



A regional approach to drought index- insurance in Intergovernmental Authority on Development (IGAD) countries

Volume II: Intergovernmental Authority on Development
country annexes



**RESEARCH
PROGRAM ON
Livestock**

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Authors of Volume I and Volume II: Felix Lung, Charles Stutley, Yihene Zewdie and Francesco Fava.

Authors of Volume III: Njoki Kahiu, Anton Vrieling and Francesco Fava.

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Correspondence: Francesco Fava, Sustainable Livestock Systems, International Livestock Research Institute, Nairobi, Kenya and Department of Environmental Science and Policy (ESP), Università degli Studi di Milano, 20133 Milano, Italy. E-mail: francesco.fava@unimi.it

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Patron: Professor Peter C Doherty AC, FAA, FRS

Animal scientist, Nobel Prize Laureate for Physiology or Medicine—1996

Box 30709, Nairobi 00100 Kenya
Phone +254 20 422 3000
Fax+254 20 422 3001
Email ilri-kenya@cgiar.org

ilri.org
better lives through livestock
ILRI is a CGIAR research centre

Box 5689, Addis Ababa, Ethiopia
Phone +251 11 617 2000
Fax +251 11 667 6923
Email ilri-ethiopia@cgiar.org

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country annexes

Felix Lung¹, Charles Stutley¹, Yihene Zewdie² and Francesco Fava^{2,3}

¹Disaster risk finance consultant

²International Livestock Research Institute (ILRI), Sustainable Livestock Systems

³Università degli Studi di Milano, Department of Environmental Science and Policy (ESP)

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Acronyms and abbreviations

AfDB	African Development Bank
ASAL(s)	Arid and semi-arid land(s)
CIMA	Conférence interafricaine des marchés d'assurance (Inter-African Conference on Insurance Markets)
DIRISHA	Drought Index Insurance for Resilience in the Sahel and Horn of Africa
eMODIS	Enhanced moderate resolution imaging spectroradiometer
FAO	Food and Agricultural Organization of the United Nations
FCDO	Foreign, Commonwealth and Development Office
GDP	Gross domestic product
IBLI	Index-based livestock insurance
ICPAC	IGAD Climate Prediction and Application Centre
ICPALD	IGAD Centre for Pastoral Areas and Livestock Development
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IGAD	Intergovernmental Authority on Development
ILRI	International Livestock Research Institute
IPC	Integrated Food Security Phase Classification
KLIP	Kenya Livestock Insurance Program
MPI	Multidimensional poverty index
ND-GAIN	Notre Dame Global Adaptation Initiative
NGO	Non-governmental organization
NDVI	Normalized Difference Vegetation Index

SIPE	Satellite Index Insurance for Pastoralists in Ethiopia
TLU(s)	Tropical livestock unit(s)
UAIS	Uganda Agricultural Insurance Scheme
UK	United Kingdom
USAID	United States Agency for International Development
WBG	World Bank Group
WFP	World Food Programme

Introduction

This report is Volume II to the report ‘A Regional Approach to Drought Insurance in Intergovernmental Authority on Development Countries, Volume I – Operational Feasibility Report’. It should be read in conjunction with Volume I, the main report.

This desk-based study has been conducted under the Drought Index Insurance for Resilience in the Sahel and Horn of Africa (DIRISHA) research program commissioned by the United Kingdom Foreign, Commonwealth and Development Office (FCDO). The study was conducted in the latter half of 2020 by the International Livestock Research Institute (ILRI). Volumes I and II of the study review the operational feasibility of a regional index-based livestock insurance (IBLI) approach in IGAD countries. A third report, Volume III, focuses on the technical feasibility of such an approach.

The objectives of this report are to review for each IGAD country the overall environment for the operational feasibility of implementing IBLI. The operational feasibility areas are summarized and scored at the end of each country chapter. They include the following.

- **Importance of pastoral livestock for economy:** To what extent is the pastoral livestock sector an important contributing factor to the country’s economy overall.
- **Impact of drought on livestock:** To what extent livestock is affected severely by recurring droughts in that country.
- **Pastoralist demand for livestock insurance:** The extent to which pastoralists in that country have shown a demand to purchase livestock insurance. This could particularly be the case in countries where IBLI-based solutions have already been implemented before such as Ethiopia and Kenya.
- **Effective distribution channels for micro-level IBLI:** The extent to which there are potentially effective distribution channels to retail micro-level voluntary IBLI policies to individual pastoralists. This includes, e.g., the degree of financial inclusion among pastoralists; the level of development of mobile banking solutions among pastoralists; and the level of development of insurance companies’ distribution networks in pastoral areas retailing micro-level voluntary IBLI policies.
- **Existing pastoralist beneficiary registries:** Whether there are existing registries of poor pastoralists that could be used for registration of beneficiaries under a potential modified macro-level IBLI solution.
- **Pastoralist financial literacy:** The extent to which pastoralists in the respective country show developed understanding and acceptance of advanced financial solutions such as insurance.
- **Legal and regulatory insurance environment:** The extent to which the country’s legal and regulatory environment is supportive of IBLI, e.g. whether there is in-country experience with implementing index-based insurance solutions.
- **Insurance market development:** The extent to which the in-country insurance markets have developed.

- **Interest from insurers in IBLI:** The extent to which local insurance companies have voiced their interest in underwriting potential IBLI policies.
- **Finance available for premiums:** The extent to which the country's government has declared its intent or shown its commitment in the past to provide supportive financing to IBLI solutions for pastoralists.
- **Interest from government stakeholders in IBLI:** The extent to which the country's government has expressed its interest in developing and supporting IBLI solutions in that country.

This report was conducted combining a desk-based study with key informant interviews. As for Volume I, given the travel restrictions due to COVID-19, only a minimum of in-country stakeholder meetings have been possible. Instead, questionnaires were shared with more than 50 in-country expert stakeholders (of which 21 replied), including ministries of agriculture, ministries of humanitarian affairs, ministries of finance, insurance regulators, development partners, livestock associations and non-governmental organizations (NGOs), inquiring about the status quo of drought risk financing initiatives in IGAD countries, the status of needed operational infrastructure for a regional approach, and the interest of stakeholders to support such an approach. Where applicable, results from these questionnaires and from other stakeholder consultations were included in the country annexes (as indicated).

The rest of the report is structured as follows. For each IGAD country, a summary country report follows. Each report includes short reviews of the socio-economic relevance of livestock production and pastoralism, the impacts of droughts on the livestock sector and pastoralist livelihoods, existing pastoralist development programs and existing drought risk financing initiatives, national livestock insurance market development, and other operational elements for potential IBLI implementation. Additionally, a summary and preliminary IBLI operational feasibility assessment and a set of annexes listing the most important pastoralist organizations and livestock associations in that country are included (except for Eritrea, where no data are available).

A. Djibouti

Table 1: Summary of livestock and insurance in Djibouti

Status of planning and implementation of Index-Based Livestock Insurance					
IBLI availability	None. Currently there is no crop or livestock insurance provision in Djibouti				
IBLI planning	2020 IBLI feasibility study conducted (WBG 2020).				
Livestock and pastoralism sector					Map amended from (Cecchi et al. 2010)
No. of pastoralists (% of total population)	MPI rating in rural areas	Livestock contribution to GDP		Livestock production index (2004–06 = 100)	
0.4 M (45%) ¹ (2015)	0.651 ² (2017)	3.1% ³ (2017)		134 ⁴ (2017)	
Livestock breakdown ⁵ (2018)*					
Total TLUs‡	Camels	Cattle	Goats	Sheep	
499,000	71,000	301,000	515,000	469,000	
Key insurance and financial sector institutions					
Banks in pastoral areas	Not available (n.a.) (seven banks and four Islamic banks with only very few branches in inner country)				
Mobile cash	Porte Monnaie Mobile de Djibouti; MDJF (mobile payment system)				
Insurance companies	n.a. (the two only insurers in-country are not interested in IBLI)				
Other	La Poste de Djibouti (for cash transfers)				
Key insurance schemes and legislation					
Insurance law/regulation	Djibouti adopts the CIMA code as the basis of insurance. Insurance supervision is carried out by the Insurance Control Service under the authority of the Ministry of Economy and Finance.				
Livestock insurance products	There is no history of agricultural crop or livestock insurance provision in Djibouti.				
Other relevant partners for IBLI					
Government partners	Directorate of Livestock, Ministry of Agriculture; Ministry of Interior				
Livestock sector associations	Djibouti Agro-Pastoralist Association				
Most important development partners	IFAD, FAO, WBG, WFP				

*FAO data based on imputation methodology, estimates and government data.

‡Tropical livestock units (TLUs) are livestock numbers converted to a common unit. The conversion coefficient varies by region of the world. TLU conversion rates: Camel: 1.4 | Cattle: 1.0 | Goat: 0.1 | Sheep: 0.1

FAO = Food and Agricultural Organization of the United Nations; IFAD = International Fund for Agricultural Development; MPI = multidimensional poverty index; WBG = World Bank Group; WFP = World Food Programme

¹(UNECA 2017)

²The multidimensional poverty index is an index between 0 and 1 that is comprised of 10 different indicators on poverty. The higher the index value, the greater the poverty (OPHI 2017).

³(Guthiga et al. 2017).

⁴(FAOSTAT 2020c).

⁵(FAOSTAT 2020c).

I. Socio-economic relevance of livestock production and pastoralism

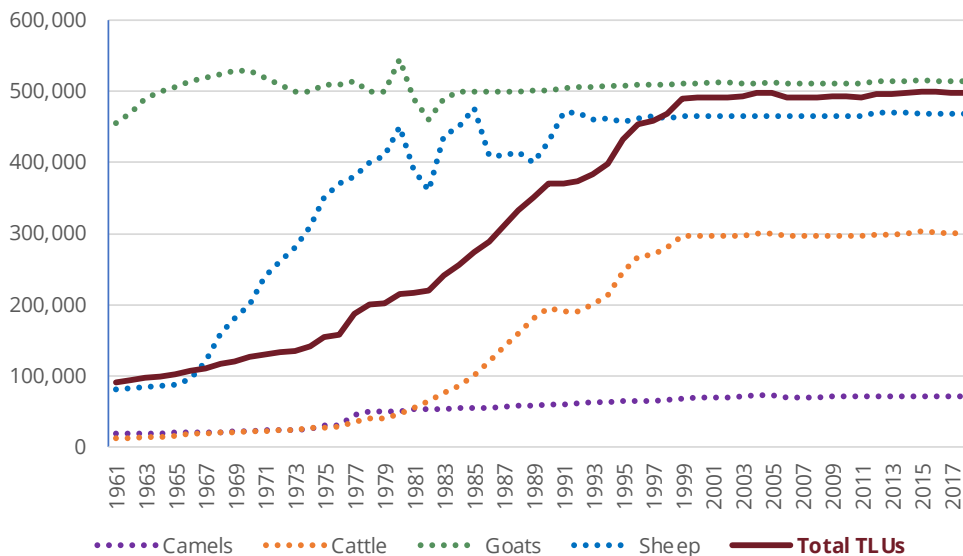
Socio-economic situation in Djibouti

Djibouti suffers from an undiversified economy and a chronic food deficit. The country ranks 171st out of 189 countries on the Human Development Index. More than 23% of the population lives in extreme poverty, with a heavy reliance on imports to meet its food needs (World Bank 2020h). Youth unemployment (21.3%) is nearly twice the total unemployment rate (11.1%), with 47.3% of the total employed considered vulnerable (UNDP 2019a). The total population was 1 million in 2017, of which 20% lived in rural areas (FAOSTAT 2020c). There are stark differences between the rural and urban population. According to a household survey administered by the Statistics Department in 2013, the incidence rate of extreme poverty in Djibouti city was 13.7%, and 40.9% for the remaining part of the country (IGAD 2020a).

Economic relevance of the livestock sector

The agriculture sector only makes up a marginal part of the country's economy but is crucial for rural households, which tend to depend on subsistence livestock rearing. The national economy is characterized by an urban-centred commercial sector reliant on the service industry, and a secluded, rural subsistence-based pastoralist economy (Babikir et al. 2015). Agriculture contributes only 1.3% to gross domestic product (GDP) but accounts for 50.4% of total employment (FAOSTAT 2020c). The livestock sector contributes 82.2% of agricultural GDP (Guthiga et al. 2017). The ratio of Djibouti's livestock sector to agricultural GDP is the largest for any IGAD country, illustrating the limited relevance of crop farming (UNECA 2017). Djibouti's agricultural sector is constrained by limited natural resources, with over 90% of the land being categorized as desert (Babikir et al. 2015).

Figure 1: Numbers of major livestock species in Djibouti (1961–2017).



Source: FAOSTAT 2020c

Livestock production systems and livelihoods

There are two major agricultural production systems, with pastoralism accounting for the majority of rural livelihoods. Pastoral activities mostly consist of nomadic herding. More than 90% of the country's area is used for herding purposes, mostly subsistence nomadic or semi-nomadic breeding of small ruminants (primarily goats) and camels.

Small-scale crop farming has increased over the past three decades but accounts for only a small percentage of Djibouti's economy, population and land usage (Babikir et al. 2015).

Pastoralist households face relatively relaxed grazing right institutions, allowing the continuation of traditionally applied tenure systems. Djibouti does not possess national land tenure legislation and instead upholds traditional tenure rights and management practices of pastoralists. Pastoralist households, in accordance with tribal leadership and traditions, continue managing the livestock grazing land independently (UNECA 2017).

Market access for livestock producers

Djibouti is a net importer of livestock, mainly sourcing them from neighbouring countries. The country has two cross-border markets at the Ethiopian and the Somali borders. Livestock trade with these two countries is indispensable for domestic consumption and for the transit to the port of Djibouti city, where livestock is exported to foreign markets, such as Egypt, Emirates, Kuwait, Oman, Saudi Arabia, Yemen, Qatar, Jordan, Lebanon and Bahrain (IGAD 2013).

Djibouti's veterinarian facilities and services are scarce. The country has a central laboratory at the Somalia border close to Djibouti city but no regional laboratories. Export animals are being tested at the quarantine station (IGAD 2016).

Issues and challenges faced by the pastoral and livestock sector

Poor vegetation and prevailing climate risks limit the availability of pasture required for livestock production. Djibouti's vegetation patterns are responsible for limited forage resources for livestock production, a trend that is further increased by climatic trends that decrease water resources and risk livestock deaths (ICPAC and WFP 2018).

Djibouti's central highlands and southern region suffer from continuous land degradation. Only 0.04% of the country's land is arable given the limited availability of water and the low and highly volatile annual rainfall. As most areas have minimal or no vegetation, agricultural production is limited to a few areas of the country, which further increases competition for natural resources (ICPAC and WFP 2018).

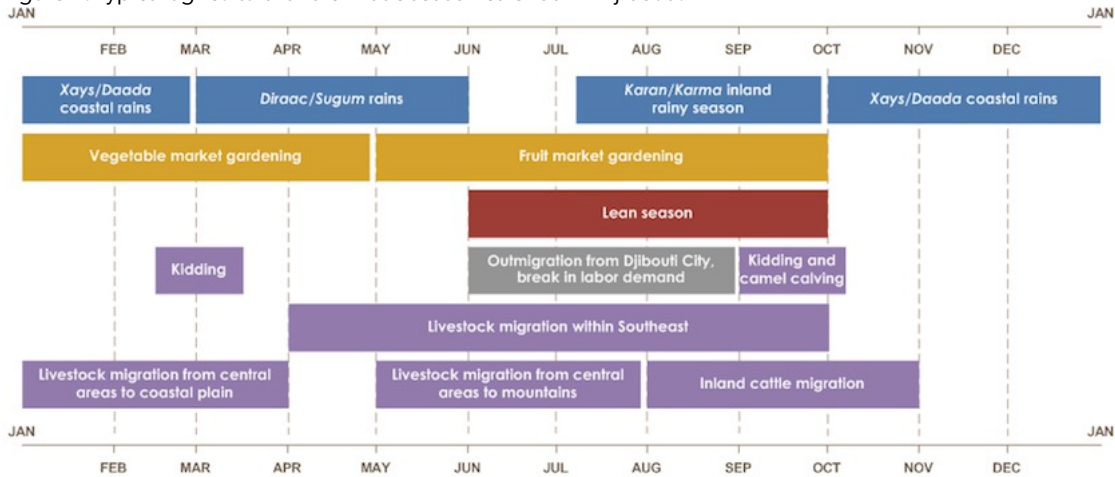
Physical access to markets to sell and purchase livestock is often restricted. Due to the country's dependency on food imports, livestock are less likely to be sourced from locally grown sources. Therefore, remote areas in the north and those at the Ethiopian border have restricted access to critical food items, which increases reliance on supply chains and cross-border trade with Ethiopia (ICPAC and WFP 2018).

II. Impacts of droughts on livestock sector and pastoralist livelihoods

Agroclimatic conditions in pastoral regions

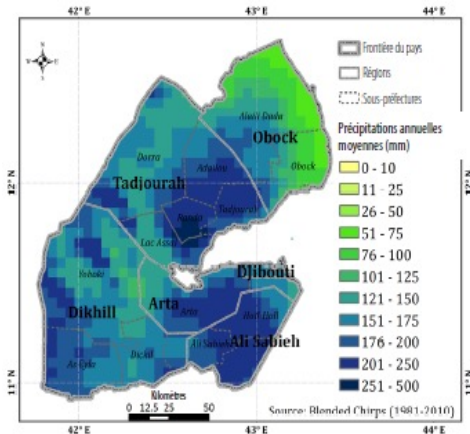
The majority of the Djibouti's area can be defined as desert, with minor pockets of forests and dense vegetation in the north. The country has three distinct geographic areas: a coastal line, a volcanic plateau in the southcentral region, and mountain ranges in the north. The main climate seasons are a dry spell lasting from May to September and a cooler season from October to April, with occasional rains in between (Babikir et al. 2015). Djibouti's climate is classified as arid to extremely arid, with average temperatures above 30°C, which can reach 45°C during the dry spell (ICPAC and WFP 2018). All of Djibouti territory is considered to be arid or semi-arid (IGAD 2020a).

Figure 2: Typical agricultural and climatic season calendar in Djibouti.



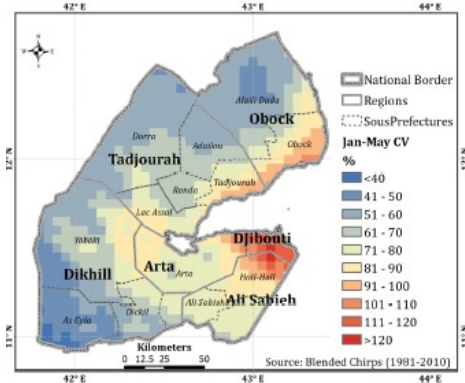
Source: FEWS NET 2020b

Figure 3: Mean annual rainfall over Djibouti (1981–2010).



Source: ICPAC and WFP 2018.

Figure 4: Coefficient of variation for Djibouti January–May seasonal rainfall (1981–2010).



Source: ICPAC and WFP 2018.

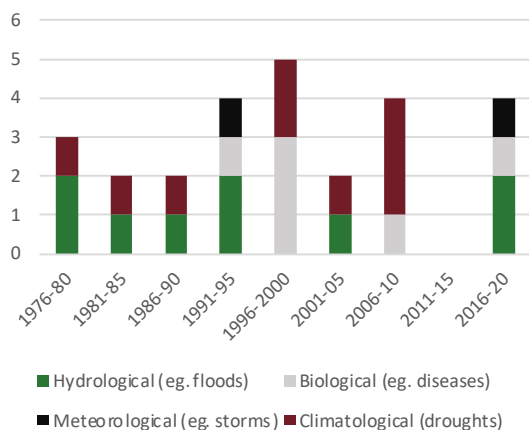
Rainfall in Djibouti is generally speaking low and highly variable, depending on the season and region. The average annual rainfall is 147 mm, varying from about 60 mm in the northeast to 300 mm at the coast. The rainfall at the coastal areas usually occurs from November to March, and inland between April to October. Patterns, however, are irregular, with long periods of no rains occurring, with infrequent heavy rain (ICPAC and WFP 2018).

Frequency and severity of natural disasters

Djibouti is heavily exposed to the effects of climate change and increasing occurrence of natural disasters. The country ranks 14th globally and 1st in sub-Saharan Africa in the WorldRiskIndex score, derived from the exposure (very high) and vulnerability (very high) to natural hazards (BEH and IFHV 2020). It further ranked 77th out of 181 countries on the ND-GAIN (Notre Dame Global Adaptation Initiative) Exposure Ranking in 2018, which describes the degree to which a system is exposed to significant climate change from a biophysical perspective (ND-GAIN 2020).

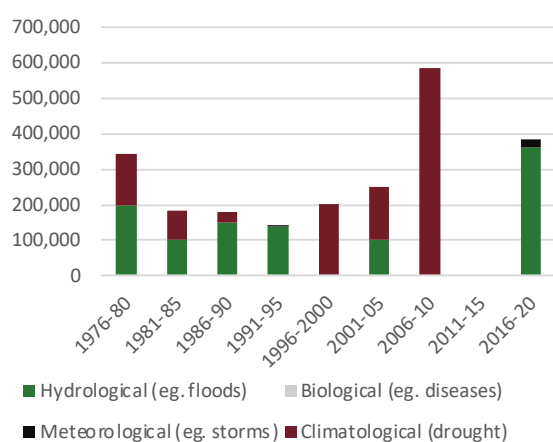
The country is vulnerable to a variety of different natural hazards that are all increasing in frequency. Disasters include multi-year droughts, flash and intense floods, earthquakes in the country's volcanic area, and wildfires resulting from droughts. Droughts occur regularly, with notable ones taking place in 1996, 2001, 2005, 2007, 2008 and 2010. Floods are rare given limited rainfall, with the exceptions of flash floods when torrential rains occur, as happened in 1993, 1994 and 2004 (ICPAC and WFP 2018).

Figure 5: Number of events by disaster type in Djibouti (1976–2020).



Source: EM-DAT 2020.

Figure 6: Number of affected people by disaster type in Djibouti (1976–2020).



Source: EM-DAT 2020.

Impact of droughts and other perils on livestock and the pastoral sector

The impact of climate risks, particularly droughts, are concentrated in the livestock sector, incurring millions of dollars of loss (ICPAC and WFP 2018). Ecological constraints such as erratic rainfall pattern, heavy showers that are lost as run-off, high evapotranspiration rates, increased competition with weeds, and low soil organic matter constrain pastoralist production systems (IGAD 2020a). An extended drought from 2008 to 2011 caused total GDP to decrease by 4% annually. Farmers and herders were hit the hardest, with the agricultural sector losing 50% of its GDP, affecting 120,000 people (15% of the population) and causing greater food insecurity (GFDRR 2015). Major droughts occurring in 1983–85, 1991–92, 1998–99, 2010–11 and 2016 led to a mortality rate between 37% and 62% of the national livestock population (IGAD 2020a).

As rural households face constrained food availability, decreased access to natural resources and adverse market impacts from macroeconomic events, the majority of them are engaging in negative coping strategies. Some 51% of pastoralists reported employing negative coping strategies: 17% resort to emergency strategies such as selling assets or committing illegal acts, 15% to crisis strategies such as reducing non-food expenses, and 22% to using stress strategies, such as buying food on credit or using savings (FSIN 2019). Pastoralists also move domestically and to neighbouring countries to follow the rains (Babikir et al. 2015).

Impact on food security and overall well-being

Some 280,000 people are estimated to be chronically food insecure, partially due to the trade imbalance in the agriculture sector. In affected areas, about 20–30% of people tend to experience severe food insecurity, Integrated Food Security Phase Classification (IPC) level 4 (Severe) (IPC 2020). The country has a vast food trade imbalance, with the value of food imports exceeding the value of exported food goods by a factor of 10 in 2017. This imbalance makes the country vulnerable to macro-economic trends, foreign market dynamics and price volatility (FAOSTAT 2020c).

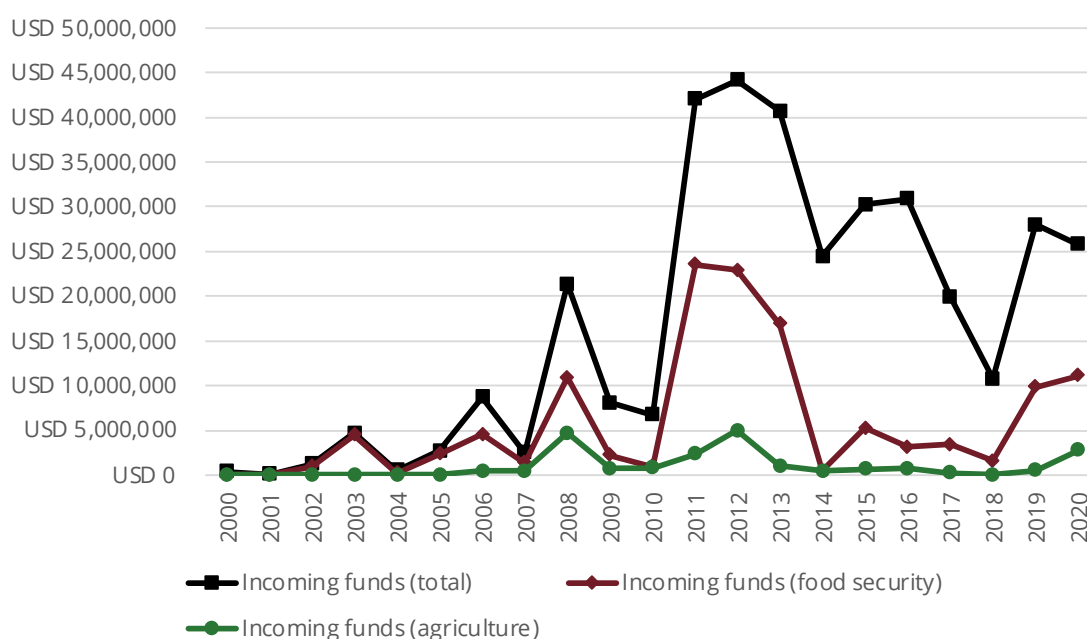
Research suggests that pastoralists are especially severely affected by droughts. Rural households are the part of the population that is most vulnerable and the most affected by chronic food insecurity. Some 55% of the rural population is categorized as moderately or severely food insecure due to limited rainfall patterns and the effects of droughts. An additional 40% of rural households are marginally food insecure. Limited domestic food production, decreased economic opportunities, and high food prices impede rural households' access to sufficient and nutritious diets. Especially remote rural markets tend to have only poor access to quality and affordable food (FSIN 2019).

COVID-19 has had severe impacts on pastoralist populations in Djibouti and has been an additional key driver of food insecurity in 2020 (FEWS NET 2020b). By 5 October 2020, 76,791 tests were conducted, confirming 5,414 infections, of which nine were still active and 5,344 had recovered. Sixty-one people had died from COVID-19 (IGAD and WHO 2020). Expert questionnaire respondents indicated that the impact of COVID-19 on pastoralist populations had been severe, indicating impacts in the following areas.

- Disrupted access to (i) agricultural inputs (including labour), (ii) extension and advisory services, (iii) output markets for many pastoralists; and (iv) veterinary services, e.g. control of Transboundary Animal Diseases, surveillance measures, cross-border control and continued animal treatment.
- Limited options to selling pastoralists' animals after the prohibition of trade from the neighbouring countries of Somalia and Ethiopia.

Humanitarian assistance

Figure 7: Incoming international aid funding to Djibouti as tracked by UN OCHA (2000–2020).



Source: UN OCHA FTS 2020.

III. Pastoralist development programs and existing drought risk financing initiatives

Table 2: Donor projects focused on the enhancement of the pastoralist and livestock sector in Djibouti.

Organization	Project title	Cost/contribution	Duration
IFAD	Soil and Water Management Program	Total: USD 17.26 million IFAD: USD 6.29 million	2016–2024
Islamic Development Bank)	Dryland Project	USD 10 million	2013–20
FAO	Project of Securing Pastoral Systems in Djibouti	USD 10 million	
World Bank	Second Additional Financing for the Rural Community Development and Water Mobilization Project	Total: USD 7.2 million World Bank: USD 7.0 million	2012 to date
FAO	Renforcement de la Productivité des Productions Végétales et Animales à Djibouti	USD 6,859,364	2018–2022
World Bank	Emergency Locust Response Program (multiple recipient countries)	USD 6.6 million (share for Djibouti)	2020–2023
World Bank	Rural Community Development and Ware Mobilization – additional financing	USD 3.0 million	2012 to date

Note: USD = United States dollar.

Source: Various.

Existing drought risk financing initiatives

Except for some budgetary allocations, the Government of Djibouti has no financial planning mechanisms for drought response in place. The Ministry of Interior has an annual emergency budget line for drought response (Fonds d'urgence pour la gestion des risques et des catastrophes) amounting to around 12 million Djiboutian franc (DJF) (67,000 United States dollar (USD)) for emergency response measures. In the 2020 finance law, the government has indicated the intention to raise this amount, due to the financial difficulty faced in 2019 to respond to floods. There is also a budget for unforeseen expenditures which in 2020 amounted to DJF 1 billion (USD 5.6 million) but this budget line is not dedicated specifically to disaster response (WBG 2020).

IV. Review of national livestock insurance market development

Insurance legal and regulatory framework

Djibouti is a francophone country and insurance legislation adopts the CIMA⁶ code. In Djibouti, insurance supervision is carried out by the Insurance Control Service under the authority of the Ministry of Economy and Finance. Insurance legislation only recognizes indemnity-based insurance or, in other words, physical loss or damage to an insured object. As such, approval would be required from the Insurance Control Service to implement IBLI.

⁶Inter-African Conference on Insurance Markets - Conférence Inter-africaine des Marchés d'Assurance. CIMA covers 15 countries in francophone Africa and was established by treaty in 1992, bringing virtually all insurance supervisory, legislative and regulatory powers under the CIMA Code, and supervised by the Regional Insurance Control Commission (Commission Régionale de Contrôle de l'Assurance).

Status of non-life insurance market

The insurance market in Djibouti is very small and in 2018, the total market premium volume was only USD 21.3 million. In 2018, Djibouti's insurance penetration rate (premium/GDP) was 0.77%, with expenditure on insurance of USD 20 per capita (World Bank 2020h), which is very similar to Ethiopia (0.72% of GDP and USD 20.46 per capita) but considerably lower than the insurance penetration in Kenya (2.75% of GDP and USD 39.97 per capita). Motor vehicle insurance contributes nearly 60% of total market premium in Djibouti.

There are only two private commercial insurance companies in Djibouti: GXA and AMERGA. The two companies have shared the Djiboutian market since 1999, and in 2018 they collected, respectively, 61% and 39% of market premiums. GXA and AMERGA are small companies with few employees, a single office each in Djibouti-city and no representation in the provinces or in the peri-urban areas of the capital (World Bank 2020h).

There are no local reinsurance companies in Djibouti and there is no domestic retention requirement: risks are ceded to African-based companies (e.g., Africa Re, ZEP-RE, Best Re) and other global reinsurers and fronting is common.

Agriculture and livestock insurance availability

There is no history of agricultural crop or livestock insurance in Djibouti. In view of the small contribution of the agricultural sector to the economy of Djibouti, the perceived lack of demand by farmers and pastoralists in agricultural insurance and the fact that the two insurers lack rural networks and staff to distribute and administer agricultural insurance, the insurers do not have the capacity or interest to develop micro-insurance retail products for this sector (World Bank 2020h).

Table 3: Availability of agricultural insurance (indemnity-based and index-based) in Djibouti

Crop insurance products available					
Indemnity-based	Index-based	Weather index insurance	Area yield index insurance	Greenhouse	Forestry
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Livestock insurance products available					
Indemnity-based	Index-based	Micro-level IBLI	Meso- & macro-level IBLI	Aquaculture	Poultry
n.a.	R & D*	n.a.	n.a.	n.a.	n.a.

Interest from public and private stakeholders

The government participated in the IGAD-ILRI-World Bank Addis Ababa 'Policy Roundtable and Technical Workshop on Index-Insurance for Livestock in the IGAD Region' on IBLI opportunities in the IGAD region in June 2019, and expressed its interest in the concept. The two insurance companies in Djibouti (GMX and AMERGA) lack the financial resources and technical capacity to design and implement micro-level IBLI insurance to individual pastoralists. They are not motivated to distribute an index insurance product, given recent and consistent drought conditions. While this seems to clearly rule out the potential for a micro-level commercial IBLI program, in which local insurers would not be interested in investing, they might be willing to underwrite a macro-level government-supported program, such as the Kenya Livestock Insurance Program (KLIP) in Kenya or Satellite Index Insurance for Pastoralists in Ethiopia (SIIP) in Ethiopia. A regional implementer and program would support the technical development of products and build capacity to grow the domestic market (World Bank 2020h).

African Risk Capacity is licenced to operate in Djibouti and could, if requested by the government, offer sovereign risk drought index insurance.

V. Operational elements for potential IBLI implementation

Financial inclusion

Table 4: Financial inclusion data for whole population in Djibouti (2011).

Financial inclusion data for Djibouti's population (% of population; age 15+)		
	Total	Rural
Account at financial institution	12.3	8.1
Borrowed from a store by buying on credit	3.3	4.0
Credit card ownership	4.0	4.3

Source: World Bank 2020f.

Financial inclusion data in pastoral areas	
Percentage of pastoralists with bank account	0–10
Percentage of pastoralists with access to mobile phone	0–10
Pastoral areas with particularly good financial services	Arta
Pastoral areas with particularly limited financial services	Obock, Ali Sabieh, Dikhil, Tadjourah

Source: Expert questionnaires

Financial inclusion of pastoralists in Djibouti is very low. Questionnaire respondents estimated that 0-10% of pastoralists own a bank account and only 0-10% of pastoralists have access to a mobile phone. There are **seven** commercial banks and four Islamic banks, who have very few branches in the inner part of the country. Digital financial services such as mobile-phone-based transactions are largely non-existent and transactions are mainly cash based. There is one provider of mobile money, Porte Monnaie Mobile de Djibouti (www.mdjf.info), but it remains very small in scale. Djibouti has been called a 'digital paradox' as the population does not benefit from the country's existing infrastructure of eight major undersea fibre-optic cables and access to telecommunications and internet service in the country remains limited (Stoppa 2020).

Beneficiary registries

In Djibouti, some beneficiary registries exist already. As per the Ministry of Social Affairs and Solidarity, there are 19,000 extremely poor households in Djibouti, 12,000 of which are supported through social safety net programs. These include a Ministry of Social Affairs and Solidarity-operated safety net in urban and peri-urban areas (3,000 households), a WFP-operated safety net in urban areas (4,000 households) and a WBG-supported safety net in rural areas (5,000) households (Stoppa 2020).

Table 5: Key government and donor programs with pastoralist beneficiary registries in Djibouti.

Government programs	Target areas	No. of pastoralist beneficiaries
Ministry of Social Affairs and Solidarity, General Secretariat: financial support to vulnerable families	Urban and peri-urban areas	3,000 households
Donor programs	Target areas	No. of pastoralist beneficiaries
WFP	Urban areas	4,000 households
WBG	Rural areas	5,000 households
FAO cash-for-work activities	Ali Sabieh, Dikhil, Tadjourah, Obock	

Sources: Questionnaires; Stoppa 2020.

Other services











Table 6: Access to additional services for pastoralists in Djibouti.

	Pastoralist access to public services	Pastoralist access to private services
Livestock registration	n.a.	n.a.
Livestock vaccination	n.a.	n.a.
Livestock extension (e.g. husbandry, sanitation)	n.a.	n.a.
Livestock inputs (e.g. vaccines, drugs)	n.a.	n.a.
Forage and feeds supplements	n.a.	n.a.

Source: Estimates by experts from questionnaires.


VI. Summary: Preliminary operational feasibility assessment of IBLI in Djibouti through a regional IGAD IBLI initiative

Table 7: Preliminary assessment of country readiness for IBLI across key operational elements in Djibouti.

	Status	Comments
Importance of pastoral livestock for economy		The overall contribution of the livestock sector to the economy is relatively low (3.1% of GDP), as Djibouti has a largely serviced-based economy. However, more than 50% of the population work in agriculture and the livestock sector contributes more than 80% of agricultural GDP; thus, it is important for large parts of the population.
Impact of drought on livestock		Droughts have had major impacts on the livestock populations in Djibouti. Pastoralists, being the most vulnerable in the society, are often those most negatively affected.
Pastoralist demand for livestock insurance	n.a.	No data could be obtained. There are some assistance programs being provided to rural and vulnerable populations. This may lower the demand for other protective programs such as IBLI.
Effective distribution channels for micro-level IBLI		Financial services infrastructure, outreach to rural populations, mobile banking and extension services are all weak in Djibouti and, where they exist, focus on Djibouti city. Thus, selling micro-level IBLI will be very challenging.
Existing pastoralist beneficiary registries		In Djibouti, some social protection programs exist that are also targeting poor pastoralists. These existing beneficiary databases could potentially be used to identify beneficiaries for a potential modified macro-level IBLI program in Djibouti.
Pastoralist financial literacy		Levels of financial literacy among pastoralists are expected to be very low. Pastoralist knowledge and acceptance of insurance was identified by all questionnaire respondents as an expected key challenge for implementing a regional IBLI approach in Djibouti. Significant investments would have to be made in capacity building and awareness raising of insurance products.
Legal and regulatory insurance environment		The insurance regulatory framework has not yet been adapted to allow for selling index insurance. The majority of questionnaire respondents identified regulatory issues as an expected key challenge for the development of a regional IBLI approach in Djibouti.
Insurance market development		Insurance market development in Djibouti is very low.
Interest from insurers in IBLI		There are only two insurers (GMX and AMERGA) that both do not have any agricultural insurance activities and no experience with index insurance. For a recent World Bank study, both did not express interest in developing and/or distributing an IBLI-type product (Stoppa 2020).
Finance available for premiums		Djibouti is part of the World Bank Horn of Africa Initiative but has not yet expressed interest in using resources to invest in IBLI. The government of Djibouti has no previous experience and has not otherwise expressed willingness so far to use financial resources to support IBLI.
Interest from government stakeholders in IBLI		The government participated in the IGAD-organized regional conferences on IBLI and expressed its interest in the concept. The level of interest in IBLI indicated by government stakeholders via expert questionnaires ranged between 'somewhat interested' (Ministry of Finance) and 'very interested' (Ministry of Agriculture).

B. Eritrea

Table 8: Summary of livestock and insurance in Eritrea.

Status of planning and implementation of Index-Based Livestock Insurance				
IBLI availability	None. The National Insurance Corporation of Eritrea offers limited indemnity-based crop and livestock insurance.			
IBLI planning	None. The Government of Eritrea is studying the role of IBLI as part of IGAD regional initiative.			
Livestock and pastoralism sector				Map amended from Cecchi et al. 2010) 
No. of pastoralists (% of total population)	MPI in rural areas	Livestock contribution to GDP	Livestock production index (2004–06 = 100)	
676 K (13%) ⁷ (2015)	0.651 ⁸ (2017)	15–17% ⁹ (2017)	126 ¹⁰ (2017)	
Livestock breakdown ¹¹ (2018)*				
Total TLUs	Camels	Cattle	Goats	
3.1 M	378,000	2.1 M	1.8 M	2.4 M
Key insurance and financial sector institutions				
Banks in pastoral areas	Saving and Micro-Credit Program			
Mobile cash	n.a. (does not exist)			
Insurance companies	National Insurance Corporation of Eritrea			
Key insurance schemes and legislation				
Insurance law/regulation	There is no specific insurance legislation in Eritrea. There is a single monopoly life and non-life insurance company the National Insurance Corporation of Eritrea, which is majority-owned by the government.			
Livestock insurance products	The National Insurance Corporation of Eritrea offers livestock indemnity-based insurance and is planning to introduce crop insurance but does not offer IBLI insurance.			
Other relevant partners for IBLI				
Government partners	Ministry of Agriculture			
Livestock sector associations	n.a. (no information)			
Most important development partners	IFAD, AfDB, FAO, WFP, European Union (with in-country office)			

*FAO data based on imputation methodology

TLU conversion rates: Camel: 1.4 | Cattle: 1.0 | Goat: 0.1 | Sheep: 0.1

⁷UNECA 2017

⁸The multidimensional poverty index is an index between 0 and 1 that is comprised of 10 different indicators on poverty. The higher the index value, the greater the poverty (OPHI 2017).

⁹Guthiga et al. 2017

¹⁰FAOSTAT 2020c

¹¹FAOSTAT 2020c

I. Socio-economic relevance of livestock production and pastoralism

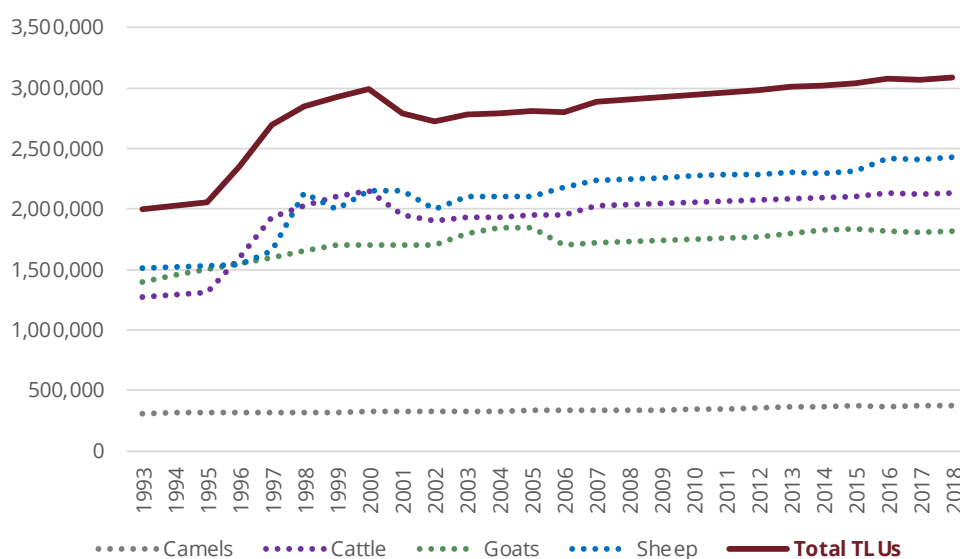
Socio-economic situation in Eritrea

Eritrea faces widespread poverty, but the socio-economic situation is difficult to assess given a lack of reliable data. The country ranks 182nd out of 189 countries on the Human Development Index (UNDP 2019a). The most recent available survey data from 1997 indicated a 70% poverty rate (World Bank 2020a). Some 78.2% of total number of people employed are considered to be vulnerable, and youth unemployment (11.6%) is nearly twice as high as the total unemployment rate (6.5%). Some 88.5% of the population lives in rural areas (FAOSTAT 2020c).

Economic relevance of the livestock sector

The contribution of the agricultural sector to the national economy is modest compared to the relative importance it has for the people's livelihoods. The agricultural sector contributes 17.6% to GDP but 62.9% to employment (FAOSTAT 2020c). The livestock sector contributes 35–49% to agricultural GDP (Guthiga et al. 2017). Reasons for the relatively modest role of the sector to overall economic output include the impact of recurring droughts, outdated farming methods, and the effect of continuous conflicts (Babikir et al. 2015). Eritrea further has extensive mineral resources including copper, gold, iron, nickel, silica, sulphur and potash, as well economic opportunities given its location at the Red Sea: fishing, salt extraction, tourism, and oil and gas reserves (ICPAC and WFP 2018).

Figure 8: Numbers of major livestock species in Eritrea (1993–2018).



Source: FAOSTAT 2020c.

Livestock production systems and livelihoods

Livestock production is limited to pastoral farming systems in the arid and semi-arid areas of the country. Most land is suitable for pasturage, except for the coastal regions and the far north, which are too arid. There has been little change or development in livestock production systems in the country over the last decades. The livelihoods of rural populations depend on income from the sale of crops, livestock and livestock products from traditional subsistence agriculture. Overall, livestock and crop producers suffer from a lack of modern farming equipment and techniques, erratic rainfall, exhausted soils and lack of financial services and investment (Babikir et al. 2015).

The livestock sector almost exclusively relies on mobile or semi-mobile production systems. In the lowlands, nomadic livestock keepers move according to the traditional migration patterns between grazing areas for the dry and rainy seasons. The construction of some water ponds and water catchments help in extending the presence of water beyond the rainy season, reducing livestock movements until depletion of the reservoirs, but mobility remains the main livelihood strategy. In the highlands, the population is more stable, agriculture is largely practiced and livestock keepers are more anchored to their areas, even though movements take place depending on the climatic conditions (drought is rare in the highlands). The whole livestock economy is largely based on subsistence, where people live on what they produce, and sell the surplus to the local market.¹²

Issues and challenges faced by the pastoral and livestock sector

The country's pastoralist population living in arid and semi-arid areas is vulnerable to the adverse effects of climate change. Reoccurring dry seasons and droughts put their health and livestock-based livelihoods at risk. Dry spells increase the risk of pest infestation and decrease the availability of fodder and water due to an increased degradation of natural resources, thereby affecting overall food security (Babikir et al. 2015).

Eritrea is one of the countries most affected by land degradation in the region. Vulnerable areas are mainly located in the central-northern part of the country, which is characterized by steep slopes, fragile soils, poor vegetation cover, and extensive usage for agricultural purposes. Short periods of intense rainfall cause significant soil erosion and runoff. Other factors include inappropriate land management, burning of animal waste and crop residues, unsustainable agricultural practices and over-exploitation of natural pastures and water for fodder (ICPAC and WFP 2018). Thirty-five per cent of the total land area is categorized as degraded (UNDP 2019a).

Pastoralists face state-enforced land tenure restrictions, increasing the risk of violent resistance. Resolute tenure legislation increases the risk of conflict between pastoralist communities and the government: Proclamation No. 58/1994 conferred all ownership of land to the state, creating a system of individual utilization rights while reserving the final dispossession rights to the national government (UNECA 2017).

The livestock sector is further affected by prevailing tensions between Eritrea and other countries. The border conflict with Ethiopia from 1998–2000 displaced nearly a third of the population, killed a large number of livestock and destroyed essential agriculture infrastructure. Continuous border tensions, even after restoring full diplomatic relations in 2018, limit traditional cross-border livestock migration and trade. Finally, poor diplomatic relations between Eritrea and the international community hinder the delivery of aid and emergency services that could strengthen rural and livestock-focused interventions (Moehler 2008).

II. Impacts of droughts on livestock sector and pastoralist livelihoods

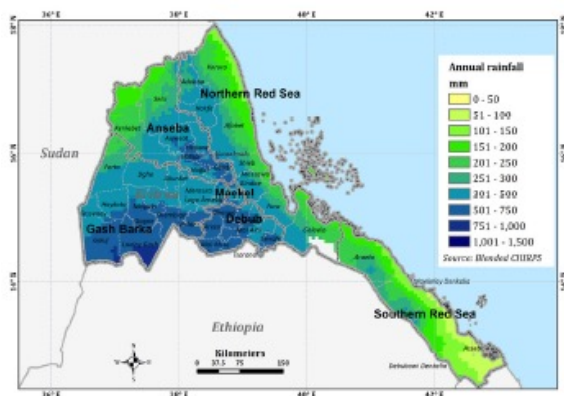
Agroclimatic conditions in pastoral regions

Climatic conditions are determined by the country's topography and location at the south-eastern border of the Sahel Zone. The central highlands mostly experience a semi-arid climate, whereas the western and eastern-coastal lowlands face hot arid climatic conditions. The country has two main rain seasons: the *Kremti* rains in western lowlands and the highlands from June to September and the *Bahari* rains in the eastern lowlands from October to March. Mean annual rainfall varies greatly by region, ranging from less than 300 mm in the coastal areas, to 400 mm in the western lowlands, and over 750 mm in the central highlands and southwest areas (ICPAC and WFP 2018).

¹²Email communication with International Committee of the Red Cross Eritrea.

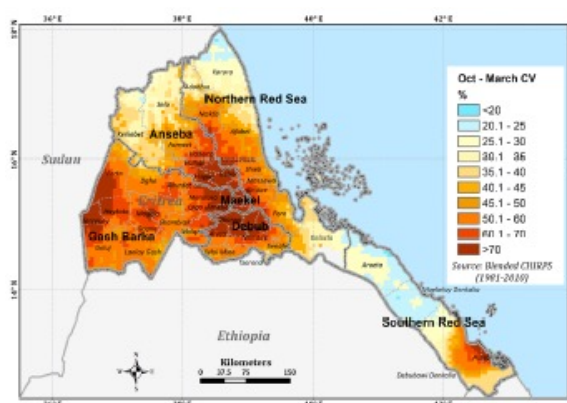
Most areas in Eritrea have poor agroclimatic conditions for farming and livestock production. Less than 5% of the total land mass is arable, with less than 0.1% being used for crop farming (Babikir et al. 2015). Rain-fed production systems exist, if at all, in the central highlands, given its flat geography, relatively fertile soil and milder climate. The western lowlands only occasionally experience favourable rain seasons that allow crop cultivation and agro-pastoralism (ICPAC and WFP 2018). Most other areas can be used for pasturage, excluding some parts in the northern and coastal areas, where the arid climate diverts water and forage (Library of Congress 2005). Overall, total rainfall received in most regions is insufficient for sustainable and consistent crop and livestock production (ICPAC and WFP 2018).

Figure 9: Mean annual rainfall over Eritrea (1981–2010).



Source: ICPAC and WFP 2018.

Figure 10: Coefficient of variation for Eritrean October–March seasonal Bahari rains (1981–2010).



Source: ICPAC and WFP 2018.

Frequency and severity of natural disasters

Eritrea experiences adverse effects from climate change and increasing occurrences of natural disasters. The country ranks 84th on the WorldRiskIndex score, given its exposure (low) and vulnerability (very high) to natural hazards (BEH and IFHV 2020). It ranks 119th out of 181 countries on the ND-GAIN Exposure Ranking in 2018, which measures the degree to which a system is exposed to significant climate change from a biophysical perspective (ND-GAIN 2020).

Climate-related natural hazards include droughts, locust swarms, and floods in isolated few areas, with droughts causing the largest negative impact on rural populations. On average, Eritrea experiences a drought every three to five years, with parts in the central and coastal regions having experienced even more incidences between 2000 to 2015. Floods only rarely occur, given the low rainfall patterns, and have minor effects on the population (ICPAC and WFP 2018).

Impact of droughts and other perils on livestock and the pastoral sector

Declining seasonal rainfall and increasing occurrences of droughts require livestock production systems to adapt in order to protect livelihoods and food security of rural populations (ICPAC and WFP 2018). While much concrete information is lacking, a lot of anecdotal and contextual evidence with neighbouring countries in the Horn of Africa points towards severe impacts of droughts on pastoralist populations and food security outcomes. The Ministry of Agriculture, in responding to the expert questionnaire of the DIRISHA project team, communicated that *“Drought occurs once every three or five years in the country. Hence, the impact of recurrent drought on the livelihood of pastoral communities and livestock is huge”*. Officially, the Government of Eritrea maintains that recurrent El Niño-induced large-scale droughts does not have serious negative effects beyond the ordinary droughts that the country experiences (UN OCHA 2018) OECD, UNDP, 2014.

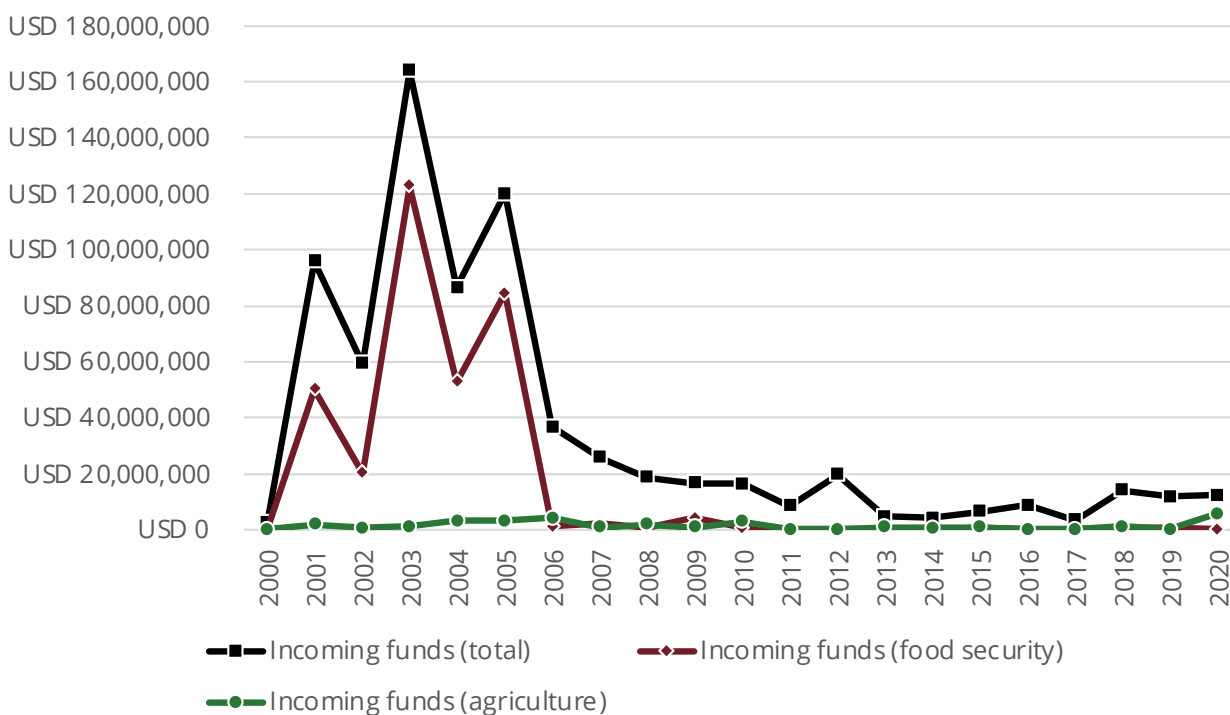
Impact on food security and overall well-being

Food insecurity rates are high and disproportionately affect rural households. Eritrea is a net food importer, importing food items worth USD 91 million (excluding fish) per year with only USD 1 million exported in 2017 (FAOSTAT 2020c). Domestic food production only covers 25–50% of national consumption, depending on the rainfall experienced. Rural households are most affected, given their dependence on agriculture-based incomes, with almost two thirds of households considered food insecure. Other factors affecting food security include war damage to agricultural infrastructure and assets, population displacement and dislocation disrupting farming activities, predominance of low-productivity subsistence farming techniques, fragmented land ownership, poor farm management, deforestation and uncontrolled over-grazing, and limited market access for their produce (CAADP 2013).

