, the lowest percentage of those with more than a secondary education, particularly for women, is found in these two regions. As shown in figures 1.3–1.5, the literacy rate in pastoralist regions is lower as well. For example, the literacy rate of men and women ages 15–49 in Afar is 50.8 percent and 23.7 percent, respectively; in Ethio-Somali, the comparable rates are 56.7 percent and 12.4 percent, respectively.

FIGURE 1.3

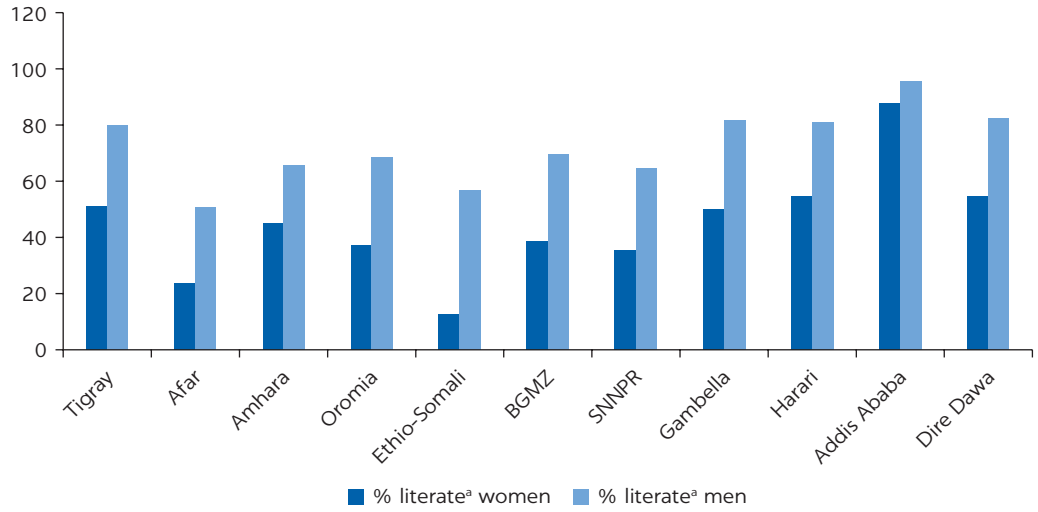
Percent of women and men ages 15–49 with no education, by region



Source: Ethiopia FDRE CSA Demographic Health Survey (DHS) 2016.
Note: SNNPR = Southern Nations, Nationalities, and Peoples' Region; BGMZ = Benishangul-Gumuz.

FIGURE 1.4

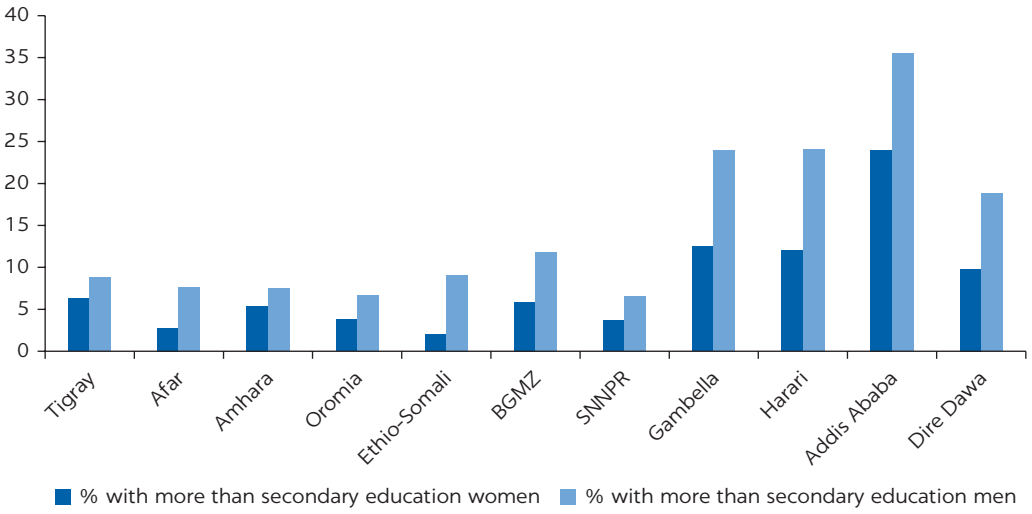
Percent of literate women and men ages 15–49, by region



Source: Ethiopia FDRE CSA DHS 2016.
Note: SNNPR = Southern Nations, Nationalities, and Peoples' Region; BGMZ = Benishangul-Gumuz.
a. A person who can read a whole sentence or part of it.

FIGURE 1.5

Percent of women and men ages 15–49 with secondary education and above, by region



Source: Ethiopia FDRE CSA DHS 2016.
Note: SNNPR = Southern Nations, Nationalities, and Peoples' Region; BGMZ = Benishangul-Gumuz.

Both regions' rates are well below the national average of 69 percent for men and 42 percent for women. Moreover, the proportion of women with no formal education in Afar and Ethio-Somali Regions is 68.7 percent and 75.3 percent, respectively; for men, the proportions are 45.5 percent in Afar and 44.8 percent in Ethio-Somali. These are all much higher than the national average of 48 percent for women and 28 percent for men (FDRE CSA 2016). All these low performances signal the need for more investment in pastoral education.

Recent efforts in health care have focused on expansion of health infrastructure, capacity building, and maternal and child health care. Considerable effort has been made in child immunization coverage. However, according to the 2016 FDRE CSA DHS, coverage of all basic vaccination is lowest in pastoral areas. The lowest vaccination coverage for children ages 12–23 months is also found in the two major pastoral regions, Afar (15 percent coverage) and Ethio-Somali (22 percent).

As shown in table 1.3, pastoral areas have the lowest maternal and child health indicators. Institutional delivery is the lowest in Afar (15 percent), followed by Ethio-Somali (18 percent). Pastoral areas have the highest fertility rates (7.2 and 5.5 births per woman in Ethio-Somali and Afar, respectively) and both regions have the fewest users of any form of contraception.

The prevailing high fertility rates, lack of use of contraceptives, and declining mortality levels because of improved health services have contributed to high population growth rates in the rangelands. Except in SNNPR, the average population growth rate in the pastoral areas of the five regions is greater than 2.5 percent (table 1.4).

Growing population pressure on dwindling natural resources has become an important feature of Ethiopia's dryland areas (Coppock 1994; Desta 1999, 2006). Family planning and reproductive health interventions are clearly crucial for managing population growth in the face of dwindling resources.

Access to improved water supply and sanitation facilities in pastoralist areas is poor, ranging from 39.5 percent to 61 percent, and from 6.5 percent to

TABLE 1.3 Health and nutrition indicators

REGION	USE OF ANY TYPE OF CONTRACEPTIVE (%)	FERTILITY (NUMBER OF BIRTHS/ FEMALE)	NUMBER OF UNDER 5 MORTALITIES PER 1,000 LIVE BIRTHS	PERCENTAGE OF BIRTH AT HEALTH FACILITIES	PERCENTAGE OF CHILDREN AGES 12–23 MONTHS WHO RECEIVED ALL BASIC VACCINATIONS	PERCENTAGE OF CHILDREN UNDER AGE 5 WHO ARE STUNTED
Tigray	36.3	4.7	59	57	67	39
Afar	11.6	5.5	125	15	15	41
Amhara	47.3	3.7	85	27	46	46
Oromia	28.6	5.4	79	19	25	37
Ethio-Somali	1.5	7.2	94	18	22	27
BGMZ	28.5	4.4	98	26	57	43
SNNPR	39.9	4.4	88	26	47	39
Gambella	34.9	3.5	88	45	41	24
Harari	29.5	4.1	72	50	42	32
Addis Ababa	55.9	1.8	39	97	89	15
Dire Dawa	30.3	3.1	93	56	76	40

Source: Ethiopia FDRE CSA DHS 2016.
Note: SNNPR = Southern Nations, Nationalities, and Peoples' Region; BGMZ = Benishangul-Gumuz.

TABLE 1.4 Average annual population growth rates in pastoralist areas, 2014–17

REGION	AVERAGE ANNUAL GROWTH RATES (2014–17)
Afar	2.6
Somali	2.7
SNNPR	2.1
Oromia	2.5
Gambella	2.5

Source: Computed from FDRE CSA 2013/14.
Note: SNNPR = Southern Nations, Nationalities, and Peoples' Region.

21 percent, respectively. In other parts of the country, water and sanitation coverage range from 62 percent to 95 percent and 41 percent to 76 percent, respectively. Access to water and to sanitation in Afar, BGMZ, parts of Oromia, Somali, Gambella, and SNNPR Regions at both household and institutional level are well below the national averages.

Poverty among PAP communities

Over the last 20 years, the incidence of poverty in Ethiopia declined significantly. Table 1.5 indicates that the country's consumption poverty incidence dropped by almost 50 percent between 1996 and 2016. The pastoral areas of Afar (23.6 percent) and Ethio-Somali (22.4 percent) registered low rates of poverty head counts in 2016. Some zones in Somali experienced poverty levels as low as 9 percent (World Bank 2018). The success of poverty eradication efforts, however, differed significantly across regions. Considering 1996–2016, noticeable achievements have been recorded for Harari, SNNPR, Amhara, Tigray, and BGMZ Regions. The lowest rates of poverty reduction for the period were registered in the pastoralist regions of Afar and Ethio-Somali (about a 28 percent change), much

TABLE 1.5 Consumption poverty headcount index by region, 1996–2016

REGION	1996 %	2000 %	2005 %	2011 %	2016 %	PERCENTAGE CHANGE (2016/1996)
Tigray	50.6	61.4	48.5	31.8	27.0	–46.6
Afar	33.1	56.0	36.6	36.1	23.6	–28.7
Amhara	54.3	41.8	40.1	30.5	26.1	–51.9
Oromia	34.0	39.9	37.0	28.7	23.9	–29.7
Ethio-Somali	30.9	37.9	41.9	32.8	22.4	–27.5
BGMZ	46.8	54.0	44.5	28.9	26.5	–43.4
SNNPR	55.9	50.9	38.2	29.6	20.7	–63.0
Gambella	34.2	50.5	n.a.	32.0	23.0	–32.7
Harari	22.5	25.8	27.0	11.1	7.1	–68.4
Addis Ababa	30.2	36.1	32.5	28.1	16.8	–44.4
Dire Dawa	29.4	33.1	35.1	28.3	15.4	–47.6
Total	45.5	44.2	38.7	29.6	23.5	–48.4

Source: MoFED 2013 and NPC 2017.
Note: n.a. = not available; SNNPR = Southern Nations, Nationalities, and Peoples' Region; BGMZ = Benishangul-Gumuz.

lower than the national average reduction of 48.4 percent. Gambella Region is also among the relatively lower-performing regions. The lower poverty index in Afar and Ethio-Somali should be interpreted with caution, because the computation does not factor in calories supplied to households in the regions through the Productive Safety Net Program (PSNP) and food aid because of the 2015 and 2016 drought. In 2011, Afar and Ethio-Somali had the highest poverty index in Ethiopia.

The issue of asset poverty in pastoral areas has received special attention in recent studies. Asset poverty is particularly stressed in association with individual households' capacity for sustainable wealth accumulation in pastoral rangelands. The situation is especially relevant given dwindling per capita livestock asset holdings and declining wealth status due to recurrent exposure to asset losses caused by cyclical droughts and declining rangeland productivity, coupled with significant human population expansion. A study by Berhanu (2017) in Borana based on a panel subsample of pastoral households tracked from 2003–13 shows the prevailing extreme difficulty of escaping poverty in ASALs. According to this study, more than 90 percent of previously asset-poor households remained in poverty, with a further deterioration in their position, while a significant percentage of nonpoor stock owners slipped into poverty.

Table 1.6 shows results from the World Bank internal computation on the multidimensional poverty index (MPI) or index of deprivation for Ethiopia (World Bank 2018). The pastoralist regions of Afar and Ethio-Somali, according to this poverty measure, are home to most deprived or impoverished people in the country. The country's most impoverished region in 2016 (with MPI = 80.1 percent) was Ethio-Somali followed by Afar (MPI = 78.7 percent). The next highest numbers of deprived people are found in Oromia and Amhara Regions. The reduction in the MPI over the last 11 years was 14 percent for Afar and 15 percent for Ethio-Somali, both smaller than the national average reduction (24 percent).

TABLE 1.6 Trends in the multidimensional poverty index, by region (percent)

REGION	2005	2011	2016	% CHANGE (2005–16)
Tigray	84.2	69.9	56.5	–33
Afar	91.4	81	78.7	–14
Amhara	89.7	76.3	67.1	–25
Oromia	85.8	76.7	70.8	–17
Ethio-Somali	94.2	84.8	80.1	–15
BGMZ	88.7	76.7	64.5	–27
SNNPR	87.2	77.5	62.2	–29
Gambella	77.8	62.1	42	–46
Harari	49.5	42.1	39.4	–20
Addis Ababa	10.9	12.6	5.4	–50
Dire Dawa	51.7	42.8	39.2	–24
National	85	73.9	64.8	–24
Urban	29.4	26.5	18.6	–37
Rural	91.7	84.4	73.3	–20

Source: World Bank internal calculation 2018.
Note: SNNPR = Southern Nations, Nationalities, and Peoples' Region; BGMZ = Benishangul-Gumuz.

PAP COMMUNITIES' VULNERABILITY TO DROUGHT AND FOOD INSECURITY

Climate-related hazards such as droughts and floods have serious impacts on the three pillars of pastoralism and agropastoralism: natural resources, livestock, and people. These hazards adversely affect the natural capital base through rangeland degradation, encroachment of invasive species such as *Prosopis juliflora,* floods in Afar, and soil erosion and formation of big gullies, such as in Aware *woreda* in Ethio-Somali. Agropastoralists along the Awash River Basin positioned flood control as one of their top development priorities to save their harvest from the overflowing Awash River (focus group discussion [FGD] in Mille). Agropastoralists in Aware *woreda* are losing their fertile soil because of gullies that erode their farmlands (FGD in Ethio-Somali).

The loss of livestock assets and the decline in animal and crop production and productivity during drought times lead to household food insecurity, increased incidence of human diseases, and widespread destitution among PAP communities (key informants [KIs]) and FGDs in Afar, Ethio-Somali, SNNPR, and Oromia).

Vulnerability in PAP areas is often understood as exposure to climatic (drought) hazards, sensitivity of livelihood activities to climate change, and PAP communities' coping capacity. A community-level study in the Borana pastoral area indicates that 73 percent of surveyed communities rank drought as the main livelihood hazard; the remaining 27 percent rank it at second place. The same study among pastoral communities in Ethio-Somali Region shows that all interviewed communities (100 percent) rank drought as the most important hazard, followed by livestock and human diseases (Riché, Hachileka, and Awuor 2009). Increasing drought frequency (for example, from every 5–10 years to 2 years) has

been reported by survey respondents as a critical factor of livelihood vulnerability.

The 2011/12 drought that hit the HoA, said to be the worst in 60 years, devastated pastoral livelihoods in East Africa, including Somalia, Djibouti, Ethiopia, and Kenya. It caused severe food crisis, affecting the livelihoods of an estimated 13.4 million people. It entailed catastrophic livestock asset losses of 40–60 percent, substantial declines in milk yields, increased cereal prices, and significantly reduced purchasing power of pastoralist populations in the HoA (AU 2013; MoA 2012).

More recently, the 2015/16 El Niño-induced drought substantially affected PAP livelihoods and internally displaced a significant number of people in lowland areas of Ethiopia. For example, the drought hit nine zones in Ethio-Somali Region, decimating pastoral livestock herds and crops, reportedly leading to significant deterioration in the food security positions of many PAP households (field survey, Ethio-Somali). The GoE and development partners diverted substantial development resources to help people affected by the drought (KI from Pastoralist Areas Resilience Improvement through Market Extension [PRIME]).

The people most affected in the 2015/16 drought were PAPs in the northeastern rangelands of Afar and in northern Ethio-Somali, with pockets of severe drought in the southern part of Oromia around Borana, and in peripheral *woredas* in SNNPR. Of the 10.2 million people affected, 90 percent were from lowland areas. For example, the drought that hit the South Omo zone in SNNPR in Ethiopian financial year (EFY) 2009 wiped out more than 90 percent of the Bena-Tsemay *woreda's* livestock and crop field (field survey, SNNPR). The severity of the drought triggered "unseasonal" migration and displacement.

Table 1.7 indicates the number of people affected by drought by region in 2016 and 2017. The highest numbers of people needing relief assistance were in the pastoral regions of Afar and Somalia. Regions with substantial pastoral populations such as Oromia and SNNPR also had large drought-affected populations. These figures indicate the high vulnerability and low resilience of pastoral populations. PAPs' persistent vulnerability to drought has led to an increasing number of people in safety net programs and in receipt of relief aid.

TABLE 1.7 Number of drought-affected population needing assistance, 2016 and 2017

REGION	BASELINE POPULATION (MILLIONS) (FDRE CSA 2016)	DROUGHT-AFFECTED POPULATION (MILLIONS) 2016 (2017)	PERCENTAGE OF AFFECTED POPULATION 2016 (2017)
Afar	1.70	0.41 (0.41)	25 (25)
Amhara	20.70	2.20 (0.65)	11 (03)
BGMZ	1.00	0.079 (0.021)	8 (2)
Gambella	0.40	0.039 (0.034)	9 (9)
Harari and Dire Dawa	0.23	(0.014)	(6)
Oromia	34.50	3.70 (2.05)	11 (6)
SNNPR	18.70	0.67 (0.52)	4 (11)
Ethio-Somali	5.50	1.50 (1.70)	27 (31)
Tigray	5.10	1.20 (0.31)	24 (06)

Source: Computed based on UN OCHA and GoE 2016 and 2017.
Note: SNNPR = Southern Nations, Nationalities, and Peoples' Region; FDRE = Federal Democratic Republic of Ethiopia; BGMZ = Benishangul-Gumuz.

The figures affirm that the underlying causes of food insecurity and low resilience as well as deep-seated deprivation need to be addressed in a holistic and coherent manner to avoid the recurrent and very high cost of emergency humanitarian responses.

Despite the many improvements, vulnerabilities still seem to remain, and management of drought remains a challenge for pastoralists in Ethiopia. Hence, the current adaptive capacity of PAP communities in lowland areas need to be strengthened to enhance PAP livelihood sustainability in the lowlands of Ethiopia.

2 Lessons Learned from Past and Ongoing Interventions

PASTORAL DEVELOPMENT POLICY AND STRATEGY

Policy can hinder or promote development. Inappropriate policy could retard and even destroy development gains. Pastoralists in Ethiopia, like elsewhere in Africa, were historically sidelined from policy- and decision-making processes. They were often marginalized because of their absence from the centers of power, geographic remoteness, and the mode of their livelihood, perceived by many decision makers as outdated, a liability, and in need of replacement by "modern" livelihood systems (de Haan 2016; Little et al. 2010a). The result is chronic underinvestment in pastoralist communities and a consequent increase in their vulnerability.

Ethiopia's pastoral policy-making process in the 1960s was premised on two interrelated objectives. The first was to bring conflict-ridden, remote, and inaccessible areas into the mainstream of Ethiopian polity. The second focused on restructuring and modernizing the perceived "backward traditional system" to exploit livestock resources to feed urban consumers and to earn foreign exchange to contribute to national development (Coppock 1994; Desta 1999, 2006; Zere and Norton 1994).

More recent efforts attempt to align and harmonize the policy-making process with continental and regional initiatives, such as the African Union (AU) Policy Framework for Pastoralism in Africa and the Inter-Governmental Authority for Development (IGAD) Drought Disaster Resilience and Sustainability Initiative (IDDRSI). The former is the AU's flagship policy document on pastoral livelihoods; it aims to secure, protect, and improve the lives, livelihoods, and rights of African pastoralists (AU 2013) (see appendix B).

The post-1991 period represented a fairly significant departure given the federal administrative arrangement that established the country's regions. Doing so paved the way to a better understanding of the socioeconomic and ecological particularities of pastoralist regions in the process of national planning and policy development. The 1994 Ethiopian Constitution, the country's guiding legal framework, has some key provisions that particularly recognize the rights of pastoral groups (FDRE 1994). Specifically, Articles 40, 41, 43, and 44 guide the

formulation of economic, social, and development policies, strategies, and programs in pastoralist areas. For example:

- Article 40(5): "Ethiopian pastoralists have a right to free land for grazing and cultivation as well as a right not to be displaced from their own lands."
- Article 41(8): "Ethiopian pastoralists have the right to receive fair prices for their products, that would lead to improvement in their conditions of life and to enable them to obtain an equitable share of the national wealth commensurate with their contribution."

The issue of equity and other relevant stipulations particularly relevant to least-advantaged peoples and regions are provided in the economic objectives of the Constitution (FDRE 1994). For example:

- Article 89(2): "The Government has the obligation to ensure that all Ethiopians get equal opportunity to improve their economic situations and to promote equitable distribution of wealth among them."
- Article 89(4): "Nations, Nationalities and Peoples least advantaged in economic and social development shall receive special assistance."

Nevertheless, the reality does not reflect the constitutional provisions listed above. Pastoralists' communal land rights have been compromised by the annexation of their land for megaprojects, and their rights to fair prices for their livestock have been undermined by stringent restrictions on cross-border trade.

In addition to the 1994 Constitution, many high-level policy documents, specific national policy strategy documents, and flagship programs were formulated post 1991. The Government of Ethiopia's (GoE) level of emphasis and direction of focus with respect to pastoralism and pastoral and agropastoral (PAP) development can be discerned from core high-level policy documents such as the Poverty Reduction Strategy Paper (PRSP); the Sustainable Development and Poverty Reduction Program (SDPRP) (2002–05); the Plan for Accelerated and Sustained Development to End Poverty (PASDEP) (2006–10); GTP I and II (MoFED 2011); and the Livestock Master Plan (LMP) of 2015 (see appendix C). All existing government pastoral policies and strategies overemphasize pastoralist sedenterization (communes) as a strategic long-term policy direction for improvement of the welfare of populations inhabiting Ethiopia's arid and semi-arid lowlands (ASALs).

The Ministry of Federal and Pastoral Development Affairs (MoFPDA) is currently spearheading the formulation of a new Pastoral and AgroPastoral Development Policy and Strategic Framework, including commune formation. The draft policy is expected to ameliorate the limitations and shortcomings of past pastoral development strategies and will be in line with the fundamental rights to development of pastoralists as enshrined in Article 43 of the Constitution and the AU Policy Framework for Pastoralism in Africa.

Overall, the formulation of pastoral policies and strategies in Ethiopia was based on general misconceptions and inappropriately premised generalizations about the nature of pastoralism and the pastoral mode of life, including mobility. Pastoralists were stereotyped as irrational and backward. Given this, government interventions in pastoralist areas were primarily aimed at rectifying these characterizations.

The AU Policy Framework and IDDRSI advocate for pastoral mobility with regional harmonization to ensure cross-border access to resources, trade, and other services (including animal health services and peace building). These initiatives can inform the crafting of some of the components of the new pastoral development policy.

PAST AND CURRENT PAP DEVELOPMENT INTERVENTIONS (1960–2018)

The GoE and its development partners, including the World Bank, African Development Bank (AfDB), International Fund for Agricultural Development (IFAD), U.S. Agency for International Development (USAID), and other development institutions, have invested hundreds of millions of dollars to develop the country's lowland pastoral areas. Several programs and projects used different approaches to achieve defined objectives within a planned time horizon. The following sections review the performance of the major programs and projects implemented over the last 50 years to draw lessons from both their successes and failures. These lessons will inform the design of future PAP development initiatives in Ethiopia (see appendix D for details and appendix G for a summary of past and ongoing PAP projects).

Past and ongoing programs and projects can be grouped into three generations, based on their implementation period and their common objectives and development approaches.

- **First-generation programs/projects are those implemented before the 2000s.** These projects focused on livestock commercialization aimed at extracting surplus meat from PAP areas for urban consumption and export earnings. They were top-down in their development approaches, with no or little community participation and little engagement of customary institutions and traditional leaders.
- **Second-generation programs/projects are those implemented from about 2000 to 2010.** This is the period when advocacy for pastoralists' rights, issues of sustainable development, and access to improved public service delivery took center stage in PAP development.
- **Third-generation programs/projects are those implemented after 2010.** Their development objectives have a regional dimension and a key aspect is resilience to disaster, mainly drought.

