



Enabling Adaptation

HARNESSING THE POWER OF PARTICIPATORY APPROACHES
TO FACILITATE LOCALLY LED CLIMATE ADAPTATION IN NORTHERN KENYA

OCTOBER 2025



ABOUT SPARC

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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ABOUT THE COVER IMAGE

A community researcher shares preliminary findings from this study in a community sensemaking, validation, and action planning session in Sereolipi, Waso Ward in Northern Kenya in March 2025. Photo Credit: Mercy Corps Kenya.

Funded by



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This report was written by four of this study's principal investigators: Britt Sloan, Geoffrey Lelenguyah, Alma Bezares Calderón, and Ryan Sheely. Bharathi Radhakrishnan is also a principal investigator on this study. She led the study from initial design through data collection and provided a review and edits to this report.

As a piece of participatory research, this study is the result of the collaborative efforts of a wide range of individuals throughout the entire research process. Will Baron, Nelson Ochieng Owange, and Edwin Mbaya from the Mercy Corps Kenya country office all made substantial contributions at the outset of the study by helping to find overlaps between the proposed research and the country office's programming portfolio on governance, climate adaptation, and rangeland management. Bonface Kangentu Kaberia and Alex Sayon Lengarite from the Mercy Corps RANGE programme have been key partners in supporting the integration of this study into the programme's workplan and activities. Ifeoluwa Olawole and Simon Mercer from Mercy Corps' Research and Learning Team played important roles in the early development of the design and scope of this study.

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Joel Mulwa

Executive Summary

Over the past decade, locally led adaptation (LLA) has gained recognition within global climate resilience efforts. Defined by its emphasis on shifting power and resources to local actors, LLA is underpinned by principles of equity, inclusion, and community agency. Despite widespread endorsement of these principles, there remains limited evidence on how governance structures and political dynamics shape the ability of communities to lead climate adaptation in practice. This study contributes to filling that gap by examining how participatory research and decision-making processes can help diverse local stakeholders to overcome barriers to LLA in the context of drought in pastoralist and agro-pastoralist communities in Isiolo, Marsabit, and Samburu Counties in Northern Kenya.

The study was carried out between September 2024 and March 2025 in three wards (Chari in Isiolo County, Laisamis in Marsabit County, and Waso in Samburu County), in collaboration with Mercy Corps Kenya's Resilient Approaches in Natural Rangeland Ecosystems (RANGE) programme. The study was conducted through a participatory research process involving community researchers, local government officials, and RANGE programme partners. Data collection included 12 focus group discussions (FGDs) led by community researchers from each of the wards included in the study. Analysis included a mix of thematic analysis and systems analysis led by the core research team, alongside sensemaking sessions with community researchers, local government officials, and a civil society stakeholder. The analysis process also included community validation sessions to connect emerging themes to local realities and to identify actions that Mercy Corps and its partners can undertake to support adaptations.



Patrick Meinhardt / Mercy Corps - Kenya

Findings

The findings offer insights into the locally prioritised adaptations to drought, barriers to and enablers of those adaptations, and the role of participatory approaches in advancing LLA principles.

Drought as the Central Climate Challenge Facing Communities

Across nearly all FGDs, communities identified drought as the most pressing climate shock affecting their daily lives. Participants described increasingly unpredictable, prolonged, and intense droughts that disrupt livelihoods, exacerbate resource-based conflict, and undermine wellbeing. Systems mapping analysis revealed complex, mutually reinforcing downstream effects of drought, including diminished pastures, water scarcity, livestock disease, economic hardship, malnutrition, and intercommunal conflict. These effects are experienced differently across groups, with women, youth, and children bearing distinct burdens.

Locally Led Adaptations to Drought in Northern Kenya

Communities are already undertaking a range of locally led adaptations to mitigate the effects of drought, drawing on long-standing cultural practices and newer interventions by civil society, local governments, and external donors. Four key strategies emerged across all wards:

- **Rangeland Management:** Includes grazing plans, land use bylaws, invasive species control, and indigenous conservation practices.
- **Conflict Management:** Encompasses traditional dispute resolution, Local Peace Committees, intercommunal dialogues, and informal patrols.
- **Herd Management:** Involves destocking/restocking, livestock health interventions, drought-resistant breeds, and fodder harvesting.
- **Diversification of Livelihoods:** Includes kitchen gardening, gum and resin harvesting, small businesses, and vocational training.

Barriers to and Enablers of Locally Led Adaptations to Drought

Despite active engagement in adapting to drought, communities face several cross-cutting barriers:

- **Poor Infrastructure and Services:** Limited access to water systems, veterinary care, law enforcement, and financial services impedes all four adaptations.
- **Exclusive Governance and Social Norms:** Traditional structures often exclude women, youth, and marginalised groups from decision-making, limiting equitable participation.
- **Economic Hardship:** Financial constraints prevent households from investing in sustainable adaptations and participating in governance processes.

Conversely, five categories of enablers are critical to overcoming these barriers and unlocking the potential of locally led adaptations:

- **Coordination and Relationships:** Community governance structures (Rangeland Management Committees, Water Resource User Associations, and conservancies) and linkages to formal institutions and markets facilitate collective action and service delivery. Relationships between individuals—and related norms of solidarity and reciprocity—form the backbone of a “moral economy” that serves as a powerful source of informal social protection.
- **Skills and Capacities:** Technical training, mentorship, and financial literacy empower individuals and governance bodies to implement and sustain adaptations.
- **Information and Data:** Climate forecasts, indigenous knowledge, and context analysis support timely and locally relevant decision-making.
- **Resources and Infrastructure:** Public infrastructure (roads, water systems, communications) and material assets (seeds, livestock, equipment) are essential for adaptation implementation.
- **Principles and Norms:** Participation, inclusion, transparency, and equity underpin effective governance and ensure that adaptations reflect community priorities.

Participatory Research as a Catalyst for Locally Led Adaptation



Ezra Millstein / Mercy Corps - Kenya

More broadly, this study demonstrates how participatory research methods can help realise LLA principles. By involving community researchers, local officials, and programme partners throughout the research lifecycle, the study created space for inclusive problem analysis, evidence generation, and action planning. The final phase of the research process facilitated community-led brainstorming of awareness-raising, advocacy, and collective action initiatives to strengthen enabling factors and support desired adaptations. These ideas are being incorporated into RANGE programme activities by Mercy Corps, the Frontier Counties Development Council (FCDC), and local civil society organisations (CSOs), ensuring that the evidence directly informs locally led climate action.



Ezra Millstein / Mercy Corps - Kenya

Recommendations

This study's findings lead to four high-level recommendations to civil society actors, policymakers, and donors seeking to support LLA in East Africa's drylands and beyond:

- 1 Sequence and Layer Participation Thoughtfully-** Define the full range of 'local' stakeholders and identify opportunities to increase meaningful participation across planning and implementation cycles.
- 2 Empower Communities to Define Climate Challenges-** Use participatory tools to enable communities to prioritise climate risks and contribute local knowledge to problem analysis and adaptation planning.
- 3 Identify and Strengthen Locally Led Adaptations-** Focus on existing and latent community-led strategies and the types of participation and collaboration that help overcome barriers to their success.
- 4 Integrate Participatory Research into Programming-** Embed participatory research and monitoring methods throughout programme cycles to simultaneously meet evidence needs and model inclusive, accountable decision-making.



Ryan Sheely / Mercy Corps - Kenya

Community researchers work together to review the draft FGD questionnaire during the January 2025 qualitative methods training.



Ezra Millstein / Mercy Corps - Kenya

The Eight Principles of Locally Led Adaptation

- 1 Devolving decision-making to the lowest appropriate level
- 2 Addressing structural inequalities faced by vulnerable groups, including women and children
- 3 Providing accessible, patient, and predictable funding
- 4 Investing in local capabilities
- 5 Building a robust understanding of climate risk and uncertainty
- 6 Flexible programming and learning
- 7 Ensuring transparency and accountability
- 8 Collaborative action and investment

BOX 1: The Eight Principles of Locally Led Adaptation

Introduction

Existing Evidence and Evidence Gaps on Locally Led Adaptation

Over the past decade, **locally led adaptation** (LLA) has gained growing recognition as a critical approach to bolstering climate resilience. Enshrined in the 2019 [Adapt Now](#) flagship report of the Global Commission on Adaptation, LLA is widely understood as “recognising the value of local knowledge and expertise to address climate risk and ensures that local actors on the front lines of climate change have equitable access to power and resources to build resilience” (Coger et al. 2022, p.2). LLA seeks to distinguish itself from other participatory approaches, such as community-based adaptation and community-driven development, by emphasising the central role of diverse local stakeholders in decision making processes, both as an acknowledgement of their implicit agency and as an effort to meaningfully integrate values of equity and social inclusion (Tye & Suarez 2021).

To advance the global commitment to supporting LLA, the Global Commission on Adaptation formulated eight key principles, which focus on addressing common challenges of translating LLA into action (**Box 1**).¹ LLA argues that these principles are best realised through the active engagement of local institutions, including public authorities, private sector enterprises, and civil society organisations, as the key delivery partners to local communities (Soanes et al. 2021).

¹ These principles were developed in 2020 for the Global Commission on Adaptation by the International Institute for Environment and Development (IIED) and World Resources Institute (WRI) (Soanes et al. 2021; Rahman et al. 2023). Over 130 organisations have [endorsed the principles of locally led adaptation](#), including Mercy Corps, which published its [commitment to the principles](#) in 2021.



Patrick Meinhardt / Mercy Corps - Kenya

Separately, a body of literature on climate adaptation emphasises the importance of effective and inclusive local governance structures in promoting climate resilience (Birchall 2023; Chu 2015; OECD 2023). These structures shape the enabling environment for climate adaptation through policies and service delivery, connect households to local forums and resources for collective action on adaptation, and link local communities to external interventions at the regional and national levels (Agrawal, et al. 2008; Virinder, et al. 2014). Previous research has further found that effective and legitimate local governance can mitigate the risk that the effects of climate change will spark conflict (Jene & Tesfaye 2020; Adano et al. 2012).

Despite the growth of the literature on climate adaptation and governance, there is relatively little evidence about how the design and implementation of programmes and policies can address governance challenges such as accountability, power, and justice to LLA in practice, even though they are mentioned within the principles of locally led adaptation (Rahman et al. 2023; Cogger et al. 2022; LIFE-AR 2024). This study contributes

to filling this evidence gap **by exploring how participatory research and decision-making shape the ability of a diverse set of stakeholders—including county governments, International Non-Governmental Organisations (INGOs), local Civil Society Organisations (CSOs), and community members themselves—to address barriers to and enablers of locally led climate adaptation** within the specific context of **drought** and related hazards **in arid and semi-arid regions of Northern Kenya**.

To do so, this study builds on a broader body of existing theory and evidence on the linkage between **participatory governance** and **adaptive development**. It integrates the insights of this literature with the research and practice on locally led climate adaptation (Levy 2014; Andrews et al. 2017; Hakiman & Sheely 2023; Hakiman & Sheely 2024). In particular, this study builds on a research project that Mercy Corps conducted in the aftermath of the COVID-19 pandemic, entitled [Participatory Adaptations in the COVID-19 Era \(PACE\)](#), which examined how Mercy Corps teams adapted their participatory programmes to the wide range of constraints provoked by the pandemic, as well as concurrent dynamics, such as insecurity, climate shocks, and other public health emergencies (Sloan et al. 2024).

One of the central findings of the PACE study is that **genuine and proactive efforts to prioritise meaningful community participation in decision-making were essential to enabling effective locally led adaptations to unexpected shocks**. The central hypothesis of this study is that if this causal mechanism is also relevant to efforts to build climate resilience, **we would expect to observe evidence that participatory approaches help communities and other local stakeholders to address governance challenges and power dynamics that block the realisation of LLA principles**.



Patrick Meinhardt / Mercy Corps - Kenya

Aim and Outline of This Study

This report seeks to contribute to evidence, practice, and policy related to LLA by testing the plausibility of this hypothesis about the connections between participation, local leadership, and adaptation within the context of climate shocks and stresses.² This study focuses on understanding the enablers of and barriers to locally led adaptations to the climate hazards that affect pastoralists and agro-pastoralists in arid and semi-arid regions of Northern Kenya, with a particular focus on drought. Grounded in both participatory research approaches and participatory governance programming, the study aims to directly inform community-based action for climate resilience, while also providing evidence about how a larger set of local, national, and international stakeholders can create an enabling environment for realising the principles of LLA in practice.

The study was carried out between September 2024 and March 2025 in three wards (Chari in Isiolo County, Laisamis in Marsabit County, and Waso in Samburu County), in collaboration with Mercy Corps Kenya's Resilient Approaches in Natural Rangeland Ecosystems (RANGE) programme. The study was conducted through a participatory research process involving community researchers, local government officials, and RANGE programme partners. Data collection included 12 focus group discussions (FGDs) led by community researchers from each of the wards included in the study. Analysis included a mix of thematic analysis and systems analysis led by the core research team, alongside sensemaking sessions with community researchers, local government officials, and a civil society stakeholder. The analysis process also included community validation sessions to connect emerging themes to local realities and to identify actions that the RANGE programme and its local CSO partners will undertake as tangible activities in partnership with communities.

This report proceeds as follows. First, it presents the participatory research approach that guided the methodology—articulating the goals of this approach, the specific steps undertaken, and the unique contributions of participatory research principles and methods to a study on LLA. Next, it provides context on climate change in Northern Kenya as well as local conceptions of drought—which was identified by communities as the most pressing climate shock—and its multiple and interrelated downstream effects. The report then examines four locally led adaptations to drought identified by research participants, including rangeland management, conflict management, herd management, and diversification of livelihoods.³ It also outlines common barriers to these adaptations, including ineffective and exclusive governance, restrictive socio-cultural norms, and economic hardship. The core section of the report explores five critical enablers of the identified locally led adaptations, including 1) coordination and relationships; 2) skills and capacities; 3) information and data; 4) resources and infrastructure; and 5) principles and norms. Finally, the report presents key conclusions about the potential contributions of participatory research and decision-making to LLA and provides recommendations for civil society actors, policymakers, and donors looking to support LLA.



Ezra Millstein / Mercy Corps - Kenya

- 2 Because the current study built on theory and evidence from the PACE research, the full name for the underlying research initiative is Participatory Adaptations for Climate and Environment (PACE II). The PACE II research reported here was undertaken with funding from Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC), which is supported by the United Kingdom's Foreign, Commonwealth, and Development Office (FCDO).
- 3 For a description on the deep cultural and historical roots of these locally led adaptations in Borana pastoralist communities, see Mohamed (2022).

