SPARC
Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises

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POLICY BRIEF

STATUS OF MOBILITY OF LIVESTOCK IN KENYA

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Key messages

- **Strengthen and enforce legal protections for livestock routes.** Strengthen comprehensive policies and legislative frameworks that recognise traditional livestock routes and safeguard them from encroachment and land use changes. This includes creating mechanisms for monitoring and enforcing these protections.
- **Implement participatory mapping and community engagement.** Actively inclusively involve pastoral communities in the mapping of livestock routes and decision-making processes related to land use. Utilise participatory mapping techniques that incorporate the traditional knowledge of local stakeholders, allowing them to document and advocate for their routes effectively.
- **Invest in infrastructure development along livestock routes.** Allocate funding and resources towards the construction and improvement of critical infrastructure along livestock routes, such as water points, veterinary services, and rest areas. Enhancing infrastructure will facilitate better livestock movement and improve access to services critical for herd health.
- **Mitigate emerging threats.** Land use conflicts are a key challenge for mobility in Kenya. There is a need to strengthen and implement land use policies and decision-making that take into account the special needs of pastoral areas, whilst undertaking landscape-level land use planning to address pressures that fragment and block mobility corridors.
- **Enhance cross-border collaboration on livestock mobility.** Strengthen regional cooperation among East African countries to facilitate transboundary livestock movements. Establish agreements that address common challenges and promote peaceful coexistence between different pastoral communities, ensuring that livestock routes are maintained across borders for trade and mobility.

A Samburu boy and girl (L-R) with their herd of cattle 5 km to the west of Oldonyiro town in Isiolo County, Kenya, 2018.
Credit: ILRI Livestock CRP/ Kabir Dhanji

Introduction

Livestock routes have historically underpinned the livelihoods of pastoral and agro-pastoral communities in Kenya, which predominantly inhabit arid and semi-arid lands (ASALs). These routes facilitate the seasonal movement of livestock, an essential practice that ensures the availability of feed and water sources. As climate conditions fluctuate and human activities encroach on pastoral lands, understanding and documenting these routes has become increasingly vital in order to uphold the socioeconomic fabric of pastoral communities and their cultural heritage.

Pastoralism in Kenya plays a critical role in the national economy, contributing to food security, employment, and income generation (Pavenello, 2010; ICPALD, 2024a). With an estimated 10 million pastoralists relying on livestock, sustaining their livelihoods depends on maintaining efficient livestock mobility. Livestock routes serve as arteries that connect grazing areas, water resources and markets, allowing for effective transhumance and trade.

Policies that facilitate the protection of livestock routes do exist, including the National Land Use Policy 2017, the National Livestock Policy 2020, the ASAL Policy 2012, and the Community Land Act 2016, alongside regional frameworks like the IGAD Protocol on Transhumance (ICPALD, 2020) recently signed by Kenya (ICPALD, 2024b). However, the protection of these vital routes faces multiple challenges, including land degradation, urbanisation, climate change, and social conflicts. The resulting restrictions on livestock mobility have adverse effects on herd health, market access, and overall pastoral livelihoods (Flintan, 2011).

This policy brief seeks to provide a high-level analysis of the status of livestock routes in Kenya, highlighting the importance of mobility for pastoral communities and proposing actionable recommendations for enhancing the security and sustainability of these critical infrastructures. Participants drew the routes on topographical maps, whilst documenting information on supporting infrastructure and services. The mapping was supported by the International Livestock Research Institute (ILRI), IGAD Centre for Pastoral Areas and Livestock Development (ICPALD), and the State Department of Livestock, and enriched by the knowledge and participation of livestock and pastoral experts from all 47 counties of Kenya.

Current status of livestock mobility

Status of livestock routes

Livestock routes are predominantly located in the northern and eastern regions of Kenya, where pastoralism is an entrenched way of life, particularly in counties like Turkana, Marsabit, Mandera, Wajir, Tana River, Garissa, Isiolo, Kitui and Kajiado. Together, they play a significant role in sustaining livestock populations and supporting market access.

Beyond the economic importance, the routes also embody the traditional knowledge and cultural practices of pastoral communities, which have adapted their movement strategies over generations according to climatic and environmental conditions. This traditional knowledge holds critical importance for developing context-specific strategies that enhance pastoral resilience, particularly as climate variability intensifies.

