SPARC
Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

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POLICY BRIEF

STATUS OF MOBILITY OF LIVESTOCK IN ETHIOPIA

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Key messages

- **Protect the route network.** Ethiopia's extensive network of 'major' livestock routes extends over 25,500 km. These routes need to be demarcated, protected and maintained, particularly in pastoral areas, to ensure year-round access to grazing and water resources.
- **Establish and maintain supporting livestock infrastructure.** Infrastructure to support livestock mobility – including veterinary posts, resting places, abattoirs, and water points – is minimal, particularly in pastoral areas. To ensure that livestock reach markets in good condition and the welfare of animals is maintained, there is a need for significant investment, including from the private sector, to establish and maintain this infrastructure particularly along roads.
- **Mitigate emerging threats.** Land use conflicts are a key challenge for mobility in Ethiopia. There is a need to strengthen and implement land use policies and conflict resolution mechanisms, whilst undertaking landscape-led land use planning to address pressures from agricultural expansion, urbanisation, and infrastructure projects that fragment and block mobility corridors.
- **Scale up mapping efforts.** Expand livestock route mapping as a decision-making tool for resource management, disease surveillance, conflict prevention, optimisation of resource use and cultural preservation, and support more detailed mapping of routes at lower levels.
- **Expand policy dialogue and investment.** There is a need for federal and regional dialogue to develop a common vision for land use that integrates livestock, including pastoralism with other land uses. Recognising the true value of livestock ought to lead to increased investment.

Livestock routes are the arteries feeding livestock production nationally. Herd of cattle, Debre Zeit, Ethiopia. Credit: ILRI/Apollo Habtamu

Introduction

Livestock routes have underpinned the livelihoods of rural communities reliant on livestock in Ethiopia for centuries. This is particularly the case for the country's pastoral and agro-pastoral communities, which predominantly inhabit arid and semi-arid lowlands. Such routes facilitate the seasonal movement of livestock, an essential practice that ensures access to grazing and water resources. As climate conditions fluctuate and human activities expand into pastoral lands, understanding and documenting these routes has become increasingly vital if the socioeconomic fabric of pastoral communities and their cultural heritage is to be upheld.

Pastoralism in Ethiopia plays a critical role in the national economy, contributing to food security, employment, and income generation (Pavenello, 2010; ICPALD, 2024). Pastoral areas are connected to long-distance secondary and terminal markets, as well as feedlots, through main roads. Livestock routes serve as arteries that connect grazing areas, dry-season water sources, and markets, allowing for effective transhumance and cross-border trade. With millions of pastoralists depending on livestock, maintaining efficient livestock mobility is crucial for sustaining their livelihoods (Amejo, 2024).

Ethiopia's 1995 Constitution grants land grazing rights and protection against displacement, and the more recent 2020 Pastoral Development Policy and Strategy serves as a framework for pastoralist development. The Rangeland Management and Development Policy 2014 promotes sustainable management of rangeland resources. Though none of these explicitly mention protection of livestock routes, the 2025 Proclamation No. 1376 on Animal Health and Welfare gives protection to working animals during movement and livelihood activities. These existing instruments can serve as a foundation for strengthening policy and legislation protecting livestock routes, alongside regional frameworks like the IGAD Protocol on Transhumance (ICPALD, 2020).

The functionality of livestock routes in Ethiopia faces multiple challenges, including land use conversion to crop farming, urbanisation, climate variability, administrative boundaries that fragment shared grazing lands, and increasing competition for resources. The resulting restrictions on livestock mobility have adverse effects on herd health, market access, and overall pastoral resilience (Flintan, 2011).

This policy brief seeks to provide a snapshot of the status of livestock routes in Ethiopia, highlighting the importance of mobility for livestock for pastoral communities in particular, and proposing actionable recommendations for enhancing the security and sustainability of these critical infrastructures.