Methodology: Participatory Data Collection, Analysis, and Evidence Use

Core Approach: Participatory Research

In alignment with this study's aim of understanding how participatory approaches can help empower locally led climate adaptation, we decided to draw on **participatory research** to underpin the study design and methodology. Participatory research aims to facilitate direct engagement with communities and other local stakeholders as partners in decision-making about how to generate and use evidence (Vaughn & Jacquez 2020; Jagosh et al. 2012). This engagement may occur throughout all stages of the research and evidence use cycle and may vary in the level of participation—with collaboration and empowerment of communities representing the most meaningful type of participation (as depicted in **Figure 1**). Participatory research is not a strictly defined method. Instead, it encompasses a wide range of methods and facilitative techniques that seek to create space for community perspectives and priorities in a way that centres their agency, curiosity, and knowledge (Sheely 2018; Sloan 2024).

For this study, we drew on the co-PIs previous experiences with participatory research to develop a seven-step process (summarised in **Figure 2**) that aimed to iteratively layer participation by a variety of local stakeholders throughout each stage (Sloan et. al. 2023). Given our interest in understanding how participatory research itself can serve as an approach for realising the principles of LLA, we engaged in regular internal reflection sessions to continuously adapt the process and assess its potential contributions to locally led climate action. We have incorporated these observations into our analysis.

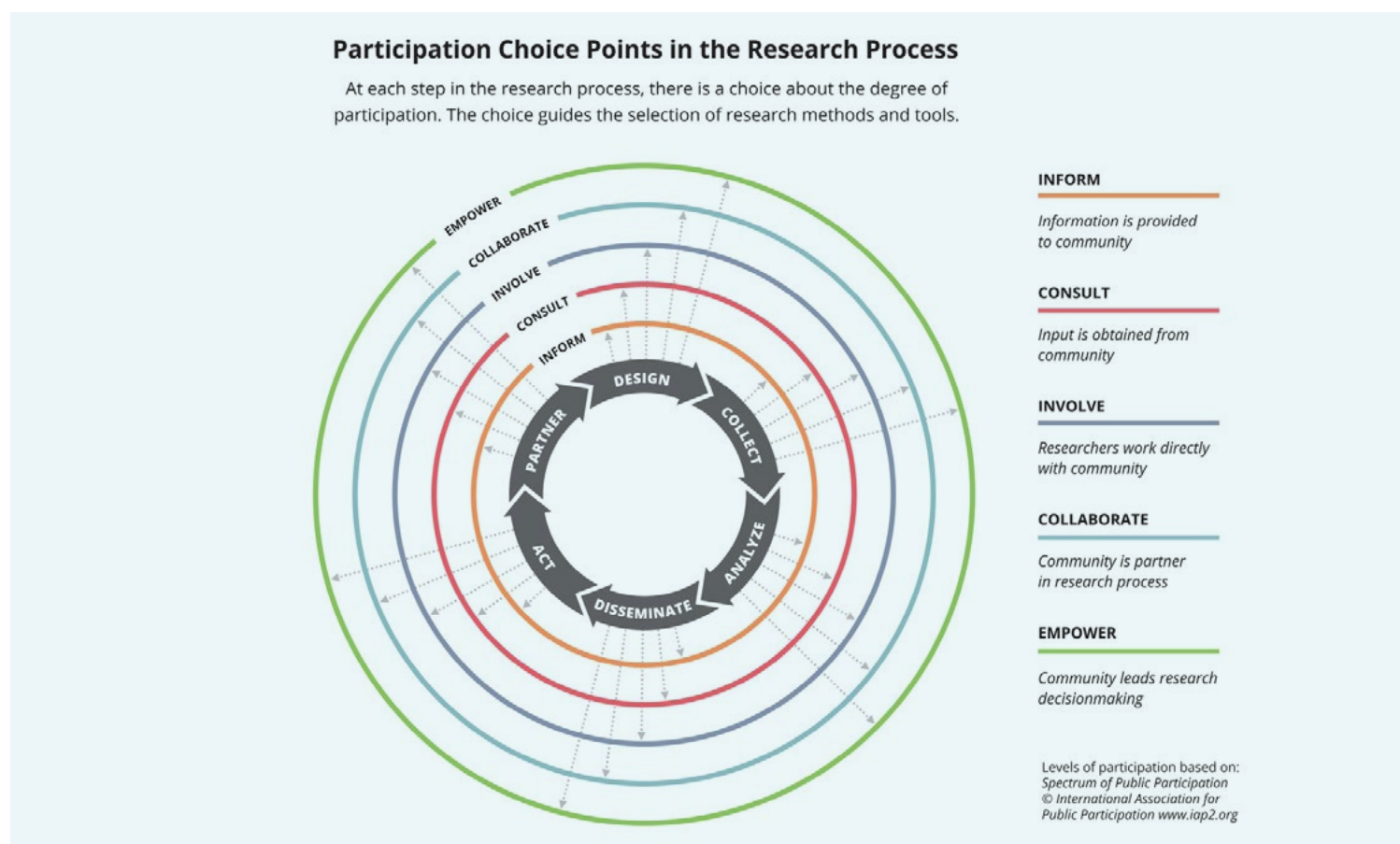


FIGURE 1: Schematic overview of possible levels of participation throughout the research and evidence use lifecycle (Source: Vaughn & Jacquez 2020)



A focus group discussion in session in Kulatanga village in Waso Ward during the community validation meetings in March 2025.

Mercy Corps - Kenya

Overview of the Participatory Research Process in this Study

SELECTING RESEARCH PARTNERS AND LOCATIONS

We started the participatory research process in September 2024 by identifying an existing Mercy Corps programme with which to partner, to ensure that we would have the relationships and resources to meaningfully engage local stakeholders and to harness the research findings for community-based action.⁴ Based on areas of geographic alignment with SPARC, thematic alignment between the proposed research and the country programme, and the availability of field-based staff to partner on the research, we selected Kenya as the most appropriate country programme. We subsequently collaborated with the Mercy Corps Kenya country office to select a specific programme related to climate adaptation, ultimately choosing the Resilient Approaches in Natural Rangeland Ecosystems (RANGE) programme. The programme, funded by the Embassy of the Kingdom of the Netherlands, seeks to strengthen the resilience of communities through sustainable economic and social development in a healthy ecosystem across the three neighbouring counties of Isiolo, Marsabit, and Samburu in Northern Kenya. The programme is implemented by a consortium that includes The Faculty of Geo-Information Science and Earth Observation at University of Twente and the Frontier Counties Development Council (FCDC), a regional economic bloc representing ASAL counties. In addition, the RANGE consortium has established partnership agreements with local Non-Governmental Organisations (NGOs), who will serve as Local Implementing Partners (LIPs), implementing activities aligned with RANGE's overall goals. Furthermore, the programme also has established relationships with officials of the target county governments and with community-based governance structures, including Ward Development Planning Committees, pastoral associations, Water Resource User Associations, and Local Peace Committees. RANGE runs from January 2024 to December 2028 and was in an active inception phase at the outset of the participatory research process in September 2024. This duration and timing ensured space for the meaningful uptake of findings from this study into programming activities being designed and implemented by the RANGE consortium and LIPs.

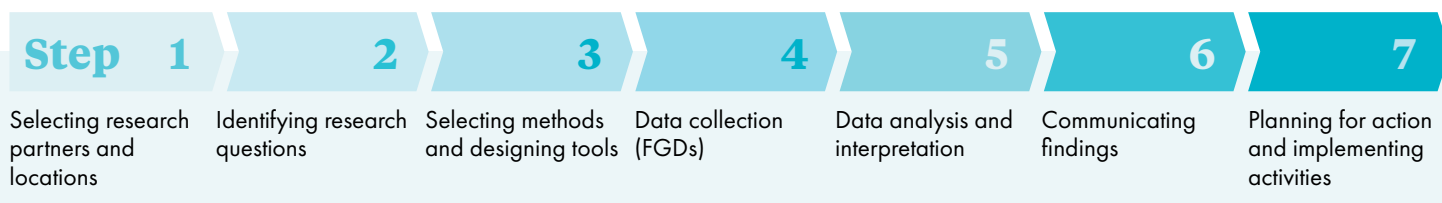


FIGURE 2: The Participatory Research Process Used In this Study

⁴ Throughout this study, the use of the pronoun “we” or the “co-PIs” is used to refer to decisions and actions taken collectively by the five co-Principal Investigators (co-PIs) for the PACE II study. The co-PIs (in alphabetical order by last name) are as follows: Alma Bezares Calderón (Mercy Corps- Research and Learning Team), Geoffrey Lelenguyah (Mercy Corps Kenya/RANGE programme), Bharathi Radhakrishnan (Mercy Corps- Research and Learning Team/Independent Researcher), Ryan Sheely (Mercy Corps-Evidence Use Team), and Britt Sloan (Mercy Corps Consultant). Throughout this report, decisions or activities led by a specific co-PI or set of co-PIs will refer to the relevant co-PI by their last name. Bezares Calderón, Radhakrishnan, and Sheely have been co-PIs on this study since its inception in July 2024; Lelenguyah joined as a co-PI in December 2024 (following the design workshop), and Sloan joined as a co-PI in February 2025 (following the completion of data collection and prior to the start of analysis).

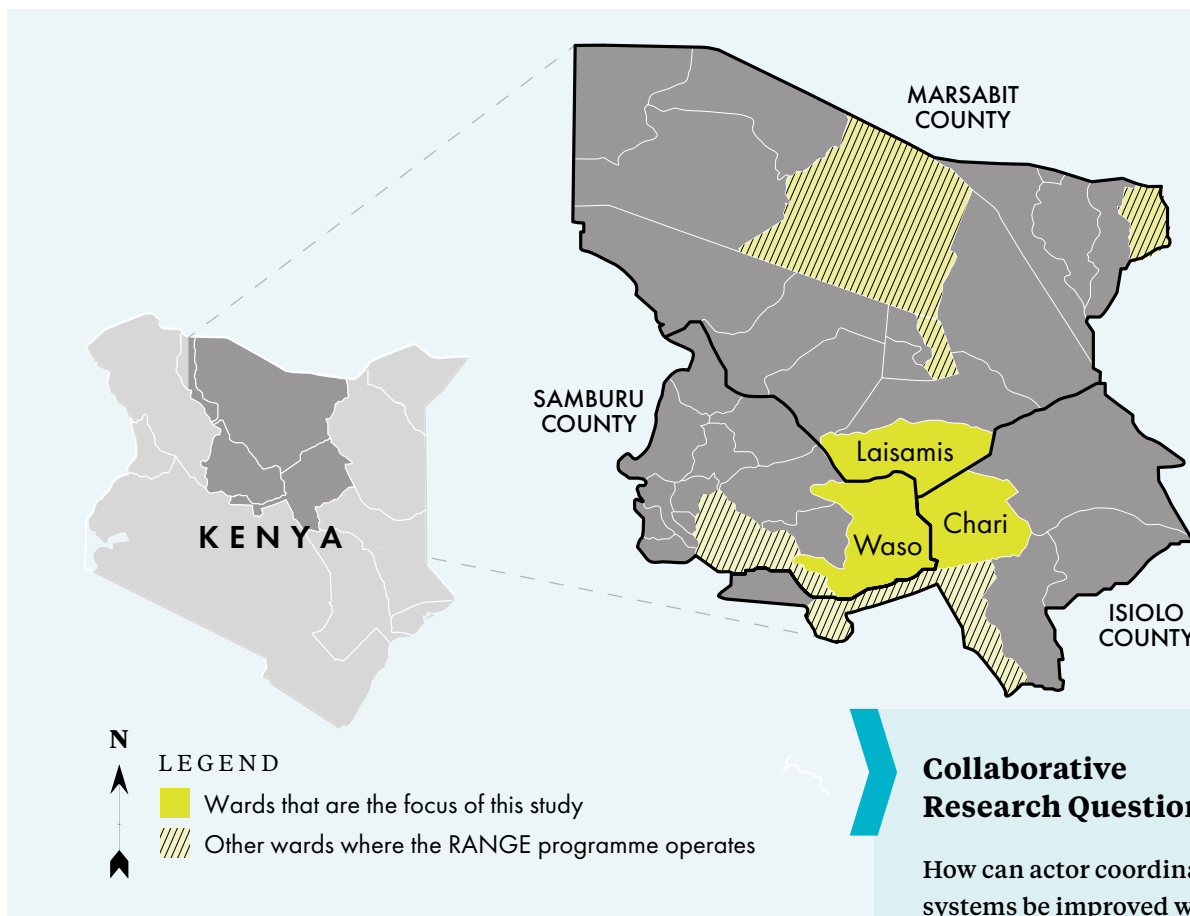


FIGURE 3: Map of RANGE Programme Wards and the Focus Wards for this Study

IDENTIFYING RESEARCH QUESTIONS, SELECTING METHODS, AND DESIGNING TOOLS

Our first engagement with the programme stakeholders was through a two-day **research design workshop** in November 2024. The workshop was facilitated by a co-PI (Radhakrishnan), the RANGE Programme Manager, and a Mercy Corps research team member. Participants included RANGE team members, County Government Directors for Environment and Climate Change, representatives from the FCDC, and a representative from Resilience Reach Initiative (RRI), a community-based organisation in Samburu County. The workshop gave space for the participants to reflect on their own evidence and learning needs and to translate them into research questions and sub-questions (see **Box 2**). The participants also selected three focus wards for this study from among the 12 wards where RANGE operates: Chari Ward (Isiolo County), Laisamis Ward (Marsabit County), and Waso Ward (Samburu County) (see **Figure 3**).⁵ In addition, following the research design workshop, the co-PIs and the Mercy Corps RANGE programme team identified one of its staff members (Lelenguyah) to serve as a co-PI on the study.

⁵ The workshop participants had also selected an additional four wards as study sites for a second phase of the PACE II study that had been scheduled to begin data collection in April 2025: Burat and Ngaremaru Wards (Isiolo County), Sagante/Jaldessa Ward (Marsabit County), and Wamba West Ward (Samburu County). This phase was to be funded by Mercy Corps' internal Country Strategy Realisation Fund, but was cancelled due to budget cuts in February 2025.

Collaborative Research Questions

How can actor coordination and data systems be improved within the RANGE counties to foster stronger climate resilience and climate adaptation efforts and mitigate climate-induced conflicts among communities?

- 1 What coordination efforts and mechanisms exist among different actors (communities, government actors, NGOs, etc.) in the RANGE counties? How can they be strengthened to improve climate resilience and adaptation?
- 2 How can the current skills and capacity strengthening approaches better meet the climate adaptation/resilience needs of the communities in the RANGE counties? Are there ways to fill any existing gaps?
- 3 What data and data management systems exist to inform decisions, and are there ways to improve their efficiency?

BOX 2: Research Questions Developed During Research Design Workshop

Description of the Study Wards

Waso Ward, located in Samburu East sub-county of Samburu County, has a population of 18,666 (9,262 males and 9,404 females). The majority of residents are Samburu pastoralists, though minority groups such as Rendille, Meru, Turkana, Borana, and Somali are also present due to grazing mobility and trade. It is a government priority area hosting three conservancies—Sera, Kalama, and Losesia—and programs such as Mercy Corps NAWIRI. The ward supports Lolkuniyani, Samburu’s largest market, and serves as a key dry season grazing zone for Samburu, Isiolo, and Marsabit, often sparking resource-based conflicts. It also hosts ILRI and NDMA sentinel sites. According to the 2019 hazard map, Waso faces droughts, conflicts, floods, land degradation, invasive species, and livestock diseases.