Challenges to mobility

Despite the established networks, livestock mobility faces numerous challenges:

- **Land use changes:** rapid urbanisation and agricultural expansion have led to the conversion of traditional grazing lands into farmland, significantly impacting the integrity and functionality of livestock routes. As towns expand, the encroachment upon these corridors results in lost pastureland and greater difficulty of movement.
- **Infrastructure development:** the construction of roads, highways, and other infrastructure has resulted in the fragmentation of livestock routes. Newly developed infrastructure can hinder movement and increase travel times for pastoralists seeking access to markets or grazing areas.
- **Insecurity and conflict:** social conflicts between communities, often arising from resource competition, disrupt traditional pastoral routes and lead to violence. Instances of livestock raids and cattle rustling trigger insecurity that impedes mobility and limits pastoralists' access to their grazing lands.

- **Climate change:** variability in weather patterns affects the availability of water resources and grazing land, forcing pastoralists to alter their traditional mobility patterns. Periods of drought can lead to resource-based conflicts, while flooding can obstruct access to established routes.

- **Policy and regulatory barriers:** limited recognition of the importance of livestock routes in national and local policies has resulted in inadequate infrastructure planning that considers the needs of pastoralists. Regulatory frameworks often neglect to prioritise the protection of these corridors, leaving them vulnerable to encroachments and mismanagement.

Why is understanding mobility important?

Understanding livestock mobility is fundamental for several reasons. Firstly, livestock mobility is essential for maintaining herd health and productivity. Access to diverse grazing areas reduces the risk of overgrazing and enables herders to adapt to changing environmental conditions. In the context of climate change, effective understanding of mobility is critical for implementing adaptive strategies and responding flexibly to environmental changes and unpredictability.

Efficient livestock movement enhances food security by ensuring that pastoralists can access markets to sell livestock and animal products, contributing to national food supply chains. Recognising and reinforcing traditional mobility can help alleviate tensions and conflicts over resource access. By formalising the routes, communities can establish a framework for equitable resource distribution.

By visually representing these routes along with 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.

The maps

The mapping process identified a substantial network of routes that facilitate livestock movement throughout Kenya. Many of these follow the road network, as long-distance movement of livestock relies increasingly on trucks. Supporting livestock infrastructure is lacking, particularly in the lowland pastoral areas, where resources including veterinary health posts, dip tanks, holding grounds and on-/off-loading facilities are needed.

The mapping exercise identified 646 'major' livestock routes, amounting to approximately 31,597 km across Kenya 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:

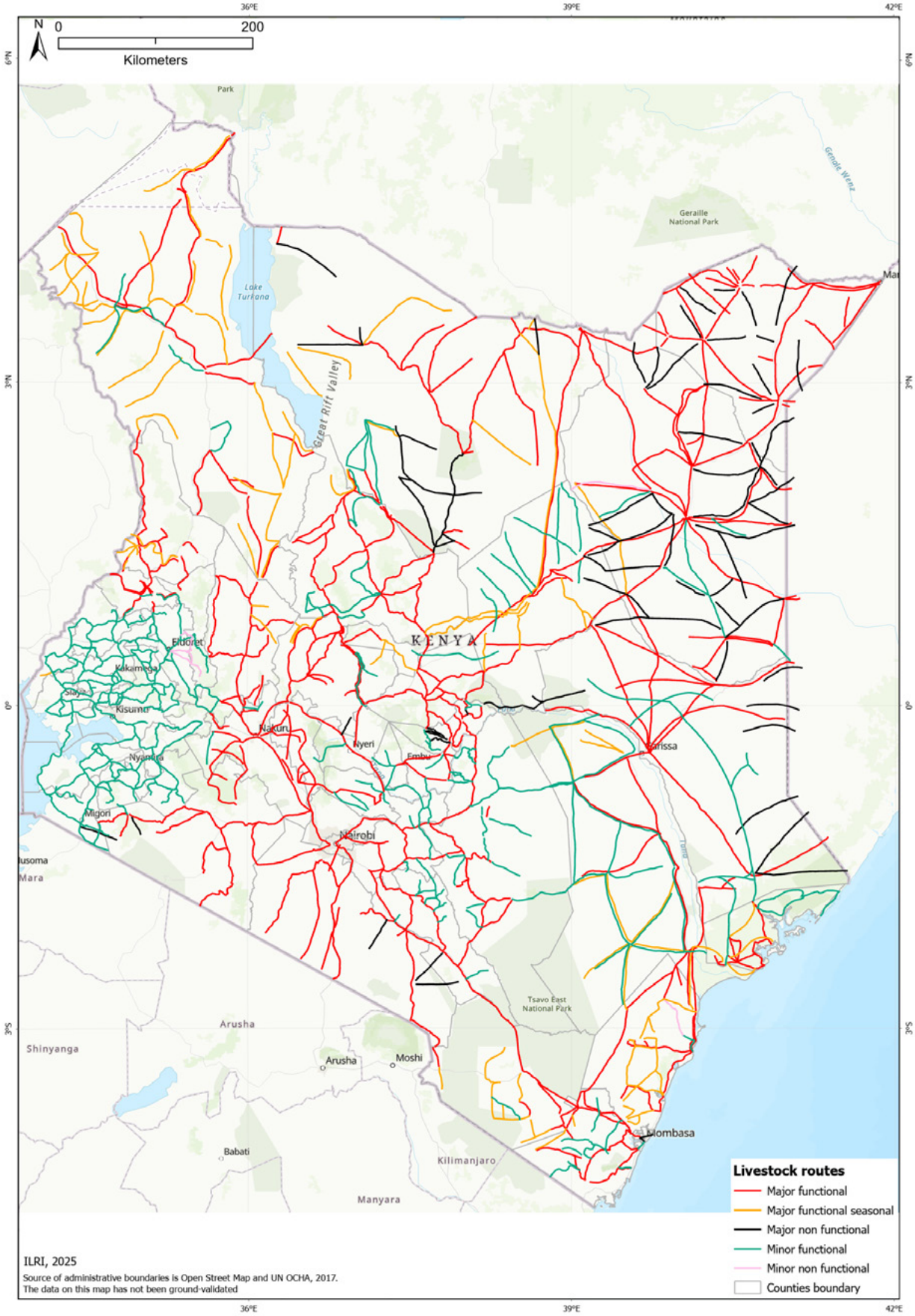
- **Major functional routes:** approximately 14,925 km are classified as major functional routes that serve as primary pathways linking grazing grounds to water resources and market areas. Meanwhile, routes that are considered major but non-functional account for 3,424 km.