First-generation interventions (1960–2000)

The RDP, conventionally called the Third Livestock Development Project (TLDP), was the first large-scale pastoral development project in Ethiopia financed jointly by the GoE, the African Development Fund, and the World Bank. The TLDP's design was based on experience and lessons learned from two previous smaller-scale pastoral development projects–the Arero Range Pilot Project (ARPP) and the Second Livestock Development Project (SLDP)—and studies financed and carried out (a) by the Ethiopian Livestock and Meat Board (LMB) in the Borana rangelands, and (b) by USAID in the east and northeast lowland areas, then thought to be rangelands (Coppock 1994; IDA 1973; Zere and Norton 1994).

The ARPP was a 10-year (1965–75) project implemented in a small area in Yabello *woreda* among the Borana pastoralists in southern Ethiopia. The ARPP aimed at improving pastoral livestock production and productivity and increasing animal offtake for regular supply of commercial livestock markets for urban consumers. Using the western ranching model, the project established paddocks and large watering facilities in an area of 2,000 km^2 to improve livestock meat productivity through controlled rotational grazing, which was not well suited to the traditional common property rights and mobility-based traditional

milk-meat system of the Borana pastoralists. The project fell short of meeting its desired objective of livestock commercialization. Instead, its newly constructed large water bodies attracted permanent settlements that resulted in severe localized overgrazing (Coppock 1994; Desta 2006; Zere and Norton 1994).

The SLDP, which ran from 1973 until 1981, focused on developing an integrated livestock market and stock route system in the country to improve livestock offtake by opening better market opportunities for producers, but most were destroyed during the Ethio-Somalia war of 1977–78. Furthermore, implementation was constrained because of continued civil unrest in the eastern and southern rangelands. When the project ended in 1981 only a few markets were operational (Coppock 1994; Desta 2006).

The major problems with the ARPP and the SLDP were their failure to consult pastoralists and other users along the value chain, and their focus on livestock commercialization at the expense of pastoralists' livelihoods. Neither project considered or assessed the level of awareness of pastoralists toward the market economy or their willingness and readiness for integration with the central market. The projects were top heavy and technology and infrastructure driven. The social fabric of herders and their traditional institutions and values were not considered in the projects' design and implementation (Desta 2006; Zere and Norton 1994).

The TLDP, a more comprehensive pastoral development project, was approved in 1975, for a 5-year project life but it closed after 8 years in 1984, after two extensions totaling 3 years. Security and limited institutional capacity to fully use the loan fund were some of the reasons justifying the two extensions.

The TLDP's objective was to rehabilitate and develop three major pastoral areas: the southern (Southern Rangeland Development Unit [SORDU]), eastern (Jijiga Rangeland Development Unit [JIRDU]), and northeastern (Northeast Rangeland Development Unit [NERDU]) rangelands of Ethiopia in Oromia, Ethio-Somali, and Afar Regions, respectively. This project's ambitious overall objective was to restructure and modernize the "low-output" traditional pastoral economy into a commercialized system of efficient, high-quality, high-quantity production systems through controlled grazing and a large offtake program of animal finishing/fattening in a system of ranches, feedlots, and smallholder fattening schemes. A key project strategy was the establishment of a system of controlled range use under which pastoralists would be encouraged to adjust stock numbers to the carrying capacity of the ranges. This was expected to reduce the recurring "boom and bust" cycle of herd buildup and overstocking, followed by heavy losses in drought years (World Bank 1991).

The TLDP's animal health and extension service was fairly successful in all subprojects. Herders' attitudes about bringing their animals for annual and biannual vaccinations changed, and their willingness to pay for treatment improved over time. A total of 2,158 trade roads and 1,762 access tracks were constructed by the TLDP that connected villages to other villages and markets. Nevertheless, the project's range-water development and management and the smallholder fattening scheme in the highlands of Sidamo, Bale, and Harerghe (using young bulls sourced from pastoral areas) both made limited progress; neither component generated quantifiable benefits (World Bank 1991).

The TLDP promoted a sectoral approach, emphasizing on provision of livestock services and the management of the rangeland, with very low focus on human capacity building and community participation. It was top-down with little or no community consultation; the result was inadequate participation by

pastoralists and their unwillingness to accept and apply the proposed intervention packages. The project had also suffered from the institutional instability at the higher level of its management (World Bank 1991).

One of the key lessons learned was the difficulty of implementing a project in an insecure environment (characterized by disruption of project implementation, misuse of project funds, and loss of development gains). The project's implementation was overwhelmed by internal and external political, military, and social events that destroyed development gains in NERDU and JIRDU, and retarded resource flows and activity implementation in SORDU.

The project's design was based on limited knowledge about how the pastoral system functions ecologically, economically, and socially. The lack of knowledge about pastoralists' attitudes and of the pathways to pursue and incentives needed to engage them in project implementations hindered the project's success.

The TLDP was succeeded by the World Bank-financed Fourth Livestock Development Project (FLDP), the SORDU pilot project, and the AfDB-supported South-East Rangelands Development Project (SERP).

The FLDP focused on supporting smallholders by improving health services and developing animal feed, mainly in the Ethiopian highland crop-livestock systems. It also had a small lowlands pastoral component, the Southern Rangelands Pilot Project, implemented through SORDU of the TLDP. The key objective of the Southern Rangelands Pilot Project was to build institutions to test innovative ways of introducing low-cost pastoral participation for project sustainability (World Bank 1996).

The SERP, on the other hand, covered a vast area of ASALs in Ethio-Somali Region, and applied some of the experiences from the SORDU pilot project and the TLDP in its design and implementation arrangements (ADF 2001). The key objective of the SERP was to raise the living standards and food security of PAP populations in the region by improving productivity of livestock and ensuring sustainability of natural resources (ADF 1989). An important implementation challenge of the Southern Rangelands Pilot Project was that it took a long time to reorganize the organizational setup of the project to reflect the decentralized government structure, which disrupted the timely implementation of project activities. This was worsened by internal unrest and security challenges across the whole project area. Although the FLDP-SORDU pilot project was disrupted in 1991 with the change of government and the subsequent instability in the area, the project seeded the notion of participation and cost sharing among the staff and pastoral community to enhance development in pastoral areas. For the SERP undertaking, besides institutional instability, the big challenge was the country's political instability and the insecurity that prevailed in Ethio-Somali Region and neighboring Somalia. These, among other things, hindered staff mobility and timely implementation of the project activities and efficient utilization of project resources (ADF 2001). All the same, the SERP appears to have pioneered the introduction of a participatory cost-sharing, bottom-up approach to implementing a large-scale pastoral development initiative.

Second-generation interventions (advocacy and service delivery) (2000–10)

The design features of the first-generation projects significantly lacked (a) core attention to pastoralists' rights, empowerment, ownership, and political representation; (b) recognition of pastoral resource management and

customary institutions; and (c) governance mechanisms or provision of social and economic services. In contrast, the interventions of the 2000s were essentially influenced by the emergence of nongovernmental organizations (NGOs) and civic societies advocating for pastoralists' empowerment, participation in their own development, and their rights for improved access to education, health, and other social services. The Pastoralist Forum Ethiopia (PFE), one of the civic societies in Ethiopia, has played an advocacy role since its establishment in 2003. The U.K. Department for International Development (DFID)-funded Pastoral Communication Initiative (PCI) (2005–08) was another important scheme that mainly focused on advocacy of pastoralist issues, policy promotion, and enhancement of voice and representation. The PCI worked with regional and federal-level authorities and was instrumental in the establishment of the Pastoral Affairs Standing Committee (PASC) in the House of Peoples Representatives and pastoralist councils in the regions (UN OCHA Pastoralist Communication Initiative 2007).

Among the second-generation interventions, the Pastoral Community Development Project (PCDP) is perhaps the most important. This multiphase World Bank- and IFAD-supported intervention was implemented in three phases. Its higher-order objective is to improve the livelihoods of PAPs living in the ASALs of Ethio-Somali, Afar, Oromia, and Southern Nations, Nationalities, and Peoples' Region (SNNPR) Regions on a sustainable basis while reducing their vulnerability to cyclic climatic shocks (World Bank 2016). The three phases of the program were sequenced so that each one would build on the success of its predecessor. The PCDP applies a holistic development model, with a focus on the social dimension of development. The program uses a community demand-driven (CDD) development approach, with a strong capacity-building investment component for communities and their institutions and local-level government agencies. The project's core activities, particularly the Community Investment Fund (CIF) subprojects, are implemented through community-based institutions with technical assistance (TA) from project teams. PCDP I and II introduced models for participatory local development within a limited area and expanded target communities' access to basic social and economic services. Hence, PCDP III broadened this to access and utilization of community projects to have an impact on income, nutrition, education, and livelihoods of PAP communities (World Bank 2009, 2016).

The PCDP's CDD development approach is believed to have worked well and increased communities' authority and ownership of subprojects. However, this approach is not a cure-all and should be complemented with research, science, and an expert-informed development approach for large, intercommunity, and complex projects with regional dimension. Nevertheless, the CDD approach remains relevant even in complex projects to engage communities' input, wisdom, and knowledge and to secure their custodianship. The program created a wider sphere of demand for education and health services. The primary schools and health posts necessitated the development of secondary schools and health clinics and centers. As to the challenges, the PCDP did not address well the livelihood dimension (livestock husbandry and health, rangeland development and management, other natural resources management [NRM], agropastoral activities, and value chains). Moreover, the PCDP's CIF subprojects are modest in size and too sparsely distributed over a large area. This is particularly true for water points, as most are small in volume and widely distributed over a vast area to meet demand. FGDs and KI interviews identified the increase in frequency of

drought and absence of adequate focus on Pastoral Risk Management (PRM) in PCDP III as a challenge. Poor coordination between projects and programs has been a handicap, despite the forums and platforms established at different levels, including Steering Committees.

Third-generation interventions (livelihoods and drought resilience) (2011–present)

The intensity and regional dimension of recurring droughts in the IGAD region triggered the search for a regionwide response to enhance and strengthen the resilience of pastoralist communities' livelihoods. In September 2011, the Heads of States of IGAD pledged to end drought emergencies and mandated IGAD to coordinate regional interventions to build drought resilience in the Horn of Africa (HoA). IGAD member states with the support of development partners subsequently developed the IDDRSI and its "implementation arm" (the Regional Programming Paper[RPP]), together with seven Country Programming Papers (CPPs), including that of Ethiopia. Within the IDDRSI framework, the overarching objective of Ethiopia's CPP is to improve food and nutrition security and enhance resilience to external shocks with focus on the ASAL communities in Ethiopia (MoA 2012). Two ongoing projects are currently being implemented to realize the objectives of the CPP: the World Bank-financed Regional Pastoral Livelihoods Resilience Project (RPLRP) and the AfDB-financed Drought Resilience and Sustainable Livelihoods Project (DRSLP) (see appendix D for details; AfDB/ADF 2014; IDDRSI 2015).

The RPLRP's overarching development objective is to enhance the livelihood resilience of PAP communities in cross-border and drought-prone areas of IGAD member states and improve the capacity of their governments to respond promptly and effectively to drought emergencies. The DRSLP, with comparative program components, has a similar long-term development objective of improving and building the livelihoods and resilience of pastoralist communities in ASALs so as to significantly enhance their capacities to withstand the adverse effects of recurring disasters. The RPLRP and DRSLP employ a holistic and comprehensive programming approach to effectively enhance resilience, combat chronic food and nutrition insecurity, and transform the pastoralist sector into a more viable, integrated, and resilient economic system.

To date, encouraging progress has been made by the RPLRP in NRM as the achievements of some planned activities have had considerable impact and strategic importance in responding to drought emergencies and building resilience. Two important cross-border activities that have been completed and have positive impact are "Mapping of Market Access" and "Trade and Transboundary Animal Diseases (TAD) Vaccination." The DRSLP's recently completed midterm review (MTR) reported that its most notable achievement is the rehabilitation of existing water infrastructure. At the same time, one major challenge of implementing the RPLRP and DRSLP is coordination between these regional projects and other similar GoE projects such as the PCDP or donor-supported projects like Pastoralist Areas Resilience Improvement through Market Extension (PRIME). Thus, the benefits of synergetic relationships to achieve better results and impacts seem getting lost. The Ministry of Agriculture and Livestock Resources (MoALR) is responsible for overall coordination, supervision, and implementation of the RPLRP and DRSLP, while regional- and *woreda*-level activities are implemented by either regional or *woreda* technical bureaus or agencies.

It can safely be argued that the RPLRP is well-designed and its components are well articulated to address issues of PAP development and to enhance resilience. The DRSLP also has good design features and both projects appear to fill the gaps associated with first- and second-generation projects. The projects' components and activities balanced well both the livelihood and resilience aspects of communities, developing and protecting their resources as well as meeting their basic needs and services. The cross-border dimensions are also well-articulated (cross-border trade, managing and mitigating conflict, disaster risk management [DRM], and combatting TADs.) The strategic investments in market centers and water points are meant to bring harmony among the borderland communities, minimizing conflicts through mutual sharing of vital resources such as grazing and water. Their comprehensive and holistic approach and cross-border dimensions should be incorporated in future PAP development and resilience projects.

Nonetheless, activities planned under each component are unlikely to be implemented in time because of serious capacity limitations and inadequate institutional arrangements. The regional nature of the projects requires implementation of activities in cross-border, peripheral, and remote *woredas*, where administrative and institutional capacities are extremely weak and infrastructure very poor. Implementation of such complex and varied activities requires staff of high technical caliber and robust implementation capacity, neither of which exist at present. Their area coverage is very small (implemented in few *woredas* compared to the overall pastoral areas) and they do not cover social and economic services (education, human health, and water). The next project design should fill these gaps as well as learn from the design features of the RPLRP and DRSLP in addressing the shortcomings of the first- and second-generation projects.

PRIME is another third-generation intervention in pastoral areas of Ethiopia. This USAID-funded, US$70 million, 5-year project was designed to contribute to the "Feed the Future" strategic objective of "Linking the vulnerable to markets." The overarching project goal is to reduce hunger and poverty in selected pastoralist areas of Oromia, Somali, and Afar Regions, while its project-level objective is "to increase household incomes and enhance resilience to climate change through market linkages." PRIME demonstrated that with careful and judicious use of resources such as grants and loans, it is possible to facilitate and support value chain actors to improve their productivity and market access. Nevertheless, implementation progress has been curtailed by the severity of the recurrent drought and because of insecurity in its project areas. Recent conflicts in Oromia and SNNPR have also negatively affected the progress of implementation.

The Enhanced Livelihoods in the Mandera Triangle (ELMT)/Enhanced Livelihoods in Southern Ethiopia (ELSE) is another USAID-funded program in the ASALs, under the Regional Enhanced Livelihoods in Pastoral Areas (RELPA) (Nicholson and Desta 2010). The ELMT/ELSE was one of the few regional pastoral livelihood projects implemented by a consortium of NGOs led by Cooperative for Assistance and Relief Everywhere (CARE) International in southern Ethiopia, northern Kenya, and western Somalia between August 2007 and September 2010. Its objective was to support the effective transition from emergency-relief dependency to livelihood resilience and promote long-term economic development in dryland and pastoral areas of the region. With regard to PRM and early response to crisis/climate change, the program appears to have achieved better preparedness, coordination, sharing of information, and response in cross-border regions. However, the ELMT's performance and achievements were compromised by a cumbersome and complex institutional

arrangement; the Regional Coordination Unit in Nairobi was weakly linked with the field offices in Ethiopia and Somalia. Insecurity posed challenges to implementing the cross-border subprojects in areas bordering Somalia.

The European Union (EU) Resilience Building Program in Ethiopia (RESET) is an innovative approach that aims to build the resilience and expand the coping capacities of the most vulnerable populations in specifically selected areas (clusters of *woredas*) that are highly drought-prone and food-insecure (Weldesilassie et al. 2016). This multifaceted program transcends sectoral boundaries to create bridges and synergies between humanitarian and development partners for tackling chronic humanitarian and long-term needs and recurrent food insecurity.

Strengthening Drought Resilience in Afar Region (SDRA), a project supported by the Italian Development Cooperation with a total budget of €13.4 million in four *woredas* of Afar Region, and a similar project titled Strengthening Drought Resilience of Pastoralists (SDRP) in Afar and Somali Region, with a budget of €12 million financed by Kreditanstalt für Wiederaufbau (KfW) development bank of Germany, are two other projects working on livelihood resilience (DRSLP 2015; IDDRSI 2015).

Commune development program

The GoE started the "Commune Development Program and Livelihood Strategy" in 2010, moving thousands of people out of rural villages to other areas, usually within the same region. The GoE claims that the program is designed to bring scattered rural populations closer to schools, health clinics, roads, and other public services and improve their livelihoods and enhance equitable growth. Although development partners remain wary, the GoE asserts that relocation is driven by the core principles of voluntarism, beneficiaries' direct participation, clean of coercion, and ownership (MoFPDA 2015).

The program is water-centric, crop-focused, and aimed at sedenterization. Hence, according to the directives used to establish commune centers, before moving people, a comprehensive assessment of the potential settlement area is made of the availability of sufficient surface water and/or groundwater and suitable land to be allocated to commune members. Facilities to provide essential social, economic, and infrastructure services, such as education, health, and water, sanitation, and hygiene (WASH), are expected to be in place so that commune members can transition smoothly to their new environment. The program is supposed to enhance livelihood diversification and should be linked to and integrated with local, regional, and national development programs, including irrigation-based agricultural investments (MoFPDA 2016).

The program is implemented in four regions: Benishangul-Gumuz (BGMZ), Gambella, Afar, and Ethio-Somali. So far about 360,000 households have been settled in the different commune centers in the four regions (KI from the MoFPDA). The formation of commune centers in BGMZ was completed with the relocation of 81,303 households into 239 commune centers. However, provision of essential socioeconomic and infrastructure services in the centers is limited. Most centers are not accessible during the wet season due to lack of all-weather roads. No electrical power has been extended to the centers (KI in Assosa). The supply of clean water for human and livestock consumption is inadequate. The assessment team observed a similar situation in one commune center visited in Gambella, in which social and economic services are poor. Its education centers and facilities are poorly organized and dilapidated. Water for people and livestock is inadequate.

According to a KI from the MoFPDA, since 2010, thousands of Afar residents have been relocated to commune centers. In 2017/18, 24,500 households relocated into 154 commune centers. It is too early to tell if these newly established communes will be sustained. It is not uncommon to see commune members abandoning the centers after a few years of establishment due to lack of water and forage for their livestock and absence or inadequacy of the promised basic services (KI in Semera).

In Ethio-Somali Region, regional officials reiterated that the program had mixed outcomes. In some areas it helped people who were forced to move out of the pastoral system by providing alternative livelihoods; it also provided a source of feed and crop residues to pastoralists during dry seasons and drought periods. Producers in some commune centers are supplying vegetables in the region and beyond, including cross-border. On the other hand, the communes enhanced localized degradation because of overstocking and year-round grazing in the same locations.

It has been reported by KIs that in some cases, the communes blocked access to water for mobile herders. The program takes away the key grazing and water resources that are critical to enable use of the vast rangeland by mobile pastoralism. During times of drought, mobile pastoralists can trespass commune farmlands, potentially damaging crops, which can trigger disputes if not outright conflict. The issue of competition between communes and mobile pastoralists will continue to be a challenge unless the commune development policy and strategy take pastoralism and mobility at its center to create complementarity between the two.

Megaprojects

Megaprojects such as state-owned and private projects, power dams, and sugar and cotton plantations compete for pastoral land and water resources and impact pastoral livelihoods in Ethiopia. Megaprojects are currently expanding in pastoral areas of Afar, Gambella, BGMZ, and SNNPR (Omo River Basin) Regions. For example, out of 360,000 sugar plantation projects undertaken by the Sugar Corporation, 245,000 are within pastoral areas; the largest is at Kuraz (SNNPR), with an area of 175,000 hectares (Kefale and Gebresenbet 2016).

In a study that compared the economic returns derived from pastoralism versus large-scale irrigated cotton or sugar plantations in the Awash Valley of northeastern Ethiopia, pastoral livestock husbandry was found to be more profitable than cotton farming: "While private cotton cultivation may occasionally achieve rough productive parity with pastoralism, state cotton farms lost money for decades and their mismanagement has led to soil salinization, water logging, lost soil productivity and weed infestation" (Behnke 2013). Sugarcane cultivation presents much the same picture. On the favorably situated plantation examined in this study, cane farming equaled the returns to livestock in 1 of 4 years, and fell short in 3 of 4 years. Cotton ginning and sugar refining are more profitable than simply farming cotton or sugarcane, but the integration of farming and processing is also more risky, offering higher profits in good years at the cost of greater losses in bad years.

Megaprojects could work better if PAPs were thoroughly consulted by policy makers and investors. Local communities, customary leaders, and local authorities should be consulted and their customary land and water rights and traditional knowledge integrated in environmentally sound

projects to avoid long-term damage to the environment and natural resources. Mobile livestock husbandry should not be obstructed by taking out key grazing and watering resources for megaprojects. A synergistic model for equitable growth should be applied, whereby large-scale investments or megaprojects could enhance establishment and development of small-scale projects, businesses, value chain development, and consumer markets for pastoral livestock and livestock products. Ideally, megaprojects could generate positive economic returns to pastoralist communities, be a source of livestock feed, provide employment opportunities for youth, revitalize infrastructure, and integrate pastoralist economic systems into agrocommercial projects through a genuinely negotiated process. Sustainable pathways should involve locally acceptable ventures of equitable development suitable for particular areas, including land use plans that combine the needs of both large-scale projects and pastoral and small-scale projects to mutually complement and support each other.

Alienating pastoralists from their communal land and impeding their mobile livelihood is not only counterproductive but may give rise to violent conflict. A framework for collaboration and win-win outcomes could be of great importance when it comes to planning and realizing equitable development objectives.

CHAPTER SYNTHESIS AND LESSONS LEARNED

Synthesis

In Ethiopia, the debate on pastoralism that started 30 years ago with the GoE's Rural Development Policy is still ongoing—the main issue is "mobility" versus sedenterization in the form of "communes" or settlements (Anbessa 2015). The GoE maintains sedenterization as its long-term strategy, while opponents argue for pastoralists' mobility. The new draft policy currently in the making emphasizes commune development with some consideration given to mobile pastoralism. It also recognizes pastoralism as a way of life. This is a positive policy trend and a good step forward for pastoralists. Hopefully, the final policy will reflect this pro-pastoralism trend, serving to (a) empower and revitalize pastoral people, (b) promote equitable access to resources, (c) provide adequate facilities and services, and (d) guarantee pastoral land ownership and a sustainable land use system.

The first-generation pastoral development interventions in Ethiopia were aimed at maximizing the economic benefits from the extensive livestock production system through increasing its productive potential using technologies, based on biological (range) sciences. The design feature of these interventions was influenced by conventional rangeland management principles rooted in the idea of carrying capacity and the western ranching concept (which involves paddocking and controlled grazing to limit stocking rates to increase productivity per unit of land or animal and stabilize the herd growth dynamics). This was a misconception of the functioning of the dryland livestock production environment, which depends on mobility (contrary to paddocking or controlled grazing) to optimally benefit from the highly spatial and temporal variability in pasture and water availability in a communal land tenure regime. The focus of these interventions was on livestock and natural resources development and less on

pastoral livelihood improvement and provision of social and economic services. Emphasis was made more on the management of endogenous factors (that is, the livestock population) than on managing exogenous climatic factors such as drought (which is the major factor for the loss of livestock assets and deterioration of pastoralists' livelihoods and production environment, exacerbating their vulnerability to shocks). The implementation approach of the first-generation interventions was heavily top-down, with limited regard for indigenous knowledge and customary institutions.

In the 1990s, new thinking in range ecology resulted in a major departure from the previous carrying capacity-driven livestock and natural resource-based model. The shift was to a moisture-driven livelihood and rights-based development model, and from a technology-driven approach to a more social-based approach. This led to the emergence of the second-generation pastoral development projects. These projects advocated for pastoral communities' participation in their development, recognition of the traditional pastoral resource management system as viable and appropriate, and acceptance of drought as an inherent characteristic of the dryland pastoral system. These projects also recognized the need for investment to manage the system, to build human capacity, and to empower pastoral communities.