Chari Ward in Isiolo County has 15,330 people (8,081 males and 7,249 females). The Borana are the majority group in the ward, with Somali minorities. Supported by CRS-NAWIRI, SNV LISTEN, and GIRL-H, it serves as a critical grazing fallback area and houses the Chari Conservancy with active management structures. Linked to Isiolo and local livestock markets, it also lies in the Ewaso Nyiro catchment and hosts an NDMA sentinel site. Hazards include droughts, human-wildlife conflicts, and environmental degradation.

Laisamis Ward, Marsabit County, has 22,964 people (11,664 males and 11,300 females). The Rendille are the majority group in the ward, alongside Borana, Samburu, and Turkana minorities. It hosts Melako Conservancy and a climate change planning committee. The Koya grazing area is vital but conflict prone. Within the Malgis catchment, Laisamis faces recurrent droughts, degradation, and pastoralist pressures.

BOX 3: Description of Waso, Chari, and Laisamis Wards

In January 2025, the Kenya-based co-PI (Lelenguyah) worked with the rest of the RANGE programme team to consult with local leadership, including ward administrators, chiefs, and village administrators to select three specific study sites in each of the three wards. The RANGE programme team subsequently convened initial community engagement meetings in each of the identified study sites to introduce the research and select representative research respondents. To ensure inclusion, the meetings also provided space for participants to collaboratively identify a village within each ward that they felt was most marginalised, based on its remoteness from services. This marginalisation could also overlap with other socio-economic factors for marginalisation—such as clan, profession, and income—but in all cases, was rooted in lack of access to basic services. Furthermore, the community engagement meeting participants nominated two community researchers (one male and one female) in each ward to participate in the design of data collection tools, lead data collection, and collaborate in analysis and sharing results back to the broader community. These community researchers were all under 25 years old, residents of the focus wards, had completed post-secondary education, and had extensive experience in research.

In January 2025, two of the co-PIs (Sheely and Lelenguyah) led a two-day training on qualitative methods with the community researchers and the local stakeholders who had participated in the Research Design Workshop. The participants also collaboratively tested, revised, and translated the draft focus group discussion (FGD) tool. The final FGD tool included two modules: a first module that gave FGD participants the space to identify and prioritise the interconnected climate shocks and stresses that were most meaningful to their community, and a second module that invited a deeper exploration of the adaptations to the hazards prioritised in the first module, along with a discussion of the factors that act as barriers and enablers to those adaptations.



DATA COLLECTION, ANALYSIS, AND INTERPRETATION

The community researchers subsequently conducted 12 FGD (four in each ward), convening male elders, women, youth herders, and residents of marginalised villages (mixed men and women) in February 2025. Youth herders are young people—typically young men—charged with grazing and protecting community herds, who were identified as a target respondent group due to their centrality to local livelihoods and culture.⁶ Participants in each focus group were nominated by community members, based on an open deliberation, focused on selecting participants who were representative of the diversity of lived experiences in the selected villages. The co-PI who directly supported the process of sampling participants (Lelenguyah) noted that community members tended to nominate influential and outspoken persons within each population group, due to a perception that these individuals would be best placed to represent the experiences within the community.

Following the data collection, one of the co-PIs (Sloan) used initial software-enabled thematic coding (in Dedoose) and content analysis of the data to identify an initial list of current and desired local climate adaptations and their enablers in each ward. We also used systems mapping to analyse and visualise the connections between the causes and effects of the climate shocks identified and prioritised by the FGD participants (Angkiriwang 202; Sloan et al. 2024; Ayeb-Karlsson et al. 2025).⁷

Type of FGD	Chari Ward	Laisamis Ward	Waso Ward
Elders	10 male	10 male	10 male
Women	10 female	12 female	10 female
Youth Herders	10 male	10 male	10 male
Residents of Marginalised Villages	5 male / 5 female	5 male / 5 female	4 male / 6 female

TABLE 1: Number and Type of FGD Participants by Ward

⁶ In Samburu communities, these youth herders are referred to as *morans* or warriors. We use this term throughout this report in quotes and references to focus groups from Samburu communities.

⁷ Systems mapping is a visual modelling method for undertaking systems analysis, which seeks to identify and examine complex causal relationships between diverse factors.

Community Researchers, RANGE Programme team members, and County Government Officials collaborate to contextualise the Focus Group Discussion questionnaire during a January 2025 training workshop in Archer's Post, Kenya.



Ryan Sheely / Mercy Corps - Kenya

At this stage, we reengaged all research participants for a series of interactive sensemaking sessions in March 2025, creating space to present the emergent findings and to ensure that local perspectives and priorities were integrated into the data analysis and interpretation. This collaborative sensemaking took place in two steps. First, two of the co-PIs (Bezares Calderón and Lelenguyah) facilitated a three-day workshop with the community researchers and the local stakeholders who had participated in the Research Design Workshop. In this sensemaking workshop, participants helped deepen the analysis of the identified adaptations and enablers in each ward and synthesise the refined findings to share back with community participants. Second, the community researchers, with support from the RANGE team, partners, and other local stakeholders, facilitated half-day community validation sessions with community members who had participated in the community engagement meetings and FGDs in each of the 12 target villages. These validation sessions offered an opportunity to share the emergent findings that were discussed at the sensemaking workshop and elicit feedback on their accuracy in reflecting local perspectives.

For the purpose of this report, the findings have been summarised, with a focus on themes and patterns that emerged across multiple wards, as well as unique insights from individual wards. More nuanced and geographically disaggregated findings were presented directly to the RANGE programme team, local implementing partners, and community-level research participants during the sensemaking workshop, community validation sessions, and a briefing presentation for the purpose of ensuring that the evidence could be used for context-specific adaptive management or policy design. Similarly, we did not explicitly take a gender or youth lens to the data collection or analysis. While we sought to disaggregate the analysis by gender and age, we were limited by the mixing of respondents in the FGDs, sensemaking workshop, and community validation sessions. Where insights by and on specific respondent groups were available, they have been included in the findings.

COMMUNICATING FINDINGS AND PLANNING FOR ACTION

We also used the community validation sessions in March 2025 to begin generating ideas for how to translate the emergent research findings into options for locally led action. We facilitated discussions with the community participants in which they brainstormed options for actions that they believed would strengthen the identified enabling factors and contribute to the prioritised climate adaptations. These community-based actions focused on three categories: **Awareness-Raising**, **Advocacy**, and **Activism/Collective Action** (Box 3). Across all locations, participants brainstormed a substantial number and diversity of actions that can help to unlock the enablers of locally led climate adaptations. At the time of publication (September 2025), the RANGE team is collaborating with their consortium partners and LIPs to incorporate these actions into activities that will be implemented over the next two years of the programme.

Types of Community-Based Actions

- **Awareness Raising** - These are actions that aim to inform, sensitise, or educate the community about a specific topic, with the ultimate goal of shifting attitudes, behaviours, and/or norms.
- **Advocacy** - These are actions that aim to influence decision-makers and power holders to change policies and practices in ways that can benefit the community.
- **Activism/Collective Action** - These are activities that can be undertaken directly by members of the community acting collectively to achieve a common goal. While these may simply be collaborative forms, they may also require external expertise and resources.

BOX 4: Types of Community-Based Actions Brainstormed by Communities



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Community researchers, a RANGE programme team member, and a stakeholder work together to adapt the FGD questionnaire to the local context during the January 2025 qualitative methods training.

Distinctive Elements of the Participatory Research Approach in this Study

While in an ideal participatory research process we would have had the space for more direct engagement with community-level actors from the inception, we adopted an iterative process of increasingly meaningful engagement with a diverse array of local stakeholders at multiple levels—including the Mercy Corps Kenya Country Office, the RANGE programme team, county government officials, community researchers, and community members. One of the core critiques of LLA is the risk of “local” participation being confined to the upper echelons of national and local-level power structures (Rahman et al. 2023). However, our approach of continuous layering—increasingly engaging actors who are **“more local”** to the communities and in **more meaningful forms of participation**—ensured that their voices were central to decision-making throughout the participatory research cycle. For example, the research questions and study sites were initially identified by the RANGE programme team, partners, and county government officials, who focused their learning objectives on the management or governance of climate adaptation projects. However, the involvement of the community researchers—who were themselves nominated during the community engagement meetings—served as a bridge to reframe the questions in the FGD tool in ways that were more relevant to local communities, who further interpreted and responded to the questions in ways that reflected their lived experiences of climate change and real-time adaptation. These community perspectives were honoured and prioritised through the participatory data analysis and interpretation approach, while also seeking to draw broader lessons, where possible.

This approach also implicitly built insights from programming and evidence on good governance directly into the participatory research process. The layered, disaggregated, iterative approach to participatory research described above draws on a broader methodology of participatory planning and community mobilisation used in good governance programming, including Mercy Corps’ CATALYSE approach to community mobilisation (Gurung et al. 2017; Hakiman & Sheely 2024). Notably, the engagement of officials from county governments, FCDC, and the RANGE programme at the outset of the research design phase aimed to encourage them to critically reflect on their needs for both evidence and community engagement in effectively delivering services and development programmes. They also worked collaboratively with the community researchers while revising the FGD tool and interpreting findings in ways that nurtured new relationships. The county officials further served as observers during the FGDs and community validation sessions, creating space for them to listen actively to community members and to test their own assumptions. These types of engagements can help government officials and other powerholders to adopt behaviours and norms that promote good governance and local leadership by helping them understand how being both locally led and evidence driven supports their work and by giving them the skills needed to put these principles into practice (Hakiman & Sheely 2020; Sloan et al. 2024).

“These research findings came at the right time when we are brainstorming interventions within the landscapes we are operating in.”

—Staff Member of a Kenyan NGO partnering with RANGE, April 2025



Patrick Meinhardt / Mercy Corps - Kenya

Mapping Community Understandings of Drought in Northern Kenya

The backdrop for this study is a set of interconnected climate shocks and stresses affecting the fragile ASALs of Northern Kenya. Many of these climatic changes are well documented, including rising temperatures of between 1.0-1.5 degrees Celsius since the 1960s (Ogotu et al. 2016), increasingly unpredictable rainfall patterns that have shifted the onset and duration of traditional rainy and dry seasons (Marshak & Venkat 2021), diminished freshwater resources in rivers and groundwater (Mutiga et al. 2015; Oord et al. 2014), and reduced vegetation cover and indigenous plant species, exacerbating land degradation (Mganga et al. 2018; Lelenguyah et al. 2016). As a result, drought events are both more frequent and severe (Marshak & Venkat 2021). These climate stresses have also been found to increase livestock mortality (Lenaiyasa 2020; Miller et al. 2020; Mutanda & Kimaru 2022), contribute to the spread of livestock disease (Yala et al. 2020; Chepkwony et al. 2020; Filho et al., 2020), and result in more frequent crop failures and reduced agricultural yields (Recha et al. 2016; Omoyo et al. 2015). While the literature consistently suggests an increase in resource-based conflict, most studies emphasise governance and social factors (rather than resource scarcity or climate change) as the proximate causes (Nassef et al. 2022).

Within the context of the primary data collection for this study, our first task was to analyse how community members framed the underlying contributing factors and downstream effects of various climate issues across Chari, Laisamis, and Waso Wards and to identify which issues local communities felt were the most critical. Across all but two focus groups, respondents highlighted drought as the most significant climate shock affecting their daily lives. Respondents particularly focused on the increasingly unpredictable, prolonged, and intense nature of drought.⁸ Only the youth herders in Dima Ado, Chari Ward prioritised resource-based conflict, and women in Kulatanga, Waso Ward prioritised economic hardship, ostensibly due to the immediacy of the effects of these shocks on the respective groups.⁹ Nonetheless, both groups described these issues as direct effects of drought.

“Drought gives birth to the rest of these challenges.”

—Elder, Archer's Post, January 2025

8 This finding about the centrality of drought in community members' perceptions of climate change challenges is broadly consistent with a broader literature on how pastoralists, agro-pastoralists, and farmers in Kenya and Ethiopia perceive climate change (Anbacha & Kjosavik 2019; Cuni-Sanchez et al. 2019; Habtemariam et al. 2016; Schrieks et al. 2024; Guye et al. 2022; Hassan et al. 2024).

9 FGD, Youth Herders, Chari Ward, February 2025; FGD, Women, Chari Ward, February 2025.

To help analyse communities' perceptions of drought, we utilised a systems analysis approach (see **Figure 4**), which assisted us in unpacking the dynamic and complex causal relationships between various factors related to drought (Ayeb-Karlsson 2025). What emerged from this process was a diverse range of downstream effects that are not only causally linked, but also, in many cases, mutually reinforcing.¹⁰ These factors are related to the environment (such as declining fresh water supplies, land degradation, and deforestation), livelihoods (such as poor farm yields and poor health/death of livestock), wellbeing (such as economic hardship, disruption of education, and malnutrition), and insecurity (such as cattle raiding, intercommunal conflict, and theft).