The emergence of COVID-19 in 2020 has had a severe impact on pastoralists and has further exacerbated food insecurity issues. There is no official data on the number of tests conducted in the country. By 5 October 2020, the number of confirmed cases was 375, with 34 still being active and 341 having recovered. The number of fatalities is unclear given the lack of comprehensive testing (IGAD and WHO 2020). While the government has not imposed strict lockdown measures for the agricultural sector, experts in-country describe the impact on pastoralists as severe. COVID-19 has considerably inhibited the distribution of livestock inputs and transportation of produce to the markets. Many weekly markets have also been closed as intra-zone movements within Eritrea have been restricted. There are restrictions of movement of livestock to grazing areas, watering points and weekly markets. All this has led to disruptions in the food value chain and to reduced livestock product marketing and consumption. Impacts on food security and nutrition of poor households have thus been severe.¹³

Humanitarian assistance

Figure 11: Incoming international aid funding to Eritrea as tracked by UN OCHA (2000–2020).



Source: UN OCHA FTS 2020.

¹³Information provided by Ministry of Agriculture and FAO Eritrea.

III. Pastoralist development programs and existing drought risk financing initiatives

Table 9: Donor projects focused on the enhancement of the pastoralist and livestock sector in Eritrea.

Organization	Project title	Project cost/contribution	Duration
IFAD	National Agriculture Project	Total: USD 36.15 million IFAD: USD 27.05 million	2012–2021
AfDB	Drought Resilience and Sustainable Livelihoods Program V	USD 25.4 million	2019–2025
FAO	Improved food security/livelihood of vulnerable pastoral and agro-pastoral communities in NRS, Eritrea	USD 400,000	2019–2020
FAO	Social protection	n.a.	n.a.

Existing drought risk financing initiatives

No existing drought risk financing initiatives in Eritrea could be identified.

IV. Review of national livestock insurance market development

Insurance legal and regulatory framework

There is no specific insurance legislation or law in Eritrea. The Bank of Eritrea is nominally in charge of financial and insurance market supervision but lacks specialist knowledge of insurance. There is only one monopoly insurance company in Eritrea, the National Insurance Corporation of Eritrea, which is majority owned by the government and which is responsible for all life and non-life insurance in the country.

Status of non-life insurance market¹⁴

The National Insurance Corporation of Eritrea was established through Proclamation No.20/1992 in 1992, shortly after independence, when it inherited the portfolio of operations which were previously part of the Ethiopian Insurance Corporation. The corporation operates out of three locations: Asmara (head office), Massawa and Assab. Moreover, it also markets its products through a network of agents across the entire country. It is a composite insurance company, underwriting life and non-life insurance products.

In pursuance of its development policy, the Government of Eritrea has partly privatized the National Insurance Corporation of Eritrea by initiating a 'public offer' of its shares in 2004 and 2013, making it possible for Eritrean individuals and institutions to have 44% ownership of the company.

The corporation is supported by highly renowned reinsurers and balanced reinsurance treaty facility led by Munich Re of Africa followed by Africa Re and ZEP-RE.

In 2019 the National Insurance Corporation of Eritrea total market life and non-life premium amounted to 245 million Eritrean Nafka (Nkf) (USD 16.3 million), of which non-life premiums amounted to Nkf 235 million (USD 15.7 million) or 96% of total. The growth in non-life insurance premiums has declined since 2015 (see Table 10). Motor vehicle insurance accounts for more than 50% of non-life premium.

¹⁴This section is based on information from NICE's website <http://www.niceritrea.com/background.php> and NICE's 2019 Annual Report.

Table 10: Underwriting results for National Insurance Corporation of Eritrea (premium, claims and loss ratio) (2010–2018).

Item	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Gross Premium (000 NAKFA)	155,245	183,289	221,093	217,015	222,288	271,918	265,389	253,417	247,277	235,512	2,272,443
Net Premium Earned (000 NAKFA)	111,317	118,672	136,692	147,044	159,605	190,587	196,986	182,935	177,059	165,837	1,586,734
Net Claims Incurred (000 NAKFA)	34,491	50,781	47,073	55,790	64,734	53,175	57,685	43,445	27,824	33,735	468,733
Loss Ratio (%)	31%	43%	34%	38%	41%	28%	29%	24%	16%	20%	30%

Source: National Insurance Corporation of Eritrea 2019 Annual Report and Financial Statements.

Agriculture and livestock insurance availability

In recognizing the importance of the agricultural sector to Eritrea, the National Insurance Corporation of Eritrea offers a livestock insurance policy covering injury and death of livestock due to the following:

- accidental injury/illness
- permanent total disability of the animal
- calving and transport risks

The National Insurance Corporation of Eritrea plans to extend its business in the agricultural sector in the future to include the following:

- indemnifying farmers against any unforeseen losses
- provision of products already available in urban areas to those in rural areas
- providing cover for agricultural loans granted by banks and other financial institutions

Table 11: Availability of agricultural insurance (indemnity-based and index-based) in Eritrea.

Crop insurance products available					
Indemnity-based	Index-based	Weather index insurance	Area yield index insurance	Greenhouse	Forestry
R & D*	n.a.	n.a.	n.a.	n.a.	n.a.
Livestock insurance products available					
Indemnity-based	Index-based	Micro-level IBLI	Meso- & macro-level IBLI	Aquaculture	Poultry
R & D*	n.a.	n.a.	n.a.	n.a.	n.a.

Source: Authors.

No further details of the National Insurance Corporation of Eritrea's indemnity-based livestock insurance program are available. It is likely, however, that coverage is very low and restricted mainly to commercial livestock enterprises.

The National Insurance Corporation of Eritrea has been consistently profitable since its inception in 1992.

Nevertheless, it faces important challenges including (i) lack of qualified and experienced manpower, (ii) the absence of insurance legislation (the National Insurance Corporation of Eritrea as the sole monopoly insurer is mainly free to set its own terms and conditions), (iii) the Bank of Eritrea has an important role to play in supervising the activities of the insurance industry; (iv) the majority of Eritreans lack knowledge and awareness of the role of insurance and (v) the main products in the market (motor vehicle, fire and accident, marine and aviation) fail to address the insurance needs of rural people who make up 75% of the population (Rena 2007).

Interest from public and private stakeholders

The government participated in the IGAD-organized regional conferences on IBLI and expressed its interest in the concept. In the expert questionnaire received from the Ministry of Agriculture, it indicated that it was “extremely interested” in rolling out IBLI in Eritrea given the severe impacts of recurrent droughts on pastoralists. To date it has not been possible to elicit the potential interest of the insurance sector in participating in any IGAD regional IBLI insurance program.

V. Operational elements for potential IBLI implementation

Financial inclusion

Table 12: Financial inclusion data in pastoral areas in Eritrea.

Type of financial inclusion data	
Share of pastoralists with bank account (%)	n.a.
Share of pastoralists with access to mobile phone (%)	n.a.
Pastoral areas with particularly good financial services	Western lowlands
Pastoral areas with particularly limited financial services	Eastern lowlands

Source: Estimates by experts, from questionnaires.

Access to financial services is extremely limited. A government-run microfinance program, the Saving and Microcredit Program operating under the Ministry of National Development, also extends services to rural areas. As per the Ministry of Information, the Saving and Microcredit Program extends credit to 5,770 clients, almost 50% of whom are women, and is accessible by 47% of all villages in Eritrea. It has an outstanding loan portfolio of Nkf 29 million (USD 1.9 million) (Government of Eritrea 2017). Internet access is poorly developed and government controlled. Rural areas are particularly penalized because of the poor network.

Beneficiary registries

As per estimates from expert questionnaires, there are no beneficiary registries active in Eritrea. FAO and UN OCHA operate an ‘emergency food and agriculture program’ in the eastern and western lowlands, targeting 20,000 beneficiaries and distributing farm implements, small ruminants, vaccinations and animal feed that may have further information on beneficiaries.

Other services










Table 13: Access to additional services for pastoralists in Eritrea.

	Pastoralist access to public services	Pastoralist access to private services
Livestock registration	n.a.	n.a.
Livestock vaccination	n.a.	n.a.
Livestock extension (e.g. husbandry, sanitation)	n.a.	n.a.
Livestock inputs (vaccines, drugs)	n.a.	n.a.
Forage and feeds supplements	n.a.	n.a.

Source: Estimates by experts, from questionnaires.

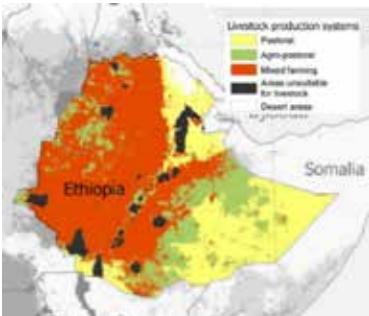
VI. Summary: Preliminary operational feasibility assessment of IBLI in Eritrea through a regional IGAD IBLI initiative

Table 14: Preliminary assessment of country readiness for IBLI across key operational elements in Eritrea.

	Status	Comments
Importance of pastoral livestock for economy		At 15–17%, livestock production contributes significantly to Eritrea’s GDP. Virtually all livestock production is conducted through nomadic or semi-nomadic systems, thus highlighting the importance of pastoralists for the country overall.
Impact of drought on livestock		There is not much quantified evidence on the impacts of drought on pastoralist populations in Eritrea. In its communication with the DIRISHA project team, the Ministry of Agriculture confirmed that drought-related impacts on pastoralists were “huge”.
Pastoralist demand for livestock insurance	n.a.	No information to this effect could be obtained. There is no previous experience of pastoralist populations in Eritrea with insurance.
Effective distribution channels for micro-level IBLI		Financial sector outreach infrastructure to pastoralist communities is weak. There are no private financial sector products or services offered to rural communities. As per government information, the public Saving and Microcredit Program reaches about half of rural communities. There are no mobile money schemes active in Eritrea and there is no information on pastoralist access to bank accounts or mobile phones.
Existing pastoralist beneficiary registries		For this study, no existing pastoralist beneficiary registries could be identified.
Pastoralist financial literacy		Given the low extension levels of financial services to pastoralists in Eritrea, pastoralist financial literacy is expected to be very low. Significant investments would need to be made in building capacity and awareness of pastoralists on insurance products.
Legal and regulatory insurance environment		All financial activities are tightly controlled by the government. There is no experience with index insurance and this would have to be approved by the respective government bodies. All answers the project team received on expert questionnaire identified insurance regulation as one of the key expected challenges on rolling out an IBLI-based program in Eritrea.
Insurance market development and interest from insurers in IBLI		There is only one insurer active in Eritrea, the government-run National Insurance Company of Eritrea. There is no private market. The interest of the National Insurance Corporation of Eritrea in IBLI could not be assessed as part of this report.
Interest from insurers in IBLI	n.a.	No information could be obtained to this effect.
Finance available for premiums		Eritrea forms part of the envisaged World Bank Horn of Africa Initiative but has not yet indicated its willingness to dedicate financing to the initiative. There is no previous experience with the government subsidizing agricultural insurance in Eritrea.
Interest from government stakeholders in IBLI		The government participated in the IGAD-organized regional conferences on IBLI and expressed its interest in the concept. In the expert questionnaire received from the Ministry of Agriculture, it indicated that it was “extremely interested” in rolling out IBLI in Eritrea given the severe impacts of recurrent droughts on pastoralists.

C. Ethiopia

Table 15: Summary of livestock and insurance in Ethiopia.

Status of planning and implementation of Index-Based Livestock Insurance				
IBLI availability	Micro-level IBLI since 2012; modified meso- (macro-) level IBLI since 2018.			
IBLI planning	The Government of Ethiopia is studying the role of IBLI as part of IGAD regional initiative.			
Livestock and pastoralism sector				Map amended from (Cecchi et al. 2010) 
No. of pastoralists (% of total population)	MPI rating in rural areas	Livestock contribution to GDP	Livestock production index (2004–06 = 100)	
14.7 M (15%) ¹⁵ (2015)	0.547 ¹⁶ (2016)	15–17% ¹⁷ (2017)	120 ¹⁸ (2017)	
Livestock breakdown ¹⁹ (2018)*				
Total TLUs	Camels	Cattle	Goats	
70.8 M	1.3 M	62.6 M	33.0 M	31.7 M
Key insurance and financial sector institutions				
Banks in pastoral areas	n.a. (no information)			
Mobile cash	HelloCash (Belcash); Sendwave; M-Birr (Ambassa/Lion Bank and Hibret/United Bank); CBE Birr (Commercial Bank of Ethiopia); Sahay Mobile Banking (Rays Microfinance Institution)			
Insurance companies	Oromia Insurance Company (underwriting IBLI); Oromia Insurance Company; Nyala Insurance Share Company, Ethiopian Insurance Corporation; Africa Insurance (all underwriting SIPE)			
Other	Ethio-Telecom, the most important telecom provider for pastoralists			
Key insurance schemes and legislation				
Insurance	Insurance legislation is the Proclamation No. 746/2012, a Proclamation to Provide for Insurance Business. National Bank of Ethiopia is the insurance supervisory authority.			
law/regulation	Recently, the National Bank of Ethiopia issued a directive that allows financial institutions (namely banks and microfinance institutions) to take moveable items, including livestock, as collateral when extending loans to agricultural producers.			
Livestock insurance products	Several insurers in Ethiopia offer a range of traditional indemnity-based livestock insurance products for livestock and poultry. Micro-level IBLI was launched by one local insurer in 2012 in selected zones of Oromia Region (Borena), and modified meso-level social protection cover was launched in 2018 by a pool of four insurers under the SIPE program in selected woredas of Somali Region.			

¹⁵ UNECA 2017

¹⁶ The multidimensional poverty index is an index between 0 and 1 that is comprised of 10 different indicators on poverty. The higher the index value, the greater the poverty (OPHI 2020a).

¹⁷ Guthiga et al. 2017

¹⁸ FAOSTAT 2020a

¹⁹ FAOSTAT 2020c

Other relevant partners for IBLI	
Government partners	Ministry of Agriculture/Agricultural Transformation Agency; Livestock and Fishery Marketing Department within the Ministry of Agriculture; Ministry of Peace; National Meteorological Agency; Pastoral agro-pastoral bureaus; cooperative offices
Livestock sector associations	Ethiopian Meat and Dairy Industry Development Institute; Ethiopian Meat Producer Exporters Association; Ethiopian Animal Feed Industry Association; National Export Council
Most important development partners	WBG, USAID, AfDB, UK FCDO, FAO, WFP, Mercy Corps, CARE, Project Concern International, Catholic Relief Services Ethiopia

* FAO data based on imputation methodology
 TLU conversion rates: Camel: 1.4 | Cattle: 1.0 | Goat: 0.1 | Sheep: 0.1
 USAID = United States Agency for International Development

I. Socio-economic relevance of livestock production and pastoralism

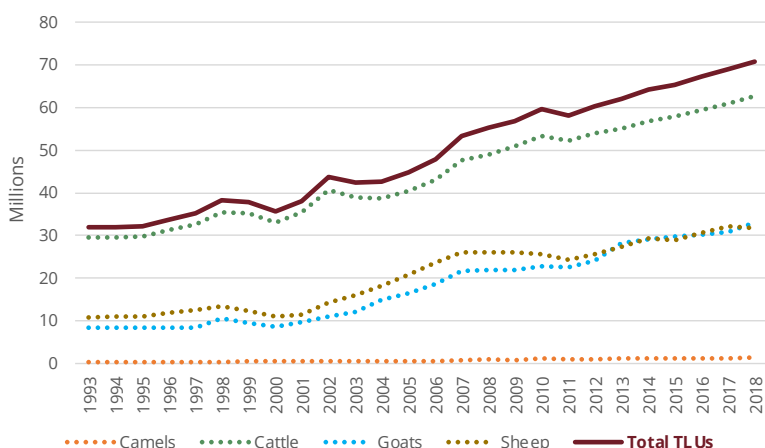
Socio-economic situation in Ethiopia

Ethiopia remains one of the poorest countries in the region despite its fast-growing economy. The country ranks 173th out of 189 countries on the Human Development Index (UNDP 2019a). Continuous strong economic performances averaging annual GDP growth of 9.8% between 2008/09 and 2018/19 led to large poverty reduction in both urban and rural areas (World Bank 2020b). Only 1.8% of the labour force is unemployed, but 86% of employment is categorized as vulnerable. There is a significant divide between the rural lowlands and urban areas in terms of socio-economic development. Some 78% of the population lives in rural areas (FAOSTAT 2020c). Pastoral and agro-pastoral households, representing 12–14% of the population, have low literacy rates, low levels of formal education, and lack access to water and sanitation compared to urban households (IGAD 2020a).

Economic relevance of the livestock sector

The agriculture sector provides employment to the majority of Ethiopians, but productivity levels are low. The sector provided 67.1% of total employment and used 37.5% of total land area in 2017 (FAOSTAT 2020c). The livestock sector is a critical source of income to farmers, creating job opportunities and strengthening food security (ICPAC and WFP 2018). It contributes 35.6% to agricultural GDP and 16.5% to the overall GDP. Despite having the largest cattle population in Africa, the level of productivity and commercialization is low (Guthiga et al. 2017). The broader agriculture sector is represented by subsistence rain-fed farming systems with low productivity levels caused by ecological changes and farmers’ limited access to financial services, production technology, and market linkages (Babikir et al. 2015).

Figure 12: Numbers of major livestock species in Ethiopia (1993–2018).

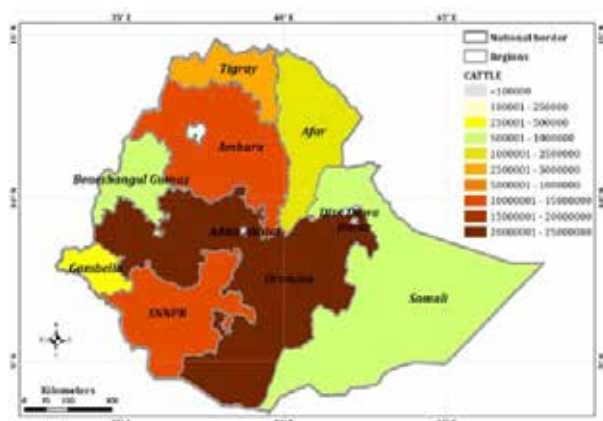


Source: FAOSTAT 2020c.

Livestock production systems and livelihoods

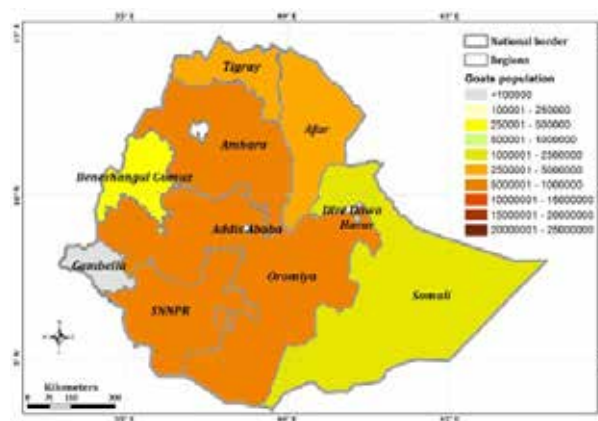
The main livestock production systems are defined by the availability of water and the topography of pastoralist regions. Pastoral farming systems have adapted to areas with sparse vegetation, fragile soils and scarce water. This system is defined by seasonal migration in response to availability of grazing as well as varying compositions of herds with different species of livestock. Agro-pastoral systems enjoy more stable access to water and maintain a semi-nomadic livelihood which includes crop farming, even though it plays a less significant role than livestock given limited and volatile rainfall. Highland farming systems exist in mountain ranges and plateaus of altitude above 1,500 meters. Livestock play a particular important role in higher-altitude areas, as crop yields are lower and more volatile. Other livestock systems include forest-based, waterside, and market-oriented production (Babikir et al. 2015).

Figure 13: Number of cattle in Ethiopia (2014/15).



Source: ICPAC and WFP 2018.

Figure 14: Number of goats in Ethiopia (2014/15).



Source: ICPAC and WFP 2018

Market access for livestock producers

There are no formal health certifications or permit regulations in the domestic livestock markets, leading to lower market barriers for informal pastoralists but increased risk of diseases that would jeopardize livestock exports. There is no issuance of sanitary permits at the farm or pastoralist production level nor pre-purchase health inspection or certification at the primary markets or along transport routes. Traders and exporters at secondary markets often engage private veterinarians to oversee and control livestock purchases to protect animals in holding grounds and along stock routes. In case trade-relevant diseases emerge, the inspecting veterinarians inform the government veterinary inspector, who notifies the Veterinary Services Directorate if cases are confirmed (IGAD 2016). The Ministry of Agriculture in close collaboration with its development partners has attempted to utilize digital technology to enhance livestock production and productivity. One such intervention is the Livestock Identification and Traceability System, which is an attempt to gather information on livestock (e.g. origin, health status and type of husbandry practice) destined for export.

Cross-border trade including livestock is a major income source for rural households but is underlaid with heavy regulations. Informal trade is an important source of income for pastoral and non-pastoral households, particularly in areas where alternative employment opportunities do not exist. While the government strives to curb informal exports through regulation, it still allows small-scale trading with Djibouti, Kenya, Somalia and Sudan. These regulations, for instance with Kenya, define the radius within which cross-border trade is permitted and the types of commodities allowed to be traded. Livestock, especially in the southern and southeastern pastoral rangeland, are among the major products that are unofficially exported (UNECA 2017). Sheep and goats have historically been the most relevant trade livestock species in terms of number and value, but cattle trade has increased in importance in recent years (IGAD 2013).

Livestock stakeholders have access to market information and financial services, but access is restricted to certain markets. The national livestock market information system collects and provides data on volumes of animals supplied and average value in each age group, sex and grade of animal. It also provides early warning information. The system monitors 47 livestock markets across Ethiopia to provide information on prices and volumes of different livestock types using simple technology (feature or smartphones). This notwithstanding, integrated market information services as well as livestock-focused banking services are available only at Moyale, Wuchale, Humera and Almahal. No other financial services are available at the other cross-border markets (IGAD 2013).

Issues and challenges faced by the pastoral and livestock sector

Changing climate patterns and decreasing rainfall amounts and predictability put livestock at risk. Weather and climate projections indicate increasing temperatures and incidents of dry spells, directly impacting livestock as aridity increases and water availability decreases. Pastoralists will need to reconsider their migration patterns and composition of livestock species to cope with the changing environment (ICPAC and WFP 2018). More details are listed under Section II.

Land degradation is a main reason for low and declining agricultural productivity, continuing food insecurity and rural poverty. Twenty-nine per cent of the total land area is classified as degraded (UNDP 2019a). Problem drivers include rapid population increase, severe soil loss, deforestation, low vegetative cover, and unbalanced agricultural production systems. The problem is particularly severe in the northern, central, and northeastern regions, with denser population causing increased pressure on natural resources (ICPAC and WFP 2018).

Intra- and inter-ethnic conflict around borderlands. More than 90% of pastoralists in Ethiopia (Afar, Somali and Borena regions) share borders with similar ethnic groups separated by colonial time international borders. Internally, in the regions that house pastoralists, the respective administrative boundaries are contested. Thus, territorial claims and counterclaims as well as competition over scarce grazing and water resources often engender intra-ethnic as well as inter-ethnic conflicts (Debelo 2019). Conflicts have heavily affected formal and informal cross-border trade and restricted travel patterns of pastoralist communities (UNECA 2017).

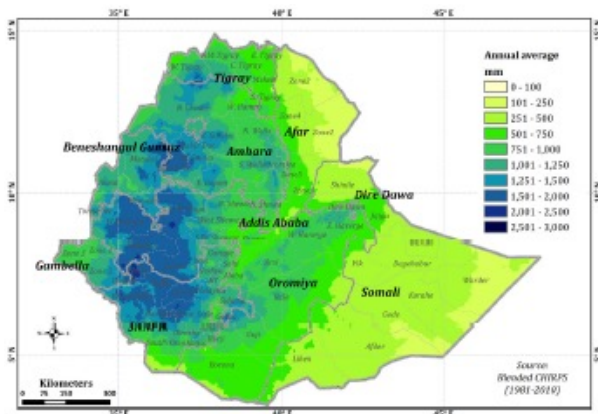
II. Impacts of droughts on livestock sector and pastoralist livelihoods

Agroclimatic conditions in pastoral regions

Ethiopia has a variety of climates, ranging from tropical in the lowlands and Rift Valley regions to cooler temperatures in the northern and southern mountain ranges. Most parts of the country have a warm and tropical climate, with hot and semi-arid climate zones dominating the northeastern lowland regions. Mean annual temperatures range between 15°C and 20°C in the highlands and between 25°C and 30°C in low-lying regions. Rainfall patterns vary considerably across the country with western, northwestern and parts of the central regions receiving over 1000 mm and pastoral areas in southeast and northeastern region receiving below 500 mm of rain annually. Rainfall data from 1981 to 2015 indicate declining annual rainfall in parts of central and southern regions (ICPAC and WFP 2018).

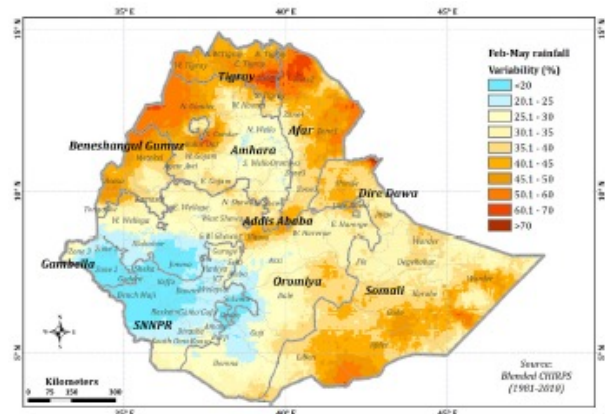
Most of the country experiences a bimodal rainfall regime with two distinct rainy seasons followed by dry seasons, which vary in their timing from north to south (see Figure 17). Pastoral areas mostly experience Belg/Gu rains from February/March to June and then Kiremt/Deyr rains in the latter part of the year. Overall, low rainfall and high variability in pastoral areas cause unfavourable conditions for livestock production (ICPAC and WFP 2018).

Figure 15: Mean annual rainfall over Ethiopia (1981–2010).



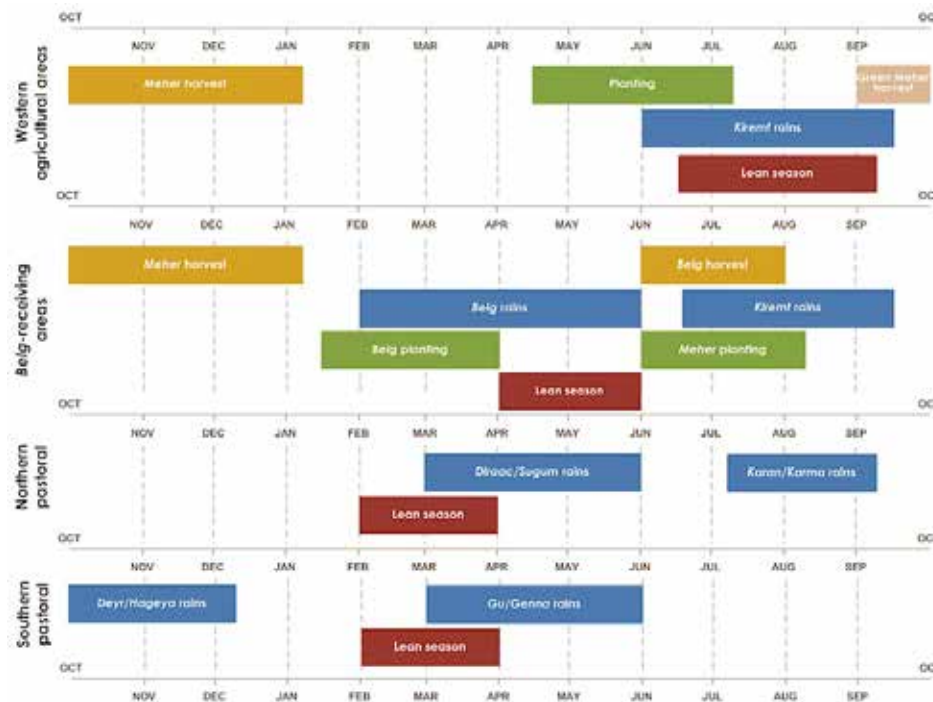
Source: ICPAC and WFP 2018.

Figure 16: Coefficient of variation for Ethiopian seasonal rains February–May (1981–2010).



Source: ICPAC and WFP 2018.

Figure 17: Typical agricultural and climatic season calendar in Ethiopia.



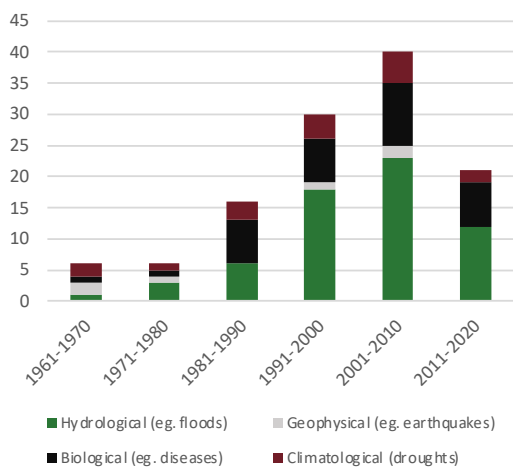
Source: FEWS NET 2020a.

Frequency and severity of natural disasters

Ethiopia is heavily exposed to the impact of climate change and natural hazards, with droughts being responsible for the largest crises. The country ranks 68th globally on the WorldRiskIndex, which ranks countries by their exposure (low) and vulnerability (very high) to natural hazards (BEH and IFHV 2020). It further ranks 157th out of 181 countries on the ND-GAIN Exposure Ranking in 2018, which measures the degree to which a system is exposed to significant climate change from a biophysical perspective (ND-GAIN 2020). Droughts represent the key hazard to the Ethiopian population, with major events occurring in 1999, 2003, 2005, 2008, 2009, 2011 and 2015 (ICPAC and WFP 2018). There is also a high risk of flooding around Lake Tana and in valleys in the highlands, where heavy seasonal downpours lead to water surges in dry river beds or flood plains, potentially putting settlements and infrastructure at risk (ICPAC and WFP 2018).

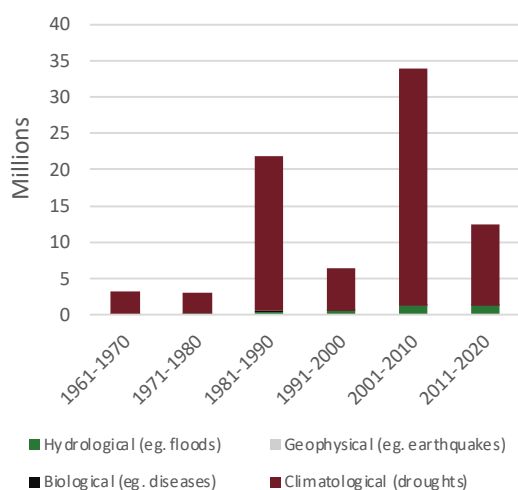
The National Disaster Risk Management Commission has mapped the vulnerable areas by collecting woreda disaster risk profile data in 445 woredas, developing profiles for 340 woredas and uploading them on an official national website.²⁰

Figure 18: Number of events by disaster type in Ethiopia (1961–2020).



Source: EM-DAT 2020.

Figure 19: Number of affected people by disaster type in Ethiopia (1961–2020).



Source: EM-DAT 2020.

Impact of droughts and other perils on livestock and the pastoral sector

The increasing number and intensity of droughts heavily impacts the Ethiopian livestock sector. Climate change as well as the unpredictability and generally decreasing amounts of rainfall hinder water availability and sustainable growth of forage for livestock, leading to declined health conditions, lower production of animal products, and potentially higher death rates, which threaten the livelihoods of pastoralist herders (ICPAC and WFP 2018).

Some pastoralists started engaging in income diversification as well as alternative fodder production. Pastoralist households located in the Somali region of the country pursue diversified livelihoods, for instance cultivation of wheat, fishing and poultry, as well as irrigated farming of vegetables, rice and sugar cane. Some pastoralists have also started to get involved in the production of livestock fodder to counteract their dependence on rain-fed grazing for their livestock (UNECA 2017). Some pastoralist communities also migrate between Djibouti, Ethiopia and Somalia depending on the rain season (Babikir et al. 2015).

²⁰The website www.profile.dppc.gov.et was not accessible during the writing of this report.

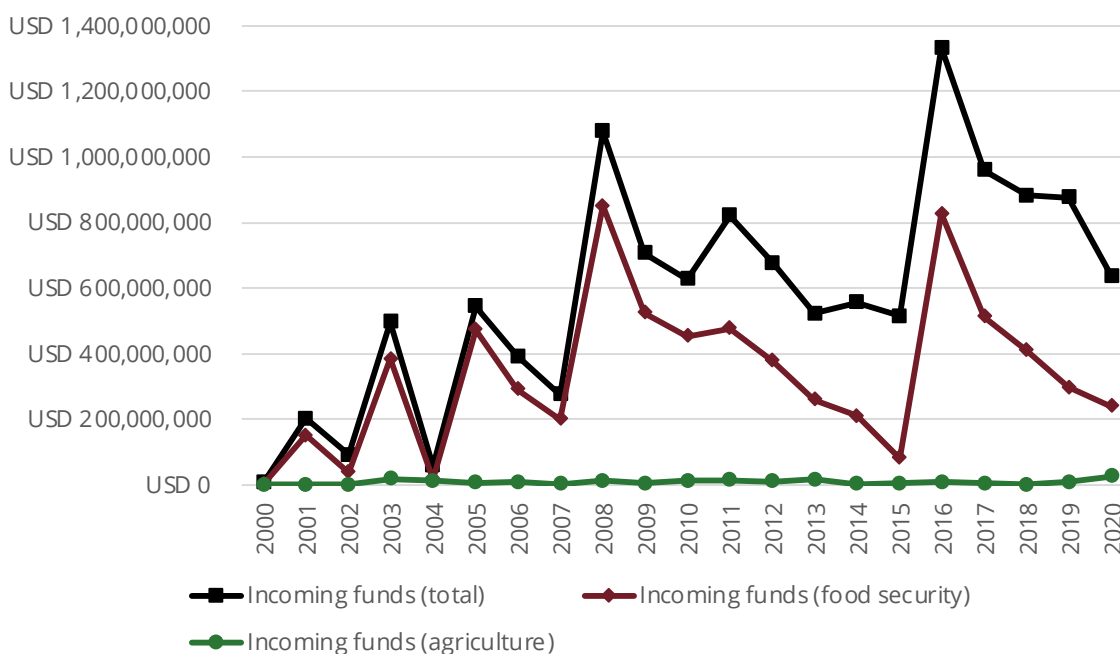
Impact on food security and overall well-being

The impact of droughts on livestock populations and other agricultural production systems consequently affects the food security of the Ethiopian population. Since the 1950s, 12 major drought-induced food security crises have occurred, highlighting the impact of climate-related risks on food security. The 2015 drought caused widespread hunger, with an estimated 10 million people (10% of the total population) requiring food aid (IGAD 2020a). Data from 2008 to 2015 suggest that the Oromia and Somali regions had the highest number of people in need of humanitarian assistance, which spiked during and following droughts, suggesting a direct influence of climate events on food insecurity of households (ICPAC and WFP 2018).

The impact of COVID-19 on pastoralists is severe and has been exacerbated by compounding shocks, leading to worsened food security outcomes. Most poor households in eastern regions will most likely continue facing crisis outcomes (IPC Phase 3) through mid-2021 (FEWS NET 2020a). By 5 October 2020, the country had conducted 1,272,352 tests, confirming 75,368 cases, of which 42,964 were still active and 31,204 had recovered. Some 1,198 people had died from the virus (IGAD and WHO 2020). Pastoralists were most impacted by market closures and movement restrictions that stayed active for five months, impacting their ability to earn income from alternative sources. Indeed, even with markets open, market activity is expected to be lower due to continued border closures, transportation challenges and disrupted religious festivals, with additional negative impacts on pastoralists. The Ministry of Agriculture also reports that fewer livestock extension services were delivered, that through the market closures, input supplies such as livestock vaccines were limited, particularly in remote pastoral areas, and that food prices had risen. As per a Mercy Corps study of Somali region from August 2020, livestock-keeping households lost 20-40% of their income between March and May 2020 as markets were closed. As a result, their food consumption was reduced, loan repayments to microfinance institutions were delayed, and average sales of retailers were lower (Mercy Corps 2020b). In addition, pastoralists were impacted by compounding shock events, including excessive rains, floods and locust infestations of the rangelands.²¹

Humanitarian assistance

Figure 20: Incoming international aid funding as to Ethiopia tracked by UN OCHA (2000–2020).



Source: UN OCHA FTS 2020 .

²¹Compiled from answers to expert questionnaires of various respondents.

III. Pastoralist development programs and existing drought risk financing practices

Donor projects that focus on the enhancement of the pastoralist and livestock sector

Table 16: Most important donor programs in Ethiopia focusing on the enhancement of the pastoralist and livestock sector.

Organization	Project Title	Cost/Contribution	Duration
World Bank	Ethiopia Rural Productive Safety Net Project	Total: USD 1.9 billion, of which IDA: USD 438 million Government of Ethiopia: USD 621 million	2017–2020
UK FCDO	Productive Safety Net Program Phase 4	USD 405 million	2014–2020
World Bank	Regional Pastoral Livelihoods Resilience Project (multiple recipient countries)	USD 74 million (for Ethiopia)	2014–2021
AfDB	Drought Resilience and Sustainable Livelihood Program for the Horn of Africa (multiple recipient countries)	USD 8.9 million (for Ethiopia)	2014–2021
IFAD/ World Bank	Lowlands Livelihood Resilience Project	Total: USD 451 million, of which IFAD: USD 90 million IDA: USD 350 million	2019–2025
USAID	Feed the Future Resilience in Pastoral Areas – North (Afar, Somali)	USD 31.3 million (USD 7.1 million emergency response fund)	2020–2024
USAID	Feed the Future Resilience in Pastoral Areas – South (Oromia, SNNPR)	USD 25.8 million (USD 5.8 million emergency response fund)	2020–2024

Source: Expert questionnaires.

IDA = International Development Association.

Table 17: Other important donor programs in Ethiopia focused on the enhancement of the pastoralist and livestock sector.

Organization	Project Title	Cost/Contribution	Duration
World Bank	Second Agricultural Growth Project	Total: USD 365.5 million WB: USD 350.0 million	2015–2023
UK FCDO	Building Resilience in Ethiopia	USD 352 million	2017–2020
IFAD	Rural Financial Intermediation Program III	Total: USD 305.79 million IFAD: USD 39.99 million	2019–2024
AfDB	Basic Services Transformation Program (incl. supplementary financing)	Initial: USD 262 million; supplementary: USD 127 million	2016–2020
IFAD	Rural Financial Intermediation Program II	Total: USD 248.05 million IFAD: USD 100.06 million	2011–2020
World Bank	Livestock and Fisheries Sector Development Project	Total: USD 176.2 million WB: USD 170.0 million	2018–2024
World Bank	Ethiopia Resilient Landscapes and Livelihoods Project	Total: USD 129 million, of which IDA: USD 100 million + USD 13 million additional financing	2018–2024
World Bank	Emergency Locust Response Program (multiple recipient countries)	USD 63 million (for Ethiopia)	2020–2023

Organization	Project Title	Cost/Contribution	Duration
FAO	Pursuing Pastoral Resilience through improved animal health service delivery in pastoral areas of Ethiopia	USD 11.5 million	2014–2020
FAO	Global Network Against Food Crises Partnership Program – Country Investment Ethiopia	USD 4.8 million	2018–2021
FAO	Emergency livelihoods assistance to vulnerable herders in desert locust infestation risk areas	USD 2.0 million	2020
FAO	Support livelihoods of drought affected households and resilience building of vulnerable groups in Warder and Kebredahar Woredas of Ethiopia's Somali Region	USD 1.7 million	2018–2020
FAO	Improved rural livelihoods through support to Moringa Value Chain development in SNNPR Region	USD 1.6 million	2019–2022

Source: Various.

Existing drought risk financing practices

Ethiopia has a well-established drought response system, including significant financial arrangements, to be able to respond to disasters such as droughts quickly and effectively. Key elements of the Ethiopian national disaster risk financing framework are the following.

- The **Productive Safety Net Program** is an unconditional cash transfer program that provides regular support to a core caseload of 8 million poor and vulnerable people everywhere in Ethiopia, including in the pastoralist areas. The program has a 'scalability' mechanism that enables it to expand horizontally in case of drought and rapidly add additional beneficiary households to its payments roster. This system has been tested thoroughly and successfully. Most impressively, after the severe 2016/17 drought, an additional 10.2 million people received Productive Safety Net Program support to buffer the negative impacts of the shock. The Productive Safety Net Program contains a federal contingency budget that provides scalability resources in case of need. Additionally needed financing for large scale-ups is provided by the Ministry of Finance via budget reallocations or raised via humanitarian appeals (Drechsler et al. 2017).
- In addition, the Government of Ethiopia also keeps a strategic grain reserve through the Emergency Food Security Reserve Administration, which is kept to a minimum size and used strictly for emergency response only (unlike other countries that use their **strategic grain reserve**, mostly unsuccessfully, as a price stabilization mechanism). In 2011, it kept a target stock of 407,000 metric tonnes of grain (Shahidur and Lemma 2011).
- Finally, the Government of Ethiopia works with a number of donors on a series of **smaller risk financing and insurance pilot programs** – for example, WFP implements its R4 rural resilience initiative in Ethiopia, a comprehensive package of drought insurance, financial services and training for participating farmers. Other such programs include SIPE and IBLI programs.

IV. Review of national livestock insurance market development

Insurance legal and regulatory framework

The current legal basis for the insurance industry is Proclamation No 746/2012, a proclamation to provide for insurance business, which replaced the Licensing and Supervision of Insurance Business Proclamation No 86/1994, the pioneering insurance law in post-socialist Ethiopia. The legal system in Ethiopia is based upon a mixture of French civil

law and local variations. The National Bank of Ethiopia is the insurance supervisory authority: the supervision of banks and insurers is governed by National Bank of Ethiopia Establishment (as amended) Proclamation No 591/2008, 11 August 2008 (AXCO 2020a).

Microinsurance is permitted by (i) an insurer licensed to cover other classes of insurance, (ii) a specialist microinsurer and (iii) a microfinance company. For these last two categories, new legislation came into effect in February 2015 under the Licensing, License Renewal and Product Approval for Microinsurance Providers Directive No SIB/1/2015. Weather index microinsurance is in its infancy with a number of pilot schemes in operation (AXCO 2020a). Brokering and agency-based selling insurance are not allowed for microinsurance operations.

There are no operating requirements set out for takaful (Islamic) insurance. Islamic banking has started in Ethiopia but there is no takaful risk transfer in the country and the regulator has stated that it will address operating requirements in the event that it is approached for such a licence (AXCO 2020a). From an IBLI perspective this is a potential issue since many pastoralists in the eastern and southern regions of Ethiopia are Muslims and their preferences are to purchase takaful insurance.

Status of non-life insurance market

In 2017, the Ethiopian non-life insurance industry ranked at 95 in the world in terms of premium income. South Africa is the largest non-life insurance industry in Africa and has a world ranking of 21, followed by Morocco at 46, Algeria at 56 and Kenya at 63. In 2017 the total market premium was 7,494 million Ethiopian Birr (ETB) (USD 314 million), of which the largest was non-life premium accounting for ETB 6,873 million (USD 288 million), while life insurance, personal accident and health only accounted for 8% of total premium. The insurance market has grown at an average of 14% per annum over the past five years – well above the inflation rate (AXCO 2020a)

There are 17 licensed insurers operating in the Ethiopian market, nine of which are composited, writing both life and non-life insurance. The major company in the market is the state-owned Ethiopian Insurance Corporation, which was established in 1976 when the industry was nationalized. It had a monopoly of the insurance market in the country until 1994, when the market was reopened. The top five insurance companies in Ethiopia are Ethiopian Insurance Corporation, Africa Insurance Company, Awash Insurance Company, NIB Insurance Company and Nile Insurance Company. Information on market share of premium dates back to 2011 when the Ethiopian Insurance Corporation had a 41% market share and the top five companies at the time (unnamed) had a 75% market share. Non-life business is dominated by motor vehicle (56% of total premium) and marine, aviation and transit (14%) (AXCO 2020).

Insurance market penetration is very low in Ethiopia, equivalent to 0.4% of GDP and only USD 2.99 per capita in 2017. Insurance penetration was considerably higher in Kenya (2.64% of GDP, with expenditure of USD 40.7 per capita). Reasons for the very low insurance penetration in Ethiopia include the fact that most people are not aware of insurance and 85% of the population live in rural areas where insurance outreach is still very low. The advent of microinsurance is seen as key to unlocking the life and non-life markets (AXCO 2020a).

Ethiopian Reinsurance (Ethiopian Re), the first local reinsurance company, was set up in the first half of 2016. Mandatory treaty cessions are required at a minimum of 25% for life and non-life insurers. Furthermore, there is a 5% per policy compulsory cession. Facultative offerings must be made to Ethiopian Re, which has the right of first refusal under law. Ethiopian Re is a shareholder in Africa Re, which is guaranteed a 5% cession on any outward reinsurance. Most Ethiopian insurers reinsure with Africa Re, and Ethiopian Re also uses Africa Re for its retrocession arrangements. Ethiopia is also a member of the Common Market for Eastern and Southern Africa (COMESA) but the 10% cession (to PTA Re/ZEP-RE) that is usually applied to insurers operating in COMESA countries does not appear to be uniformly applied in Ethiopia.

Several international reinsurers support the Ethiopian insurance market, especially for parametric or index crop and livestock index insurance. For many years, Swiss Re was the lead reinsurer of the largest share of the R4 microinsurance weather index insurance program, but in recent years an international reinsurance broker has placed this business with a large panel of mainly European specialist agricultural reinsurers. Africa Re leads the reinsurance of the Oromia Insurance Company insured IBLI program in Oromia Province and SCOR reinsurance company leads the reinsurance of the SIPE program.

Agriculture and livestock insurance availability

In the past 15 years there have been significant innovations in Ethiopia in both micro-level and meso-/macro-level index-based crop and livestock insurance products and programs targeted at small poor farmers and vulnerable pastoralists. Traditionally a handful of Ethiopian insurers including Ethiopian Insurance Corporation, the state-owned insurer, and Nyala Insurance Share Company, a private insurer, offered indemnity-based crop, livestock and poultry insurance products and programs on a limited basis. The introduction of index-based insurance has revolutionized the agricultural insurance market.

Table 18: Availability of agricultural insurance (indemnity-based and index-based) in Ethiopia.

Crop insurance products available					
Indemnity-based	Index-based	Weather index insurance	Area yield index insurance	Greenhouse	Forestry
Low uptake	Low uptake	Medium uptake	Low uptake	Low uptake	n.a.
Livestock insurance products available					
Indemnity-based	Index-based	Micro-level IBLI	Meso- & macro-level IBLI	Aquaculture	Poultry
Low uptake	Medium uptake	Low uptake	Commercial scale-up	n.a.	Low uptake

Source: Authors, updated from Mahul and Stutley 2010b.

Crop index insurance initiatives

In 2006/07 the Government of Ethiopia purchased a macro-level sovereign risk drought index insurance cover which was designed to support financing of humanitarian food aid emergency response. The rainfall-deficit product was designed by WFP and placed directly with Axa Re as a derivative cover with a total sum insured of USD 7.1 million and premium of USD 09.93 million, which was financed by USAID. No payouts were triggered in 2006/07 and the government declined to renew cover (Mahul and Stutley 2010b). The Government of Ethiopia at this time elected to invest heavily in a national drought and flood early warning system, termed Livelihoods, Early Assessment and Protection, to trigger timely cash or food payouts from contingency funds/social protection programs such as the Productive Safety Net Program to affected populations.

In 2011 WFP and Oxfam launched the R4 program with vulnerable farmers located in drought-prone areas of Tigray and Amhara provinces: the program includes a micro-level weather index insurance cover which protects against drought. R4 is closely aligned with the Productive Safety Net Program in these provinces. R4 is based on four pillars: (i) risk reduction whereby participating farmers provide their labour on public sector drought-reduction works; (ii) creation of risk reserves through the promotion of savings groups; (iii) prudent risk-taking through access to seasonal crop credit to invest in improved seeds and fertilizers; and (iv) risk transfer through a satellite drought weather index insurance product designed by the International Research Institute for Climate and Society.²² R4 is a voluntary insurance program which is implemented by the Relief Society of Tigray and insured by Africa Insurance Company and Nyala Insurance Share Company. Oxfam America and WFP finance the bulk of the drought premiums, but insured farmers are expected to contribute towards the costs of their weather index insurance policy under the Insurance for Assets program by providing their labour on risk reduction works. In the past decade, R4 has scaled up in Ethiopia and in four other African countries:

²²Earth Institute, Colombia State University.

in 2019, R4 reached over 87,000 farming households (about 450,000 people) in Ethiopia, Kenya, Malawi, Senegal and Zambia, and in 2018, around USD 1.5 million of insurance payouts was distributed through the initiative in Ethiopia, Kenya, Malawi, Senegal and Zambia to compensate for weather-related losses.²³

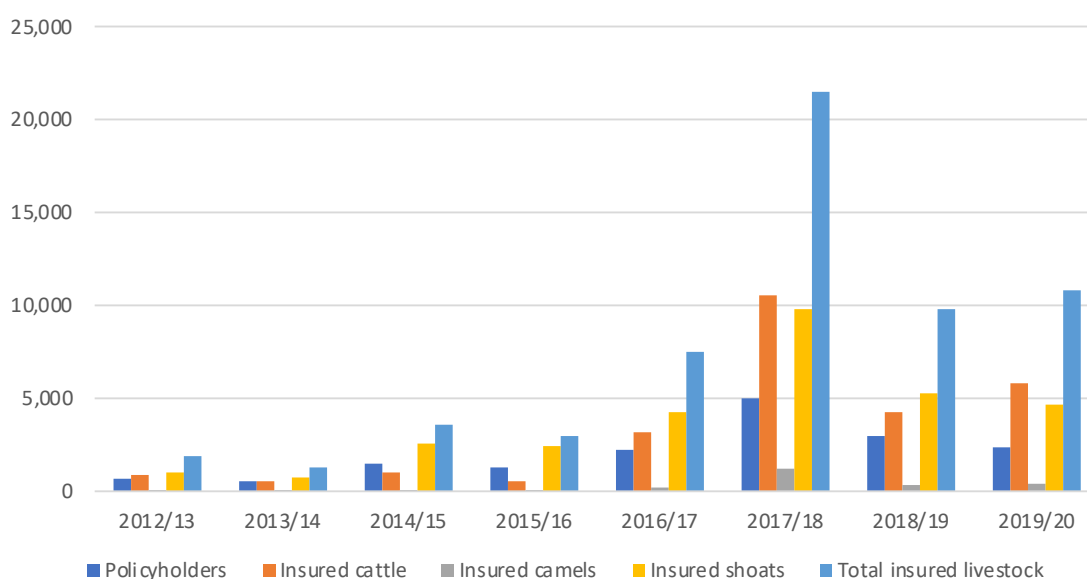
Index-based livestock insurance initiatives

Micro-level IBLI

In 2012, ILRI assisted the Oromia Insurance Company to launch a micro-level IBLI program with pastoralists located in Borena zone of Oromia Province. This followed on from the earlier success of the IBLI program in Kenya, which was designed as a livestock predicted mortality drought insurance index cover. In Ethiopia the IBLI product was based on satellite index based on the Normalized Difference Vegetation Index (NDVI), and the cover was initially designed as a livestock asset replacement policy, covering the replacement cost of the animal, and subsequently (since 2016) modified for asset protection. Various international organizations supported field operations, contract design, product pricing, extension and awareness creation through donor-funded projects to bolster the private sector commitment shown by Oromia Insurance Company. Donors have also subsidized the operational overheads of the program to keep the price of the IBLI product down to an affordable level: in practice the premium charged to pastoralists has been based on the actuarially fair price or the calculated pure loss cost premium rate. Oromia Insurance Company works closely with local cooperatives and microfinance institutions in the delivery of IBLI to pastoralists in Borena zone and uses village insurance promoters to raise awareness of the product, while Oromia Insurance Company sales agents ultimately sell the product to pastoralists.