Consequently, the role of range science and range management in pastoral development started to be overshadowed by the social aspect of development. Champions of a rights-based livelihood development approach, mainly NGOs working in pastoral areas, took root and funding for pastoral development began to shift to community development and service provision, pastoral rights, voice, advocacy, and political mobilization, with a major drought cycle management (DCM) component (Little et al. 2010a).

The second-generation interventions in Ethiopia promoted advocacy and pastoral empowerment (PFE, PCI) and the building of social and economic infrastructure—schools, health posts, water points and animal health posts, income-generating activities (IGAs) and Rural Saving and Credit Cooperatives (RUSACCOs), and implementation of PRM interventions.

The 2011/12 drought exposed the fragility and vulnerability of pastoral systems in the HoA, and led to the emergence of the third-generation interventions. Since the 2011 drought emergency summit held by IGAD countries, the most recent trend in pastoral development promotes the concept of building resilience and the importance of a regional approach (acting nationally but thinking regionally). Such an approach calls for simultaneous engagement of countries in the region in efforts that promote, facilitate, and support drought resilience and sustainability.

The ongoing third-generation interventions incorporate (a) the first generation's focus on livestock and natural resources, including commercialization (working along the value chain) and (b) the second generation's aspects of community participation and cost sharing. However, the third-generation interventions put limited consideration on provision of public basic services, such as education and human health.

Projects such as PRIME, in which investments are channeled through NGOs and civic societies, are useful in innovating to enhance development and build resilience but are too small to have wide impact or to bring about profound change.

The GoE commune program is implemented around riverine areas and limits pastoralists' access to key grazing and watering resources, upon which the

functioning of the pastoral production system depends. Megaprojects likewise constrain mobility and access to key grazing resources, which could have a detrimental effect on pastoral livelihoods.

Key lessons learned

The review of the above programs/projects illustrates that no clear vision or appropriate and consistent policy directed pastoral development in the past. A clearly defined pastoral development policy direction could have rallied and brought together communities of researchers, practitioners, development partners, private investors, and policy makers to work jointly toward a common goal.

It has been noted that the complexity of the pastoral livelihood system and its unique challenges requires a systemwide, holistic development approach. The reviewed programs and projects did not adequately use such an integrated system approach. Rather, they followed a sectoral approach, focusing on a few selected sectors implemented in limited geographic areas.

Currently, pastoral interventions are primarily implemented under the auspices of two major ministries, the MoA (previously known as MoALR) and Ministry of Peace, MoP (used to be called MFPDA). NGOs working in pastoral areas use a different institutional arrangement based on their regional presence. Yet achieving development results in pastoral areas requires a capable and stable focal institution with adequate resources and a long-term commitment to coordinate, direct, and implement programs. With the exception of the PCDP (which has registered commendable results in the development of social and economic infrastructure), all past and ongoing projects had too-short a lifetime and too-small investments to bring about significant change in Ethiopia's PAP system. Lessons in terms of coordination of the implementation and monitoring and evaluation (M&E) of pastoral development programs can be learned from the experiences of Kenya and Uganda (appendix E). Kenyans established a National Disaster Management Authority (NDMA) (Kenya 2016a) to provide overall leadership and coordination of drought management in the country. A monitoring, evaluation, and reporting system was developed in line with the National Integrated Monitoring and Evaluation System (NIMES) (Kenya 2016b).

Most past pastoral development projects were top-down and implemented under situations where security and political instability are a big challenge to mobilizing resources and maintaining project development gains. The PCDP enjoyed a relatively stable and secure environment and good community participation, contributing to its successful provision of basic public service infrastructure and community ownership. Peace, political stability, security, community participation, and engagement of customary institutions are clearly essential elements for sustainable pastoral development.

Results monitoring and evaluation (RM&E) and proper documentation of best practices and key lessons are key to generate information to inform management, enhance efficiency and effectiveness of programs, and effectively assess and document key results of interventions. All of these can help draw lessons for the adjustment of ongoing as well as the design of future interventions. The lack of effective and standardized results M&E systems to capture and measure the impacts of programs and projects now limits the lessons that can be drawn from past and ongoing PAP development interventions. One of the key lessons learned from past and ongoing interventions is the absence of a comprehensive RM&E system with clearly defined indicators to measure the outcome and impact-level

results of interventions, beyond activities and outputs. The TLDP outsourced its M&E component to the International Livestock Center for Africa (ILCA), which produced a wealth of potentially valuable data. Unfortunately, the ILCA reports provide neither basic M&E data nor an appraisal of effectiveness and impact of project interventions (World Bank 1991). Similarly, the SORDU pilot project established a M&E Unit, but it was discontinued when the Technical Assistant (TA) personnel left. The data collected were also not used to evaluate the project's impact (World Bank 1996). The SERP did not establish a M&E mechanism by which its impact on the incomes and livelihood of pastoral families could be measured (ADF 2001). The PCDP's M&E system is better organized than that of previous projects. Its M&E Unit is under the project management; it tracks project progress using participatory M&E and learning and community-level self-monitoring systems. Its system can be strengthened to measure project effects and impacts, rather than focusing heavily on activity monitoring and assessing planned versus actual performance of a set of activities and output targets. It is essential to have a standardized M&E system with well-defined indicators to actually measure outcome and impact-level results that are properly aligned with the specific development objectives of proposed interventions in a pastoral context.

Despite the modest livelihood improvements achieved because of past and ongoing interventions, the desired transformation toward resilient and sustainable pastoral livelihoods has not yet been realized. The pastoral system remains vulnerable to the recurrent drought spells that frequently affect the HoA, including Ethiopia. Climate change has increased the frequency of drought and consequently increased livestock wealth losses. The recent successive droughts of 2011–13 and 2016–17 affected pastoralists in Afar, Ethio-Somali, SNNPR, and Oromia Regions, exposing the deep vulnerability of pastoral livelihoods. The magnitude of the crisis made it clear that the pastoral system has become so susceptible to drought shocks. The situation currently unfolding does not necessarily reflect badly on past and ongoing interventions, as the counterfactual situation without them would likely be even worse.

Over the last 50 years, at least US$928 million has been invested in the development of Ethiopia's pastoral areas. The largest single project investment is that of the PCDP (US$452 million). Table A4.3 in appendix B details the investments made by some of the projects described in this section. This is by no means an exhaustive estimate of the cost of all projects implemented in pastoral development in Ethiopia over the last 50 years.

3 Theory of Change for Sustainable Pastoral Development

CURRENT THINKING ON PASTORAL LIVELIHOODS RESILIENCE AND TRANSFORMATION

After five decades of investment in the pastoral and agropastoral (PAP) areas of Ethiopia, the pastoral system is still defined by high vulnerability to shocks and unsustainable livelihoods. Emergency support and food aid have become necessary to mitigate the effects of recurrent drought in PAP communities. The capacity of the system to provide sustainable pastoral livelihoods has been questioned by some, as the Tropical Livestock Units (TLU) per person required to maintain a viable pastoral livelihood (that is, 4.5 TLU per person) has become difficult to attain and sustain (Sandford 2013). Others assert that traditional pastoralism is evolving into a more complex system represented by heterogeneous groups of people pursuing different livelihoods options, but still linked to livestock mobility.

Given the increased destitution and the rising number of stockless, Sandford (2013) argues for expansion of what he calls indigenous pastoral, small-scale irrigation, and diversification to improve the livelihoods of people in the rangelands. He argues that the decline in pastoralists' welfare cannot be stopped by focusing only or even principally on livestock-based livelihoods. Instead, diversification into other production options (including small-scale irrigation)—creating alternative livelihood pathways—is essential. He further argues that while many examples exist of failed state-led, donor-funded, large irrigation schemes in the East African drylands, privately led, community-based, and profit-oriented smaller-scale irrigation activity has spread across the region, driven by an indigenous entrepreneurial class. Examples are found along the Wabe Shebelle River in Ethiopia's Somali Region and in the Mandera Triangle. The extent of irrigable land in Ethiopia's pastoral areas is about 1,673,000 ha, of which 28 percent are regularly irrigated (Sandford 2013). Because the scale of the need for pastoralists to diversify is immense, much more land can be irrigated and many (ex-pastoralists) can be involved (Sandford 2013).

Based on work done among Borana pastoralists, many studies have shown that the system is experiencing increasing instability (boom and bust), poverty,

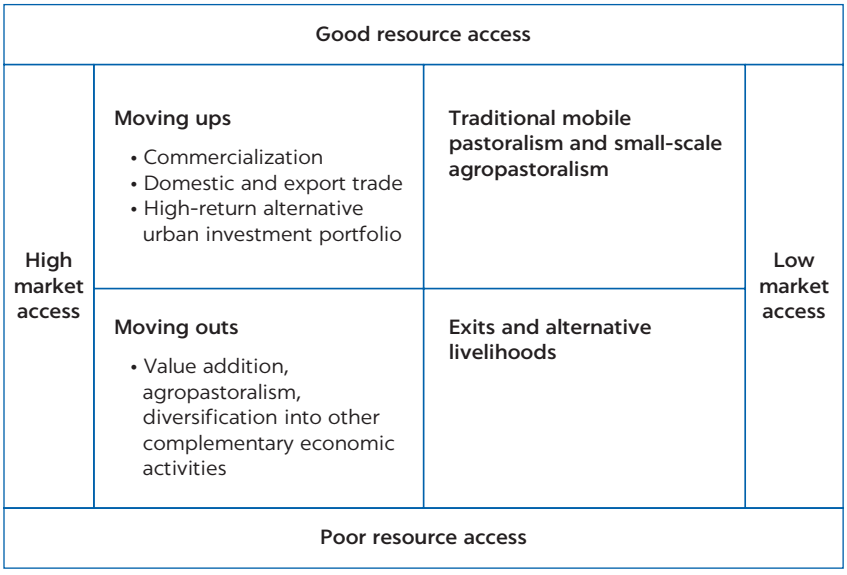
and food insecurity as a result of increasing human population, increasing drought frequency, and decreasing access to grazing lands, making the traditional livestock production system increasingly risky (Coppock 1994; Coppock et al. 2011; Desta 1999; Desta and Coppock 2002, 2004). The most common form of activity diversification away from traditional livestock production among the Borana involved maize cultivation. These studies found that 67 percent of 311 households were routinely cultivating maize in 1997, a reportedly very rare practice in the southern Ethiopian rangelands until the late 1980s (Coppock 1994). As the Borana pastoral system is under pressure, Desta and Coppock (2004) suggested that primary emphasis could be onhow to mitigate the pressure of a growing human population that depends on shrinking grazing resources. These researchers believe that more development answers lie in the risk management sphere: finding appropriate means for economic diversification (Sandford 2013); improving access to education (Little 2016) and financial services; enhancing livestock marketing opportunities (Catley, Lind, and Scoones 2013); facilitating urban-rural linkages; restoring key ecological resources lost from degradation or human encroachment; and investing in human capacity development (Coppock et al. 2011).

Some claim that pastoralism does not represent a homogenous form of livelihood (Catley 2017; Catley, Lind, and Scoones 2013; Lind, Sabates-Wheeler, and Kohnstamm 2016; Little 2016; UN OCHA Pastoralist Communication Initiative 2007). All forms, however, are linked to mobile livestock production. Pastoralists can have more or fewer livestock, keep different livestock species, have different levels of engagement with markets including export trade, and have different levels of access to resources and opportunities for diversification. These different groups can pursue different livelihood strategies.

Figure 3.1 is a schematic representation of pastoralist pathways that might be followed by different people in different places. The four quadrants represent

FIGURE 3.1

Pastoralist livelihood pathways in East Africa



Sources: Adapted from Catley, Lind, and Scoones 2013; Lind, Sabates-Wheeler, and Kohnstamm 2016; UN OCHA Pastoralist Communication Initiative 2007.

four livelihood pathways that can be followed by pastoralists in East Africa depending on their access to resources and markets, which strongly determine livelihood strategies.

Areas and pastoralists with good access to natural resources and markets are the "moving ups" or "stepping ups" (Catley 2017; Lind, Sabates-Wheeler, and Sarah Kohnstamm 2016; Little 2016). These herders practice commercially oriented livestock keeping. This group of pastoralists becomes wealthy because they can accumulate, maintain, and commercialize livestock and livestock products and even sell in high-export zones, create private abattoirs and feedlots, and find lucrative business opportunities along the livestock value chain. Pastoralists moving up are particularly evident in the high-export zones such as Ethiopia's eastern lowlands, where cross-border trade is common and large (Catley and Aklilu 2013; Desta et al. 2011). This group benefits more from policy and technology investment interventions that enhance domestic, export, and cross-border trade.

Traditional pastoralism is the most followed livelihood pathway for people in areas with good access to rangeland and water sources, but who do not have good market access. This group of herders practices traditional forms of pastoralism based on high mobility, limited market engagement, herd build-up, reliance on social capital for reciprocities, and small-scale agropastoralism to complement household food and income requirements. This group needs support to improve its access to markets so that herders can step up or commercialize and diversify. This group risks sliding into being stockless from the frequent droughts that decimate livestock if herders do not get support to step up or diversify their asset portfolio.

Herders who do not have adequate numbers of livestock to support household food and income requirements could engage in diversified activities to generate income to fill the household food and income gaps. This group of pastoralists is described as the "moving outs" or "stepping outs" (Lind Sabates-Wheeler, and Sarah Kohnstamm 2016; Little 2016). These households use good market access to pursue livestock- and nonlivestock-related economic activities (including cultivation) to generate additional income. The group can benefit from interventions that facilitate opening up of income-generating activities (IGAs) that help positive diversification and entrepreneurship.

When a pastoralist's herd is no longer viable due to lack of good resource access, the household exits pastoralism, at which point household members seek activities not directly linked to herding. This group of people often engages in urban-based small business, low-wage employment, collection and sale of natural resources such as firewood and charcoal, and mining. This group of herders should be supported with investment interventions that facilitate positive diversification and their safe and smooth landing into the new livelihood environment.

The moving ups are few in number but they are politically, socially, and economically powerful. The "exits," those who are stockless, are large in number (Catley 2017; Desta et al. 2008; Sandford 2013). The number of stockless and those unable to meet the threshold level of livestock units (that is, 4.5 TLU per person), to make a living from livestock only, is increasing. Work done in Afar and Ethio-Somali Regions in 2015 indicated that 80 percent and 90 percent of households, respectively, lacked a minimum herd (Catley 2017).

Depending on the nature of development and policy interventions that influence the two axes of the quadrant in figure 3.1 (that is, access to resources

and markets), different potential future pathways could emerge. These range from the commercialization, accumulation, and export trade of the few wealthy pastoralists to the exit and destitution of the large majority. This is a "pessimistic" view as described by Catley, Lind, and Scoones (2013), while the "optimistic" view would be "pathways emerging across all the quadrants of the diagram, with the growth of a broad-based commercialization, rooted in many forms of livestock production, linked to expanding options for local enterprises and livelihood diversification."

Given the complexity of pastoralism, the direction of the livelihood movement across the four livelihood pathways is similarly complex. The movement of the pathways is dynamic and multidirectional (not static and one directional) and in constant motion across the quadrants. This is due not only to the interaction of access to resources and markets but also to the interaction of other endogenous factors (such as demography) and exogenous factors (such as climate change, the nature and volume of development investment, and policy interventions).

Overall, the scholars cited above share the view that the pastoral system in the Horn of Africa (HoA) is under pressure and that things must be done differently (that is, not "business as usual") for the system to provide sustainable livelihoods to the people who depend on it. They are in agreement that access to key resources and markets, pastoralist-friendly policy and governance frameworks, an economic environment that supports diversification and the shift to alternative livelihoods, and human and institutional capacity building are critical elements that will determine the viability of pastoralism, now and in the future.

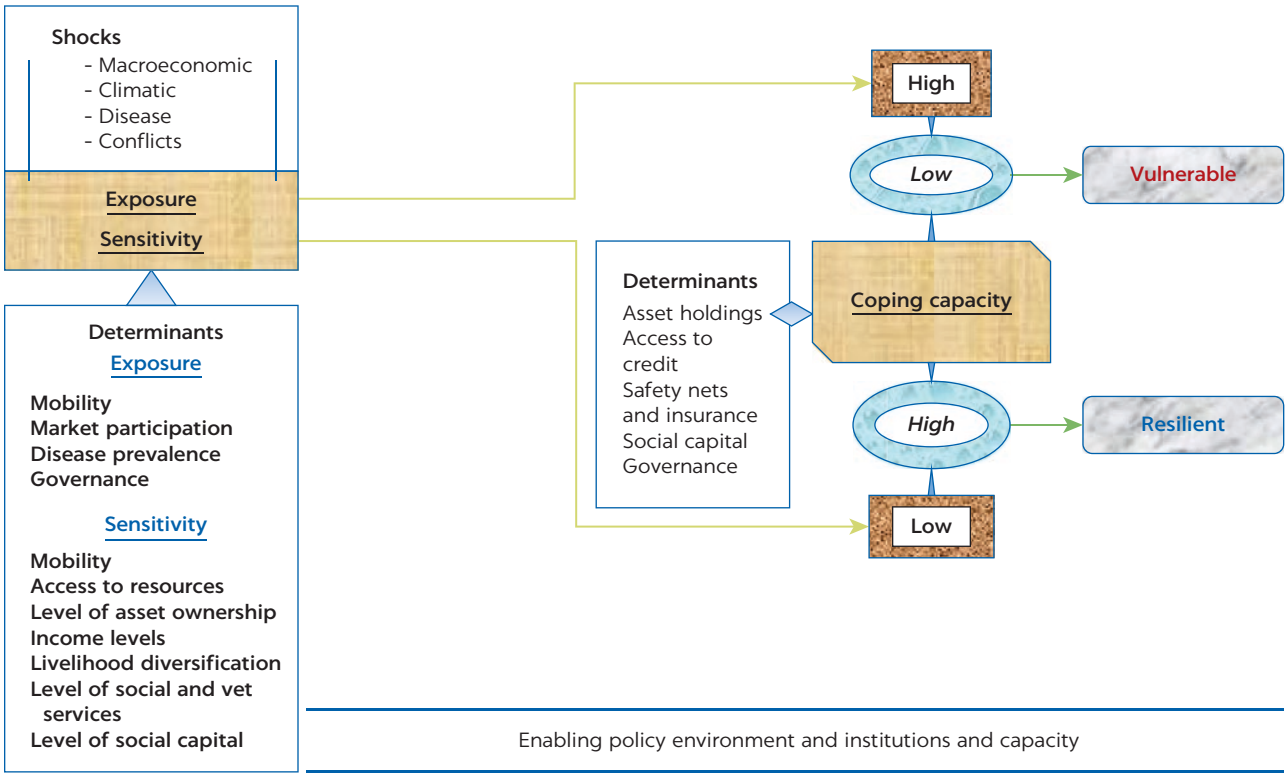
The "moving ups" can specialize more in livestock production and marketing; diversify to urban economic portfolios such as tourism, hotel, transportation, and real estate; and increase their involvement in the high end of the livestock value chain. "Traditional pastoralists" can move toward commercialization or exit. Those people who have already exited the system can move from negative diversification to positive diversification or from low-wage jobs to medium-wage jobs; alternatively, their situation can worsen, leaving them destitute. Those who engage in value addition ("moving outs") can become entrepreneurs, investors in the urban economy, or major players in the high end of the livestock value chain; alternatively, the reverse could happen, pushing them into destitution. All outcome scenarios depend on additional, appropriate development investment or inputs and favorable enabling policy interventions.

Given the high vulnerability of pastoralists to drought (which is increasing in frequency and intensity), Catley, Lind, and Scoones (2013) "optimistic" view could be sustained if built on a resilience framework that underlines the capacity to adapt to, absorb, and anticipate shocks to reach a desirable status, not only to recover to the original status and retain the same basic functions or structures (Bahadur et al. 2015; Pain and Levine 2012).

It is often indicated that people's vulnerability/resilience is generally affected by three important factors: exposure, sensitivity, and coping capacity to shocks (Cervigni and Morris 2016; de Haan 2016). Exposure refers to the frequency and degree to which households experience droughts and other shocks. Sensitivity is defined as the extent to which households are affected by these shocks when they occur. Coping capacity refers to households' ability to mitigate the impacts of livelihood shocks. Major shocks such as droughts, movements in general price levels, animal and human diseases, and violent conflicts are critical risk factors that affect the drivers (determinants) of vulnerability and resilience (figure 3.2).

FIGURE 3.2

Conceptual framework of resilience and vulnerability



Source: de Haan 2016.

Pastoral mobility is an important determinant of the degree of herders' exposure to natural disasters (such as droughts, floods, and diseases) and artificial shocks (such as conflicts). Pastoral households mostly resort to a fairly higher frequency and long-distance mobility to avoid the extreme impacts of these shocks. Market participation and the ability to proactively sell livestock regularly and when prices are favorable can help reduce exposure to price shocks. The sensitivity to shocks of livestock keepers in the rangeland depends on their asset base, diversity of their income sources, and animal health service coverage, both vaccination and treatments. Species diversification could also reduce sensitivity to shocks resulting from moisture stress and disease outbreak.

The coping capacity of PAP households is mainly determined by their asset holdings, their capability to draw on past savings, access to credit, social capital, and external support mechanisms such as social safety nets, which can help these households to make up for income/consumption shortfalls experienced due to shocks.

Therefore, strategic policy and strategy, technical and technology investment, and capacity-building efforts should be directed to key interventions that reduce households' exposure and sensitivities to shocks and to measures that strengthen their potential capacity for coping and fast recovery from shocks (Cervigni and Morris 2016; de Haan 2016).

RESILIENCE, TRANSFORMATION, AND SUSTAINABILITY: KEY ELEMENTS OF A PASTORAL DEVELOPMENT FRAMEWORK

Based on the review of past and ongoing PAP development projects, the analysis and synthesis of the current situation of PAPs, the emerging thinking on resilience, and the emerging livelihoods pathways in pastoral areas, the long-term objective or goal of future PAP development initiatives in Ethiopia (and elsewhere with similar environments) shall be anchored on the concepts of resilience, transformation, and sustainability. The objective should aim at achieving drought-resilient, transformed, and sustainable livelihoods, ecosystems, and institutions that result in peaceful, inclusive, and prosperous PAP communities.

The pastoral livelihood pathways model (figure 3.1) for East African pastoralism, the conceptual framework for resilience (figure 3.2), the Inter-Governmental Authority for Development (IGAD)/IDDRSI framework (RPLRP [Regional Pastoral Livelihoods Resilience Project], DRSLP), and the Pastoral Community Development Project (PCDP) model of improving access to basic services shall form the basis of the proposed strategic pillars for the future PAP development initiatives in Ethiopia. The PAP development initiatives for a resilient, transformed, and sustainable PAP system shall include the following pillars:

- Livelihood support through transformation of livestock-based PAP production systems, based on promotion of animal health, breed, feed, and marketing, and improved and sustainable agropastoralism, as well as livelihoods diversification and alternative IGAs
- Integrated rangeland and water development and secure access to key resources
- Transformation and commercialization of the livestock industry in PAP areas
- Enhanced access and use of basic social and economic services
- Enhanced social protection and Disaster Risk Management (DRM)
- Institutional capacity building and other cross-cutting issues

These six pillars provide the general framework for the pathways for resilience and transformation among PAP households, communities, and production systems.

The USAID resilience framework investment portfolio in the HoA and Asia is similar to the one proposed above. Its three core areas of investment and programming are Expanding Economic Opportunities, Strengthening Governance, and Improving Human Capital. Diversification and alternative livelihoods to reduce risks with provision of financial services and livestock and crop insurance schemes are the centerpieces of Expanding Economic Opportunities. Natural resources management (NRM), DRM, and conflict mitigation and management fall in the category of Strengthening Governance, which also includes strengthening local program design, good governance, and national institutions in these and other sectors. Improving Human Capital includes provision of basic services such as primary and secondary education, health, nutrition, family planning, and sanitation (USAID Center for Resilience 2016).

Similarly, the resilience building framework of EU's RESET program in Ethiopia encompasses four main cornerstones: DRM, Livelihood Building, Strengthening Basic Social Services, and Increasing Access to Safety Nets, with overarching support for NRM, sustainable land management, social protection, and climate change adaptation (Weldesilassie et al. 2016).