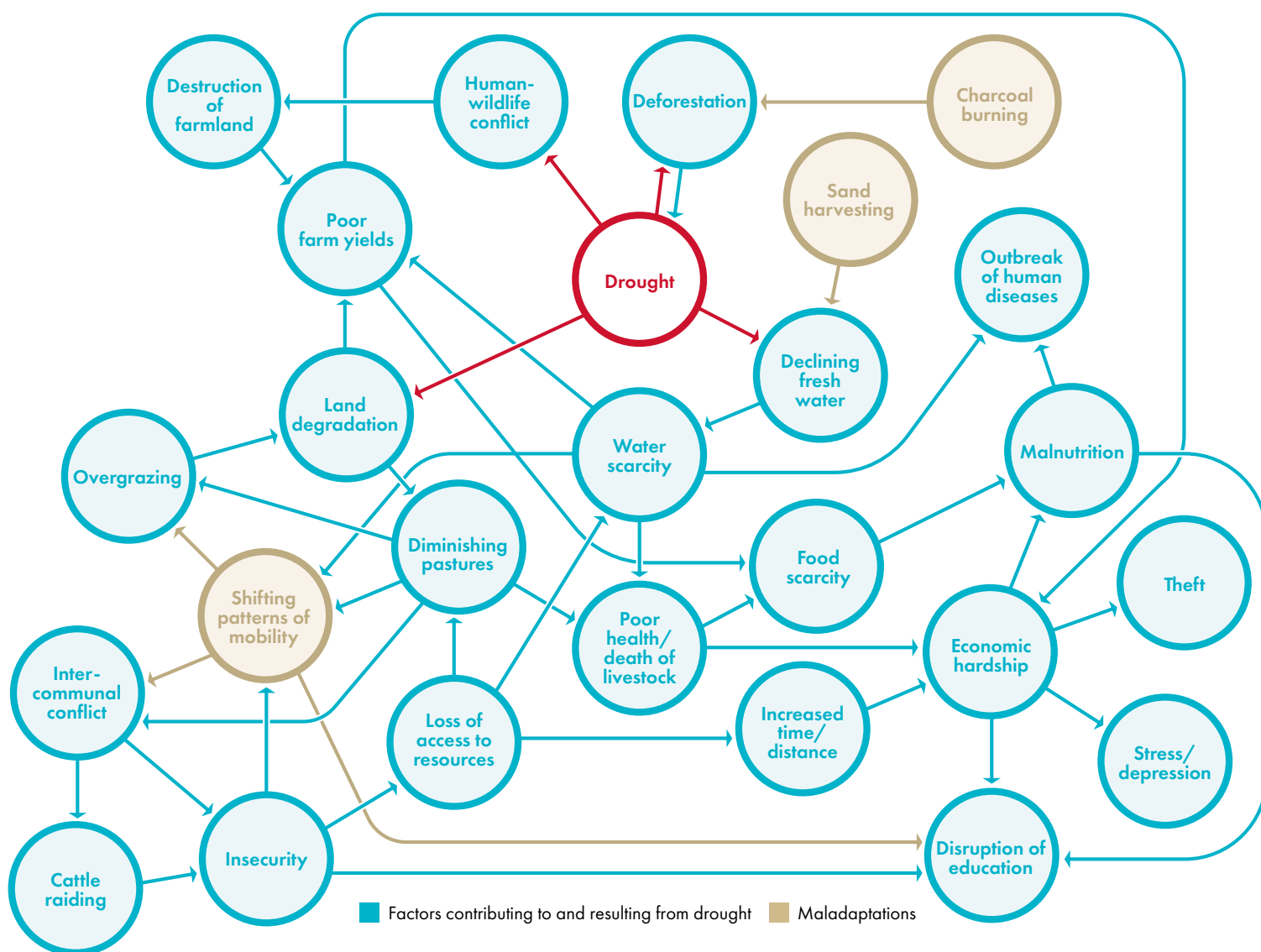


FIGURE 4: Systems map of drought and its effects in Northern Kenya

¹⁰ This systems analysis primarily focused on mapping the relationships between the various facets of drought and related climate hazards, as articulated by community participants in the first module of the FGD script. In this module, participants primarily focused on describing their lived experiences of various aspects of climate and environment and did not typically venture into explaining the underlying drivers and root causes of these experiences. As a result, exogenous factors such as infrastructure and policy did not appear heavily in the data related to participants' understanding of climate harms and risks. However, these factors did surface in the second module of the FGD, which focused on identifying locally led adaptations to drought and the barriers to and enablers of these adaptations. As a result, these exogenous factors are discussed in detail in the findings presented in pages 23-32 below. For a broader treatment of how policy and governance shape poverty reduction in fragile contexts, see Chandy et al 2015.

This approach illuminated several particularly central “nodes” within the systems map, which were underpinned by their presence across a large majority of the FGDs. Notably, **diminishing pastures** directly limit critical food sources for livestock, causing poor health and death of herds. To mitigate this risk, herders often allow their animals to overgraze in local areas or move their herds to neighbouring areas, which further degrades the land, depletes available pastures, and fuels intercommunal conflict over scarce resources. **Water scarcity** has a similar effect on the health of herds, compelling herders to migrate to neighbouring areas in search of fresh water supplies. Furthermore, water scarcity directly leads to poor agricultural yields for farmers. FGD participants also linked water scarcity to the outbreak of both human and livestock diseases. **Insecurity**, which is often a direct result of intercommunal conflict and cattle raiding consequently becomes a common trigger for movement of entire communities, which further fuels cycles of intercommunal tension as communities compete for limited natural resources or contravene local norms and bylaws. Insecurity also undermines access to critical services and resources, leading to the closure of schools and disruption of education, and further eroding the ability of local communities to reach water and pastures. Finally, livelihoods challenges—in the form of poor agricultural yields and poor livestock health and productivity—directly contribute to **economic hardship**. By extension, households have insufficient income to afford food staples, resulting in malnutrition, or school fees, resulting in educational disruptions. Families may also opt to send their children to work to supplement household income. Economic hardship also leads to increased risk of stress and depression and may provoke cases of theft.

FGD participants described these effects as being experienced differently across different groups. For example, across nearly every ward and respondent group, communities believed that children often bear the burden of economic hardship, since they are particularly developmentally vulnerable to the effects of malnutrition and disruptions to their education. Meanwhile, loss of access to water and pastures due to diminishing availability of natural resources and insecurity often result in women travelling further distances and spending more time, which undermines their ability to engage in other household and livelihoods activities and may be physically demanding.¹¹ While youth herders are typically viewed as the primary actor involved in intercommunal conflict and cattle raiding, they are also the most affected by these dynamics. Youth herders are often responsible for conducting informal, mobile patrols aimed at ensuring the security of both herders and their livestock.¹² As a result, youth herders may have a heightened risk of experiencing violence and stress.¹³ Meanwhile, women are described as being responsible for supplying the food and water to the patrolling youth herders and fodder for their livestock.¹⁴ Changes in patterns of youth herders’ seasonal movements with livestock in search of water and pastures also results in herders being further away from their communities for longer periods of time, leading to increased family dissolution.¹⁵



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- 11 FGD, Marginalised Village, Chari Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Men, Laisamis Ward, February 2025; FGD, Women, Waso Ward, February 2025.
- 12 FGD, Youth Herders, Chari Ward, February 2025; FGD, Women, Chari Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Morans (Youth Herders), Waso Ward, February 2025.
- 13 FGD, Morans (Youth Herders), Waso Ward, February 2025; FGD, Men, Waso Ward, February 2025; FGD, Youth Herders, Chari Ward, February 2025; FGD Women, Chari Ward, February 2025.
- 14 FGD, Marginalised Village, Chari Ward, 2025; FGD, Youth Herders, Chari Ward, 2025.
- 15 FGD, Youth Herders, Chari Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Women, Waso Ward, February 2025.



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Locally Led Climate Adaptations and Enabling Factors in Northern Kenya

Within the context of these complex causal connections between factors related to drought and its myriad effects in Northern Kenya, the study participants identified and prioritised locally led climate adaptations and enablers of those adaptations that they believe can contribute to mitigating the effects of drought on their daily lives. The following sections summarise these findings, first outlining current and proposed climate adaptations. It then describes common barriers impeding the implementation of these adaptations. Lastly, it examines five enablers of locally led adaptation, including: 1) coordination and relationships; 2) skills and capacities; 3) information and data; 4) resources and infrastructure; and 5) principles and norms.

This set of findings about these adaptations and related barriers and enablers is broadly consistent with the literature on social institutions and everyday strategies for adaptation and survival in pastoralist communities in Kenya and East Africa more broadly (see for example Catley 2017; Ensminger & Knight 1997; Eriksen et al. 2005; Eriksen & Lind 2009; Fratkin 2001; Homewood 2006; Lesorogol 2003; Lesorogol 2008; Lesorogol 2009; Little 2003; Little et al. 2001; Little et al. 2001; Mohamed 2022; Mohamed 2023; Robinson et al. 2017). While engaging fully with this broad interdisciplinary literature is beyond the scope of this report, we do highlight key connections where relevant in the discussion of our findings.

Locally Led Adaptations to Drought in Chari, Laisamis, and Waso Wards

Across the three wards of Chari, Laisamis, and Waso, communities are already undertaking a wide range of locally led adaptations to mitigate the effects of drought. While some of these adaptations are supported or implemented by external actors—including county and national-level government agencies and international organisations—they are most holistically envisioned and conducted by local communities themselves. Many of these adaptations have their roots in long-standing practices and social institutions that have evolved in pastoralist communities in response to the seasonal variability in rainfall that characterise rangelands, most notably mobility, networks of reciprocity, and community governance of shared natural resources (Mohamed 2022; Hassan et al. 2024).

The adaptations listed in this section reflect communities' accounts of how they are responding to the increasing frequency, severity, and unpredictability of drought. In particular, study participants highlighted four key locally led climate adaptations that are currently being employed in some form, and which they believe would have the greatest impact if further strengthened. These adaptations include rangeland management, conflict management, herd management, and diversification of livelihoods, which are described further below.¹⁶



The first of these adaptations is **rangeland management**, which entails the planning, implementation, and enforcement of policies and practices to protect and restore rangelands and the natural resources that they sustain. According to research participants across every ward and respondent group, this is typically done through the mapping of grazing patterns and development of land use plans, which not only guide youth herders to available pastures and fresh water to nourish their herds but also aim to ensure that natural resources are sustainably and equitably used and regenerated. For example, plans may designate specific pastures for grazing during the wet season and separate areas to be reserved for drought periods. The plans are codified as community bylaws by various local governance structures, such as Rangeland Management Committees and Water Resource User Associations, as well as by traditional rangeland management institutions and units, such as the dedha grazing block in Borana communities (Mohamed 2022). While these strategies have the potential to support the mitigation of conflict between neighbouring communities over natural resources, local governance structures typically only exist at the ward or conservancy level, and few coordination mechanisms exist for coordination at the county or landscape level.

Rangeland management may also involve land conservation efforts to stabilise fragile local ecosystems, focusing especially on the clearing and control of invasive plants and reseedling of native species. Notably, study participants across every ward and respondent group highlighted how invasive species, such as the red-back acacia (*Vachellia reficiens*) and the mesquite tree (*Prosopis juliflora*), crowd out indigenous grasses that sustain local herds, deplete groundwater, and can be poisonous to livestock. Meanwhile, tree planting and reseedling initiatives are helping to restore grazing lands, improve soil stability, and prevent further desertification.¹⁷ In many cases, community conservancies play a central role in the governance of land conservation efforts.¹⁸ Communities have also developed highly localised solutions based on indigenous knowledge, such as prohibiting the shaking of acacia trees during the flowering months, in order to allow seeds to disperse naturally, which promotes regeneration and ensures a sustainable source of fodder for livestock.¹⁹



Closely linked to rangeland management, **conflict management** is a critical adaptation to mitigate and respond to competition over natural resources, which increasingly escalates into violence and insecurity. Local conflict management historically relies on traditional dispute resolution mechanisms and customary law to mediate disputes, such as interclan conflicts or age set conflicts within the same tribe. Mediated solutions typically result in the provision of compensation to the aggrieved party.²⁰ However, these structures lack the coordination mechanisms and relevant knowledge to cope with climate-induced conflicts that tend to be cross-border and inter-tribal in nature. As a result, these conflicts often require the intervention of the county or national government or NGOs to coordinate such initiatives.

¹⁶ In line with the principles of participatory research to centre community perspectives, the definitions presented for each of the adaptations throughout this section were generated inductively, based on emergent trends in the FGD data.

¹⁷ FGD, Men, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025; FGD, Men, Waso Ward, February 2025; FGD, Marginalised Ward, Waso Ward, February 2025.

¹⁸ Community conservancies are organisations that support the management of community-owned land for the purpose of sustainable land use, wildlife conservation, and livelihoods conservation. A deeper discussion of community conservancies can be found in the section on Enablers of Adaptation on page 26.

¹⁹ FGD, Marginalised Village, Waso Ward, February 2025.

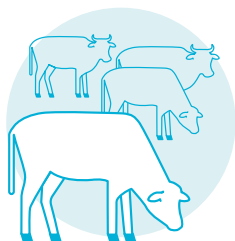
²⁰ Compensation is a common practice in traditional dispute resolution across the three tribes—Borana, Rendille, and Samburu—present in the study area. In Borana, the practice is called *qakhe*, while in Rendille and Samburu, it is called *ipaen*.



Members of Borana, Rendille, Samburu, and Turkana communities in Chari, Waso, Laisamis, and Ngaremare Wards gather in April 2025 to sign peace agreements between communities, organised by the Frontier Counties Development Council (FCDC) as part of the RANGE programme.

Over the past 20 years, Local Peace Committees (LPCs) have emerged to address a wider set of conflicts through a larger toolbox of conflict management approaches (Khabure 2014; Radhakrishnan & Santara 2025). For example, intercommunal peace dialogues have evolved to respond to inter-tribal resource-based conflicts and cattle raids that have evaded mediation by traditional structures. LPCs may also spearhead broader peacebuilding strategies aimed at improving social cohesion and strengthening a culture of peace through activities such as collective football matches, cultural exchanges, and camel caravans (Radhakrishnan & Santara 2025; Kaunga & Bunke 2020).²¹ While many LPCs have had demonstrable successes in managing climate-induced conflicts, they continue to suffer from poor institutionalisation and tensions with both traditional dispute resolution mechanisms and the formal justice system (Khabure 2014).

In the absence of viable local conflict management strategies or robust law enforcement, some communities have empowered male youth herders to undertake informal patrols to prevent and mitigate the effects of cattle raids—the theft of large numbers of animals by neighbouring communities.²² Patrols may take place in village settings, during grazing, or during seasonal movements in search of pasture. These patrols may also serve as a form of an early warning early response mechanism, surfacing intelligence about imminent security threats and enabling rapid responses through the coordination of relevant resources and actors. However, in some cases this strategy has also contributed to the escalation of conflict by securitising conservation and herd management and failing to invest in formal agreements that might mitigate future cycles of violence (Scheter et al. 2022).²³



Herd management is an adaptation that constitutes diverse strategies aimed at ensuring the wellbeing and productivity of livestock in the face of drought, and by extension, maintaining the value of the herd (Hassan et al. 2024).²⁴ In close relationship with rangeland management, mobility between dry and wetland reserves to access available pastures and fresh water for herds has traditionally been a central approach to herd management in response to seasonal variability of resources. However, increasingly unpredictable rainfall patterns have shifted the duration, location, and timing of such movements in a way that fuels intercommunal conflict and resource depletion, as discussed further below.

21 FGD, Men, Laisamis Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025.

22 FGD, Youth Herders, Chari Ward, February 2025; FGD, Women, Chari Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Morans (Youth Herders), Waso Ward, February 2025.

23 FGD, Morans (Youth Herders), Waso Ward, February 2025.

24 Another aspect of herd management focuses on how households allocate labour in response to seasonal variability and larger shocks, including by tasking household members to herding, hiring seasonal labour, or partnering with other herd owners. For more on these practices, see Mohamed (2022).