- **Seasonal functional routes:** about 4,825 km are identified as seasonal routes, primarily used during specific periods of the year when climate conditions dictate movement patterns.

- **Minor functional:** approximately 8,186 km of routes were identified as minor functional. Of other minor routes, 237 km were classified as non-functional.

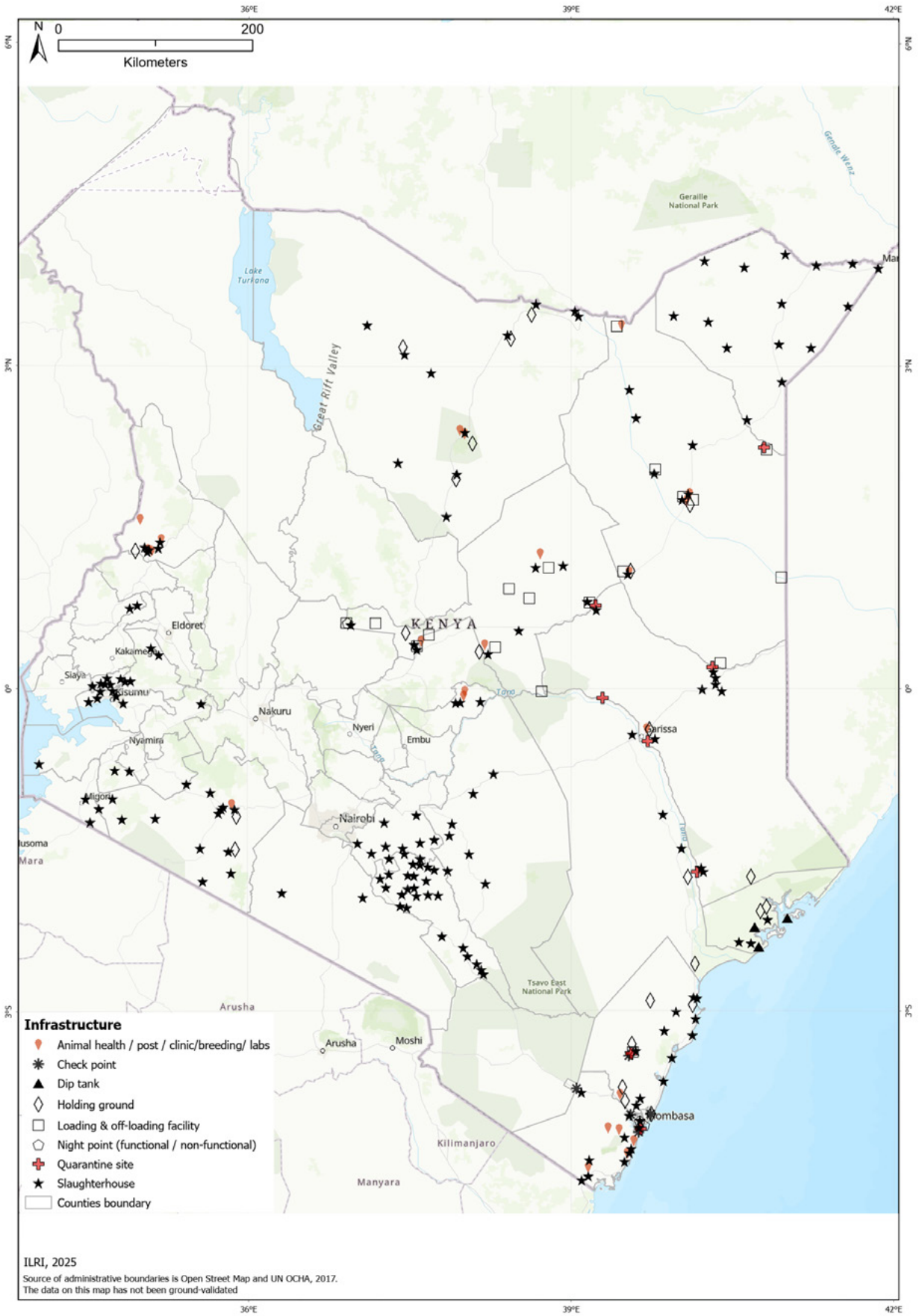
Around 80 routes were identified as non-functional, 76 of these said to be major routes. Causes of non-functionality include land use change, invasive species and conflict. The overall length and number of these non-functional routes is significant and demands further investigation into when and why these routes are blocked, and the implications of this.