Over the past eight years, Oromia Insurance Company has sold IBLI to over 16,000 pastoralists with nearly 60,000 insured TLUs and a total sum insured of ETB 113 million: over this period total premium has amounted to ETB 11.0 million against drought payouts of ETB 12.9 million. There have been four major drought years with payouts exceeding paid premiums: 2013/14 (loss ratio, 168%); 2015/16 (loss ratio, 309%); 2016/17 (loss ratio, 522%) and 2019/20 (loss ratio, 233%) and the overall loss ratio of 117% indicates that Oromia Insurance Company has lost money over the eight years it has underwritten IBLI. The company is, however, highly committed to meeting its social corporate responsibility to assist marginalized buyers of insurance.

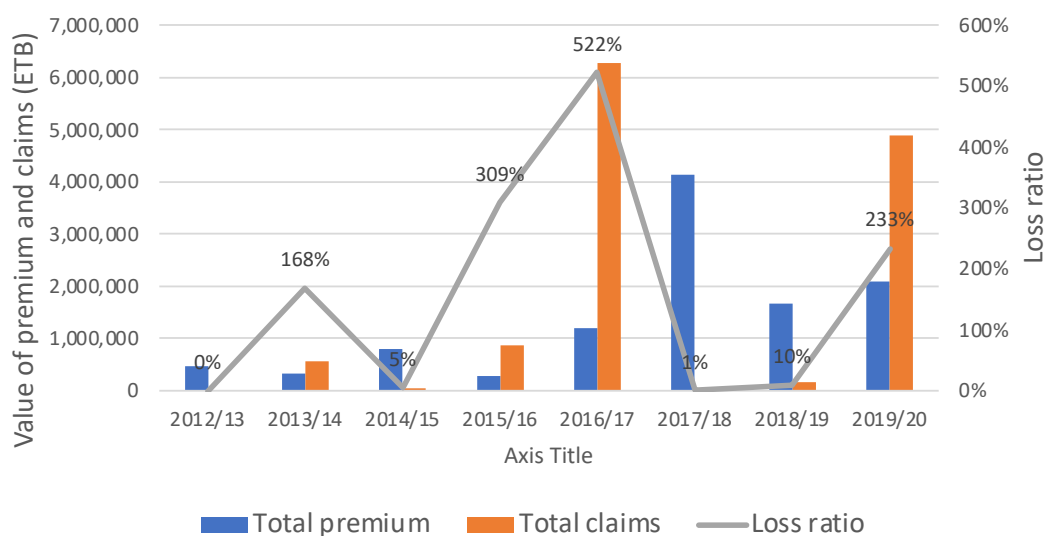
Figure 21: IBLI: Number of insured pastoralists and livestock in Ethiopia (2012–2019).



Source: Oromia Insurance Company .

²³<https://www.wfp.org/r4-rural-resilience-initiative>

Figure 22: IBLI Ethiopia uptake and underwriting results (2012/13 to 2019/20).



Source: Oromia Insurance Company.

Note: The Oromia Insurance Company insurance year covers the Hagaya rainy season (October to December), followed by the Ganna season (March to June) in the subsequent year.

Table 19: IBLI Ethiopia uptake and underwriting results (2012/13 to 2019/20).

Year	No. of insured (policy holders)	Number of insured cattle	Number of insured camels	Number of insured shoats	Total number insured livestock	Total sum insured (Birr)	Total premium (Birr)	Total claims (Birr)
2012/13	627	831	20	1,025	1,876	5,172,500	467,547	0
2013/14	509	511	12	731	1,254	3,578,900	341,260	574,687
2014/15	1,445	1,001	40	2,536	3,577	8,434,800	803,919	40,280
2015/16	1,296	539	17	2,403	2,959	2,903,500	281,374	869,015
2016/17	2,195	3,125	161	4,210	7,496	12,285,000	1,203,423	6,284,785
2017/18	4,963	10,542	1,167	9,811	21,520	42,336,000	4,126,157	41,700
2018/19	2,968	4,236	310	5,247	9,793	16,881,500	1,657,930	158,380
2019/20	2,357	5,768	357	4,662	10,787	21,420,000	2,094,337	4,886,785
Total	16,360	26,553	2,084	30,625	59,262	113,012,200	10,975,947	12,855,632

Source: Oromia Insurance Company.

Evidence from ILRI's multi-year impact evaluation of the IBLI program in Ethiopia (and Kenya) indicates considerable improvements in their resilience to drought risk and social and welfare benefits for pastoralists who have insured their livestock. These impacts include a reduction in distress sales of livestock during severe droughts, improved household consumption and nutrition, herd maintenance through timely purchases of livestock fodder and water and veterinary services and increased productivity and sales of milk and incomes (Janzen and Carter 2013; Jensen, Barret and Mude 2015; Taye et al. 2019).

In Ethiopia, micro-level IBLI has experienced a number of key challenges including difficulties in achieving scale and financial sustainability. In the peak year, 2017/18, Oromia Insurance Company achieved a total of 4,963 policy sales and 21,520 insured animals, but uptake has declined in subsequent years. Pastoralists tend to insure only very few head of animals – an average of 3.6 animals or 2.0 TLU per policy – and this means that the average premium earned on a policy has been only ETB 671 or about USD 18. This is inadequate to cover the administrative and operating costs of the IBLI product. Under this study, Oromia Insurance Company have kindly provided actual operating and administration cost data for the past eight years, which show that for every ETB 1 in collected premium, the administrative and operating expenses have amounted to ETB 1.11 and their combined ratio (paid claims plus administrative and operating expenses

divided by premium) at end 2020 is 2.29, implying that for every ETB 1 in collected premium the company is incurring ETB 2.29 in claims and expenses. While the company is willing to accept these losses in the short term because of social corporate responsibilities, clearly this is financially unsustainable in the medium to long term and more cost-effective distribution channels for the IBLI product urgently need to be identified and put in place.

Figure 23: IBLI administrative and operating expenses for Oromia Insurance Company, Ethiopia 2012/13 to 2019/20.

Oromia Insurance Company costs, expenses and loss ratios	
Total paid premiums (ETB)	10,975,947
Administrative and operating expenses:	
- Cooperative administration expenses (ETB)	588,151
- Village insurance promoters commissions (performance related) (ETB)	1,237,793
- Oromia Insurance Company administration and operating costs (ETB)	10,400,000
Total administrative and operating expenses (ETB)	12,225,944
Administrative and operating expenses: premium ratio	1.11
Paid claims (ETB)	12,855,632
Loss ratio	1.17
Combined ratio	2.29

Source: Oromia Insurance Company 2021.

Further information on the technical design of the IBLI Ethiopia product is contained in Volume III to this report, 'A Regional Approach to Drought Insurance in Intergovernmental Authority on Development Countries: Technical Feasibility Assessment'. Further details on IBLI performance, lessons, challenges and impacts are contained in Volume I to this report, 'A Regional Approach to Drought Insurance in Intergovernmental Authority on Development Countries: Main Report – Operational Feasibility Assessment'.

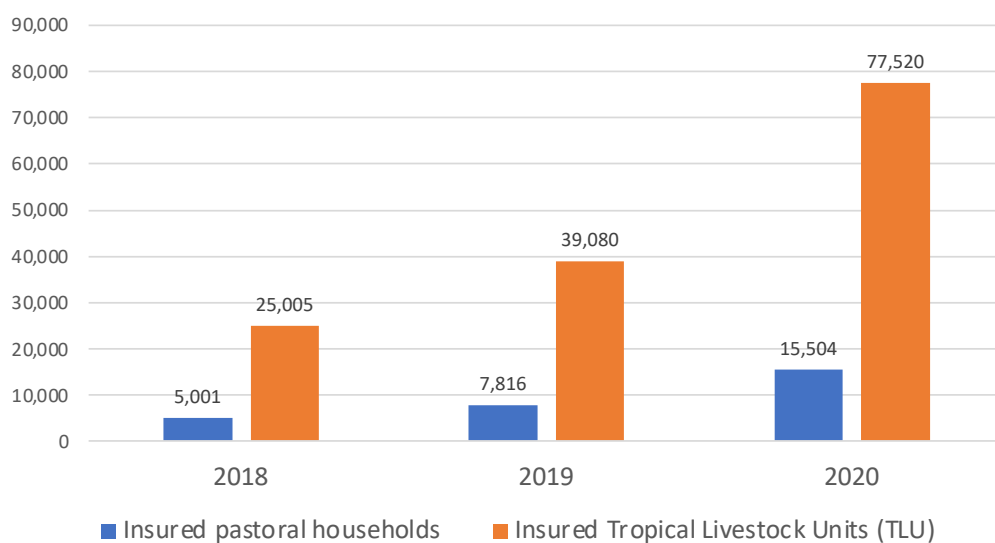
Modified meso-level social protection cover – Satellite Index Insurance for Pastoralists in Ethiopia

SIPE is an initiative of WFP and the regional government of Somali Region Ethiopia. Somali Region is an important pastoral region of southeastern Ethiopia, which is very exposed to drought. SIPE is an NDVI drought index designed to trigger timely payouts to vulnerable pastoralists to purchase livestock feed supplements to keep their animals alive (asset protection) in times of severe drought. SIPE is closely aligned to the Productive Safety Net Program, which provides conditional food and cash transfers to chronically poor households throughout Ethiopia, including a high proportion of the pastoral population in Somali Region. SIPE beneficiaries are selected on the basis that they have between 5 and 11 TLUs, and it also insures 5 TLUs per beneficiary. Currently WFP finances the costs of premiums in full, but it is examining the introduction of an insurance-for-assets approach whereby pastoralists provide their labour to cover part or all of their premium costs.²⁴ The SIPE program is insured by a co-insurance pool of four companies: the Ethiopian Insurance Corporation, Africa Insurance Company, Oromia Insurance Company and Nyala Insurance Share Company. SCOR Zurich is the lead reinsurer for SIPE.

SIPE was launched in the Gu season 2018 with 5,001 pre-selected vulnerable pastoralists (25,005 TLUs in four woredas in Somali region) and has now in 2020 scaled up to seven woredas and 15,504 beneficiaries and 77,520 insured TLUs. Over the three years, SIPE has made drought payouts in one year only (2018) (loss ratio 81%) and the loss ratio after three full years of operations is 23%. SIPE is planning to scale up to about 12 woredas and 25,000 insured beneficiaries in 2021.

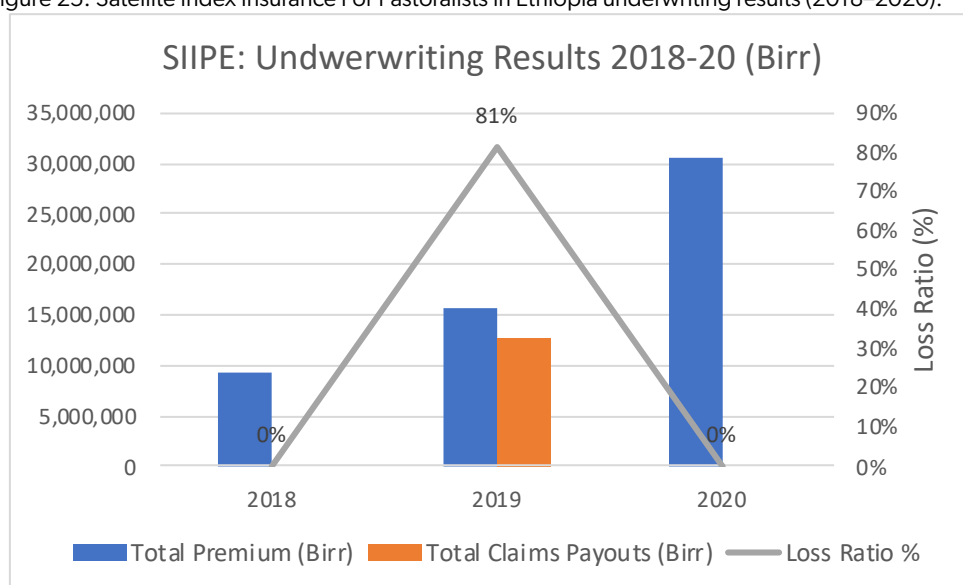
²⁴SIPE is a five-year WFP funded project. The total budget for SIPE is USD 5.6 million and is co-financed by the Government of Sweden and the Swiss Agency for Development and Cooperation (C4ED 2019).

Figure 24: Number of beneficiary households and tropical livestock units insured under Satellite Index Insurance for Pastoralists in Ethiopia.



Source: WFP Rome and Addis Ababa.

Figure 25: Satellite Index Insurance For Pastoralists in Ethiopia underwriting results (2018–2020).



Source: WFP Rome and Addis Ababa.

Table 20: Satellite Index Insurance For Pastoralists in Ethiopia: uptake and underwriting results (2018–2020).

Year	No. Insured Woredas	No. Insured Pastoral HHs (Beneficiaries)	No Insured TLU	Total Sum Insured (US\$)	Total Premium (US\$)	Average Premium Rate (%)	Total Claims Payouts (US\$)	Loss Ratio %
2018	4	5,001	25,005	2,544,844	342,426	13.5%	0	0%
2019	4	7,816	39,080				97,508	81%
2020	7	15,504	77,520					0%
Total	7	28,321	141,605	2,544,844	342,426	13.5%	97,508	23%

Source: WFP, Rome and Addis Ababa.

Further details on SIPE performance, lessons, challenges and impacts are contained in Volume I to this report, 'A Regional Approach to Drought Insurance in Intergovernmental Authority on Development Countries: Main Report – Operational Feasibility Assessment'.

Interest from public and private stakeholders

The Government of Ethiopia has voiced its interest in a regional IBLI-based approach at previous regional IBLI conferences. The 2019 IGAD workshop on livestock insurance was hosted in Ethiopia. In the expert questionnaires for this study, government representatives indicated on average that they were ‘interested’ in implementing IBLI in Ethiopia at larger scale. Development partners have also shown major commitment to supporting the scale-up of the IBLI and SIPE programs and in supporting premium financing. There is a need to incorporate IBLI and SIPE into Ethiopia’s national drought risk management strategy and plans for pastoralists located in drought-prone regions.

V. Operational elements for potential IBLI implementation

Financial inclusion

Table 21: Financial inclusion data for whole population in Ethiopia (2017).

Financial inclusion data for Ethiopia’s population (% of population; age 15+)		
	Total	Rural
Financial institution account	34.8	32.4
Borrowed any money in the past year	41.2	42.8
Borrowed from a financial institution or used a credit card	10.7	11.2
Borrowed from a savings club	7.5	8.0
Coming up with emergency funds: not possible	42.3	43.3
Credit card ownership	0.3	0.3
Financial institution account	34.8	32.4
Made or received digital payments in the past year	11.9	10.4
Main source of emergency funds: sale of assets, rural	21.2	23.8
Mobile money account	0.3	0.3
No deposit and no withdrawal from an account in the past year	5.7	5.4
Received government transfers in the past year	7.2	7.3

Source: World Bank 2020f.

In Ethiopia, there are a few microfinance institutions that provide specialized financial services to pastoralist regions. Their services include, among others: Sharia-compliant saving and credit; mobile banking; agent-based banking to buy and sell goods and services; and cash transfers. The respective microfinance institutions are:

- **Somali Microfinance Institution S. Co**, servicing Somali region.
- **Afar Microfinance Institution S. Co**, servicing Afar Region.
- **Omo Microfinance Institution S. Co**, servicing SNNPR Region.
- **Rays Microfinance Institution**, servicing Oromia and Somali regions.²⁵

Meanwhile, the presence of formal banking institutions in pastoral areas is still very low due to the very limited infrastructure and security concerns (ICPALD 2016).

²⁵Expert questionnaire response from USAID Ethiopia. USAID supported the establishment of these microfinance institutions and built their capacity to improve their outreach to pastoralist communities.

While some financial institutions exist, the overall level of financial inclusion of pastoralists is still very low, with large differences across different geographies. Almost all respondents to the expert questionnaires estimated that only 0–10% of pastoralists were using bank accounts. Similarly, respondents estimated that on average only 11–30% of pastoralists in Ethiopia had access to a mobile phone. There seem to be significant regional differences, with questionnaire respondents estimating that Borena zone and parts of Somali region enjoy relatively better access to financial services and Afar and SNNPR regions (especially South Omo) having particularly poor access to financial services. In addition, where financial services are offered, they seem not to necessarily to meet pastoralists' needs – a 2016 ICPALD study found that credit is often not extended in a Sharia-compliant fashion, which makes it unusable for Muslim pastoralist communities (ICPALD 2016). This is confirmed by further research showing that financial inclusion of pastoralists in southern Oromia, Somali and Afar remains very low and that despite new products being developed, these rarely match the needs of pastoralists (Geleta 2017). Finally, there is a much higher usage of formal financial services of participants further up the livestock value chain, i.e. not the herders themselves (ICPALD 2016).

Table 22: Financial inclusion data in pastoral areas in Ethiopia (2020).

Type of financial inclusion data	
Share of pastoralists with bank account (%)	0-10
Share of pastoralists with access to mobile phone (%)	11-30
Pastoral areas with particularly good financial services	Borena zone and Somali Region
Pastoral areas with particularly limited financial services	Afar region; SNNPR (especially South Omo)

Source: Estimates by experts, from questionnaires.

Beneficiary registries

Table 23: Key government and donor programs with pastoralist beneficiary registries in Ethiopia.

Government programs	Target regions	No. of pastoralist beneficiaries
Ministry of Agriculture/Productive Safety Net Program	SNNPR, Afar, Amhara, Somali, Oromia, Tigray, Harari, Dire Dawa	The Productive Safety Net Program has 8 million regular beneficiaries and the capacity to scale up rapidly to many additional millions (e.g. in total 18 million in 2017).
Ministry of Agriculture (veterinary inputs distribution through voucher schemes in collaboration with private Veterinary Pharmacies to flood affected community)	Afar	3,000
Donor programs		No. of pastoralist beneficiaries
SMFI registry (for e-payment)	Somali	15,504
WFP registry (SCOPE)	Somali	15,504

Source: Various.

Public sector beneficiary and livestock registries in Ethiopia are relatively strong. The Productive Safety Net Program has a comprehensive database of beneficiaries in place and is able to scale up to many more during times of drought. After the 2016/17 drought, the Productive Safety Net Program scaled up to an additional 10 million people to provide support to more than 18 million people. There is also significant experience on working with the program's database to target vulnerable pastoralists for IBLI purposes. The WFP-funded SIPE program in Borena zone in Oromia Region is working closely with the Productive Safety Net Program registry and has thus been able to gather important experience that could be used for any future modified macro-level IBLI program targeting pastoralists.

In addition, there are a number of international partner programs providing grant payments to pastoralists. As part of this study, the suitability of these programs to serve as baseline beneficiary registries could not be determined. Grant programs targeting pastoralists include, for example, programs by Mercy Corps, Save the Children, FAO and WFP (ICPALD 2016).

Other services

Table 24: Access to additional services for pastoralists in Ethiopia.

	Pastoralist access to public services	Pastoralist access to private services
Livestock registration	Low	n.a.
Livestock vaccination	Low	n.a.
Livestock extension (e.g. husbandry, sanitation)	Medium	n.a.
Livestock inputs (vaccines, drugs)	Low	n.a.
Forage and feeds supplements	Low	Low




Source: Estimates by experts from questionnaires.









Key public institutions working on veterinary services for pastoralists include the following:

- National Veterinary Institute
- National Animal Health Diagnostic and Investigation Centre
- Ethiopian Veterinary Association
- Veterinary Drug and Animal Feed Administration and Control Authority
- National Institute for the Control and Eradication of Tsetse Fly and Trypanosomiasis

VI. Summary: Preliminary operational feasibility assessment of IBLI in Ethiopia through a regional IGAD IBLI initiative

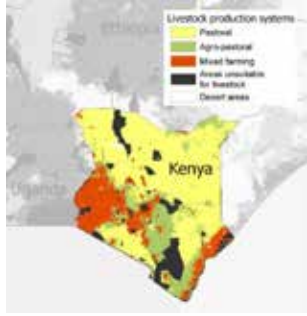
Table 25: Preliminary assessment of country readiness for IBLI across key operational elements in Ethiopia

	Status	Comments
Importance of pastoral livestock for economy		The livestock sector is of major importance to the Ethiopian economy overall, contributing an estimated 15-17% of GDP. An estimated 15% of the population or close to 15 million people are pastoralists in Ethiopia.
Impact of drought on livestock		The devastating impacts of drought on the livestock sector in Ethiopia and on pastoralists in particular have been well-documented.
Pastoralist demand for livestock insurance		Pastoralist demand for IBLI products could not be determined specifically for this study. There is, however, growing experience with IBLI and the SIPE programs in Southern Ethiopia. Although IBLI uptake has been slow, valuable lessons have been learned. In some areas, there are now high numbers of repeat purchases of IBLI every season. Greater investments in capacity building and awareness of pastoralists on IBLI will however be needed in order to significantly increase pastoralists' understanding of and ultimately demand for the IBLI product.

	Status	Comments
Effective distribution channels for micro-level IBLI		Some basic prerequisites are in place already: The Oromia Insurance Company has been marketing and underwriting the micro-level IBLI product in the IBLI target areas and has thus been able to build a network for distribution. In the current IBLI and SIPE target areas, mobile money services are relatively widely available, including for pastoralists. However, Oromia Insurance Company has suffered severe losses on the micro-level IBLI program and will thus not be able to sustain the current distribution model – innovations will be needed. Financial services including mobile money are also not equally available across pastoralist areas in Ethiopia. There might thus be a rationale for a cluster-based approach for any future program, focusing first on areas with relatively well functioning financial services and mobile money access.
Existing pastoralist beneficiary registries		The Productive Safety Net Program is a Government of Ethiopia flagship program that has a strong beneficiary database in place in all regions of the country. In collaboration with the SIPE program, this database has already been leveraged successfully to register beneficiaries into a modified macro-level IBLI program which could be repeated in any potential follow-up program. In addition, there seem to be a number of donor cash distribution infrastructures in place, including by WFP, Mercy Corps, and Save the Children. These might likewise be suitable to base beneficiary registration off them.
Pastoralist financial literacy		8 years of capacity building and awareness creation services have been delivered to pastoralists in IBLI target area. However, the IBLI and SIPE experience so far has shown the serious challenges in building pastoralist understanding and awareness of financial concepts and of IBLI. Significant further investments will be needed for any follow-up program in Ethiopia.
Legal and regulatory insurance environment		As the IBLI product has been marketed in Ethiopia now since 2012, there are no immediate insurance regulatory concerns at this stage.
Insurance market development		The Ethiopian insurance market has active participation of many insurers that also underwrite crop and livestock insurance as part of their non-life insurance portfolio. Ethiopian insurers have been able to gather experience with the IBLI and SIPE programs. There is a strong interest in the market to continue working with pastoralists, however, there will need to be changes to the operating model as the current IBLI micro-level approach faces severe profitability challenges.
Interest from insurers in IBLI		Given experience with IBLI so far, there is a strong interest among Ethiopian insurers to make the product work at the micro level and there is also strong interest in expanding the SIPE program. Insurers are worried about sustainability, however.
Finance available for premiums		Ethiopia is part of the World Bank Horn of Africa Initiative. However, the Government of Ethiopia has so far not committed or requested any World Bank financing for this regional IBLI initiative, or made available any other financing for this.
Interest from government stakeholders in IBLI		The Government of Ethiopia has voiced its interest in a regional IBLI-based approach at previous regional IBLI conferences. The 2019 IGAD workshop on livestock insurance was hosted in Ethiopia. In the expert questionnaires for this study, government representatives indicated on average that they were “interested” in implementing IBLI in Ethiopia at larger scale.

D. Kenya

Table 26: Summary of livestock and insurance in Kenya.

Status of planning and implementation of Index-Based Livestock Insurance				
IBLI availability	Micro-level IBLI since 2010; modified macro-level IBLI since 2015.			
IBLI planning	Government of Kenya is studying role of IBLI as part of IGAD regional initiative.			
Livestock and pastoralism sector				Map amended from (Cecchi et al. 2010) 
No. of pastoralists (% of total population)	MPI rating in rural areas	Livestock contribution to GDP	Livestock production index (2004–06 = 100)	
4.43M (10%) ²⁶ (2015)	0.651 ²⁷ (2017)	12% ²⁸ (2017)	116 ²⁹ (2017)	
Livestock breakdown ³⁰ (2018)*				
Total TLUs	Camels	Cattle	Goats	
28.8 million	3.3 M	19.6 M	26.7 M	19.5 M
Key insurance and financial sector institutions				
Banks in pastoral areas	Equity Bank (banking partner for Hunger Safety Net Program); Kenya Commercial Bank; Co-Operative Bank; First Community Bank			
Mobile cash	Mobile cash: M-PESA (Safaricom); Airtel Money (Airtel); Sendwave			
Insurance companies	APA Insurance (underwriter KLIP, underwriter IBLI); Takaful Insurance of Africa (formerly underwriting KLIP, IBLI)			
Other	Agent for Inclusive Insurance Development			
Key insurance schemes and legislation				
Insurance law/regulation	Insurance in Kenya is governed by the Insurance Act of and its latest amendment No 11 of 2019. The insurance industry is supervised by the Insurance Regulatory Authority.			
Livestock insurance products	Kenya has a dynamic agricultural insurance market which offers a wide range of traditional crop and livestock insurance products and services as well as crop and livestock index insurance. Micro-level IBLI was launched by one local insurer in 2010 in Marsabit County, since when this cover has spread to many ASAL (arid and semi-arid land) counties. Modified macro-level social protection cover was launched in 2015 by a pool of seven insurers under KLIP which is a Public-Private Arrangement (PPA) under which the Government of Kenya fully finances the premiums of vulnerable pastoralists: KLIP has scaled up to cover about 20,000 pastoralists in eight ASAL counties.			

²⁶(UNECA 2017)

²⁷The multidimensional poverty index is an index between 0 and 1 that is comprised of 10 different indicators on poverty. The higher the index value, the greater the poverty (OPHI 2017).

²⁸(Guthiga et al. 2017)

²⁹(FAOSTAT 2020c)

³⁰(FAOSTAT 2020c)

Other relevant partners for IBLI	
Government partners	State Department of Livestock, Ministry of Livestock, Agriculture and Fisheries (operates KLIP); National Drought Management Authority; Ministry of Devolution and ASALs (leading Hunger Safety Net Program)
Livestock sector associations	Kenya Livestock Marketing Council; Kenya Livestock Producers Association; Kenya Feed Manufacturers Association
Most important development partners	WBG, UK FCDO, IFAD, European Union, FAO

*FAO data based on imputation methodology, estimates, and government data
Tropical Livestock Unit (TLU) conversion rates: Camel: 1.4 | Cattle: 1.0 | Goat: 0.1 | Sheep: 0.1

I. Socio-economic relevance of livestock production and pastoralism

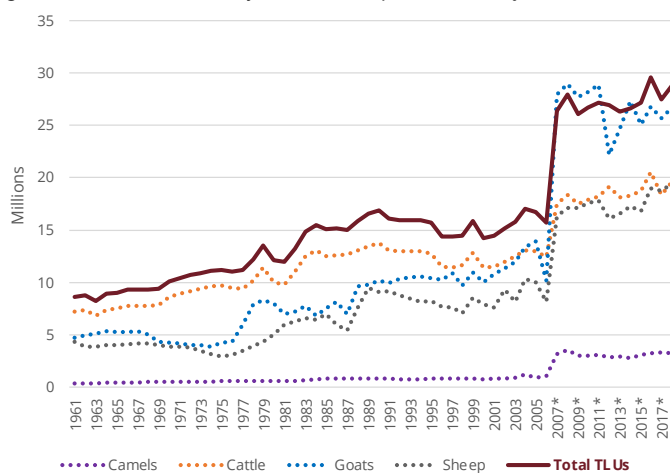
Socio-economic situation in Kenya

Poverty in Kenya has declined over the last decade but remains high compared to peer countries, with pastoralist areas by far the worst affected. Kenya ranks 147th of 189 countries in the Human Development Index (UNDP 2019a). The share of the population living below the national poverty line fell from 46.8% in 2005/06 to 36.1% in 2015/16, but is still considered high relative to other lower-middle-income countries. Considerable geographic inequities remain with regard to health care, education and access to water and sanitation services (World Bank 2020g). Seventy-three per cent of the population lives in rural areas and only 57.6% of rural households have access to electricity (UNDP 2019a). Pastoralist communities in the ASALs are by far the most disadvantaged in Kenya, scoring far below the national average on development indicators across the board (Cabot Venton et al. 2012; IGAD 2020).

Economic relevance of the livestock sector

Kenya's economy heavily depends on rain-fed agriculture, with the majority of the population pursuing agriculture livelihoods. Agriculture contributes 34.2% to GDP and comprises 57.8% of employment (FAOSTAT 2020c). The livestock sector contributes 42% to the agricultural GDP (Guthiga et al. 2017). The main export partner for livestock has been Mauritius, whereas meat products are mostly exported to the United Arab Emirates, Oman, Qatar, Bahrain and bordering countries (IGAD 2013).

Figure 26: Numbers of major livestock species in Kenya (1961–2017).



Source: FAOSTAT 2020c.

* National livestock census in 2006 led to a significant increase in recorded livestock numbers.

Livestock production systems and livelihoods

The Kenyan livestock sector includes two production systems: traditional pastoralism and more intensive commercial systems. The pastoral system is based on extensive grazing on natural pastures and forages involving the migration of pastoral households in counties such as Turkana, Wajir, Garissa, Kajiado, Narok, Isiolo and Marsabit (ICPAC and WFP 2018). Commercialized industrial livestock systems are also increasing (Thornton et al. 2007).

Tenure rights needed for pastoralist households' grazing purposes are managed at the community level. Article 63/1 from the Constitution (2010) recognizes the right of communities to govern and decide on questions related to tenure rights and development. The Trust Land Act further considers community land that is not owned but available for county councils to oversee (UNECA 2017).

Figure 27: Number of cattle in Kenya (2014).



Source: ICPAC and WFP 2018.

Figure 28: Number of goats in Kenya (2014).



Source: ICPAC and WFP 2018.

Market access for livestock producers

Kenya has a thriving trade network with its neighbouring countries. Main terrestrial cross-border markets exist at the borders with Tanzania, Uganda, South Sudan, Ethiopia and Somalia. Most of them are connected to each other and to additional inland markets via trunk roads, except for markets in the eastern and northwestern areas given poor road networks. Border inspection points exist in several border locations and are operated by the official veterinary authority but with modest staff and limited training and operating standards (IGAD 2013).

Livestock markets are often difficult to access for buyers and producers alike. Households in the northern and eastern region depend on food purchases at markets. However, access for both customers and producers in these regions are often hindered by difficult terrain, poorly maintained roads, insecure travel and inadequate transportation modes (ICPAC and WFP 2018).

Kenya's information and communications technology sector is one of the most advanced in the IGAD region, but rural areas tend to be underserved. The share of mobile cellular subscribers increased by 43.5% to 86.1% of the total population from 2010 to 2017 alone (AfDB, AUC and UNECA 2019). Some 70.5% of households have mobile money subscriptions, but only 46% have access to broadband internet, with many rural areas lacking any access (World Bank 2020g).

The Kenyan livestock sector has animal health certification requirements, but enforcement is limited at the production level. Kenya's veterinary network operates two central veterinary laboratories (Kabete and Embakasi), six regional investigation laboratories, and some satellite veterinary laboratories across the country (IGAD 2013).

Kenyan livestock traders require a 'no-objection' permit, which is a traditionally paper-based system that is currently transferred to a mobile phone communication system between originating and destination veterinarians to decrease efforts and cost for permit seekers. In addition, a 'movement' permit certifies parasite treatments, vaccinations, and freedom from diseases facilitated by an online issuance portal. In an effort to enhance the livestock sector business environment, the government decreased the number of licenses and permits required, including abolition of the livestock traders license, enabling market participation of traders without prior vetting or clearance from veterinary authorities (IGAD 2016).

Issues and challenges faced by the pastoral and livestock sector

Varying and extreme climate patterns in combination with high concentrations of livestock herds in most drought-prone areas put animals and livelihoods at risk. Pastoralists suffer from low, unreliable rainfall and potentially lasting droughts, leading to an insufficient availability of water, pasture and forage for their livestock. In contrast, occasional extreme rainfalls cause flash floods to occur. Both hazards may lead to land erosion, death of livestock herds, missing income and increased food insecurity among pastoralist households (ICPAC and WFP 2018).

Kenyan livestock producers face animal health concerns, aggravated by inadequate availability of veterinary services. Pastoral areas commonly experience pests and diseases including rinderpest, anthrax and East Coast Fever. The occurrence of livestock diseases is exacerbated by recurrent severe droughts, as they weaken the animals and thus lower their disease resilience. Veterinary services required to address these health hazards are limited and difficult to access for pastoralists, given regional security concerns and their travel-based lifestyles (ICPAC and WFP 2018).

Poor pasture quality, limited forage and overstocking are causing frequent inadequate fodder supply for livestock. Most ASALs have poor soil quality and are covered by bare land or low-quality pastures of tuft grasses, providing limited nutritional value. Pastoralists attempting to mitigate risks by keeping large numbers of livestock are contributing to overgrazing, soil erosion and environment degradation (ICPAC and WFP 2018). Locust invasions, for instance experienced in Marsabit and Turkana in 2020, further decrease available pasture for livestock (FSIN 2019).

The increasing degradation of grazing land areas causes a severe negative impact on the environment, livestock and pastoralist livelihoods. Forty per cent of the total land area is classified as degraded (UNDP 2019a). Land degradation is caused by factors including growing population numbers, land use for economic development and climatic impacts. The resulting effects including soil erosion, pasture productivity and reduced ground cover, have direct adverse effects on livestock and broader poverty and food insecurity measures of pastoralists. Land degradation occurs mostly in the central and western areas due to more intense agricultural production in these regions (ICPAC and WFP 2018).

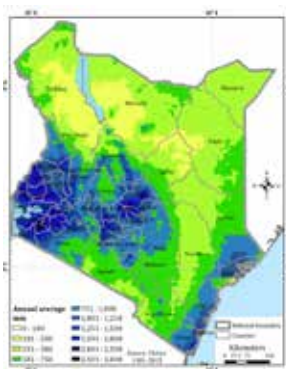
Government mitigation measures, increased value chain costs, and decreased mobility of stakeholders in response to COVID-19 severely impacted the livestock sector. The COVID-19 outbreak in 2020 caused several economic concerns, including reduced domestic private and corporate spending of about 50%, decreased international demand for key export products, including coffee horticultural products, and a 75% decrease in vegetable and fruit exports (Deloitte 2020). The Government of Kenya was among the first to establish strict COVID-19 prevention and mitigation efforts, starting in March 2020. International land border closures and domestic movement restrictions directly impacted the trade activities in the livestock sector. After a political backlash, these restrictions were repealed. Yet, additional costs for traders related to the additional transportation, holding and fodder expenses occurred, leading to a significant reduction in the frequency and volume of trade. Overall, ILRI estimated that these factors lead to an estimated 40% volume reduction of livestock sold from February to April (Mercy Corps 2020a).

II. Impacts of droughts on livestock sector and pastoralist livelihoods

Agroclimatic conditions in pastoral regions

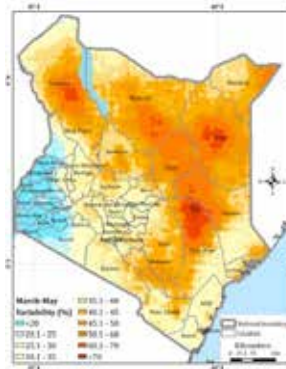
Kenya has a warm and humid climate along its coastline and savannah grasslands inlands. The ASALs make up 89% of the total land area. Thirty-eight per cent of the population and 70% of the national livestock herd live in arid counties (IGAD 2020a). The western region is dominated by forested and hilly areas, whereas the northeastern regions are arid and semi-arid. The southwestern region includes the fertile grasslands of the Kenya highlands (Babikir et al. 2015). The central highland regions are substantially cooler than the coast, ranging from an average temperature of 15 C compared with 29 C at the coast. Of the total land area, 18% has high to medium agricultural potential, with the remaining area being arid and semi-arid land and therefore categorized to be of limited potential (ICPAC and WFP 2018).

Figure 29: Mean annual rainfall in Kenya (1981–2010).



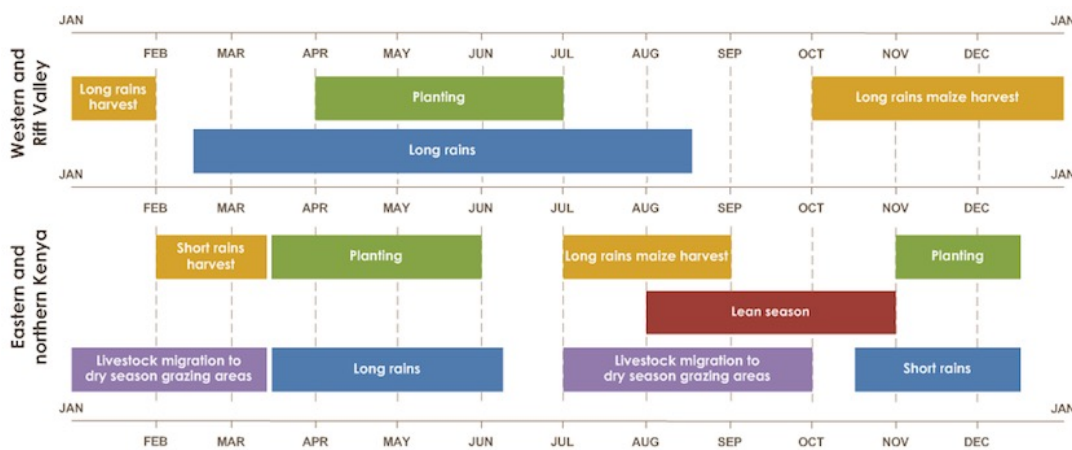
Source: ICPAC and WFP 2018.

Figure 30: Coefficient of variation for Kenyan March–May seasonal rains (1981–2010).



Source: ICPAC and WFP 2018.

Figure 31: Typical agricultural and climatic season calendar in Kenya.



Source: FEWS NET 2020b

Overall, vegetation conditions remain poor in the northeastern regions causing critical problems for pastoralists that depend on natural vegetation for livestock forage. The rainfall distribution is defined by two rainy seasons: long rains from March to May and short rains from October to December for most parts of the country, with pastoral areas receiving less than 100 mm of rain in most months. The climate is influenced by the inter-tropical convergence zone and ranges from permanent snow on Mount Kenya to desert areas at Chalbi desert in Marsabit County in the northern region (ICPAC and WFP 2018).

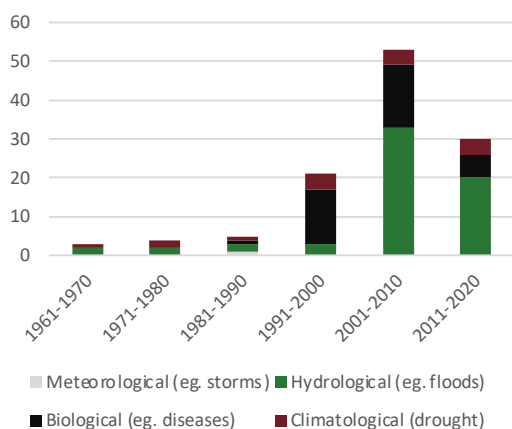
Frequency and severity of natural disasters

Kenya is significantly experiencing the effects of climate change and increasing occurrences of natural disasters.

The country ranks 40th out of 181 countries in the WorldRiskIndex score (high), with a high exposure to and very high vulnerability to natural disasters (BEH and IFHV 2020). It further ranked 159th out of 181 countries on the ND-GAIN Exposure Ranking in 2018, which describes the degree to which a system is exposed to significant climate change from a biophysical perspective (ND-GAIN 2020).

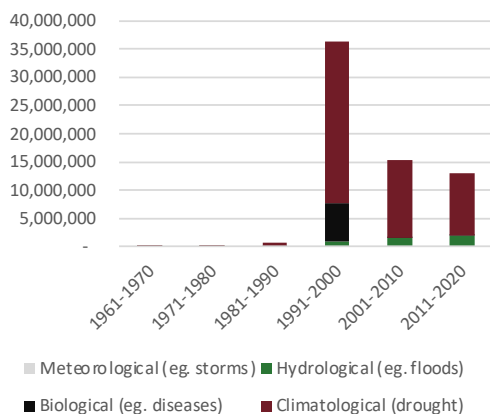
Kenya's main natural hazards are droughts and floods. The country experienced drought conditions in the years 1983, 1984, 1993, 2000, 2009, 2011, 2012 and 2016, with 2009 to 2011 categorized as severe to extreme drought conditions. Floods affect low-lying regions of the country such as the coastal strip and river valleys that are unevenly distributed in the country's drainage basins. Regions in the northern and eastern regions are especially susceptible to both droughts and floods, despite some of them recording an average rainfall of 300–500 mm annually compared to 1600–2000 mm in the western and central highlands.

Figure 32: Number of events by disaster type in Kenya (1961–2020).



Source: EM-DAT 2020.

Figure 33: Number of affected people by disaster type in Kenya (1981–2020).



Source: EM-DAT 2020.

Impact of droughts and other perils on livestock and the pastoral sector

Kenya's livestock sector carries the majority of economic costs inflicted by drought. Reliable data on economic losses in the agriculture sector due to droughts are scarce and limited to costs assessments of recent events (ICPAC and WFP 2018). Drought conditions between 2008 and 2011 created an estimated overall loss of USD 12.1 billion. The

livestock sector accounted for 72% of that loss, putting the livelihoods of pastoralists at severe risk (World Bank 2018a). The loss resembled the cost of animal deaths due to droughts and diseases and additional costs such as increased need for veterinary services, water and fodder. A post-disaster needs assessment indicated that the highest costs due to livestock deaths between 2008 to 2011 occurred in the Rift Valley, followed by the eastern and northeastern regions (ICPAC and WFP 2018). Impacts were generally worse in places where poverty levels were already higher (IGAD 2020a).

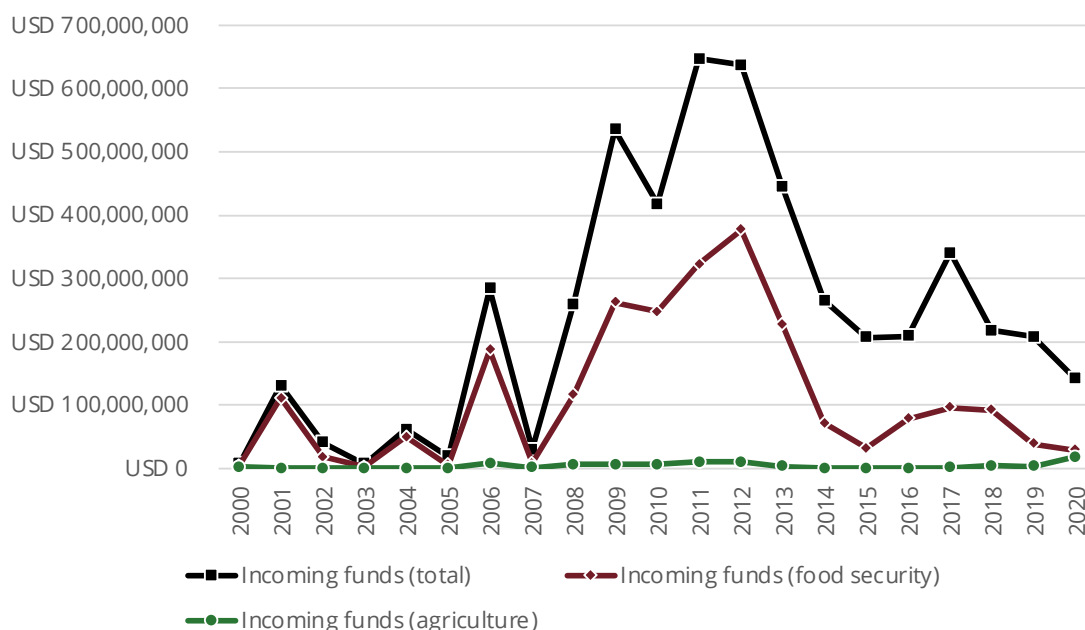
Impact on food security and overall well-being

Poverty and food insecurity are acute in pastoralist areas. Food insecurity results from various factors, including economic shocks, market inaccessibility, and reduced food production due to climatic shocks (ICPAC and WFP 2018). Some 2.6 million people, mainly located in arid and semi-arid counties, experienced a crisis or emergency food insecurity level in 2018 (IPC Phase 3 or higher), mainly driven by climate shocks, conflict and economic shocks requiring urgent humanitarian assistance (FSIN 2019). Other events during the beginning of 2020 such as flooding, population displacements, desert locusts and outbreaks of livestock diseases led to acute food insecurity (IPC 2020).

COVID-19 further exacerbated existing food access concerns in 2020. Staple food prices in rural areas were negatively affected by COVID-19 restrictions. (FEWS NET 2020c). By the end of September 2020, 547,946 tests were conducted, confirming 38,529 cases of which 12,910 were still active and 24,908 had recovered. Some 711 people had died from the virus (IGAD and WHO 2020). During the months of March, April, May and June 2020, movement was restricted by authorities and markets closed either by design or out of concern for public health. This affected pastoralist welfare significantly. The effect of the pandemic on employment also affected pastoralist communities adversely.³¹

Humanitarian assistance

Figure 34: Incoming international aid funding to Kenya as tracked by UN OCHA (2000–2020).



Source: UN OCHA FTS 2020.

³¹From answers to expert questionnaires.

III. Pastoralist development programs and existing drought risk financing practices

Table 27: Government programs focused on the enhancement of the pastoralist and livestock sector in Kenya.

Title	Description	Duration
KLIP	Modified-macro level IBLI for vulnerable pastoralists in eight Kenyan ASAL counties. Volume: USD 241 million.	2015 to date
Agricultural Sector Development Support Program II	The overall goal is to contribute to the transformation of crops, livestock and fisheries production into commercially oriented enterprises that ensure sustainable food and nutrition security.	n.a.
National Agricultural and Rural Inclusive Growth Project	The project development objective is to increase agricultural productivity and profitability of targeted rural communities in selected counties, and in the event of an eligible crisis or emergency, to provide immediate and effective response.	2017–2022

Source: Ministry of Agriculture 2020.

Table 28: Donor projects focused on the enhancement of the pastoralist and livestock sector in Kenya.

Organization	Project title	Cost/contribution	Duration
World Bank	Regional Pastoral Livelihoods Resilience Project (multiple recipient countries)	USD 77 million (for Kenya)	2014–2021
World Bank	Kenya Social and Economic Inclusion Project (KSEIP)	USD 1,346 million, of which IDA: USD 182.5 million	2019–2023
IFAD	Upper Tana Catchment Natural Resource Management Project	Total: USD 87.4 million IFAD: USD 46.6 million	2012–2022
World Bank	Kenya Climate Smart Agriculture Project	Total: USD 279.7 million WB: USD 250.0 million	2017–2022
World Bank	Emergency Locust Response Program (multiple recipient countries)	USD 43 million (for Kenya)	2020–2023
European Union	Ending Drought Emergencies: Support to Resilient Livelihoods and Drought Risk Management	USD 45.4 million, of which European Union: USD 37 million	2018–2022
European Union	Ending Drought Emergencies: Support to Resilient Livelihoods and Drought Risk Management	USD 35 million, of which European Union: USD 27.8 million	2016–2020
FAO	Restoration of ASALs of Kenya through bio-enterprise development and other incentives under the Restoration Initiative	USD 4,157,341	2018–2023
FAO	Integrated actions for innovative food systems across rural-urban communities	USD 2.1 million	2018–2021
FAO	Reducing Distress Migration Through Local Value Chain Development	USD 1.5 million	2017–2021

Existing drought risk financing programs

The Government of Kenya has experimented with a multitude of different drought risk financing instruments.

Today, Kenya is using the following:

- **National disaster risk financing strategy:** In 2018, Kenya was the first African country to adopt a national disaster risk financing strategy. The strategy that was drafted and adopted by the National Treasury outlines a comprehensive mix of pre-arranged financing instruments providing resources to finance the response to severe droughts. The framework is shown schematically in Figure 35 (Government of Kenya 2018; 2019).

- **Contingency funds:** There are a number of different contingency funds being operated in Kenya that provide finance for drought response. They are funded by a series of different donors, with a particularly prominent role for the European Union. Drought response funds are generally coordinated by the National Drought Management Authority under the Ministry of Planning and ASALs. For more than a decade, the government has debated the plan of launching a publicly financed National Drought Contingency Fund (but it has so far not been launched).
- **Contingent credit:** In 2018, the Government of Kenya concluded a contingent credit agreement with the World Bank under its 'Catastrophe Deferred Drawdown Option' program. Upon the occurrence of a disaster, including drought, the government would be able to take out a concessional loan with a total volume of up to USD 200 million. The full loan volume was disbursed in 2020 to provide rapid liquidity enabling the government to respond to COVID-19 and has not been renewed so far.
- **Contingent grant:** The National Drought Management Authority has also arranged a contingent grant arrangement with the World Bank and UK Aid under the World Bank 'Kenya Social and Economic Inclusion Project. Under the condition of making certain financial commitments, the government receives grant payments from the World Bank and the UK FCDO in the case of a drought for delivery to vulnerable pastoralist populations using the scalable Hunger Safety Net Program, a cash transfer program active in eight Kenyan ASAL counties.
- **Agricultural insurance:** There are also a number of publicly supported agricultural insurance schemes active in Kenya which provide resources to agricultural producers during severe droughts and thus lower the Government of Kenya's fiscal drought exposure. They main schemes include (i) the Kenya Livestock Insurance Programme (KLIP), which is fully funded by the Government of Kenya and provides payouts to vulnerable pastoralists; (ii) the IBLI program, which is funded by different donors and provides payouts to micro-level pastoralist policyholders during severe droughts; (iii) the WFP-funded R4 rural resilience program, a comprehensive package of drought insurance, financial services, and trainings delivered to crop farmers; and (iv) the Comprehensive Insurance Program, a crop insurance program for emerging farmers that is partially subsidized through government resources and has reached a critical size of more than 400,000 farmers (Kenya News Agency 2020).
- **Sovereign insurance:** Finally, the Government of Kenya is a member of the African Risk Capacity and purchased sovereign drought insurance from 2014 to 2016. The policy purchase was not renewed as no payout was received in 2016 despite serious drought conditions in Kenya's ASALs. However, the government continues to be in negotiation with African Risk Capacity on purchasing cover under another product that is designed specifically for the Kenyan rangelands (Government of Kenya 2020).

Figure 35: Kenya's disaster risk financing framework.



Source: World Bank.

IV. Review of national livestock insurance market development

Insurance legal and regulatory framework

The Insurance Act Chapter 487, which was passed in 1985 and made effective from 1 January 1987 and Insurance Regulations of 1986 control insurance in Kenya. There have been numerous amendments to the Insurance Act over time, including the most recent Insurance (Amendment) Act No 11 of 2019. The Kenyan legal system is based on English common law (AXCO 2020b).

The insurance industry is supervised by the Insurance Regulatory Authority of Kenya. The Insurance Regulatory Authority was formed in 2007 as an autonomous state corporation responsible for supervising, regulating and promoting the development of the insurance industry in Kenya (AXCO 2020b). Over the past decade the Insurance Regulatory Authority has been extremely supportive of the numerous crop and livestock micro-level index insurance pilots that have been introduced into Kenya.

Microinsurance and index insurance were added to the list of permitted insurance business in 2019. Under the Insurance (Amendment) Act No 11 of 2019, microinsurance and social insurance schemes have been added to the definition of permitted insurance business, and index-based insurance is also specifically admitted (AXCO 2020b). As such, Kenya is the first country in East Africa specifically to approve index insurance as a permitted class of non-life insurance business.

A takaful governance framework was added to the Insurance Act in 2016 to serve the minority but economically active Muslim population, which amounts to around 11% of the population. The Insurance Regulatory Authority issued takaful guidelines in 2018. Most takaful insurance is transacted through window operations plus there is one takaful specialist insurer, Takaful Insurance of Africa (AXCO 2020b)

Reinsurance regulations require local insurers to make compulsory reinsurance cessions of 20% to Kenya Re, the state-controlled reinsurer, 10% to ZEP-RE and 5% to Africa Re (AXCO 2020b). In practice Kenya Re may decide to decline to take up the compulsory cession.

Status of non-life insurance market

The Kenyan insurance market ranked 57th globally in 2018, its non-life insurance market ranked 63rd and its personal accident and healthcare premium ranked 46th. In 2018, the total market premium was Kenyan shilling (KES) 216.2 billion (USD 2.1 billion), of which life insurance was the biggest sector, accounting for 40.4% of total premium, closely followed by non-life premium (39.5%) and personal accident and health insurance (20.1%). Kenya has the second largest non-life insurance market in sub-Saharan Africa after South Africa. Gross written non-life premiums in 2018 totalled KES 85.4 billion (USD 817.77 million). Between 2014 and 2016 the Kenyan insurance market increased at more than 10% per annum, but since 2017 premium growth has been very sluggish at about 2% due to intense competition and rate cutting by Kenyan insurers (AXCO 2020b).

