

PROMOTING INVESTMENT IN CLIMATE SMART LIVESTOCK IN PASTORAL AND AGRO-PASTORAL SYSTEMS FOR CO-BENEFIT OF ENVIRONMENT AND LIVELIHOOD

IGAD Centre for Pastoral Areas and Livestock Development (ICPALD), in partnership with the French Development Agency (AFD), conducted a regional study on the political economy of the livestock sector with a focus on pastoral and agro-pastoral systems.

OVERVIEW



OBJECTIVE

The objective of the study was to analyze political decision-making processes and power plays amongst various actors and identify key constraints and challenges across the livestock value chain in the IGAD member countries. The study flushes out issues that can improve the efficiency of markets and supportive policies and regulatory environments, and therefore become more likely to attract financial and technical support from governments and other development partners.

The study benefited from two regional technical meetings held in September 2023 and January 2024, in Mombasa and Addis Ababa respectively, that greatly added value to the report.

Finally, a Ministerial Meeting was held in January 2024 (Addis Ababa) for a Policy Dialogue on the Pastoral Livestock Sector in the IGAD Region, based on the political economy study. Among the nine recommendations in a Communique released by the Ministers was a commitment to promote investment in climate-smart agriculture and pastoral livestock systems. This policy brief summarizes an approach to climate-smart agriculture with reference to pastoral and agro-pastoral livestock systems.

BACKGROUND

The IGAD region Member States are Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda. Livestock is key to food and nutrition security and its four channels: availability, accessibility, utilization, and stability. The region is endowed with an extensive livestock population, especially large and small ruminants (cattle, camels, sheep, and goats). (Table 1).

In the Arid and Semi-Arid Lands (ASALs) of the region, which constitute about 70% of the region's landmass, potential for rainfed crop farming is limited and pastoral agro-pastoral (PAP) livestock systems are the main means of producing food and livelihood support (Cecchi et al. 2010). For example, in Kenya's ASAL areas, where 70% of the country's livestock is raised, 95% of the income of the inhabitants comes from the livestock sector.

The IGAD region is Africa's largest livestock exporter; it generates income for herders, traders, processors, and governments. The production and trade of livestock and livestock products play a prominent role in the region's agricultural GDP. For example, it contributes 42%, 40% and 20% to the agricultural GDP of Kenya, Ethiopia, and Uganda, respectively (World Bank, 2021).

INVESTING IN CLIMATE-SMART PASTORAL LIVESTOCK SYSTEMS

The growth in livestock production and productivity in terms of milk, meat, and eggs in the IGAD region is low compared to the growth in demand for animal products. This is mainly due to inadequate animal health services, inadequate availability of feed, poor nutrition, low-yielding animal breeds and inadequate access to markets. Adapting to climate change for the pastoralists has become even more daunting because the climate is not the only thing that is shifting. Human populations are growing. Other land uses such as farming, mineral and oil exploration, protected area, and settlement are expanding into core areas where pastoralists graze their animals during the dry season.

KEY INTERVENTIONS TO PROMOTE CLIMATE-SMART LIVESTOCK PRODUCTION

1. Adapting to change

Pastoralist and agro-pastoralist groups in the IGAD region are as diverse as the landscape so they keep a range and mix of different animal species as an adaptation measure. Pastoralists adapt to change in a variety of ways (Figure 2). Switching from cattle to other species such as camels, sheep, and goats, which are better adapted to heat stress, and drought is a form of adaptation. Splitting herds and moving them to different locations and reserving certain areas for grazing only during emergencies are time-tested indigenous practices common to pastoralists. Adaptation to climate change can also be fostered by switching livestock species. For example, the Samburu of Northern Kenya and Borana of Southern Ethiopia, traditionally cattle-keeping people, adopted camels as part of their livelihood strategy. This switch allowed them to overcome a decline in their cattle economy, which had been affected by drought, cattle raiding and animal disease. It is, therefore, important to build on and support locally tested adaptation efforts.

2. Communal rangeland grazing management

Grazing management through rotational grazing is not new for most pastoralists. Through targeted temporal grazing exclusions, rotational grazing allows for the maintenance of forages at a relatively earlier growth stage. This enhances the quality and digestibility of the forage, improves the productivity of the system, and reduces methane emissions per unit of live weight gain (Eagle et al., 2012). It is therefore important to strengthen governance of traditional communal rangelands by supporting participatory rangeland management at scale for the co-benefit of environment and livelihood.