Overall specific interventions or pathways to enhance resilience are context specific and can vary even within PAP areas based on available resources, vulnerability indicators, and socioeconomic characteristics. Appendix G summarizes the proposed region-contextualized PAP interventions. Detailed programmatic and operational recommendations for each of the six pillars are discussed in the following sections.

Livelihood support

Transform pastoralism and livestock-based agropastoral production systems

Pastoralism and livestock-based agropastoralism are the predominant forms of livelihoods in the lowland pastoral areas of Ethiopia and will remain so for the foreseeable future. Hence, it is important to improve existing livelihood activities through policy and technology interventions to enhance sustainability and resilience. Livestock keeping should be recognized as the basis for livelihood transformation and resilience building in PAP areas. Integrated interventions in this sphere may include the following:

- Improved animal health services
- Promotion of scientifically supported interventions in genetic selection and preservation of high-potential, adaptable, indigenous livestock breeds
- Increased pastoralist participation in the marketing system to benefit from both domestic and export markets
- Improved feed supplies
- Encouragement of pastoral mobility to best exploit the vast rangeland resources and reduce exposure and sensitivity to drought
- Improved environmentally adaptable and sustainable agropastoralism, livelihoods diversification and alternative IGAs
- Promotion of viable savings and rural credit services that improve productivity, increase and diversify household income, and build coping capacity

These interventions would support sustainability and resilience building among all groups including the moving ups, traditional pastoralists and moving outs, and those exiting (figure 3.1) the system.

Promote animal health, breed, feed, and marketing for pastoralists

Improving animal health services including controlling transboundary animal diseases (TADs) along with improved feeding could help increase productivity, reduce losses from disease outbreaks and climate shocks, and avoid depletion of livestock wealth (accumulation). The past and current animal health services were delivered by the public sector either heavily subsidized or free of charge, with no or little private sector participation. Although demand for services is well established, services by the public sector are not efficiently delivered and coverage is less than 50 percent (Shapiro et al. 2017).

It is essential to rationalize animal health services through expansion of private animal health services and strengthening of public-private partnerships (PPPs) to widen coverage and reduce young and adult stock livestock mortality, currently around 20–50 percent (Shapiro et al. 2017). Working toward a regional framework and a common engagement on TADs' control, and harmonization of the legal framework and procedures to support disease surveillance and vaccination campaigns in case of emergency, should be a part of this effort.

A focus on breed improvement through selection is needed to reap the maximum benefit from the animal health improvement package. The meat-milk yield of indigenous livestock breeds can be raised through improved feeding combined with breed improvement through selection. Limited cross-breeding could be done in pocket areas (agropastoral) with better moisture and feed availability. Species diversification that reflects changes in the natural vegetation composition (such as introducing browsers, or camels and goats in browse-dominant areas) should not be ruled out. The breed improvement effort should be based on scientifically verified selected breeds with adequate consideration of several parameters, including adaptability and social acceptability, in addition to productivity.

Pastoralists' participation in the marketing system, including both domestic and export (cross-border) markets, should be encouraged so that they get fair value for their products. Informal cross-border livestock trading (Ethiopia-Kenya, Ethiopia-Somalia) is essential and constitutes a dynamic livestock trading zone that supports the livelihoods of millions of people, both pastoral and nonpastoral (Desta et al. 2011; Mahamoud 2010).

The cross-border livestock trading system is crucial for regional food security as it is interconnected with food and other basic commodity imports. Moreover, this trading system supports nonpastoral income growth and employment generation. Its contribution can be seen in direct job creation in the cross-border livestock value chain and in indirect multiplier effects of linkages with other IGAs such as merchandise trade, sale of food and drinks, transportation, hay making, and animal pen rentals. Formal and informal cross-border livestock trade across Ethio-Somalia and the Ethio-Kenya trade route is a vital source of livelihoods and food security for millions of people in the region (Desta et al. 2011; Mahamoud 2010).

The lowland-highland livestock market linkage and connection with major livestock buyers is essential to promote stratification of the livestock industry (Desta et al. 2006). Such a lowland-highland linkage aimed at establishing a viable stocker feeder program (whereby young male stock from PAP areas are channeled to feedlot operations in the highlands) could reduce grazing pressure and increase meat supplies in the highlands (World Bank 1991).

Timely market information and access to regular and reliable markets are features of a well-functioning marketing system that could result in a win-win situation for all value chain actors. Fair terms of trade for PAPs' livestock can be ensured if they have access to a competitive buyers' and sellers' market and are able to make informed decisions based on real-time market information.

The animal health, breed, and market interventions should be accompanied by increased feed supplies through extensive grazing that involves mobility and integrated NRM and rangeland development, backyard forage development, commercial fodder production, and conservation and utilization of crop residues (for agropastoralists). Availability of animal feed is a critical factor limiting livestock production, productivity, and commercialization in Ethiopia (Shapiro et al. 2017). In PAP areas, accessibility is as critical as availability. In some places, available feed is underutilized due to conflict or lack of water (Shapiro et al. 2015), hence water development and conflict management could open underutilized grazing resources. Without addressing the feed problem (natural and processed), it is impossible to transform Ethiopia's livestock industry.

Promote improved and sustainable agropastoralism

Agropastoralism is a form of livestock-based livelihood in pastoral areas that is complemented with income and consumption from crops produced on one's own farm. Agropastoralism is expanding in all pastoral lowland regions of Ethiopia. Table 3.1 shows the importance of agropastoralism in PAP areas. Overall, there are more agropastoralists than pastoralists in the RPLRP sites.

According to the Atlas of Ethiopian Livelihoods (2010), agropastoralists constitute 44 percent of the national PAP population. Agropastoralism (both irrigated and rainfed) is becoming important in the communes in BGMZ and Gambella, and in recently established sugarcane plantations in South Omo.

Agropastoralists can increase their crop production and productivity through improved crop production technologies, introduction of drought-tolerant varieties, rainwater harvesting, spreading, and gully control.

In areas where irrigation is accessible, either from rivers or underground water sources, small-scale irrigation can reduce exposure and sensitivity of agropastoralists to drought shocks and increase their coping ability if they are hit by drought. Community-based small-to-medium scale pastoral irrigation could help build resilience (Sandford 2013). This will depend on the availability of reliable and functioning input and output markets, access to improved seeds (for high-value cultivars), fertilizer, and other inputs, training and advisory services, and maintenance services. Critical success factors include secure rights of access to land.

Agropastoralists can engage in agroforestry for fruits and energy (fuelwood) alongside crop farming to boost their income. Small-scale cattle fattening using crop residues and sugarcane tops and molasses is another opportunity. That is, agropastoralists in and around sugarcane plantations can maximize the use of sugarcane tops, molasses, and other by-products for cattle fattening and small-scale dairy activities.

Livelihoods diversification and alternative IGAs

The changing dynamics have pushed large numbers of pastoralists in Ethiopia to live on the edge of pastoralism, surviving off small numbers of animals, and increasingly relying on a range of IGAs (Catley 2017; Little 2016). Development of alternative and diversified sources of income, inside and outside pastoral areas, thus needs to be an integral component of any future PAP development strategy (de Haan 2016).

TABLE 3.1 PAP household distribution in RPLRP project baseline survey, 2017

	PROPORTION OF HOUSEHOLDS BY LIVELIHOOD TYPE	
REGION	PASTORAL	AGROPASTORAL
Afar	62.21	37.79
Oromia	19.40	80.60
Ethio-Somali	70.90	29.10
SNNPR	29.40	70.60
Total RPLRP sites (2017)	45.80	54.20

Source: Adapted from RPLRP baseline study (Gebremedhin et al. 2017).
Note: SNNPR = Southern Nations, Nationalities, and Peoples' Region.

Those stockless (exits) who engage in alternative livelihoods due to push factors are increasingly participating in quick but low-return activities, such as unsustainable opportunistic farming, charcoal making, and low-paying casual labor (Catley 2017; Little 2016). Those traditional pastoralists who do have livestock but want to make additional income outside herding, the moving outs, often diversify in relatively positive, productive areas, such as livestock trading, food and retail services, rural manufacturing (making mats, ropes, carvings, and baskets), dairy processing, and salaried jobs.

The fourth category of herders, who are few in number (moving ups), diversify in high-return activities that involve conversion of livestock assets to urban-based ventures or high-return investments portfolios in urban economies. These are the ones who push for commercialization. The three former categories of herders need public investment support for micro-financial services, training, and skills development so that they do not get locked into negative diversification. The herders in the third and fourth category (moving outs and moving ups) are diversifying due to pull factors such as a booming nonpastoral sector and improved access to markets (Catley 2017; Little 2016; Little et al. 2010a).

The gender dimension of alternative livelihoods in pastoral areas is another important aspect. As women bear the heaviest burden of maintaining household viability and family survival in the hostile habitats of rangeland ecosystems, they are often the main participants in alternative and low-return livelihood options.

Overall, positive diversification into nonlivestock income-generating and asset-holding schemes is an important investment to attain resilient and sustainable livelihoods in pastoral areas. Required support interventions include the following:

- Promotion of education and other human development initiatives, such as effectively organized and focused training and skills development interventions. Investment in education enhances positive diversifications and helps build resilience. Secondary and tertiary education could enable youth's better access to higher-salary jobs.
- Development of small pastoralist rangeland towns and rural-urban linkages in a way that vitally serves the interests of pastoralist communities, both the wealthy and the poor (Little et al. 2010).
- Increased availability of effective rural financial service schemes.
- Maximization of the benefits of cross-border trade (livestock and other consumption items) and transboundary coordination efforts.

The sparse PAP population distributed over vast areas makes doing business less attractive, as markets are thin and costly to reach. However, the increasing size and density of the human population in PAP areas will create opportunities or demand for goods produced and services rendered by households engaged in diversified business IGAs. In this sense, population growth can be viewed as an opportunity that could help promotion of livelihood diversification (Cervigni and Morris 2016).

Rural Saving and Credit Cooperatives (RUSACCOs) are effective tools to facilitate diversification of income and to create employment opportunities in pastoral areas. A wealth of experience from the PCDP can inform the establishment of effective RUSACCOs. RUSACCOs can enhance entrepreneurship and contribute toward wealth creation and poverty reduction, particularly if they are managed well from misuse and technically supported in business identification and

development and members have some level of literacy and human capacity building, a favorable business policy, and linkages to markets (Coppock et al. 2011).

The fast-growing number of small towns in PAP areas, the growth of small businesses and the construction industry in pastoral regions, and the presence of large agricultural investments will open business opportunities for entrepreneurs and employment for trained and skilled masons, carpenters, and electricians (Little et al. 2010b). Support should be given for Technical and Vocational Education and Training (TVET), universities, and other tailored training to produce a capable workforce of youth and women in pastoral areas to respond to the growing demand for skilled labor.

Small pastoral towns attract herders from both ends of the socioeconomic spectrum. The herders moving out seek town-based opportunities, including wage labor and better access to food aid, to support their destitute households. For them, pastoral towns provide new types of survival strategies. Wealthier herders settle in or near towns to pursue real estate and business opportunities unavailable in pastoral areas (Little et al. 2010b). For them, towns create opportunities to diversify their risk profile and investment opportunities for more income.

Integrated rangeland and water development and secure access to key resources

Rangeland resources are a key pillar of the pastoral system; without productive rangeland resources, pastoralism cannot be productive. Ethiopia's rangeland resource appears to have generally declined in both volume of production and productivity in the last several decades due to degradation, increased bush encroachment, and use of pastoral land for nonpastoral commercial ventures (Coppock 1994; Oba 2013). Many soil and water conservation and gully control measures, participatory range rehabilitation initiatives, and well-proven range management approaches are needed to restore the pastoral rangeland ecosystems for increased productivity and resilience.

A more comprehensive and integrated participatory rangeland resource approach should replace the current situation of isolated and piecemeal efforts made by different agencies. Participatory Rangeland Management, which takes into account traditional resource use systems and the traditional institutions that govern them, should be taken seriously and blended with scientifically proven rangeland management systems (Flintan and Cullis 2016). Establishment of rangeland councils as piloted in Ethio-Somali Region by PRIME and the Participatory Rangeland Management experience in Borana should be encouraged and operationalized. Participatory Rangeland Management recognizes the importance of mobility in resource management in the dryland system.

Mobility is key to range development and management in PAP areas. Ethiopia's PAP areas cannot produce sufficient feed resources to support animals year-round. Hence, livestock should be moved seasonally to maximize the spatial and temporal variability in the availability of forage resources. Interventions that support and facilitate mobility should be implemented (including policy support for herd migration) (Cervigni and Morris 2016; de Haan 2016; Little et al. 2010a, 2010b). Mobility that involves cross-border movement of people and livestock must be encouraged and strengthened with policy support for smooth and harmonized resource utilization. While range resources are critical, the availability, volume,

and distribution of water are equally critical. Water development and management interventions in arid and semi-arid pastoral areas should occur alongside range resource development and management. In constructing big ponds and boreholes, planners need to consider the available rangeland resources to avoid unnecessary attraction of settlements that may end up devastating the rangeland. Pastoral water management policy must consider the volume and distribution of water in relation to grazing and other uses, including irrigation.

Land use planning measures are needed to facilitate movement of herds and flocks through designation of dedicated migration corridors. Policy makers in consultation with communities need to decide which land to dedicate to pastoralism and agropastoralism versus other investment options, and to define and map migration and trade routes to secure them for herders. These activities are critical to avoid land grabbing by private wealthy herders and the establishment of private enclosures by individuals at the expense of communal land (Napier and Desta 2011). They will also reduce resource conflict and grabbing of key grazing resources as settlements, communes, and nonpastoral investments (megaprojects) grow in lowland pastoral areas.

A conflict management mechanism to ensure cooperation between different land users should be encouraged. Traditional mechanisms for accessing and sharing resources (water and forage) through negotiation were built on reciprocity, but these have been weakened. They need to be reinvigorated and blended with modern mechanisms, including a built-in conflict early warning system to act proactively.

Finally, sustainable range-water development that enhances the production and productivity of the PAP system requires (a) a land tenure system that recognizes the land rights of pastoralists (ensuring their ownership of, access to, and use of rangeland resources) and (b) a policy that (a) promotes judicious investments in water resources development and (b) protects mobility routes (to facilitate movement of animals to underutilized feed resources). The ongoing effort by the Land Administration to Nurture Development (LAND) project to register and certify communal land use rights in Afar and Borana Regions (Bekure, Keefe, and Felson 2017) is an encouraging development to ensure pastoralists' rights to their communal lands.

Support should be provided for complementary forage development activities such as backyard and commercial forage cultivation, emergency hay and fodder production, storages, and management systems for the private sector and/or PPP arrangements. Conservation activities such as catchment protection, terracing, planting of grass, afforestation, and protection of indigenous species should be given attention. Control and alternative uses of encroaching plant species such as *Acacia drypanalobium* in Borana and *Prosopis juliflora* in Afar (now expanding in SNNPR and Ethio-Somali) should be explored. Support is needed for research to investigate the management and alternative uses of invasive species.

Transformation and commercialization of the livestock industry in PAP areas

Livestock-based commercialization and improved market integration is another pillar that supports transformation of the livestock industry in Ethiopia's PAP areas. Development efforts in pastoralist areas should be principally based on a long-term view of the transformation of livestock

production to a more commercialized system (Shapiro et al. 2015, 2017). This should involve (a) livestock commercialization by moving ups or better-off herders engaging in live animal trading in both domestic and export markets and (b) industrialization of the livestock production system in which small-scale fattening and conditioning are linked with medium-to-high scale feedlot operations and meat processing plants; this will require larger investments by the private sector and PPPs.

Ethiopian rangelands have huge potential to become the hub for industrialized red meat and camel milk (Afar and Ethio-Somali) to supply domestic and export markets. However, this can only happen with massive private sector engagement and investment through PPPs. The public sector often has limited capital for constructing large-scale livestock facilities for livestock product processing and may lack the technical and business capacity and experience to run such facilities efficiently. These limitations can be addressed by the private sector. For example, a recent study revealed that private sector and PPP delivery options for three types of facilities (municipal abattoirs, export quarantines, and livestock markets) and for one service area (sanitary mandate contracts) are technically and financially feasible and yield a higher return on investment (MoALR 2017).

Commercialization would directly benefit wealthier or better-off herders and those moving up and indirectly benefit all other groups by opening up market opportunities for livestock and creating jobs and opportunities for alternative livelihoods and entrepreneurship.

Livestock processing plants established closer to or inside pastoral areas could provide substantial high-paying salaried employment opportunities for pastoral youth and women, including TVET, college, and university graduates. A concerted effort should be made to bring medium- and large-scale livestock value additions (such as feedlots, meat processing, milk processing, and hide and skin plants) closer to rangeland areas so that employment benefits (for exits and graduates), consumer markets for pastoral products, and other multiplier effects are captured within PAP areas. For example, youth and women in Ethio-Somali Region are benefiting from the establishment of the Jig-Jiga Export Slaughter House (JESH) abattoir within pastoral areas in Jig-jiga. Increased public investment in infrastructure (roads, airstrips, power, and communication including Internet access) and better access to markets (including cross-border markets) will be required to attract livestock processing plants and other larger-scale livestock value addition facilities closer to PAP areas.

Furthermore, livestock-based transformation could enhance wealthier herders' investment in urban-based, high-return wealth portfolios (for example, hotels, tourism, real estate, service provision for urban consumers, livestock product processing, and production of natural gum and incense) that would result in job creation for youth, women, and exits. Substantial efforts will be needed to create the underlying economic response behavior by (a) significantly investing in human capital, improved infrastructure, and market access and (b) creating visible incentive mechanisms in the livestock supply and marketing chain and incentives to attract wealthy herders to invest in the urban economy.

Enhanced access and utilization of basic social and economic services

Despite increased recent efforts and success in the construction and expansion of education, health, and safe water and sanitation facilities, provision of social

services in pastoralist areas still requires significant improvement in both quantity and quality.

Education and skills training support interventions through TVET play a pivotal role in building resilient livelihoods and facilitate structural transformation of the economy of pastoralist regions (Little 2016; Little et al. 2010b). Social service interventions in the ASALs should consider their unique socioeconomic and climatic features, such as periodic droughts, seasonality, and pastoral mobility to maximize their utilization.

There is increasing demand created among PAP communities for expanded coverage of primary schools in all pastoral *kebeles* and for higher-level schools in centrally selected locations (KIs in FGD, Afar, Oromia, Ethio-Somali, and SNNPR) to reduce the dropout rate after completion of primary education, particularly for female students. Subsidized hostels and high schools with a boarding facility could reduce dropouts, especially of girls. Education for those with special needs could raise school enrolment and attendance rates. A pro-pastoral curriculum and a flexible school calendar (including mobile schooling and distance education where feasible) could improve enrolment and reduce the rate of student dropouts. The curriculum should also focus on producing and supplying highly skilled manpower to transform the sector. Provision of special incentives for teachers working in pastoral areas could attract and help retain highly qualified teachers for longer periods and reduce the rate of staff turnover.

The same approach is relevant for health service providers, including health extension workers. Similar to mobile education, there is a need to strengthen mobile health teams, clinics, and the health extension system to adequately and regularly reach herders.

Access to drinking water and its management in the context of pastoral systems should take into account its availability in the dry season, when water is most needed. In some areas shallow wells may not work, as they dry up during the dry season when the need for water is at its peak.

Other basic services, including roads, electricity, energy, and communication, and access to the Internet, media, and information technology (IT) are becoming more essential as the pastoral system transforms.

From a resilience perspective, better access to health, education, and safe potable water and other social services is directly linked to pastoralists' and agropastoralists' capacity to work, diversify, and earn income to improve their family's livelihoods and build resilience. Policies and strategies to improve these services should be designed taking into account pastoralists' context and mobility. Local capacity for efficient management of such socioeconomic infrastructural facilities is essential for their durability and sustainability.

Enhanced social protection and DRM

Social protection programs should be a key component of an integrated resilience strategy in dryland pastoral areas. Such programs can play two very different but complementary roles: they provide crucial safety nets to protect the most vulnerable people in times of crisis, while at the same time helping build household resilience through asset building.

The Productive Safety Net Program (PSNP) was implemented in pastoral areas to assist those who are currently poor, in particular the exits. Despite its contribution to improving household food security and supporting survival, the PSNP's impact on asset building and viable wealth accumulation in pastoralist

areas remains minimal (Catley 2017). Recognizing the existing gaps, best practices and cost-effective safety net interventions need to be scaled up and replicated with the core aim of building resilience in dryland pastoral areas.

A new phase of the PSNP (PSNP IV) began in 2015, with the objective of supporting the transition toward a social protection system. PSNP IV will ensure that poor and vulnerable households benefit from an essential suite of services, including safety net transfers, livelihood interventions, key health and nutrition services, community assets constructed through public works, and support to households up to, during, and beyond safety net graduation. By mainstreaming nutrition throughout program implementation, PSNP IV will address some determinants of malnutrition by linking beneficiaries to basic health services including maternal and child health, vaccinations, infant and young child feeding practices, dietary diversity, women's empowerment, and WASH. Demand for health services will further be promoted through the introduction of soft conditionality within the PSNP, linked to the health-seeking behavior of temporary direct support clients.

PSNP IV is being implemented in Afar Region (32 *woredas*), Ethio-Somali Region (46 *woredas*), Oromia Region's pastoral *woredas* (32 *woredas*), and SNNPR's pastoral *woredas* (3 *woredas*)—a total of PSNP pastoral interventions in 113 *woredas* (KI from the World Bank). The new program guidelines seek to make the PSNP pastoralist friendly, rectifying the targeting challenge of its previous phases. It is essential to put in place a rapidly scalable and flexible safety net program to act timely and effectively.

Introduction and institutionalization of a PAP-friendly livestock/drought insurance system, such as index-based livestock insurance (IBLI), can help build herders' coping capacity and their absorptive capacity to shocks. The advantage of IBLI is that it allows for quick payouts, prevents loss of household assets, and redresses catastrophic loss of livestock following disasters. Despite the technical, commercial, and marketing challenges, promotion of a livestock insurance scheme should be included as part of the future Pastoral Risk Management (PRM) initiative.

Enhancing preparedness with PRM instruments can reduce vulnerability and increase resilience in pastoral areas by increasing herders' adaptive and absorptive capacities. PRM approaches can be effective in reducing sensitivity to droughts and other shocks as well as improving coping capacity after a shock has hit. Private investment in drought preparedness, such as private forage production and marketing, should be encouraged.

The availability of a pastoral early warning system to improve anticipatory capacity to trigger appropriate and timely response can reduce vulnerability to risks. Communities'/*woredas*' capacity to get contingency planning and emergency responses through a crisis modifier or interventions based on Livestock Emergency Guidelines (LEGS 2014) is an important provision to help deal with shocks. Traditional early warning systems and information dissemination mechanisms should not be undermined.

Traditional safety net mechanisms of sharing and reciprocity and mutual insurance systems should also be encouraged and supported. Support should be given to strengthen the capacity of the traditional system of mutual assistance among communities that will be in the forefront in the event of shocks to help and rescue those who suffer losses. Moreover, traditional safety net mechanisms can share the cost of social protection, facilitate safety net targeting, and co-manage the program.

Institutional capacity building and other cross-cutting issues

Capacity building

Investment in institutional capacity building to institutionalize resilience building is crucial, in both formal government and nonformal institutions. Low institutional capacity is a key challenge to delivering service in PAP areas. Traditional institutions and their leadership also need to be strengthened. Hence, interventions aiming to enhance resilience and sustainable development in PAP areas of Ethiopia need a built-in and well-designed mechanism to address implementation capacity constraints in the short and medium term and to strategically build institutional, organizational, and human resource capacity in the longer term.

Gender mainstreaming

In pastoral areas, women traditionally play an important role in livestock rearing, especially of small ruminants. They are also active in alternative IGAs, such as trading small ruminants, processing milk and selling dairy products, and conducting other small businesses to augment household income (Coppock et al. 2011, 2013). Yet they are often excluded from decision-making processes and resource management and allocation. They do not own valuable property and are less educated than men. Therefore, they benefit the least from pastoralism. Policy measures and interventions must address this imbalance by creating gender equality and empowering women and youth in decision making.