There were 56 licensed insurance companies in 2020, of which 31 were non-life insurers only, and a further eight were composite (life and non-life) insurers, including one takaful operator, Takaful Insurance of Africa Ltd. The leading five non-life insurers in 2018 were Jubilee Insurance Company Ltd, CIC General Insurance Ltd, APA Insurance Company Ltd, UAP Insurance Company Ltd. and Britam Insurance Company Ltd. These top five companies accounted for 37.5% of total non-life insurance premium (AXCO 2020b). Four of the five top non-life insurance companies are also actively involved in underwriting crop and livestock insurance: Britam is currently not a major agricultural insurer.

The Kenyan non-life insurance market is currently over supplied, creating fiercely competitive price- driven trading conditions with declining profitability.

Insurance market penetration in Kenya is high relative to other East African countries, equivalent to 2.43% GDP and only USD 42.45 per capita in 2018. This compares with 0.69% of GDP and USD 5.43 per capita in Uganda and 0.53% of GDP and USD 5.43 per capita in Tanzania in 2018. Raising insurance penetration is a long-term policy goal of both the Insurance Regulatory Authority and the Association of Kenyan Insurers (AXCO 2020b).

Official regulatory reporting does not disclose the market premium for agricultural lines, though the Association of Kenya Insurers reports KES 716.2 million (USD 6.86 million) in written premiums in 2018, a 13% decline on the KES 822.7 million (USD 7.88 million) written in the previous year. Livestock cover accounted for 62% of the total, and crop insurance 38% (AXCO 2020b). The authors of this DIRISHA report estimate total Kenyan market agricultural insurance premiums in 2019 at about USD 7.5 million to USD 10 million, of which KLIP premiums amounted to about USD 2.4 million.

African Risk Capacity is licensed to operate in Kenya and between 2014/15 and 2015/16 the Government of Kenya purchased sovereign risk drought index insurance. There were no drought payouts in these two years and since then government has declined to purchase further drought cover from African Risk Capacity.

Agriculture and livestock insurance availability

The agricultural insurance market in Kenya traditionally only served the interests of a small number of commercial farmers and agri-business companies involved in large-scale export-oriented crop, greenhouse and livestock production. The past 15 years have, however, seen major development of microinsurance and index insurance crop and livestock insurance products for small-scale emerging farmers and vulnerable pastoralists. Traditional indemnity-based crop insurance covers offered by the private commercial insurers include multi-peril crop insurance, named peril fire and hail crop insurance, specialist greenhouse insurance for floriculture and intensive horticulture crops and forestry insurance and machinery breakdown covers. Traditional indemnity-based livestock insurance covers are available for dairy and beef cattle, horses, pigs, poultry and pets and insure against mortality and accidental injury and named diseases.

Crop index insurance initiatives

Some of the first crop weather index insurance programs in Kenya were launched in 2009 by the Syngenta Foundation for Sustainable Agriculture under the Kilimo Salama initiative, a private-sector led crop index-based weather insurance program that insured Kenyan smallholder farmers against rainfall deficit (drought) and excess rain. The programs were underwritten by UAP Insurance Company, one of Kenya's largest insurance companies, and Safaricom, the largest mobile network operator in Kenya (Syngenta 2010). At the same time, the World Bank through its Commodity Risk Management Group was developing similar weather index insurance products for Kenya's maize, banana, wheat and sorghum farmers. Most of these pilots did not pass to commercial scale-up and encountered significant basis risk; however, they put crop weather index insurance firmly on the map and led to government support particularly in areas of weather data and crop production and yield data strengthening (Bankable Frontier Associates 2013).

Since 2014 there has been a major expansion of micro-level crop area yield index insurance in Kenya with direct linkage to crop credit insurance. Crop producers in Kenya face numerous risks including weather-related perils of drought and flood, but also crop pests and diseases, which can reduce average production and yields in staple crops such as maize by as much as 40%. Starting in 2014 the World Bank assisted the Kenyan Government and a consortium of leading private sector insurers to introduce area yield index insurance into Kenya: area yield index insurance is a suitable product for smallholder farmers and provides more comprehensive cover than weather index insurance. The State Department of

Agriculture, Ministry of Agriculture, Livestock and Fisheries, conducted major strengthening of crop area, production and yield estimations systems and procedures to provide the basis of an area yield index insurance program. Commercial banks and microfinance institutions including the One Acre Fund, were brought into the program to act as distribution channels for crop credit insurance and the Government of Kenya agreed to support the program through the provision of 50% premium subsidies. The Kenya Agricultural Insurance and Risk Management Program was launched in 2016 and today in 2020 is insuring nearly half a million Kenyan smallholder farmers: as such it has achieved commercial scale-up. The bundling of crop credit with insurance and input supply and assistance with output marketing has proved a high value proposition for Kenyan farmers and may provide pointers in future for scaling up the parallel micro-level IBLI program.

Table 29: Availability of agricultural insurance (indemnity-based and index-based) in Kenya.

Crop insurance products available					
Indemnity-based	Index-based	Weather index insurance	Area yield index insurance	Greenhouse	Forestry
Low uptake	Medium uptake	Medium uptake	Commercial Scale-up	Low uptake	Low uptake
Livestock Insurance Products Available					
Indemnity-Based	Index-Based	Micro-level IBLI	Meso- & macro-level IBLI	Aquaculture	Poultry
Low uptake	Medium uptake	Low uptake*	Commercial Scale-up	Low uptake	Low uptake

Source: Authors.

Livestock index insurance initiatives

Micro-level IBLI

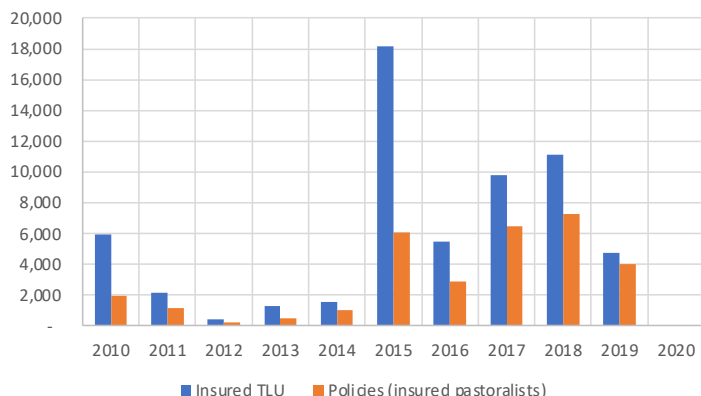
In 2010, ILRI, in conjunction with various development partners launched the first micro-level IBLI in Africa for smallholder nomadic pastoralists based in northern Kenya. The IBLI design project represented a technical agreement between ILRI, the Ministry of Development of Northern Kenya, Cornell University, Syracuse-University and the BASIS Program at University of Wisconsin. The project was funded by the UK's Department for International Development (DFID), USAID, the World Bank and the Financial Sector Deepening Trust. In addition, the Global Index Insurance Fund provided financial assistance for premium subsidies. In 2010, at the launch of the IBLI initiative, ILRI's commercial implementation partners included UAP Insurance Company as the local insurer with reinsurance support provided by Swiss Re's Corporate Solutions, with product distribution managed by Equity Insurance Agency, which is part of Equity Bank (ILRI 2013).

The first IBLI product in Kenya was designed as an asset replacement cover designed to replace livestock that die during droughts. It used NDVI satellite imagery to measure the conditions of grazing lands, which was then fed into an algorithm that predicted livestock losses. The program was launched in Marsabit in 2010 and in its first year UAP insured nearly 2,000 pastoralists and 6,000 TLUs. Since then IBLI has struggled to achieve scale-up: in 2012 UAP exited the business and APA Insurance Company and Takaful Insurance Company took over the program. Takaful offered Sharia-compliant IBLI and invested heavily in staffing, systems and procedures and scaled up the program in the central and eastern ASAL counties such as Wajir and Isiolo, which are mainly Muslim pastoral, between 2014 and 2017. APA, however, withdrew from underwriting IBLI by 2016. Over the past decade IBLI has insured nearly 32,000 pastoralists and 61,000 TLUs in the arid and semi-arid counties of Kenya. In 2015/16 the IBLI program was converted to asset protection cover to bring this into line with the government-subsidized KLIP.

The underwriting results of the voluntary IBLI micro-level program in Kenya have been very poor over the past five years and insurers and their reinsurers have lost money. Between 2015 and 2019 Takaful Insurance Company experienced major underwriting losses in four out of the five years with an overall loss ratio³² of 176% and as high as 615% in 2016. It is noted that for much of this period weather in Kenya and the Horn of Africa was adversely affected by the ENSO El Niño phenomenon and which caused extreme droughts in La Niña years.

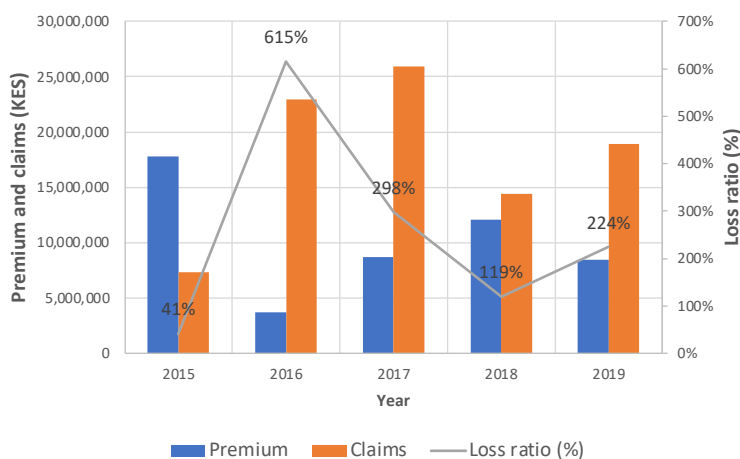
³²The overall loss ratios presented in this section represent the 'long-term average loss ratio', which is equivalent to the sum of the claims for all years divided by the sum of the premiums for the corresponding years. Underwriters also refer to the 'average loss ratio', which is the average of the annual loss ratios for all years.

Figure 36: Demand by pastoralists for voluntary IBLI (2010–2020).



Source: ILRI 2020.

Figure 37: Kenya Takaful Insurance Company IBLI underwriting results.



Source: Takaful Insurance Company.

Evidence from ILRI’s multi-year impact evaluation of the IBLI program in Kenya (and Ethiopia) indicates considerable improvements in their resilience to drought risk and in social and welfare benefits for pastoralists who have insured their livestock. These impacts include a reduction in distress sales of livestock during severe droughts, improved household consumption and nutrition, herd maintenance through timely purchases of livestock fodder and water and veterinary services and increased productivity and sales of milk and incomes (Janzen and Carter 2013; Jensen, Barret and Mude 2015; Taye et al. 2019).

In Kenya, micro-level IBLI has experienced a number of key challenges, including difficulties of achieving scale and financial sustainability. At its peak in 2017, more than 7,250 micro-level policies were sold by Takaful, but by 2020 demand had declined to a point where Takaful suspended sales of the product and closed down its IBLI operational unit.³³ Pastoralists in Kenya (and in Ethiopia) tend to insure only a very few head of animals – an average of only 1.9 TLU per policy – and this means that the average premium earned on a policy has been totally inadequate to cover the administrative and operating costs of the IBLI product. Under this study, Takaful Insurance Company has kindly provided actual operating and administration cost data for the past five years, which show that in Kenya between 2015 and 2019 for every KES 1.0 of IBLI premium collected by Takaful, it cost the company KES 1.29 in IBLI operating expenses and, with the addition of the very high claims (loss ratio 1.76 or 176%), the combined ratio was equivalent to 3.02 (indicating for every KES 1.0 of premium the company was incurring KES 3.02 in claims and operating expenses), or in other words the business has

³³Under their former CEO, Mr H. Bashir, Takaful invested heavily in promoting and underwriting micro-level IBLI and at its peak the company employed more than 60 village insurance promoters. However, following his departure from the company, the new management has reduced its commitments to IBLI.

been very unprofitable for Takaful and this is the major reason the company withdrew from the micro-level IBLI market in 2020. While the company is willing to accept these losses in the short term because of social corporate responsibilities, clearly this is financially unsustainable in the medium to long term and more cost-effective distribution channels for the IBLI product urgently need to be identified and put in place.

Table 30: Kenya Takaful Insurance Company administrative and operating expenses (2015–2019).

Takaful Insurance Company costs, expenses and loss ratios	
Total paid premium (KES)	50,787,429
Total administrative and operating expenses (KES)	64,003,331
Administrative and operating expenses: premium ratio	1.26
Paid claims (KES)	89,524,449
Loss ratio	1.76
Combined ratio	3.02

Source: Kenya Takaful Insurance Company.

Further information on the technical design of the IBLI Kenya product is contained in Volume III to this report, 'A Regional Approach to Drought Insurance in Intergovernmental Authority on Development Countries: Technical Feasibility Assessment'. Further details on IBLI performance, lessons, challenges and impacts are contained in Volume I to this report, 'A Regional Approach to Drought Insurance in Intergovernmental Authority on Development Countries: Main Report – Operational Feasibility Assessment'.

Macro-level Social Protection Cover: Kenya Livestock Insurance Program

Kenya suffered huge multi-billion-dollar losses to the livestock sector in the droughts of 2008 to 2011, which led to widespread death of animals belonging to pastoralists located in the northern ASAL counties due to lack of pasture and grazing. In 2012 a GIZ-funded agricultural insurance situation analysis recommended that the Government of Kenya used satellite pasture drought NDVI index insurance as a large-scale social protection cover to support its drought risk financing strategy and which would be designed to make timely payouts as droughts developed in order to permit pastoralists to purchase fodder, feed supplements and water to keep their core breeding animals alive (Stutley et al. 2013).

In parallel with the micro-level IBLI products, in the short rains 2015/16, livestock asset protection insurance was launched with 5,000 vulnerable pastoralists in two counties in Kenya through a government-led public-private arrangement agreement known as the KLIP and supported by ILRI and WBG. The program has progressively expanded and, in the 2019 season, KLIP provided fully funded insurance coverage to 18,000 pastoral households, representing 120,000 beneficiaries, across eight counties of northern Kenya, and is planned to scale to 45,000 households across 16 counties by 2022 (Kyuma, 2019). The 2016/17 drought was among the worst in Kenya in the past 20 years, and KLIP paid out to pastoralists USD 7 million (ILRI 2019).

KLIP is built on a public-private arrangement approach that includes local private insurance companies, the State Department of Livestock, and the Insurance Regulatory Authority. Research organizations and development partners are also supporting the program. The overall objective of KLIP is to reduce the risks of livestock mortality due to drought, and to build the financial resilience of vulnerable pastoralists and enhance sustainable food security. Under KLIP, private insurance companies underwrite the insurance product and the Kenyan Government fully subsidizes insurance coverage for 5 TLUs to a selected range of beneficiaries, thus being the policyholder under the scheme. The target beneficiaries of KLIP are pastoral communities whose livelihoods are mainly dependent on livestock and are prone to the effects of recurrent droughts. The sum insured is based on the feed requirements to keep 1 TLU alive for 12 months or KES 14,000 per TLU: with 5 TLUs covered each beneficiary can stand to receive maximum drought payouts of KES 700,000 (about USD 700 per year). In the case that payouts are triggered, insurance companies transfer them directly to the beneficiaries, using either mobile money or banks.

Box 1: Kenya design features for macro-level NDVI pasture drought index insurance cover for nomadic pastoralists in the ASAL regions

Macro-level cover purchased by the Government of Kenya as part of its national drought risk management strategy for the most vulnerable livestock producers as defined (cattle, sheep and goats, camels etc.). Cover is designed to provide regular (monthly) payouts to livestock producers in periods of extreme drought and pasture degradation as measured by the NDVI index in order to purchase supplementary feed for their animals. It is anticipated that if livestock producers have cash in hand, this will stimulate local traders to supply livestock fodder in times of extreme drought.

Insured (policyholder): The Government of Kenya and county governments responsible for payment of premiums.

Cover period: Six months: March to May (long rains) and October to December (short rains); the cover is designed to insure pasture and grazing during the normal growing season period only and not in the dry seasons. The cover period would be refined and agreed in each agroclimatic region of Kenya in conjunction with ILRI.

Insured unit: County sub-divisions as identified by a technical partner, e.g. ILRI.

Insured interest: Cover is for all classes of livestock based on TLUs.

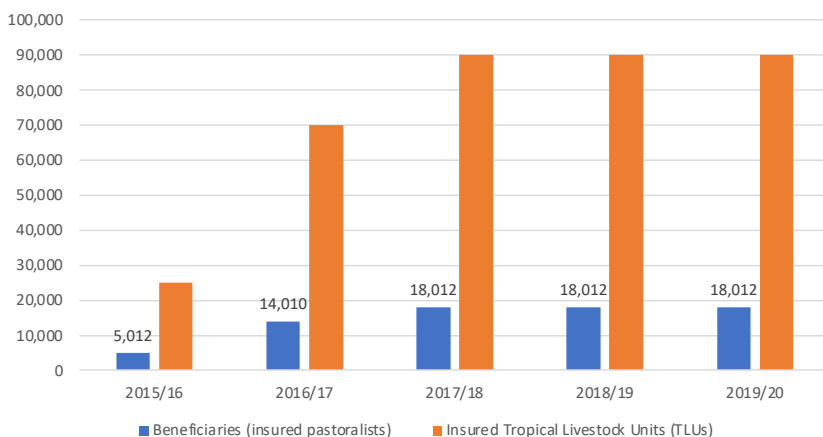
Sum insured: The sum insured is based on the monthly nutritional requirements of one TLU. This is currently set at four hay bales per month per TLU currently valued at about KES 250 per hay bale or KES 1,000 per month. For a six-month cover period the sum insured per TLU would equal KES 6,000. The daily nutritional requirement is to be confirmed with Department of Livestock specialists.

Contract pay-out parameters: The monthly threshold triggers and exit triggers would be defined and agreed with Department of Livestock specialists and calibrated with past historical drought events to ensure that moderate to severe droughts which will result in forced livestock sales and potentially starvation resulting in death is projected.

Beneficiaries: Approximately 700,000 vulnerable livestock producers located in ASAL regions.

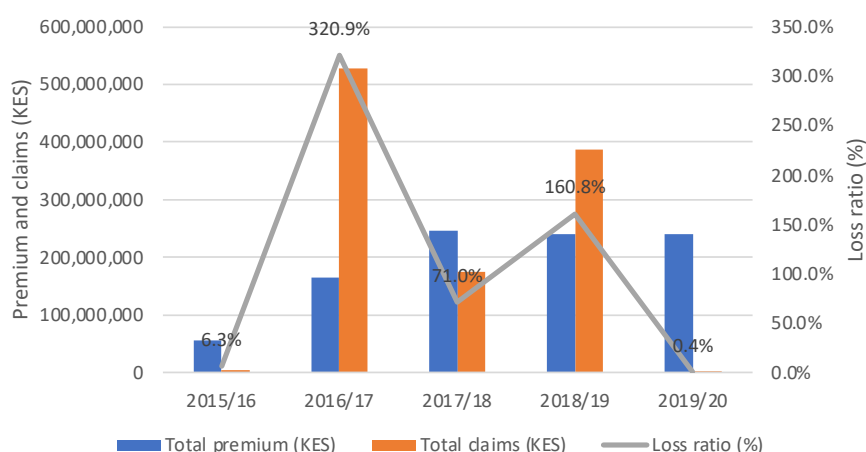
Over the past five years of operation, KLIP insurers and its reinsurers led by Swiss Re have received nearly KES 949 million in premiums from the Government of Kenya and paid out drought claims of KES 1.1 billion with a long-term loss ratio of 115%: 2016/17 was the worst loss year with payouts of KES 528 million and a loss ratio of 321%. It reflects local insurers’ and their reinsurers’ commitment to KLIP that they have continued to support the program in spite of these losses.

Figure 38: Number of beneficiaries and tropical livestock units insured under Kenya Livestock Insurance Program.



Source: Fava et al. 2020.

Figure 39: Kenya Livestock Insurance Program underwriting results (2015–2020).



Source: Fava et al. 2020.

Table 31: Kenya Livestock Insurance Program underwriting results (2015–2020).

Year	No counties	No beneficiaries	No insured TLUs	Total sum insured (KES)	Total premium (KES)	Total claims (KES)	Loss ratio (%)
2015/16	2	5,012	25,060	350,840,000	56,134,440	3,525,789	6.3%
2016/17	6	14,010	70,050	980,700,000	164,460,000	527,834,300	320.9%
2017/18	8	18,012	90,060	1,260,840,000	246,557,230	175,107,406	71.0%
2018/19	8	18,012	90,060	1,260,840,000	240,877,703	387,214,716	160.8%
2019/20	8	18,012	90,060	1,260,840,000	240,882,350	1,000,000	0.4%
Total		73,058	365,290	5,114,060,000	948,911,723	1,094,682,211	115.4%

Source: Fava et al. 2020.

An independent impact study of KLIP led by the German development agency (GIZ) (C4ED 2018) shows it is cost-effective to use insurance to respond to severe weather shocks. Self-reported satisfaction with the program was high and most beneficiaries reported using at least part of the payouts for their livestock (maintenance, restocking, production equipment) and for household needs. In addition, qualitative evidence of community spill overs, such as sharing payouts with neighbours, was observed. Despite the short life of the program, households with insurance subsidized by KLIP experienced slightly lower levels of food insecurity and greater awareness of insurance in general (ILRI, 2019).

Over the past five years of operations, KLIP has faced a series of challenges which centre on the following.

- Insurance contracts are tendered out to underwriters every year, which acts as a major disincentive to private sector infrastructure investment.
- Government of Kenya funds 100% of KLIP premium costs, but lacks budget to scale up the program. It is unclear whether the Kenyan scheme will be sustainable in the medium to long term.
- There has not been sufficiently clear policy guidance on how long the selected beneficiaries should be eligible for fully subsidized premiums.
- KLIP has acted as a disincentive to individual pastoralists purchasing micro-level voluntary IBLI.
- For KLIP, the registration of beneficiaries and handling of claims has been a major challenge.
- KLIP has had challenges to align effectively with other drought risk financing initiatives in Kenya (see Volume I for more detail of the challenges facing KLIP).

Interest from public and private stakeholders

The KLIP has been a widely hailed success. It has also been an effective way for the Government of Kenya to reach remote populations and take a share of drought risk off its balance sheets. At the same time, there is a strong desire from Kenyan officials to turn the full-subsidy scheme into one that only receives partial (e.g. 50%) support. This wish would need to be addressed in any follow-up IBLI-based program.

V. Operational elements for potential IBLI implementation

Financial inclusion

Table 32: Financial inclusion data for whole population in Kenya (2017).

Financial inclusion data for Kenya's population (% of population; age 15+)		
	Total	Rural
Financial institution account	81.6	81.2
Borrowed any money in the past year	64.4	64.5
Borrowed from a financial institution or used a credit card	19.2	19.2
Borrowed from a savings club	19.7	20.8
Coming up with emergency funds: not possible	48.6	49.3
Credit card ownership	5.7	5.1
Financial institution account	55.7	55.0
Made or received digital payments in the past year	79.0	78.7
Main source of emergency funds: sale of assets (% able to raise funds)	6.4	6.7
Mobile money account	72.9	72.6
No deposit and no withdrawal from an account in the past year	3.6	3.6
Received government transfers in the past year	12.3	12.3

Source: World Bank 2020f.

Despite that the digital revolution is farthest advanced in Kenya among IGAD countries, pastoralist communities remain underserved by financial institutions. Access to finance remains a major issue in remote pastoralist areas in Kenya (Kenya National Bureau of Statistics 2016). In many areas, financial institutions are not present at all. Some commercial banks have opened branches in pastoralist areas, including Kenya Commercial Bank, Equity Bank Limited, Co-operative Bank Limited and First Community Bank, the latter also offering Sharia-compliant financial products. However, their offices are few and concentrated only on major towns such as Isiolo town, Marsabit town and Moyale town, which tend to be hundreds of kilometres apart. Besides the long distances required for pastoralists to reach them, their product portfolio is often unsuited to the typical pastoralist client profile, who often cannot offer collateral. Microfinance institutions are trying to fill the gap, mostly operating through Saccos and village loan and saving groups. However, issues with collateral persist and financial literacy severely constrains the use of even available financial services (Ouma 2017). ILRI research shows that pastoralist credit demand tends to be very low (Gesare et al. 2015).

One encouraging trend is the increasing access of pastoralists to mobile phones and the growth of mobile money systems. As per Kenya National Bureau of Statistics (2016), mobile ownership in rural areas in Kenya increased from 41.6% in 2009 to 71.3% in 2016. Indeed, in pastoral areas, one respondent to the expert questionnaires estimated that access to a mobile phone was greater by 50% today. There are a number of mobile money schemes in Kenya, including M-PESA by Safaricom, Airtel Mobile by Airtel, and Sendwave. These all offer opportunities for growing financial inclusion in pastoralist areas.

Beneficiary registries





Kenya has recently made great advances in consolidating beneficiary data under one Single Registry. The Government of Kenya has consolidated beneficiary data of over more than 1.3 million Kenyan households under one single data platform, the Single Registry for Social Protection. The platform consolidates data from management information systems of the country's largest social cash transfer programs – the Cash Transfer for Orphans and Vulnerable Children, the Hunger Safety Net Program, the Older Persons Cash Transfer, the Cash Transfer for Persons with Severe Disabilities and WFP's Jenga Jamii. The explicit purpose of this database is to serve as a registry for designing and managing safety nets.³⁴ It can be accessed online and could be a useful starting point for identifying beneficiaries of any potential future modified macro-level insurance program.

Table 33: Key government and donor programs with pastoralist beneficiary registries in Kenya.








Government programs	Target areas	No. of pastoralist beneficiaries (households)
Single Registry for Social Protection	All of Kenya	465,000 from WFP registry 839,000 from Kenya National Safety Net Program
Hunger Safety Net Program	Marsabit, Mandera, Turkana and Wajir	375,000
KLIP	Garissa, Isiolo, Marsabit, Mandera, Samburu, Tana River, Turkana and Wajir	18,000

VI. Summary: Feasibility Assessment of a livestock insurance market through a regional IGAD IBLI initiative

Table 34: Preliminary assessment of country readiness for IBLI across key operational elements in Kenya.

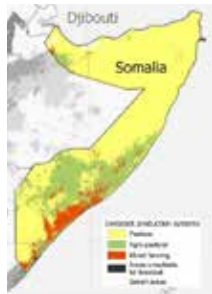
	Status	Comments
Importance of pastoral livestock for economy		The livestock sector is of key importance for the Kenyan economy, providing about 12% of GDP and with more than 4 million people or 10% of the population being pastoralists.
Impact of drought on livestock		Droughts have recurrent devastating impact on pastoralist populations in Kenya. This was most visible during the 2008–2011 droughts that caused more than USD 12 billion in losses and damages, more than 70% of which was borne by the livestock sector, and pastoralists in particular.
Pastoralist demand for livestock insurance		There has now been more than 10 years of experience with retailing micro-level IBLI in Kenya. It has become very clear that demand from pastoralists has been limited due to a variety of factors: limited financial literacy and ability to pay being essential ones. However, agricultural insurance is a challenging product to retail anywhere. There has been demand from some pastoralists, and arguably more challenges have been with distribution and capacity building rather than with the lack of demand from pastoralists once they would be trained on the potential benefits of the product.
Effective distribution channels for micro-level IBLI		IBLI product distribution has been a major challenge for Kenyan insurers and not been a profitable business. As a result, the current underwriter, Takaful Insurance of Africa has exited the market altogether, leaving no one to underwrite IBLI during the 2020/21 season. Major innovations will be required to upgrade the effectiveness of distribution. Positives are the relatively strong access of pastoralists to mobile phones and the availability and growing use of mobile money systems.

³⁴<https://mis.socialprotection.go.ke:20307/>

	Status	Comments
Existing pastoralist beneficiary registries		In recent years, the Government of Kenya has made great progress in consolidating its various beneficiary databases in one Single Registry for Social Protection. This could serve as an entry point for the identification of beneficiaries of any new potential modified macro-level IBLI product going forward.
Pastoralist financial literacy		Through IBLI programs, 10 years of capacity building and awareness-creation activities have been provided to pastoralist communities in the four northern Kenyan counties: Mandera, Marsabit, Turkana and Wajir. However, as anywhere else in the ASALs, financial literacy among Kenyan pastoralists is very limited. The IBLI experience has shown the huge needs for investments in capacity building and awareness creation should the goal be to create a commercial and sustainable micro-level IBLI market. Arguably, the overall program structure, especially both the annual tenders of KLIP and its lack of an incentive structure for pastoralist capacity building, has not supported relevant efforts effectively. These issues would need to be addressed under any future program ensuring large-scale investments in enhancing pastoralist knowledge and acceptance of the IBLI product.
Legal and regulatory insurance environment		The IBLI product has been retailed for the past 10 years, thus there are no regulatory insurance challenges of immediate concern.
Insurance market development		The Kenyan market is the most advanced in East Africa and there is now a series of insurers with experience in underwriting, retailing and administrating IBLI products. While interest of the Kenyan insurance sector in continuing the IBLI program is still high, some are getting tired of the lack of profitability.
Interest from insurers in IBLI		There is strong engagement by some players in agricultural insurance. Given experience with IBLI so far, there is a strong interest among Kenyan insurers to make the product work at the micro level. However, some players, notably Takaful Insurance of Africa, are getting frustrated with the lack of progress on voluntary micro-level sales and have recently exited the market.
Finance available for premiums		Kenya is member of the World Bank Horn of Africa Initiative and has requested financing from the World Bank to invest in the IBLI initiative. In theory, this money could be used to finance or co-finance premium payments under a future regional IBLI-based program. However, no definitive decisions have been made.
Interest from government stakeholders in IBLI		KLIP has been a widely hailed success. It has also been an effective way for the Government of Kenya to reach remote populations and take a share of drought risk off its balance sheets. At the same time, there is a strong desire from Kenyan officials to turn the full-subsidy scheme into one that only receives partial (e.g. 50%) support. This wish would need to be addressed in any follow-up IBLI-based program.

E. Somalia

Table 35: Summary of livestock and insurance in Somalia.

Status of planning and implementation of Index-Based Livestock Insurance					
IBLI availability	None.				
IBLI planning	IBLI Feasibility study conducted 2019 (WBG AND ILRI 2019). The Government of Somalia is studying role of IBLI as part of IGAD regional initiative.				
Livestock and pastoralism sector					Map amended from (Cecchi et al. 2010)
No. of pastoralists (% of total population)	MPI rating in rural areas	Livestock contribution to GDP	Livestock production index (2004–06 = 100)		
6.7 M (60%) ³⁵ (2015)	0.651 ³⁶ (2017)	40% ³⁷ (2017)	109 ³⁸ (2017)		
Livestock breakdown ³⁹ (2018)*					
Total TLUs	Camels	Cattle	Goats	Sheep	
17.1 M	7.2 M	4.7 M	11.5 M	10.6 M	
Key insurance and financial sector institutions					
Banks in pastoral areas	Amal Bank; Dahabshil Bank; the International Bank of Somalia; Premier Bank; Global Tech Bank; and Salaam Somali Bank (targeting community saving and loan groups)				
Mobile cash	11 money transfer businesses registered with the Central Bank of Somalia				
Insurance companies	First Somali Takaful and Re-Takaful Insurance Company (FISO Takaful Insurance); Takaful Insurance of Africa; Horn Insurance				
Key insurance schemes and legislation					
Insurance law/regulation	Currently no insurance law or regulation; sector regulated by Ministry of Finance.				
Livestock insurance products	Very limited; some crop and livestock indemnity-based products are offered by FISO Takaful Insurance. There is no IBLI insurance in 2020.				

³⁵(UNECA 2017).

³⁶The multidimensional poverty index is an index between 0 and 1 that is comprised of 10 different indicators on poverty. The higher the index value, the greater the poverty (OPHI 2017).

³⁷(Guthiga et al. 2017).

³⁸(FAOSTAT 2020c).

³⁹(FAOSTAT 2020c).

Other relevant partners for IBLI	
Government partners	Ministry of Livestock, Forestry and Range (at IBLI conferences); Ministry of Humanitarian Affairs and Disaster Management (at IBLI conferences)
Livestock sector associations	NAFAQO Butchers and Slaughter Association; Somaliland Meat Development Association; Somaliland Pastoral Forum
Most important development partners	UK FCDO, European Union, FAO, WBG, USAID, WFP, Swiss Development Cooperation (SCD) (interested in livestock insurance), Building Resilient Communities in Somalia (BRCiS) NGO consortium, Somali Resilience Program (an NGO consortium)

*FAO data based on imputation methodology.

TLU conversion rates: Camel: 1.4 | Cattle: 1.0 | Goat: 0.1 | Sheep: 0.1

I. Socio-economic relevance of livestock production and pastoralism

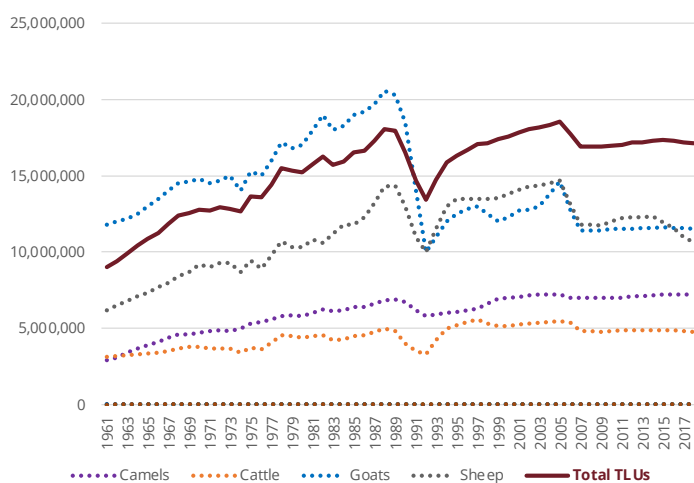
Socio-economic situation in Somalia

Somalia is one of the poorest countries in the world. Sixty-nine per cent of the population is estimated to be poor, with more than 50% experiencing severe multidimensional poverty in their health, education and standard of living (UNDP 2019b). There are several geographical differences in terms of poverty and access to basic services, with rural populations being disproportionately negatively affected. Around half of the Somali population lives in rural areas, having steadily declined from 83% in 1960 (World Bank 2020i). Nomadic pastoralists and agro-pastoralist communities make up 26% and 23% of the total population, respectively. (United Nations Population Fund 2014).

Economic relevance of the livestock sector

Somalia’s economy heavily relies on the agriculture sector, which accounts for an estimated 75% of total GDP (MoPIED 2019). The livestock sector is the largest provider of livelihoods, employing 65% of the labour force (Crane et al. 2018). It further contributes 60% of agricultural GDP and 93% of export earnings (World Bank 2018b). The total national stock of livestock animals is currently estimated at 56 million (MoPIED 2019). This includes 7.2 million camels, 4.8 million cattle, 11.5 million goats and 10.6 million sheep. The total domestic number of TLUs as estimated by FAO was 13.6 million in 2018 (FAOSTAT 2020c).

Figure 40: Numbers of major livestock species in Somalia (1961–2017).



Source: FAOSTAT 2020c⁴⁰.

⁴⁰These figures are based on FAO imputation methodology and estimates as well as official and unofficial data.

Livestock production systems and livelihoods

Somalia has one of the largest livestock populations in the world, partly due to large areas suitable for grazing, fodder production and free movement of herds (World Bank 2018b). The livestock sector is dominated by traditional pastoral and agro-pastoral production systems, depending on local geography, climate and labour markets. Northern and central regions are mainly pastoral due to arid and semi-arid conditions, characterized by limited cropping activities and high mobility of people and herds. Agricultural or agro-pastoral production systems prevail in the south, as land tends to be more fertile due to higher rainfall and access to water from the rivers Juba and Shebelle. Overall, productivity levels remain low, given the lasting impact of the civil war and missing investments (MoPIED 2019).

The broader livestock value chain includes input stakeholders, including animal health services and fodder providers, but both sectors have limited resources and lack quality standards. Livestock traders that market livestock include small-scale traders that purchase, fatten and resell animals in local markets, large traders with more capital and better logistical facilities that provide to larger markets and clients, as well as brokers that facilitate transactions within and outside local markets (FAO and WBG 2018). Overall, value additions to animal products through modern meat and milk processing and distribution techniques offer substantial economic potential but remain untapped, restricted to traditional product needs on local markets (MoPIED 2019).

Table 36: Former livestock development programs and services in Somalia.

Project Name	Timeframe	Implementer	Donor	Budget (USD)
Building Resilience to Enhance Adaptable Development in Somaliland	2013–16	World Concern	Private Donations	0.26 million
Consumption Smoothing and Enhancing Livestock-based Livelihoods	2014–17	World Concern	WCDO	
Distribution of Productive Animals in Nugal and Bari Regions of Puntland	2014	Kaalo Aid and Development, PULPA, Ministry of Livestock and Animal Husbandry Shakir Company	FAO	
Livelihood Support to Pastoral Agro-pastoral and Riverine Households in Southern Somalia	2011–14	Village committees Local authorities NGOs	US	49.97 million
Puntland Livelihood Support Program	2010–11	VSF Germany	SDC	0.84 million
Reinforcing Animal Health Services in Somalia (RAHS)	2014 to date	AU-IBAR	European Union	5.4 million
Safe Water for Communities and their Livestock	2012–15	American Relief Agency for the Horn of Africa	Private donations	0.05 million
Somali Pastoral Dairy Development Project II	2010–14	VSF Germany	European Union	2 million
Support to Pastoral Livelihood Development (Phase II). Promoting an internationally competitive Somali meat industry	2010–13	FAO VSF Germany	European Union	2.42 million
Sustainable peri-urban milk value chain development in Somaliland	2013–16	ICIPE	European Union	4 million

Source: Guthiga et al. 2017.

Market access for livestock producers

The livestock sector depends heavily on exports, which have risen by a factor of almost 10 over the past three decades (MoPIED 2019). In 2015, 5.3 million livestock were exported, a 32.5% increase from 4 million in 2011. The majority of export markets are in the Gulf region, with Saudi Arabia accounting for 65% of 2015 exports, followed by

neighbouring countries such as Yemen and Oman (FAO and WBG 2018). Besides livestock, exports of related products such as milk, fish and hides and skins have become more important (World Bank 2018b). Factors determining the export volume of livestock include the occurrence of religious holidays and imposed livestock import bans in key trading partner countries (Musa, Wasonga and Mtimet 2020).

The Somali livestock trade sector suffers from high information costs between different value chain members.

The Livestock Marketing Information System, implemented by the Somaliland Chamber of Commerce, Industries and Agriculture, provides current market information to livestock producers, traders, government and development partners. Collected and disseminated data include weekly traded volumes, prices for different grades of livestock species, and export trader numbers (Mugunieri et al. 2014).

Issues and challenges faced by the pastoral and livestock sector

The Somali livestock sector faces severe and inter-connected weaknesses and vulnerabilities. The significance of these risks is further amplified, as the sector accounts for the majority of livelihoods, economic growth and food consumption in the country.

The sector's vulnerability to the impact of climate change and national disasters affects its economic situation.

One economic consequence is the effect of changing weather patterns on market prices. The price of livestock is largely determined by its physical conditions, which in turn heavily depends on rainfall patterns and resulting grazing availability. For instance, improved livestock conditions after two consecutive favourable rainfall seasons led to a 6–32% increase above the five-year average of goat prices on local markets in 2019/20 (FEWS NET 2020f). Further information of how climatic risks affect pastoralists' livelihoods are explained in Section II.

Rural livelihoods further suffer from man-made impacts on the environment, as governance of environmental regulations for natural resources is either absent or failing. The significant number of total domestic livestock, currently estimated at 56 million, exhausts limited natural resources such as rangelands, vegetation cover and water, which are vital for nomadic and semi-nomadic livestock production systems (MoPIED 2019). Unsustainable charcoal production methods in the absence of environmental governance structures are causing severe land degradation and soil erosion. These risks and strains are further amplified by the effects of climatic change and extreme weather events, as high livestock numbers and density combined with more frequent and extreme droughts decrease available recovery times of rangelands (World Bank 2018b).

Animal diseases, mostly transboundary, are common in the Somalian livestock sector, exacerbated by recurrent drought. Diseases include peste des petits ruminants, contagious caprine pleuropneumonia, and contagious bovine pleuropneumonia (FAO and WBG 2018). Climate change also negatively affects the health of livestock, as it increases the risk of vector-borne diseases and their spread into previously unaffected areas located at higher altitudes (Thornton et al. 2007). The exposure of animals to recurrent severe drought and thus forage shortages also makes them more prone to diseases as their resilience is lowered.

The predominance of the livestock sector for the Somalian economy bears several risks, as it increases dependence on a few key export markets. Non-standardized and poorly enforced quality, hygiene, and health certification standards make the sector vulnerable to potential import restrictions of these countries (FAO and WBG 2018; World Bank 2018b). International livestock trading is also exposed to broader health shocks. Somali livestock exports in 2020 are anticipated to decrease by 25–35% due to supply chain disruptions, closure of markets and border trading, and the broader economic downturn related to the COVID-19 pandemic (FEWS NET 2020f).

The sector suffers from underdeveloped and fragmented markets, limited value addition, restricted access to crucial inputs, and low skill levels of the available labour force (Haji and Shirdon 2020). Overall, the limited and

largely informal organization of the value chain lacks coordination and integration among its key stakeholders. The related dairy sector also suffers from a lack of milk preservation processes, inefficient marketing channels, an inadequate transportation infrastructure, and a resulting absence of economies of scale (FAO and WBG 2018).

Environmental concerns are negatively affecting the relationship between nomadic pastoralists and agro-pastoralists. Decreasing water volumes for crop planting and livestock production, given dilapidated water management infrastructure and services, increases the competition between the two rural social groups for resources vital for their livelihoods (World Bank 2018b). Missing or idle rangeland governance leads to increased conflict and insecurity over the control of rangelands and access to the water sources, grazing areas and trees on the rangelands (FAO and WBG 2018).

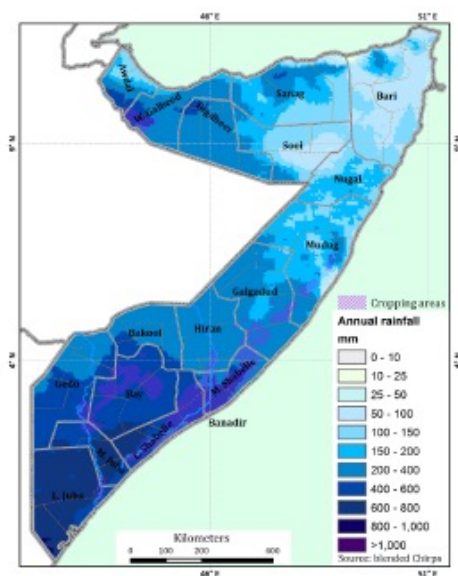
The emergence of the COVID-19 pandemic hit the pastoralists sector of Somalia especially hard. Pandemic-related border closures reduced international demand for livestock and meat and significantly reduced remittances sent by Somalians living abroad. Remittances, which account for 24% of GDP, are predicted to be reduced by 50% during global COVID-19 lockdowns (UN OCHA 2020). Border lockdown measures from Kenya, and Saudi Arabia's announcement to prevent international travellers entering the country for the hajj (a religious pilgrimage) significantly reduced international demand for livestock products (Mercy Corps 2020a). While there is no official data on the number of tests conducted, the total number of confirmed cases stood at 3,588 by 5 October 2020, with 543 active cases, 2,946 people recovered, and 99 fatalities (IGAD and WHO 2020).

II. Impacts of droughts on livestock sector and pastoralist livelihoods

Agroclimatic conditions in pastoral regions

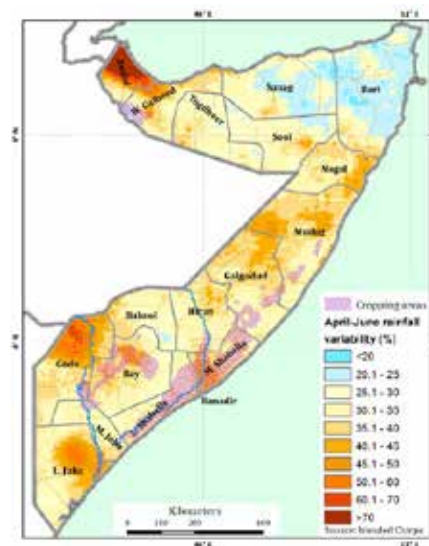
The climate of Somalia is mainly arid to semi-arid, with predominantly thorn-bush savanna and semidesert landscapes. Most of the country is flat, with few natural barriers to restrict the mobility of livestock herds (MoPIED 2019). The annual rainfall is bimodal, with the major *Gu* rains from April to July and the minor *Deyr* rains from September to November, separated by the dry seasons *Jilaal* from January to March and *Hagaa* from July to September (FSNAU 2020).

Figure 41: Mean annual rainfall over Somalia (1981–2010).



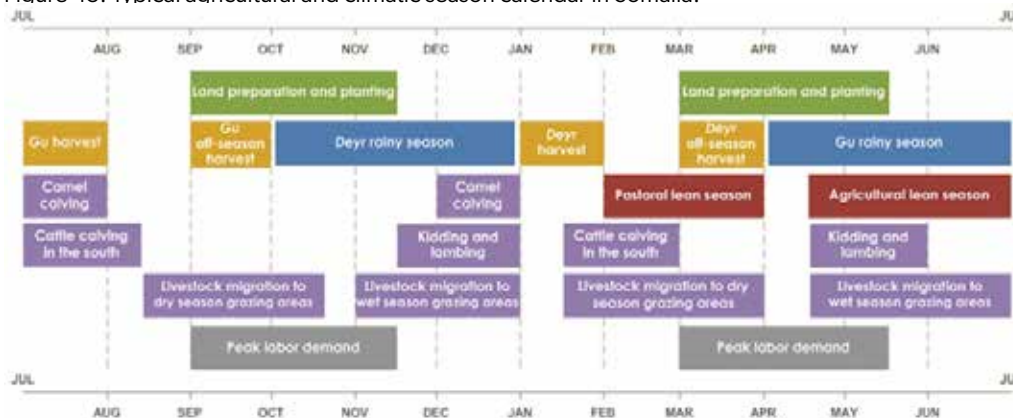
Source: ICPAC and WFP 2018.

Figure 42: Coefficient of variation for Somalia April–June seasonal rains (1981–2010).



Source: ICPAC and WFP 2018.

Figure 43: Typical agricultural and climatic season calendar in Somalia.

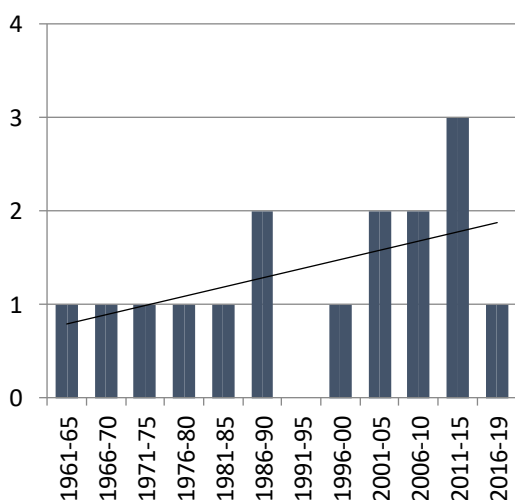


Source: FEWS NET 2020b.

Frequency and severity of natural disasters

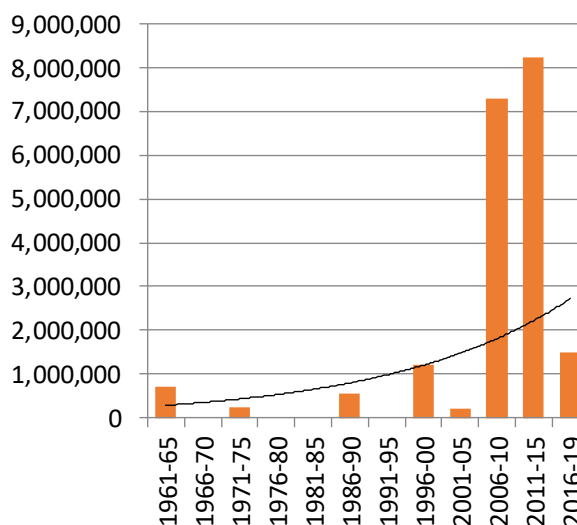
Somalia is confronted with droughts of increasing frequency and severity. Over the last decade, the region has suffered from more frequent and severe droughts, drastically straining pastoralists’ resilience mechanisms and humanitarian response systems (IGAD, 2019). As per EM-DAT data, since 2000, Somalia has experienced nine major droughts, affecting more than 18 million people, or on average 1.7 million people every time (see Figure 43 and Figure 44).

Figure 44: Occurrence of droughts in Somalia (1961–2019).



Source: EM-DAT (www.emdat.be).

Figure 45: Number of people affected by droughts in Somalia (1961–2019).



Source: EM-DAT (www.emdat.be).

Impact of droughts and other perils on livestock and the pastoral sector

Droughts in Somalia tend to have devastating consequences.

- **The severe drought of 2010/2011 had devastating consequences in Somalia leading to famine and the death of 260,000 Somalis by starvation.** Half of the starved people were children under five. At the height of the crisis, May to August 2011, some 30,000 people died every month. There was widespread livestock death (FSNAU and FAO 2013).

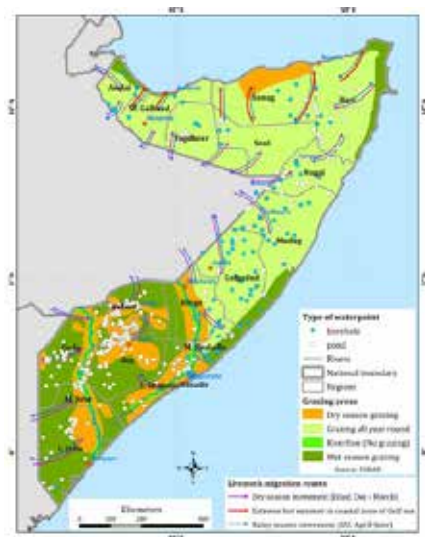
- **Somalia's most recent major drought in 2016/17 resulted in estimated damages and losses of over USD 3 billion, or 50% of GDP, largely in relation to the death of livestock (World Bank 2018).** Almost 6.5 million livestock, 12% of the total population, died due to reduced pasture and water availability as well as lower resistance to diseases. Damage directly resulting from livestock deaths was USD 350 million, and related damage due to, for instance, lower milk output and body weight of surviving livestock was estimated to be USD 1.2 billion (FAO and WBG 2018).

Rural households in Somalia mostly rely on self-insurance to cope with shocks, given inadequate risk management and mitigation systems and the absence of formal safety nets. One strategy to mitigate drought risks is through the adjustment of herd compositions by, for instance, focussing on hardy browsers such as camels and goats. This enables households to cope with pasture shortages from increased pasture land competition, missing environmental practices, and increasing temperatures. However, poorer households are especially unable to pursue this strategy as they cannot afford the shift to more expensive livestock species (FAO and WBG 2018).

Pastoralists are often forced to deplete assets and food stocks due to increasing food and water prices combined with decreasing demand and falling wages in rural labour markets. The 2016/17 drought led to the internal and cross-border displacement of almost one million Somalians, requiring humanitarian aid from government and international organizations (WBG 2019a). Pastoralist households further often fall back to allocate a majority of their livestock revenue to debt repayments from borrowing during such drought seasons (FEWS NET 2020f).

Livelihood diversification strategies of pastoralists are also shaped by new technologies, market dynamics, as well as land and water governance considerations. One approach is the diversification of livelihoods from pure pastoralism to combined farming activities. However, this strategy is often hindered by a lack of knowledge, experience, equipment and capital. Other strategies include managing or enclosing grazing areas, cultivating fodder or transporting herds to distant pasture areas to cope with dry seasons and droughts. Each of these interventions, however, comes with financial, social, ecological and resource governance implications (Crane et al. 2018).

Figure 46: Livestock grazing and migration patterns in Somalia.



Source: ICPAC and WFP 2018.

Impact on food security and overall well-being

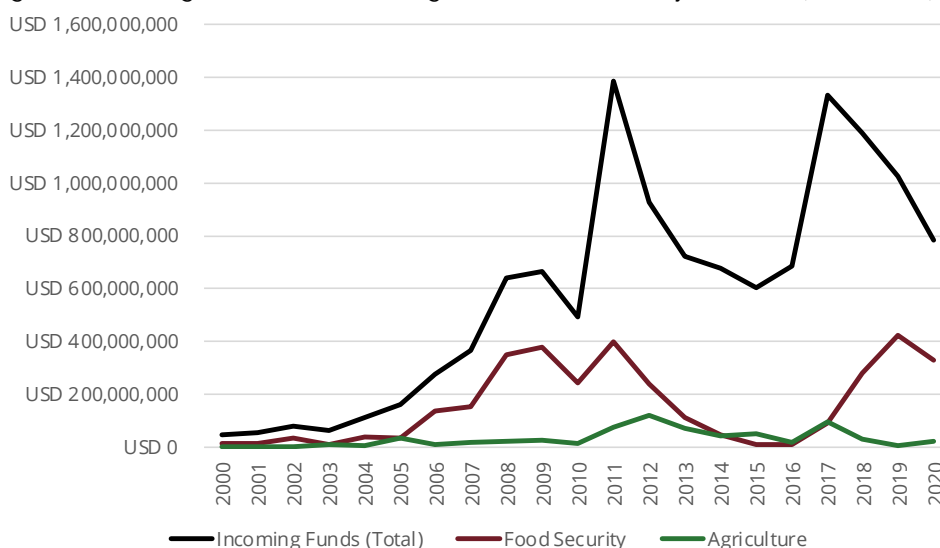
Some 6.2 million people, half of the Somali population, experienced acute food insecurity during the 2016/17 drought, based on the IPC scale for food insecurity. Some 2.4 million Somalis required humanitarian assistance to avert loss of livelihoods and reduced acute malnutrition (IPC Phase 3), and 866,000 people required urgent food assistance to avert a famine (IPC Phase 4) (WBG 2019a).