The mapping exercise provides a high-level mapping of 'major' livestock routes: those that form the arteries of livestock movement across the country. It was beyond the scope of this high-level exercise to map the thousands of 'minor' routes that exist, and which facilitate movement at a more local level.

The mapping exercise was undertaken by livestock and pastoral experts across eight key regions of Gambella, Benishangul, Harari, Tigray, Somali, Amhara, Oromia, and what was previously the Southern Nations and Nationalities Region (now including South Ethiopia Regional State and the Southwest Ethiopia Peoples' region). Participants drew the routes on topographical maps, whilst documenting information on the status of supporting infrastructure and services. The process was supported by the International Livestock Research Institute (ILRI), Ministry of Agriculture, IGAD Centre for Pastoral Areas and Livestock Development (ICPALD), and regional government.

Current status of livestock mobility

Status of livestock routes

Livestock routes are predominantly concentrated in the Amhara, Oromia and Somali regions, with additional important corridors traversing Afar, Benishangul-Gumuz, and parts of the south-western regions. They form the backbone of livestock production particularly for pastoralism, sustaining livestock populations while enabling access to markets and cross-border trade networks.

Beyond their economic importance, the routes embody the accumulated traditional knowledge and cultural practices of Ethiopia's livestock-including pastoral communities. These practices have guided herd movements for generations, in response to shifting ecological and climatic conditions. Preserving this knowledge is critical for designing context-specific strategies that strengthen pastoral resilience – particularly in the face of increasing climate variability, resource pressures and ethnic conflicts.

Challenges to mobility

Livestock mobility in Ethiopia is threatened by route fragmentation due to land conversion for agriculture, urban expansion, invasive species, increasing conflict and infrastructural development. These changes often lead to increased competition for resources between pastoralists and agriculturalists. The lack of mapping, formal designation or legal recognition for traditional livestock routes results in the designation of these pathways as informal, causing uncertainty and making it difficult for pastoralists to claim their rights to movement.

Why map the routes?

The importance of understanding mobility

By visually representing these routes along with their associated critical infrastructures – such as water points and markets – policy-makers and stakeholders can make informed decisions regarding resource allocation and infrastructure development. This national mapping is a starting point for more detailed mapping at regional and local levels.

Effective understanding of livestock mobility enables better planning of livestock infrastructure such as abattoirs and veterinary posts; disease management; resource distribution; and conflict mitigation. Clear documentation of seasonal routes can help establish stable access to vital grazing areas and water resources, particularly as climate change induces more frequent and severe droughts. Furthermore, recognising the cultural significance of these pathways supports efforts towards preserving the unique heritages of pastoralists and other livestock keepers.