Nutrition

The absence or lack of emphasis on nutrition in past and ongoing projects in pastoral areas is an area that needs to be addressed in future interventions. To combat the challenge of malnutrition, which is relatively better in pastoral areas, promotion of increased consumption of livestock and livestock products is critically important. This can be done through training in social behavioral change, cooking demonstrations, and nutrition education.

Research and knowledge management capacities

One of the weakest links in past programs and projects was the lack of documentation of lessons learned and best practices. Very few research outputs were linked to or fed back into project design and implementation. To correct this, future PAP initiatives should support research and capacity building in priority thematic areas. Research institutes, universities, and other higher education centers could play a pivotal role in future PAP initiatives, generating knowledge and informing effective program implementation. These institutions should receive support for basic and applied research and to train youth and women in various skills to make them more attractive in the job market.

Good governance and promotion of pastoralists' rights and conflict management

Violent conflicts in pastoralist areas of Ethiopia are often fueled by bad governance and patronizing attitudes that largely emanate from improper understanding of the pastoralist system and way of life. Strategic decisions directed to attain improved livelihoods in the area should be based on a participatory planning system that respects pastoralists' rights to free mobility, their freedom from political interference, and their use of indigenous conflict resolution mechanisms.

The absence of peace and security in many lowland pastoral areas remains a challenge to smooth and uninterrupted program implementation. This is especially serious in times of drought, when competition for scarce water and pastures heightens, and can result in violent conflict. More recent drivers of conflicts between different ethnic groups are identified by most KIs as disputes over political and administrative boundaries and borders (between regions/zones), ethnic or clan rivalries, weakness of governance and rule of law structures, and communal revenge attacks (KI informant discussions, March 2018).

In light of the changing circumstances and the need to ensure planned activities are implemented without interruption, future pastoral development initiatives must have a strong conflict prevention, mitigation, and resolution component. Conflict sensitivity planning should be carried out before actual implementation of an intervention in a certain locality. Various tools have been developed for conflict sensitivity planning. One is the Conflict Sensitivity and Prevention Toolkit (CSPT) developed by IGAD and the Permanent Interstate *Comité Inter-Etat de Lutte contre la Sécheresse au Sahel* (Committee on Drought Control in the Sahel, CILLS) (West Africa) under the Pastoralism and Stability in the Sahel and Horn of Africa (PASSHA) project to support interventions in pastoral areas (World Bank 2016). Safeguards specialists and other stakeholders in the RPLRP have been trained to use this tool kit. Ready-to-use technical cards have been developed for planning and implementation of specific pastoral interventions such as water points, access roads, and facilities such as market centers and slaughterhouses.

Indigenous conflict management systems for peacebuilding and conflict resolution should be promoted to minimize conflicts that hamper livestock production, sustainable use of natural resources, and stability in program areas. Pastoral conflicts were mediated and resolved by leaders of customary institutions who had the legitimacy and authority to resolve disputes over resources.

Customary institutions and policy support

Support is needed to inform the Government of Ethiopia (GoE) on pastoralist-friendly policies that are consistent with the Constitution, which facilitates improved and resilient PAP livelihoods. Such policies include land use and tenure policy, mobility-promoting policies, and trade policies that enhance cross-border as well as domestic livestock trading. Financial policies include those that encourage private sector investment. All policies should recognize the role and authorities of customary institutions in governing resources, in managing and resolving conflicts, and in administering traditional social protection mechanisms such as sharing and reciprocity.

DEVELOPMENT APPROACHES AND INSTITUTIONAL ARRANGEMENTS

Proposed PAP development approaches

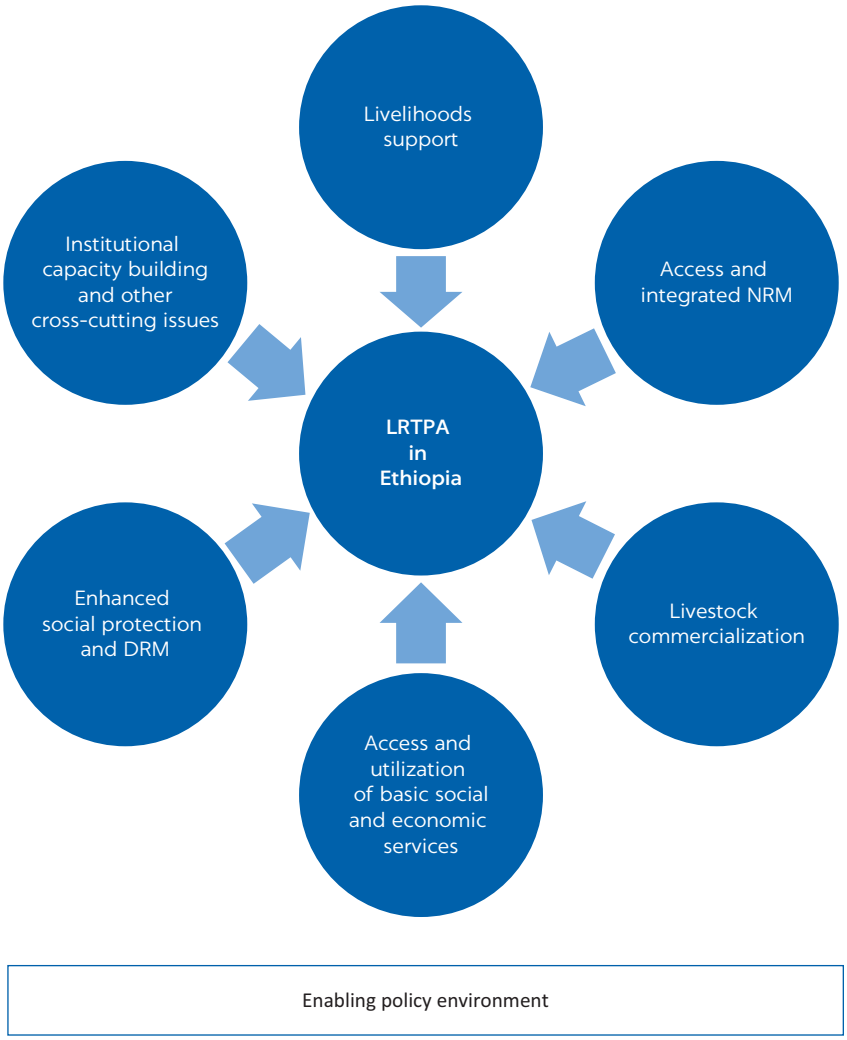
In pastoral areas, resilience building is complex, difficult, and requires long-term commitment and flexible and adjustable investment for impact. Hence, it is appropriate to have a strategic commitment for long-term investment to transform PAP areas. Moreover, a strong monitoring and evaluation (M&E) system is

needed to monitor trends in the achievement of long-term objectives. Indicators to monitor the change in the resilience capacity of households, communities, and systems are critically important for making any necessary adjustments. A strong RM&E component with a well-designed results framework, including appropriate indicators to measure the actual anticipated changes among the target, is critical to track changes, learn lessons from practice, and make timely adjustments for better results.

In general, the three major resilience/vulnerability factors (exposure, sensitivity, and coping capacity) (figure 3.2) and the proposed PAP resilience framework (figure 3.3) are expected to improve the adaptive, absorptive, and anticipatory capacity of PAP communities to shocks, and could be taken into account in the design of the M&E system. Such a design should identify measurable indicators and their means of verification for each pillar and resilience determinants.

FIGURE 3.3

Strategic investment framework for livelihoods resilience and transformation in pastoral areas of Ethiopia



Note: LRTPA = Livelihoods Resilience and Transformation in Pastoral Areas.

The community demand-driven (CDD) development approach to provision of social and economic services adopted and institutionalized by the PCDP has worked well in delivering community-identified development needs. It is also appreciated by beneficiaries and local and regional authorities (field survey and regional consultations). However, the CDD approach's effectiveness depends on the genuine participation of pastoral (mobile) and agropastoral representatives, including women, youth, minorities, and disabled groups, and a deliberative process to flesh out issues with shared power to make decisions.

Where strategic investments are considered, the CDD approach should be supplemented with expert technical advice, be it rangeland management, borehole development, or education or health interventions that require special technical and scientific knowledge to inform implementation.

The private sector and PPPs are critical in promoting livestock services (for example, veterinary drug supplies), building infrastructure (for example, abattoirs, market centers, or management of quarantine facilities), and producing improved forage. While the GoE should maintain its regulatory role and ownership of public goods, the private sector, individually or in cooperatives, is better placed to provide the required finance and technical services to efficiently develop, run, and maintain facilities. PAP producers should have a key role in the functioning of PPP arrangements. Future development approaches should encourage private investment and promote regional and cross-border harmonization, coordination, and participation of customary institutions.

Institutional arrangement and implementation modalities

The World Bank, IFAD, and MoFPDA organized workshops at the national and regional levels for stakeholders' consultation and validation of this work; these workshops identified the need for a well-structured and technically and organizationally capable focal institution to not only coordinate but also direct PAP development initiatives in Ethiopia. A strong autonomous federal and regional institution with implementation, coordination, and management responsibilities and effective institutional linkages and presence at all levels, including at *woreda* and *kebele*, has been suggested to direct and implement PAP development initiatives. Such an institution should have relevant directorates, adequate project management, M&E, financial, procurement, and human resources capacities.

Investment in capacity building is critical at all levels, including federal, regional, *woreda*, and customary institutions. Ultimately, the capacity of community institutions must be augmented at the *woreda* and grassroots level. The focal institution should also be responsible for coordinating nongovernmental organization (NGO) activities and engaging with the private sector in PPPs. Finally, the institutional and implementation arrangement should give adequate space and incentives for the engagement of universities and regional and national research institutions, which are the centers for generation of knowledge into which development initiatives could tap.

The poor public services availability in areas where pastoralism is practiced may discourage high-caliber experts from staying in the PAP areas for long unless appropriate incentive mechanisms are provided. In all past and ongoing PAP development projects, the staff attrition rate is very high.

4 Conclusions and Way Forward

KEY CHALLENGES REMAINING

The projects reviewed herein registered limited success in overcoming the major challenges of pastoral and agropastoral (PAP) development. Some positive outcomes have been registered in areas of controlled livestock disease, market engagement, public service delivery infrastructure, community participation and ownership of local development, and improved political representation of pastoralists. However, they have not provided the expected level of sustainable and resilient livelihoods. PAP communities remain extremely vulnerable to climatic shocks, particularly recurring droughts, as witnessed in the 2011 HoA drought and the more recent 2016 and 2017 droughts that affected all PAP regions in Ethiopia.

Intensified competition for natural resources has exacerbated conflicts. According to KIs in the PAP regions visited, herders' mobility has been severely constrained due to new settlements, growing conflicts, and large-scale, nonpastoral development schemes. Furthermore, degradation of range resources and loss of prime grazing lands due to encroachment of native and alien invasive species and megaprojects have shrunk the available and accessible grazing resources.

Restricted access to informal cross-border trade is limiting PAPs' access to markets that provide them fair prices for their livestock and cheaper imported goods for household consumption.

The existing public extension system does not deliver proper services to PAPs. It is not designed in line with the PAP context to transfer appropriate technology and knowledge in husbandry, animal health, marketing, NRM, livelihood diversification, commercialization, or dryland agronomy.

The issues of land rights and the land use system in PAP areas remain unresolved. Progress recently made by the Land Administration to Nurture Development (LAND) project to register and certify communal landholding in Borana based on traditional grazing units is an encouraging development (Bekure, Keefe, and Felson 2017). LAND is continuing its effort to secure the land use rights of herders in Afar.

Traditional institutions have weakened and traditional safety net mechanisms have not functioned well. Social differentiation is observed between the few emerging wealthy (and commercial) herders and the growing number of stockless and poor PAPs. All of the above factors contribute to the ongoing vulnerability of PAP communities.

RECOMMENDATIONS AND ENABLING POLICY

This study contributes to crystalizing the pathway for PAP development and transformation toward a sustainable and resilient livelihood. This would be achieved through development investments that adopt the integrated approach set out in the six proposed pillars, which in turn provide the general framework for the pathways for resilience and transformation of PAP households, communities, and production systems.

Livelihood Support; Existing and emerging livelihood options in the pastoral system (including mobile pastoralists, agropastoralists, those who are moving out and diversifying, and exiting herders) need to be supported through provision of appropriate technology and policy interventions to make them more productive and resilient to shocks. Promotion of animal health, breed, feed, and marketing, and improved and sustainable agropastoralism, as well as livelihoods diversification and alternative IGAs shall be areas of focus. Rationalization of the animal health service through public-private partnerships (PPPs) supported with mobile services is critically important to increase livestock production and productivity. Market opportunities need to be expanded and market linkages strengthened to improve traditional pastoralist engagement in markets. Agropastoralism can be practiced in both rainfed and irrigations schemes (small and medium scale) to produce staple foods, high-value cash crops, and forage crops for animal feed. Critical factors in the success of rainfed or irrigated agriculture include appropriate advisory services and inputs, secure rights of access to land, integrated livestock enterprises, roads and communication infrastructure, and accessible markets. Skills development through TVET, access to financial services, and an improved enabling environment are essential for youth and women to engage in diversified and alternative livelihoods activity.

Integrated Rangeland and Water Development and Secure Access to Key Resources; Access to vast and productive rangeland and key grazing resources are critical factors without which pastoralism cannot be sustained. To maintain the productivity and health of the rangeland, more comprehensive and integrated Participatory Rangeland Management interventions that involve customary institutions should be institutionalized and implemented. Sustainable range-water development that enhances the production and productivity of the PAP system requires (a) a land tenure system that recognizes the land rights of pastoralists (ensuring their ownership of, access to, and use of rangeland resources) and (b) a policy that (a) promotes judicious investments in water resources development and (b) protects mobility routes (to facilitate movement of animals to underutilized feed resources). A conflict management mechanism to ensure cooperation between different land users should be encouraged. Support should be provided for complementary private forage development activities.

Transformation and Commercialization of the Livestock Industry in PAP Areas; Livestock-based commercialization and improved market integration is

another pillar that supports transformation of the livestock industry in Ethiopia's PAP areas. Development efforts in pastoralist areas should be principally based on a long-term view of the transformation of livestock production to a more commercialized system and industrialization of the livestock production system in which small-scale fattening and conditioning are linked with medium-to-high scale feedlot operations and meat processing plants through private sector investment and PPPs. Substantial efforts will be needed to create the underlying economic response behavior by significantly investing in human capital, improved infrastructure, and market access and by creating visible incentive mechanisms in the livestock supply and marketing chain, financial services, and incentives to attract wealthy herders to invest in the urban economy.

Enhanced Access and Utilization of Basic Social and Economic Services; From a resilience perspective, better access to health, education, and safe potable water and other social services is directly linked to pastoralists' and agropastoralists' capacity to work, diversify, and earn income to improve their family's livelihoods and build resilience. Education and skills development play a pivotal role in building resilient livelihoods and facilitate structural transformation of the economy of pastoralist regions. Social service interventions in the ASALs, including education and health, should consider their unique socioeconomic and climatic features, such as periodic droughts, seasonality, and pastoral mobility to maximize the accessibility and utilization of services. Other basic services, including roads, electricity, energy, and communication, and access to the Internet, media, and IT are becoming more essential as the pastoral system transforms.

Enhanced Social Protection and Disaster Risk Management (DRM); Best practices and cost-effective safety net interventions need to be scaled up and replicated with the core aim of building resilience in dryland pastoral areas. A rapidly scalable and flexible safety net program should be put in place to act timely and effectively. The availability of a pastoral early warning system to anticipate shocks and contingency plans to trigger appropriate and timely response can also reduce pastoralists' vulnerability to risks. Traditional early warning systems and safety net mechanisms should be supported. Projects need to include conflict sensitivity planning before actual implementation of an intervention. Implementation could also promote indigenous conflict management systems for peacebuilding and conflict resolution to minimize issues that hamper livestock production, sustainable use of natural resources, and stability in program areas. Indigenous conflict management systems for peacebuilding and conflict resolution should be promoted.

Institutional Capacity Building and Other Cross-Cutting Issues; It is crucial to invest in human capital development and institutional capacity building, in both formal government and nonformal pastoral institutions, to institutionalize resilience building. Low institutional capacity is a key challenge to delivering service in PAP areas. The leadership of formal and traditional institutions must also be strengthened to address implementation capacity constraints in PAP areas.

Future interventions shall pay special attention to mainstreaming gender and nutrition, promoting cross-cutting issues of women and youth employment, climate change and adaptation, governance, and enhanced use of IT to access market information and financial services.

Institutional/Implementation Arrangements; An integrated PAP development approach requires a high degree of coordination capacity, autonomy in

commanding resources within a decentralized arrangement, and robust technical capabilities, including adequate TA within the program/project to ensure effective implementation. Furthermore, the approach requires organizational presence at federal, regional, and *woreda* (district) levels and a strong standardized monitoring and evaluation (M&E) system with a capable technical staff. Such an institution must create a favorable enabling environment with which to attract private sector and community participation and active engagement of traditional institutions in PAP development and the transformation of the livestock sector.

Impact and Scaling Up; Development in pastoral areas is complex and requires long-term, flexible, and adjustable strategic investments for impact. This also requires a strong M&E system with appropriate measurable indicators to track the trend in achievement of long-term objectives. The three phases of the Pastoral Community Development Project (PCDP) over 15 years significantly contributed to the improvement of infrastructure for public service delivery. The first-generation projects were too short to have made substantial impact. To have an impact in pastoral areas, scale and long-term presence matter. Even after 15 years, the PCDP reached only 38 percent of pastoralists in Ethiopia. The coverage of the RPLRP and DRSLP was limited to dozens of *woredas* (AfDB/ADF 2014; IDDRSI 2015).

Efficient and effective implementation of the six proposed pillars for resilience and transformation will require strong policy action. The following policy suggestions merit consideration.

- The new draft policy should include a well-elaborated pastoral land use and tenure policy that fully operationalizes the provision of Article 40(5) of the Constitution. It should address the problem of pastoral land alienation and confiscation of rangeland resources for commercial investment ventures, and privatization of communal rangelands, which undermines equity considerations as well as NRM. A land tenure system with a robust pastoral land use policy should be designed to avoid conflict between expansion of large-scale irrigation schemes and mobile pastoral livelihoods.
- Mobility must be considered as a core pastoral livelihood strategy. Mobility should be at the center of any policy design directed toward pastoral development in the country.
- Pastoral policy should have a range-water development strategy that allows optimum utilization of the range resource to avoid water-caused rangeland degradation.
- The policy should pave the way for a comprehensive pastoral livestock marketing strategy to realize the fundamental provision of Article 41(8) of the Constitution. The pastoral livestock marketing system is currently characterized by informal, credit-based transactions, delayed payments, and the prevalence of unjust brokerages that undermine the welfare and bargaining positions of pastoralist producers (KIs at the national and regional consultative workshops).
- It is imperative for any pastoral policy design to consider the role of informal cross-border livestock trade on pastoral household welfare and on the vibrancy of the economies of pastoralist regions. A study carried out in Ethio-Somali Region to assess the importance of the informal cross-border livestock trade through the Barbara corridor found out that the associated food security, employment, and livelihood diversification benefits transcend beyond

the region to the central part of the country (Desta et al. 2011). Given its sheer size and enormous contributions to pastoralist livelihoods and welfare, the informal cross-border livestock trade system should be positively considered within the framework of the new pastoral development policy and strategy. Any negative government interference (such as putting more military and custom posts across the trade routes, stringent and bureaucratic custom regulations) with normal operation of the informal trading system to stop and/or discourage it will negatively affect the livelihoods and food security of millions of people.

- Rural financial policy and promotion of microfinance schemes in pastoralist regions should recognize the uniqueness of PAP areas' cultural and religious values. More innovative and Sharia-compliant alternatives should be considered.

Finally, it can be said that development in PAP areas requires a long-term commitment, flexible investment support, and a robust implementation institution that involves the public and private sectors and customary institutions. Such development should take a value chain orientation and a CDD approach accompanied by policy direction, expert guidance, and investment actions from the top as needed. It should enhance the production and productivity of livestock, economic and livelihood diversification, and commercialization with private sector and PPP engagement. The development program should have a regional and cross-border dimension to enhance coordinated DRM, markets, mobility, and control of TADs.

Implementation of the proposed resilience framework and its building blocks with an appropriate policy framework could transform Ethiopia's livestock sector. Doing so would make the PAP system more resilient and more sustainable, so that future shocks such as drought do not lead to food security and livelihoods disasters.

Appendix A Pastoralism and Agropastoralism in Gambella and Benishangul-Gumuz Regions

Pastoral and agropastoral (PAP) development and research initiatives in Ethiopia over the last five decades have paid attention to conventionally known pastoral areas such as Borana in the Oromia, Ethio-Somali, and Afar lowland areas. During the PCDP era, some attention was given to PAP people in SNNPR and other pastoral areas in Oromia. Gambella and Benishangul-Gumuz (BGMZ) Regions have PAP communities that practice pastoralism and agropastoralism. However, they were historically excluded from pastoral research and development ventures. As part of this assessment, a review of the extent and importance of pastoralism and agropastoralism in these two regions was undertaken. The review was based on field visits to the two regions, information collected from KIs and focus group discussions (FGDs), reports and a literature review, and a discussion with Nuer pastoral herders in Lare *woreda*, Gambella. The findings were verified at a regional workshop held in Gambella.

PASTORALISM AND AGROPASTORALISM IN GAMBELLA REGION

Gambella National Regional State has an area of 25,802 km^2. Most of Gambella is a flatland, with a hot, humid climate. Annual rainfall averages about 600 mm while the minimum/maximum temperatures are approximately 21.1°C/35.9°C. Agroecologically, the region is predominantly lowland (*kolla*) with a few midlands (*weynadega*).

Based on the 2007 census conducted by the CSA (FDRE Population Census Commission 2008) of Ethiopia, Gambella Region had a total population of 306,916, of which urban inhabitants constituted 25.37 percent. The demography has recently changed significantly because of internal population growth and influx of refugees from South Sudan.

Gambella has diverse livelihood systems, of which pastoralism, agropastoralism, and crop production (including shifting cultivation and coffee production) are the major ones. In addition, beekeeping, poultry raising, fishing, hunting, and

wild food gathering are practiced widely. Livestock keeping is the main livelihood in the Nuer zone, followed by fisheries and crop and vegetable production. Fuelwood and charcoal sales are important sources of income as is petty trading.

Out of Nuer zone's 14 *woredas*, 8 *woredas* are purely pastoralist and 6 are agropastoralist. They have huge livestock resources of cattle, sheep, and goats. Wealthy Nuer pastoralists have large cattle herds—some have thousands of cattle, and the poor have less than five cattle. Short distance mobility is becoming an important resource management system for the Nuer. In the past, the Nuer moved cross-border, but now they cannot do so because of insecurity. Nuer pastoralists move toward the Barro River during the dry season in search of water and forage and come back to their homesteads during the wet season. These pastoralists move with their whole family, including women and children. Students continue with their schooling by walking 15–20 km daily. Riverside recession agriculture is common, particularly for maize and sorghum production, and is widely practiced by Agnuak people along the Barro, Gilo, and Akobo Rivers. The Agnuak live along the banks of the Barro River and cultivate maize and sorghum. They are a settled group of people, as opposed to the Nuer, who move seasonally. Some Agnuak are changing their form of livelihood from crop production to livestock keeping. Overflooding and loss of their farmlands are forcing them to become livestock keepers.

Gambella has 101 fish species, of which 15 are endemic to Gambella. The fisheries sector has high potential but so far has been poorly used. Moreover, the opportunity for agropastoralism, using both private and community-based small- and medium-scale irrigation for cash crop production such as sesame is good. Informal cross-border livestock movement is very common. Livestock, hides, and skins flow across the border. No organized market places and systems exist in the Nuer zone. Herders have to bring their livestock to Gambella market to sell. It is a long walk and transaction costs are high. No traders or other buyers come to Nuer village to buy livestock. Marketing of livestock is a big problem for Nuer livestock keepers.

Animal disease is the most critical challenge for livestock production in the region. The animal health problem is worsened by TADs that are carried by animals crossing the border from Sudan. The Felatta from Sudan cross to the Nuer zone with their family and livestock and stay 6 months, from January to June. This has become the major cause of the spread of TADs, and also puts pressure on the available limited grazing resource. Cross-border conflict is common. Cattle rustling by the Murulle from Sudan is a common problem. Refugees and crime, competition for services, and livestock theft are major challenges. Infrastructure is very poor and markets and marketing linkages to livestock buyers do not exist. The capacity of local institutions to deliver services is very low. Capacity building is needed at all levels. Poor delivery of basic social and economic services is a problem, in particular, education and health for women and clean water for both humans and livestock.