Droughts place the food security of pastoralists and agro-pastoralists especially in danger. From 2007 to 2014, about 40% of Somalis were subject to food stress, food crises or food emergencies. Rural, nomadic and displaced communities remain at the highest risk of food insecurity given low levels of education, agricultural dependence for food and income, limited assets, and large household sizes. By the end of 2017, rural households in the drought-affected areas experienced a 16% decrease in food consumption and 17% increase in the probability of experiencing hunger (WBG 2019a).

Humanitarian assistance

The international community, represented by humanitarian agencies and international donor organizations, has been the leading provider for disaster preparedness, management and response. After the 2016/17 drought, USD 1.4 billion of aid funds were disbursed, 96.5% from international agencies and the remaining 3.5% from domestic NGOs (MoPIED 2019). These interventions, in combination with easing climatic and weather conditions, decreased the number of Somalis facing acute food insecurity from 6.2 million in 2017 to 4.4 million in early 2018 (WBG 2019a).

Figure 47: Incoming international aid funding to Somalia as tracked by UN OCHA (2000–2020).



Source: UN OCHA FTS 2020.

III. Pastoralist development programs and existing drought risk financing initiatives

Table 37: Donor projects focused on the enhancement of the pastoralist and livestock sector in Somalia.

Organization	Project title	Cost/contribution	Duration
UK FCDO	Somalia Humanitarian and Resilience Program 2018–2022	USD 353 million	2017–2022
European Union	Various projects focused on resilience building	USD 135.6 million	2016 to date
FAO	Improving and Sustaining Food Security in Rural Somalia	USD 67 million	2019–2021
World Bank	Somalia – Water for Agro-pastoral Productivity and Resilience	USD 42.0 million	2019–2023
UK FCDO	Somaliland Development Fund Phase II Program	USD 33.6 million	2017–2024
FAO	Resilient Fisheries and Livestock Value Chain for Inclusive and Sustainable Growth in Somalia	USD 16.2 million	2020–2023
FAO	Somalia Crisis Response Project	USD 10 million	2020–2022
FAO	Resilient, Inclusive and Competitive Agriculture Value Chain Development in Southern and Central Regions of Somalia	USD 8.0 million	2019–2022

Organization	Project title	Cost/contribution	Duration
FAO	Building Resilience in Middle Shabelle	USD 6.5 million	2019–2021
FAO	Sustained Humanitarian Assistance to Drought-Affected Rural People in Somalia	USD 5.4 million	2018–2020
FAO	Protecting Lives and Livelihoods Impacted by Desert Locust In Rural Somalia	USD 3.8 million	2020–2021

Existing drought risk financing initiatives

The Government of Somalia currently does not pursue any drought risk financing schemes but some initiatives have been implemented by international partners. Following the tragic events of 2011, many initiatives were launched in Somalia trying to ensure better planning to respond to drought emergencies. For example, DFID operated a USD 48 million Internal Risk Facility, an emergency contingency fund, in Somalia from 2013 to 2017 (LaGuardia and Poole 2016). FAO's Food Security and Nutrition Analysis Unit has been operating the Early Warning Early Action program since 2014, which monitors 19 ground-collected and remote-sensed indicators from different actors, including on climate, prices, nutrition, health and population movements. Hard 'alarm' and 'alert' thresholds have been agreed on by the humanitarian community, which are shared with the UN Humanitarian Country Team (Hillier 2017). And the Somali Resilience Program, an NGO consortium led by World Vision International, set up a multi-donor contingency fund in 2018 which disburses emergency assistance based on pre-agreed triggers (Somali Resilience Program 2018).

Agro-met and earth observation data management

FAO provides several agricultural-, pastoral- and livestock-focused earth observation data indicators. Seasonal data indicators that focus on the state of grassland for livestock include the Agricultural Stress Index and the Mean Vegetation Health Index; vegetation indicators include the NDVI, the Vegetation Condition Index, and the Vegetation Health Index; and precipitation indicators show the difference between the current and long-term average water volumes (FAO 2020).

Within the federal government, livestock health and vaccination agencies keep some basic public data on the domestic herd size and state. The Ministerial Emergency Disease Task Force unit maintains key data on livestock and wildlife populations as well as maps on livestock distribution, stock movement routes, and watering and holding grounds. The National Disease Emergency Commission administers a system for the gathering, dissemination and analysis of epidemiological data in an emergency disease control program (Ministry of Livestock, Forestry and Range, 2016). The Somalia National Development Plan 9 highlights the need to design and implement an early warning system that would leverage existing systems including those within or from the Food Security and Nutrition Analysis Unit and the IPC (MoPIED 2019).

IV. Review of national livestock insurance market development

Insurance legal and regulatory framework

The legal and institutional framework of Somalia is still fragile, and the federal government is only partly capable of providing and ensuring relevant fiscal, justice and governance responsibilities. The Somali National Development Council defined 'Improved Security and the Rule of Law' as one of three national priorities as part of the National Development Plan 9. It also defined the 'development and enactment of investment, insurance and copyright law' as a key constraint to be tackled to boost economic growth. Interventions for its business environment strategy include the development of legal, policy and regulatory frameworks, including the development of company, intellectual property and insurance laws (MoPIED 2019).

There is currently no insurance law or federal regulation in Somalia, with the insurance industry regulating itself and the Ministry of Finance given the role to oversee the sector. The current state of the Somali insurance sector has been restricted since the overthrowing of the Barre regime in 1991. The Ministry of Finance and Ministry of Commerce have been working towards establishing a legal framework in recent years as part of a broader economy framework (AMISOM 2015). The Ministry of Commerce of the State of Somaliland initiated drafting an insurance companies bill, but it has not been formally submitted to nor considered by parliament (Somaliland Law 2020).

Status of non-life insurance market

The inception of the First Takaful and Re-Takaful Insurance Company (FISO Takaful Insurance) in 2014 was the first national insurance company launch since the collapse of the central government in 1991 (Goobjoog News 2019).

The company is registered and regulated as per Sharia law under the Somali Ministry of Commerce and offers takaful coverage products.⁴¹ It offers a broad range of insurance coverage, including motor, travel, public liability and property (FISO Takaful Insurance 2020).

Agriculture insurance availability

The availability of agriculture insurance products is very restricted: FISO Takaful Insurance lists indemnity-based micro-level crop and livestock insurance products on its website, but there is no information on actual sales of these products to farmers/herders. It is likely these products are being researched and developed by FISO Takaful Insurance as opposed to being commercially launched into the markets. FISO Takaful Insurance's crop insurance policy is limited to protection against loss or damage from perils (including natural fire, disease, floods, hailstorms) and livestock risks (for livestock death due to accidents, injury, illness/disease, or humane destruction if certified from a veterinarian) (FISO Takaful Insurance 2020). The Kenyan insurance provider Takaful Insurance of Africa has announced plans to introduce the IBLI product into the Somali market.

Table 38: Availability of agricultural insurance (indemnity-based and index-based) in Somalia.

Crop insurance products available					
Indemnity-based	Index-based	Weather index insurance	Area yield index insurance	Greenhouse	Forestry
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Livestock Insurance Products Available					
Indemnity-based	Index-based	Micro-level IBLI	Meso- & macro-level IBLI	Aquaculture	Poultry
n.a.	R & D	n.a.	n.a.	n.a.	n.a.

Source: Authors.

The World Bank commissioned an ILRI study in 2019 into the feasibility of implementation of IBLI solutions for pastoralists in Somalia. This study shows a strong justification and a good potential in terms of potential uptake and socio-economic impacts for the implementation of drought index-insurance for livestock schemes, and the technical conditions are suited to offering IBLI-based cover in upwards of 70% of the area of Somalia which is comprised of rangelands (ILRI and World Bank 2019). There are, however, major institutional, financial and insurance market, operational, and financial-related challenges to developing and implementing micro-level IBLI programs given the lack of rural infrastructure and insecurity, and any entry point is more likely to be for macro-level IBLI social protection covers.

⁴¹Takaful (or Islamic) insurance is 'a cooperative scheme, where in which the participants pay a premium in the form of donation or Tabarru in a common pool in return for the ability to cover that pool upon a valid claim' (FISO Takaful Insurance 2020).

Interest from public and private stakeholders

The National Development Plan 9 states the possibility of introducing a crop insurance to address the risk of livestock and crop diseases, but does not mention any other specific insurance measures focused on the agriculture sector (MoPIED 2019). The Government of Somalia has expressed its major interest on various occasions in receiving technical and financial assistance from the World Bank to develop IBLI products and programs, either under the Horn of Africa Initiative or the IGAD regional initiative.

V. Operational elements for potential IBLI implementation

Financial inclusion

Table 39: Financial inclusion data for whole population in Somalia (2014).

Financial inclusion data for Somalia's population (% of population; age 15+)		
	Total	Rural
Financial institution account	38.7	31.9
Borrowed any money in the past year	57.0	60.0
Borrowed from a financial institution or used a credit card	2.1	1.3
Borrowed from a store by buying on credit	18.3	17.4
Coming up with emergency funds: not possible	49.3	52.7
Credit card ownership	0.6	0.5
Financial institution account	7.9	4.0
Made or received digital payments in the past year	38.3	31.5
Mobile money account	37.1	30.4
Received government transfers in the past year	4.0	2.9

Source: World Bank 2020f.

The mobile money sector is fairly well established, with monthly mobile money transactions estimated to be worth USD 2.7 billion. Mobile money penetration rates range from 83% in urban areas to 55% of rural populations. The five main mobile Network Operators are Hormuud (South Central), Golis (Puntland), Telesom (Somaliland), Somtel (South Central, Puntland and Somaliland), and Nationlink (South Central, Puntland and Somaliland). There are 11 money transfer businesses registered by the Central Bank of Somalia with agents across the country, with one mobile money service dominating in each region: EVC Plus (by Hormuud) in South Central, Sahal (by Golis) in Puntland, and Zaad (by Telesom) in Somaliland (Altai Consulting and World Bank 2017).

Despite good mobile connections, financial services extended to pastoralists in Somalia remain relatively weak.

Most financial sector institutions in Somalia are relatively young, mostly established during the last few years. Many of these banks rely on clan structures for accountability and typically only have enough capital to survive. Given the severe exposure and vulnerability to a range of shocks, they tend to pursue conservative lending strategies and, e.g., require financial guarantees from borrowers, proof of financial identity (although no national IDs exist in Somalia) and a credit history. The portfolio of financial services to the poor, i.e. pastoralists in rural areas, is limited. If they can, pastoralists mostly access finance informally, borrowing from friends, relatives, neighbours or moneylenders (Calhoun et al. 2020).

If pastoralists in Somalia interact with the financial sector, they mostly do so via community saving and loan groups. Individual pastoralists tend not to have bank accounts but many such groups do. Consortiums active in Somalia that support community saving and loan groups include the Building Resilient Communities in Somalia (BRCiS)

consortium; the Danwadaag Durable Solutions Consortium; the Enhancing Integration of Displacement Affected Communities in Somalia and Somaliland Durable Solutions Consortium; the NAGAAD Network; and the Somali Resilience Program. Many of the Somali commercial banks have created financial services specifically catering to community saving and loan groups, including, e.g., Amal Bank, Dahabshil Bank, the International Bank of Somalia, Premier Bank, Global Tech Bank, and Salaam Somali Bank. There are also microfinance institutions that specifically cater to such groups, including KIMS, MicroDahab, and the International Bank of Somalia (Calhoun et al. 2020).

Beneficiary registries

Some institutions have created beneficiary databases to deliver cash transfers. The largest is the WFP SCOPE database, which covers 5.5 million registries or 1.2 million households. The WFP SCOPE database is used by a number of humanitarian NGOs providing cash transfers in Somalia. The European Commission on Humanitarian Aid and Civil Protection has also started to work with the Ministry of Labour and Social Protection to create a registration platform that gathers biometric data of beneficiaries. The Government of Somalia is also, with support from the World Bank, working on designing a digital ID system that aims to include 1 million people. Finally, insurance companies such as Takaful Insurance of Africa use smart cards for the registration of client policyholders (WBG and ILRI 2019).




Table 40: Key government and donor programs with pastoralist beneficiary registries in Somalia.









Government programs	Target areas	No. of pastoralist beneficiaries
European Commission on Humanitarian Aid and Civil Protection/Ministry of Labour and Social Protection	Unclear	Unclear
WBG/Government of Somalia digital ID system	Unclear	1 million people (target)
Donor programs	Target areas	No. of pastoralist beneficiaries
WFP SCOPE	All of Somalia	5.5. million registered beneficiaries (1.2 million households)
Private sector programs	Target areas	No. of pastoralist beneficiaries
Takaful Insurance of Africa smart card registration	Unclear	Unclear

Source: Various.

VI. Summary: Preliminary operational feasibility assessment of IBLI in Somalia through a regional IGAD IBLI initiative

Table 41: Preliminary assessment of country readiness for IBLI across key operational elements in Somalia.

	Status	Comments
Importance of pastoral livestock for economy		The national economy depends to a large extent on the pastoralist sector, which provides 40% of GDP and around 60% of employment.
Impact of drought on livestock		The devastating impacts of droughts on pastoralists in Somalia have been well recorded, with catastrophic impacts last suffered in 2010/11 and 2016/17.
Pastoralist demand for livestock insurance		There is little firm evidence on the demand of pastoralists for insurance, but FISO advises that pastoralists bordering Kenya have heard of IBLI (mainly via radio) and are interested in the product. However, evidence from other countries in the region suggests that demand is limited and raising it will require significant investments in capacity building and insurance awareness creation.

	Status	Comments
Effective distribution channels for micro-level IBLI		There is a high penetration of mobile money solutions among potential clients. While financial service provision to individual pastoralists remains weak, there seems to be a relatively good Somalia-wide coverage of community saving and loan groups, which interact with the financial services industry. These could potentially be leveraged for distributing IBLI products. The great drawback on potential distribution is the security situation which makes face-to-face interactions with potential clients for insurers impossible in many places. Mobile sales could provide a remedy. Another entry point could be a modified macro-level IBLI program which does not rely on individual sales.
Existing pastoralist beneficiary registries		Institutional capacity in Somalia is very weak. There are a number of existing databases of households in the country including of WFP, the government and the private sector that are already being used by institutions to deliver cash transfers. The development of further such registries is underway.
Pastoralist financial literacy		As confirmed by a recent study, financial literacy among pastoralists is low (Calhoun et al. 2020). Significant efforts will be required to build policyholders' understanding and acceptance of potential insurance-based solutions
Legal and regulatory insurance environment		So far, there is no insurance law in Somalia but it is being drafted by the government. There has also not been any experience with index insurance products in the country so far. Sharia law applies and this would have to be considered by any new IBLI product. Regulation of the financial sector is also weak.
Insurance market development		The insurance sector in Somalia is nascent, with only few insurers active and even fewer on agricultural insurance. An opportunity could be that Takaful Insurance of Africa, which has sold IBLI policies in Kenya over the last decade, is expanding its operations into Somalia. There could be an experience and expertise transfer for the Somali market.
Interest from insurers in IBLI		For a recent index insurance feasibility study, private insurance sector stakeholders have signalled strong interest in developing an IBLI program.
Finance available for premiums		The Government of Somalia is participating in the World Bank Horn of Africa Initiative but has so far neither requested any concrete funding for a regional IBLI initiative nor committed any funding of its own.
Interest from government stakeholders in IBLI		The very limited capacity of key facilitators among implementing government agencies, private insurance and financial service providers, as well as regulatory bodies to facilitate insurance products would need to be strengthened.

F. South Sudan

Table 42: Summary of livestock and insurance in South Sudan.

Status of planning and implementation of Index-Based Livestock Insurance				
IBLI availability	None.			
IBLI planning	None. The Government of South Sudan is studying role of IBLI as part of IGAD regional initiative.			
Livestock and pastoralism sector				Map amended from (Cecchi et al. 2010)
No. of pastoralists (% of total population)	MPI rating in rural areas	Livestock contribution to GDP	Livestock production index (2004–06 = 100)	
7.32 M (60%) ⁴² (2015)	0.615 ⁴³ (2010)	12.8% - 33% ⁴⁴ (estimate)	n.a.	
Livestock breakdown ⁴⁵ (2018)*				
Total TLUs ⁴⁶	Camels	Cattle	Goats	Sheep
15.1 M	n.a.	12.1 M	13.5 M	16.3 M
Key insurance and financial sector institutions				
Banks in pastoral areas	n.a. (no information)			
Mobile cash	NilePay Mobile Money; M-Gurush/Zain; MTN South Sudan			
Insurance companies	n.a. (no information)			
Key insurance schemes and legislation				
Insurance law/regulation	2010 new Insurance Act permits the insurance of “crops, fishing and livestock”.			
Livestock insurance products	The insurance sector is very poorly developed. There was no agricultural crop or livestock insurance provision in 2020.			
Other relevant partners for IBLI				
Government partners	Ministry of Agriculture; Ministry of Environment			
Livestock sector associations	Pastoralists Association; Nile Community Development Organization (NICODO) dairy associations			
Most important development partners	UK FCDO, FAO, European Union, WFP			
NGOs	Organization for Peace, Relief and Development; Assistance Mission for Africa			

*FAO data based on imputation methodology, estimates, and government data
Tropical Livestock Unit (TLU) conversion rates: Camel: 1.4 | Cattle: 1.0 | Goat: 0.1 | Sheep: 0.1

⁴²UNECA 2017

⁴³The multidimensional poverty index is an index between 0 and 1 that is comprised of 10 different indicators on poverty. The higher the index value, the greater the poverty (OPHI 2020b).

⁴⁴DFID 2018

⁴⁵FAOSTAT 2020c

⁴⁶Based on FAO imputation methodology and estimates as well as official data.

I. Socio-economic relevance of livestock production and pastoralism

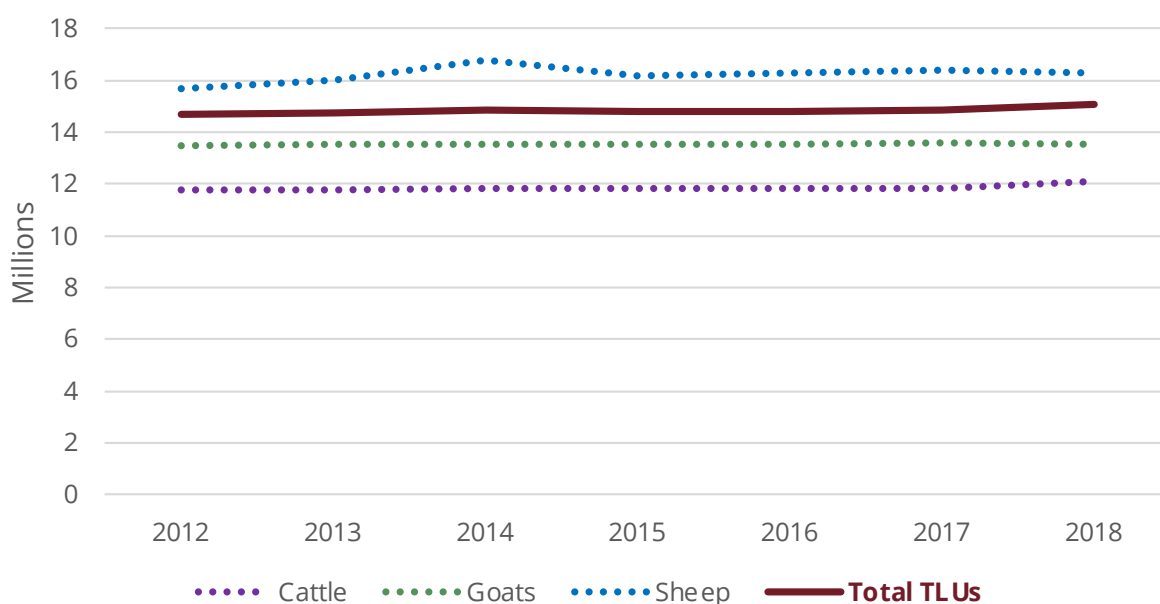
Socio-economic situation in South Sudan

Since gaining independence, South Sudan has been shaped by continuous conflict over natural resources, remaining one of the poorest countries in the world. Renewed conflicts in 2013 and 2016 worsened the humanitarian situation and undermined the development gains achieved following the secession from the Republic of Sudan in 2011. Poverty levels remain extremely high, with severe food insecurity and restricted access to basic services (World Bank 2020c). It is one of the most vulnerable countries in the world, ranking 186th out of 189 countries on the Human Development Index. The unemployment rate is 12.7%, with 87.3% of total employment considered vulnerable. Some 80.4% of the population lives in rural areas, with only 21.4% of the rural population having access to electricity (UNDP 2019a). Recent shocks, including severe flooding, locust infestations, the COVID-19 pandemic and lower oil prices, further increased needs for humanitarian interventions and exacerbated existing pressures on livelihoods already affected by conflicts (World Bank 2020c).

Economic relevance of the livestock sector

South Sudan's economic output is dominated by its oil industry. The agriculture sector accounts for a significant share of livelihoods but suffers from low productivity levels. South Sudan is one of the most oil-dependent countries in the world. Oil accounts for almost all of exports earnings, 90% of revenue, and more than one third of GDP. Outside the oil sector, livelihoods are concentrated in the agriculture sector, which is still suffering from eroded productivity capacities given continuous conflicts (World Bank 2020c). Crop production is primarily pursued in subsistence farming systems with low yields. Less than 4% of the total land area is currently being cultivated. Livestock is mainly perceived as a store of value by livestock keepers. The sale of livestock, especially small ruminants, offers significant income-generation opportunities (Babikir et al. 2015). Production levels of livestock products such as butter and milk remain low (UNDP 2012). The sector accounts for 48.9% of total employment (FAOSTAT 2020c).

Figure 48: Numbers of major livestock species in South Sudan (2012–2018).



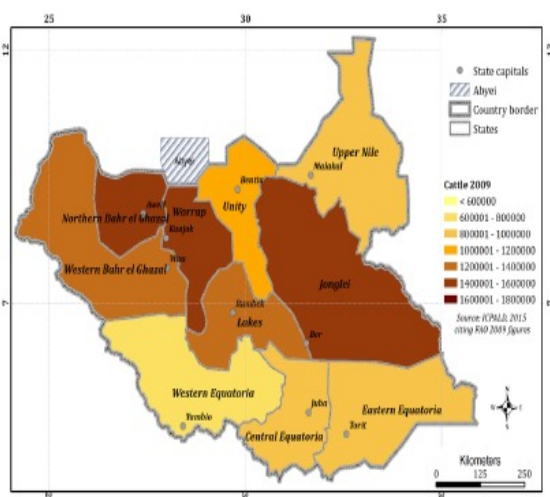
Source: FAOSTAT 2020c⁴⁷.

⁴⁷Based on FAO imputation methodology and estimates as well as official data.

Livestock production systems and livelihoods

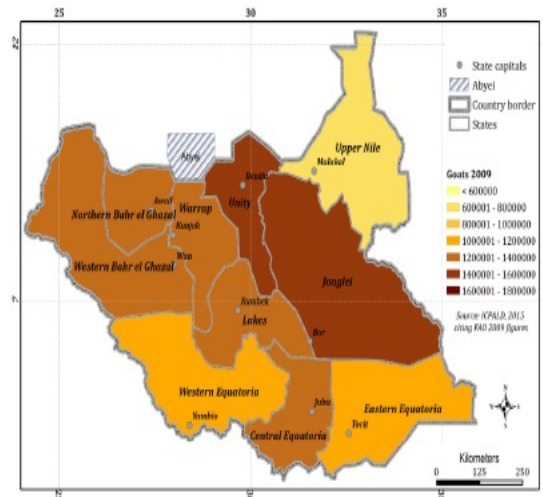
There are three livestock production systems in South Sudan: nomadic, semi-nomadic in combination with cultivation, and sedentary, where small livestock are raised in close proximity to villages. Livestock is mainly perceived as a form of asset. Levels of livestock products such as milk and meat remain low. The sale of livestock, especially small ruminants, offers significant income-generation opportunities for livestock producers of all production systems (Babikir et al. 2015).

Figure 49: Number of cattle in South Sudan (2009).



Source: ICPAC and WFP 2018.

Figure 50: Number of goats in South Sudan (2009).



Source: ICPAC and WFP 2018.

Market access for livestock producers

Markets are the predominant sales channel for livestock producers, but physical access is often constrained by conflict or infrastructure barriers. Effective livestock marketing is essential for pastoralists and breeders to sell livestock during the period when they are in good physical condition. Physical access to markets for both producers and purchasers alike can be hindered by factors including difficult travel terrain, security issues, mode of transport available and the lack of and poor conditions of roads. The lack of distribution systems puts pastoralists' livelihoods at risk and prevents efficient movement of food commodities required to connect areas of low food security with those with high production or import locations (ICPAC and WFP 2018). The country's infrastructure network is estimated to include 17,000 km of roads. Less than 2% (192 km) are paved; the remaining roads either have gravel or earth surfaces (IGAD 2020b). Roads on the main cattle marketing routes are generally in poor condition. Cattle owners and traders do not send animals by truck because of the risk of injury or death, instead turning to trekking, which can take longer than a month. During this period, livestock can lose weight due to insufficient access to food and water (IGAD 2016).

South Sudan is located within one of the major regional livestock trading zones, but its trade sector is hampered by missing livestock facilities and the poor state of the transportation infrastructure. The country is connected to Ethiopia, Kenya and Somalia through the southern corridor, one of the major livestock trade markets in the Horn of Africa. It is also within another trading zone that links it with Cameroon, the Central African Republic, Chad and Sudan. Livestock trade with South, Eastern and Central Darfur continues despite the remaining violent conflicts (UNECA 2017). The country's trade capacity is hindered by poor conditions of stock routes, high insecurity and cattle raids, unauthorized charges, and problems in obtaining necessary permits. Livestock infrastructure and veterinary facilities at these crossing points tend to be inadequate (IGAD 2016). Neither quarantine stations nor export slaughter houses exist in the country (IGAD 2013).

Issues and challenges faced by the pastoral and livestock sector

Pastoralism in South Sudan faces the major problem of most herds being too small and economically non-viable, with an average of only 0.87 TLU per capita. From an economic perspective, agro-pastoralism is associated with the ownership of at least three Tropical Livestock Units (TLU) per capita, equivalent to about four cattle or 30 sheep or goats per person. However, using the Food Security and Nutrition Monitoring Bulletin from May 2018 (WFP 2018), average livestock ownership in South Sudan was estimated at only 0.87 TLUs per capita. This low level of livestock ownership is broadly consistent with the recent categorization of 5.4 million people in South Sudan as severely food insecure (IPC phases 3, 4 and 5) (Catley et al. 2005).

Land degradation occurs in pastoralist areas around the equatorial belt, but the impact is comparatively limited.

Problem drivers include unsustainable charcoal and firewood production, increased areas for crop cultivation accelerating soil erosion, overgrazing due to livestock concentration resulting from climate migration patterns, and new population settlements. Overall, land degradation is less of a problem compared to other countries in the IGAD region (ICPAC and WFP 2018).

Pastoralists are facing a lack of legislation and land management institutions, resulting in uncontrolled and far-reaching land dispossession. Part 12 of South Sudan's Transitional Constitution from 2011 and Chapter 2 of the 2009 Land Act recognize communal ownership and customary land rights, with the government holding regulatory powers. In practice, development projects from private-sector institutions investing in natural resource and large-scale agricultural schemes have displaced a large number of pastoralists from the regions without compensation or proper redress (UNECA 2017).

Rural communities are involved in conflicts over natural resources, especially in oil-rich regions. The Dinka and Nuer, two rival pastoralist groups, have competed for grazing land and water access for their cattle in the past. These, as well as numerous other pastoralists groups, are located in oil-producing areas, further increasing the potential for conflict given the economic importance of this commodity. According to estimates, oil production is expected to decline steadily and to become negligible by 2035 (UNECA 2017).

Pastoralists have little access to veterinary services. Access to animal health care and extension services, skills and knowledge remains poor. Some community-based animal health services exist but are inadequate. The remoteness of rural communities and the poorly developed road network infrastructure compounds this issue (IGAD 2020b).

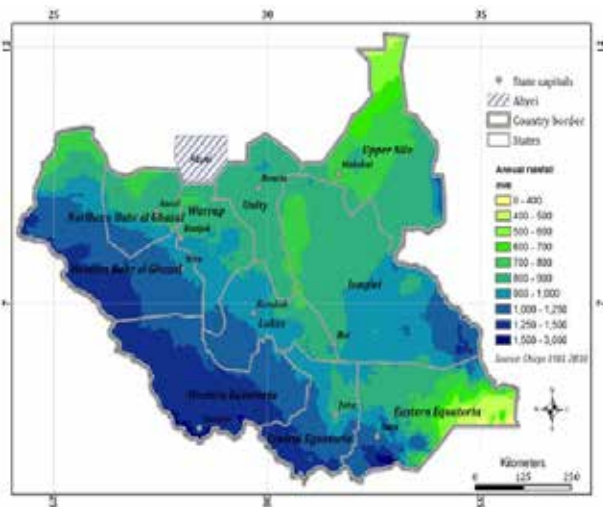
II. Impacts of droughts on livestock sector and pastoralist livelihoods

Agroclimatic conditions in pastoral regions

Most of the country has a sub-humid climate, with seasonal climate patterns determining land use patterns of crop cultivation and livestock grazing. There are five ecological zones, namely the savannah region, the flood region, the montane forest zone, the semi-desert zone and the lowland forest zone. Rainfall occurs seasonally between April and December, with varying annual rainfall ranging from 200 mm to 2200 mm with risks of seasonal flooding. The dry season occurs from January to April, with temperatures increasing from 25C to over 35C. Agricultural seasons are ultimately defined on a regional level and depend on the respective rainfall regimes, with southwestern parts having an annual growing season of 280 to 300 days compared to 130 to 150 days in northern states (Babikir et al. 2015).

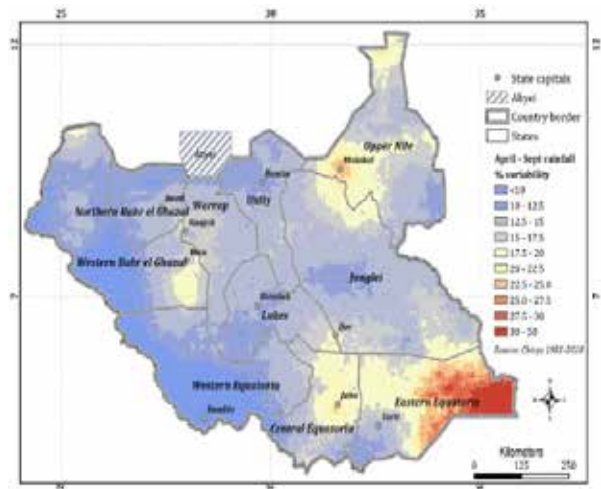
In general, the majority of South Sudan's land area provides favourable agricultural conditions, with livestock keeping as the dominant form of land use. The country's agricultural potential is based on its favourable soil, water and climatic conditions, resulting in around 70% of total land area being suitable for producing a wide range of agricultural products. Livestock is the dominant agriculture pursued throughout the country, but especially in dryer areas, given better grass quality and fewer livestock parasite issues (Babikir et al. 2015).

Figure 51: Mean annual rainfall over South Sudan (1981–2010).



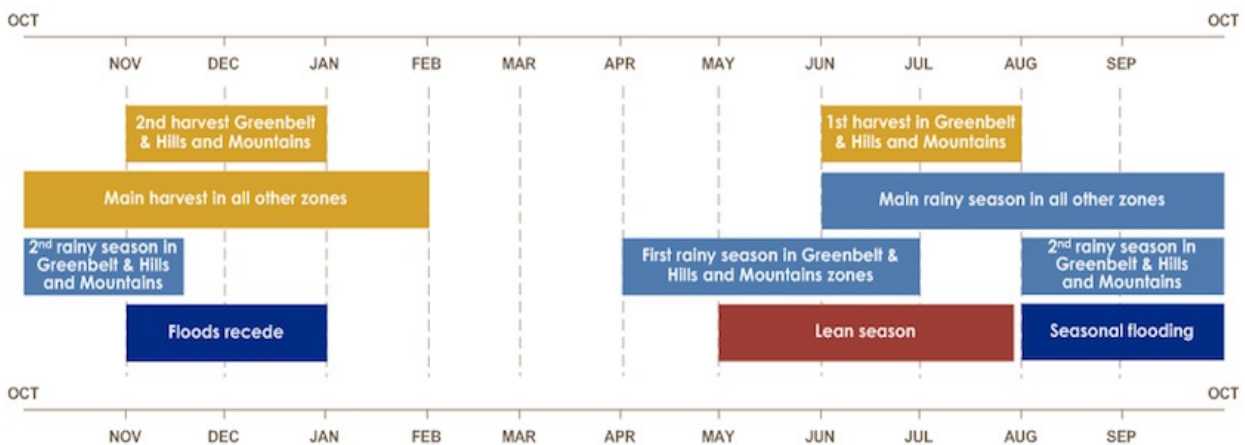
Source: ICPAC and WFP 2018.

Figure 52: Coefficient of variation for April–September seasonal rainfall in South Sudan (1981–2010).



Source: ICPAC and WFP 2018.

Figure 53: Typical agricultural and climatic season calendar in South Sudan.



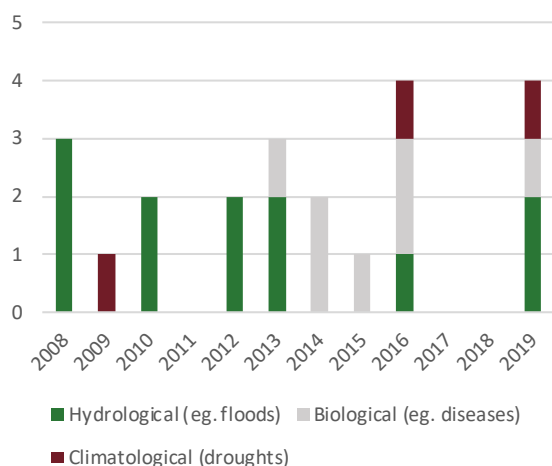
Source: FEWS NET 2020b.

Frequency and severity of natural disasters

South Sudan is affected by different natural hazards. The country is exposed to climate-related risks including droughts and floods that affect various regions at varying times of the year. Floods are a common occurrence during the rainy season, especially in low-lying areas along the Nile River and during periods of increased water accumulation from streams in neighbouring countries. Among the worst-affected areas are Jonglei, Unity, Warrap, Upper Nile and Northern Bahr el Ghazal states and partly Lakes state. Vegetation condition generally remains favourable in western regions, with other regions experiencing significant temporal variation determined by rainfall and cropping patterns (ICPAC and WFP 2018). Biological hazards include bacterial and viral diseases (EM-DAT 2020).

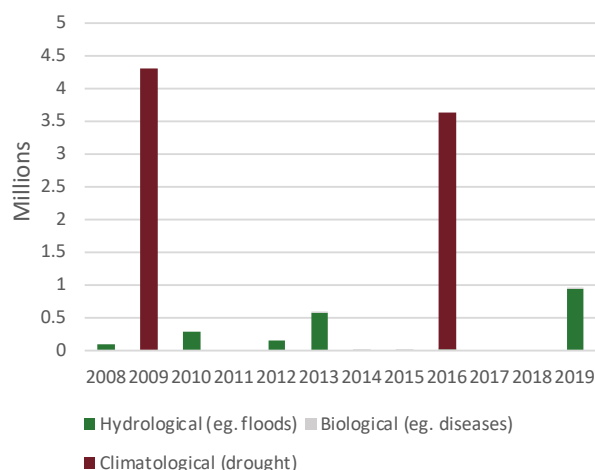
Data on the impact of natural disasters, however, is scarce, partially due to the relatively short time since South Sudan’s independence. The country is not ranked in the WorldRiskIndex score because of incomplete data (BEH and IFHV 2020). It is not listed in the ND-GAIN Exposure Ranking in 2018 (ND-GAIN 2020).

Figure 54: Number of events by disaster type in South Sudan (2008–2019).



Source: EM-DAT 2020.

Figure 55: Number of affected people by disaster type in South Sudan (2008–2019).



Source: EM-DAT 2020.

Impact of droughts and other perils on livestock and the pastoral sector

Declining rainfall trends and simultaneous prolonged rainfall seasons adversely affect livestock productivity and food security due to reduced water and pasture availability. Data from the National Household Baseline Survey conducted in 2009 indicate that drought and floods are the prevailing shocks, affecting 56% of the population (IGAD 2020a). During droughts, inadequate moisture to support pasture growth and lack of water results in poor-quality forage, as well as livestock out-migration (ICPAC and WFP 2018). This negatively affect livestock production and household food security. The rainy season can last up to nine months per year, causing widespread floods, destruction of roads and infrastructure, and reduced market access. The wet climate also increases the risk of livestock parasites and diseases such as Rift Valley Fever, ticks and tsetse flies. Floods, however, also have beneficial effects, increasing fish and maintaining pastures and water (ICPAC and WFP 2018).

Impact on food security and overall well-being

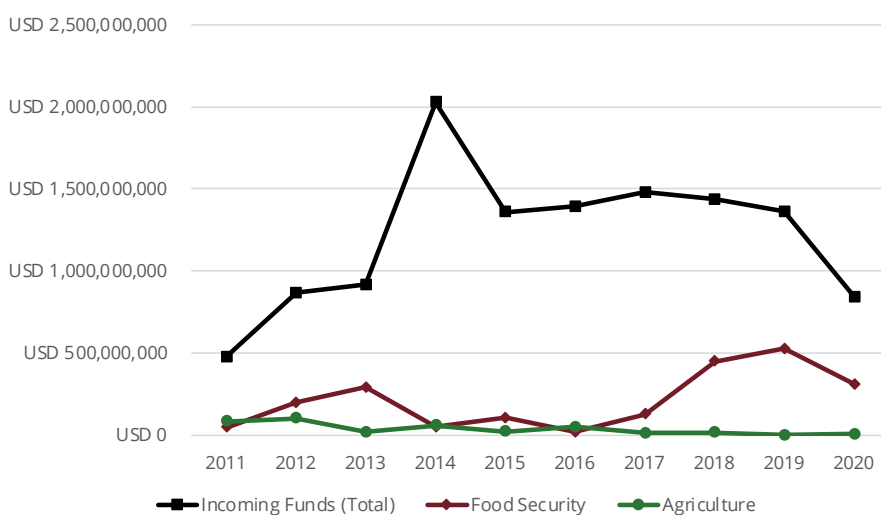
South Sudan has been facing high levels of food insecurity since gaining independence. Main problem drivers include stagnating agricultural growth coupled with a significant increase in the population; low infrastructural development required for food commodity transport; and economic shocks such as soaring oil prices and depreciating exchange rate. Contributing effects of climatic variability and natural hazards, such as droughts and floods, affect both

livestock and crop production. Diseases and pests that emerge during wet conditions can further reduce livestock productivity. Conversely, dry conditions can lead to unavailability of pastures and water, which hampers production (ICPAC and WFP 2018). As a result, extreme food insecurity persists across the country, with over half of the population in need of humanitarian assistance and protection in 2020 (World Bank 2020c).

COVID-19 has had a strongly negative impact on pastoralist livelihoods, given movement restrictions, reduced terms of trade, and a lack of veterinary services. Staple food prices reached exorbitant levels in several markets. Reasons included a mandatory COVID-19 testing fee of USD 65 for cargo truck drivers transporting food (FEWS NET 2020d). By 5 October 2020, the country had conducted only 28,672 tests, confirming 2,705 cases of which 102 were still active and 2,553 had recovered. Fifty people had died from the virus (IGAD and WHO 2020). Movement restrictions were not as strict within South Sudan as in neighbouring countries but lockdown restrictions in Uganda and Kenya greatly affected livestock trade in South Sudan. There are reports that pastoralists restricted their movements to towns, significantly in fear of contracting the disease, hampering market access. Some markets were also closed. Fewer veterinary services were extended.⁴⁸

Humanitarian assistance

Figure 56: Incoming international aid funding to South Sudan as tracked by UN OCHA (2000–2020).



Source: UN OCHA FTS 2020.

III. Existing drought mitigation and response financing practices

Table 43: Donor projects focused on the enhancement of the pastoralist and livestock sector in South Sudan.

Organization	Project title	Cost/contribution	Duration
UK FCDO	Humanitarian Assistance and Resilience in South Sudan 2015–2021	USD 919 million	2015–2021
European Union and FAO	Strengthening the Livelihoods Resilience of Pastoral and Agro-Pastoral Communities in South Sudan's cross-border areas with Sudan, Ethiopia, Kenya and Uganda	USD 33.9 million	2017–2021
FAO	2020 Emergency Livelihood Response Program, South Sudan	USD 25 million	2020–2021
FAO	Emergency Livelihood Response Program in South Sudan 2018–2020	USD 24.6 million	2018–2020

⁴⁸Answers to expert questionnaires.

Organization	Project title	Cost/contribution	Duration
FAO	Mitigating cattle-related violence in the tri-state border areas of Tonj, Gogrial and Wau	USD 3.5 million	2019–2021
FAO	South Sudan Rural Development: Strengthening Smallholders' Resilience	USD 2.3 million	2019–2023
FAO	Strengthening the preparedness of vulnerable communities to climate shocks and natural disasters in South Sudan	USD 1.1 million	2020–2022
FAO	Revitalizing Marial Lou Livestock Training Institute and support to vulnerable pastoralists in South Sudan	USD 1 million	2020–2021
WFP and Organization for Peace, Relief and Development	Pastoral Food Assistance for Assets	350,000	
FAO and Organization for Peace, Relief and Development	Emergency Livelihoods Response Program	400,000	
World Bank	Southern Sudan Emergency Food Crisis Response Project	n.a.	2016

Existing drought risk financing initiatives

No existing drought risk financing initiatives could be identified for the purposes of this study.

IV. Review of national livestock insurance market development

Insurance legal and regulatory framework

South Sudan gained independence from Sudan on 9 July 2011 and this was accompanied by a major change in insurance law: Sudan is governed by Islamic, or Sharia, law; South Sudan has adopted British law. With independence, a new Insurance Act was drafted termed 'the Law of Southern Sudan: the Insurance Bill 2010'.⁴⁹ This purpose of this new act is to set the rules for the establishment of insurance companies and to regulate the business of life and non-life insurance in South Sudan. Article 7 of the new insurance act 'Classification of Insurance Business' permits 'crops, fishing and livestock insurance'.

Chapter 2 of the insurance bill 2010 also authorizes the establishment of a new insurance regulator termed the Insurance Commission/Corporation under the Ministry of Finance, whose roles are to ensure effective administration, supervision, regulation and control of the insurance business in South Sudan.

Status of non-life insurance market

There are seven registered insurance companies in South Sudan: two non-life companies and five composite life and non-life insurers. The insurance companies are represented by the Association of Southern Sudan Insurers. The leading insurers include UAP Insurance South Sudan, which is a subsidiary of UAP Kenya, New Sudan Insurance Co. Ltd and National Insurance Corporation Ltd. Insurance market statistics are not published for South Sudan but according to the World Bank, in 2018 insurance and financial services accounted for a very small (1.5%) of commercial service imports.⁵⁰

⁴⁹ https://www.wto.org/english/thewto_e/acc_e/ssd_e/wtaccssd6_leg_53.pdf

⁵⁰ <https://data.worldbank.org/indicator/TX.VAL.INSF.ZS.WT?locations=SS>

There is no available data on the size and composition of the insurance and reinsurance market or the levels of penetration of insurance. It is, however, likely that most insurance is restricted to products for urban consumers (motor insurance, property insurance, personal accident and health insurance, etc.) and that insurance has not yet taken-off in rural areas since South Sudan gained independence.

Agriculture and livestock insurance availability

There is currently no agricultural crop or livestock insurance provision in South Sudan and given the political and social uncertainty and insecurity in the country and lack of rural insurance infrastructure this poses a major challenge for the introduction of micro-level IBLI. As an entry point, the government could consider purchasing (i) macro-level sovereign risk IBLI insurance or (ii) a modified macro-level drought social protection IBLI scheme modelled on KLIP (Kenya) or SIPE (Ethiopia) lines.

Table 44: Availability of agricultural insurance (indemnity-based and index-based) in South Sudan.

Crop insurance products available					
Indemnity-based	Index-based	Weather index insurance	Area yield index insurance	Greenhouse	Forestry
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Livestock Insurance Products Available					
Indemnity-based	Index-based	Micro-level IBLI	Meso- & macro-level IBLI	Aquaculture	Poultry
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Interest from public and private stakeholders

Government stakeholders have participated in previous IGAD regional conferences on IBLI. The Ministry of Agriculture replied to the expert questionnaire that it was 'very interested' in implementing an IBLI initiative. It has not been possible to date to engage with private sector insurers to gauge their possible interest in participating in a regional IGAD-level IBLI initiative.

V. Operational elements for potential IBLI implementation

Financial inclusion

Table 45: Financial inclusion data for whole population in South Sudan (2017).

Financial inclusion data for South Sudan's population (% of population; age 15+)		
	Total	Rural
Financial institution account	8.6	8.1
Borrowed any money in the past year	38.5	36.6
Borrowed from a financial institution or used a credit card	3.4	2.8
Borrowed from a savings club	6.6	6.5
Coming up with emergency funds: not possible	75.5	77.5
Credit card ownership	1.4	1.5
Financial institution account	8.6	8.1
Made or received digital payments in the past year	7.3	7.0
Main source of emergency funds: sale of assets (% able to raise funds)	23.0	23.4
Received government transfers in the past year	4.0	3.8

Source: World Bank 2020f.

Table 46: Financial inclusion data in pastoral areas in South Sudan.

Type of financial inclusion data	
Share of pastoralists with bank account (%)	0–10
Share of pastoralists with access to mobile phone (%)	11–30
Pastoral areas with particularly good financial services	n.a.
Pastoral areas with particularly limited financial services	All of the country

Source: Estimates by experts, from questionnaires.

Financial inclusion of pastoralists in South Sudan is very low. There is little recent information available on financial inclusion in South Sudan. A 2015 report by Japan International Cooperation Agency held that there were limited financial services available targeting the livestock sector, even for commercial actors who were mostly relying on self-financing and grant support from NGOs (JICA 2015). The International Finance Corporation found in 2012 that bank penetration, while dominated by the two Kenyan banks Equity Bank and Kenya Commercial Bank, was ‘negligible’ (International Finance Corporation 2012). Mobile payments are a relatively new service available in South Sudan, with the two services ‘M-Gurush’ by Zain/Trinity Technologies and ‘NilePay’ by NilePay Plc/Zain founded only in 2019 (Microcapital 2019; Nextv Africa 2019).

Beneficiary registries

The largest beneficiary registry in South Sudan is operated by WFP. Through its SCOPE system, WFP had 1 million beneficiaries registered by mid-2019 but was then planning to have registered 5 million by 2020. The International Organization for Migration operates BRaVE in South Sudan, a biometric beneficiary data management system used to strengthen humanitarian responses. In 2019, WFP and the International Organization for Migration started exchanging beneficiary data (WFP 2019). The Ministry of Animal Resources and Fisheries also aims to create a beneficiary registry identifying all the livestock owners who have benefited from cash-based transfers in South Sudan since 2013, targeting a total of 6.5 million people. However, progress on this initiative is unclear.⁵¹

Table 47: Key government and donor programs with pastoralist beneficiary registries in South Sudan.

Government programs	Target areas	No. of pastoralist beneficiaries
Ministry of Animal Resources and Fisheries (cash-based transfer list for livestock owners in South Sudan)	All of South Sudan	6.5 million people (target)
Donor programs		No. of pastoralist beneficiaries
WFP SCOPE	All of South Sudan	1–5 million (target 2020)
International Organization for Migration BRaVE	All of South Sudan	n.a.

Other services

Table 48: Access to additional services for pastoralists in South Sudan.










	Pastoralist access to public services	Pastoralist access to private services
Livestock registration	n.a.	n.a.
Livestock vaccination	Low	Low
Livestock extension (e.g. husbandry, sanitation)	Low	Low
Livestock inputs (vaccines, drugs)	Low	n.a.
Forage and feeds supplements	n.a.	n.a.

Source: Estimates by experts, from questionnaires.

⁵¹ Official from Ministry of Agriculture via expert questionnaire.

VI. Summary: Preliminary operational feasibility assessment of IBLI in South Sudan through a regional IGAD IBLI initiative

Table 49: Preliminary assessment of country readiness for IBLI across key operational elements in South Sudan.

	Status	Comments
Importance of pastoral livestock for economy		Pastoralists make up around 60% of the South Sudanese population and the livestock sector provides up to one third of GDP.
Impact of drought on livestock		Drought is a recognized important hazard in South Sudan and the high numbers of people affected in the drought years of 2009 and 2016 (>4 million and >3.5 million, respectively, according to EM-DAT data) show the significance of drought for people in South Sudan, of whom pastoralists make up the majority.
Pastoralist demand for livestock insurance	n.a.	There is no data available on pastoralists' demand for insurance in South Sudan. There is no previous experience with any insurance products.
Effective distribution channels for micro-level IBLI		Product distribution in South Sudan would be very difficult. There is virtually no distribution network infrastructure for insurers, the level of financial services extended to pastoralists is extremely low, and mobile payments are still a newly emerging technology in the country. South Sudan has been subject to severe internal conflict for a long time and security concerns are likely to persist and make face-to-face marketing of insurance products very difficult.
Existing pastoralist beneficiary registries		WFP has a large beneficiary database in-country, which could possibly be leveraged for a potential regional IBLI program, as does International Organization for Migration. There also seems to be a government effort by the Ministry of Agriculture to record all beneficiaries of cash transfers since 2013.
Pastoralist financial literacy		Pastoralist financial literacy is expected to be even lower than in other countries in the region. There are very few financial services being extended to pastoralists in South Sudan, offering them little exposure. In addition, the civil war will likely have significantly impeded any advances in financial literacy and will possibly also have eroded trust in contract-based financial instruments such as insurance. All respondents to the expert questionnaires indicated that pastoralists' knowledge and acceptance of insurance was likely going to be one of the greatest challenges in rolling out a regional IBLI program in the country.
Legal and regulatory insurance environment		There is an insurance bill governing the insurance sector in South Sudan based on British law. However, it is unclear to what extent it is being applied. There is also no reference to or previous experience with index insurance in the country. This would have to be discussed with the insurance supervisory authority, the Insurance Commission.
Insurance market development and interest from insurers in IBLI		The insurance market is very poorly developed. No data on market penetration is available. There is no agricultural insurance of any kind being underwritten in South Sudan. No previous experience with index insurance could be gathered.
Finance available for premiums		South Sudan is not part of the World Bank Horn of Africa Initiative. No financing has thus far been committed to a regional IBLI initiative.
Interest from government stakeholders in IBLI		Government stakeholders have participated in previous IGAD regional conferences on IBLI and the Minister of Agriculture has previously visited ILRI to discuss IBLI opportunities in South Sudan. The Ministry of Agriculture replied to the expert questionnaire that it was 'very interested' in implementing an IBLI initiative.

G. Sudan

Table 50: Summary of livestock and insurance in Sudan.

Status of planning and implementation of Index-Based Livestock Insurance					
IBLI availability	None. Various insurers offer indemnity-based livestock insurance.				
IBLI planning	IBLI Feasibility study is planned for 2021 and will be conducted by Syngenta Foundation for Sustainable Agriculture and ILRI. Government of South Sudan is studying role of IBLI as part of IGAD regional initiative.				
Livestock and pastoralism sector				Map amended from (Cecchi et al. 2010)	
No. of pastoralists (% of total population)	MPI rating in rural areas	Livestock contribution to GDP	Livestock production index (2004–06 = 100)		
8.18 M (20%) ⁵² (2015)	0.351 ⁵³ (2014)	21% ⁵⁴ (2017)	104.1 ⁵⁵ (2011)		
Livestock breakdown ⁵⁶ (2018)*					
Total TLUs	Camels	Cattle	Goats		Sheep
45.3 M	4.9 M	31.2 M	31.8 M		40.8 M
Key insurance and financial sector institutions					
Banks in pastoral areas	Agricultural Bank of Sudan Microfinance Initiative; Bank of Khartoum; Savings and Social Development Bank				
Mobile cash	Hassa/Bank of Khartoum; Faisal Islamic Bank				
Insurance companies	13 companies. Market leader is Shiekan Insurance and Reinsurance Company				
Key insurance schemes and legislation					
Insurance law/regulation	The main insurance laws in Sudan, the Insurance Supervision Act 2018 and the Takaful and Insurance Act 2003 are based on Sharia law.				
Livestock insurance products	More than 30 years of traditional livestock indemnity insurance for dairy cattle. Poultry and aquaculture insurance. To date, no IBLI.				