Beyond seasonal mobility, another core approach for herd management is destocking and restocking of animals depending on climate conditions and available natural resources. This entails reducing the number of livestock—especially cattle—during drought periods, typically through the sale of animals on livestock markets. In some cases, however, this is done by slaughtering sick and newborn animals, which gives healthy adult animals a better chance to survive due to limited pasture and water and limited household resources available for expensive livestock care.²⁵ Herders then purchase new livestock, typically at the beginning of the rainy season, when natural resources are expected to increase. When sufficient livestock are not available locally, herders may restock with animals from other regions; however, these animals may bring new diseases or may not be resistant to local conditions and diseases.²⁶ Relatedly, herd redistribution is a practice in which livestock owners may temporarily—either seasonally or after acute crises—lend their animals to more vulnerable households, most often family and clan members across different regions (Hassan et al. 2024). This risk sharing approach not only enables the animals to access grazing lands in other areas but also offers the hosting household access to animal products, such as milk. Increasingly, cattle raiding has also become a maladaptive and violent form of restocking, which in turn can fuel cycles of intercommunal conflict.²⁷ Meanwhile, some FGD participants expressed interest in participating in the Kenya Livestock Insurance Programme, which aims to provide a financial safety net for herders during drought periods, mitigating negative strategies.²⁸



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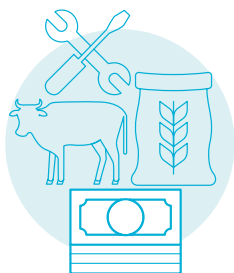
25 FGD, Women, Chari Ward, February 2025.

26 FGD, Men, Chari Ward, February 2025; FGD, Youth Herders, Chari Ward, February 2025; FGD, Men, Laisamis Ward, February 2025.

27 FGD, Women, Laisamis Ward, February 2025.

28 FGD, Men, Chari Ward, February 2025; FGD, Men, Laisamis Ward, February 2025; FGD, Women, Laisamis Ward, February 2025.

Other herd management strategies are focused on livestock health, including livestock vaccination and quarantining techniques to prevent and control disease outbreaks. Herders are also increasingly harvesting and storing fodder or, to a lesser extent, purchasing fodder or animal feeds to ensure sufficient sustenance for their herds, where traditional grazing lands have diminished or are inaccessible due to conflict and insecurity (see also Hassan et al. 2024). As such, effective rangeland management and conflict management are essential for herd management. In the face of recurring droughts, there is also a growing trend of herders rearing more drought-resistant animals, such as goats and camels, which are better suited to hotter and drier climates.²⁹ These livestock health strategies are frequently supported by external actors, including the national government and NGOs.



As the increasing severity, frequency, and intensity of drought continue to threaten traditional pastoralist livelihoods, communities are adapting through the **diversification of livelihoods**, which entails varying their income-generating activities to ensure sufficient household resources to provide for basic needs. Within the local context, communities are particularly interested in alternatives within the agricultural and forestry sectors. Across every ward and respondent group, study participants mentioned small-scale farming and kitchen gardening, which focus primarily on production for household consumption to bolster food security, as well as the sale of

surplus crops at market to supplement family income. However, these alternatives remain highly dependent on effective water management for sufficient irrigation. Women and youth, in particular, are involved in the harvesting of natural gums and resins from trees in local shrublands for sale to large commercial buyers.³⁰ In line with the herd management adaptation, some women and youth, especially in Chari Ward, have turned to planting and harvesting fodder on local farmland in response to the growing demand from herders, where access to natural grazing lands is limited.³¹ In some rare cases when fodder is harvested from existing pastures, the effects of drought and land degradation are compelling women and youth to travel further distances, while insecurity makes these areas increasingly inaccessible.³² Across all wards and respondent groups, there is also a growing interest in the development of small businesses, often micro-enterprises, such as tailoring, transportation services, hairdressing, mechanics, and market shops.



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29 FGD, Men, Chari Ward, February 2025; FGD, Women, Chari Ward, February 2025; FGD, Youth Herders, Chari Ward, February 2025; FGD, Men, Waso Ward, February 2025.

30 FGD, Women, Chari Ward, February 2025; FGD, Men, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025.

31 FGD, Women, Chari Ward, February 2025; FGD, Men, Chari Ward, February 2025; FGD, Marginalised Village, Chari Ward, February 2025.

32 FGD, Women, Chari Ward, February 2025.

There are also several alternative livelihoods—including sand harvesting and charcoal production—that are widely perceived as harmful coping strategies, which reinforce the negative effects of drought, as depicted in the systems map (see **Figure 3**). Sand has long been harvested to support local construction and manufacturing activities; however, it is increasingly mined on an industrial scale for sale to large commercial buyers. As a result, communities, especially in Laisamis Ward, are witnessing increased soil erosion, decreased volume of fresh water supplies, and increased water salinity.³³ Charcoal production has similarly become particularly widespread across all wards in the study. This practice contributes to deforestation through the felling of trees, as well as through wildfires that may inadvertently be sparked during the charcoal production process and that spread rapidly due to drought conditions. Local community governance structures have attempted to establish and enforce bylaws to curtail these activities as part of rangeland management strategies but have been largely unsuccessful.



As mentioned above, seasonal mobility is a long-standing strategy that pastoralist communities have deployed to adapt to the variability in rainfall and pasture that characterises rangelands contexts. However, research participants extensively described **shifts in patterns of mobility**

as a strategy for coping with changing patterns of drought.³⁴ FGD participants noted that in response to increasingly erratic rainfall patterns, seasonal mobility is becoming more unpredictable and prolonged, and herders are forced to travel further distances into neighbouring counties, where indigenous tribes and clans may have different bylaws and cultural norms around rangeland management and conflict management. Moreover, these neighbouring areas typically face similar drought conditions that strain their natural resources. In some cases, these temporary seasonal movements may also occur alongside more permanent displacement of entire communities in response to insecurity from intercommunal conflict or from rural to urban areas as part of efforts to diversify livelihoods.



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“Since our initiation five years ago, we have not stayed at home with the livestock. The community is blaming us for not bringing the livestock home, but they don’t understand that it’s not our fault. These droughts have killed our grazing lands, so that we now have to move to far places where there is at least something for the livestock. My problem with drought is that it kills the livestock, and if it’s not satisfied, it takes human lives too. We morans are in constant fear when the droughts set in, because you do not know if this is the drought that will end you, or maybe the next. We just don’t know if we will return home. When you sleep, you pray that God will take you home.”

—Moran (Youth Herder), Waso Ward, February 2025

33 FGD, Men, Laisamis Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025.

34 In FGDs and validation sessions with community members, as well as the sensemaking session with community researchers and other stakeholders, this type of mobility and movement was frequently described as “migration”. Because migration also is used locally to refer to larger-scale (and more permanent) movement of communities to new locations in response to conflict or natural disasters, we utilise the phrase “shifts in patterns of mobility” in this section to balance clarity and accurate representation of our FGD data.

To date, local governance structures have struggled to adapt to these new shifts in mobility dynamics in ways that effectively and equitably coordinate social and economic interactions and resource use, while recognising the importance of mobility as an adaptation strategy in drylands contexts. As a result, unpredictable changes in movement patterns can exacerbate the same underlying factors that fuel it—increasing competition over scarce resources, intercommunal conflicts, and pressures on local job markets. Study participants in both the FGDs and the sensemaking workshop expressed broad interest in minimising unpredictable shifts in mobility but also acknowledged that it is unlikely to cease due to its myriad and complex causes. Instead, they suggest that it could be transformed from a negative to a positive adaptation by reimagining the governance of traditional mobility practices in the context of changing social, ecological, and political dynamics.

Barriers to Locally Led Adaptation

Although communities are already active in undertaking these locally led adaptations to drought, they continue to face a number of cross-cutting and interconnected vulnerabilities and barriers that inhibit their ability to fully realise the impact of these strategies. Issues of ineffective and exclusive governance, restrictive socio-cultural norms, and economic hardship prevent community members from shaping the enabling environment for LLA and from accessing the opportunities for adaptation that already exist.



The most cited barrier was **poor infrastructure and access to basic services**, reflecting ineffective local governance, with communities highlighting a lack of veterinary services to reinforce herd management, emergency and law enforcement services to support conflict management, and financial services to facilitate diversification of livelihoods. Damaged, distant, and poorly located boreholes, troughs, irrigation systems, and other water infrastructure were also identified as impeding all four adaptations across all wards. Moreover, underdeveloped road and communications systems further exacerbate the challenge, as households spend more time and resources to access these services, which subsequently limits their means and availability to participate in deliberate adaptation processes, including rangeland management, conflict management, and other areas of community governance.³⁵ FGD respondents in Laisamis Ward also described that poor infrastructure more directly prevents community members from participating in local governance and decision-making platforms, due to the challenges of physical transportation and lack of information about the opportunities to engage in the process or the decisions that result from them.³⁶

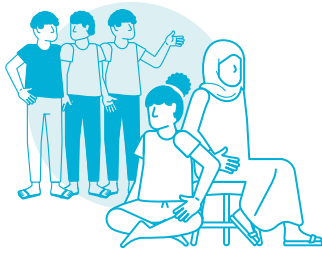
Boys haul water up from a deep well for their animals during a severe drought in Samburu County in 2022.

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35 FGD, Youth Herders, Chari Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025.

36 FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025.



These barriers are further reinforced by **exclusive traditional norms**, which empower older men from politically prominent sub-tribes and clans, while sidelining women, youth, and other socio-economically disadvantaged groups, such as people with certain socially unacceptable livelihoods (e.g., blacksmiths and hunter-gatherers) or communities living in remote rural areas. In many cases, this results in the persistent lack of representation of marginalised groups in community governance structures, which has a cascading effect. When these groups are not present, their needs and perspectives are overlooked, and policies are designed in ways that either neglect or deepen their marginalisation through inequitable resource allocation and development planning.³⁷ Even when these community governance spaces are opened to marginalised groups, they may not feel comfortable participating due to fear of social stigmatisation, particularly for women.³⁸ Relatedly, FGD participants in Laisamis Ward noted that individuals with lower levels of education may perceive that they do not have the knowledge or skills to effectively engage in community governance and policy discussions related to rangeland management or conflict management.³⁹ Women in Waso Ward also report that harmful gender norms undermine their ability to participate in diversification of livelihoods due to their rejection from roles that are traditionally viewed as “men’s jobs,” such as construction work, as well as personal fears of financial commitment and judgment from colleagues and family members.⁴⁰



Economic hardship is itself a barrier to climate adaptation, often compelling communities to prioritise urgent basic needs and domestic duties over voluntary participation in rangeland management and conflict management processes. Similarly, they may not have sufficient financial resources to invest in livelihood diversification, even when those alternatives might be more sustainable and profitable in the long term. In Laisamis, community validation session participants also mentioned a prevailing cultural belief that large herd size conveys wealth and

prestige, which may impede effective herd management strategies, such as destocking and use of climate-resistant animals, further exacerbating economic hardship.⁴¹ These dynamics are reinforced by socio-economic factors, such as high inflation and traditionally large family sizes, which diminish household purchasing power.⁴²



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37 FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025; FGD, Marginalised Village, Waso Ward, February 2025.

38 FGD, Women, Waso Ward, February 2025.

39 FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025.

40 FGD, Women, Waso Ward, February 2025.

41 Community Validation Session, Lontolio, Laisamis Ward, March 2025.

42 FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Women, Waso Ward, February 2025.



Enablers of Adaptation

The core focus of our study was the identification of enablers that facilitate the implementation of locally led climate adaptations. These are preconditions that must be in place in order to overcome the stated barriers to adaptation and for the four key adaptations to achieve their envisioned impact. The five categories of enablers include: 1) coordination and relationships; 2) skills and capacities; 3) information and data; 4) resources and infrastructure; and 5) principles and norms (see **Box 5**). While three of these enablers align with and respond to the factors mentioned in the initial research questions (Coordination and Relationships, Skills and Capacities, and Information and Data), the research also unearthed two additional categories of enablers that local communities understand as critical to LLA (Resources and Infrastructure and Principles and Norms).



Coordination and relationships

include all types of formal and informal coordination mechanisms and relationships that link

individuals, groups, or institutions for the purpose of achieving a common goal.⁴³ These primarily refer to various mobilisation processes and community governance structures that have been established to manage local-level decision-making. Study participants, particularly in Laisamis,

consistently referred to barazas—large, semi-formal public gatherings convened by local government administrators—as a critical space to share information, air grievances, advocate for solutions, take decisions, and coordinate collective action, thereby facilitating citizen engagement in local policymaking and service delivery related to climate adaptation.⁴⁴

Enablers of Locally Led Adaptation to Drought in Laisamis, Waso, and Chari Wards

- 1 Coordination and Relationships** that link individuals, groups, or institutions for the purpose of achieving a common goal
- 2 Skills and Capacities** that empower and enable individuals and communities to adopt new practices
- 3 Information and Data**, both experiential and scientific, that can be used to inform evidence-based decision making
- 4 Resources and Infrastructure**, including tangible financial or material assets and public infrastructure, that are essential to implementing new practices
- 5 Principles and Norms** that govern the way that adaptation is managed

BOX 5: Enablers of Locally Led Adaptation in the Study Sites in Northern Kenya

⁴³ This section focuses on describing the governance institutions and relationships mentioned by community members in FGD sessions. As a result, what is described here is not exhaustive, but instead reflects the set of institutions whose actions are highly visible to community members. Other institutions and bodies that have been identified as important in other research and programming, but which were not emphasized in our data include Ward Planning Committees (Hakman & Sheely 2024) and County Steering Groups (CSGs) that bring together government and civil society organisations to coordinate responses to drought. Probing the role of these institutions and actors alongside the ones identified in this study is an important area for future research and programming on climate adaptation in this context.

⁴⁴ FGD, Men, Laisamis Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025; FGD, Men, Waso Ward, February 2025.

Case Study: The *Mlolongo* as Local Governance Structure

Mlolongo are a critical traditional governance structure that supports rangeland management, conflict management, and herd management.

Mlolongo are large communal settlements where cattle from many different herds, often reaching around 4000 cows, are all managed under a single enclosure by the youth herders from an individual community. This approach aims to ensure sustainable resource use through regulated grazing, enhance the security of livestock from cattle raiding and theft, and manage livestock health through skill sharing for the care of sick animals.

The *mlolongo* is governed through the election of a *Imorijoi* who leads collective decision making - including on issues related to locally led adaptation - with the support of other experienced *morans* on the basis of indigenous knowledge. The practice of establishing *mlolongo* is widely viewed as highly effective, due to its deep cultural significance and sense of shared responsibility that it fosters. However, a warrior ethos is also central to the *mlolongo* culture, whereby youth herders invest in preparedness for conflicts with neighboring communities, rather than in deep conflict management and peacebuilding strategies.

BOX 6: Case Study: The *Mlolongo* as Local Governance Structure

All of the study sites also have dedicated governance structures to support locally led adaptations. Community conservancies, such as those supported by the Northern Rangeland Trust (NRT), were frequently mentioned by participants as a widely used model of local governance within the study area. Community conservancies are community-based organisations that support the management of community-owned land for the purpose of sustainable land use, wildlife conservation, and livelihoods conservation. Within Chari, Laisamis, and Waso Wards, they are heavily involved in reseeded pastures, facilitating intercommunal dialogues, and supporting youth vocational skills training. Despite the generally positive view of conservancies expressed by participants in FGDs for this study, broader research, journalism, and commentary offer critiques of the conservancy model and the NRT, highlighting its outsized influence in shaping community decisions about land use, and in some cases overriding those decisions altogether (Schetter et al. 2022; The Elephant 2022). Given the divergence between the positive perceptions of conservancies expressed in the FGDs for this study and the more critical perspective present in broader research and public discourse, this topic is an important area for future research and programming within this study area and the broader region.