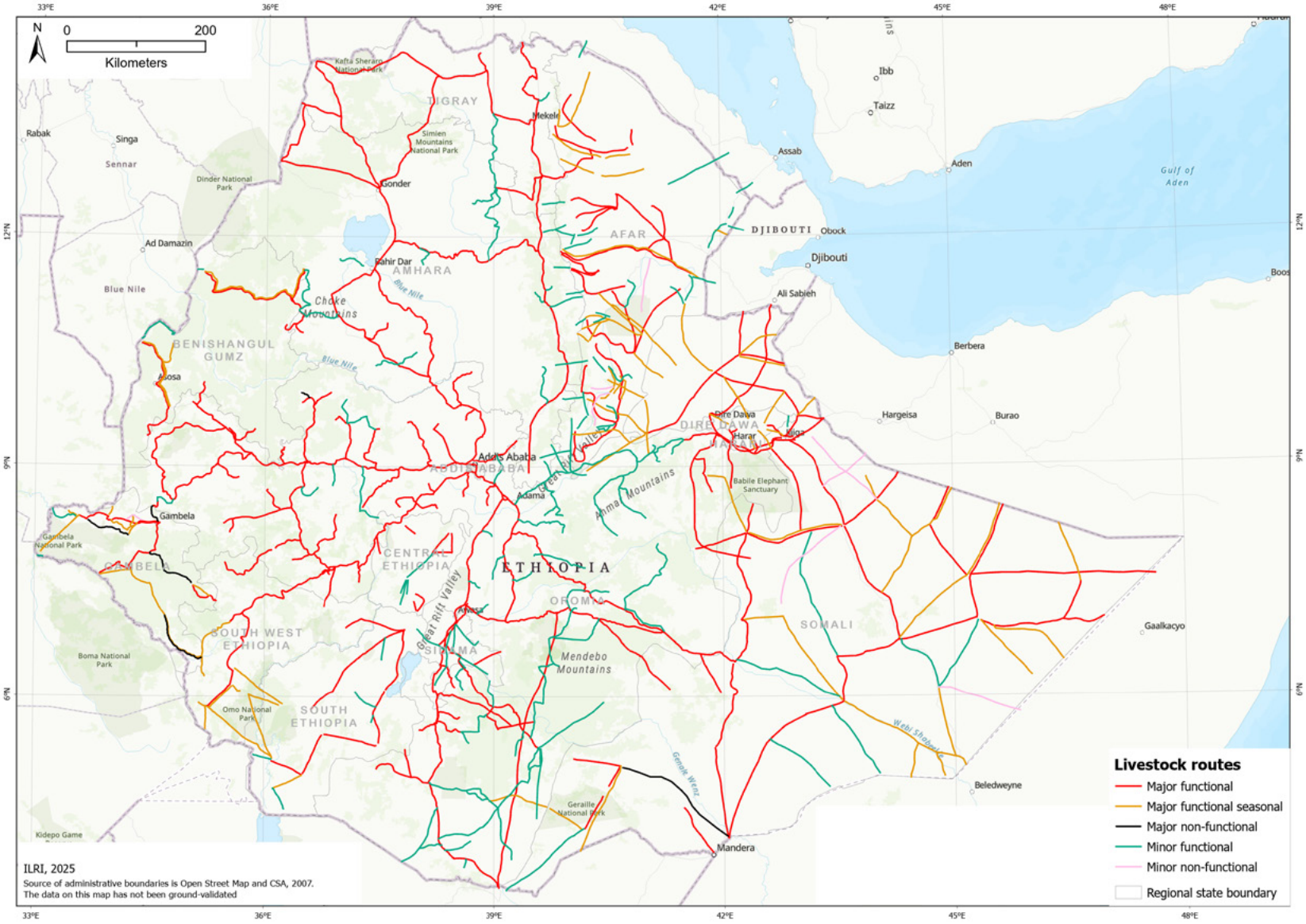
The maps

The mapping process identified a substantial network of routes that facilitate livestock movement throughout Ethiopia. Many of these follow the road network, as moving livestock long distances relies increasingly on trucks. Supporting livestock infrastructure is lacking, particularly in the lowland pastoral areas, where resources including dip tanks, holding grounds and on-/off-loading facilities are needed. The mapping shows that only 83 slaughterhouses exist across the whole country and are situated far from pastoralist areas.

The mapping exercise identified 330 'major' livestock routes, amounting to approximately 25,500 km across Ethiopia in both pastoral/lowland and mixed crop–livestock/highland areas, where, commonly, vehicles are transporting animals to markets. These routes are categorised based on their level of use and functionality:

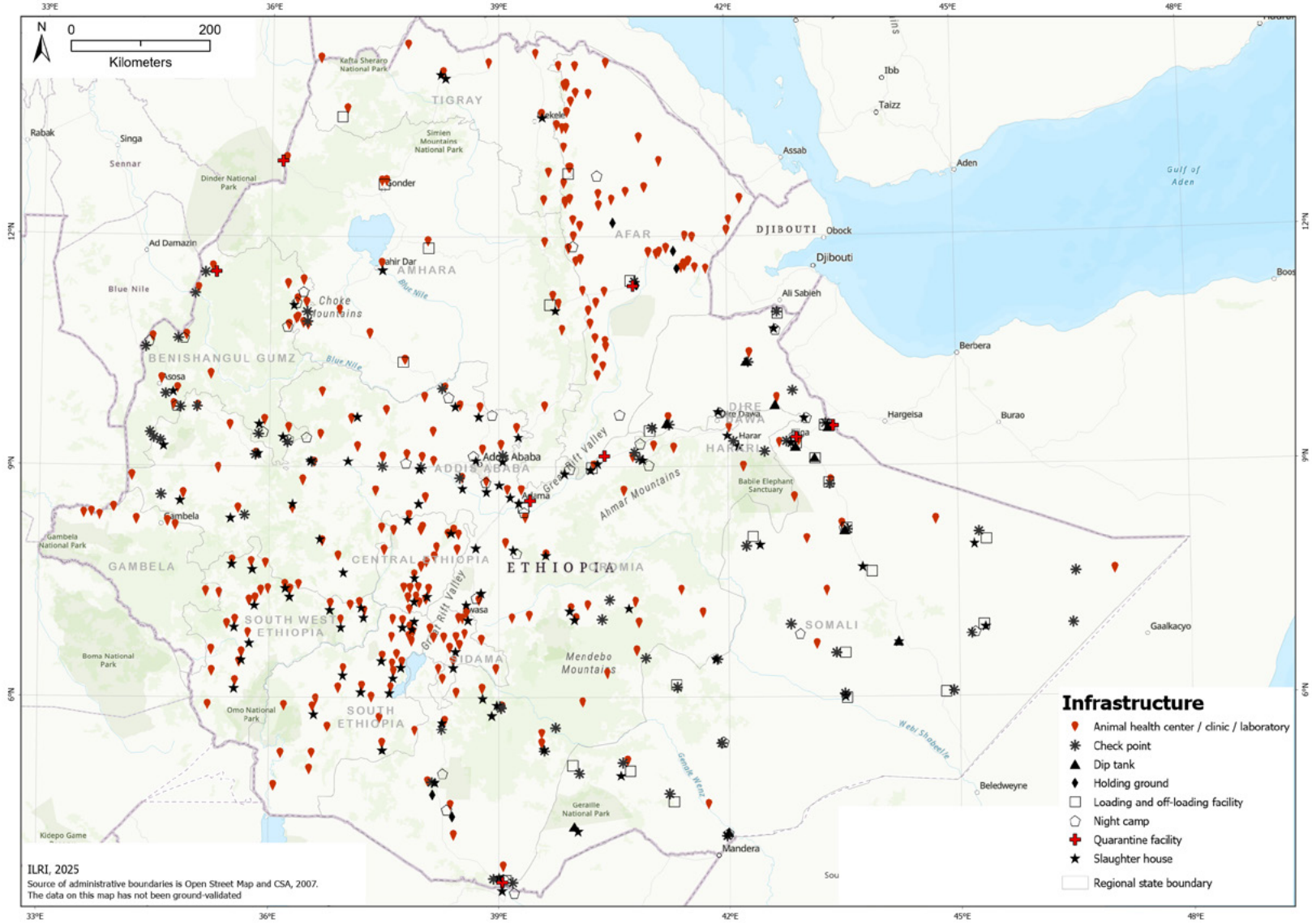
- **Major functional routes:** a significant share of the documented network consists of major functional routes – approximately 12,863 km – serving as the primary corridors that connect markets and dry- and wet-season grazing areas with permanent water sources. Somali (2,644 km), Amhara-Tigray (2,291 km) and Oromia (2,061 km) are the leading regions for the extent of routes.
- **Seasonal functional routes:** several routes are recognised as seasonal pathways, primarily utilised during specific times of the year when rainfall patterns and rangeland conditions dictate herd movements. These cover 5,951 km.
- **Relatively minor and non-functional routes:** other routes were identified as minor functional (6,263 km), supporting localised livestock mobility, while some were identified as non-functional due to encroachment, degradation, or land use changes. The mapping of these requires validation at local level, and investigation into why routes are said not to be functioning.