⁵²UNECA 2017.

⁵³The multidimensional poverty index is an index between 0 and 1 that is composed of 10 different indicators on poverty. The higher the index value, the greater the poverty (OPHI 2020c).

⁵⁴Guthiga et al. 2017.

⁵⁵World Bank 2019.

⁵⁶FAOSTAT 2020c

Other relevant partners for IBLI	
Government partners	Ministry of Agriculture
Livestock sector associations	Chamber of Livestock, Meat and Slaughterhouse; Dairy sub-chamber
Most important development partners	WFP, IFAD, FAO, WBG

*FAO data based on imputation methodology, estimates, and government data

Tropical Livestock Unit (TLU) conversion rates: Camel: 1.4 | Cattle: 1.0 | Goat: 0.1 | Sheep: 0.1

I. Socio-economic relevance of livestock production and pastoralism

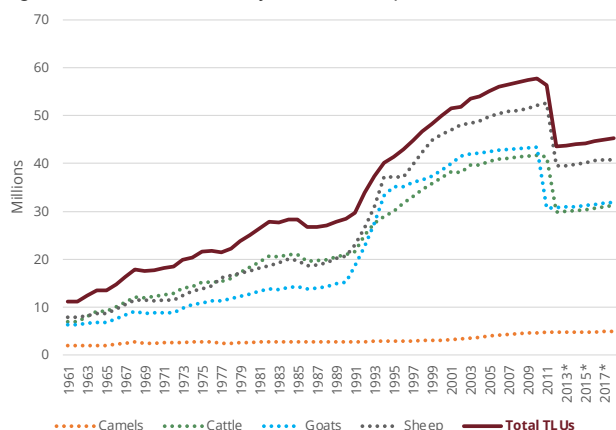
Socio-economic situation in Sudan

Sudan is considered to be a potential economic powerhouse in eastern Africa but has been held back by long-lasting conflict and governance challenges. The country is rich in fertile land and livestock, has a reasonable manufacturing base, large oil reserves, and a strategic market location at the intersection of sub-Saharan Africa and the Middle East (Babikir et al. 2015). The country, however, has been experiencing international conflicts that weakened its political stability and risked the economic situation of its population. The secession of South Sudan in 2011 triggered several economic shocks, causing reduced revenue from oil, reduced economic growth, higher inflation, and increased fuel prices (World Bank 2020d). The national poverty rate is estimated at 46.5%, with a disproportionately larger share among rural households. Persistent poverty and deteriorating ecological conditions led to ongoing rivalry over scarce resources, conflict, and mass migration to urban centres (IGAD 2020a). Sudan ranks 168th out of 189 countries in the Human Development Index. Total unemployment is 12.9%, with youth unemployment being 26.7%. Forty per cent of total employment is considered vulnerable. The total population is 41.8 million, of which 65.4% are located in rural areas (UNDP 2019a).

Economic relevance of the livestock sector

The agricultural sector is one of the leading pillars of economic output and has increased in importance since the secession of South Sudan in 2011. The agricultural sector is one of the leading economic sectors in Sudan, providing a substantial share of the non-oil export earnings, and household incomes. Following the loss of the majority of the national oil revenue following the secession of South Sudan in 2011, the government started to support this sector more actively. It still remains highly vulnerable to climate change and variability, which puts the predominant rain-fed production systems at risk. The livestock sector plays an important role in achieving food security and sustaining livelihoods (ICPAC and WFP 2018). It contributes 60% of the agricultural GDP and 21% of the overall GDP (Guthiga et al. 2017).

Figure 57: Numbers of major livestock species in Sudan (1961–2017).

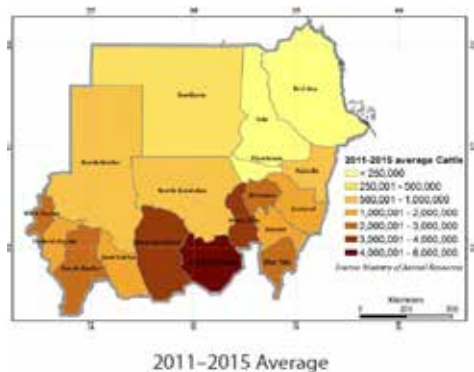
Source: FAOSTAT 2020c⁵⁷

Livestock production systems and livelihoods

Livestock production systems in Sudan are either pure pastoralism or combined livestock and crop production systems.

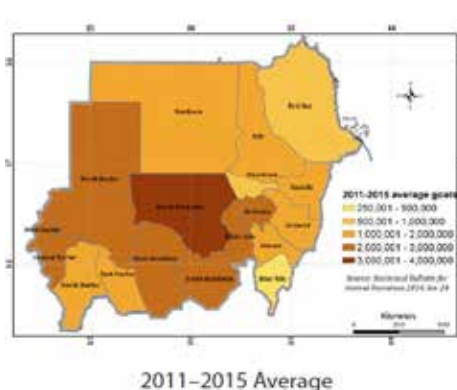
The majority of agriculture producers pursue traditional farming systems (defined by small-scale farmers pursuing subsistence crop production) or livestock production or a combination of these two in areas of moderately sufficient rainfall. Pastoralism is mostly pursued by semi-nomadic households that spend the rainy season in northern semi-arid regions and the dry season in the southern savannah areas. Agro-pastoralism is a variation in which households also grow crops, but where livestock production remains the main livelihood and source of food (Babikir et al. 2015).

Figure 58: Number of cattle in Sudan (2011–2015 average).



Source: ICPAC and WFP 2018.

Figure 59: Number of goats in Sudan (2011–2015 average).



Source: ICPAC and WFP 2018.

Market access for livestock producers

The domestic livestock sector has a network of markets throughout the country with varying levels of veterinary services.

Primary markets tend to be in close proximity to village markets or livestock producers. A lack of veterinary services at these markets prohibits the issuance of movement certifications at this level. Secondary markets tend to provide better management, necessary facilities such as fencing, water and feed for animals, and the issuance of health certificates by a veterinary office (IGAD 2016). There are secondary markets in each of the states. Tertiary markets are located in the central and northern regions of the country. Cattle movement from the west to the centre is done by trekking along traditional livestock movement corridors during the winter months, given cool temperatures and availability of water and pastures. By contrast, small ruminants are transported throughout the year by trucks (IGAD 2013).

⁵⁷Based on FAO imputation methodology and estimates as well as official and unofficial data. Data from 1961 to 2011 is for former Sudan before the separation with South Sudan.

Sudan is located in the central northwestern corridor, one of the major livestock trade markets in the Horn of Africa, connecting Egypt with Ethiopia and Eritrea. It also pursues trade with Chad via cross-border markets including Seraf Omra and Geneia. Markets like Geneia and Um Dukhun are located at migratory routes used by livestock traders from neighbouring countries (UNECA 2017). Main cross-border markets provide different financial services, including mobile money transfers, loans for traders, and the use of livestock as collateral (IGAD 2013). They tend to have necessary infrastructure and facilities in place, including fencing, water and feed, veterinary facilities and loading ramps. Federal veterinary authorities inspect, vaccinate and issue health certificates for livestock destined for export (IGAD 2016).

Issues and challenges faced by the pastoral and livestock sector

Land degradation is a key concern for pastoralists regions, putting livestock populations and food security and peace at risk. Overall, 12% of the total land area of Sudan is considered degraded (UNDP 2019a). Areas with the highest levels of degradation are the Red Sea region and Darfur. Contributing factors in Darfur include livestock overgrazing, man-made deforestation, reduced vegetation cover due to droughts, and low soil quality. Increased competition over shrinking fertile areas further aggravate this trend (ICPAC and WFP 2018).

Pastoralists are facing insecure land tenure rights in light of renewed agriculture legislation and a lack of land registration in pastoral areas. The Agriculture and Animal Producers' Legislative Act passed in 2010 eliminated traditional representation of pastoralists. The new system ensures that the state can use any land with proven significant natural resources, including oil, minerals, gas, forests or agriculture. The lack of land security and frequent land appropriation by the national government have intensified prevailing conflicts (UNECA 2017).

In relation to the insecure land tenure rights, pastoralists have faced increased risk of conflict, given competing interests with natural resource extraction and commercial farming production. Pastoral areas are important hubs for the production of minerals, gas and oil. This has led to large-scale rangeland concessions in for public or private interests (UNECA 2017). Private sector companies pursuing rain-fed semi-mechanized farming further increase the risk of conflict, as they compete with pastoralists and contribute to land degradation (Babikir et al. 2015). These competing interests led to an increase in pastoralists' resistance towards government control and private sector interests. The risk of resource-inflicted conflicts are considerable and have ultimately caused the conflict in the Darfur region to turn into a civil war that drew in different local groups and the national government (UNECA 2017).

Decreasing quality and availability of pasture due to the effects of climate change and man-made land degradation increases the risk of livestock diseases. Increasing concentration of livestock due to changing migration patterns of pastoralists increases the chance of disease outbreaks and reduces meat and milk production due to declining physical conditions of livestock (ICPAC and WFP 2018). These factors also increase the mortality risk for livestock.

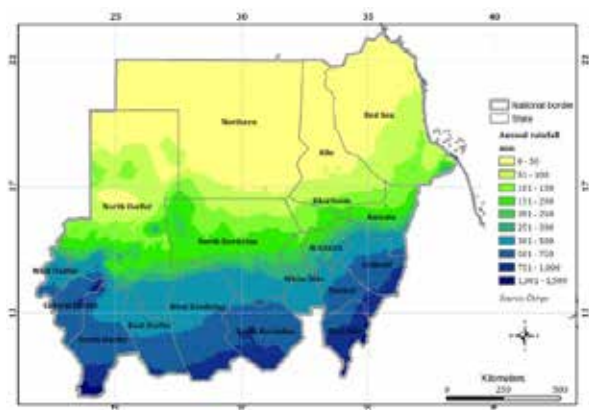
II. Impacts of droughts on livestock sector and pastoralist livelihoods

Agroclimatic conditions in pastoral regions

Sudan's agroclimatic conditions are defined by its ecology, which shifted towards a dryland environment following the secession of South Sudan. About 60.2% of the total 181 million hectares of Sudan's land area is categorized as arid and semi-arid (IGAD 2020a). Agricultural potential in these areas is limited, as soil quality tends to be poor due to low rainfall and lack of vegetation. Only certain areas of Northern Darfur experience cooler winter months, allowing for grass growth (referred to as *gizu*). Pastoralism, agro-pastoralism and some irrigated agriculture along the Nile banks are practiced in these regions. Other ecological regions are different types of savannah regions. Low-rainfall

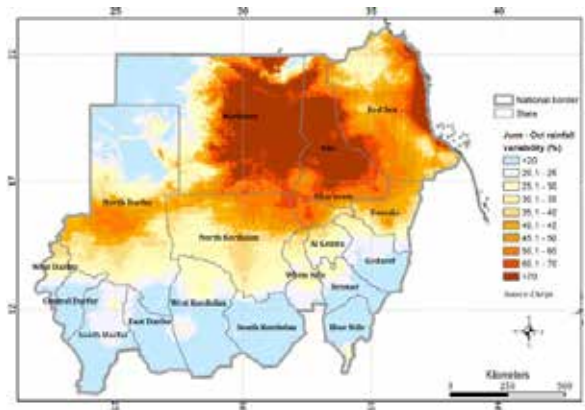
sand-based savannah zones typically experience 300–400 mm of rainfall. Low rainfall, clay-based soil savannah receives 400–900 mm of rainfall. Both of these regions are characterized by a mixture and pasture and forest areas and are used for rain-fed farming and pastoral livestock systems. High-rainfall savannahs experiencing annual rainfall of 800–1300 mm are located in parts of South Darfur Nuba Mountains and the southern border (Babikir et al. 2015).

Figure 60: Mean annual rainfall in Sudan (1981–2010).



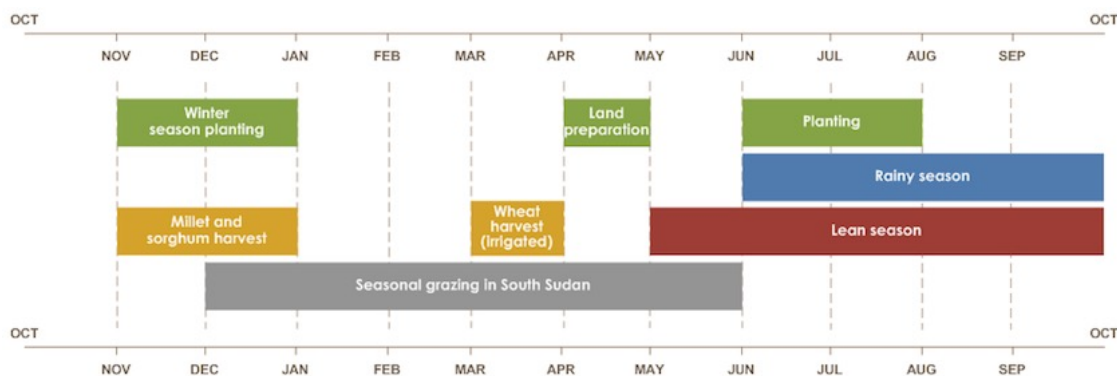
Source: ICPAC and WFP 2018.

Figure 61: Coefficient of variation for mean March–June seasonal rainfall in Sudan (1981–2010).



Source: ICPAC and WFP 2018.

Figure 62: Typical agricultural and climatic season calendar in Sudan.



Source: FEWS NET 2020b.

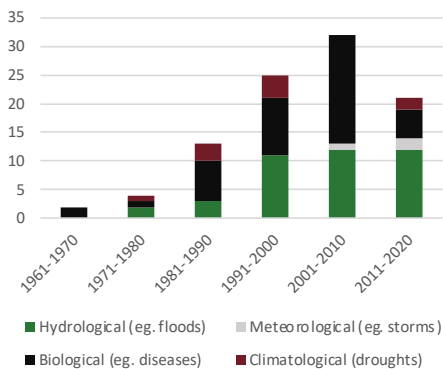
Frequency and severity of natural disasters

Sudan is facing increased impact of natural disasters, with droughts being the main concern for rural populations.

The country ranks 61st globally in the WorldRiskIndex score, derived from the exposure (medium) and vulnerability (very high) to natural hazards (BEH and IFHV 2020). Sudan further ranks 174th out of 181 countries on the ND-GAIN Exposure Ranking in 2018, which describes the degree to which a system is exposed to significant climate change from a biophysical perspective (ND-GAIN 2020). The country is prone to drought conditions given its location on the fringes of the Sahel, as well as flash floods which carry water from the White Nile in Ethiopia and the East African highlands (ICPAC and WFP 2018).

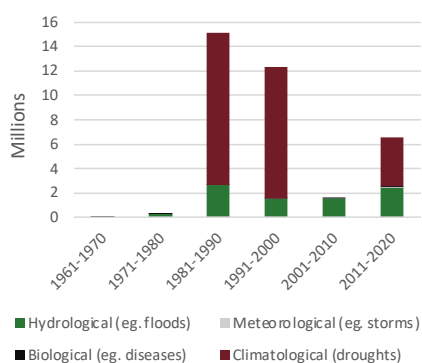
The largest drought on record of the last 50 years was in 1984 but since then there have been many other drought events. Drought years since then include 1985, 1989, 1990, 1997 and more recently in 2000, 2003, 2008, 2009 and 2011. While the northern areas are particularly prone to dryness given their proximity to the Sahara, all regions of the country are exposed to drought. Areas worst exposed include North Kordofan, North Darfur, West Darfur, Red Sea, Gedaref, North state and White Nile states (Hussein 2020).

Figure 63: Number of events by disaster type in Sudan (1961–2020).



Source: EM-DAT 2020.

Figure 64: Number of affected people by disaster type in Sudan (1961–2020).

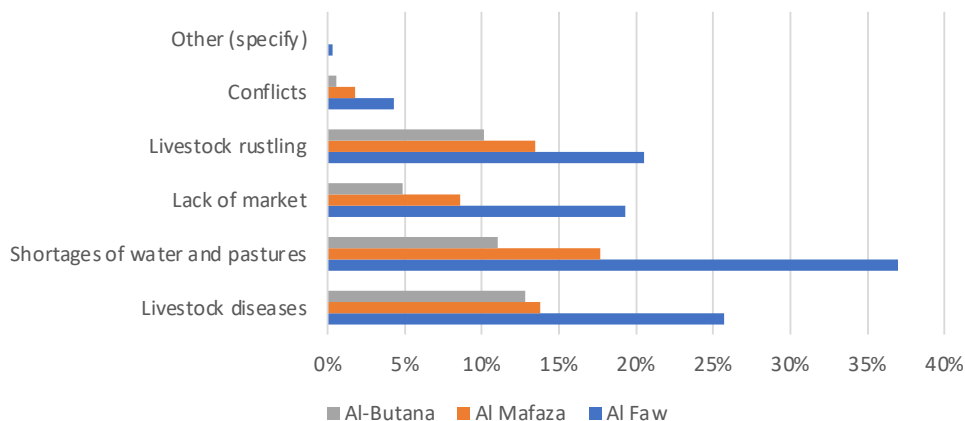


Source: EM-DAT 2020.

Impact of droughts and other perils on livestock and the pastoral sector

The livestock sector faces numerous challenges resulting from the impact of droughts and floods. Climate hazards and prolonged dry seasons characterized by low and unreliable rainfall lead to a lack of water pasture for livestock in pastoral areas for most of the year. The rainy season from May through November supports pasture and crop production, but erratic rainfall can also lead to flash floods that cause livestock death (ICPAC and WFP 2018). A recent study from Gedaref State, an agro-pastoral area in Eastern Sudan, showed that drought was the key challenge for households in the region (see Figure 65).

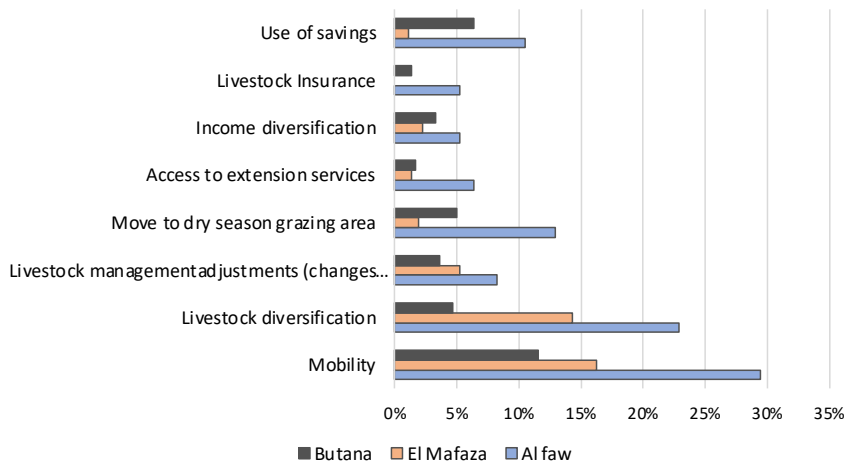
Figure 65: Percentage of respondents identifying selected key problems in sub-localities in Gedaref State, Sudan.



Source: Hussein 2020

To cope with growing climatic risks, pastoralists increasingly migrate to sometimes distanced areas with available grazing resources during severe droughts (ICPAC and WFP 2018). Since the Sahel drought of the 1970s, Sudanese pastoralists have migrated to the Central African Republic in search of water and pastures. The number of pastoralists has increased with subsequent drought spells and as people have fled the civil war in Darfur (UNECA 2017). Other key coping mechanisms include diversifying livestock herds and the use of savings (see Figure 66).

Figure 66: Percentage of respondents citing selected drought coping strategies in sub-localities in Gedaref State, Sudan.



Source: Hussein 2020.

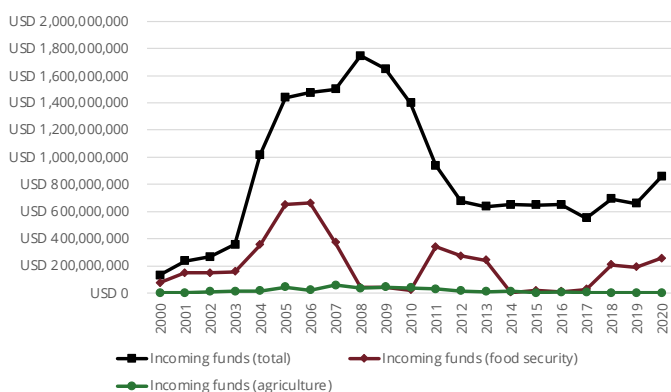
Impact on food security and overall well-being

Food insecurity and water shortages are two of Sudan's most pressing challenges resulting from the fragile ecosystem and frequent droughts (Babikir et al. 2015). Varying and scarce rainfall, predominantly in the north, have a dominant effect on agriculture and food security. Contributing factors are mostly directly or indirectly related to droughts, including below-average agricultural production, rising market prices, inaccessibility to markets, poor seasons due to climatic reasons, and conflicts and related human displacements (ICPAC and WFP 2018).

The impact of the COVID-19 pandemic has been increasing pre-existing food security concerns in 2020. High staple food prices and COVID-19 control measures including lockdowns and the closing of transportation facilities have caused large numbers of people to require emergency food assistance (FEWS NET 2020e). By 5 October 2020, the country had 13,640 confirmed cases, of which 6,040 were still active and 6,764 had recovered. Some 836 people had died from the virus (IGAD and WHO 2020).

Humanitarian assistance

Figure 67: Incoming international aid funding to Sudan as tracked by UN OCHA (2000–2020).



Source: UN OCHA FTS 2020.

III. Pastoralist development programs and existing drought risk financing initiatives

Table 51: Donor projects focused on the enhancement of the pastoralist and livestock sector in Sudan.

Organization	Project title	Cost/contribution	Duration
IFAD	Livestock Marketing and Resilience Program	Total: USD 128.7 million IFAD: 31.47 million	2014–2021
European Union and GIZ	Cross-Border Collaboration Program in Western Ethiopia and Eastern Sudan	USD 24 million	2018–2021
World Bank	Sudan Sustainable Natural Resources Management Project Additional Financing (Phase 2)	USD 5.5 million	2019–n.a.
FAO	Promote the provision for legitimate land tenure rights using VGGT58 to conflict displaced communities including small-scale rural farmers, pastoralists, and internally displaced persons in Darfur region	USD 3.3 million	2016–2020
FAO	Enhancing the agriculture and the livestock-based livelihood situation of the most vulnerable households from the internally displaced persons, returnees and host communities	USD 3 million	2020–2021
FAO	Enhancing food security and livelihoods sector coordination mechanisms and addressing food and nutrition insecurity of the vulnerable farming, agro-pastoral and fisheries communities in the rural areas of Sudan	USD 2.8 million	2020
FAO	Restoring and improving crop and livestock-based livelihoods of internally displaced persons, returnees, South Sudanese refugees and vulnerable resident populations in South Darfur, Central Darfur, North Darfur and South Kordofan states	USD 2 million	2019–2020

Existing drought risk financing initiatives

There are no major government drought risk financing initiatives active in Sudan. There is a livestock insurance program operated by the private sector and the government has subsidized agricultural insurance premiums for many years to encourage farmers and pastoralists to buy insurance (see section IV). Sudan has signed a memorandum of understanding with African Risk Capacity but has not purchased any cover yet.

Agro-meteorological and earth observation data management

Sudan’s early warning and forecasts has contributed to building a better information base on changing climate and alerting farmers and pastoralist communities to the drought and flood events, ahead of the disaster. This has helped the country to implement its National Adaptation Program of Action in collaboration with the Higher Council for Environment and Natural Resources and address the climate change phenomena and therefore contribute to building resilience of communities in the drought-prone areas in the country. The government has invested some of its resources for weather data collection, land-use, crop and livestock sustainable production systems to better understand the suitable or appropriate strategies that may be available. Therefore, long-term investment in livelihood protection, safety nets and production insurance packages in support of smallholder food production would contribute to boosting the economy and development of the drought-prone areas (IGAD 2020c).

⁵⁸Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security.

IV. Review of national livestock insurance market development

Insurance legal and regulatory framework

Sudan was the first insurance market to conform to Islamic (Sharia) finance law in 1993, which is in place for all insurance in Sudan. The main insurance laws in Sudan, the Insurance Supervision Act 2018 and the Takaful and Insurance Act 2003, have sought to ensure conformity to Sharia law and strengthen the financial position of insurers in the market (AXCO 2020c).

The Insurance Supervisory Authority, the Ministry of Finance and Economic Planning, formed in 1960, issues regulations which generally focus on ensuring the financial strength of the insurance market and deal with solvency and capital requirements, investments and technical reserves (AXCO 2020c).

Non-admitted insurance is not generally permitted in Sudan. Fronting is permitted subject to approval by the Insurance Supervisory Authority, which scrutinizes reinsurance arrangements. Fronting commission levels range broadly between 2.5% and 7.5% (AXCO 2020c).

Non-life insurance is subject to stamp duty tax of 10% and an Insurance Supervisory Authority levy of 0.5%. Agricultural activities including insurance are exempt from corporation tax (AXCO 2020c).

Takaful insurance and reinsurance

As the Sudanese insurance market is run according to Islamic (Sharia) principles, local insurance policies must be takaful compliant. Insurers are required wherever possible to place their reinsurance in 'retakaful' markets with takaful-approved and licenced reinsurers. Currently most general and life insurance in Sudan is reinsured with the state-owned Sheikan Insurance and Reinsurance Company and with the National Reinsurance Company, NIC, and ZEP-RE and Africa Re,⁵⁹ which both have retakaful subsidiaries or windows; international retrocessions are then placed with retakaful markets in the Middle East and Asian (e.g. Malaysia) markets. Some business is also ceded to European insurers including a share of Sheikan's long-standing crop and livestock reinsurance treaty business (AXCO 2020c).

The planning and design of an IGAD regional IBLI program will need carefully to consider the requirements in Sudan for the insurance and reinsurance program to meet takaful and retakaful requirements.

⁵⁹Local insurance companies are required by law to make 40% compulsory reinsurance cessions to the National Reinsurance Company, which was formed in 2016. Compulsory cessions also apply to ZEP-RE (10%) and to Africa Re (5%) (AXCO 2020).

Box 2: Sharia-compliant reinsurance in Sudan (Retakaful)

The insurance market in Sudan is run according to Islamic principles, and thus all insurers try as far as possible to place their reinsurances in the retakaful market. Reinsurance placements are under constant supervision by the Higher Sharia Board and the Sharia committees of the insurance companies.

In 2010 ZEP-RE opened a retakaful window in Sudan, which increased the retakaful capacity in the local market and ensured that all ZEP-RE's acceptances are on a retakaful basis.

Africa Re (headquartered in Lagos, Nigeria) launched a retakaful subsidiary in 2010 called Africa Takaful Reinsurance Company.

The percentage of treaty reinsurance placed on a retakaful basis in the local market, with Africa Re and with retakaful providers in Arab countries and Malaysia is estimated currently to be between 70% and 80% of all reinsurance placed.

Reinsurance with a conventional reinsurance company is permitted only when adequate retakaful alternatives are not available and as long as contributions paid to the reinsurer are minimized and the insurer does not receive commission from the reinsurer.

Compulsory cessions and locally accepted reinsurance business are placed on a direct basis as is some business ceded to major European professional reinsurers.

Source: AXCO 2020c

Status of non-life insurance market

Sudan is ranked 98th in the world in terms of the size of its insurance market premium volume in 2016, the most recent year for which figures are available, with a total premium volume of Sudanese Pounds (SDG) 3,062 million (USD 494 million), of which the non-life insurance market accounted for the bulk (87%) of the total premium, followed by personal accident and health (11%); while life (takaful) insurance was insignificant at 2.45% of premiums (AXCO 2020c).

In 2019 the Sudanese insurance market consisted of 13 companies, of which eight were composites, writing both non-life and life (takaful) business. The state-owned Sheikan Insurance Company dominates the market and transacted 31.6% of non-life business in 2016. The top five insurance companies in Sudan are Skeikan, Islamic, Sudanese, United and El Nilein; together they accounted for 72% of total market written premium in 2016 (AXCO 2020c).

Insurance penetration is very low in Sudan. The Sudanese 2016 total market insurance premium was equivalent to 0.48% of GDP or an expenditure USD 12.48 per capita on insurance. This compares to Ethiopia (0.72% of GDP and USD 20.46 per capita) and to Kenya (2.75% of GDP and USD 39.97 per capita) (AXCO 2020c).

African Risk Capacity is licenced to operate in Sudan and could, if requested by the government, offer sovereign risk drought index insurance.

Agriculture and livestock insurance availability

Indemnity-based livestock insurance in Sudan dates back to the 1960s. The state-owned Sheikan Insurance and Reinsurance Company launched its first milking cow livestock policy in 1992 and subsequently expanded the account to cover fattened cows, fattened sheep, bloodstock (horses and camels), poultry, police dogs and fish farms (AXCO 2020). Crop insurance was launched in 2002 by Sheikan under an area yield index cover for irrigated cotton grown in the Gezira irrigation area (Mahul and Stutley 2010b).

Currently, only indemnity-based livestock insurance is available in Sudan in the form of an individual animal mortality cover due to accident and diseases for dairy cattle. Poultry and aquaculture insurance are also available but on a very restricted basis.

In 2014 the Global Environment Facility and UNDP, launched a weather index insurance pilot program under the USD 24.5 million Climate Risk Finance for Sustainable and Climate Resilient Rain-Fed Farming and Pastoral Systems project implemented by the Ministry of Environment, Forests and Physical Development of Sudan. The project invested both in (i) strengthening climatic and flood early warning systems by investing in seven automatic climate stations and six automatic synoptic weather stations and 162 rain gauges in six states (River Nile, Gedaref, North Kordofan, South Darfur, Kassala and White Nile) and (ii) introducing weather index insurance cover for pastoralists and for farmers in rainfed areas: cover was targeted at 45,000 benefitting farmers. Alnafain Insurance Company signed up to provide crop weather index insurance in four states: Gedaref, South Darfur, Kassala and White Nile. The project provided financial support in the form of premium subsidies to farmers. The program was poorly managed and implemented and at the 2017 mid-term review had only succeeded in reaching 1,000 farmers with crop weather index insurance. The program failed to design or implement any index insurance pilots with pastoralists (Rijal and Hanafi 2017).

In December 2020, ILRI and Syngenta Foundation launched a project to assess the feasibility of IBLI in Sudan and conducted preparatory work of the launch of a pilot with Ebdaa Bank, a micro-finance institution, as a local financial partner. The project is funded by the Swiss Capacity Building Facility and will have a duration of 24 months.

Table 52: Availability of agricultural insurance (indemnity-based and index-based) in South Sudan.

Crop insurance products available					
Indemnity-based	Index-based	Weather index insurance	Area yield index insurance	Greenhouse	Forestry
Low uptake	n.a.	n.a.	n.a.	n.a.	n.a.
Livestock Insurance Products Available					
Indemnity-Based	Index-Based	Micro-level IBLI	Meso- & macro-level IBLI	Aquaculture	Poultry
Low uptake	R & D*	n.a.	n.a.	n.a.	Low uptake

Source: Authors, updated from Mahul and Stutley 2010b.

There are currently five to six active agricultural insurance companies in Sudan. Sheikan Insurance Company is the largest agricultural crop and livestock insurance company in Sudan and it is reinsured by Partner Reinsurance Company, Zurich on a quota share and stop loss treaty basis (AXCO 2020). Other agricultural insurance companies include Islamic Insurance Company, Blue Nile, Alnafain Insurance Company, Garalnaby, El Nilein and Ta'wanuya.

According to the latest available data in 2017, agricultural insurance premiums were worth SDG 321 million (about USD 48 million at 2017 exchange rates), equivalent to 6.4% of the total insurance market life and non-life premium volume (Table 51).

Table 53: Total insurance premiums (SDG million) in Sudan (2013–2017).

Year	2013	2014	2015	2016	2017	% of 2017 market premium
Agriculture		80.7	173.2	184.3	321.0	6.4%
General (Non-Life) Insurance	1,583.1	1,773.8	2,065.3	2,986.7	4,898.5	98.0%
Takaful (Life Insurance)	54.6	56.7	60.7	74.9	98.0	2.0%
Total Premium (incl. Takaful Life)	1,637.7	1,830.5	2,126.0	3,061.6	4,996.5	100.0%

Source: Sudan Democracy First Group 2019.

Over the four-year period 2014 to 2017, the agricultural insurance market expanded significantly from SDG 81 million to SDG 321 million. Over this period, Sudanese agricultural insurers achieved profitable underwriting results as shown by the long-term average loss ratio of 57% on their crop and livestock portfolios (AXCO 2020).

Table 54: Total agricultural insurance premiums (SDG million) and loss ratios in Sudan (2013–2017).

Year	2013	2014	2015	2016	2017	Total
Agriculture Premium		80.7	173.2	184.3	321	759.20
Animal and Agriculture Claims	36.7	35.1	102.6	99.1	194.2	431.00
Loss ratio %		43%	59%	54%	60%	57%

Source: Sudan Democracy First Group 2019.

The Government of Sudan is highly committed to promoting the adoption of agricultural insurance and has for many years provided financial support in the form of 50% premium subsidies. In 2008, only crop insurance policies qualified for premium subsidies (Mahul and Stutley 2010b), but it is believed that the 50% premium subsidy has now been extended to livestock policies as well.

Interest from public and private stakeholders

Senior representatives from the Government of Sudan attended the June 2019 Addis IGAD/ILRI/World Bank ‘Policy Roundtable and Technical Workshop on Index-Insurance for Livestock in the IGAD Region’ on scaling up IBLI solutions in the IGAD region and expressed their interest in participating in this initiative. To date it has not been possible to elicit the interest from insurance companies in developing and underwriting micro-level and or meso-level IBLI products and programs for pastoralists in the country. At the government’s request, Syngenta Foundation for Sustainable Agriculture and ILRI have planned an IBLI feasibility assessment study in Sudan in 2020–21: funding support is being provided by the Swiss Capacity Building Facility and AgFund.

V. Operational elements for potential IBLI implementation

Financial inclusion

Table 55: Financial inclusion data for whole population in Sudan (2014).

Financial inclusion data for Sudan’s population (% of population; age 15+)		
	Total	Rural
Account	15.3	13.1
Borrowed any money in the past year	45.5	43.8
Borrowed from a financial institution or used a credit card	4.2	3.8
Borrowed from a store by buying on credit	0.9	0.4
Coming up with emergency funds: not possible	43.2	43.9
Credit card ownership	0.4	0.3
Financial institution account	15.3	13.1
Made or received digital payments in the past year	11.9	9.8
No deposit and no withdrawal from an account in the past year	3.6	3.2
Received government transfers in the past year	2.5	2.2

Source: World Bank 2020f.







Financial inclusion for pastoralists is at a fledgling stage in Sudan. Country-wide, microfinance coverage is estimated at only reaching 8% of potential clients, leaving around 8 million people or around 20% of the population excluded (Ammar, Ahmed and McMillan 2016). Rural areas are largely excluded. IFAD supports the Agricultural Bank of Sudan Microfinance Initiative with a grant of USD 925,000 to scale up operations and reach a greater client base, focusing on North and South Kordofan. The banks with the greatest branch network active in microfinance and lending to livestock holders seem to be the Bank of Khartoum and the Savings and Social Development Bank (Ali 2020).

Beneficiary registries

No existing database of pastoralists could be determined for the purposes of this study. The last population census was carried out in Sudan in 2009, while the only census of livestock and agriculture was conducted in 1964. However, most recently in December 2020, the government has announced the launch a two-year national census of the country's population, farmlands and livestock costing USD 305 million.⁶⁰ If implemented successfully, this census could provide a national database registry of all pastoralists and agro-pastoralists and their livestock.





VI. Summary: Preliminary operational feasibility assessment of IBLI in Sudan through a regional IGAD IBLI initiative

Table 56: Preliminary assessment of country readiness for IBLI across key operational elements in Sudan.

	Status	Comments
Importance of pastoral livestock for economy		The livestock sector contributes up to 21% of Sudanese GDP, and up to 20% of the Sudanese population are pastoralists.
Impact of drought on livestock		Sudan is exposed to drought in a major way, with pastoralists shouldering a large share of the burden. Water shortages have been recorded in field studies as the main challenge faced by pastoral communities.
Pastoralist demand for livestock insurance		While no IBLI-type products have been rolled out in Sudan thus far, traditional commercial indemnity-based products are available in the market to sedentary livestock holders, distributed by Shiekan Insurance. The Shiekan livestock insurance program has been around for many years and has a consistent client base. Studies show some pastoral communities are familiar with livestock insurance and about 5% have purchased livestock insurance as a risk mitigation strategy (Hussein 2020). However, there is no experience with IBLI livestock insurance products targeted specifically at pastoralists.
Effective distribution channels for micro-level IBLI		Shiekan Insurance has experience in distributing livestock insurance products, albeit not specifically in pastoral regions. Other insurers underwrite agricultural insurance programs, although the details of their operations require further research. Mobile cash solutions are available in Sudan. The extension of financial services to pastoral regions is still low, although there seem to be some commercial banks with operations targeted at pastoralists.
Existing pastoralist beneficiary registries		In December 2020, the government announced the launch of a two-year national census of the country's population, farmlands and livestock costing USD 305 million. ⁶¹ If implemented successfully this census could provide a national database registry of all pastoralists and agro-pastoralists and their livestock.
Pastoralist financial literacy		Financial literacy among pastoralists is expected to be very low. In pastoral areas, there is little experience with financial services and no experience with insurance. Significant investments would have to be made in capacity building and awareness creation of any IBLI products.

⁶⁰ <https://www.aa.com.tr/en/africa/sudan-launches-census-to-count-population-farmlands/2071052>

⁶¹ <https://www.aa.com.tr/en/africa/sudan-launches-census-to-count-population-farmlands/2071052>

	Status	Comments
Legal and regulatory insurance environment		The Sudanese insurance sector is governed by Sharia law and any IBLI product would have to be marketed in a Sharia-compliant (takaful) way. There is limited experience with index insurance products and the Insurance Supervisory Authority would have to be involved closely in the development of any IBLI product.
Insurance market development		Sudan has a moderately developed insurance market, with five to six companies underwriting agricultural insurance. In 2017, insurers collected SDG 321 million (USD 48 million) in agricultural insurance premiums, of which possibly 10–20% was for livestock insurance (dairy cattle, poultry etc.). The insurance market is much less developed in rural pastoral areas.
Interest from insurers in IBLI	n.a.	The DIRISHA team did not have an opportunity to interact directly with insurance companies in Sudan.
Finance available for premiums		The Government of Sudan is very committed to promoting micro-level agricultural insurance and for many years the Ministry of Finance has provided 50% premium subsidies to farmers.
Interest from government stakeholders in IBLI		The Government of Sudan has participated in the IGAD regional conferences on drought insurance and has expressed its interest in participating in any IBLI initiative. Syngenta Foundation for Sustainable Agriculture and ILRI have planned an IBLI feasibility assessment study in Sudan in 2020–21: funding support is being provided by the Swiss Capacity Building Facility and AgFund.

H. Uganda

Table 57: Summary of livestock and insurance in Uganda

Status of planning and implementation of Index-Based Livestock Insurance				
IBLI availability	None. The UAIS pool co-insurers offer indemnity-based livestock			
IBLI planning	An IBLI feasibility study was conducted in 2019 (WBG 2019b).			
The Government of Uganda is studying role of macro-level IBLI as part of IGAD regional initiative.				
Livestock and pastoralism sector				Map amended from (Cecchi et al. 2010)
No. of pastoralists (% of population)	MPI rating in rural areas	Livestock contribution to GDP	Livestock production index (2004–06 = 100)	
9.2M (23%) ⁶² (2015)	0.309 ⁶³ (2016)	5.2% ⁶⁴ (2017)	133 ⁶⁵ (2017)	
Livestock breakdown ⁶⁶ (2018)*				
Total TLUs	Camels	Cattle	Goats	
17.6 M	n.a.	15.8 M	16.2 M	2.1 M
Key insurance and financial sector institutions				
Banks in pastoral areas	Centenary Bank (lending to pastoralist associations); Brac (microfinance institution)			
Mobile cash	MTN; Airtel; Sendwave			
Insurance companies	Africa Insurance Company (consortium of 11 insurers underwriting the national agricultural insurance program UAIS); UAP Insurance (underwriting Centenary pastoralist portfolio).			
Key insurance schemes and legislation				
Insurance law/regulation	Insurance companies in Uganda operate under the terms and conditions of the Insurance Act 2017 (Act 6 of 2017), which was brought into force on 30 March 2018. The insurance market is supervised and regulated by the Insurance Regulatory Authority, an autonomous agency under the Ministry of Finance, Planning and Economic Development.			
Livestock insurance products	Traditional livestock indemnity insurance for cattle, pigs, poultry and fish farming (aquaculture) are offered under the government subsidized UAIS. Currently IBLI is not available, but the government is planning to introduce modified macro-level IBLI in 2021.			



⁶² UNECA 2017.

⁶³ The "multidimensional poverty index is an index between 0 and 1 that is comprised of 10 different indicators on poverty. The higher the index value, the greater the poverty (OPHI 2020d).

⁶⁴ Guthiga et al. 2017

⁶⁵ FAOSTAT 2020b

⁶⁶ FAOSTAT 2020c

Other relevant partners for IBLI	
Government partners	Office of the Prime Minister; Ministry of Agriculture, Animal Industry and Fisheries; Ministry of Finance, Planning and Economic Development
Livestock sector associations	Uganda Meat Producers Cooperative Union Ltd; Uganda Beef Producers Association; Uganda Manufacturers Association (animal feed)
Most important development partners	USAID, FAO, UK FCDO, WBG
NGOs	Coalition of Pastoralist Civil Society Organizations; Karamoja Livestock Development Forum

* FAO data based on imputation methodology, estimates, and government data

Tropical Livestock Unit (TLU) conversion rates: Camel: 1.4 | Cattle: 1.0 | Goat: 0.1 | Sheep: 0.1

I. Socio-economic relevance of livestock production and pastoralism

Socio-economic situation in Uganda

Uganda has experienced several conflicts since gaining independence in 1962, but recently experienced sustained economic growth and poverty reduction (Babikir et al. 2015). Uganda has achieved remarkable results in reducing poverty over the past decades, reducing the share of Ugandan households living in poverty by half between 1992 and 2013 (World Bank 2020e). The country ranks 159th out of 189 countries on the Human Development Index. Employment is relatively high, with only 1.7% of the total labour force being unemployed. However, 75.2% of employment is considered vulnerable. Rural households, 76.2% of the total population, rank much lower on socio-economic indicators. Pastoral communities experience especially high rates of infant and maternal mortality, low levels of literacy, high poverty rates, sparse access to social services, limited economic opportunities and limited political participation (Stark 2011). Only 11.4% of the rural population has access to electricity (UNDP 2019a).

Economic relevance of the livestock sector

The agriculture sector is still a key source of livelihoods but the livestock sector is a smaller subset. Agriculture has played a significant but declining role in contributing to the economic growth of the country. Other sectors including services, industry and tourism have become increasingly important (IGAD 2020d). The agriculture sector still accounts for 71.1% of total employment and 71.9% of total land use (FAOSTAT 2020c). Its productivity level, however, remains low due to limited technology adaption rates. The majority of producers still rely on traditional and rudimentary methods like using hand hoes and unreliable or inadequate rains during the crop cycle (IGAD 2020a). The livestock sector contributes 18% to agricultural GDP, constituting 5.2% to overall GDP (Guthiga et al. 2017). The sector provides a key source of income and household food consumption (ICPAC and WFP 2018).

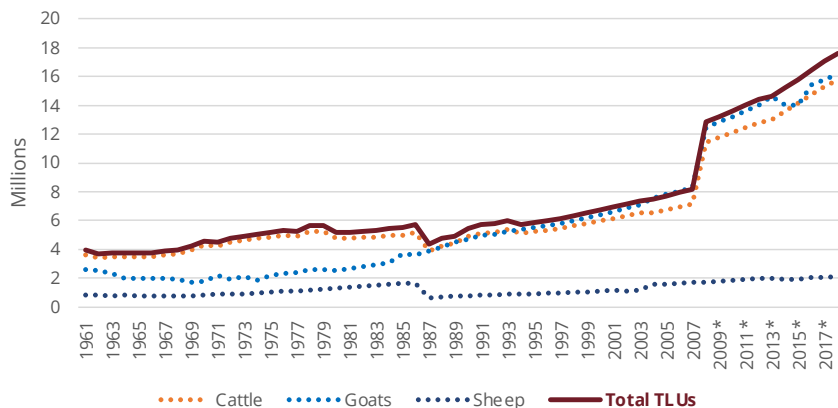
The economic importance of the livestock sector, and agro-pastoralism in particular, is much higher in the Karamoja region in the northeast of the country. The Karamoja region is by far the poorest region in the country, with 74% of people living below the poverty line, compared to about 20% nationwide. It is exposed to severe drought, prone to conflict, and food insecurity is a major issue – up to 45% of households are considered food-insecure. It comprises seven districts: Abim, Amudat, Kaabong, Kotido, Moroto, Nakapiripirit and Napak. Traditionally, Karamoja has been a pastoral area but crop production has recently emerged as an important contributor to livelihoods. As per a 2016 survey, around half of the households in the region declared themselves to be ‘pastoralists’ or ‘agro-pastoralists’ (see Table 58) (FAO 2018).

Table 58: Self-reported livelihoods by district in Uganda

	Abim	Amudat	Kaabong	Kotido	Moroto	Nakapiripirit	Napak
Pastoralist or agro-pastoralist (% of total)	32.4	84.0	53.9	59.3	48.2	24.8	40.0
Farmer (% of total)	66.2	9.0	28.8	37.7	48.8	56.3	59.4
Other (% of total)	1.5	7.0	19.4	3.0	3.0	18.9	0.6

Source: FAO 2018

Figure 68: Numbers of major livestock species in Uganda (1961–2017).

Source: FAOSTAT 2020c⁶⁷

* National livestock census in 2008 led to a significant increase in recorded livestock numbers

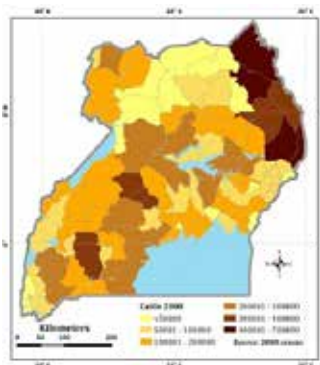
Livestock production systems and livelihoods

The Ugandan livestock sector is composed of different production systems, with a higher prevalence of modern technology methods compared to peer countries in the region. Pastoral systems are practiced in districts with annual rainfall below 100 mm, mostly in the Karamoja region in the northeast, but also in some areas in western and central districts. Zero grazing systems are more intensive production methods that tend to be located near urban areas to supply growing urban demand for milk and other livestock products (Babikir et al. 2015). These modern systems pursue a strategy of specialization to maximize output, which is in contrast and competition with pastoralists seeking to diversify production systems as a risk mitigation strategy (UNECA 2017).

The distribution of livestock clearly shows the concentration of the sector on the northeast Karamoja region.

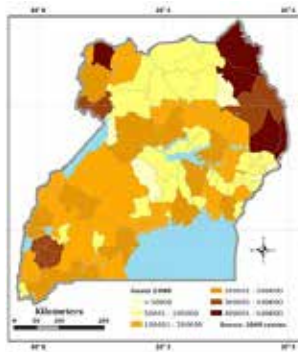
However, there are other pockets, particularly in the southeastern parts, where dairy farming and some agro-pastoralism is practiced (see Figure 69).

Figure 69: Number of cattle in Uganda (2008).



Source: ICPAC and WFP 2018.

Figure 70: Number of goats in Uganda (2008).



Source: ICPAC and WFP 2018.

⁶⁷Based on FAO imputation methodology and estimates as well as official and unofficial data.

Market access for livestock producers

Uganda has a comprehensive network of livestock markets but lacks effective market information services. The country has eight main overland border posts, at least one secondary market for every sub-county or district, and a tertiary market in Kampala. Cross-border markets lack market information services that would benefit traders and customers by, for example, providing current market prices, despite the existing Uganda-Foodnet Livestock Market Information System. Most markets, however, provide banking, mobile money transfer and money exchange services. By 2013, Uganda had no export quarantine station nor slaughter facilities (IGAD 2013).

Domestic livestock movement is controlled by a permit system, but operational constraints of the veterinary oversight systems remain. There is a mandatory livestock movement permit system for any movements of live animals or livestock products. Decentralized veterinary services and insufficient staffing at diagnostic and quarantine facilities, however, prohibit a comprehensive enforcement of such regulatory requirements. Local veterinarians tend to base issuing permits on broader, known livestock disease situations instead of a thorough examination of production places during on-site visits. Pastoralist production systems, which are based on remote extensive livestock production areas, open borders and constant migration for water and pasture, further challenge the enforcement of such permits. Permit requirements have been increased, including improved identification and animal welfare, and serve as a sanitary permit for domestic and international trade (IGAD 2016).

Issues and challenges faced by the pastoral and livestock sector

Land degradation is a growing concern for Uganda, which in general has more favourable vegetation conditions than most of its peer countries. According to estimates, 41% of the total area experiences severe and 12% very severe degradation, putting agricultural livelihoods especially at risk (ICPAC and WFP 2018).

Some legislation exists to protect land rights of pastoralists, but efforts have not yet been widely adopted, leaving pastoralists without secured land tenure. The Land Act of 1998 provides a legal basis for pastoral land rights and to deal with land disputes, for instance through the establishment of communal land associations. These associations, however, have not been implemented, which creates a lack of tenure security for pastoralists who face the risk of losing land rights to private or public land development projects (UNECA 2017).

Ongoing regional conflicts have disproportionately affected rural populations. Several regions in the Horn of Africa, including the northeastern Karamoja region of Uganda, have experienced repeated violent conflict over the past decades. Violent episodes have led to large numbers of internally displaced persons and refugees, especially among pastoralists or people of pastoral origins (UNECA 2017).

Livestock producers face different types of health risks for their herds. Livestock pests occurring in Uganda include ticks and the tsetse fly, diseases such as rinderpest, contagious bovine pleuropneumonia and East Coast Fever. These health risks put the health of livestock at risk, either reducing its value or even killing animals (ICPAC and WFP 2018).

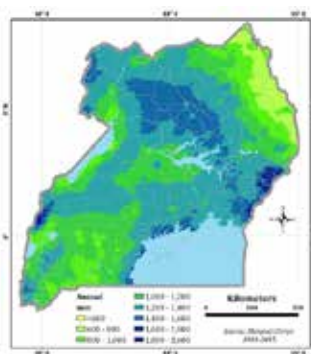
Transformation trends of the livestock production systems favour modern specialization over mixed agricultural systems traditionally pursued and favoured by pastoralists. Interventions to modernize livestock production systems target the transformation of pastoral systems into commercialized forms, specializing for instance in beef ranching or dairy farming. These efforts tend to ignore or further undermine the integration of crop and pastoral production systems. They have also sometimes undermined the symbiotic relationship between the systems and their importance to pastoralist communities (UNECA 2017).

II. Impacts of droughts on livestock sector and pastoralist livelihoods

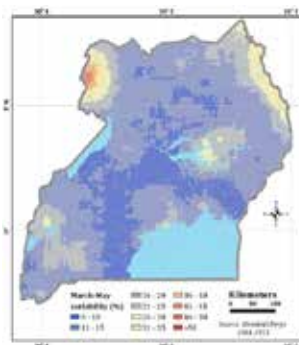
Agroclimatic conditions in pastoral regions

Uganda's natural resources and ecosystem provides advantageous conditions for agricultural and livestock production systems in most areas of the country. The national rainfall average is high but varies considerably by area, from less than 800 mm in parts of northeast including Karamoja to about 1500 mm in parts of the north, and over 2000 mm in eastern and western parts (ICPAC and WFP 2018). Most of the country's land area is occupied by the 'cattle corridor' which stretches from Karamoja region in the northeast, through the central to the southwest part of the country. The area is defined by semi-arid and dry sub-humid conditions and has experienced a higher frequency of dry spells and droughts (IGAD 2020d). Rainfall variability is highest in the Karamoja region. Overall, vegetation conditions for agricultural production are advantageous except for the northeastern parts, including Karamoja (ICPAC and WFP 2018).

Figure 71: Mean annual rainfall in Uganda (1981–2010). Figure 72: Coefficient of variation for March–June seasonal rainfall in Uganda (1981–2010).



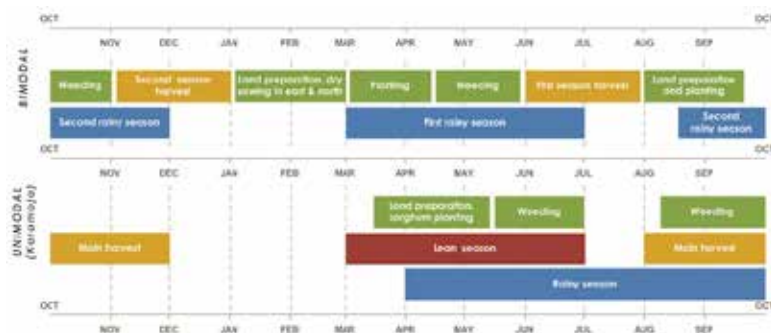
Source: ICPAC and WFP 2018.