Commune centers were established, supposedly to provide better social and economic services, but the centers visited during the field study had poor basic social and economic infrastructures. Communes are not working well in the centers visited in Gambella due to their inability to provide basic social and economic infrastructure.

To benefit from the available livestock resources, the following key challenges must be addressed:

a. Control of tsetse infestation and other deadly diseases such as *Peste des petits ruminant* (PPR) and Contagious Caprine Pleuro Pneumonia (CCPP) in small ruminants
b. The overflooding of the Barro River, which destroys farmlands and grazing resources
c. The unregulated movement of Fellata herders to the region
d. Cross-border conflict, cattle rustling, and kidnapping of children by the Murulle
e. Lack of markets for livestock inputs and consumer items
f. Negative impacts of refugees
g. Lack of a PAP extension system, a serious issue that needs prompt action

PASTORALISM AND AGROPASTORALISM IN BENISHANGUL-GUMUZ (BGMZ) REGION

BGMZ has a population of 784,345 with an area of 50,381 km^2 divided into three zones—Metekel, Assosa, and Kamashi. Most of Assosa zone is a lowland, dry, moisture-deficit area along the Sudan border; livelihoods are based on livestock, fisheries, and crop production. Kamashi zone is mostly midlands in altitude, and wet and rich in moisture, stretching along the Dedisa River. Shifting agriculture is complemented with livestock rearing. Large commercial farms in the region produce cash crops such as sesame, maize, and oil seeds for export.

The lowland areas in Assosa and Kamashi are endowed with savannah-type grasslands suitable for livestock rearing, if managed properly and used at the right time before the grass loses its palatability and lignifies. The high infestation of livestock disease, mainly trypanosomiasis, has discouraged inhabitants from engaging in livestock. FGDs revealed that as a result, some people in the lowlands have been forced into crop production. The high prevalence of transboundary diseases is aggravated by the Fellata pastoralists from Sudan who cross the border each year. The Fellatas use the long border that the region shares with Sudan to cross to all parts of the region (the three zones and Ma-komo special *woreda*) with their large herds of cattle, sheep, and goats; they stay for at least 4 months (April–July) before returning to Sudan. The transboundary nature of livestock diseases has made control and eradication extremely difficult, although the region has attempted to supply veterinary drugs on a revolving fund scheme basis to control such diseases.

Four *woredas* in the region (Guba in Metekel zone, Sharkole and Kurmuk in Assosa zone, and Sadal in Kamashi zone) are fully agropastoral. In addition, *kebeles* in the remaining *woredas* have agropastoralists. For example, in Wombera *woreda* in Metekel zone, 15 out of 33 *kebeles* are fully agropastoralist. Overall, agropastoralism is an important form of livelihood for tens of thousands of people in the region. Mobility in search of water and pasture during the dry season is widely practiced by these agropastoralists, who move as far as 35 km away from their homestead toward the riverbanks and spend

months before returning to their homesteads and farmlands. They keep the *Abigar* cattle breed, sheep, and goats. The *Abigar* cattle are hardy animals that can withstand frequent disease outbreaks, drought, seasonal feed and water shortages, and high temperature and heat loads. They can survive, produce milk, and reproduce even under trypanosomiasis disease pressure. The breed is primarily used for milk but is also good for meat (Stein 2011). The largest cattle population is found in Metekel, while small ruminants including the "Arab exotic variety" goats are available in Kamashi zone and along the border in Assosa.

The major livestock production challenges include the Fellata herders' cross-border movement, which leads to competition for available grazing resources and brings diseases; conflict when resources are dwindling; water for livestock during the dry season, forage, and lignification; and access to livestock markets. A new tsetse control and eradication branch was established in Assosa in 2017 and is currently operational.

Also untapped is the potential for exploitation of fisheries. During the discussions with regional authorities, it was revealed that 17 varieties of fish exist in the region, according to a study carried out by the Russian Academy of Science during the early 1980s. Apiculture is also practiced in the region, though on a smaller scale. Also, as noted, huge potential exists for cash crop production, particularly of sesame, peanuts, and flax.

Communes are one of the biggest undertakings in the region to bring water-based development—239 commune centers have been established so far. Water supply is one of the greatest problems; shallow wells are the norm but their yield is not year-round and they are not dependable.

Given the region's opportunities and challenges, recommendations are to:

- Control livestock disease, especially tsetse infestation, in the short term, and promote rangeland management and forage utilization and conservation;
- Support agropastoralism (crop production complemented by livestock keeping by small farmers);
- Improve the road network, market access, health and education services, and power supply (energy); and
- Enhance job creation for youth and women with improved access to finance and an enabling environment.

Appendix B African Union/ Inter-Governmental Authority for Development

CONTINENT WIDE AND REGIONAL POLICY FRAMEWORKS

AU Policy Framework for Pastoralism in Africa

The AU Policy Framework for Pastoralism in Africa is fairly recent and emerged out of the policy debate from two schools of thought in the 1980s and 1990s. The first one considered pastoralism an outmoded, unproductive, and unsustainable livelihood system. The second considered pastoralism the best form of livelihood for the arid and moisture-deficit, semi-arid lowland areas, one that thrives on opportunistic exploitation of range and water resources

The framework was developed in October 2010, and was the first continent-wide policy initiative to secure, protect, and improve the lives, livelihoods, and rights of African pastoralists. While underpinned by recognition of the critical role of livestock husbandry in the life of pastoral communities, the framework expands the scope to address other concerns of pastoral communities, such as health care, education, land tenure, women's rights, governance, ethnicity, and religion. 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 framework emphasizes the regional nature of many pastoralist ecosystems in Africa, and the consequent need to support and harmonize policies across the regional economic communities and member states.

The AU also formulated the Livestock Development Strategy for Africa 2015–35. Its main push is commercialization of livestock production and modernization of the traditional livestock production system practiced by pastoralists (AU 2013).

IGAD-IDDRSI

Drought resilience has become the cornerstone of Inter-Governmental Authority on Development's (IGAD) engagement with pastoralism, within the framework of the IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI)

developed in January 2013. The objective of the IDDRSI is to develop a framework to manage disasters and build resilience in the HoA. The framework is based on strengthening pastoral livelihoods through interventions that target livestock production, health, and marketing. A key element of the framework is the development of supportive policy, institutional, and legal frameworks at regional and national levels. The initiative emphasizes "the modernization of pastoralism for increased productivity," to be achieved "through appropriate strategies whose implementation modalities are sensitive to the way of life of the pastoralists and to broaden and enhance the policy and institutional-related strategies of the pastoral communities."

Implementation of the IDDRSI strategy and execution of the associated RPP and CPPs are designed to benefit from existing windows of opportunity, including the growing political will of IGAD member states and the growing trend toward consolidating regional economic and political integration, the focus on ending drought emergencies through building resilience and sustainable development, and the firm commitment of development partners.

The IDDRSI strategy espouses a paradigm shift—from the view that considers the arid and semi-arid lowlands (ASALs) as nonproductive wastelands to one that sees the ASALs as having great potential that can be harnessed with well-targeted public and private sector investments for the benefit of local communities and nations. The strategy emphasizes the importance of a regional approach (acting nationally but thinking regionally) that calls for simultaneous engagement of countries in efforts that promote, facilitate, and support drought resilience and sustainability.

Before the launch of the IDDRSI, the Conflict Early Warning and Response Mechanism (CEWARN) of IGAD was operational in IGAD member states. CEWARN continues to be actively engaged in conflict resolution and peacebuilding activities as well as other cross-border issues such as governance and development of a legal framework for informal cross-border trade in lowland pastoral areas.

Appendix C
National Strategy Documents of Relevance to Pastoral Areas and the New Draft Policy

RURAL DEVELOPMENT POLICIES AND STRATEGIES

The government policy document "Rural Development Policies, Strategies and Instruments," published in 2001, broadly underlines that development interventions in pastoral areas shall be based on both short- and long-term strategies (MoFED 2003). In the short run "since the livelihood of the people is based on pastoralism, the development endeavor and activities must be based on pastoralism itself."

The long-term strategy of Rural Development Policies and Strategies (RDPS) on pastoralism is sedenterization based on the development of irrigation schemes. The strategy, therefore, envisages the preparation and implementation of a comprehensive settlement program focused on step-by-step pastoralist settlement activities, and extensive training of traditional herders in the methods of the settled farming system.

STATEMENT ON PASTORAL DEVELOPMENT POLICY (2002)

This was published in 2002 by the Ministry of Federal and Pastoral Development Affairs (MoFPDA). It underlined phased voluntary sedenterization along the banks of major rivers as the main direction of transforming pastoral societies into agropastoral systems, from mobility to sedentary life, from a scattered population to small pastoral towns and urbanization.

The above two policy documents highly emphasize pastoralist sedenterization and disfavor pastoral mobility and pastoralism as a way of life.

THE NEW DRAFT PASTORALIST POLICY AND STRATEGIC FRAMEWORK (2018)

The new draft policy spearheaded by the MoFPDA bases its policy pillars on two separate agroecological zones—"Areas with Moisture Stress" and "Areas with Adequate Moisture."

The vision for "Areas with Moisture Stress" which mainly include northeastern and eastern pastoral areas of Afar and Ethio-Somali Regions, encompasses recognition of pastoralism as a viable livelihood and mobility as its essential characteristic.

The vision for "Areas with Adequate Moisture" embraces diversification of pastoral livelihoods through the commune program by creating growth and development corridors and centers, standardized basic social services and infrastructure (modernization), and customized agricultural practices. The draft policy recognizes pastoralism as a way of life practiced in the ASALs, which is a positive move by the government. However, the policy needs to be clear about how to maintain mobile pastoralists' unrestricted access to moisture-adequate areas, as these key resource areas make the use of marginal areas possible and allow pastoralism to function well.

Appendix D
Past and Current Pastoral and Agropastoral Development Interventions (1960–2018)

FIRST-GENERATION INTERVENTIONS (1960–2000)

Ethiopian Rangeland Development Project and its predecessors

The Arero Range Pilot Project (ARPP) was implemented in a small area in Yabello *woreda* among the Borana pastoralists in southern Ethiopia. The ARPP aimed at improving pastoral livestock production and productivity and increasing animal offtake for regular supply of commercial livestock markets for urban consumers. Using the western ranching model, the project established paddocks and large watering facilities in a 2,000 km^2 area to improve livestock meat productivity through controlled rotational grazing, which was not well-fit to the traditional common property rights and mobility-based traditional milk-meat system of the Borana pastoralists.

The ARPP was not effective and did not accomplish its objective to commercialize the livestock system. Instead, the newly constructed large water bodies attracted permanent settlements that resulted in severe localized overgrazing (Coppock 1994; Desta 2006; Zere and Norton 1994).

The Second Livestock Development Project (SLDP)s ran from 1973 until 1981. This US$5 million project aimed at developing an integrated livestock market (including processing) and stock route system in the country to improve livestock offtake by opening better market opportunities for producers (IDA 1973). Stock route facilities and market places were constructed in pastoral areas to connect them with highland urban consumer centers, but unfortunately most were destroyed in the Ethio-Somalia war of 1977–78.

Implementation was constrained due to continued civil unrest in the eastern and southern rangelands. When the project ended in 1981, only a few markets were operational. Stock routes with their staging and resting facilities were never used (Coppock 1994; Desta 2006).

The Third Livestock Development Project (TLDP), a more comprehensive pastoral development project, was approved on December 23, 1975, for a 5-year project life but closed after 8 years on June 30, 1984, after two extensions totaling 3 years. The project was funded by the Government of Ethiopia (GoE), Africa Development Fund, and the World Bank for a total of US$35.8 million (World Bank 1991).

The TLDP modernization and intensification investment aimed at transforming the livestock industry at large, again following the western ranching and feedlot/fattening model. A key project strategy was the establishment of a system of controlled range use under which pastoralists would be encouraged to adjust stock numbers to the carrying capacity of the ranges. This was expected to reduce the recurring boom and bust cycle of herd buildup and overstocking, followed by heavy losses in drought years (World Bank 1991).

The TLDP, SLDP, and ARPP promoted a sectoral approach, emphasizing livestock services and the rangeland, with very low focus on human capacity building and community participation. The projects did engage traditional leaders and herders in the design and implementation of the projects.

Major achievements of TLDP, SLDP, and ARPP

The TLDP's animal health and extension service was fairly successful in all subprojects. Herders' attitudes about bringing their animals for annual and biannual vaccinations changed and their willingness to pay for treatment improved over time. Thousands of kilometers of access roads were constructed, connecting villages to other villages and to markets. Range-water development and management in Southern Rangeland Development Unit (SORDU) and JIRDU, and forage cultivation in the highlands of Sidamo, Bale, and Harerghe to enhance smallholder fattening using young bulls sourced from pastoral areas, were good beginnings for stratification of the production system. Pastoralists' market engagement improved (World Bank 1991). The SLDP left behind few functioning livestock market centers. The ARPP funded water development to mitigate water problems during the dry season.

Challenges of TLDP, SLDP, and ARPP

The design and implementation of the TLDP, SLDP, and ARPP had inadequate participation from pastoralists, who were reluctant to accept and apply the proposed modern intervention packages.

Overall management of the TLDP project moved from the LMB to the Animal Resources Development Authority, and finally to the Animal and Fisheries Resources Development Department in the MoA, which destabilized staffing and disrupted institutional learning.

The projects' implementation was overwhelmed by internal and external political, military, and social events that hampered project implementation and destroyed some of the development gains.

Lessons learned from TLDP, SLDP, and ARPP

One of the key lessons learned was the difficulty in implementing a project in an insecure environment characterized by disruption of project implementation, misuse of project funds, and loss of development gains.

A clear understanding and knowledge about how the pastoral system functions ecologically, economically, traditionally, and socially is crucial in designing and implementing development projects. Projects designed with limited knowledge would likely fail.

Fourth Livestock Development Project's Southern Rangelands Pilot Project

The Southern Rangelands Pilot Project was implemented through the SORDU. Started in 1988 and ended in 1993, the pilot project was the first community-based participatory and cost-sharing development approach attempted in pastoral areas in Ethiopia.

The pilot project was implemented through five sections: (a) animal health and production, (b) range management, (c) cooperative development, (d) cattle marketing and fattening, and (e) infrastructure development (World Bank 1996).

The cooperative development section was central to the project, as service cooperatives (SCs) were expected to become the basis for providing essential services at cost to pastoralists. The SCs were designed to serve as a vehicle for extension services to provide animal health and production, range management, and marketing services. Range management activities were concentrated on bush management/control techniques by burning and clearing and other range management activities.

Major achievements of the Southern Rangelands Pilot Project

The program blended Borana pastoralists' traditional social institutions and their territorial set-up with conventional administrative boundaries to form the SCs (Hogg 1992). The project established five cooperatives and provided them with a range of support activities, such as pond construction, rehabilitation of traditional wells, and construction of clinics, with SCs' contributions as high as 50 percent. These SCs were able to provide various services to pastoralists, including retail shops, drug stores, veterinary clinics, and marketing. Moreover, the project channeled its extension advice through the SCs.

Support for animal health and production focused on strengthening health and extension services and training veterinary scouts and primary animal health agents. These trained local professionals were hired by the SCs to manage drug stores and clinics. They provided basic veterinary services to pastoralists, informed the project of disease outbreaks, and served as community mobilizers for widespread, coordinated vaccination campaigns.

The technical capacities of the technical staff was built through training provided by international technical consultants. Knowledge and skills were transferred to the national staff and some capability was built into the project to continue after the consultants left.

Challenges of the Southern Rangelands Pilot Project

It took a long time to reorganize the organizational setup of the project to reflect the decentralized government structure, which disrupted the timely implementation of project activities. This was worsened by internal unrest and security challenges across the whole project area.

The SCs that were meant to facilitate provision of services and community participation were labelled as political instruments rather than economic entities by the new government and some were dissolved.

It was challenging to convince communities to engage and change experts' attitudes about communities' capability to manage their own development needs.

Lessons learned from the Southern Rangelands Pilot Project

A participatory approach is a slow process and it took time for the experts and communities to internalize it. This resulted in a slow project take-off. Communities did eventually demonstrate their potential to identify, implement, manage, and participate in the financing of their own development needs. The critical need was to provide communities the space and technical support they needed to engage at their will.

One lesson learned was how difficult it is to use a participatory, bottom-up approach to implement development in an environment dominated by a top-down approach, insecurity, and political and institutional instability.

Although the project was disrupted in 1991 with the change of government and the subsequent instability in the area, the project seeded the notion of participation and cost-sharing among the staff and pastoral community to enhance development in pastoral areas.

South-East Rangelands Development Project

The South-East Rangelands Development Project (SERP) started in 1990 with funding of US$34.02 million from the AfDB. It covered a vast area of 245,000 km^2 of ASALs in Ethio-Somali Region (ADF 1989).

The SERP used World some of the experiences from the SORDU pilot project and the TLDP in its design and implementation arrangements. Its design combined the infrastructural and rangeland management emphasis of the TLDP with the institutional building, outreach, participatory, and people-centric approaches of the SORDU Rangeland Pilot Project.

Furthermore, similar to the SORDU Rangeland Pilot Project, the SERP worked through traditional Somali organizations to form pastoral associations, cooperatives, and other social development units and groups, such as women's groups. The project used these arrangements to facilitate provision of extension services, planning, and implementation of subprojects. Overall, the project applied a sectoral approach with an aspect that enhanced community participation.

The project comprised five components: (a) extension and community development, (b) animal health, production, and marketing, (c) land use and range management and dryland farming, (d) infrastructure development, and (e) water development. All components registered limited success in delivering services to beneficiaries and improving livelihoods (ADF 2001).

Major achievements of the SERP

Extension and Community Development Component. Extension services aimed to build the institutional capacities of both pastoral and agropastoral (PAP) communities and small-scale entrepreneurs, including rural women and

returnees, to meet their input and technology needs. On top of the broad extension facility that serves all, the project had a Women Extension Development Unit (WEDU) that formed several dozens of women's development groups to specifically target and empower rural women.

Land Use and Range Management and Dryland Agronomy Component. Under this component, the project conducted hundreds of studies, trials, demonstrations, and implementation of range management practices, rangeland monitoring and evaluation (M&E) techniques, forage conservation, and development and utilization of fodder banks. It introduced and demonstrated proven agropastoral and agroforestry practices.

Challenges of the SERP

The political instability in the country and the insecurity in all of Ethio-Somali Region and neighboring Somalia hindered staff mobility and timely implementation of the project and efficient utilization of project resources, both financial and human (international consultants). The influx of refugees and returnees put additional pressure on project resources.

Institutional instability was another big challenge. The project had eight project managers in 11 years. The project manager and all management staff changed every time the regional president changed.

Lessons learned from the SERP

A peaceful environment, stable institutions, and focused management are needed to implement a participatory and cost-sharing development approach and to sustain the gains from this type of approach.

Stability of the political and civil environment is crucial for successful implementation of development projects. Good project design is not a guarantee by itself of good project outcomes; conduciveness of the political environment matters a lot.

SECOND-GENERATION INTERVENTIONS (ADVOCACY AND SERVICE DELIVERY) (2000–10)

The 2000s marked the emergence of nongovernmental organizations (NGOs) and civic societies advocating for pastoralists' empowerment, participation in their own development, and their rights for improved access to education, health, and other social services.

Pastoral advocacy and empowerment

Pastoralist Forum Ethiopia

The PFE is one of the civic societies in Ethiopia that has played an advocacy role since its establishment in 2003. The PFE was established in response to several compelling realities in the country, including the lack of coordination and networking among pastoral-oriented NGOs/charities, the undeveloped pastoral knowledge base, the history of exclusion and marginalization of pastoralists from public policy processes and development, and the absence of a platform to voice support for pastoral development in Ethiopia.

PFE's key achievements

The PFE has been a pioneer consortium in flagging issues of pastoralism and leveraging for recognition of pastoralists at different levels. For example, the PFE elevated the social position of pastoralists by changing society's wide use of the term *Zelan* (meaning aimless and irrational wanderers) to *Arbito'ader* (which literally means pastoralists).

The PFE contributed to changing government policy toward pastoralism and pastoral development. Examples include recognition of Ethiopian Pastoralist Day (EPD) as a national day; establishment of the Pastoral Affairs Standing Committee (PASC) in the Federal Parliament; and establishment and/or formulation of pastoral institutions at the federal and regional level (Pastoral Commission, bureaus, and so on).

The PFE facilitated and ensured the inclusion of pastoralists' interests in national plans or PRSPs (for example, the SDPRP, PASDEP, and GTP I and II). It also contributed to formulation of the AU Policy Framework for Pastoralism in Africa and its popularization at different levels, including the FDRE House of Peoples Representatives.

DFID-funded pastoralist communication initiative

The DFID-funded PCI project, implemented between September 2005 and February 2008, focused mainly on advocacy of pastoralist issues, policy promotion, and enhancement of voice and representation. The PCI worked with regional and federal-level authorities and was instrumental in the establishment of the PASC in the House of Peoples Representatives and pastoralist councils in the regions. It conducted many studies, including "Vulnerable Livelihoods in Somali Region of Ethiopia" (Devereaux 2006).

The PCI organized many pastoralist gatherings, inviting pastoralists from all over the world to deliberate on issues pertaining to pastoral livelihoods, such as land rights, resource use, policy making, education, and culture. It also organized many trainings and seminars for high-level government officials.

Pastoral Community Development Project

The Pastoral Community Development Project (PCDP) was the first multi-phase World Bank- and IFAD-supported PAP development program funded through an Adaptable Program Lending (APL) instrument (World Bank 2013). This funding was matched by contributions from the GoE and beneficiary communities. The program was designed to be implemented in three 5-year phases (projects) over a 15-year period. On September 30, 2003, the first phase (project) of the PCDP was declared effective; it was completed in February 2008. The second project was declared effective in October 2008 and closed in December 2013. The third project was declared effective on April 1, 2014, and is still ongoing. The components across the three phases of PCDP are indicated in table D.2.

As indicated in table D.1, total funding for the program is US$452.8 million. The World Bank contributed 49 percent, followed by IFAD (41 percent), communities (7 percent), and regional governments (3 percent). About 56 percent of the total program investment was allocated to the final phase of the program (PCDP III).

Institutional and implementation arrangements of the PCDP

The PCDP is implemented through the GoE's existing federal, regional, and *woreda* structures and community institutions supported by the project team.

TABLE D.1 PCDP funding by source (US$, millions)

SOURCE	PCDP I	PCDP II	PCDP III	TOTAL OVER 15 YEARS	PERCENTAGE OF TOTAL
World Bank	30	80.0	110.0	220.0	49
IFAD	20	39.0	128.9	187.9	41
Communities	4	14.7	14.2	32.9	7
Regional governments	6	5.0	1.0	12.0	3
Total	60	138.7	254.1	452.8	100
% of total	**13**	**31**	**56**		

Source: PCDP II PAD, World Bank 2008.
Note: PCDP = Pastoral Community Development Project; IFAD = International Fund for Agricultural Development.

TABLE D.2 PCDP's components

PCDP I	PCDP II	PCDP III
Sustainable Livelihoods Enhancement (SLE)	Sustainable Livelihoods Enhancement (SLE)	Community-driven Service Provision
Pastoral Risk Management (PRM)	Pastoral Risk Management (PRM)	Rural Livelihoods Program (RLP)
Project Support and Policy Reform (FPCU, RPCU)	Participatory Learning and Knowledge Management	Development Learning and Knowledge Management
	Project Management	Project Management and Monitoring and Evaluation

Source: PCDP III PAD, World Bank 2013.
Note: PCDP = Pastoral Community Development Project; FPCU = Federal Project Coordination Unit; RPCU = Regional Pastoral Coordination Unit.