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In parallel, research participants across all wards referenced Rangeland Management Committees, Water Resource User Associations, and Local Peace Committees, which develop grazing bylaws and land use policies, coordinate water schedules, and mediate disputes, respectively. However, FGD participants also stated that these bodies are hampered by weak enforcement capacity, poor engagement with neighbouring wards and counties, and insufficient public awareness about the decisions that they take. Ensuring that these structures are empowered, have platforms for coordinating with neighbouring structures, and mechanisms for community sensitisation is essential for effective climate adaptation.⁴⁵

45 FGD, *Morans* (Youth Herders), Waso Ward, February 2025.

Another critical enabler in this category is the establishment of linkages between local communities and formal institutions and services that facilitate climate adaptation. This often entails the integration of local staff or community liaisons within governmental departments. For example, Community Disease Reporters are essential to linking local herders with the county directorate of veterinary services for effective herd management,⁴⁶ while recruitment of youth herders into local branches of the National Police Reservists (NPR) was identified by participants as having the potential to enable rapid response to insecurity and crime for effective conflict management.⁴⁷



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Furthermore, linkages to market systems are vital for creating pathways for pastoralists, farmers, and businesspeople to get their goods to market. While these linkages exist to some extent at present, they are currently dominated by market brokers who capture the bulk of profits by buying animals and other products (such as gums, resins, and agricultural crops) from communities at low prices and selling them at market prices. As a result, community members expressed that strengthening direct, formal linkages between community members and markets will enable a number of adaptations, especially herd management and livelihoods diversification. For example, study participants specifically envision connecting the newly completed Isiolo slaughterhouse to regional livestock markets and linking herders to buyers for destocking in advance of drought periods to support herd management.⁴⁸ They also broadly proposed

strengthening market linkages for women and youth to sell gums and resins, honey, and local crafts, and creating opportunities for individuals interested in establishing small businesses to access training programs and financial services, in a way that could enable diversification of livelihoods.

Lastly, study participants identified interpersonal relationships within communities as critical for fostering effective collaboration, learning, and mutual aid needed for climate adaptation. These relationships are established on the basis of familial, social, economic, or cultural interactions, and related norms of reciprocity and solidarity.⁴⁹ When these relationships and norms are strong, they can nurture a sense of shared responsibility, common purpose, and systems of mutual support, as in the case of *morans* in Waso Ward living within a *mlolongo*.⁵⁰ During the community validation sessions in Waso Ward, participants also proposed connecting successful local businesspeople with individuals interested in starting small enterprises.⁵¹ These relationships have the potential to catalyse exchange and experiential learning of critical skills, such as livestock care, record keeping, and climate-adapted farming in a way that supports herd management and diversification of livelihoods. They can also have a secondary effect of strengthening intercommunal relationships that contribute to conflict management.⁵²

“When drought is extreme, you can go to your uncle and borrow a camel for milking, and when drought season is over, you return it.”

—Man, Laisamis Ward, February 2025

46 FGD, Marginalised Village, Laisamis Ward, February 2025; Community Validation Session, Biliqo Marara, Chari Ward, March 2025; Community Validation Session, Lontolio, Laisamis Ward, March 2025.

47 FGD, Youth Herders, Chari Ward, February 2025; FGD, Marginalised Village, Chari Ward, February 2025.

48 FGD, Marginalised Village, Chari Ward, February 2025; FGD, Men, Laisamis Ward, February 2025; Community Validation Session; Tirgamo, Laisamis Ward, March 2025.

49 This type of social solidarity is frequently referred to as “moral economy” in the literatures on agrarian societies in general and pastoralism in particular (Scott 1976; Shariff 2020; Mohamed 2022; Mohamed 2023).

50 FGD, *Morans* (Youth Herders), Waso Ward, February 2025.

51 Community Validation Session, Sereolipi, Waso Ward, March 2025; Community Validation Session, Ndonyo Wasin, Waso Ward, March 2025; Community Validation Session, Kulotanga, Waso Ward, March 2025.

52 FGD, Men, Laisamis Ward, February 2025; Community Validation Session, Sereolipi, Waso Ward, March 2025.



Skills and capacities are learned knowledge and practices that enable individuals, households, and communities to adopt new climate adaptations and evolve existing practices to meet shifting realities. In line with the centrality of community governance structures as an enabler of LLA, study participants suggested that these structures should be the primary audience for capacity strengthening on approaches that facilitate the uptake and effectiveness of climate adaptations. While INGOs and government actors currently do substantial amounts of training and capacity strengthening, recruiting participants is often not systematic and is not coordinated across

organisations implementing trainings. Increasing the extent to which capacity strengthening efforts effectively enable LLA entails ensuring that training focuses more systematically on building the capacity of the members of community governance structures in a targeted and coordinated manner. With respect to rangeland management, participants across all wards and respondent groups proposed themes including control of invasive plant species, response to wildfires and other climate emergencies, and sustainable land use strategies. With respect to conflict management, themes could include dialogue, mediation, and conflict early warning early response. These skills could also be relevant to other community members who could have a role in the broader governance of peace and natural resources.

Meanwhile, herd management and diversification of livelihoods require technical skills that empower individuals to effectively undertake these adaptations. Capacity strengthening for herd management should focus on livestock vaccination and care, livestock value addition, and fodder production and storage. With respect to the diversification of livelihoods, there is a particular interest in supporting youth and women to adopt alternatives within the agricultural sector and to start small enterprises. As a result, capacity strengthening should focus on modern, climate-adapted crop farming, poultry farming, and beekeeping, as well as training on masonry, plumbing, and other locally marketable vocations. For example, participants in one community validation session in Chari Ward recommended the establishment of community demonstration farms to host trainings on various topics related to herd management.⁵³ Study participants in Laisamis Ward also suggested that youth should learn borehole repair skills to directly benefit the wider community, rather than having to hire contractors from other regions to rehabilitate community water infrastructure.⁵⁴ In addition, one of the most referenced themes was financial literacy and management, which would not only enable more effective herd management and diversification of livelihoods, but also more generally support households in managing limited income. Study participants primarily envisioned these technical skills being transmitted through formal trainings but also mentioned the potential of developing mentorship schemes and apprenticeship opportunities between community members.⁵⁵



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⁵³ Community Validation Session, Biliqo Marara, Chari Ward, March 2025. For more on the adaptation of farmer field school approaches to pastoralist contexts, see Watson (2008).

⁵⁴ FGD, Men, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025.

⁵⁵ Community Validation Session, Biliqo Marara, Chari Ward, March 2025; Community Validation Session, Kulatanga, Waso Ward, March 2025; Community Validation Session, Ndonyo Wasin, Waso Ward, March 2025. For examples of promising approaches to strengthening financial literacy in northern Kenya and beyond, see recent work by My Oral Village and the Women and Money project led by [ideo.org](https://www.ideo.org).



Information and data comprise scientific and experiential analytics and evidence, as well as simple, reliable, and usable insights derived from this data that can be used to inform decision-making about climate adaptation (see also Bedelian 2024). Most critically, local communities are increasingly using climate data about historical weather patterns and events, as well as predictive early warning information about imminent climate shocks, especially regarding the intensity, duration, and geographic scope of drought. Communities rely on this data predominantly for herd management, so that herders can destock, move to satellite cattle

camp, purchase fodder, or dig new wells before the onset of the most severe drought conditions. Climate data is also critical in supporting the diversification of livelihoods, especially for farming activities, as irregular rainfall patterns increasingly disrupt typical timing for planting and harvesting crops. Similarly, market data, including livestock and crop prices, local demand, export potential, seasonality, and mapping of competition, enable productive livelihoods and income-generating activities. Study participants consistently cited the [National Drought Management Authority \(NDMA\)](#), which circulates a monthly early warning bulletin, and the [Kenya Meteorological Department \(KMD\)](#), which shares regular weather forecasts, as the primary actors providing this information. Local communities typically access climate data through radio broadcasts or from local administrators during barazas, although study participants in Laisamis Ward described that women, youth, and remote villages often face barriers to these modes of communication.⁵⁶ Notably, existing research suggests that women not only have unique needs and preference related to the content and medium for receiving climate information (Ngigi & Muange 2020; Diouf 2019; Raj et al. 2020), but also play critical roles in supporting climate resilience (United Nations 2022).

Communities also spoke extensively about the importance of centring indigenous knowledge in decision-making and using “modern” data to support rather than supplant this knowledge (see also Guye et al. 2022 & Hassan et al. 2024).⁵⁷ Indigenous knowledge, as described in the FGDs, typically refers to observational insights into animal behaviour or environmental changes in ways that foretell impending climate and conflict shocks. For example, youth herders in Laisamis Ward noted that when camels yawn in the early evening, it suggests that the rainy season is approaching; however, when they yawn late at night, it indicates that drought is imminent.⁵⁸ In some cases, indigenous knowledge also may portend imminent violence, such as

cattle raids. Notably, the chirping of the *ltiloi* bird is locally considered to be a bad omen, while frequent urination by cattle is a sign of distress.⁵⁹ Youth herders and elders are particularly skilled at interpreting these signs due to their extensive engagement with animals and the natural environment. Indigenous knowledge also includes inherited wisdom, which focuses on astronomical signs or readings of animal entrails to make predictions.⁶⁰ Indigenous knowledge is widely viewed as a highly credible source of information among local communities. However, respondents expressed that indigenous knowledge is becoming less reliable in predicting seasonal weather patterns due to the increasing volatility of weather patterns, even while community elders and youth herders remain credible sources of indigenous knowledge. Communities suggest that scientific climate early warning data should be leveraged to more accurately forecast drought, while the inclusion of indigenous knowledge can continue to offer vital insights on the local indicators and effects of drought.

“These days, we don’t seem to always get it right when we predict drought. Maybe you who have gone to school can help us, because we usually hear that you people have a magical way of knowing the weather.”

—Moran (Youth Herder), Waso Ward,
February 2025

56 FGD, Men, Laisamis Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025.

57 FGD, Morans (Youth Herders), Waso Ward, February 2025; FGD, Marginalised Village, Waso Ward, February 2025.

58 FGD, Youth Herders, Laisamis Ward, February 2025.

59 FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Marginalised Village, Chari Ward, February 2025.

60 FGD, Marginalised Village, Chari Ward, February 2025.

In addition to climate-specific data, communities also view broader context analysis as a critical precondition of LLA. Context analysis may cover many different themes. Most critically, respondents suggest that useful context analyses map available natural resources, including pastures and fresh water sources, which can inform the development of grazing patterns for improved rangeland management.⁶¹ It may also support conflict management by assessing conflict dynamics based on historical knowledge of flashpoints around these natural resources and patterns in relationships with neighbouring communities.⁶² Furthermore, stakeholder analysis should map relevant actors—including governmental institutions, civil society, and international assistance partners—at various levels, and their roles in supporting LLA.⁶³ The aggregate of these various forms of context analysis can be harnessed to facilitate climate and conflict early warning early response, so that all actors are familiar with the indicators of crisis and how to mobilise a coordinated response. Stakeholder analysis may also ensure that partners in climate adaptation avoid duplication of efforts and enable communities to more effectively and efficiently access relevant services. Study participants in Laisamis Ward further emphasised the importance of mapping climate policies related to land use, drought response, and water conservation in order to empower them in their advocacy efforts to shape the enabling environment for LLA.⁶⁴ While context analysis is essential to communities in their pursuit of LLA, it is even more vital for external assistance partners to ensure that they are responsive to community priorities and needs.



Resources and infrastructure include public infrastructure and tangible financial or material assets required to effectively implement climate adaptations. These are among the most significant barriers to all four locally led adaptations identified by FGD participants. As a top priority, study participants highlighted the importance of the construction and maintenance of public infrastructure—especially roads and telecommunications systems (including radio and mobile phone networks), which are essential for coordinating mitigation and response strategies to climate emergencies and intercommunal conflicts that are central to the rangeland

management and conflict management adaptations.⁶⁵ Specifically, these systems are also critical to sharing information about opportunities for participation in community governance and facilitating the movement of community members to join in these spaces. Study participants in Chari Ward also indicated a need to establish well-equipped police stations to ensure the presence of law enforcement and emergency services to respond to conflict and violence that may erupt in remote areas.⁶⁶ Meanwhile, across all wards and respondent groups, study participants highlighted that water infrastructure is particularly essential to herd management and diversification of livelihoods. Solar-powered boreholes, water storage tanks, small-scale irrigation projects, rainwater harvesting systems, and community dams have the potential to sustain livestock, fuel farming activities, and, more generally, support household functions.

Material assets are also vital enablers across all four adaptations. These may include agricultural assets, encompassing seeds and saplings to be used for land conservation initiatives that support rangeland management,⁶⁷ alternative livestock breeds to ensure that herders are restocking in ways that improve herd management,⁶⁸ and drought-resistant crops and fodder storage facilities to promote climate-adapted farming for diversification of livelihoods.⁶⁹ In addition, basic communications and transportation equipment, such as vehicles and satellite phones, enable the essential functions of community governance structures as they conduct monitoring and response activities for rangeland management and conflict management.⁷⁰

61 FGD, Men, Laisamis Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025.

62 FGD, Morans (Youth Herders), Waso Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025.

63 FGD, Men, Laisamis Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025; FGD, Marginalised Village, Laisamis Ward, February 2025.

64 FGD, Men, Laisamis Ward, February 2025; FGD, Women, Laisamis Ward, February 2025; FGD, Youth Herders, Laisamis Ward, February 2025.

65 FGD, Youth Herders, Chari Ward, February 2025; FGD; Marginalised Village; Laisamis Ward, February 2025; FGD, Women, Waso Ward, February 2025; Community Validation Session, Sereolipi, Waso Ward, March 2025.

66 FGD, Youth Herders, Chari Ward, February 2025; Community Validation Session, Biliqo Marara, Chari Ward, March 2025; Community Validation Session, Bulesa, Chari Ward, March 2025; Community Validation Session, Goda, Chari Ward, March 2025.

67 FGD, Women, Waso Ward, February 2025.

68 FGD, Men, Waso Ward, February 2025.

69 FGD, Men, Chari Ward, February 2025; FGD, Women, Chari Ward, February 2025; FGD, Marginalised Village, Chari Ward, February 2025.