Source: ICPAC and WFP 2018.

Uganda experiences both unimodal and bimodal rainfall seasons. In bimodal areas of the country, the first rains are from April to July and the second rains are from October to December. However, in Karamoja, which is the main pastoral livestock region, there is only one rainy season (unimodal) from April to September (see Figure 73).

Figure 73: Typical agricultural and climatic season calendar in Uganda.



Source: FEWS NET 2020b.

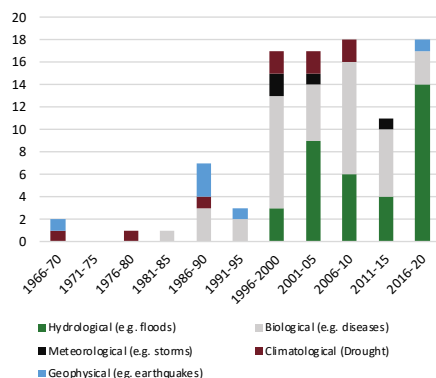
Frequency and severity of natural disasters

Uganda is at risk from several natural hazards. The country ranks 58th in the WorldRiskIndex score, which measures exposure (medium) and vulnerability (very high) to natural hazards (BEH and IFHV 2020). Uganda further ranks 166th out of 181 countries on the ND-GAIN Exposure Ranking in 2018, which measured the degree to which a system is exposed to significant climate change from a biophysical perspective (ND-GAIN 2020).

Experienced hazards types include epidemics, droughts and famine, floods, landslides, earthquakes and hailstorms.

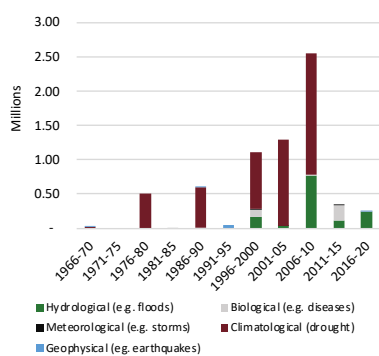
Floods and flash floods are becoming more common in many areas, including the central, eastern, and the Teso regions. These often coincide with increased rainfall spells including from El Niño events. Drought is a major climate risk, especially in the northeastern part of the country (ICPAC and WFP 2018).

Figure 74: Number of events by disaster type in Uganda (1966–2020).



Source: EM-DAT 2020.

Figure 75: Number of affected people by disaster type in Uganda (1966–2020).



Source: EM-DAT 2020.

Impact of droughts and other perils on livestock and the pastoral sector

Climatic risks have the biggest effect on the pastoral sector due to inadequate moisture for pasture development and restricted access to water needed for livestock feed.

Droughts tend to occur from August to November in the cattle corridor. Such events lead to water scarcity, which sometimes results in conflicts among pastoralists competing over water and pasture for their livestock. Variations in climatic conditions have implications for vegetation condition, which is critical for pastoral and agro-pastoral livestock production that relies on natural vegetation for pastures. Karamoja has historically been the most affected region. The impacts of droughts are numerous, including the loss of human and livestock through starvation. It can lead to increased water and pasture shortage, crop failure, increased malnutrition and abnormal livestock out-migration. Erratic rainfall-induced flash floods can also lead to livestock deaths. Livestock producers affected by climatic risk increasingly migrate to other regions during the dry seasons (ICPAC and WFP 2018).

Impact on food security and overall well-being

Uganda has experienced several major droughts that put livelihoods and food security at risk. During the drought in 1993/94, over 1.8 million people faced a lack of food, water and inadequate pasture. Another drought, which occurred in 1998/99, affected over 3.5 million people. In addition to food shortages, large numbers of livestock had deteriorated

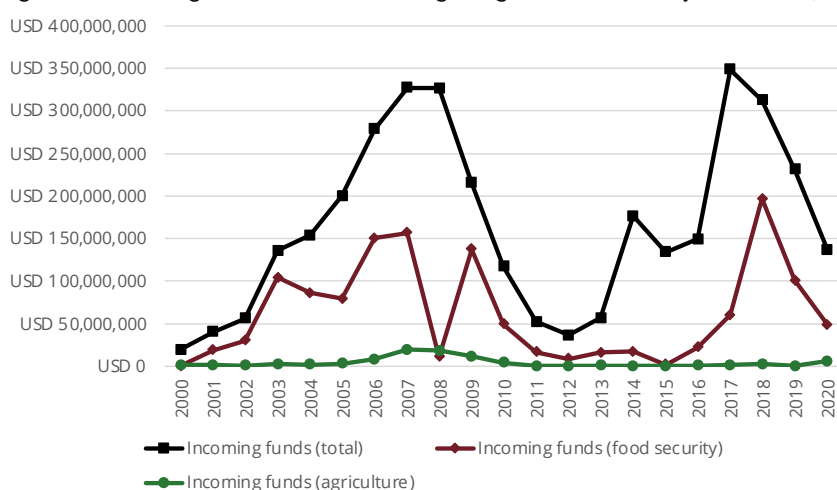
in physical conditions or died. Other major drought events occurred in 2006, 2008, 2009, 2010, 2011 and 2016. The last drought led to severe crop losses and decreased pasture areas and water, putting about 10.9 million people into acute food insecurity. The most-affected communities were located in the arid and semi-arid areas of the country (IGAD 2020d).

The impact of the COVID-19 pandemic in 2020 particularly affected the food security of livestock-dependent households.

The income of households that rely on livestock and milk sales remain below average, as sales were limited by localized quarantine measures and market closures to limit the spread of COVID-19 (FEWS NET 2020b). By 5 October 2020, the country had conducted 480,037 tests, confirming 8,129 cases, of which 3,794 were still active and 4,260 had recovered. Seventy-five people had died from the virus (IGAD and WHO 2020).

Humanitarian assistance

Figure 76: Incoming international aid funding to Uganda as tracked by UN OCHA (2000–2020).



Source: UN OCHA FTS 2020

*According to the UN OCHA database, the drop in incoming food security funding in 2008 is explained by WFP making a USD 137 million internal transfer (within Uganda) to pay for food security.

III. Pastoralist development programs and existing drought risk financing initiatives

Table 59: Government of Uganda programs focusing on the pastoralist and livestock sector

Title	Description
Office of Prime Minister (Karamoja Integrated Development Program)	Medium-term development framework tailored to address the unique context and development challenges in the Karamoja region. The overall objective is to contribute towards human security and promote conditions for recovery and development in Karamoja (2015–2020, USD 24 million).
Ministry of Agriculture (Market-Oriented and Environmentally Sustainable Beef Meat Industry in Uganda)	Holistic value chain approach in the targeted geographical areas to leverage an increase in the overall performance (in terms of production volume, quality, value addition, increased employment and environmental sustainability) of the Ugandan meat value-chain
Ministry of Agriculture (The Goat Export Project)	Make available improved indigenous and exotic (Savannah) goat germplasm to farmers in the project area which will serve as a springboard for establishing a pilot goat export zone in the country.

Source: Ministry of Agriculture, Animal Industry and Fisheries 2020.

Table 60: Donor projects focused on the enhancement of the pastoralist and livestock sector in Uganda.

Organization	Project title	Cost/contribution	Duration
World Bank	Emergency Locust Response Program (multiple recipient countries)	USD 48 million (for Uganda)	2020–2023
World Bank	Regional Pastoral Livelihoods Resilience Project (multiple recipient countries)	USD 40 million (for Uganda)	2014–2021
IFAD	Project for Financial Inclusion in Rural Areas	Total: USD 36.39 million IFAD: USD 29.96 million	2013–2021
UNDP	Community Resilience to Climate Change and Disaster Risks in Uganda	USD 23 million	2016–2020
UK FCDO	Financial Service Inclusion Program	USD 18.4 million	2012–2020
FAO	Integrating climate resilience into agricultural and pastoral production in Uganda through a Farmer/agro-pastoralist field school approach	USD 6.9 million	2019–2024
FAO	Fostering Sustainability and Resilience for Food Security in Karamoja Sub Region	USD 3.6 million	2017–2022

Existing drought risk financing initiatives

The Government of Uganda has started to explore drought risk financing instruments and has expressed interest in exploring further ones. Key risk financing instruments of the Government of Uganda include the following (WBG 2019b).

- **Office of the Prime Minister, Department in Charge of Relief, Disaster Preparedness and Management.** This department is the key institution in the Government of Uganda coordinating all disaster relief efforts in the country. It has no dedicated fund to provide any potential relief from; instead it relies on a budget that can vary from year to year.
- **Scalable Safety Net – Third Northern Ugandan Social Action Fund.** The Office of the Prime Minister, supported by the World Bank, is implementing the Third Northern Ugandan Social Action Fund. The five-year program provides temporary labour-intensive public works to poor households, as well as grants to promote income-generating activities. In the Karamoja region, the labour-intensive public works component is scalable (the ‘disaster risk financing component’) and additional beneficiary households can be added rapidly in the event of a major drought. Currently, 84,000 households in the Karamoja region are being targeted, for which USD 10 million have been set aside. Since inception in 2016, the mechanism has been activated multiple times (**Maier and Poulter 2018**).
- **Agricultural insurance.** In 2016, the Government of Uganda launched the Uganda Agricultural Insurance Scheme (UAIS), which is targeted both at crop and at livestock producers (see Section IV). The program aims both to support the resilience of agricultural producers and to de-risk the agriculture sector in general in order to attract greater finance extended to the sector. Products are being underwritten by a consortium of 11 Ugandan insurers and are distributed by seven participating rural banks.
- **Further interest.** The Government of Uganda has expressed its interest in IBLI, both at IGAD regional conferences on livestock insurance and through a recent letter to the World Bank, particularly in receiving technical assistance to design and implement a modified macro-level IBLI approach building on the Kenyan and Ethiopian models.

IV. Review of national livestock insurance market development

Insurance legal and regulatory framework

Insurance companies in Uganda operate under the terms and conditions of the Insurance Act 2017 (Act 6 of 2017), which was brought into force on 30 March 2018. The insurance market is supervised and regulated by the Insurance Regulatory Authority, an autonomous agency under the Ministry of Finance, Planning and Economic Development, which is tasked with licensing of insurance companies, reinsurance companies, health membership organization companies and their intermediaries, loss adjusters and assessors, risk inspectors and valuers. Other functions include inspecting and reviewing companies operating in the insurance market, operating a complaints bureau, approving policy and proposal form texts, approving minimum premium and maximum commission rates, and advising the Government of Uganda on insurance protection and security of national assets and properties. The Insurance Regulatory Authority is funded by a 1.5% compulsory levy on insurers' gross written premiums (AXCO 2020c).

Status of non-life insurance market

In 2017, the total gross written premium amounted to Ugandan shilling (UGX) 729 billion (USD 202 million). The non-life insurance market accounted for the greater share of total market premium or UGX 570 billion (USD 152 million). The non-life insurance industry has shown steady growth in recent years, with growth of 12.7% (AXCO 2020d).

The number of licensed insurers operating in the Ugandan market in 2017 was 29; of these, 9 were life companies, 1 was a microinsurer and the remaining 19 were non-life companies. There are no state insurers in Uganda; all are private limited companies. There is one reinsurer, the Uganda Reinsurance Company Limited (Uganda Re). In 2017 the five largest non-life insurers by premium income were Jubilee, UAP-Old Mutual, Britam, Lion and Sanlam, with a combined market share of 68% of total non-life premiums (AXCO 2020d).

Insurance market penetration is very low in Uganda, equivalent to 0.77% of GDP and only USD 4.71 per capita in 2017. The only East African country with a lower insurance penetration rate in 2017 was Tanzania, at 0.64% of GDP; insurance penetration was considerably higher in Kenya (2.64% of GDP, with expenditure of USD 40.7 per capita). Reasons for the very low insurance penetration in Uganda include the fact that only 1 million people are in salaried employment, and that most people are not aware of insurance as a concept. The low penetration rate may change, however, with the development of microinsurance and bancassurance (AXCO 2020d).

The most important class of non-life insurance in 2017 was personal accident and health care (26.7% share of non-life premium), followed by motor (25.5%), and property (19.0%). Agricultural insurance is included under miscellaneous insurance (8.9% share) (AXCO 2020d).

In 2017, the total non-life premium ceded was UGX 209.38 billion (USD 6.46 million), representing 41.28% of 2017 gross written premium income, little changed from 41.12% in 2016. Uganda operates compulsory cessions to Uganda Re: 15% of all reinsurance cessions (treaty and facultative, life and non-life) must be offered to the company. This is in addition to the existing compulsory cessions that must be offered to African Reinsurance Corporation (Africa Re) and Preferential Trade Area Reinsurance Company (ZEP-RE) of 5% and 10%, respectively (AXCO 2020d).

Agriculture and livestock insurance availability

Agricultural insurance in Uganda is a relatively new class of business and has less than 10 years of operational experience. During this time there have been two major agricultural insurance initiatives: (i) the private-sector implemented Kungula Agrinsurance Scheme, from 2013–15, a coinsurance pool scheme established by eight private commercial companies, which failed to achieve sufficient demand and scale and was subsequently terminated; and (ii) UAIS, which is a public-private arrangement launched in July 2016, with major financial support from the Government of Uganda in the form of premium subsidies and also subsidies for farmer awareness and training.

Under UAIS, a wide range of indemnity-based and index-based crop insurance products are currently offered, but in the case of livestock (dairy and beef cattle and pigs), poultry and aquaculture (fish farming), all policies are traditional indemnity-based covers. Currently, UAIS does not offer any micro-level IBLI or macro-level IBLI policies to protect Ugandan herders/pastoralists against drought. To date, the most important programs purchased by farmers include multiple peril crop insurance and a satellite drought weather index insurance policy. Conversely, very few indemnity-based livestock insurance policies have been sold.

Table 61: Availability of agricultural insurance (indemnity-based and index-based) in Uganda.

Crop insurance products available					
Indemnity-based	Index-based	Weather index insurance	Area yield index insurance	Greenhouse	Forestry
Low uptake	Low uptake	Low uptake	Low uptake	Low uptake	n.a.
Livestock Insurance Products Available					
Indemnity-based	Index-based	Micro-level IBLI	Meso- & macro-level IBLI	Aquaculture	Poultry
Low uptake	R & D*	n.a.	n.a.	Low uptake	Low uptake

Source: Authors.

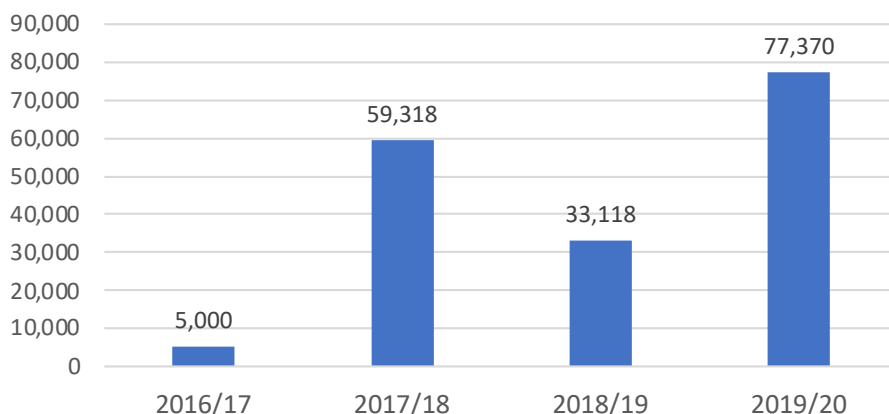
UAIS is underwritten by an agricultural insurance consortium under a coinsurance agreement among 11 leading non-life insurance companies, led by Sanlam. The agricultural insurance consortium co-insurers fund an agro-consortium secretariat to underwrite and manage UAIS on their collective behalf.

The Government of Uganda is very committed to promoting adoption of agricultural insurance by farmers and livestock producers and is financing premium subsidies of UGX 5 billion (USD 1.33 million) in 2016/17 and in 2017/18 and in principle up to UGX 10 billion per year for the four subsequent years up to 2020/21 to make cover more affordable to farmers and to assist uptake and penetration of crop and livestock insurance in Uganda. The government's priority is to help small-scale farmers and livestock producers access insurance, and it has agreed to the following premium subsidy levels for each category of farmer.

- Large farmers: 30% premium subsidy
- Small farmers: 50% premium subsidy
- Farmers in high-risk regions: up to 80% premium subsidy (high-risk and disaster-prone areas include Kasese, Arua, Isingiro, Ngora, and Mount Elgon region)

UAIS has now completed four years of operations (2016/17 to 2019/20) and has achieved some significant milestones over this period, including sensitization of more than 1.5 million farmers and cumulative sales in its first four years of operations of 174,806 policies by 31 December 2019.

Figure 77: Number of farmers insured by Uganda Agricultural Insurance Scheme (2019).



Source: Agricultural Insurance Consortium 2020.

Over the four-year period, UAIS has achieved very favourable underwriting results. The total cumulative sum insured at 31 December 2019 was UGX 922 billion (USD 245 million), total written premium was UGX 26.7 billion (USD 7.1 million) and total cumulative claims were UGX 5.5 billion (USD 1.5 million). According to the Agricultural Insurance Consortium's figures the underwriting performance has been extremely favourable to underwriters over the first three and a half years of the program, with a loss ratio at 31 December 2019 of only 21%, which is exceptionally low for an agricultural insurance scheme of this nature that insures catastrophic perils of drought and flood.

Table 62: Uganda Agricultural Insurance Scheme cumulative underwriting results (1 July 2016 to 31 December 2019).

Year	Number Insured Farmers / Livestock Producers	Total Sum Insured (UGX Million)	Total Premium (UGX Million)	Total claims (UGX Million)	Average premium rate (%)	Loss Ratio (%)
2016-18	64,318	365,300	8,573	4,009	2.3%	46.8%
30-Jun-19	97,436	515,113	15,832	4,755	3.1%	30.0%
31-Dec-19	174,806	921,959	26,678	5,482	2.9%	20.5%

Source: Agricultural Insurance Consortium 2020.

Issues relating to low sales of livestock policies

Over the past four years the standard indemnity-based aquaculture, livestock and poultry policies marketed by UAIS have only achieved 109 policy sales to medium and very large commercial enterprises. This suggests a need for UAIS stakeholders to completely redraw their livestock insurance strategy and the products that are offered to small-scale livestock and poultry producers in Uganda. In addition, the Agricultural Insurance Consortium secretariat may wish to study opportunities to introduce micro-level IBLI in drought-prone pastoral regions of Uganda, which ILRI has pioneered in Kenya and Ethiopia for the past decade (World Bank 2019a).

Interest from public and private stakeholders

In Uganda, the government has for a number of years actively been exploring options for introducing satellite pasture drought IBLI both as a modified macro-level livelihoods protection cover and possibly in the future as a micro-level retail IBLI product. At the request of the Government of Uganda, between 2018 and 2019 the World Bank conducted a pre-feasibility assessment of developing a large-scale satellite pasture drought index insurance cover for pastoralists in the livestock corridor and Karamoja region and presented indicative budgets for the initial five years' implementation. The program is designed to reach 100,000 small-scale pastoralists by year 5, costing USD 27.6 million (World Bank 2019a).

The Government of Uganda has subsequently signalled its strong interest in developing such a modified macro-IBLI cover and in 2020 the Ministry of Agriculture, Animal Industry and Fisheries presented costed proposals to parliament for approval. The COVID-19 lockdown means that decisions are currently on hold. If, however, the IBLI proposals are approved, the Agricultural Insurance Consortium-UAIS will need technical assistance to design and implement this new program.

V. Operational elements for potential IBLI implementation

Financial inclusion

Table 63: Financial inclusion data for whole population in Uganda (2017).

Financial inclusion data for Uganda's population (% of population; age 15+)		
	Total	Rural
Financial institution account	59.2	58.2
Borrowed any money in the past year	66.1	66.2
Borrowed from a financial institution or used a credit card	14.7	14.3
Borrowed from a savings club	22.2	22.7
Coming up with emergency funds: not possible	55.1	55.4
Credit card ownership	2.3	2.4
Financial institution account	32.8	31.7
Made or received digital payments in the past year	54.7	54.1
Main source of emergency funds: sale of assets (% able to raise funds)	14.8	15.4
Mobile money account	50.6	50.1
No deposit and no withdrawal from an account in the past year	3.8	3.3
Received government transfers in the past year	9.7	9.8

Source: World Bank 2020f.

Financial inclusion is progressing in Uganda, with mobile banking playing a major role. As per a 2017 survey, 63% of Ugandans accessed financial services in 2016/17, up from only 55% in 2015/16. Forty-three per cent of Ugandans had a registered mobile banking account. This is the major driver for financial inclusion in Uganda – 94% of those financially included owned a mobile banking account. However, there are still strong limitations with regards to mobile access – only 54% of adults owned a mobile phone in 2017 (Financial Inclusion Insights 2018).

However, financial inclusion in the Karamoja region, the main pastoral region, is still extremely low. Only 20% of adults in Karamoja have bank accounts. Indeed, the number of banked adults in the Karamoja region is so small that no banked respondents could be identified during the 2018 Financial Sector Deepening FinScope Survey in the area (FSD 2019). A USAID-funded 2017 rapid review of financial services in the Karamoja region found that Centenary Bank, the largest financial inclusion bank in Uganda, had had branches in Moroto and Kotido since 2013 and serviced 17,000 customers in Karamoja, all equipped with mobile money accounts; PostBank was then expected to open a branch in the area and was expected to take a financial inclusion approach; the microfinance institution BRAC was operating nine branches in Karamoja. The review also showed that there were more than 50 SACCOs in Karamoja, many of which were, however, dormant or closed, and that there were more than 5,000 village savings and loan associations in Karamoja (Seibel 2017).








Beneficiary registries





Table 64: Key government and donor programs with pastoralist beneficiary registries in Uganda.

Government programs	No. of pastoralist beneficiaries
Third Northern Ugandan Social Action Fund	84,000 households
Donor programs	No. of pastoralist beneficiaries
WFP SCOPE	n.a. (no information)

VI. Summary: Preliminary operational feasibility assessment of IBLI in Uganda through a regional IGAD IBLI initiative

Table 65: Preliminary assessment of country readiness for IBLI across key operational elements in Uganda.

	Status	Comments
Importance of pastoral livestock for economy		While the livestock sector contributes only 5.2% of GDP, up to 23% of the population is constituted by pastoralists. Pastoralism is very important in the Karamoja region in northeastern Uganda, which produces approximately 20% of Uganda's livestock.
Impact of drought on livestock		Drought impacts on livestock and pastoralists are well documented, particularly in the Karamoja region in the far north east of the country. There, droughts are recurring frequently and have devastating impacts on the livelihoods of pastoralists. They are the poorest segment of the population and are often thrown into food security by severe droughts.
Pastoralist demand for livestock insurance		Baseline demand studies prior to the launch of UAIS suggest there is considerable demand for crop and livestock insurance by Uganda's small-scale farmers and herders. While no IBLI program has been piloted in Uganda so far, traditional indemnity-based livestock insurance is being offered through UAIS. This is not offered to pastoralists and to date UAIS has targeted large commercial livestock and poultry and aquaculture enterprises as the UAIS insurers lack rural distribution networks linked to small-scale livestock herders.
Effective distribution channels for micro-level IBLI		As livestock insurance is already being rolled out in different parts of Uganda, insurers have started investing in distribution networks. Mobile money is gaining traction rapidly across the country, spearheaded by MTN and Airtel, although coverage is still low in the Karamoja region.
Existing pastoralist beneficiary registries		The Third Northern Ugandan Social Action Fund program is providing social protection services targeting a total of 599,100 households over five years. The scalability component to the program is targeting 84,000 vulnerable households in the Karamoja region, many of whom pastoralists. In addition, the WFP SCOPE database is in place in Uganda.
Pastoralist financial literacy		Financial literacy among pastoralists is expected to be very low. In pastoral areas, there is little experience with financial services and no experience with insurance. Significant investments would have to be made in capacity building and awareness creation of any IBLI products.
Legal and regulatory insurance environment		While no specific IBLI programs exist at this stage, the Government of Uganda, through UAIS, enables and promotes the sale of index-based insurance products. There seem to be no concerns at this stage for IBLI from a legal/regulatory perspective.

	Status	Comments
Insurance market development		The Ugandan insurance market is moderately developed, with a total market premium of more than USD 200 million in 2018 and 11 insurers involved in agricultural insurance through UAIS. Overall insurance penetration is still low, however, at less than 1%.
Interest from insurers in IBLI		With 11 insurers working on agricultural insurance, there is a lively interest in the field. Livestock insurance has been rolled out, albeit not yet through an index-based approach.
Finance available for premiums		The Government of Uganda currently supports premium subsidies on UAIS. In 2020 government had officially requested World Bank technical assistance to support the roll-out of a national IBLI scheme. It is understood that in 2020 the Ministry of Livestock prepared a bill and financial budget to support the introduction of subsidized macro-level IBLI in the livestock corridor and including Karamoja, but that passage of this bill through parliament is currently being held up because of the COVID-19 outbreak. ⁶⁸
Interest from government stakeholders in IBLI		Government stakeholders have shown a keen interest in IBLI in Uganda, both through participation in regional IGAD conferences on IBLI and communication with the World Bank. The Government of Uganda, more generally, has also shown interest in the drought risk financing agenda, experimenting with different instruments and approaches.

⁶⁸ Personal communication with the World Bank Nairobi.

References

- AfDB, AUC and UNECA (African Development Bank, African Union Commission and the United Nations Economic Commission for Africa). 2019. *The African Statistical Yearbook 2019*. <https://www.afdb.org/en/documents/document/the-african-statistical-yearbook-2019-109564>.
- Agricultural Insurance Consortium. 2020. Uganda Agricultural Insurance Scheme (UAIS): Progress Report on the UAIS as at 31st December 2019. Unpublished.
- Ali, A.E.S. 2020. *Enhancing financial inclusion through Islamic finance, Volume II*. Springer Nature.
- Altai Consulting and the World Bank. 2017. *Mobile money in Somalia: Household survey and market analysis*. https://www.mfw4a.org/sites/default/files/resources/Mobile_Money_in_Somalia_-_WBank.pdf.
- AMISOM (African Union Mission in Somalia). 2015. *Somalia's first insurance company thrives as economy reinvigorates*. AMISOM, 3 September 2015. AMISOM News. <https://amisom-au.org/2015/09/somalias-first-insurance-company-thrives-as-economy-reinvigorates/>.
- Ammar, A. Ahmed, E.M. and McMillan, D. 2016. Factors influencing Sudanese microfinance intention to adopt mobile banking. *Cogent Business & Management*. <https://doi.org/10.1080/23311975.2016.1154257>.
- AXCO. 2020a. Ethiopia: Non-life (Property & Casualty). Insurance market report.
- . 2020b. Kenya: Non-life (Property & Casualty). Insurance market report.
- . 2020c. Sudan: Non-life (Property & Casualty). Insurance market report.
- . 2020d. Uganda: Non-life (Property & Casualty). Insurance market report
- Babikir, O., Muchina, S., Sebsibe, A., Bika, A., Kwai, A., Agosa, C., Obhai, G. and Wakhusama, S. 2015. *Agricultural systems in IGAD region – A socio-economic review*. https://pdfs.semanticscholar.org/864e/63e2c13cb717ca6d6c652038b12be09c4118.pdf?_ga=2.177197667.779070619.1601027662-1546373348.1601027662.
- Bankable Frontier Associates. 2013. *Review of FSD's Index-Based Weather Insurance Initiatives*. June 2013. Nairobi: FSD Kenya. <https://www.fsdkenya.org/publications/review-of-fsds-index-based-weather-insurance-initiatives-full-report/>
- BEH (Bündnis Entwicklung Hilft) and IFHV (Institute for International Law of Peace and Armed Conflict). 2020. *WorldRiskReport*. BEH and IFHV. <https://weltrisikobericht.de/english/>.
- C4ED (Center for Evaluation and Development). 2018. *Kenya Livestock Insurance Programme Evaluation report*. <https://c4ed.org/portfolio/kenya-livestock-insurance-programme/>
- CAADP (Comprehensive Africa Agriculture Development Programme). 2013. *East and Central Africa regional CAADP nutrition program development workshop: Nutrition country report Eritrea*. http://www.fao.org/fileadmin/user_upload/wa_workshop/ECAfrica-caadp/Eritrea_NCP_190213.pdf.
- Cabot Venton, C., Fitzgibbon, C., Shiterek, T., Coulter, L. and Dooley, O. 2012. *The economics of early response and disaster resilience: lessons from Kenya and Ethiopia*. London: UK Department for International Development. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/67330/Econ-Ear-Rec-Res-Full-Report_20.pdf
- Calhoun, N., Cabot Venton, C. Clarey, T. and Dalmar, A. 2020. *Mapping of financial services for SHGs and barriers for women to access microfinance services in Somalia*. Concern Worldwide. <https://www.concernusa.org/wp-content/uploads/2020/08/Concern-Worldwide-Somalia-Mapping-Financial-Services-Report-May-2020.pdf>.

- Catley, A., Leland, T. and Bishop, S. 2005. *Policies, practices and participation in complex emergencies: the case of livestock interventions in South Sudan. A case study for the Agriculture and Development Economics Division of the Food and Agriculture Organization*. Tufts University, Feinstein International Center. <https://fic.tufts.edu/publication-item/policies-practice-and-participation-in-complex-emergencies-the-case-of-livestock-interventions-in-south-sudan/>
- Cecchi, G., Wint, W., Shaw, A., Marletta, A., Mattioli, R. and Robinson, T. 2010. *Geographic distribution and environmental characterization of livestock production systems in eastern Africa*. FAO. <http://www.fao.org/3/a-ak791e.pdf>.
- Crane, T., Marshall, K., Ahmed, M.A., Awaleh, I.A., Wane, A. et al. 2018. *Understanding climate change adaptation dynamics in central Somaliland*. International Livestock Research Institute. <https://www.ilri.org/publications/understanding-climate-change-adaptation-dynamics-central-somaliland>.
- Debelo, A.R. 2019. Living with conflict: Borana's resilience in southern Ethiopia. *African Conflict and Peacebuilding Review* 9(2): 75–97.
- Deloitte. 2020. *Economic impact of the COVID-19 pandemic on east African economies: Summary of government intervention measures and Deloitte insights*. https://www2.deloitte.com/content/dam/Deloitte/tz/Documents/finance/Economic_Impact_Covid-19_Pandemic_on_EastAfrican_Economies.pdf.
- DFID (United Kingdom Department for International Development). 2018. *Livestock and livelihoods in South Sudan*. UK Department for International Development. <https://assets.publishing.service.gov.uk/media/5c6ebda7ed915d4a33065327/Livestock.pdf>.
- Drechsler, M., Coll-Black, S., Tatin-Jaleran, C. and Clarke, D. 2017. *Quantifying costs of drought risk in Ethiopia*. World Bank: Washington, DC. <https://doi.org/10.1596/34192>.
- EM-DAT. 2020. *The international disasters database, 2020*. EM-DAT. <https://www.emdat.be/>.
- FAO (Food and Agricultural Organization of the United Nations). 2018. *Resilience analysis in Karamoja*. FAO. <http://www.fao.org/3/i8365en/i8365EN.pdf>.
- . 2020. *Earth observation: Country indicators Somalia*. 2020. FAO. <http://www.fao.org/giews/earthobservation/country/index.jsp?code=SOM>.
- FAO and WBG. 2018. *Rebuilding resilient and sustainable agriculture in Somalia*. FAO and WBG. <http://documents1.worldbank.org/curated/en/781281522164647812/pdf/124651-REVISED-Somalia-CEM-Agriculture-Report-Main-Report-Revised-July-2018.pdf>.
- FAOSTAT. 2020a. *FAOSTAT country profile: Ethiopia*. http://faostat.fao.org/static/syb/syb_238.pdf.
- . 2020b. *FAOSTAT country profile: Uganda*. http://faostat.fao.org/static/syb/syb_226.pdf.
- . 2020c. *FAOSTAT data, 2020*. <http://www.fao.org/faostat/en/#home>.
- FEWS NET (Famine Early Warning Systems Network). 2020a. *Ethiopia Food Security Outlook: Tue, 2020-10-06 to Thu, 2021-05-06*. Famine Early Warning Systems Network. 2020. <https://fews.net/east-africa/ethiopia/food-security-outlook/october-2020>.
- . 2020b. *FEWS NET website*. Famine Early Warning Systems Network. 2020. <https://fews.net/>.
- . 2020c. *Kenya*. Famine Early Warning Systems Network. 2020. <https://fews.net/east-africa/kenya>.
- . 2020d. *South Sudan*. Famine Early Warning Systems Network. 2020. <https://fews.net/east-africa/south-sudan>.
- . 2020e. *Sudan Food Security Outlook: Wed, 2020-06-17 to Sun, 2021-01-17*. Famine Early Warning Systems Network. 2020. <https://fews.net/east-africa/sudan/food-security-outlook/june-2020>.
- . 2020f. *Somalia Food Security Outlook: Tue, 2020-06-30 to Sun, 2021-01-31*. Famine Early Warning Systems Network. September 2020. <https://fews.net/east-africa/somalia/food-security-outlook/june-2020>.
- Financial Inclusion Insights. 2018. *Uganda: Wave 5 report*. Fifth Annual FII Tracker Survey, Conducted July-August 2017. http://finclusion.org/uploads/file/uganda-wave-5-report_final.pdf.
- FISO Takaful Insurance. 2020. *First Somali takaful & re-takaful, 2020*. <https://www.fisoinsurance.com/>.
- FSD (Financial Sector Deepening). 2019. *Report on banking and the status of financial inclusion in Uganda: Insights from FinScope 2018 survey*. <https://fsduganda.or.ug/wp-content/uploads/2019/05/FSDU-Thematic-Report-on-Banking.pdf>.

- FSIN (Food Security Information Network). 2019. *2019 global report on food crises: Regional focus on the Intergovernmental Authority on Development (IGAD) member states*. Food Security Information Network. <http://www.fao.org/resilience/resources/resources-detail/en/c/1206841/>.
- FSNAU (Food Security and Nutrition Analysis Unit). 2020. *Climate overview: Somalia*. Food Security and Nutrition Analysis Unit Somalia. <https://www.fsnau.org/analytical-approach/methodology/climate>.
- FSNAU and FAO. 2013. *Study suggests 258,000 Somalis died due to severe food insecurity and famine*. https://fews.net/sites/default/files/documents/reports/FSNAU_FEWSNET_PR_050113_FINAL.pdf.
- Geleta, K. 2017. *Inclusive financial services in pastoral areas of southern Oromia, Afar and Ethiopian Somali regions: Opportunities, implementation challenges and prospects*. https://www.researchgate.net/publication/322112959_inclusive_financial_services_in_pastoral_areas_of_southern_omoria_afar_and_ethiopian_somali_regions_opportunities_implementation_challenges_and_prospects.
- Gesare, A., Sheahan, M., Mude, A. and Banerjee, R. 2015. *Determinants of pastoral women's demand for credit; evidence from Marsabit in northern Kenya*. Working Paper. Nairobi: ILRI. https://adrasibli.files.wordpress.com/2015/06/2-anne-ibli-adras-gender-11_6_2015.pptx.
- GFDRR (Global Facility for Disaster Reduction and Recovery). 2015. *Country profile: Djibouti*. <file:///C:/Users/Simeon/AppData/Local/Temp/country-profile-2016-djibouti.pdf>.
- Goobjoog News. 2019. *Somalia opens first insurance company in over 20 years*. <http://goobjoog.com/english/somalia-opens-first-insurance-company-in-over-20-years/>.
- Government of Eritrea. 2017. *Saving and micro credit program in NRS Region*. Eritrea Ministry of Information. <https://shabait.com/2017/12/02/saving-and-micro-credit-program-in-nrs-region/>.
- Government of Kenya. 2018. *Disaster risk financing strategy 2018–2022*. Nairobi: National Treasury and Ministry of Planning.
- . 2019. *Stakeholder engagement workshop on disaster risk financing and official dissemination of Kenya's disaster risk financing strategy*. Speech by Julius Muia, PhD, EBS, Principal Secretary, the National Treasury. Nairobi.
- . 2020. *Background rangeland model; presentation at ARC IGAD multi-stakeholder sensitization meeting for the IGAD regional economic community, 16 September 2020*. National Drought Management Authority.
- Guthiga, P.M., Karugia, J.T., Massawe, S.C., Ogada, M., Mugweru, L., Ongudi, S., Mbo'o-Tchouawou, M. and Mulei, M. 2017. *Mapping livestock value chains in the IGAD region*. Report. The Technical Centre for Agricultural and Rural Cooperation. <https://cgspace.cgiar.org/handle/10568/89789>.
- Haji, H. and Shiridon, M.F. 2020. *Somalia's agriculture and livestock sectors: A baseline study and a human capital development strategy*. Heritage Institute for Policy Studies and City University of Mogadishu. <https://reliefweb.int/report/somalia/somalia-s-agriculture-and-livestock-sectors-baseline-study-and-human-capital>.
- Hillier, D. 2017. *From early warning to early action in Somalia: What can we learn to support early action to mitigate humanitarian crises?* Oxfam. <https://doi.org/10.21201/2017.0834>.
- Hussein, M.O. 2020. *An assessment of the impact of the drought during the period 2011–2018 on livestock sector/economy and the effects of IDDRSI investments in abating drought impacts in selected IGAD member states (Ethiopia, Kenya, Sudan)*. <https://www.fcgi.fi/en/projects/assessment-impact-drought-during-period-2011-2018-livestock-sectoreconomy-and-effects-1>.
- ICPAC (IGAD Centre for Pastoral Areas and Livestock Development) and WFP. 2018. *Greater Horn of Africa climate and food security atlas*. Intergovernmental Authority on Development. <https://www.icpac.net/publications/greater-horn-africa-climate-and-food-security-atlas/>.
- ICPALD (IGAD Centre for Pastoral Areas and Livestock Development) 2016. *Stock-taking and Gap Analysis Study of Financial Products for Pastoral Areas and Linking Pastoralists to Financial Service Providers*.
- IGAD (Intergovernmental Authority on Development) 2013. *Regional integration support programme (RISP II) continuation*. Inter-Governmental Authority for Development. <https://icpald.org/wp-content/uploads/2016/01/Cross-border-livestock-routes-and-markets-TADs-and-zoonoses-study-7.pdf>.
- . 2016. *IGAD regional animal health certification guidelines*. <https://icpald.org/wp-content/uploads/2016/01/Animal-Health-Certification-Guidelines1.pdf>.
- . 2020a. *IGAD Resilience. Cross-border knowledge sharing*. <https://resilience.igad.int/>

- . 2020b. *South Sudan country programming paper 2019–2024: Consolidating the path to resilience and sustainability*. IGAD Resilience. <https://resilience.igad.int/resource/south-sudan-country-programming-paper-2019-2024/>.
- . 2020c. *Sudan country programming paper 2019–2024: Consolidating the path to resilience and sustainability*. IGAD Resilience. <https://resilience.igad.int/resource/sudan-country-programming-paper-2019-2024/>.
- . 2020d. *Uganda country programming paper 2019–2024: Consolidating the path to resilience and sustainability*. IGAD Resilience. <https://resilience.igad.int/resource/uganda-country-programming-paper-2019-2024/>.
- IGAD and WHO. 2020. *IGAD COVID-19 tracker*. <https://igad.int/coronavirus/igad-covid-19-tracker>.
- International Finance Corporation 2012. *South Sudan: Key findings from the scoping report*. 2012. https://www.ifc.org/wps/wcm/connect/REGION_EXT_Content/Regions/Sub-Saharan+Africa/Advisory+Services/AccessFinance/Partnership_FinancialInclusion/ScopingReport_SouthSudan.
- ILRI. 2013. *Index-based livestock insurance (IBLI) in northern Kenya*. Project document. January 2013 revision. Unpublished.
- IPC (Integrated Food Security Phase Classification). 2020. *IPC global platform: country overview, 2020*. <http://www.ipcinfo.org/>.
- JICA (Japan International Cooperation Agency). 2015. *Livestock*. 2015. https://openjicareport.jica.go.jp/pdf/12233656_02.pdf.
- Kenya News Agency. 2020. *Farmers receive over Sh117 million from the agriculture insurance cover*. <https://www.kenyanews.go.ke/farmers-receive-over-sh117-million-from-the-agriculture-insurance-cover/>.
- Kenya National Bureau of Statistics. 2016. *Kenya: FinAccess household survey*. 2016. https://www.centralbank.go.ke/uploads/financial_inclusion/736331048_FinAccess%20%20Household%202016%20Key%20Results%20Report.pdf.
- Kyuma, R. 2019. *Lessons learnt from implementing index-based livestock insurance – implementers’ views*. Presentation for the index-insurance for livestock in the IGAD region ministerial policy roundtable and technical workshop. ILRI Campus, Addis Ababa, 24-26 June.
- LaGuardia, D. and Poole, L. 2016. *DFID’s internal risk facility: Changing the humanitarian financing landscape for protracted crises?* Humanitarian Outcomes. The Department for International Development. <https://www.humanitarianoutcomes.org/publications/dfid%e2%80%99s-internal-risk-facility-changing-humanitarian-financing-landscape-protracted>.
- Library of Congress. 2005. *Country profile: Eritrea*. <https://www.loc.gov/rr/frd/cs/profiles/Eritrea.pdf>.
- Mahul, O., and C.J. Stutley. 2010a. *Government support to agricultural insurance: Challenges and options for developing countries*. Washington, DC: World Bank Group. <https://openknowledge.worldbank.org/handle/10986/2432>
- Mahul, O., and C.J. Stutley. 2010b. *Government support to agricultural insurance: Challenges and options for developing countries*. Annex E. International experiences with agricultural insurance: Findings from a World Bank survey of 65 countries. The World Bank.
- Ministry of Agriculture, Animal Industry and Fisheries. 2020. Ministry of Agriculture, Animal Industry and Fisheries. <https://www.agriculture.go.ug/>.
- Maher, B. and Poulter, R. 2018. *Better data, better resilience: Lessons in disaster risk finance from Uganda*. Washington, DC: World Bank Group. <https://www.gfdrr.org/en/publication/better-data-better-resilience-lessons-disaster-risk-finance-uganda>.
- Mercy Corps. 2020a. *COVID-19 and livestock market systems: The impact of COVID-19 on livestock-based economies in the Horn of Africa*. <http://www.celep.info/wp-content/uploads/2020/07/2020-MC-HoA-COVID-Impact-Livestock-Mrks-Aug-2020.pdf>.
- . 2020b. *Economic impact of COVID-19 in Somali Region*. <https://www.mercycorps.org/research-resources/economic-impact-covid-19-somali-region>.
- Microcapital. 2019. *NilePay, Zain to Launch Mobile Money Service in South Sudan*. Microcapital: Brief, 26 August 2019. <https://www.microcapital.org/microcapital-brief-nilepay-zain-to-launch-mobile-money-service-in-south-sudan/>.
- Ministry of Livestock, Forestry and Range. 2016. *Federal Republic of Somalia: Veterinary Law Code 2016*. Ministry of Livestock, Forestry and Range. <http://www.fao.org/faolex/results/details/en/c/LEX-FAOC171698/>.

- Ministry of Agriculture. 2020. *Ministry of Agriculture*. Ministry of Agriculture, Livestock, Fisheries and Cooperatives. 2020. <https://www.kilimo.go.ke/>.
- Moehler, D.C. 2008. *The political economy of pro-poor livestock policy in Eritrea*. IGAD Livestock Policy Initiative. https://cgspace.cgiar.org/bitstream/handle/10568/24971/IGAD_LPI_WP_03-08.pdf?sequence=1.
- MoPIED (Ministry of Planning, Investment and Economic Development). 2019. *Somalia National Development Plan 2020 to 2024*. Ministry of Planning, Investment and Economic Development. <https://mop.gov.so/wp-content/uploads/2019/12/NDP-9-2020-2024.pdf>.
- Mugunieri, L.G., Baker, D., Elmi, I.I., Costagli, R., Gulaid, I. and Wanyoike, F.N. 2014. *Enhancing the provision of livestock marketing information in Somaliland*. Report. ILRI. <https://cgspace.cgiar.org/handle/10568/56737>.
- Musa, A.M., Wasonga, O.V. and Mtimet, N. 2020. Factors influencing livestock export in Somaliland's terminal markets. *Pastoralism* 10(1): 1. <https://doi.org/10.1186/s13570-019-0155-7>.
- ND-GAIN (Notre Dame Global Adaptation Initiative). 2020. *ND-GAIN index score country ranking*. Notre Dame Global Adaptation Initiative. 2020. <https://gain.nd.edu/>.
- Nextv Africa. 2019. *Zain and Trinity Technologies introduced mobile money service 'M-Gurush' in South Sudan*. NexTV News Africa. July 26, 2019. <https://nextvafrica.com/zain-and-trinity-technologies-introduced-mobile-money-service-m-gurush-in-south-sudan/>.
- OPHI (Oxford Poverty and Human Development Initiative). 2017. *Somalia country briefing*. Oxford Poverty and Human Development Initiative. www.ophi.org.uk/multidimensional-poverty-index/mpi-country-briefings/.
- . 2020a. *Global MPI country briefing 2020: Ethiopia*. Oxford Poverty and Human Development Initiative. https://ophi.org.uk/wp-content/uploads/CB_ETH_2020.pdf.
- . 2020b. *Global MPI country briefing 2020: South Sudan*. Oxford Poverty and Human Development Initiative (OPHI). https://ophi.org.uk/wp-content/uploads/CB_SSD_2020.pdf.
- . 2020c. *Global MPI country briefing 2020: Sudan*. Oxford Poverty and Human Development Initiative. https://ophi.org.uk/wp-content/uploads/CB_SDN_2020.pdf.
- . 2020d. *Global MPI country briefing 2020: Uganda*. https://ophi.org.uk/wp-content/uploads/CB_UGA_2020.pdf.
- Ouma, C. 2017. *Analysis on pastoralists financial products and models in Kenya*. *International Journal of Innovative Research and Development* 6(8). <https://doi.org/10.24940/ijird/2017/v6/i8/AUG17100>.
- Rena, Ravinder. 2007. Insurance industry in Eritrea: Achievements and challenges. *Osmania Journal of International Business Studies* 2(1): 140–146. https://mpr.ub.uni-muenchen.de/10762/1/Ravi_Problems_and_Prospects_of_Eritrean_Insurance_Industry_April2007.pdf
- Rijal, A., and Hanafi A. 2017. *Climate risk finance for sustainable and climate resilient rain-fed farming and pastoral systems*. United Nations Development Program. November 2017.
- Seibel, H. 2017. *Financial Services in Karamoja: A Rapid Review*. Karamoja Resilience Support Unit. USAID: Uganda, Kampala. https://pdf.usaid.gov/pdf_docs/PA00D5QB.pdf
- Shahidur, R. and Lemma, S. 2011. *Strategic grain reserves in Ethiopia*. International Food Policy Research Institute. <https://www.ifpri.org/publication/strategic-grain-reserves-ethiopia>.
- Somali Resilience Program. 2018. *SomReP Strategy Phase II 2018–2023*. <https://careclimatechange.org/wp-content/uploads/2019/03/SomReP-Strategy-Phase-II.pdf>.
- Somaliland Law. 2020. *Somaliland insurance law*. http://www.somalilandlaw.com/insurance_companies_bill.htm.
- Stark, J. 2011. *Climate change and conflict in Uganda: The cattle corridor and Karamoja*. <https://www.climatelinks.org/resources/climate-change-and-conflict-uganda-cattle-corridor-and-karamoja>.
- Stoppa, A. 2020. *Feasibility of index insurance for livestock in Djibouti*. World Bank Group.
- Stutley, C., Kerer, J., Jacobi, P., Osumba J. and Sina, J. 2013. *Kenya: Situation analysis for a national agricultural insurance policy*. Prepared by the German Agency for International Cooperation. Unpublished.
- Sudan Democracy First Group. 2019. *Insurance sector in Sudan – Islamization and corruption*. <https://democracyfirstgroup.org/wp-content/uploads/2019/10/Insurance-Sector-Report-English.pdf>

- Syngenta 2010. Kilimo Salama (safe agriculture): Micro insurance for farmers in Kenya. Fact sheet. http://www.syngentafoundation.org/__temp/Kilimo_Salama_Fact_sheet_FINAL.pdf
- Thornton, P., Herrero, M., Freeman, A., Mwai, O., Rege, E., Jones, P. and McDermott, J. 2007. *Vulnerability, climate change and livestock – research opportunities and challenges for poverty alleviation*. International Livestock Research Institute (ILRI). https://www.researchgate.net/publication/26520771_Vulnerability_climate_change_and_livestock_-_research_opportunities_and_challenges_for_poverty_alleviation.
- UN OCHA. 2018. *Eritrea: country snapshot*. OCHA. February 15, 2018. <https://www.unocha.org/southern-and-eastern-africa-rosea/eritrea>.
- . 2020. Financial Tracking Service, 2020. <https://fts.unocha.org/>.
- . 2020. *Somalia country preparedness and response plan (CPRP) COVID-19*. <https://reliefweb.int/sites/reliefweb.int/files/resources/CPRP%20Final%20Subow%2C%2026%20April%20%281%29.pdf>.
- UNDP (United Nations Development Programme). 2012. *Environmental impacts risks and opportunities assessment – natural resources management and climate change in South Sudan*. <http://webcache.googleusercontent.com/search?q=cache:AEBjEtkAHCYJ:www.undp.org/content/dam/southsudan/library/Reports/southsudanotherdocuments/EIRO%2520Report-fr-website.pdf+&cd=2&hl=en&ct=clnk&gl=us&client=firefox-b-d>.
- . 2019a. Human Development Indicators: Country Reports. <http://hdr.undp.org/en/countries>.
- . 2019b. *Human Development Report 2019 – Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century*. United National Development Programme. <http://hdr.undp.org/sites/default/files/hdr2019.pdf>.
- UNECA (United Nations Economic Commission for Africa). 2017. *New fringe pastoralism: Conflict and insecurity and development in the Horn of Africa and the Sahel*. <https://repository.uneca.org/bitstream/handle/10855/23727/b11836179.pdf?sequence=3&isAllowed=y>.
- United Nations Population Fund. 2014. *Population estimation survey 2014 for the 18 pre-war regionals of Somalia*. United Nations Population Fund. <https://somalia.unfpa.org/sites/default/files/pub-pdf/Population-Estimation-Survey-of-Somalia-PESS-2013-2014.pdf>.
- WBG (World Bank Group). 2019a. *Somali poverty and vulnerability assessment: Findings from wave 2 of the Somali high frequency survey*. AUS0000407. World Bank Group. <http://documents1.worldbank.org/curated/en/464241565765065128/pdf/Findings-from-Wave-2-of-the-Somali-High-Frequency-Survey.pdf>.
- . 2019b. *Toward scaled-up and sustainable agriculture finance and insurance in Uganda*. Washington, DC: World Bank Group. <https://openknowledge.worldbank.org/handle/10986/32331?show=full>.
- . 2020. *Republique de Djibouti: Options pour renforcer la é silience finançj re face aux catastrophes naturelles*. World Bank Group.
- WBG and ILRI. 2019. *Feasibility of Drought Index-Insurance for Livestock in Somalia*. Unpublished.
- WFP (World Food Programme). 2019. *IOM, WFP conduct first beneficiary data exchange in South Sudan*. World Food Programme. <https://www.wfp.org/news/iom-wfp-conduct-first-beneficiary-data-exchange-south-sudan>.
- World Bank 2015a. *Kenya. Towards a national crop and livestock insurance program: Summary of policy suggestions*. World Bank Group, October 2015.
- World Bank 2015b. *Kenya. Towards a national crop and livestock insurance program: Background report*. World Bank Group, October 2015.
- World Bank. 2018a. *Kenya’s pastoralists protect assets from drought risk with financial protection, 2018*. <https://www.worldbank.org/en/news/feature/2018/11/05/kenyas-pastoralists-protect-assets-from-drought-risk-with-financial-protection>.
- World Bank. 2018b. *Somalia: country partnership framework for the period FY19-FY22*. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail>.
- . 2019. *World Bank Open Data*. 2019. <https://data.worldbank.org/>.
- . 2020a. *Country overview – Eritrea*. <https://www.worldbank.org/en/country/eritrea/overview>.
- . 2020b. *Country overview – Ethiopia*. <https://www.worldbank.org/en/country/ethiopia/overview>.
- . 2020c. *Country overview – South Sudan*. <https://www.worldbank.org/en/country/southsudan/overview>.

- . 2020d. *Country overview – Sudan*. <https://www.worldbank.org/en/country/sudan/overview>.
- . 2020e. *Country overview – Uganda*. <https://www.worldbank.org/en/country/uganda/overview>.
- . 2020f. *Global financial inclusion: DataBank. 2020*. <https://databank.worldbank.org/reports.aspx?source=1228>.
- . 2020g. *Systematic country diagnostic – Kenya*. <http://documents1.worldbank.org/curated/en/531731600090213005/pdf/Kenya-Systematic-Country-Diagnostic.pdf>.
- . 2020h. *The World Bank in Djibouti – Overview*. <https://www.worldbank.org/en/country/djibouti/overview>.
- . 2020i. *Somalia – Data*. World Bank Open Data. 2020. <https://data.worldbank.org/country/somalia>.