Project management was decentralized to Regional Pastoral Coordination Units (RPCUs) and *woredas*, with a Federal Project Coordination Unit (FPCU) housed at the MoFPDA. Specialized technical ministries—the Federal Cooperative Agency (FCA) and the Ministry of Agriculture and Livestock Resources (MoALR)—are responsible for leading the implementation of the cooperatives and early warning and response systems, respectively. This decentralized implementation arrangement was meant to build the capacity of existing government institutions while implementing and ensuring sustainability and continuity of project activities. It was also meant to avoid conflict and duplication of effort, which could lead to inefficient use of scarce human and financial resources.

The PCDP applies a holistic development model, with a focus on the social dimension of development. The program uses a community demand-driven (CDD) development approach, with a strong capacity-building investment component for communities and their institutions and local-level government agencies. Thus, communities take primary responsibility for planning and executing most project activities. Implementation of the project's core activities, particularly Community Investment Fund (CIF) subprojects, is through community-based institutions with TA from project teams.

PCDP components and achievements

PCDP I and II introduced models for participatory local development within a limited area and expanded target communities' access to basic social and economic services. PCDP III broadened this to access and utilization of

community projects to have an impact on income, nutrition, education, and livelihoods of PAP communities (World Bank 2009, 2016).

The components of the three projects vary in their type and area of focus but are all based on interventions that support provision of social and economic services, PRM (PCDP I and II), and livelihood improvement (income generation).

The livelihoods component was included in all three projects, with emphasis on the provision of social and economic services CIF and IGAs/RUSACCOs). The CIF in the SLE component supports community subprojects in targeted PAP *kebeles* to build demand-driven social and economic infrastructure for local development. A total of 6,300 CIF subprojects were implemented over the three phases of the PCDP in the four project regions; 1,303 RUSACCOs were established over the same period.

Some level of institutionalization of the CDD approach in government institutions was secured and witnessed by senior government project partners (World Bank 2016; field visit). Communities internalized the CDD approach and began using it in government development planning processes and pressured other development partners to apply it as well (field visit).

The PRM subcomponent supported preparation of four Disaster Preparedness and Strategic Investment Plans (DPSIPs) for the four project regions (Ethio-Somali, Afar, Oromia, and SNNPR [Southern Nations, Nationalities, and Peoples' Region]). The plans have a menu of interventions in each region to manage and mitigate major disasters. As part of this plan, PCDP II supported many strategic investments, such as 82 water schemes (including 32 boreholes), 4 rural roads, 16 livestock markets, 10 small- to medium-scale irrigation schemes, and other forage development and NRM subprojects. The remaining components deal with community and institutional capacity building, policy studies and consultation, knowledge generation, documentation and dissemination, project support, and M&E.

The PCDP has so far reached 4.5 million people, or 38 percent of the country's total PAP population. This is a commendable achievement given the remote, sparsely distributed nature of pastoralists in the vast rangeland areas and the challenges of drought and security commonly found in lowland areas.

Major challenges of the PCDP

The PCDP's CIF subprojects are modest in size and too sparsely distributed over a large area to meet the growing demand for social and economic services. This is particularly true for water points, because most are small in volume and widely distributed over a vast area.

FGDs and KI interviews identified the increase in frequency of drought and absence of adequate focus on PRM in PCDP III as challenges. While climate change resulted in increases in the frequency of drought and absence of respite for livestock to recover from shocks, the PRM's subcomponents of Drought Preparedness and Contingency Plans (DPCPs) and DPSIPs and the Pastoral Early Warning System (PEWS) could have strengthened communities' preparedness.

Limited coordination between projects and programs, despite the forums and platforms established at different levels including Steering Committees, has been a handicap. Integration, coordination, and harmonization of efforts are missing even among the Regional Pastoral Livelihoods Resilience Project (RPLRP) and PCDP (the World Bank-funded projects), and among the Drought Resilience and Sustainable Livelihoods Project (DRSLP), RPLRP, PCDP, and Productive Safety Net Program (PSNP) and other MoALR (Pastoral Directorate) activities in pastoral areas.

Lessons learned from the PCDP

Development in pastoral areas is complex and requires long-term, flexible, and adjustable strategic investments for impact. The PCDP's three phases over 15 years significantly contributed to the improvement of infrastructure for public service delivery. Such strategic long-term investment with multiple phases, however, needs a strong M&E system with appropriate measurable indicators to track the trend in achievement of long-term objectives.

Capacity building for communities and institutions at all levels was crucial for the good performance of the PCDP. The dividend accrued from the PCDP's investment in capacity building of communities and institutions at all levels is very high (in terms of efficiency in project implementation and delivery of services, and sustainability of project gains). This is affirmed by beneficiary communities as well as regional PCDP stakeholders.

The CDD approach worked well and increased communities' authority and ownership of subprojects. However, it was found out that this approach is not a cure-all and should be complemented with research, science, and an expert-informed development approach for large, intercommunity, and complex projects with regional dimension. The CDD approach remains relevant even in complex projects to engage communities' input, wisdom, and knowledge and to secure their custodianship.

RUSACCOs are promoting women entrepreneurship, and are absorbing some of the stockless pastoralists transitioning out of pastoralism. To ensure sustainability, a favorable business policy that encourages and incentivizes new entrepreneurs is crucial.

The program created a wider sphere of demand for education and health services. It was found that the primary schools and health posts necessitated the development of secondary schools and health clinics. Education in pastoral areas should expand to secondary and tertiary levels. This would help to avoid student dropout after primary school. This issue is especially problematic for female students.

For the PCDP to address well the livelihood dimension, NRM, agropastoralism, and livelihood improvements should have been placed in a dedicated component. The dropping of the PRM component together with its disaster preparedness strategic investment rendered PCDP III incomplete in addressing the multidimensional challenges of livelihoods resilience among targeted PAP communities in its wide geographic coverage.

THIRD-GENERATION INTERVENTIONS (LIVELIHOODS AND DROUGHT RESILIENCE) (2011–PRESENT)

The Regional Pastoral Livelihoods Resilience Project

The RPLRP project has five main components: Natural Resources Management (NRM); Market Access and Trade (MAT); Livelihood Support; Pastoral Risk Management-(PRM); and Project Management, M&E, and Institutional Support (World Bank 2014).

RPLRP's progress and major achievements

The RPLRP in Ethiopia, a US$75 million project, was implemented over the last 2.5 years. To date, encouraging progress has been made in NRM

because the physical achievements of some planned activities have had considerable impact and strategic importance in responding to drought emergencies and building resilience.

Early output indicators show that completed and ongoing rangeland management and development activities in pastoral areas are relevant and positively affecting the livelihoods of intended beneficiaries. Two important cross-border activities that have been completed and have positive impact are "Mapping of Market Access" and "Trade and Transboundary Animal Diseases (TAD) Vaccination." The mapping of livestock markets and trade routes as well as complementary collection of data on livestock prices and seasonal volume of trade were successfully completed for all RPLRP cross-border areas. Completion of this mapping exercise is a great step in enhancing knowledge about livestock markets, and facilitating livestock trade in border areas, which will potentially boost trade, increasing household income and thereby building resilience. The RPLRP has also been facilitating the execution of a joint Ethio-Kenya cross-border vaccination program for selected TADs along the Borana–Marsabit routes. The two major activities cited above are important in enhancing livestock health and trade across the borders and into the hinterlands.

Drought Resilience and Sustainable Livelihoods Project

DRSLP's development objective

The DRSLP has three main components: NRM; Market and Livestock Infrastructure; and Capacity Building, Program Coordination, and Management. These components are strongly aligned with the IDDRSI framework for collective engagement with regional dimensions in cross-border rangeland management, livestock trade, transboundary water resources and livestock disease control, knowledge sharing and management, and conflict resolution.

In Ethiopia, the DRSLP is being implemented in a way complementary to the activities envisaged in the CPP and structured along its same components (AfDB/ADF 2014; IDDRSI 2015). The DRSLP's overarching objective is to contribute to the GoE's GTP of poverty reduction, food security, and accelerated sustainable economic growth through enhanced rural incomes. Its strategy emphasizes the importance of a regional approach and calls for simultaneous engagement of countries in the region in efforts that promote, facilitate, and support drought resilience and sustainability. The program design, especially in its choice of specific locations in Ethiopia, considers the regional dimension in terms of seasonal cross-border livestock movement patterns and trade, as well as the transboundary system within the Inter-Governmental Authority for Development (IGAD) region (especially in Afar and Ethio-Somali Regions, which border Djibouti and Somalia).

DRSLP's progress and major achievements

The DRSLP's recently completed midterm review (MTR) reported that the most notable achievement is the rehabilitation of existing water infrastructure. According to the MTR, 12 out of 19 planned activities were completed by the project and 7 out of 19 were executed by the GoE. The project grew fodder in selected demonstration sites in Afar and SNNPR that was used during the recent drought spell. It also constructed hay stores for emergency fodder storage, established fodder banks, and trained selected beneficiaries on backyard fodder

production. A participatory rural appraisal tool was used to collect information on the socioeconomic and cultural situation of the regions to prepare NRM (rangelands conservation) plans in response to community needs. Outlet readings using a global positioning system (GPS) were taken to prepare NRM plans and area watersheds for each target *kebele*.

Construction of pastoral training centers (PTCs), livestock market centers, and animal health posts progressed well, with a range of achievement between 80 percent and 90 percent. Activities that lag behind are the construction of feeder roads linking the hinterlands to market and service centers. Staff capacity-building activities were conducted according to plan, including short-term training as well as higher learning up to Master's (MSc) level.

The RPLRP is implemented in 21 *woredas* of four regions (Oromia, Afar, Ethio-Somali, and SNNPR), while the DRSLP is implemented in 36 *woredas* of the same regions. Both programs have coordination units at regional and *woreda* level, and most activities are implemented by either regional or *woreda* technical bureaus or agencies. Oversight and overall guidance for project implementation are provided by a Federal Program Steering Committee, Regional Program Steering Committees, Zonal Steering Committees, and *Woreda* Steering Committees.

Major challenges of RPLRP and DRSLP

One major challenge of implementing the RPLRP and DRSLP is their lack of a strong coordination mechanism between the regional and *kebele* level. Absence of strong ownership and commitment by the various specialized ministries and bureaus to implement planned activities, lack of clear delineation of responsibilities, and loose integration of the projects' plans with *woredas'* plans have led to what regional staff call "implementation by pleading."

Noncompetitive salaries have led to high staff turnover and difficult recruitment of replacements. This in turn has resulted in low implementation of planned activities. Added to the limited technical capacity and high staff turnover, the lengthy contractual process to prepare bid documents for awarding contracts and procurement of equipment and facilities within the host ministry has contributed to the challenges of timely and efficient implementation of activities.

A very limited coordination mechanism exists between these regional projects and other similar GoE projects such as the PCDP or donor-supported projects like Pastoralist Areas Resilience Improvement through Market Extension (PRIME), which also work on pastoral development and enhancing resilience. Because of the lack of coordination, the benefits of synergistic relationships to achieve better results and impacts are lost.

Lessons learned from the RPLRP and DRSLP

The RPLRP is a well-designed project to address issues of PAP development and to enhance resilience. The DRSLP also has good design features and both projects appear to fill the gaps associated with first- and second-generation projects. The projects' components and activities balanced well both the livelihood and resilience aspects of communities, developing and protecting their resources as well as meeting their basic needs and services. The cross-border dimensions are also well-articulated (cross-border trade, managing and mitigating conflict, disaster risk management (DRM), combatting transboundary disease). The strategic investments in market centers and water points are meant to bring

harmony among the borderland communities, minimizing conflicts through mutual sharing of vital resources such as grazing and water. Their comprehensive and holistic approach and cross-border dimensions should be incorporated in future PAP development and resilience projects.

Nonetheless, activities planned under each component are unlikely to be implemented in time because of serious capacity limitations and inadequate institutional arrangements. The regional nature of the projects requires implementation of activities in cross-border, peripheral, and remote *woredas*, where administrative and institutional capacities are extremely weak and infrastructure very poor. Implementation of such complex and varied activities requires staff of high technical caliber and robust implementation capacity, neither of which exist at present. The next project design should fill these gaps as well as learn from the design features of the RPLRP and DRSLP in addressing the shortcomings of the first- and second-generation projects.

Bilateral projects affiliated with RPLRP and DRSLP

Two bilateral projects affiliated with the RPLRP and DRSLP are being implemented in Afar and Ethio-Somali Regions to build pastoralists' drought-resilience capacity. These projects are designed to realize the RPLRP and DRSLP objectives and their components are aligned to those of these projects.

The first project, "Strengthening Drought Resilience in Afar Region," is a €13.4 million project financed by the Italian Development Cooperation and is executed in four *woredas* of Afar (Amibara, Chifra, Dewe, and Telalak) to complement the DRSLP. Its main objective is strengthening the livelihoods of pastoralists to recurring drought and building their resilience.

The second project, "Strengthening Drought Resilience of Pastoralists in Afar and Somali Region," is a €12 million project financed by KfW; its main objective is strengthening the production system of pastoralists and agropastoralists and diversifying livelihoods affected by recurring drought in selected cross-border areas. Its focus is on enhancing pastoralists' adaptation capacity to drought through increased fodder availability and access to water as well as child and animal health. The project is to be implemented in three *woredas*—two in Afar (Elidaar and Asayita) and one in Ethio-Somali Region (Ayisha).

Pastoralist areas resilience improvement through market expansion

PRIME's strategic goal and project objective

PRIME is a USAID-funded, US$70 million, 5-year project designed to contribute to the Feed the Future strategic objective of "Linking the vulnerable to markets" (AKLDP 2015; USAID Feed the Future 2019). The overarching project goal is to reduce hunger and poverty in selected pastoralist areas of Oromia, Somali, and Afar Regions, while its project-level objective is "to increase household incomes and enhance resilience to climate change through market linkages." The focus is primarily on building resilience through market expansion, although other components contribute to the overall achievement of PRIME's objective.

The five components or intermediate results that contribute to PRIME's main objectives are (a) productivity and competitiveness, (b) adapting to a changing climate, (c) alternative livelihood options, (d) use of nutritional products, and (e) evidence-based learning. The project design uses the Push-Pull model,

involving increased production (the Push) and developing market linkages (the Pull), but has a broad intervention approach that includes increasing resilience to climate change, providing alternative livelihood options for those transitioning out of pastoralism and improving nutrition for the most vulnerable.

PRIME's major achievements

PRIME strives to improve the lives of chronically food insecure and vulnerable populations with innovative approaches to economic development. Its focus is on addressing existing livelihood and market gaps, as well as tackling the underlying systemic bottlenecks that leave populations vulnerable. PRIME's Innovation and Investment Fund (IIF) activates transformation through selected investments that drive social and economic changes. The IIF makes investments in partnership with other stakeholders to catalyze sustainable growth through grant matching. The IIF's overarching goals are to spark sustainable improvements in industry capacity, expand supply chains, increase sector competitiveness, and strengthen the financial services industry (USAID Feed the Future 2019).

Challenges

PRIME's implementation progress has been curtailed by the severity of the recurrent drought and occasional suspension of travels because of insecurity in its project areas. Recent conflicts in Oromia and SNNPR have also affected its implementation pace.

Lessons learned from PRIME

PRIME demonstrated that with careful and judicious use of resources such as grants and loans, it is possible to facilitate and support value chain actors to improve their productivity and market access. By supporting the private sector through matching funds, it is possible to enhance productivity and improve market linkages. In times of drought, the lesson from PRIME's activity indicates that careful use of a "smart subsidy" led to better offtake of livestock using private sector operators. With regard to NRM, regional councils played a key part in managing and rehabilitating natural resources.

Enhanced Livelihoods in the Mandera Triangle/enhanced livelihoods in Southern Ethiopia

The USAID-funded Enhanced Livelihoods in the Mandera Triangle (ELMT) Program, under RELPA, was one of the few regional pastoral livelihood projects implemented by a consortium of NGOs led by CARE International in southern Ethiopia, northern Kenya, and western Somalia between August 2007 and September 2010 (Nicholson and Desta 2010).

Objective of ELMT/ELSE

The objective of the Enhanced Livelihoods in the Mandera Triangle (ELMT)/ELSE was to support an effective transition from emergency-relief dependency to livelihood resilience and promote long-term economic development in dryland and pastoral areas of the region. The major pillars of the ELMT/ELSE were combating recurring crises of climate change and chronic vulnerability in the border

regions of northern Kenya, southern Ethiopia, and western Somalia, improving resilience, and enhancing the livelihoods of people.

Major achievements of the ELMT/ELSE

With regard to PRM, early response to crisis/climate change—using the crisis calendar to trigger timely and appropriate response and protect livelihoods—led to better preparedness, coordination, sharing of information, and response in cross-border regions. The ELMT/ELSE's "Enhanced Veterinary Services" activity linked Community Animal Health Workers (CAHWs) to community drug stores and private drug suppliers and provided services on a shared risk basis. The approach resulted in a sustainable supply of veterinary drugs and enhanced coverage of services (Kenya and Somalia).

Customary institution-led participatory NRM mapping was introduced and implemented. The ELMT was engaged in cross-border peacebuilding and conflict resolution activities, linking with IGAD/CEWARN to strengthen cross-border peace structures for the establishment of a regional peacebuilding framework or peace council.

Business development training led to improved production and increased household income (milk and honey marketing and beads and mat making). Improved literacy and numeracy skills resulted in better bookkeeping and business planning.

Challenges of ELMT/ELSE

The ELMT's performance and achievements were compromised by a cumbersome and complex institutional arrangement; the Regional Coordination Unit in Nairobi was poorly linked with the field offices in Ethiopia and Somalia. The consortium was not strong and partners did not always implement activities according to the plan and stated objective of the project. Insecurity posed challenges to implementing the cross-border subprojects in areas bordering Somalia.

Lessons learned from ELMT/ELSE

The ELMT/ELSE program was overambitious given the 3-year period and the complexity of its activities. The consortium was not given time to build a shared vision, trust, and collaborative ability, and instead plunged straight into implementation. As a result, it continuously struggled between implementation, shared learning, and building cross-border linkages. It showed how difficult it is to implement development projects in areas where peace does not prevail.

EU resilience building program in Ethiopia

The EU RESET is an innovative approach that aims to build the resilience and expand the coping capacities of the most vulnerable populations in specifically selected areas (clusters of *woredas*) that are highly drought-prone and food insecure (EU RESET 2016). This multifaceted program transcends sectoral boundaries to create bridges and synergies between humanitarian and development partners for tackling chronic humanitarian and long-term needs and recurrent food insecurity.

Resilience Building Program in Ethiopia's (RESET) development concept for building resilience is based on four cornerstones or pillars: (a) Improved basic services—that is, nutrition, health, WASH, and education; (b) livelihoods support and diversification in agriculture and livestock; (c) safety nets for the most chronically

vulnerable groups; and (d) DRM—that is, preparedness to shocks. The EU RESET program follows a geographically focused approach whereby currently eight clusters of *woredas* are selected in highly food insecure and drought-prone areas. The eight clusters cover 34 *woredas* and more than 2.5 million people spread across five regions (Somali, Oromia, Afar, Amhara, and SNNPR). The clusters are composed of a minimum of two and a maximum of six *woredas*. The clusters represent some 10–15 percent of the overall food insecure population, including those in pastoral areas who are in need of resilience building.

A strong link exists between RESET II and PSNP IV. The RESET program will actively support graduation from the PSNP in its areas of intervention. RESET works at community level as well, favoring community ownership and management and the setup of DRM activities (EU RESET 2016).

The first phase (2012–17) of the RESET program, "Resilience Building in Ethiopia," was jointly contracted and funded by Cape Breton Development Corporation (DEVCO) and European Community for Humanitarian Concern (ECHO). A second phase will cover 2016–20; the fund, amounting to €47 million, will be channeled through the EU Trust Fund for Africa. It includes the support of the Dutch and Austrian cooperation agencies in Ethiopia and an enhanced partnership with the GoE.

Over the last 50 years, at least US$928 million has been invested in the development of the pastoral areas of Ethiopia. The largest single project investment is that of the PCDP (US$452 million). Table D.3 shows the investments made through some of the projects discussed herein. It is not an exhaustive list by any means, but the table captures the major investments.

TABLE D.3 Major development investment in Ethiopia's PAP areas, 1960–2018

PROJECT	FINANCIER	US$, MILLIONS	SOURCE
SLDP IDA Project agreement	World Bank	5.000	IDA 1973 project agreement
TLDP (PCR)	World Bank, AfDB, and GoE	35.800	World Bank 2001 PCR
PCDP	World Bank, IFAD, GoE, Community	452.800	World Bank 2008 PCDP II PAD, World Bank 2013 PCDP III PAD
SERP (PCR)	ADF, GoE	34.020	AfDB 2001, SERP PCR
RPLRP	World Bank	75.000	World Bank 2014 RPLRP PAD
DRSLP I	AfDB	46.000	AfDB/ADF 2014
DRSLP II	AfDB	50.000	IDDRSI 2015
Pastoral Livelihood Initiatives Phase I	USAID	33.800	USAID 2009
Pastoral Livelihood Initiatives Phase II	USAID IBTC	15.900	Stockton et al. 2012 PLI II MTR.
PRIME	USAID	70.000	USAID FtF 2019
EU RESET Phase II (EU RESET 2016)	EU	57.810	EU RESET 2016
SDRP	KfW	14.760	IDDRSI 2015
SDRA	Italian Development Cooperation	16.482	DRSLP 2015
RAIN	USAID/OFDA	20.600	Kleiman 2013
Total		**927.972**	

Note: ADF= African Development Fund; AfDB = African Development Bank; Community = Project Beneficiary Communities; DRSLP = Drought Resilience and Sustainable Livelihoods Project; EU RESET = European Union Resilience Building Programme in Ethiopia; GoE = Government of Ethiopia; IBTC = International Business and Technical Consultants; IDA = International Development Association; IDDRSI = IGAD [Inter-Governmental Authority for Development] Drought Disaster Resilience and Sustainability Initiative; IFAD = International Fund for Agricultural Development; KfW = *Kreditanstalt für Wiederaufbau*; PAD = Project Appraisal Document; PCDP = Pastoral Community Development Project; PCR = Project Completion Report; PRIME = Pastoralist Areas Resilience Improvement through Market Extension; RPLRP = Regional Pastoral Livelihoods Resilience Project; SERP = South-East Rangelands Development Project; SDRA = Strengthening Drought Resilience in Afar; SDRP = Strengthening Drought Resilience of Pastoralists; SLDP/IDA = Second Livestock Development Project/International Development Association; TLDP = Third Livestock Development Project; USAID/OFDA = U.S. Agency for International Development/Office of U.S. Foreign Disaster Assistance.

Appendix E
Regional Experiences from the HoA

KENYA

Kenya has a continuous history of development efforts in arid and semi-arid lowlands (ASALs) since its independence in 1963 (Kenya 2012a). The first phase (1963–80) was focused on range management, promotion of commercial livestock production, and registration of pastoral group ranches, primarily in Kajiado, Narok, Samburu, and Laikipia areas. In the more arid districts in the north and east, a block-grazing model was promoted (1968–82).

The first 10-year ASAL development program was formulated in 1979 and implemented until 1988. In 1989, the Government of Kenya created the Ministry of Reclamation and Development of Arid and Semi-Arid Areas and Wastelands to coordinate the policy formulation of all ASAL development. During the life of this ministry, the Environmental Action Plan (EAP) was developed, with the main objective to enhance the ability of ASAL communities to manage their resources in a sustainable manner. The significance of the EAP to ending drought emergencies was its emphasis on the need for policies, legislation, and institutions to address economic development and the environmental problems of the ASALs, with emphasis on improved pastoralism, dryland farming, wildlife integration, drought management, reclamation of degraded lands, community participation, and use of forest resources (Kenya 2012b).

Kenya has implemented several pastoral and dryland programs over the decades. The RPLRP is one such program, implemented since 2012, to transform the management of drought, substantially reduce its impact, and eventually end drought emergencies in Kenya. The program has six Strategic Response Areas (SRAs) or components:

- Peace and human security
- Humanitarian preparedness
- Climate-proofed infrastructure development
- Building human capital

- Sustainable livelihoods adaptive to climate change
- Multisector and multi stakeholder coordination.

As the implementation of such a complex program requires effective coordination of all stakeholders, the Government of Kenya established the National Disaster Management Authority (NDMA) to provide overall leadership and coordination of drought management in the country. A monitoring, evaluation, and reporting system was developed in line with the NIMES.