3. Pasture management and animal nutrition

Pasture management measures involve rainwater conservation, over sowing of different varieties of pasture seeds, prioritizing native grasses with higher yielding and more digestible forages, including perennial

Table 1: Livestock Population from the IGAD Member States (millions) (2020)1

Species	Djibouti	Eritrea	Ethiopia	Kenya	Somalia	S. Sudan	Sudan	Uganda	Total
Cattle	0.29	2.13	70.29	21.65	4.82	13.78	31.75	15.54	160.28
Sheep and goats	0.98	4.22	95.37	61.36	23.65	32.54	73.17	17.45	308.78
Camels	0.07	0.38	1.63	4.66	7.33	-	4.891	-	19.02
Total									488.09

Source: FAO STAT 2021

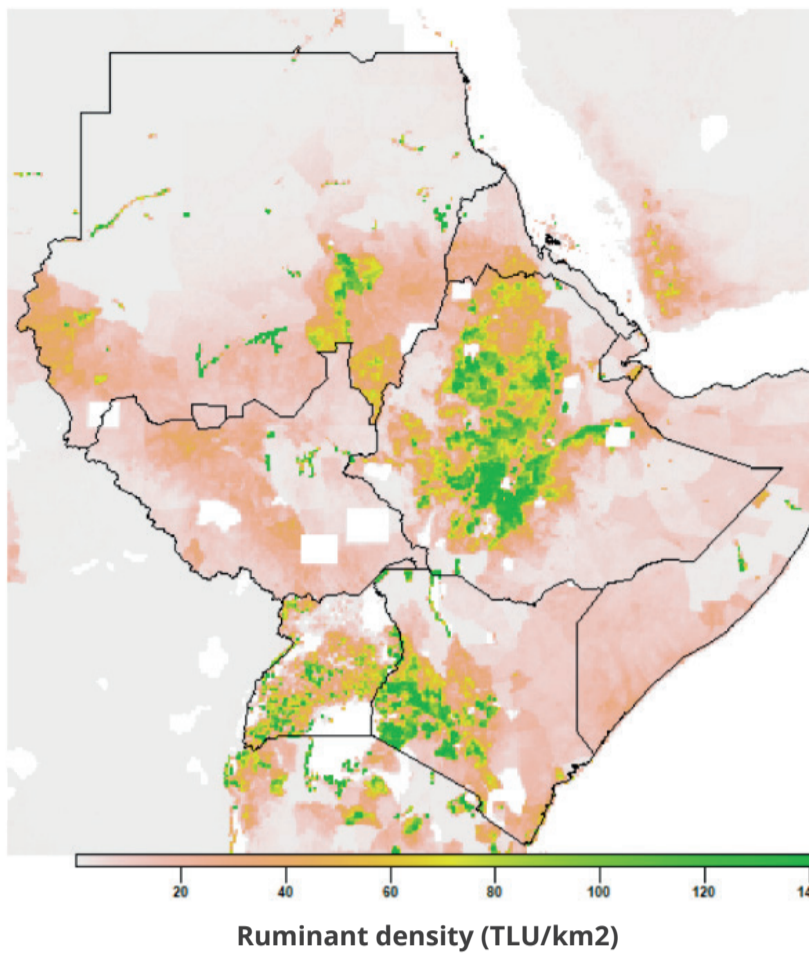


Figure 1: Ruminant Density in the IGAD Region. Source: IGAD Strategy for Sustainable and Resilient Livestock Development in View of Climate Change (2022-2037)

fodders, pastures, and legumes. For example, studies show that substantial improvements in soil carbon storage and grass productivity, as well as reductions in enteric emission intensities, are possible by over sowing with deep-rooted pasture species such as *Brachiaria*. However, there are far fewer efforts made so far to improve quality and quantity of pastures in arid and semi-arid grazing systems.

4. Animal breeding

The diversity of animal breeds in the IGAD region provides ample opportunity to improve productivity by selecting well-performing local breeds, multiplication and recording genetic gains. Promoting community-based breeding programs by selecting high-yielding and fast-maturing local animal breeds suitable for the ASALs can contribute to reduced GHG emission intensity and improve livelihoods.