Annex A: Livestock organizations in Djibouti

Table 1: Livestock associations.

Name	Location (app)	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
Association DALAL-AFITO D'Obock	Obock, Djibouti	2004	Individuals (20)	Improvement of livelihoods through education support; support pastoral communities through provision of waterpoints, bring individual members together.	Government of Japan, WFP, Action Against Hunger, NEALCO	Forage management through WFP; enhancing members' livelihoods through provision of health facilities and education support.	Export market (Yemen); local market	Goats, sheep, camel, cattle	Mr. Abdalla
Djibouti Agro-pastoral Association	Ambouli, Arta route	2005	Cooperative (37); individuals (327)	Provide support to members in agro-pastoral areas in livestock production, resource mobilization from donors, improvement of livelihoods (provision of water).	FAO, SDC, French cooperation, Ministry of Agriculture, WFP, E.A. Farmers' Federation, China, Japan, IGAD	Capacity building through training, information sharing and experience-sharing within the eastern Africa region.	Local market	Goats (number cannot be ascertained)	Email: ado.okieh@gmail.com , eaaff.org
Association des femmes jardinières (Planters association of women)	Nagad, Djibouti	2015	Individuals (8)	Development and improvement of chicken and goat production.	Directorate of Livestock, Fisheries and Agriculture, FAO, AfDB, Drought Resilience and Sustainable Livelihood Program for the Horn of Africa I and III	Assist farmers in marketing and selling poultry products and goats.	Local market	Chickens (200), goats	Mr. Yonis Adar, yonisadar@yahoo.fr , 253 77812037

Name	Location (app)	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
No. 23	Commune Balbala, cite 55	2003	Individuals (40)		European Union, FAO, UNICEF, Action against Hunger, CEWARN, NEALCO, Ministry of Agriculture	Database creation of livestock producers, consumers and market for dairy farming; capacity building through training on disease surveillance in small ruminants.	N/A	N/A (they are not livestock producers)	paixlait@intnet.dj
La Caravne du Development de Gobaad	Cite Arhiba	2012		It aims to improve the livelihood quality of the population of the Gobaad region by acting on the levers of development such as education, agro-pastoralism and livestock.	FAO, UNDP, Action against Hunger, SOS SAHEL, European Union	Capacity development through training in agriculture and livestock management; providing market access to its members, policy and advocacy.	Local market	Sheep, goats (100)	dadalarho@gmail.com

Source: ICPALD website 2020 (IGAD Centre for Pastoral Areas and Livestock Development).

AFDB = African Development Bank.

Annex B: Pastoralist and livestock organizations Ethiopia

Table 1: Pastoralist organizations.

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Afar Pastoralist Development Association	National/ local			https://apda-ethiopia.org/	afarpda@gmail.com		http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979825/
Aged and Children Pastoralists Association	National/ local			http://www.agedandchildren.org	ali.sh@agedandchildren.org	+251 118602432	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979826/
Community Initiative Facilitation and Assistance	National/ local	1991	To support in the communities of Marsabit County of northern Kenya and southern Ethiopia through support for the initiatives in livestock, environment, peacebuilding and economic diversification.	http://www.cifakenya.co.ke/	ibrasora@yahoo.com	+254 692102115	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979845/
Ethiopia Muslim's Relief and Development Association	National/ local	1994	EMRDA's overall objective is to be a strong integrated development organization in the fight against poverty for better livelihoods, particularly in rural and pastoral areas.	https://www.emrda.org/	emrda@ethionet.et	+251 113482463	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979828/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Ethiopian Pastoralist Research and Development Association	National/ local				eparda@ethionet.et		http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979827/
Friends of Lake Turkana	National/ local	2010	Friends of Lake Turkana is a grassroots organization that works with and on behalf of the communities within the greater Lake Turkana basin to demand their collective social, environmental, economic, cultural and territorial rights.	http://friendsoflaketurkana.org/	afd@ethionet.et		http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979829/
Gayo Pastoral Development Initiative	National/ local	2003	GPDI works with pastoral communities in Oromia Regional States (Ethiopia). The overall goal of GPDI is to improve socio-economic conditions and promote sustainable livelihoods of pastoral communities.	https://gpdi-ethio.org/	gpdi@gpdi-ethio.org	+251 114664375	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979830/
Horn of Africa Voluntary Youth Communities	International		HAVYOOCO's vision is to alleviate poverty through sustainable development.	http://www.havoyoco.org	yohannes2001@yahoo.com	+251 911505428	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979831/
Labata Fantalle Organization	National/ local				labatafantalle@gmail.com	+251 911093985	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979832/
Ogaden Welfare and Development Association	National/ local	1999	OWDA focuses on capacity building to empower communities, especially women, to protect their rights and participate in power, decision-making activities.	https://www.owda.org.et/	olmarei.lang@gmail.com	+254 20202543	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979858/
Oromia Pastoralist Association	National/ local	2006	To contribute to enhancing well-being, rising voices and protecting right for the pastoralists through engaging policy advocacy, peaceful coexistence and resource management & climate adaptation	https://www.oromiapastoralist.org/	info@pdnkenya.org	+254 722810161	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979860/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Pastoralist Forum Ethiopia	National/ local	1998	To represent and capacitate its member organization and contribute to sustainable pastoral development in Ethiopia.	http://www.pfe-ethiopia.org	pfe@pfe-ethiopia.org	+251 115524582	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979835/
SOS Sahel Ethiopia	International	1989	SOS Sahel Ethiopia is dedicated to improving the living standards of marginalized pastoralists and smallholder farmers through better management of their environment and improved access to fair and sustainable markets.	http://www.sossahelthiopia.org/	SOS.Sahel@ethionet.et	+251 911934917	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979837/

Source: FAO website 2020.

Table 2: Livestock associations.

Name	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
Ethiopian Meat Producer-Exporters Association	2003	EMPEA has 15 members that are engaged in meat processing and export	<ul style="list-style-type: none"> To represent the interests of the sector in the international market and at government level to ensure meat products meet international standards. 	Ministry of Industry, Ministry of Livestock and Fisheries, Ministry of Trade, Ministry of Foreign Affairs, Ethiopian Chamber of Commerce and Sectoral Association, USAID	<ul style="list-style-type: none"> Provide linkages from producers to the export market. Identification of possible strategic partners and supporters. Lobbying and advocacy. 	UAE, Jeddah and Riyadh, Egypt, Kuwait, Qatar and Congo, Bahrain, Kuwait, Qatar, Oman, Angola, Comoros, Vietnam, Hong Kong	Meat export-19038 tons, Live animal export-535,620	251912249130, Mr.Abebew Mekonen, www.empea.com.et , Abebew.m1@gmail.com , empea.ethionet.et
Ethiopian Poultry Producers and Processors Association	2011	55 entrepreneurs (poultry production and processing)	<ul style="list-style-type: none"> To enhance policy environment for efficient service delivery. To engage with other actors within the value chain. To build farmers capacity in production. 	Agriterra, ENTAG, HAPP, Ministry of Livestock and Fisheries, Chamber of Commerce, Ethiopian Dairy and Meat Technology Development Industry	<ul style="list-style-type: none"> Represent and protect member's interests, enhance public-private partnerships. Awareness creation and sensitization. 	Locally (hotels, supermarkets, higher learning institutions)	Improved and commercial poultry (which is about 10 million)	251911491049, Mr.Fanta Terere, www.ethiopoultryassociation.org , Mesegiz2112@gmail.com , temesgen_alemu@yahoo.com , fanta_elere@yahoo.com

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference	Telephone
Ethiopian Honey & Beeswax Producers & Exporters Association	2006	Voluntary membership base for interested parties in the apiselector	<ul style="list-style-type: none"> To strengthen the apiselector by working with various stakeholders. To assist the private sector for more effective & efficient business operations. 	SNV Ethiopia, Ministry of Livestock and Fisheries, Ministry of Trade, Ministry of Industry, Ethiopian Meat & Dairy Development Institute	<ul style="list-style-type: none"> Organize & present the sectors' problems to the concerned government body. Identify the problems faced by the private sector investors & work to find solutions 	Locally, export (European Union, UAE, Korea, Japan & USA)	251 911606492, Mr. Elias Zewdie, eliaszewdie1@gmail.com	
Ethiopian Animal Feed Industry Association	2008	10 unions, 36 feed processors and ingredient suppliers	<ul style="list-style-type: none"> To enhance cooperation between the members and the public sector. To provide technical assistance and training to its members, enhance availability of credit facility. 	USDA, ACDI/VOCA, FEED II	<ul style="list-style-type: none"> Lobbying and advocacy. Provide market connection for its members. Improvement in forage production. 	Locally	poultry and dairy partners	251 911346749, Mr. Telaye, www.EAFIA.com , telaye_gt@yahoo.com
Ethiopian Livestock Traders Association	2004	> 120 members, 25% domestic livestock, 75% feedlot operations	<ul style="list-style-type: none"> To promote domestic and export livestock trade. To improve public awareness and visibility of Ethiopian livestock trade. To develop capacity of livestock trading. 	USAID-LMD, NEALCO, Mercy Corps, Ministry of Trade, Ministry of Foreign Affairs, Ministry of Customs Authorities, Ministry of Transport	<ul style="list-style-type: none"> Provide linkages from producers to the export market, Condition animals in feedlot areas for export market. lobbying and advocacy for livestock traders 	Domestic market, export market	Shoats (279,639), cattle (129,032), camels (43,299)	251 912719161, Meseret Adugnaw, www.elta.com.et , adugnawmeseret@yahoo.com

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Ethiopian Meat Producer-Exporters Association	2003	11 (meat processing and export), five meat export abattoirs (under development)	<ul style="list-style-type: none"> To ensure Ethiopian meat products meet international standards. To promote Ethiopian meat products in the international market. 	11 Export abattoirs and slaughter houses	<ul style="list-style-type: none"> Provide linkages to its members to the export market. Ensure food safety and quality assurance, 	Export: Dubai and Saudi Arabia	251 912249130/251 116628292, Mr.Abebaw Mekonen, www.empea.com.et , empea@ethionet.et / Abebaw.m1@gmail.com
Ethiopian Milk Processors Industry Association	1914	Milk processors as members and input providers as associate members	<ul style="list-style-type: none"> To facilitate and serve as bridge between the producer members and market. To build the capacities of the members. 	raw milk suppliers distributors government agencies financial institutions research ad higher learning institutions	<ul style="list-style-type: none"> Lobbying and advocacy. Capacity building. Market linkage and promotion. Research. Resource mobilization. 	Domestic	African zebus and crosses 2519011228775, Mr Belechew Elemtu, belachew.elemtu@gmail.com
Ethiopian Leather Industries Association	1928	1500 reg. private traders, 26 tanneries, 16 leather producer manufacturers, 18 shoe manufacturers	<ul style="list-style-type: none"> Promote and foster the interests of the leather industry. Promote cooperation among its members and establish good working relations with other stakeholders in the value chain. 	31 tanneries, 16 leather manufacturers, 18 shoe manufacturers, LIDI, UNDP, UNIDO, USAID, Italian Cooperation, ECBP, ECF-World Bank, COMESA-LLPI	<ul style="list-style-type: none"> Advocacy with regard to the industry's views in administrative matters. Coordinate capacity-building activities through training programs, panel discussions. 	China, Italy, within Africa, UK, Western Europe, Middle East and Far East, Southeast Asia	127,700 pieces of skins and 7,200 pieces of hides per day for each tannery 251911657287 / +251 115 15 61 44, Berhanu Abate /Mr. Abdissa Adugna, http://www.elia.org.et / berhanuabate3@gmail.com / elia@elia.org.et , aalf@elia.org.et

Source: ICPALD website 2020.

Annex C: Pastoralist and livestock organizations in Kenya

Table 1: Pastoralist organizations.

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Action for Sustainable Change	National/local				msheikh@afosc.org	+254 720534151	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979839/
Adakar Peace and Development Initiatives	National/local		To work towards the achievement of the people supported, owned and sustainable peace that will enhance security and development between the Turkana of Kenya and their Topesa cousin of S. Sudan.		Apedi.project@gmail.com	+254 729422160	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979840/
Agency for Pastoralist Development	National/local		APAD contributes towards resolution of the inherent problems that affect nomadic pastoralist communities of Loima and cross-border districts of Karamoja cluster.	https://apadkenya.wordpress.com/	sam.kimeli@apadkenya.org	+254 722240445	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979841/
Agency for Strengthening Pastoralist Innovation & Resilience	National/local				aspire.organization10@gmail.com	+254 721256810	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979842/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Alumen Pastoralist Empowerment Initiative	National/local				apeicbn@yahoo.com	+254 724725650;	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979844/
Arid Lands Development Focus Kenya	National/local			http://www.aldef.org	Sharun.iman@yahoo.com	+245 46421016	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979843/
Centre for Minority Rights Development	National/local	2001	Enhancing economic empowerment of minority and indigenous communities; strengthening CEMIRIDE's institutional capacity.	http://www.cemiride.org	nyangori.ohenjo@cemiride.org	+254 701705620	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/1085582/
Community Initiative Facilitation and Assistance	National/local	1991	To contribute towards the improvement in the quality of life in the communities of Marsabit County of northern Kenya and southern Ethiopia through support for the initiatives in livestock, environment, peacebuilding and economic diversification.	http://www.cifakenya.co.ke/	ibrasora@yahoo.com	+254 692102115	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979845/
Drylands Learning and Capacity Building Initiative for Improved Policy and Practice in the Horn of Africa	National/local	2008	A knowledge management and advocacy resource organization with the aim of improving policy and practice in the Horn of Africa. Previously known as REGLAP (the Regional Learning and Advocacy program), it supports collaborative learning and documentation on drylands development and advocacy.	http://www.dlci-hoa.org	info@dlci-hoa.org	+254 736851076	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/1071517/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Dupoto E-maa	National/local	1993	To empower Maa pastoralists through inclusive quality education and sustainable land resource use intervention for economic growth, high livelihoods and social standards.		dupoto-e-maa@africaonline.co.ke	+2547 26056855	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979847/
Food for the Hungry	International	1971	FH Kenya's goal is eradication of poverty among the most vulnerable communities by connecting marginal opportunity through economic empowerment, livelihoods development and education. Strengthening the resiliency of the most vulnerable through program implementation.		uk@fh.org	+254 720239621	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979848/
Horn of Africa Development Initiative	National/local	2003	The organization's mission is to champion justice and development in northern Kenya through advocacy and facilitation of education, community cohesion and livelihood support programs	https://www.hodiafrica.org/	info@hodiafrica.org	+254 719192313	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979849/
International Institute of Rural Reconstruction	National/local		Together with our development partners, we build on the unique assets and strengths of the rural people. We focus on learning what works for them through research, action, sharing, and enriching their knowledge. We then implement field programs that empower rural communities.	https://iirr.org/	admin@iirr.org	+254 202370039	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979850/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Kapitur Resources Management Association	National/local	2002	KARMA is a grassroots community-based organization formed in 2002 by herders, farmers, women and youth to fight hunger, poverty and unemployment in order to uplift the living standards of the Turkana community which has fallen out of pastoralist lifeline.		info@karmaturkana.org	+254 711636297	http://www.fao.org/pastoralist-knowledge-hub/database-of-organization/details/en/c/979851/
Kenya Livestock Marketing Council	National/local	2000	To improve the livelihoods and resilience of pastoral communities and other livestock keepers/producers by providing services that effectively respond to their needs.	http://livestockcouncil.or.ke	klmc@livestockcouncil.or.ke	+254 203746549	http://www.fao.org/pastoralist-knowledge-hub/database-of-organization/details/en/c/979846/
League of Pastoral Women of Kenya	National/local	2007	Our mission is to build pastoralist women's leadership capacity and foster participation in a broad sense, with a focus on economic and social empowerment as well as political engagement.		contact@lpwk.org	+254 202513360	http://www.fao.org/pastoralist-knowledge-hub/database-of-organization/details/en/c/979852/
Lotus Kenya Action for Development organization	National/local	2003	LOKADO is a community-driven local organization formed by members from Lokichoggio, Oropoi and Kakuma divisions in 2003. The major driving factor was to assist address the cross-border violent conflict experienced among the Turkana pastoralist and their neighbours from Uganda and South Sudan.	https://lokadoke.wordpress.com/about/	lomedes@gmail.com	+254 722652268	http://www.fao.org/pastoralist-knowledge-hub/database-of-organization/details/en/c/979853/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Mainyoito Pastoralist Development Organization	National/local	2000	MPIDO curves its niche into pursuing food security, climate change mitigation, governance and conflict transformation, natural resource management, gender equity, and HIV & AIDS responses targeting Maa pastoralists.		mpido@mpido.org	+254 722303233	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979854/
Merti Integrated Development Program	National/local	2003	Envision an empowered, just, equitable and resilient society in northern Kenya	https://www.midkenya.org/cross-cutting-themes/	info@midkenya.org	+254 721109171	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/1074451/
Northern Kenya Caucous	National/local		NORKENYA is set to be the region's leading organization to help the communities attain self-sufficiency, survival, peace, protection, development and participation.	http://nkcaucus.blogspot.it/	nbi.nkc@gmail.com	+254 726722226	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979855/
Northern Rangelands Trust	National/local	2004	The Northern Rangelands Trust was set up in 2004 in northern Kenya by a coalition of local leaders, politicians and conservation interests. Its mission is to develop resilient community conservancies, which transform people's lives, secure peace and conserve natural resources.	https://www.nrt-kenya.org/	info@nrt-kenya.org	+254 701555000	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979856/
Oloip Lenkerai Organization	National/local	2010	To promote and ensure sustainable livelihoods in a safe and secure environment.			+254 724591564	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979859/
Pastoral Girls Initiative	National/local	2001	To enhance socioeconomic status of pastoralist community in the targeted counties by developing alternative sources of livelihood.		info@pastoralistgirls.org	+254 202165 376	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979861/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Pastoralist Integrated Support Program	National/local	1996	PISP exists to reduce poverty and vulnerability amongst pastoralist communities in Marsabit County through provision of appropriate community empowerment strategies for enhanced and sustainable development.	https://www.pisp.org/index.php/en/	admin@pisp.org	+254 2102201	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979862/
Pastoralist Parliamentary Group	National/local	1998	To be a critical parliamentary force that ensures security, unity and prosperity for pastoralists communities in Kenya. To provide political leadership in the development and implementation of policies and legislation that achieve pastoralism full potential.	https://dici-hoa.org/ppg/overview	pworg@ethionet.et	+251 116626407	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979836/
Pastoralist Women for Health and Education	National/local	2006	PWHE objectives are enhanced local and inclusive governance, strong community groups/champion for peace and good leader, access to quality health and education services for pastoralist children, to diversify income for women and youth, to advocate for change for vulnerable groups especially the pastoralist communities, women and youth, diversify and growth of funding base for PWHE.	https://www.pastrolistswomen.org/about-us/	Pastoralistwomenhealtheducation@yahoo.com	+254 726844850	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979864/
Pastoralists Community Initiative for Development	National/local	2008	PACIDA empowers pastoralist communities through sustainable community-driven development interventions. For instance, the livelihoods program seeks to increase the incomes of households within the ASAL regions of northern Kenya and southern Ethiopia by facilitating better access, control and management of available community resources.	http://pacida.org/	pacida@pacida.org	+254 20265 6947	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979865/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Resilience and Development Action in Kenya	National/local		To alleviate poverty, mitigate and manage disasters, minimize impact of HIV/AIDs, and improve agricultural production for the poor, vulnerable and marginalized people, groups and communities in Kenya.		adhiambotracy@yahoo.com	+254 703662311	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979866/
Rural Agency for Community Development and Assistance	National/local		RACIDA's mission is to enhance self-reliance and prosperity amongst vulnerable pastoralist communities living in northern Kenya through promotion of better livelihood systems, sustainable use of natural resources and community empowerment.	https://racida.org/	racidamandera@yahoo.com	+254 4652368	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979867/
Samburu Women Trust	National/local	2009	We exist to empower human rights of women and girls in pastoralists communities; strengthening their capacity to influence local and national policies; and address silent harmful traditional cultural practices through integrating the role of women as decision makers in the community.	http://www.samburuwomentrust.org/		+254 622031822	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979868/
Turkana Development Organization Forum	National/local	2002	TuDOF is dedicated to improving enjoyment of human rights and root for democratic governance among the people of Turkana County in northwest Kenya.	https://namati.org/network/organization/tudof/	tudof2008@yahoo.com	+254 717414370	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979869/
Turkana Environmental Resources Association	National/local	1998	To advocate for the conservation/reservation and useful utilization of environmental natural resources, and promote and facilitate inter- and intra-community cooperation and collaboration amongst the co-existing diversified communities.		Philip_ekolong@yahoo.com	+254 710245998	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979870/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Turkana Pastoralist Development Organization	National/local	2000	TUPADO work towards the realization of an empowered gender-sensitive pastoralist community capable of initiating and sustaining its development activities by utilizing the available local resources to improve livelihoods using the Asset Based Community Development approach.		tupadongo@gmail.com	+254 202352296	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979871/
Wajir Paralegal Network (WAPNET)	National/local	2008	To empower pastoralist communities to understand their basic constitutional rights and enable them hold service providers/duty bearers accountable for better service delivery.		wajirparalegal@yahoo.com	+254 729844964	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/1071535/
Wajir Peace and Development Agency	National/local	2002	To promote self-reliance of the Wajir people by partnering with others to develop sustainable peace and livelihoods.		wajirpeace@gmail.com	+254 724873621	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/1074453/

Source: FAO website 2020.

Table 2: Livestock associations.

Name	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
Kenya Livestock Marketing Council	2000	22,000	To organize livestock marketing and provide a conducive environment to promote livestock trade.	OXFARM, Cordaid, SNV, ILRI, Land on Lakes	Supporting its members in facilitating market access, capacity building and resource mobilization.	Local market & UAE	Cattle, goats, camels, donkeys	klmc@livestockcouncil.or.ke , livestockcouncil@gmail.com , www.livestockcouncil.or.ke
Kenya Camel Association	1997	1,230	Contribution to research through provision of training on livestock production and veterinary services in University of Nairobi.	Natural Research Institute, GIZ-Marsabit, the Government of Kenya, World Bank, National Drought Management Authority	Promotion and facilitation of production and marketing of camel trade policy and advocacy training and research.	Under development	Camels	kenya.camel@gmail.com
Kenya Livestock Producers Association	2004	100,000	To provide a network platform for all livestock producers & provide market linkages and opportunities to its members.	Ministry of Agriculture, Council of Governors & private sector.	• Advocacy and lobbying, policy intervention, provision of training of farmers and conducting trade fairs.	Local market-through trade fairs.	All domesticated livestock and emerging (quails, crocodile)	klpakenya@gmail.com , www.klpakenya.org
Eastern and Southern Africa Dairy Association	2004		To promote initiatives in the dairy industry & contribute towards shaping the policy environment for trade in dairy products in the region.	COMESA, RNDP, MPO, TAMPA, UDPA, EMPPA, ZDIT	• Participation in the African Dairy Conference and Exhibition, ESADA trade & exchange missions. Capacity building in provision of relevant training to its members.	East and South Africa	Dairy animals and their products	secretariat@dairyafrika.com , www.dairyafrika.com
Kenya Fish Processors & Exporters Association	2000	Fish Exporters	To enhance sustainable fisheries supply, enhance and promote marketing of fish and enhance effective fish safety, quality assurance and cleaner production.	Fishermen, Fish agents, MoALF, KAM, KPSA	• Increase capacity of fish export. • Provide linkage with regional fisheries operators in Uganda and Tanzania through the regional association.	Mainly Europe (70%)	Nile perch, octopus, lobsters, live crabs, squids, marine ornamentals	admin@afipek.org , www.afipek.org
Kenya Poultry Farmers Association	2005	7,653	• To advance poultry farmers interests, facilitate dialogue between stakeholders and engage with other actors within the value chain.	MoALF, KPBA, AKFM, Kenya National Farmers Federation, Poultry Association of East Africa	• Advocacy and lobbying. • Training. • Market linkages. • Information dissemination.	Linking our farmers to market outlets	All types of poultry	info@kenyapoultryfarmers.org / www.kenyapoultryfarmers.org , 0722 406390

Name	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
Dairy Goat Association of Kenya	1993	12,000	<ul style="list-style-type: none"> Raising the income of its members and enhance their food security through increasing their capabilities and skills in dairy goat breeding. 	Government of Kenya of Kenya, KLBO, KAGRIC	<ul style="list-style-type: none"> Buck rotation Artificial Insemination Marketing of breeding stock Identification and registration of dairy goats Training 	Locally and countrywide	Approximately 50,000	dgak@jambo.co.ke , www.dgakenya.org Contact: Dr Humphrey Mbugua, hcwmbugua@yahoo.com , 0725159104 Contact: DrJohn Mutunga, 0723903957, producers@kenfap.org http://www.kenaff.org/ Name: Racheal Gatei, 0722573432/0733521438, info@kldb.co.ke , http://www.kldb.co.ke
Association of Kenya Feeds Manufacturers								
Kenya National Farmers Federation								
Kenya Dairy Board	1958	Active	To organize, regulate and develop efficient production, market distribution and supply of dairy produce. To improve the quality of dairy produce.	National government, county government, donor agencies, dairy development partners	<ul style="list-style-type: none"> Licensing of milk handling premises. Inspection of milk handling premises. Surveillance on the quality and safety of milk and milk products. 	Local and Export market		Name: Racheal Gatei, 0722573432/0733521438, info@kldb.co.ke , http://www.kldb.co.ke
Kenya Livestock Breeders Organization	1994	16,000	To improve livestock breeding through effective and efficient livestock registration and recording.	MoALF, LRC, ILRI, KDB, farmer cooperatives, farmers/livestock breeders, KAGRIC	<ul style="list-style-type: none"> Setting up livestock registration rules in liaison with the breed societies Registration and issuance of certificates for both grade and pedigree stock. 	East Africa	All livestock species (cattle, sheep, pigs, goats, poultry)	Name: Leonard Mukhebi 0722907686, lmukhebi@gmail.com / info@klbo.co.ke , www.klbo.co.ke
Kenya Pig Farmers Association	2009	834	<ul style="list-style-type: none"> Advocacy and capacity building of members. Support members for improvement of pig value chain (production management, processing and products). 	Government of Kenya, Pig Policy and Strategy, National Livestock Associations	<ul style="list-style-type: none"> Advocacy and capacity building of members. Support members for improvement of pig value chain (production management, processing and products). 	Locally	There are several types of pig genetics e.g. large white, landress, duroc).	info@kenpig.org , akireria@gmail.com , silverster.muigah@gmail.com

Source: ICPALD website 2020.

Annex D: Pastoralist and livestock organizations in Somalia

Table 1: Pastoralist organizations.

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Agricultural Development Organization	National/local		Focusing on securing livelihoods of communities through intervention aimed at food sovereignty including access to clean water and sanitation for communities we work with.	http://adosom.org	dosomalia@yahoo.com	+252 24429664	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979875/
Candlelight	National/local	1995	Candlelight strives to bring about positive changes in communities through environmental conservation, provision of quality education and creation of awareness rising on health issues.	http://www.candlelightsomal.org	candasli@yahoo.com	+252 523146	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979876/
Gargaar Relief Development Organization	National/local	1992	GREDO focuses so much on aspects of emergency, humanitarian responses and development/resilience programs.	http://www.gredosom.org	info@gredosom.org		http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979877/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Humanitarian Action for Relief and Development Organization	International	1992	Our mission today is to save lives and create sustainable socio-economic development for vulnerable groups and needy communities in the Horn of Africa.		info@harido-ea.org		http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979879/
Somaliland Pastoral Forum	National/local	2006	To empower pastoralists and agro-pastoralists to secure their livelihoods, influence institutions to be responsive to pastoralists' and agro-pastoralists' needs.		abdikarim.daud@solpaf.org	+252 634448747	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979880/

Source: FAO.

Table 2: Livestock associations.

Name	Location (app.)	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
Nafaqo Meat Association	Hargeisa, Half London	2001	3500		FAO, Ministry of Livestock	Selling meat, slaughtering livestock.	Local	Cattle, goats, sheep, camels	NAFAQOHargeisa@yahoo.com
Somaliland Veterinary Association	Hargeisa, Half London	2012	21	To improve veterinary services to ensure food security.	FAO, TERA NOUVA, ICITE	Community animal health worker training.		Cows, goats, camels, sheep	Hornspca@gmail.com
Maandeq Slaughterhouse	Hargeisa	2005	85	To ensure quality meat produce in Hargeisa; to provide hygienic meat standards in Hargeisa.	Ministry of Livestock, local government, FAO	Slaughtering of livestock.	Local market	Cattle, camels, goats, sheep, poultry	mdeek@hotmail.com
Somaliland Meat Development Association					FAO	Training of the livestock farmers.		Cows, goats, camels	
Assal Youth Development		2001	25	To improve peoples' living standards in rural areas.	Ministry of Livestock	Trainings and DRRA.		Goats, camels, cows	
African House		2008	15	To improve livestock production in Somaliland.	FAO, Ministry of Livestock	Conducting trainings for livestock farmers.		Goats, cows, camels	idaan54@gmail.com
Somaliland Livestock Network		2001	83	To provide training to the livestock communities to ensure livestock development.	FAO, UN OCHA, Ministry of Livestock	Training, enterprising people in rural areas.	Local	Goats, cows, camels	sowdaze@gmail.com

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference	
Ubale Poultry Farm Association		2000	13	To ensure quality poultry production.	DAI, World Bank	Training of farmers, providing livestock farmers with information on drugs.	Local	Poultry UbalePF@gmail.com
Somaliland Youth Public Health Association		2016	12	Lobbying and advocacy in livestock farming.	Ministry of Livestock, FAO	Rearing of livestock.	Local	Goats, cows, camels

Source: ICPALD website 2020.

Annex E: Pastoralist and livestock organizations in South Sudan

Table 1: Pastoralist organizations.

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Assistance Mission for Africa	National/ local	2002	Focusing on securing livelihoods of communities through intervention aimed at food sovereignty including access to clean water and secured sanitation for communities we work with.	http://www.amasouthsudan.org	jubaama@gmail.com	+211 955224368	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/1070585/

Source: FAO website 2020.

Table 2: Livestock associations.

Name	Location	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
NICODO Dairy Associations	Jubek	1983	82	Train pastoralists, provide veterinary services to pastoralists, collect milk and process.	OXFAM, WFP, UNICEF	Milk processing and promotion.	Local/domestic	Cattle, goats	Nicodoorg@gmail.com
Butchers Union Ladjor State	Ladjor State	1986	20	Improvement of meat environment, produce quality meat.	Traders, GOSS	Buy, slaughter, sell.	Local	Cows, goats, sheep	
Central Equatorial Poultry Association	Jubek state	2009		To promote poultry techniques, train farmers.	MCF, MARF, USAID	Broiler and layers production, training farmers.	Juba town and some states	Broiler (2,000)	jami_jele@yahoo.com.au

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference	Poultry (300)	
Lainya Poultry Association	Yei River, state	2013	17	Improve community livelihood and increase production.	Local and international NGOs	Local feed formulation and poultry production.	Local/domestic	Poultry (300)	Lainya@yahoo.com
Hides and Skin Group	Latjor state	2009	18	to make people speak with one voice so that they have access to market and determine price.	Butchers, traders, GOSS	Collect hides, treat them by salting then sell.	Export to Khartoum	Cattle, goats, sheep	
Jebel Group Poultry Farm	Jubek state	2008	10	Improve chicken quality meat.	N/A	Import chicken from Uganda and sell in South Sudan.	Local	Chicken for meat	
Bari Anigo Integrated Farm		2006	21	To change livelihoods of members, have good technical poultry ideas and to have more products for export.	GOSS, traders, training from NGOs	Rearing chicks, cultivate greens and vegetables.	Local markets within Juba	900 chickens	jami_jele@yahoo.com.au
Butchers Union Rumbek	Western Lakes (Rumbek)	2008	26	To avoid cattle rustling and under payment during selling.	N/A	Buy and sell cows.	Local	Cattle, goats	
Jonglei Fisheries Association		2012	17	To empower members of the association, to establish a market system, to assist members of the association to make a profit.	N/A	Purchasing fish from fishermen and selling them to the target market.	Local	Fish	
Terekeka Butchers Association		2010	24	To encourage quality meat production.	N/A	Slaughtering, selling of meat products.	Local market	Cows, goats	
Alesoka Fisheries Association		2012	100	To freeze fish, to provide efficient and quality storage facilities for fish.	N/A	Fishing, selling of fish produce.	Local	Fish	
Butchers Union WAU		2013	14	To represent any program for butchers' unions, to organize and put things in order.	Government of S.S	Market access.	Local market	Cows, coats	
Pastoralists Association		2013	25	To keep animals for economic use, to control livestock diseases, to increase beef production.	Government of S.S	Gather livestock, find its livestock members, negotiate pricing.	Local, exports (hides and skin)	Cattle, goats, sheep	

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference		
Butcher Association Rejat County		2014	20		Government of S.S	Provide market access, slaughtering.		Cows, goats	
Butchers Traders Union		2014	100				Local market	Cattle, goats	

Source: ICPALD website 2020.

Annex F: Pastoralist and livestock organizations in Sudan

Table 1: Pastoralist organizations.

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Al/Massar Charity Organization for Nomads Development and Environment Conservation	National/local	2001	Reduction of resource-based conflict, enrolment & retention of nomadic children in basic education, increased access for nomadic pastoralists to primary health care, improved supply & management of resources, improved animal health and animal production.	http://almassar.org/	hq@almassar.org	+249 120796149	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979953/
Arab Organization for Agricultural Development	Intergovernmental	1970	The overall objective of the AOAD is to identify and develop linkages between Arab countries, and coordinate all agricultural and agricultural-related activities amongst them.	http://www.aoad.org/indexeng.htm	info@aoad.org	+249 18347217683	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979954/
Fellowship for African Relief	International	1985	FAR is a Canadian, Christian NGO which has been working in Sudan for 25 years providing relief and development to the country's most vulnerable people.		info@farsudan.org	+249 183231233	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979955/
Vet Care	National/local	2003	VCO aims at empowering rural communities to enable them to improve their livelihood and food security.	http://vetcare-sd.org/	info@vetcare-sd.org	+249 120344073	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979956/

Source: FAO.

Table 2: Livestock associations

Name	Location (app.)	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
Sudanese Hide and Skins Exporters Union of Sudanese Chamber of Commerce	Industrial area, Khartoum North	1940	All exporters from raw to tanned, leather traders and tanneries.	<ul style="list-style-type: none"> To organize member exporters to have information on exports. To facilitate export procedures with government. 	tanneries, port of Sudan authority, Niala, exporters	<ul style="list-style-type: none"> Participate in international leather trade fairs. Network and provide linkages with other leather associations. 	Italy, Spain, Turkey, Brazil, India, China, Egypt, Syria	Cattle hide (3 million pieces (60%)), goats (12 million pieces (80%)), sheep (15 million (80%)), camels (500,000 pieces (25%)).	249 912302013, Eng. Marwan, marwan@sudanmail-net-sd
Chamber of Fish Producers	Omurdman	1991	Owners of boats, traders and fishermen.	<ul style="list-style-type: none"> To promote the development of fish sector. To facilitate and promote interaction with other relevant and related associations. 	Feed companies, union of chamber of agriculture and animal production	<ul style="list-style-type: none"> Enhancement of production of fishnets. Production of feed from fish remains. 	Locally to hotels and restaurants	50,000 tons per year	249 912213597, Adam Nasr, adamn222@hotmail.com
Meat Processors Sub-Chamber	Chamber of Commerce, Gamhoria Street, Khartoum, Sudan	2012	21 factories	<ul style="list-style-type: none"> To promote privatization and innovativeness in meat in attaining international quality standards. 	Government, NEALCO, suppliers	<ul style="list-style-type: none"> Policy development and legislation. Promotion of national interest in meat industry. Facilitate the process of obtaining international quality assurance standards. 	Locally		249 912338891, Mr. Yassir Abdulkarim, info@sudanindustry1.org
Meat Exporters Sub-Chamber	Chamber of Commerce, Gamhoria Street, Khartoum, Sudan	1990	Exporters: individual (18), family companies (3).	<ul style="list-style-type: none"> Ensure meat products meet international standards as well as the promotion of meat products in the international market. 	NEALCO, government	<ul style="list-style-type: none"> Resource mobilization Lobbying and policy development. Facilitation of trade and promotion of conducive business environment. 	Gulf operating council countries (GCC), MENA, Malaysia, locally	8099.612 tons; Cattle (2168.078), Sheep (2337.657), Goats (176.158), Camels (8.908) (for the year 2016)	249 123000709, Dr. Khalid Magboul, khmagaa@yahoo.com

Name	Location (app.)	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
Chamber of Livestock, Meat and Slaughter House	Africa street, Union of chamber of agriculture and animal production	2002	Producers, slaughter house owners, traders.	<ul style="list-style-type: none"> Promote policy development on livestock meat and slaughterhouses. 	NEALCO, government, traders, feed suppliers and processors, meat and livestock exporters	<ul style="list-style-type: none"> Facilitate trade and supply of livestock. Capacity development to its members. Construction of slaughter houses. Resource mobilization. 	Locally	Camels (4.85 million, cattle (30.926 million), goats (31.569 million), sheep (40.725 million)	249 123000709, Dr. Khalid Magboul, khmragaa@yahoo.com
Livestock Exporter Sub-chamber	Chamber of Commerce, Gamhoria Street, Khartoum, Sudan	1990	Exporters: individuals (600), family companies (10).	<ul style="list-style-type: none"> To promote domestic and export livestock trade in meeting international quality standards. 	NEALCO, government,	<ul style="list-style-type: none"> Facilitate trade and supply of livestock. Capacity development to its members. Advocacy and development of policies. 	GCC, Saudi Arabia (accounts to 98% exports)	Sheep (4,411,956), goats (271,647), camels (220,665), cattle (100,655) (total 5,004,923)	249 123000709/ 249 9912225182, Dr. Khalid Magboul, Mr Al Nassir, khmragaa@yahoo.com
Traders of Sheep and Goats SELAM (export market)	Omurdman	1990	Individuals (4,000)	<ul style="list-style-type: none"> To provide linkages to potential investors, producers and buyers in the international market. 	livestock exporters, meat exporters, NEALCO, govt, locality govt.	<ul style="list-style-type: none"> Promote trade environment to exporters. 		900,000 per year	249 912299422, Mr. Alsarik, khmragaa@yahoo.com
Mouleh Export Market (cattle)	Omurdman	1992	Producers and traders	<ul style="list-style-type: none"> To provide linkages to potential investors, producers and buyers in the international market. 	govt, NEALCO	<ul style="list-style-type: none"> Facilitate trade and export of cattle. 	Locally	1.04 million tonnes	249 123303731, Mr. Hussein, khmragaa@yahoo.com
Dairy Sub-Chamber	Nile Avenue, Kuwait Building 3rd tower	2002	Dairy farmers (primary), input suppliers & dairy processing (associate)	<ul style="list-style-type: none"> To represent the dairy farmers at the different forums to advocate for their development needs, capacity building of producers and all employee in the sector. 	Dairy plants, Feed millers, Artificial insemination providers, Government extension services	<ul style="list-style-type: none"> To create a portfolio to finance the activity of the Sector; assist farmers and farmers group to develop milk collection centres. 	Locally, regional market in Saudi Arabia and Gulf countries, Egypt	Hybrid cows (593250), local breeds (13,918,510), hybrid goats (740,135)	249 912398547, Zubeir Ibrahim Mohamed, nilesun@hotmail.com

Name	Location (app.)	Since	Members	Objectives	Partners	Key activities	Market base	Livestock	Contacts
Poultry Sub-Chamber		2002	Companies, individual farmers	<ul style="list-style-type: none"> To engage with other actors and engage with stakeholders within the value chain; to improve the capacity of producers in sustainable poultry production. 	NEALCO, Government, producers	<ul style="list-style-type: none"> Capacity building through organization of trainings and skill development. Policy dialogue to create better business environment. 	Locally	100,000 tons of meat	249 912393184, Mr. Ayaad George

Source: ICPALD website 2020.

Annex G: Pastoralist and livestock organizations in Uganda

Table 1: Pastoralist organizations.

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Africa Climate Change Resilience Alliance, Uganda	International		ACCRA champions development planning, which is adaptive to climate change, grounded in the needs and priorities of citizens, and equitable towards women, girls, boys and men.	https://www.odi.org/projects/2554-africa-climate-change-resilience-alliance-phase-2	Tracy_Kajumba@wvi.org		http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979887/
Caritas Kotido Diocese	National/ local	1991	Self-reliant, just and peaceful community with sustainable livelihoods and social services.	http://www.caritaskotido.org	kotidocaritas@gmail.com	+256 772605387	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/1095234/
Coalition of Pastoralist Civil Society Organizations	National/ local	2005	To provide a platform for civil society organizations to engage with policy formulation and advocacy for the recognition of pastoralism as a way of life and the right of pastoralists to benefit from national and local resources.		info@copacso.org	+256 414697137	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979888/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Dodoto Agro Pastoralist Development Organization	National/ local	1996	To empower agro-pastoralists in Dodoto to fully take control of own development pursuits, improve animal health, agriculture, livestock production and marketing, livelihood diversification, human rights protection and peace building.	https://www.weadapt.org/organisation/dado	simonpeter.lomoe@dadooug.org	+256 392176417	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979889/
Ecological Christian Organization	National/ local	2005	To promote transparent, accountable, sustainable and equitable management of land and extractive mineral. To build community resilience through increasing adaptive capacity to climate change and other natural hazards. Biodiversity conservation and community resource use.		eco@ecouganda.org	+256 464660273	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/1105931/
Gender and Livelihoods Opportunities for Rural Youth	National/ local	2012	Sustainable production, improved livelihood and household socio-economic transformation and food security in Karamoja attained.		gloryuganda.org@gmail.com	+256 392126791	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979890/
Jie Community Animal Health Workers Association	National/ local	2004	To create and ensure a peaceful, viable, resilient community with improved healthy animals, better livelihoods where community livestock assets and other natural resources are not threatened by natural hazards.		jicahwa@gmail.com		http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979891/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Kaabong Peace and Development Agency	National/ local		KAPDA was formed by a group of peacemakers from the Karamoja sub-region following a period of insecurity including cattle raids and theft, cross-border conflicts, land disputes, domestic violence and many other types of dispute.	https://www.peaceinsight.org/conflicts/uganda/peacebuilding-organisations/kapda/	lokwangpl@yahoo.com	+256 772959094	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979892/
Karamoja Development Forum	National/ local			http://www.kdfug.org/	ed@kdfug.org	+256 773044910	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979894/
Nakapiripirit Civil Society Forum	National/ local				Nakapiripiritcivilsocietyforum@gmail.com	+256 773965611	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979896/
Nakasongola Pastoralist Association	National/ local				samuelkaweesi2014@gmail.com	+256 772403335	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979897/
Riamiriam Civil Society Network	National/ local	2003	To strengthen civil society organizations through coordination and capacity building for self-reliant communities.		Riamiriamkaramojanetwork@gmail.com	+256 759441129	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979899/

Name	CSO Type	Since	Details	Website	E-Mail	Telephone	Reference
Uganda Land Alliance	National/ local	1995	To promote people-centred land governance that recognizes and protects the rights of the poor and vulnerable through advocacy for fair land laws, policies and empowering rights holders for sustainable Livelihoods.		ula@ulaug.org	+256 414540048	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979900/
Uganda Veterinary Association	National/ local	.	UVA is an umbrella organization that promotes and protects the interests of veterinarians in Uganda and collaborate with other stakeholders in the animal industry.		info@vetuganda.org	+256 414251762	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979901/
Warrior Squad Foundation	National/ local	2005	WSF aims at fighting for the rights of children, youth and communities who suffer from poverty, disease, injustice and violence through working with them to find lifelong answers to the problems they face.	http://warriorstfdn.blogspot.it/	lopiriamilton@gmail.com	+256 782002597	http://www.fao.org/pastoralist-knowledge-hub/pastoralist-networks/database-of-organization/details/en/c/979902/

Table 2: Livestock associations.

Name	Location (app.)	Since	Members	Objectives	Partners	Key activities	Market base	Livestock
Masindi Port Livestock and Beef Producers	Masindi District	2011	32	Promoting cattle trade.	UMPCU	Buying and selling animals		Cattle and goats
Uganda Livestock Products and Bio Products Traders Association	Kampala District	1999	65	Promoting livestock products and beef products trade.	Uganda Meat Industries	Buying and selling livestock products	Local	Cattle, sheep and goats
Gombe Meat producers Cooperative Society	Gomba District	2010	136	Improving the quality of cows, selling cows on market.	UMPEU	Buying and selling animals		Cattle, sheep and goats
Uganda Meat Producers Cooperative Union Limited	Whole of Uganda	2008	2,017 individual farmers	To enhance livestock production and productivity, to enhance member access to finance.	Norture, Norges Vel, NORAD, European Union, MAAIF	Mobilization of farmers, Markets, Financing		Cattle, goats and sheep
Uganda Leather and Allied Industries Association	USSIA Building, Uma Showground, Lugogo	1996	57	To develop the leather industry.	Government ministry and agencies, ministries of trade, agriculture, gender, NEMA, Beaream of standards.	Advocacy, technical training, investment profiling standards	Export tanners	Cattle, goats, sheep, fish
Ngoma Beef Producers	Ngoma	1999	200	To help farmers produce the best beef.	Free Cuts and Uganda meat industry	Livestock production	Uganda meat industry	Cows and goats
Uganda Cattle Traders and Transporters Association	Uganda Meat Industries, Plot 5, Old Portbell Road	2000	3,000	Promote cattle trade in and outside the country, to promote good transportation practices.	Fresh Cuts, Ngoma Beef Producers, Uganda Meat Producers Cooperative Union.	Cattle trading, beef production and livestock transportation	Kampala and its suburbs	10,000 goats
Walimi Fish Cooperative Society	Wandegeya, Buganda Road, Kampala, Uganda	2004	312	The overall goal is to make aquaculture a competitive.	MAAIF, Worldfish Centre, Aurburn University.	Technical training in agriculture	Local and export market	Tilapia, fish and catfish
The Uganda National Agriculture Development Organization (Tumado)	Countrywide	2004	89,000 bee-keepers; 266 coop	To promote agriculture for employment, income and livelihood improvement and do sector coordination.	Government (MAAIF), **TRIAS Uganda, OXFAM.	Value addition in bee products, Policy advocacy	88% demotive market	Bees. About 1000,000 colonies

Name	Location (app.)	Since	Members	Objectives	Partners	Key activities	Market base	Livestock
Pig Production and Marketing Uganda Limited	Mateyya -Wakiso District	2016		To moderate, promote and develop pig production in Uganda through providing secure and sustainable markets.	ILRI, Breeds, Feeds and Meats Limited.	Sale of pork, Sale of breeding stock/ consultancy services	Local	Pigs
Entebbe Livestock Co-operative Society	Entebbe	1989	45	Developing and multiplying cattle population and trade economic stability.	Ministry of Agriculture.	Marketing Livestock, beef hide	Local	Cows, sheep, goats, poultry
Kitenga-Kayabe Beef Producers Co-operative Society	Kiboga	2011	40	Promoting farmers.		Buying and selling cattle		Cattle, sheep and goat
Bitemba Meat Producers Co-operative Society	Kyamkwanzi	2011	51	Promoting farmers.	UMPE	Producing beef cattle	Local	Goats, cattle and sheep
Buremba Livestock Co-operative Society	Kirunura	2010	36	Produce meat and goat for beef.	UMPE	Meeting and sharing information		Goat, cattle and sheep
Kinyogoya Livestock Co-operative Society	Makaseka District	2008	546	To get one voice; to improve business.	UPMC	Buying and selling milk		Cattle
Zirobwe Co-operative Society	Luwero District	2010	40	Promoting cattle trade.	UMPCU	Buying and selling cattle	Local	Cattle, goats and sheep
Zalira Abalunda Meat Producers Co-operative Society	Luwero District	2009	36	Promoting cattle trade.	UMPCU	Buying and selling livestock	Local	Cattle, sheep and goats
Bigasa Kitanda Beef Farmers Cooperative Society	Bukomansimbi District	2009	38	Producing beef for export and local consumption.	UMPEU	Selling beef	Local	Cattle, sheep and goats
Kayunga Poultry Farms Association	Kayunga	2012	40	Promote poultry production in the district.	Biyimsika farmers	Buying and selling chicken	Local	Chicken and eggs
Kamira Livestock Co-operative Society	Lhwero District	2008	222	To promote beef and dairy farming in the area.	UMPCU	Selling milk and cattle	Local	
Kiganda Tukole Livestock Co-operative Society	Mubende District	2012	58	Promoting beef and dairy farming.	UMPCU	Selling milk and beef	Local	
Kigando Meat Producers Co-operative Society	Mubende District	2008	63	Promote beef in the area.	UMPCU	Selling and buying cattle	Local	Cattle and goats
Lwengo Meat Producers Co-operative Society	Lwengo District	2011	37	Promoting beef production.	UMPCU	Buying and selling cattle	Local	Cattle

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Maddu Meat Producers Co-operative Society	Gomba district	2011	58	Buying and selling cattle.				Cattle, sheep and goats
Biharwe Meat Producers Co-operative Society	Biharwe Town before Mbarara	2010	65	Bring farmers together so that can get market.	UMPCU	Buying animals, fatten, then sell		Cows
Kyankwanzi Livestock Co-operative Society	Kiboga District	2005	40	Promote farmers.	UMPCU	Buying and selling milk	Local	Cattle
Endinzi Meat Producers Cooperative Society	Kingiro	2005	80	Produce meat and promote farmers.	UMPE	Buying and selling cows	Local	Cattle, sheep and goat
Wakyato Livestock Co-operative Society	Nakaseke District	2008	43	Promoting livestock trade.	UMPCU	Buying and selling livestock	Local	Cattle and goat
Wabinyonyi Meat Producers Society	Nakasongola District	2008	60	Marketing and lobbying for farmers.	UMPCU	Buying and selling livestock	Local	Cattle and goats
Lugushuru Meat Producers Co-operative Society	Sembabule District	2009	36	Promoting livestock trade.	UMPCU	Selling and Buying livestock	Local	Cattle and goats
Kyazanga Beef Farmers' Co-operative Society	Lwengo District	2012	31	Promoting livestock trade.	UMPCU	Buying and selling livestock	Local	Cattle and goats
Kyarujungu Meat Producers Co-operative Society	Mbarara District	2009	72	Promoting livestock trade.	UMPCU	Buying and selling livestock	Local	Cattle and goats
Nabiswera Meat Producers Co-operative Society	Nakasongola District	2009	40	Promoting livestock trade.	UMPCU	Buying and selling livestock	Local	Cattle and goats
Ntuutsi Meat Producer Co-operative Society	Sembabule	2010	156	Promoting cattle trade.	UMPCU	Buying and selling livestock	Local	Cattle and goats
Ngoma Meat Producers Co-operative Society	Makaseke District	2009	68	Promoting livestock trade.	IMPCU	Buying livestock	Local	Cattle and goats
Rushenyi Meat Producers CO-Operative Society	Ntungamo District	2008	64	Focus on producing meat.	UMPCU	Selling and buying Livestock	Local	Cattle and goat
Gulu Meat Producers Co-operative Society	Gulu District	2010	50	Promoting livestock.	UMPCU	Selling milk and meat		Cattle and goats
Kabuyanda Nshenyi Meat Producers Co-operative Society	Isingiro District	2010	64	Promoting livestock production.	UMPCU	Selling and buying livestock	Local	Cattle and goats
Kyanamukanka Meat Producers Co-operative society	Masaka District	2009	34	Promoting livestock trade.	UMPCU	Selling and buying livestock	Local	Cattle and goats

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Uganda National Farmers Federation	Nakasero Rd, Plot 27, Kampala	1992	98 members: 78 districts, 20 community associations	Advocate for favourable agricultural policies and programs.	MAAIF, NARO, Development partners	Advocacy	Local	Cattle, goats, pigs, sheep
Heifer International/ EADD	Nakasero	1982	42 farmers cooperatives related to EADD	Poverty reduction.	Plan International, DDA	Working with farmers communities and other value chain sectors	Locally and export	Cattle, goats, pigs, dairy and animal traction, beef
Poultry Association of Uganda	Chicken House old Kampala, near police station	2004	Executive-10, total members-200	To lobby the government, to tackle industry challenges.	Poultry breeders, Feed manufacturers, Ministry of Agriculture	Public sensitization, lobbying the government		Poultry
Isingiro United Beef Farmers' Co-operative society	Isingiro District	2012	39 members	Beef production.	UMPCU	Livestock trading (buying and selling)	Local	Cattle, goats
Keshunga Meat Producers Co-operative Society	Kiruhura District	2011	66 members	To produce quality livestock.	UMPCU	Livestock trading (buying and selling)	Local	Cattle, goats
Kashongi Meat Producers Co-operative Society	Kiruhura District	2008	259 members	Quality beef production.	UMPCU	Livestock trading (buying and selling)	Local	Cattle, goats
Kinoni Meat producers Co-operative Society	Kiruhura District	2010	100	To promote livestock trade.	UMPCU	Livestock trading (buying and selling)	Local	Cattle, goats
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Source: ICPALD website 2020.

Notes: MAAIF – Ministry of Agriculture, Animal Industry and Fisheries.

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