Lessons learned from the Kenyan experience for effective implementation of interventions in the Ethiopian ASALs include the following:

- A central body like the NDMA should be established for the implementation of all livelihood, resilience, and humanitarian interventions. Such a body should have political clout and report to the Office of the President to avoid fragmentation of roles and responsibilities and lack of focus.
- Priority and attention accorded to peace and security should be a major component in the design and implementation of development interventions in the ASALs (for example, conflict resolution and peacebuilding and conflict sensitivity planning), as peace and development must go hand in hand.

UGANDA

Over the years the Government of Uganda has made serious efforts to develop its livestock sector, investing in construction of infrastructure for livestock production including roads, water development (for irrigation, livestock, and aquaculture), disease control, quality assurance including laboratories, and market infrastructure. However, these infrastructures are disproportionately distributed in the ASALs, with some pastoral regions receiving less attention (for example, Karamoja) (DFID 2015). The growing national and international demand for livestock and livestock products presents an opportunity to revamp Uganda's livestock industry, which primarily depends on production in dryland PAP areas (Uganda 2013). However, the increased frequency of droughts has precipitated frequent humanitarian crises, diverting the attention of the Ugandan government, development partners, and NGOs. This has been detrimental to investments in long-term development programs, including investment in dryland pastoral areas.

Some of the key elements for success learned in Uganda (UNDP 2014) are the following:

- Active stakeholders' participation in planning and implementation, working through existing structures/systems, and building on local ownership, including community-based land management committees
- Transparent transactions and accountable behavior by leaders
- Formation of partnerships, collaboration, and harnessing of synergies across interventions
- Strong support for capacity building to enhance local technical and management capacity, improve farmers' skills for land management, and empower farmers to train others
- Cost-effective operations, leading to proven improvement of incomes and income diversification and visible streams of economic benefits; these accrue

to those involved, including multiple benefits from activities that save time and labor
- Technically sound initiatives expressed in simplified terms
- Inherent early warning mechanisms and activities, leading to better preparedness and early response to occurrence of drought
- Ability to leverage additional inputs from external sources.

Appendix F
Summary of Major Pastoral and Agropastoral Development Projects in Ethiopia

NAME OF PROJECT	KEY OBJECTIVE	OPERATIONAL AREA	FUNDING SOURCES	DURATION	DESIGN FEATURE	DEVELOPMENT APPROACH	KEY ACHIEVEMENTS	OUTCOMES	CONTRIBUTION TO SYSTEM SUSTAINABILITY AND RESILIENCE
ARPP	Modernization commercialization, Commodity (meat production)	Yabello, Borana	USAID and GoE	1965–75	Controlled grazing, rangeland management, and livestock production	Sectoral, technology-driven, and extractive focus	Established 8 x 8 km grazing paddock with large water points	Opened underutilized grazing resources and prevented non-prescribed range fire	Localized degradation and permanent settlements around water points
SLDP	Market modernization, Commodity (meat production)	Pastoral areas and the highland	GoE and the World Bank	1973–81	Integrated livestock market and stock route system; improved livestock offtake	Infrastructure and market-focused and top heavy; extractive in nature	Stock routes with staging points and market places were constructed	Some of the market places facilitated livestock marketing	Some benefit to integrate pastoral production with markets to enhance offtake
TLDP	Modernization and intensification investment to transform the livestock industry for production of meat and livestock	Afar, Ethio-Somali, and Borana plateau	The GoE, World Bank, and African Development Fund	1975–84	Restructure and modernize traditional rangeland practices; increase production efficiency	Sectoral, comprehensive, integrated, top down, technology-driven; controlled range use; and comprehensive land use planning and range management program	Infrastructure; veterinary services; highland-lowland linkage; establishment of three backgrounding ranches	Opened underutilized grazing areas, livestock mortality reduced, improved market awareness and engagement	Localized degradation, settlement, increased offtake of animals, enhanced mobility in some areas
FLDP SORDU Pilot	Test innovative ways of introducing low-cost pastoral participation for the sustainability of TLDP outputs and similar pastoral projects	Borana plateau	The GoE and World Bank	1988–93	Institution building to implement projects	Participatory and cost sharing	Institution built SCs capacitated to manage and pay for development	Knowledge and culture of participation and cost sharing	Cost sharing to sustain water points and animal health services; improve market linkage that increases offtake
SERP	Raise the living standards; improve productivity and food security, and sustainability	Ethio-Somali Region	The GoE and AfDB	1990–2001	Infrastructural and rangeland management	Participatory, cost sharing, bottom-up	Institution built to implement development, women empowerment	Institutions built to implement development and deliver services	
PCDP	Improve the livelihoods of pastoralists on sustainable basis while reducing their vulnerability to cyclic climatic shocks: development	SNNPR, Afar, pastoral areas in Oromia and SNNPR	The GoE, World Bank, and IFAD	2003–19	Social and economic services, risk management, livelihood improvement, and resilience	CDD and community and institution capacity building	Social and economic infrastructure built, CDD institutionalized; government institutions and community organization capacity developed to implement development services	Better social and economic services, confidence to implement development escaped relationship of dependency to have control on their own development	Enhanced diversification of livelihoods and alternative livelihoods, awareness raised to act proactively before drought hits

continued

NAME OF PROJECT	KEY OBJECTIVE	OPERATIONAL AREA	FUNDING SOURCES	DURATION	DESIGN FEATURE	DEVELOPMENT APPROACH	KEY ACHIEVEMENTS	OUTCOMES	CONTRIBUTION TO SYSTEM SUSTAINABILITY AND RESILIENCE
RPLRP	Enhance livelihood resilience of PAP communities in cross-border, drought-prone areas Improve the capacity of governments to respond promptly and effectively to an eligible crisis or emergency	Cross-border woredas in Afar SNRS, Oromia, SNNPR	The GoE and World Bank	2015–19	The RPLRP is regional in nature and implemented using a sustainable landscape approach along cross-border livestock	Holistic and comprehensive programming; Demand-driven, value chain approach	Ongoing-progress in cross-border vaccination and mapping of markets	Strengthen IGAD member countries' cooperation	Work in progress, needs evaluation
DRSLP	Contribute to GoE GTP plan of poverty reduction, food security, and accelerated sustainable economic growth through enhanced rural incomes	Cross-border woredas in Afar, SNRS, Oromia, SNNPR	The GoE and AfDB	2013–19 (with no-cost extension)	Market development, NRM, water development; Transboundary trade routes and corridors	Holistic and comprehensive programming Participatory	Ongoing—in progress—Fodder production, rehabilitation of water points, systems	Provision of timely feed during drought spells	Work in progress, needs evaluation
PRIME	Contribute to Feed the Future and GoE's economic growth and resilience	Afar, SNRS, SNNPR, Oromia	USAID	2012–18 (with extension)	Market linkage, NRM, livestock services, drought risk management	Holistic, innovative, market focused	Market improvement, support private sector	Quick response to drought, enhance resilience	Needs end of project evaluation

Note: AfDB = African Development Bank; ARPP = Arero Range Pilot Project; CDD = community demand-driven; DRSLP = Drought Resilience and Sustainable Livelihoods Project; FLDP = Fourth Livestock Development Project; GoE = Government of Ethiopia; GTP = growth and transformation plan; IFAD = International Fund for Agricultural Development; IGAD = Inter-Governmental Authority for Development; NRM = natural resources management; PAP = pastoral and agropastoral; PCDP = Pastoral Community Development Project; PRIME = Pastoral Areas Resilience Improvement through Market Extension; RPLRP = Regional Pastoral Livelihoods Resilience Project; SERP = South-East Rangelands Development Project; SLDP = Second Livestock Development Project; SNNPR = Southern Nations, Nationalities, and Peoples' Region; SNRS = Somali National Regional State; SORDU = Southern Rangeland Development Unit; TLDP = Third Livestock Development Project; USAID = U.S. Agency for International Development.

Appendix G
Priority Development Pillars for Pastoral and Agropastoral Resilience Building: General and by Region

GENERAL	ETHIO-SOMALI	AFAR	OROMIA	SNNPR	BGMZ	GAMBELLA
Livelihood support						
Transform pastoralism and livestock-based agropastoral production system						
Improved animal health services	Provision of comprehensive animal health services through private and PPP arrangements	Provision of comprehensive animal health services through private and PPP arrangements	Provision of comprehensive animal health services through private and PPP arrangements	Provision of comprehensive animal health services through private and PPP arrangements	Provision of comprehensive animal health services through private and PPP arrangements	Provision of comprehensive animal health services through private and PPP arrangements
Regional harmonization for cross-border livestock disease surveillance and control of TADs; Livestock traceability institutionalized	Policy enhancing and regulating privatization of the service and PPPs Regional harmonization for cross-border livestock disease surveillance and control of TADs Traceability system institutionalized	Policy enhancing and regulating privatization of the service and PPPs Regional harmonization for cross-border livestock disease surveillance and control of TADs Traceability system institutionalized	Policy enhancing and regulating privatization of the service and PPPs Regional harmonization for cross-border livestock disease surveillance and control of TADs Traceability system institutionalized	Policy enhancing and regulating privatization of the service and PPPs Regional harmonization for cross-border livestock disease surveillance and control of TADs Traceability system institutionalized	Regional harmonization for cross-border livestock disease surveillance and control of TADs Traceability system institutionalized	Regional harmonization for cross-border livestock disease surveillance and control of TADs Traceability system institutionalized
Improved breeds through selection and by promoting livestock species diversification	Breed interventions through selection	Breed interventions through selection	Breed interventions through selection	Breed interventions through selection	Breed interventions through selection	Breed interventions through selection
	Livestock species diversification	Livestock species diversification	Investment in Dida Tiyura breed conservation ranch; expansion of the community breeding branches to multiply the improved Borana breed	Introduction of camels	Verification of Nuer cattle breed for trypanotolerance capability	Verification of Nuer cattle breed for trypanotolerance capability
Improved access to market and participation and linkages	Establishment of market places including trust-based market linkage and information sharing Small-scale value addition, fattening, and milk processing	Establishment of market places including market linkage and information	Establishment of market places including market linkage and information	Establishment of market places including market linkage and information	Establishment of market places including market linkage and information	Establishment of market places including market linkage and information
	Facilitate cross-border trade for live animals and milk			Facilitate cross-border trade	Facilitate cross-border trade and road construction	Facilitate cross-border trade and road construction Quarantine
	Enhance early destocking of young male cattle	Enhance early destocking of young male cattle	Enhance early destocking of young male cattle	Enhance early destocking of young male cattle	Enhance early destocking of young male cattle	Enhance early destocking of young male cattle

continued

GENERAL	ETHIO-SOMALI	AFAR	OROMIA	SNNPR	BGMZ	GAMBELLA
Improved feed supplies and improved access to vast grazing land through enhanced mobility	Improved forage cultivation, fodder production and conservation, and efficient utilization of crop residues	Conserve and expand drought-tolerant local forage such as grasses, legumes, and browses	Conserve and expand drought-tolerant local forage such as grasses, legumes, and browses	Improve forage cultivation, enhance backyard forage production, private and group fodder production and conservation, and efficient utilization of crop residues	Proper management of available feeds, conservation and improved utilization of crop residues	Proper management of available feeds, conservation and improved utilization of crop residues
Water point development commensurate with available range resource potential	Water point development commensurate with available range resource potential	Water point development commensurate with available range resource potential	Water point development commensurate with available range resource potential	Water point development commensurate with available range resource potential	Water point development commensurate with available range resource potential	Water point development commensurate with available range resource potential
Dryland agronomy (agropastoralism) better farming practices and improved technology, small-scale and community-based irrigation schemes	Improved dryland agronomy, soil and water conservation and gully control, and water harvesting and spreading	Extension services for improved dryland agronomy and farming practices	Improved dryland agronomy, water harvesting, and spreading	Extension services for improved dryland agronomy and farming practices	Extension services for improved dryland agronomy and farming practices	Extension services for improved dryland agronomy and farming practices
	Small-scale individual and community-based medium-scale irrigation for cash crop and forage production	Small-scale individual and community-based medium-scale irrigation for cash crop and forage production		Small-scale individual and community-based medium-scale irrigation for cash crop and forage production	Controlled Fellatas' movement	
Livelihood Diversification and Alternative income generation						
Diversification, enhanced entrepreneurship	Alternative livelihood within the pastoral area, poultry, beekeeping, incense and gum, horticulture; skill development and entrepreneurship	Alternative livelihood through fisheries, horticulture, mining, or as a tour agent; promote employment creation through skill development for those exiting	Alternative livelihood within the pastoral area through beekeeping, incense and gum, poultry, horticulture, forage production; promote employment creation through skill development	Alternative livelihood through the outgrowers' scheme and fisheries Alternative livelihood outside the pastoral area through employment	Alternative livelihood in all areas including honey, farming, fisheries, mining, horticulture, and oil crops	Invest to facilitate mobility
	Improved pastoralist-friendly financial services such as RUSACCOs and MFI	Improved financial services through RUSACCOs and MFI	Improved financial services through RUSACCOs and MFI	Improved financial services through RUSACCOs and MFI	Improved financial services through RUSACCOs	Communal and group fodder production and conservation
	Support for the growth of small and medium pastoral towns and youth and women entrepreneurs		Support for the growth of small and medium pastoral towns and youth and women entrepreneurs	Support youth and women entrepreneurs Tourism	Support youth entrepreneurs	

continued

GENERAL	ETHIO-SOMALI	AFAR	OROMIA	SNNPR	BGMZ	GAMBELLA
	Enhance applied research for exploring viable diversifying and alternative IGAs	Enhance research for exploring viable diversifying and alternative IGAs	Enhance research for exploring viable diversifying and alternative IGAs	Enhance research for exploring viable diversifying and alternative IGAs	Enhance research for exploring viable diversifying and alternative IGAs	Range management Soil and water conservation
	Land use planning	Land use planning	Land use planning	Land use planning	Land use planning	Land use planning
Integrated rangeland and water development and secure access to key resources						
	Improved access to the vast grazing resource through mobility and designated movement routes	Improved access to the vast grazing resource through mobility and designated movement routes	Improved access to the vast grazing resource through mobility and designated movement routes	Improved access to the vast grazing resource through mobility and designated movement routes	Improved access to the vast grazing resource through mobility and designated movement routes	Improved access to the vast grazing resource through mobility and designated movement routes
	Communal and group fodder production and conservation	Communal and group fodder production and conservation	Communal and group fodder production and conservation	Communal and group fodder production and conservation	Communal and group fodder production and conservation	Communal and group fodder production and conservation
	Control of invasive species	Control of invasive species	Control of invasive species	Control of invasive species	Control of invasive species	Control of invasive species
	Promote commercial feed production and markets	Promote commercial feed production and markets	Promote commercial feed production and markets	Promote commercial feed production and markets	Promote commercial feed production and markets	Promote commercial feed production and markets
	Soil and water conservation and gully control	Soil and water conservation and gully control	Soil and water conservation and gully control	Soil and water conservation and gully control	Soil and water conservation and gully control	Soil and water conservation and gully control
	Rangeland use planning and communal land certification	Rangeland use planning and communal land certification	Rangeland use planning and communal land certification	Rangeland use planning and communal land certification	Rangeland use planning and communal land certification	Rangeland use planning and communal land certification
	Strengthen customary rules for sharing and regulating utilization of grazing resources	Strengthen customary rules for sharing and regulating utilization of grazing resources	Strengthen customary rules for sharing and regulating utilization of grazing resources	Strengthen customary rules for sharing and regulating utilization of grazing resources	Strengthen customary rules for sharing and regulating utilization of grazing resources	Strengthen customary rules for sharing and regulating utilization of grazing resources
	Enhance context specific Participatory Rangeland Management	Enhance context specific Participatory Rangeland Management	Enhance context specific Participatory Rangeland Management	Enhance context specific Participatory Rangeland Management	Enhance context specific Participatory Rangeland Management	Enhance context specific Participatory Rangeland Management
	Range quality improvement	Range quality improvement	Range quality improvement	Range quality improvement	Range quality improvement	Range quality improvement

continued

GENERAL	ETHIO-SOMALI	AFAR	OROMIA	SNNPR	BGMZ	GAMBELLA
Transformation and commercialization of the livestock industry						
Promote market-oriented meat-milk production at the level of family herd; Specialized meat-milk production for domestic as well as export markets; processing, integrated livestock value chain development; Industrialization and transformation of the livestock sector	Support for the expansion of improved market-oriented small, medium, and large family herd	Support for the expansion of improved market-oriented small, medium, and large family herd	Support for the expansion of improved market-oriented small, medium, and large family herd	Support for the expansion of improved market-oriented small, medium, and large family herd	Support for the expansion of improved market-oriented small, medium, and large family herd	Support for the expansion of improved market-oriented small, medium, and large family herd
	Enhance early destocking of young male cattle	Enhance early destocking of young male cattle	Enhance early destocking of young male cattle	Enhance early destocking of young male cattle		Enhance early destocking of young male cattle
	Commercial small- to medium-scale feedlot	Commercial small- to medium-scale feedlot	Commercial small- to medium-scale feedlot	Commercial small- to medium-scale feedlot	Commercial small- to medium-scale feedlot	Commercial small- to medium-scale feedlot
	Small- and medium-scale agroprocessing for meat, milk, hides, and skins	Small- and medium-scale agroprocessing for meat, milk, hides, and skins	Small- and medium-scale agroprocessing for meat, milk, hides, and skins	Small- and medium-scale agroprocessing for meat, milk, hides, and skins	Small- and medium-scale agroprocessing for meat, milk, hides, and skins	Small- and medium-scale agroprocessing for meat, milk, hides, and skins
	Support to specialized market service providers and entrepreneurs along the value chain	Support to specialized market service providers and entrepreneurs along the value chain	Support to specialized market service providers and entrepreneurs along the value chain	Support to specialized market service providers and entrepreneurs along the value chain	Support to specialized market service providers and entrepreneurs along the value chain	Support to specialized market service providers and entrepreneurs along the value chain
	IT-based market information system	IT-based market information system	IT-based market information system	IT-based market information system	IT-based market information system	IT-based market information system
	Lowland-highland market linkage and stratification of production	Lowland-highland market linkage and stratification of production	Lowland-highland market linkage and stratification of production	Lowland-highland market linkage and stratification of production	Lowland-highland market linkage and stratification of production	Lowland-highland market linkage and stratification of production
	Development of local industry for large-scale red meat and camel milk processing; livestock industrial park	Development of local industry for large-scale red meat and camel milk processing; livestock industrial park	Development of local industry for large-scale red meat processing; livestock industrial park	Small-scale fattening along the sugarcane plantation		Red meat cluster
Policy and institutional arrangement to enhance private and PPP engagement along the value chain	Policy and institutional arrangement to enhance private and PPP engagement along the value chain	Policy and institutional arrangement to enhance private and PPP engagement along the value chain	Policy and institutional arrangement to enhance private and PPP engagement along the value chain	Policy and institutional arrangement to enhance private and PPP engagement along the value chain		

continued

GENERAL	ETHIO-SOMALI	AFAR	OROMIA	SNNPR	BGMZ	GAMBELLA
Enhance access and utilization of basic social and economic services						
Improved availability, accessibility, and utilization of quality and basic services	Improved availability, quality, and utilization of basic services; skill-based training for off-farm employment; TVET, secondary, and tertiary for high-income-earning jobs	Improved availability, quality, and utilization of basic services; establish boarding schools, mobile schooling, special needs education; expand adult literacy Establishment of special institute to produce pedagogical material for pastoral context/education; health strategy for pastoral context; institutional setup to create local skilled manpower to provide basic services	Improved availability, quality, and utilization of basic services; skill-based training for off-farm employment; TVET, secondary, and tertiary for high-income earning jobs	Improved availability, quality, and utilization of basic services; skill-based training for off-farm employment	Improved availability, quality, and utilization of basic services	Improved availability, quality, and utilization of basic services
Upgrading the level of the existing basic services	Upgrading the level of existing basic social and economic services special needs education	Upgrading the level of basic services	Upgrading the level of existing basic social and economic services	Upgrading the level of basic services		
Enhance social protection and disaster risk management						
Social protection and PRM with all pastoral early warning, contingency planning, and financing, strategic investment components	Strengthen the traditional social protection mechanisms and institutions PRM with structured community-based early warning systems, contingency planning and financing, strategic investment components	Strengthen the traditional social protection mechanisms and institutions and social capital Mainstream Disaster Risk Reduction in all sectors and support it with plan and budget Strengthen formal and informal early warning system (focusing on Dagu) Establish meteorological stations PRM with all early warning, contingency planning and financing, strategic investment components	Strengthen the traditional social protection mechanisms and institutions and social capital Mainstream DRR in all sectors and support it with plan and budget Strengthen formal and informal early warning system Establish meteorological stations and downscale information to the local-level PRM with all early warning, contingency planning and financing, strategic investment components	PRM with all early warning, contingency planning and financing, strategic investment components Establishment of meteorological stations at *woreda* level for better early warning system Improve dissemination of downscaled early warning information and advisories	Flood control Control of the Fellatas' cross-border movement	Flood control Control of the Fellatas' cross-border movement

continued

GENERAL	ETHIO-SOMALI	AFAR	OROMIA	SNNPR	BGMZ	GAMBELLA
Insurances such as IBLI and other crop insurance for pastoralists and agropastoralists	Pastoralist- and agropastoralist-friendly insurance mechanisms		Insurance for pastoralists and agropastoralists			
Rapidly scalable safety net program	Rapidly scalable safety net program	Rapidly scalable safety net program Strengthen PSNP	Rapidly scalable safety net program	Rapidly scalable safety net program	Rapidly scalable safety net program	Rapidly scalable safety net program
Peacebuilding and conflict management	Strengthen the traditional conflict management mechanisms and institutions and blend them with the modern system for peacebuilding and conflict management	Peacebuilding and conflict managements locally	Peacebuilding and conflict managements locally and cross-border	Peacebuilding and conflict management locally	Peacebuilding and conflict management locally and cross-border	Peacebuilding and conflict management locally and cross-border
Institutional capacity building and other cross-cutting issues						
Gender	Gender	Gender	Gender	Gender	Gender	Gender
Nutrition	Nutrition	Nutrition	Nutrition	Nutrition	Nutrition	Nutrition
Capacity building	Capacity building	Capacity building	Capacity building	Capacity building	Capacity building	Capacity building
Policy support	Policy support	Policy support	Policy support	Policy support	Policy support	Policy support
Knowledge documentation	Knowledge documentation	Knowledge documentation	Knowledge documentation	Knowledge documentation	Knowledge documentation	Knowledge documentation
Indigenous knowledge and customary institutions	Indigenous knowledge and customary institutions	Indigenous knowledge and customary institutions	Indigenous knowledge and customary institutions	Indigenous knowledge and customary institutions	Indigenous knowledge and customary institutions	Indigenous knowledge and customary institutions

Note: BGMZ = Benishangul-Gumuz Region; DRR = disaster risk reduction; IBLI = index-based livestock insurance; IGA = income-generating activities; IT = internet technology; MFI = microfinance institution; PAP = pastoral and agropastoral; PPP = public-private partnership; PRM = Pastoral Risk Management; PSNP = Productive Safety Net Program; SNNPR = Southern Nations, Nationalities, and Peoples' Region; TAD = transboundary animal disease; TVET = technical and vocational education and training; RUSACCO = Rural Saving and Credit Cooperative.

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Despite half a century of development efforts, multidimensional deprivation and vulnerability to shocks remain a serious problem in Ethiopia's pastoral areas. A review of past and ongoing pastoral and agropastoral (PAP) development efforts in Ethiopia, analysis of the current socioeconomic situation in relation to PAPs, and an extensive literature review of emerging knowledge on the topic point to the need for future PAP development to focus on resilience, transformation, and sustainability. This study, which was commissioned by the World Bank and the International Fund for Agricultural Development (IFAD), proposes six strategic pillars: livelihood support for improved pastoral and agropastoral production; livelihood diversification and improved agropastoral extension; integrated rangeland and water development, and secure access to key resources; transformation and commercialization of the livestock industry; enhanced access and use of basic social and economic services; enhanced social protection and disaster risk management; and institutional and human capacity development. In addition, intervention-planning needs to be sensitive to conflict, should mainstream gender issues and nutrition, and should emphasize women and youth employment, climate change and adaptation, information technology, action-oriented research, and knowledge management and documentation.

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