5. Adaptation pioneers

The lives of pastoralists have always been shaped by the highly variable climate. That means they are generally more proficient at adaptation than farmers or other livestock keepers, who are used to a more stable environment. But even among pastoralists, some local champions are more successful than others in adapting and securing their livelihoods in the face of a changing world. They also experiment with different breeds of cattle and goats to find crosses that are both productive and resilient. It is, therefore, important disseminating such innovation by supporting the pioneers in facilitating field days where the pioneers show their techniques to interested neighbors, explain their reasoning, answer questions, and get advice from others.

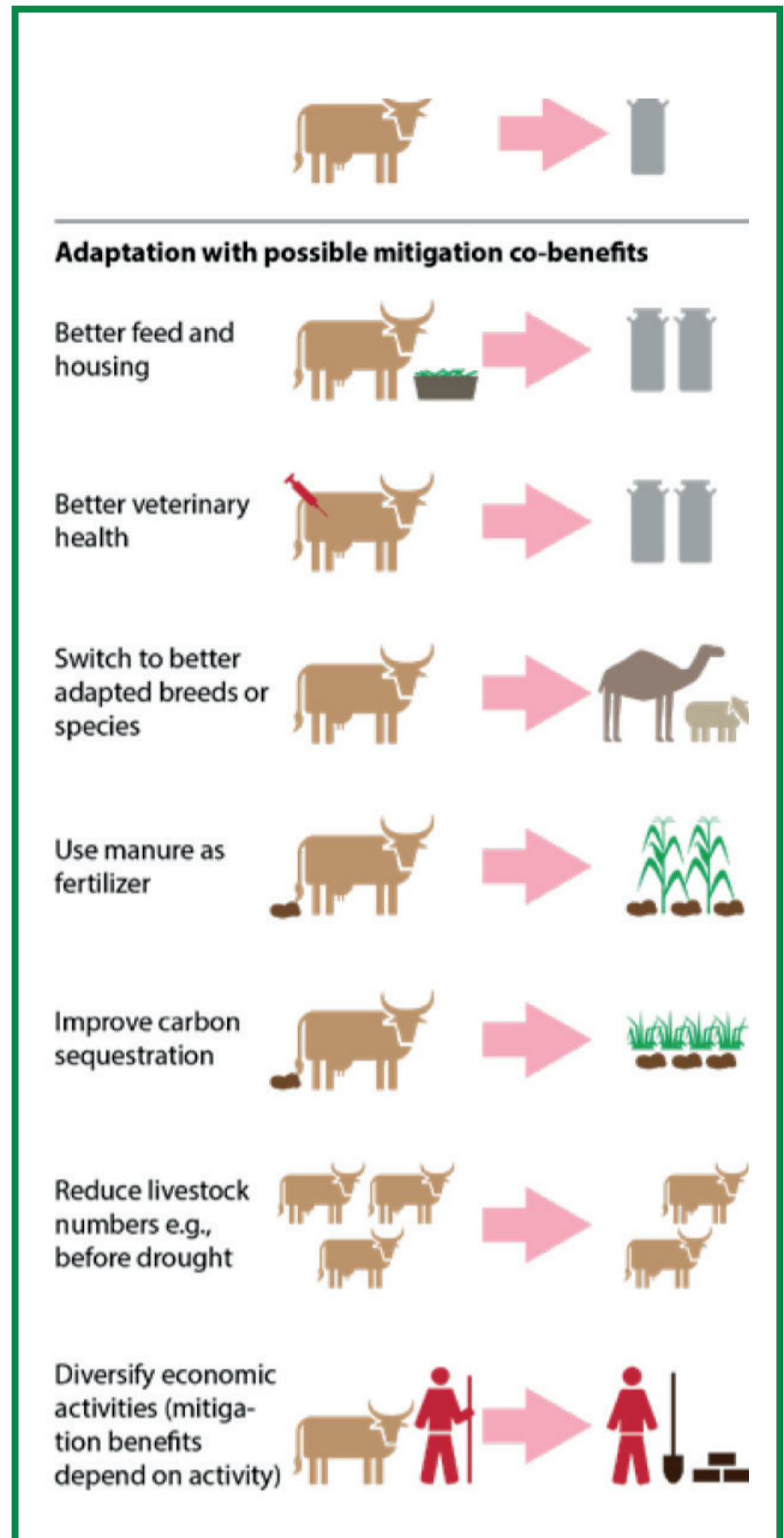


Figure 2: Extensive livestock keepers can adapt to climate change in various ways.

Source: Crane et al., 2022.



Figure 3: Cattle drinking from water pan built by an adaptation pioneer, Kajiado, Photo Credit: ILRI



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