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



Source: authors' own.

FIGURE 2. MAP OF LIVESTOCK INFRASTRUCTURE ACROSS KENYA, 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 and environmental degradation.** Ill-informed land use decisions can result in land use change that blocks livestock routes. There is a lack of information about routes and their importance, including the necessity of mobility as part of a well-functioning pastoral system. Intensity of grazing on remaining pastures has led to loss of vegetation and reduced soil fertility, further exacerbating the challenges of mobility.
- **Insufficient infrastructure.** The lack of proper infrastructure along livestock routes, such as water points and veterinary services, limits the ability of pastoralists to move their livestock efficiently and safely. This results in livestock arriving at markets in poor condition and/or animal welfare being compromised.
- **Lack of participation.** The marginalisation of pastoral communities from decision-making processes regarding land use and resource management limits their agency and ability to advocate for their rights, including for mobility.
- **Inadequate data.** While mapping efforts have made strides in cataloguing livestock routes, ongoing data collection is necessary to keep up with changes in land use and mobility patterns.

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 with appropriate supporting infrastructure. Documentation of the routes is a starting point for policy engagement and 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, then the local-level mapping necessary to add layers of detail that can be consolidated to provide a full picture of mobility and its status in the country. Advances in technology, such as GIS (Geographic Information Systems), can aid in mapping and tracking route usage patterns, making it easier to inform policy decisions based on real-time data.

Though relatively enabling policies and legislation exist, they could be strengthened to more comprehensively protect livestock routes. Collaborating with neighbouring countries to manage shared grazing routes can foster peace and cooperation, and reduce conflict over resources.

Government experts drawing major livestock routes on topographical maps, whilst documenting livestock infrastructure and services, Kenya, 2025. Credit: Mohammed Said/ILRI

Conclusion

Livestock routes represent the lifeblood of livestock keepers in Kenya, particularly in pastoral and agro-pastoral communities, ensuring that millions can sustain their livelihoods amidst the challenges posed by climate change, land degradation, and conflict. Threats to livestock mobility – ranging from land use changes to inadequate infrastructure, resulting in a significant number of non-functional routes – necessitate urgent action and attention from policy-makers. Existing national policies provide a framework for protection; however, they need to be made more robust if they are to be effectively implemented.

The high-level mapping achieved here is a foundation for more local-level mapping and detailing of movements. Innovative approaches such as GIS technology can facilitate the continuous mapping and monitoring of routes, ensuring that relevant data informs policies sustainably. Recognising and formalising livestock routes not only preserves an essential aspect of Kenya's pastoral economy but also promotes harmony among communities, fostering collaborative resource management agreements that benefit all stakeholders involved.

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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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