70 Community Validation Session, Tirgamo, Laisamis Ward, March 2025.

Finally, financial assistance is of particular interest to communities to support the establishment of small enterprises as part of the diversification of livelihoods. While financial assistance traditionally comes in the form of formal business grants or bank credit and loans, communities in remote ASALs often lack access to these services, and these institutions often lack sufficient liquidity and reach in remote areas to meet the needs of communities. Instead, village savings and loan associations (VSLAs) and savings and credit cooperatives (SACCOs) serve as essential community-based financial institutions that enable members to pool resources, make collective decisions about resourcing initiatives, and access small loans to support their businesses and daily needs.⁷¹ Supporting remote community members to establish savings accounts and subscribe to insurance products can also be an essential foundation that provides them with the financial security to invest in diversifying their livelihoods. Study participants in Waso Ward emphasised the importance of raising public awareness about the availability of these services and working to address pervasive cultural norms that often exclude women and youth from accessing financial assistance.⁷² In light of the economic hardship that often act as a barrier to community engagement in rangeland management and conflict management governance processes, financial assistance in the form of participant stipends can encourage participation from vulnerable community members who would otherwise prioritise critical income-generating activities.⁷³



Cutting across all four locally led adaptations and all other categories of enablers, study participants highlighted several essential **principles and norms** that are critical to unlocking the effectiveness of locally led climate adaptations. Above

all, locally led adaptations must be undertaken in ways that centre community participation, empowering the individuals and groups most impacted by climate risks and hazards in decision-making processes. Relatedly, these processes should make space for the inclusion and active involvement of diverse groups, especially those who are traditionally excluded from community governance structures, such as women, youth, and marginalised sub-tribes, clans/sub-clans, or livelihoods groups. In many cases, this requires a fundamental shift in social norms that tend to empower a select group of elders or influential leaders. This could also entail the establishment of new community governance structures or sub-structures or reform of existing structures to ensure that they are more representative of the local community and create a platform for diverse perspectives to be incorporated into decision-making. Furthermore, it is critical that community governance structures are transparent, proactively sharing information about how they function, opportunities for the broader community to contribute input and feedback, and the resulting local-level policies. It is also important for these governance structures to promote accountability by showing openness to listening to different groups in the community and learning when initiatives are successful and when they have unintended consequences.

“For us to implement the changes we discuss, we need regular meetings where we can educate people, gather their opinions, and ensure everyone is on board with the new policies.”

—Man, Waso Ward, February 2025



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A community researcher facilitating a focus group discussion in Kulatanga, Waso Ward, Samburu County, Kenya in February 2025 during the data collection exercise.

71 Relatedly, Mohamed (2022) includes a useful discussion of a “marro”, local system of savings clubs in Borana communities in Isiolo county.

72 FGD, Women, Waso Ward, February 2025; Community Validation Session, Sereolipi, Waso Ward, March 2025; FGD, Marginalised Village, Waso Ward, February 2025.

73 FGD, Men, Waso Ward, February 2025; Community Validation Session, Ndonyo Wasin, Waso Ward, March 2025.

When participation, inclusion, and transparency are the focus in local governance, they help to ensure that resulting policies and interventions are equitable, increasing the likelihood that vulnerable individuals and groups who are historically marginalised benefit from climate adaptation according to their respective needs and priorities. While equity is essential to ensuring that the effects of rangeland management, herd management, and diversification of livelihoods are felt across diverse groups, it is particularly important to conflict management, often addressing the central grievances that underpin intracommunal and intercommunal conflict. For example, *morans* in Waso Ward described a water-sharing agreement between the Samburu and Borana communities, which set specific days for each group to take their livestock to shared rivers.⁷⁴ This arrangement reduced tensions and prevented disputes over access to water by ensuring that each community felt that its needs were being fulfilled.

While communities recognize the value of partnering with government and NGOs to enable effective climate adaptations, internationally funded initiatives tend to be managed by distinct, project-level governance structures, instead of being integrated into existing community governance structures and decision-making processes. Many climate adaptations, therefore, respond to external strategic interests and power dynamics, rather than to local needs and priorities. When these initiatives fail to create space for inclusive and meaningful community participation, adaptations may not be well tailored to the local context and may not achieve their potential impact. Rather, LLA necessitates a mutual exchange of expertise, whereby government and NGO actors provide technical expertise, policy expertise, and linkages to institutions and resources, while local actors fundamentally lead the design and implementation of the adaptations and efforts to strengthen the enablers of those adaptations through awareness raising, advocacy, and/or activism. This exchange should also involve a blending of indigenous knowledge and scientific data to ensure that adaptations to drought are both relevant and effective. As such, partnerships between external actors and local communities must be collaborative and facilitative, valuing and incorporating community knowledge and norms throughout the process.⁷⁵

“All key actors should visit villages to collect people’s views...This will help them create policies and strategies that actually work for our community.”

—Woman, Waso Ward, February 2025



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⁷⁴ FGD, *Morans* (Youth Herders), Waso Ward, February 2025.

⁷⁵ For an example of putting these kinds of principles and norms into practice, see [the Legado Initiative’s work with the Ngali Community Conservancy in Samburu county](#), which utilised participatory approaches to articulate a community plan for rangeland management.



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“I felt that the community voice was speaking to us, and it came at the right time...These findings validate the premise of RANGE and provide us with the opportunity to be creative and innovative.”

—RANGE Programme Senior Management Team Member, April 2025

Conclusions and Recommendations

The aim of this study is to contribute to policy and practice related to LLA by exploring the ways in which the deliberate incorporation of participatory approaches may help to realise core principles and commitments. We found two interconnected ways in which meaningful and inclusive participation may help overcome barriers to LLA. First, we found that incorporating **participation in the research lifecycle** helped frame the areas of inquiry, analysis, and opportunities for evidence use around the priorities of local communities, local government, and civil society actors in their ongoing efforts to reinforce their resilience to drought and its downstream effects.

Second, we found that study participants valued the principles of **inclusive and equitable participation in decision-making about climate policies, investments, and activities** as a crucial enabling factor that helps adaptations realise their potential impact. Not only did this emerge as a distinct enabling factor, but study participants also identified numerous, concrete actions for embedding meaningful participation across each of the four locally led adaptations to drought (rangeland management, conflict management, herd management, and diversification of livelihoods) and each of the four other categories of enabling factors (coordination and relationships, skills and capacities, information and data, resources and infrastructure). These proposed actions offer opportunities for nurturing collaborative and transparent community governance structures, leveraging existing local expertise to strengthen individual and collective skills, integrating and disseminating scientific data and indigenous knowledge, and ensuring context-specific maintenance of public infrastructure and distribution of resources. Critically, these principles of participation should be applied by all partners in LLA, including local governance structures, county government directorates, and local or international NGOs.

Notably, the last phase of the participatory research process used in this study brought together these two types of participation by giving community members space to harness the research findings to generate concrete potential actions for awareness raising, advocacy, and/or collective action that can help overcome the barriers to their current and desired climate adaptations. These ideas are being incorporated into the work plans being developed by the RANGE programme team, consortium partners, and local partner NGOs, ensuring that the evidence produced through this research is directly translated into LLA activities.

The recommendations in this report target **civil society actors, policymakers, and donors looking to support LLA**, particularly in East Africa’s drylands.⁷⁶ In the section that follows, we present four key implications and recommendations following from this research, focusing on connections between the findings presented here and the principles of LLA (see **Box 1**).

Key Implications and Recommendations for Locally Led Adaptation

Being intentional about sequencing and layering the participation of diverse local stakeholders over time can help to incrementally advance LLA. At its heart, LLA is focused on building resilience to shocks and stresses related to climate change by shifting power and resources to local actors (Coger et al. 2022). This commitment underpins the eight principles of LLA (see **Box 1**), especially the principles that revolve around devolving decision-making to the lowest appropriate level (Principle 1), investing in local capabilities (Principle 4), and addressing structural inequalities faced by marginalised groups (Principle 2). Progress on realising these principles can be hampered by a practical need to flatten the diversity of local actors into a single broad category such as “local leaders,” “the community,” or “youth” and by implicitly assuming that this “local” decision-making can be simply increased to the maximum level (Rahman et al. 2023). This tendency—even when driven by practical considerations such as donor-driven project timelines and budgets—runs the risk of overlooking the full diversity of local capacities and interests related to building climate resilience, and the power dynamics and norms that shape the ability of communities and governance institutions to incorporate these diverse perspectives in decision-making processes.



Bharathi Radhakrishnan

RANGE programme team members and stakeholders participate in an exercise to prioritise research questions during the November 2024 research design workshop.

The findings in this study—and broader practitioner knowledge and evidence on good governance—indicate that one potential way to overcome this pitfall is by getting **fine-grained and specific about mapping local stakeholders and identifying the actual and desired levels of participation of each stakeholder across each step of iterative planning and implementation cycles** (Sheely 2015; Gurung et al. 2017). As described in the methodology section above, the version of the participatory research process that we deployed in this study identified a rich array of local actors, including RANGE programme staff and consortium partners, county government officials, local NGOs serving as RANGE LIPs, young people serving as community researchers for this study, local leaders, and community members representing a wide range of livelihoods, ethnic groups, genders, and ages.

⁷⁶ Alongside the publication and dissemination of this report in mid-2025, we are also working with other stakeholders—including the Mercy Corps Kenya country office, the RANGE programme team and partners, RANGE Local Implementing Partners, and Community Researchers—to tailor the findings and recommendations to their specific needs and use cases.

This fine-grained focus on what constituted “local” stakeholders vis-à-vis climate adaptation in this context enabled us to gradually layer increasingly meaningful forms of participation across each step of the research lifecycle. At the earliest stages of the research, from selecting research partners through designing tools, a small set of local stakeholders—RANGE programme staff and consortium partners plus county government stakeholders—gradually moved from **consultation** to **collaboration** on the development of research questions, sites, and tools via the participatory research design workshop. Similarly, while broader community members were **empowered** to nominate the community researchers from their ward, these young people then served as representatives of their wards as they **collaborated** with the co-PIs and RANGE partners to refine and implement the FGD tool and analyse the data. The final phase of the participatory research process gave a broader set of community members in each research site an opportunity to be **involved** in interpreting the findings and to **collaborate** on identifying community-based actions that might help to address barriers to and enablers of the specific adaptations that are most relevant to their community. Our ability to iteratively create space for both broader and deeper participation throughout the research lifecycle indicates that repeating the participatory research cycle in these communities in the future (either through RANGE or as a standalone initiative) could create opportunities to activate even deeper levels of collaboration and empowerment for a broader diversity of local actors across more stages of the research and action cycle.

RECOMMENDATION #1

When planning for participation in research and/or decision-making, actors supporting LLA should be specific and inclusive when defining the full range of “local” stakeholders and their current and desired level of participation in various aspects of a study or activity, finding opportunities for increasingly meaningful forms of participation over time across the phases of a single initiative, or through iterative cycles of planning and implementation.



Ryan Sheely / Mercy Corps - Kenya

Community researchers work together to review the draft FGD questionnaire during the January 2025 qualitative methods training.

Giving communities the opportunity to define, prioritise, and diagnose problems related to climate change helps to balance simplicity and awareness of complexity. Because LLA aspires to empower communities and other local actors to solve locally specific challenges related to climate change, its core principles intentionally link building a robust understanding of climate risk and uncertainty (Principle 5) to providing patient and predictable funding that can be accessed more easily (Principle 3). In particular, the principles of LLA highlight the need to draw on insights from multiple sources—including scientific, local, and indigenous knowledge and ways of knowing—to identify hazards, plan for adaptations, and direct resources accordingly (WRI 2022; IIED 2022).

The findings presented in this study show that one way to advance this aspect of the LLA principles is by facilitating space for meaningful participation by communities and other local stakeholders in **problem analysis**. As described above, the FGD tool used in this study was explicitly designed to move from broad, externally defined understandings of “climate shocks and stresses” and the “climate-conflict nexus” to local knowledge about these phenomena and how they shape the lives of the individuals and communities taking part in the research. This structure simultaneously revealed that while most individual focus groups agreed that drought is the central challenge related to climate change in the communities where the study took place, **participants also identified a diverse web of interconnected factors that shape how the same shock might impact different communities or households due to their current characteristics**. Participants also identified numerous specific examples of indigenous knowledge about drought and identified the ability to link indigenous knowledge to scientific data as a key enabler for adaptations—specifically herd management diversification of livelihoods.

Collectively, this body of local knowledge largely aligned with core assumptions in the RANGE programme’s theory of change and design while providing the Mercy Corps programme team, consortium partners, and LIPs with the information that they needed to fine tune activities to fit with community-level challenges, in partnership with communities themselves. Using systems analysis as a core tool for analysis and data visualisation helped to make this evidence usable by a wide range of local stakeholders by synthesising a complex set of causal relationships into a single snapshot that summarises local knowledge about drought and its impacts. While these kinds of tools for participatory problem analysis were deployed in the context of a research study, they can also easily be used as an assessment or planning tool within an NGO programme or planning process led by local governments or community governance structures. Future uses of this kind of tool can further deepen community participation in problem analysis by adopting tools such as participatory systems mapping in which community members and other stakeholders actively take the lead in drawing and analysing the connections between factors (Angkiriwang 2020; Ghadri et al. 2024; Szetey et al. 2023).



RECOMMENDATION #2

At early stages in research and/or programming, actors supporting LLA should use participatory data collection tools and/or facilitation techniques to help empower communities to define and prioritise climate challenges in ways that draw on local knowledge.

Investigating the specific barriers to and enablers of locally led adaptations organically highlights needs and opportunities for meaningful participation and collaboration in decision-making. Another core commitment of LLA is to invest in the capabilities of local institutions to design and manage adaptation initiatives over the long term (Principle 4). Along with technical and analytical skills related to analysing climate risks, these skills also include being able to design and implement adaptation programmes and initiatives in ways that are transparent and accountable to local communities and other stakeholders (Principle 7) and which foster collaboration across the diverse set of actors working to support adaptation across different sectors and at different levels (Principle 8).

The findings reported in this study show that devoting explicit attention to existing and latent local adaptations to climate shocks and stresses—and the factors that block or enable those adaptations—is a central aspect of effectively investing in local capabilities for managing adaptation initiatives. Rather than starting from a focus on the RANGE programme (or any other initiative led by NGOs, donors, or the government), the FGD tool for this study explicitly focused on identifying how individual households and their broader communities prepare for and respond to drought and its effects. This approach surfaced four types of locally led adaptations to drought that are present to varying degrees across all three of the wards and counties included in this study: rangeland management, conflict management, herd management, and diversification of livelihoods.

Our findings show that a diverse array of actors and institutions play important roles in enabling the success of each of these kinds of locally led adaptations by articulating and enforcing local bylaws and agreements, providing access to resources and infrastructure, sharing information that households and communities need to make timely decisions before and during a drought, and helping to build the skills and norms needed to successfully implement adaptations. Our findings also show that the ability of these actors to play their roles in supporting adaptation is shaped by the extent to which they are willing and able to facilitate meaningful engagement and participation by community members and to collaborate with one another and with outside actors. Some adaptations—namely rangeland management and conflict management—are explicitly collective in nature. As a result, implementing these adaptations depends on effective, accountable, and inclusive local institutions, such as Rangeland Management Committees and Water Resource User Associations in the case of rangeland management and local peace committees in the case of conflict management.