FIGURE 1. MAP OF 'MAJOR' LIVESTOCK ROUTES IN ETHIOPIA AS DEFINED BY GOVERNMENT LIVESTOCK EXPERTS



Source: authors' own.

FIGURE 2. MAP OF LIVESTOCK INFRASTRUCTURE ACROSS ETHIOPIA, FOLLOWING THE LIVESTOCK ROUTES



Source: authors' own.

Challenges and opportunities for protecting livestock routes

Challenges

The primary challenges to protecting livestock routes include:

- **Land use change:** ill-informed land use decisions can result in land use change that blocks livestock routes. There is a lack of information on routes and their importance, including the necessity of mobility as part of a well-functioning pastoral system.
- **Insecurity:** increased conflict and insecurity pose significant barriers to livestock movement, with conflicts increasingly resulting in violence against pastoral communities and their herds.
- **Infrastructure gaps:** insufficient facilities along routes, such as water points and veterinary services, restrict effective animal movement and compromise livestock health. This results in livestock arriving at markets in poor condition and/or animal welfare being compromised.

Opportunities

This relatively rapid mapping of routes presents an opportunity to inform land use decision-makers about the routes and their importance for livestock production in the country, and particularly in pastoral areas. The routes require demarcation and national protection, together with improved servicing. Documentation of the routes is a starting point for policy engagement and for investment in this, including a role for the private sector. Furthermore, the integration of mapping systems into national databases can enhance visibility for livestock-including pastoral needs, enabling better resource allocation.

The high-level livestock routes mapping presented here is a starting point for more detailed regional-level mapping and local-level mapping, to add layers of detail that can be consolidated to provide a full picture of mobility and its status in the country.

The availability of precise data on major functional routes, non-functional routes, infrastructure, and water resources is fundamental to establishing a Livestock Information System. Specifically, these mappings can elaborate on:

- the functionality and utilisation of various livestock routes based on seasonal patterns
- the distribution and accessibility of livestock markets, which are crucial for the economic survival of livestock keepers – particularly pastoralists
- identification of critical water points, enhancing both livestock health and management.

Conclusion

In summary, functioning livestock routes are critical for the livelihoods of millions who depend on livestock, including through pastoralism. These routes facilitate the movement of livestock within and across regions, and are essential for accessing grazing lands, water sources, and markets. Currently, these routes are under significant threat due to factors such as agricultural expansion, urbanisation, and increasing land conflicts.

Protecting livestock routes is vital not only for the economic well-being of livestock keepers, including pastoralists, but also for food security at a national level. The mobility of livestock ensures the efficient utilisation of resources and supports the resilience of pastoral systems against climate variability and market fluctuations. Furthermore, these routes contribute to cultural heritage, defining the social fabric of livestock-including pastoral communities.

To ensure the preservation of these vital corridors, it is essential to implement policies that recognise and legally protect livestock routes, invest in infrastructure improvements like veterinary services and work with local communities. By safeguarding these routes, Ethiopia can sustain its livestock economy, enhance food security, and promote the well-being of its rural populations.

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About SPARC

Climate change, armed conflict, environmental fragility and weak governance and the impact these have on natural resource-based livelihoods are among the key drivers of both crisis and poverty for communities in some of the world's most vulnerable and conflict-affected countries.

Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC) aims to generate evidence and address knowledge gaps to build the resilience of millions of pastoralists, agro-pastoralists and farmers in these communities in sub-Saharan Africa and the Middle East.

We strive to create impact by using research and evidence to develop knowledge that improves how the UK Foreign, Commonwealth and Development Office (FCDO), donors, non-governmental organisations, local and national governments and civil society can empower these communities in the context of climate change.

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