In addition, all four adaptations—including household-level adaptations such as herd management and livelihoods diversification—are enabled by the provision of infrastructure, information, and financial resources by a variety of international and national actors and institutions, including international donors and NGOs, national actors such as NDMA and KMD, county governments, local NGOs, Ward Development Committees, SACCOs, and VSLAs. For all of these actors and institutions, cultivating meaningful participation by the community as a whole or specific subsets of the community can help to enhance the effectiveness of interventions by helping to ensure that resources and infrastructure are targeted to the areas of greatest need; trainings, data, and awareness-raising activities address the gaps identified as important by community members; and that outside actors are held accountable for their responsibilities. The diverse range of awareness raising, advocacy, and collective action activities brainstormed by communities as part of the final step of the participatory research process in this study showcase the diverse and creative types and levels of community participation and collaboration with outside actors and other local stakeholders that can help to activate LLA.

RECOMMENDATION #3

Actors supporting LLA should use participatory research and/or assessment tools to identify existing and latent community-led adaptations to the most important climate risks and harms in that community and to probe the types of ongoing community participation and collaboration that overcome the most important barriers to those adaptations.

Participatory research can help to build a foundation for flexible, participatory decision-making and programming on climate adaptation. A final defining commitment of LLA is to flexible programming and funding, enabled by relevant scientific data and local knowledge (Principle 5), robust monitoring and learning systems (Principle 6), and functioning transparency and accountability relationships (Principle 7). The findings in this study—along with a growing evidence base on the intersections between participation in research and governance—indicate that participatory research methods are uniquely well suited to simultaneously advancing these commitments to evidence-driven, flexible programming and transparent, accountable decision-making in LLA (Sheely 2018; Hakiman & Sheely 2025; Assenbaum et al. 2025). As noted throughout the preceding discussion in this section, participatory research methods can serve an important role in filling gaps in data and evidence needed to undertake planning for LLA by helping to bridge scientific knowledge and climate data with local knowledge about the indicators and drivers of climate challenges and the enablers of existing and latent LLA. The findings from this study show that participatory research is an especially promising approach for supporting evidence-driven, flexible interventions to support LLA, due to its emphasis on building in space for collaboration with communities and other local stakeholders to interpret evidence and take actions based on that analysis.

At the same time, the findings in this study also indicate that participatory research methods can help provide communities, local stakeholders, and international NGOs and donors an opportunity to model and practice the norms and principles of inclusion, transparency, and accountability that are cross-cutting enablers of LLA (Hakiman & Sheely 2020; Sloan et al. 2024). As described in the methodology section above, the participatory research process used in this study explicitly drew on technical approaches, evidence, and practitioner knowledge from the broader practice of participatory governance alongside more specific methodological tools focused on participatory research. This focus helped to inform the layered, iterative approach to the participatory research process used in this study, bringing explicit attention to the interests and power of a diverse array of community members, local institutions, and international stakeholders. By collaborating with the RANGE programme staff and county government stakeholders throughout the participatory research—including contextualising tools, collecting and analysing data, and planning for action with community members—we were able to facilitate opportunities for new types of engagement and collaboration between these stakeholders and community members. Future efforts to support LLA through development programming can further expand on the approach piloted here by building participatory research directly into the programming lifecycle and by supporting ongoing, iterative cycles of evidence generation, learning, and adaptation that help to simultaneously build both knowledge and shift norms over time.

RECOMMENDATION #4

Actors supporting LLA should explicitly integrate participatory research methods throughout planning and programming cycles, with an explicit emphasis on selecting methods and processes that simultaneously meet evidence needs and provide opportunities to model and practise inclusive, accountable, and transparent decision-making.



Patrick Meinhardt / Mercy Corps - Kenya

Works Referenced

Adano, W. R., Dietz, T., Witsenburg, K., & Zaal, F. 2012. Climate change, violent conflict and local institutions in Kenya's drylands. *Journal of Peace Research*, 49(1), 65-80. Available at: <https://doi.org/10.1177/0022343311427344>.

Agrawal, A., McSweeney, C., & Perrin, N. 2008. Local Institutions and Climate Change Adaptation. *Social Development Notes*, No. 113. World Bank. Available at: <https://hdl.handle.net/10986/11145>.

Anbacha, A. E., & Kjosavik, D. J. 2019. Gendered perspectives of climatic and non-climatic stressors in Borana, southern Ethiopia. *Journal of Arid Environments*, 166, 28-36. Available at: <https://doi.org/10.1016/j.jaridenv.2019.02.012>.

Andrews, M., Pritchett, L., & Woolcock, M. 2017. *Building State Capability: Evidence, Analysis, Action*. New York: Oxford University Press.

Angkiriwang, P. 2020. "Tracing Climate Impacts Using Participatory Systems Mapping: Informing Adaptation for a Marine Food System in the Tla'amin First Nation." PhD Thesis, University of British Columbia. <https://open.library.ubc.ca/soa/cIRcle/collections/ubctheses/24/items/1.0394121>.

Anonymous Contributor. Stealth Game: "Community" Conservancies and Dispossession in Northern Kenya. (2022, January 14). *The Elephant*. Available at: <https://www.theelephant.info/analysis/2022/01/14/stealth-game-community-conservancies-and-dispossession-in-northern-kenya/>.

Asenbaum, H, Bussu, S., Escobar, O., & Harris, C.. 2025. "Participatory Democracy and Participatory Research." *European Political Science Review*, May, 1-19. Available at: <https://doi.org/10.1017/S1755773925000074>.

Ayeb-Karlsson, S., Hayward, G., & Kniveton, D. 2025. "'We Herders Are Often Chased About by Drought': A Systems Analysis of Natural Resource Degradation Within the Climate-(Im)Mobility-Violence-Health Nexus in Sahel." *Earth* 6 (1): 11. Available at: <https://doi.org/10.3390/earth6010011>.

Bedelian, C. 2024. *How Climate Information Services (CIS) Can Help Pastoralists in the Horn of Africa*. Policy Brief. London: Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises (SPARC). Available at: https://www.sparc-knowledge.org/sites/default/files/documents/resources/how-climate-information-services-can-help-pastoralists-in-the-horn-of-africa_policy-brief.pdf.

Birchall, S., Bonnett, N., & Kehler, S. 2023. The influence of governance structure on local resilience: Enabling and constraining factors for climate change adaptation in practice. *Urban Climate*, 47. Available at: <https://doi.org/10.1016/j.uclim.2022.101348>.

Catley, A. 2017. Pathways to Resilience in Pastoralist Areas: A Synthesis of Research in the Horn of Africa (18). Boston: Feinstein International Center, Tufts. Available at: https://www.researchgate.net/profile/Andy-Catley/publication/325312253_Pathways_to_Resilience_in_Pastoralist_Areas_A_Synthesis_of_Research_in_the_Horn_of_Africa/links/5b04fa700f7e9be94bdbb39b/Pathways-to-Resilience-in-Pastoralist-Areas-A-Synthesis-of-Research-in-the-Horn-of-Africa.pdf.

Chambers, R. 1994. *Paradigm Shifts and the Practice of Participatory Research and Development*. Working Paper 2. Institute of Development Studies.

- Chandy, L., Kato, H., & Kharas, H. (Eds.). 2015. *The Last Mile in Ending Extreme Poverty*. Brookings Institution Press. Available at: <https://www.jstor.org/stable/10.7864/j.ctt7zsvz6>.
- Chepkwony, R., et al. 2020. Associations between monthly rainfall and mortality in cattle due to East Coast fever, anaplasmosis and babesiosis. *Parasitology*, 147(14), 1743-1751. Available at: <https://doi.org/10.1017/S0031182020001638>.
- Chu, E., Angelovski, I., & Carmin, J. 2015. Inclusive approaches to urban climate adaptation planning and implementation in the Global South. *Climate Policy*, 16(3), 372–392. Available at: <https://doi.org/10.1080/14693062.2015.1019822>.
- Coger, T., et al. 2022. “Locally Led Adaptation: From Principles to Practice.” Working Paper. Washington, DC: World Resources Institute. Available at: <https://www.iied.org/sites/default/files/pdfs/2021-01/10211IIED.pdf>.
- Cuni-Sanchez, A., Omeny, P., Pfeifer, M., Olaka, L., Mamo, M. B., Marchant, R., & Burgess, N. D. 2019. Climate change and pastoralists: Perceptions and adaptation in montane Kenya. *Climate and Development*, 11(6), 513–524. Available at: <https://doi.org/10.1080/17565529.2018.1454880>.
- Diouf, N. S., et al. 2019. Factors influencing gendered access to climate information services for farming in Senegal. *Gender, Technology and Development*, 23(2), 93–110. Available at: <https://doi.org/10.1080/09718524.2019.1649790>.
- Ensminger, J., & Knight, J. 1997. Changing Social Norms: Common Property, Bridewealth, and Clan Exogamy. *Current Anthropology*, 38, 1 - 24. Available at: https://www.journals.uchicago.edu/doi/abs/10.1086/204579?casa_token=QMAEjSU-plMAAAAAA:qGz4Jiv0UcQ2VL05HtDhsQKopG5Geac4mhvZq0K5kRM9Du9W2ui2-NzqyGfFNpzc8QzGLAD5IIfbqw.
- Eriksen S, Brown K, & Kelly P. 2005. The Dynamics of Vulnerability: Locating Coping Strategies in Kenya and Tanzania. *Geographical Journal*, 171(5), 287-305. Available at: <https://doi.org/10.1111/j.1475-4959.2005.00174.x>.
- Eriksen, S., & Lind, J. 2009. Adaptation as a Political Process: Adjusting to Drought and Conflict in Kenya’s Drylands. *Environmental Management*, 43(5), 817–835. Available at: <https://link.springer.com/article/10.1007/s00267-008-9189-0>.
- Filho, W. L., et al. 2020. Introducing experiences from African pastoralist communities to cope with climate change risks, hazards and extremes: Fostering poverty reduction. *International Journal of Disaster Risk Reduction*, 50, 101738. Available at: <https://doi.org/10.1016/j.ijdrr.2020.101738>.
- Fine, M. & Torre, M.E. 2021. *Essentials of Critical Participatory Action Research*. American Psychological Association. Available at: <https://doi.org/10.1037/0000241-000>.
- Fratkin, E. 2001. East African Pastoralism in Transition: Maasai, Boran, and Rendille cases. *African Studies Review*, 44 (3), 1–25. Available At: <https://doi.org/10.2307/525591>.
- Global Commission on Adaptation. 2019. Adapt Now: A Global Call for Leadership on Climate Resilience. Washington, DC: World Resources Institute. Available at: <https://gca.org/reports/adapt-now-a-global-call-for-leadership-on-climate-resilience/>.
- Gurung, S., Shean, A., O’Neil, C., & Barnett, K. 2017. “CATALYSE: Communities Acting Together.” A Governance in Action Guide. Portland, OR: Mercy Corps.

- Guye, M., Legesse, A., & Mohammed, Y. 2022. Indigenous weather forecasting among Gujii pastoralists in southern Ethiopia: Towards monitoring drought. *Pastoralism*, 12(1), 43. Available at: <https://doi.org/10.1186/s13570-022-00258-0>.
- Habtemariam, L. T., Gandorfer, M., Kassa, G. A., & Heissenhuber, A. 2016. Factors Influencing Smallholder Farmers' Climate Change Perceptions: A Study from Farmers in Ethiopia. *Environmental Management*, 58(2), 343–358. Available at: <https://doi.org/10.1007/s00267-016-0708-0>.
- Hakiman, K., & Sheely, R. 2020. "Pathways to Good Governance." Washington, D.C.: Mercy Corps.
- Hakiman, K., & Sheely, R. 2023. "Unlocking the Potential of Participatory Planning: How Flexible and Adaptive Governance Interventions Can Work in Practice." *Studies in Comparative International Development* 60 (1): 43–80. <https://doi.org/10.1007/s12116-023-09415-x>.
- Hakiman, K., & Sheely, R. 2024. "Participatory Planning in East Africa's Drylands, Take Two." Policy Brief. London, UK: SPARC. https://www.sparc-knowledge.org/sites/default/files/documents/resources/Policy%20Brief_Participatory%20planning%20in%20East%20Africa%27s%20drylands_take%20two-%20from%20chasing%20an%20illusory%20panacea%20to%20practical%20learning_HiRes.pdf.
- Hassan, R., Stites, E., & Howe, P. 2024. *Pastoralists' Perspectives on Early Warning, Anticipatory Action, and Emergency Response*. Feinstein International Center, Tufts University. Available at: https://fic.tufts.edu/wp-content/uploads/Desk_Study1_Pastoralist_Perspectives.pdf.
- Homewood, K. 2006. As Pastoralists Settle: Social, Health and Economic Consequences of Pastoral Sedentarization in Marsabit District, Kenya. *Human Ecology*, 34(2), 297–299. Available at: <https://link.springer.com/article/10.1007/s10745-006-9018-0>.
- Jagosh, J., et al. 2012. Uncovering the benefits of participatory research: Implications of a realist review for health research and practice. *Milbank Quarterly*, 90(2), 311–346. Available at: <https://doi.org/10.1111/j.1468-0009.2012.00665.x>.
- Jene, L. & Tesfaye, B. 2020. *Addressing the Climate-Conflict Nexus in Fragile States: Understanding the Role of Governance*. Washington DC: Mercy Corps. Available at: https://www.mercycorps.org/sites/default/files/2020-11/Addressing-the-Climates-Conflict-Nexus_Research-Brief_11.6.pdf.
- Kaunga, M. & Bunke, T. 'Walking for Peace—Camel Caravan in northern Kenya,' in in Buchanan, C. (ed.). 2020. *Pioneering peace pathways—Making connections to end violent conflict*, Accord 29. London: Conciliation Resources. Available at: <https://www.c-r.org/accord/pioneering-peace-pathways/walking-peace-camel-caravan-northern-kenya>.
- Khabure, L. 2014. Committed to peace or creating further conflict? The case of Kenya's local peacebuilding committees. *Peace Insights*. Peace Direct. Available at: <https://www.peaceinsight.org/en/articles/committed-peace-creating-conflict-case-kenyas-local-peacebuilding-committees>.
- Least Developed Countries Initiative for Adaptation and Resilience (LIFE-AR). 2024. Demonstrating locally led adaptation principles in practice. London: IIED. Available at: <https://www.iied.org/22531g>.
- Lelenguyah, G. L., et al. 2023. Seasonal distribution of livestock in Samburu county, northern Kenya: a response to variable pasture and water in semi-arid rangelands. *African Journal of Range and Forage Science*, 41(3), 1–14. Available at: <https://doi.org/10.2989/10220119.2023.2210611>.

- Lenaiyasa, et al. 2020. Pastoralists' use of income diversification as a strategy for adapting to social-ecological change in Samburu, Kenya. *Regional Environmental Change*, 20(1), 1-11. Available at: <https://doi.org/10.1007/s10113-020-01612-x>.
- Lesorogol, C. K. 2003. Transforming Institutions among Pastoralists: Inequality and Land Privatization. *American Anthropologist*, 105(3), 531–541. Available at: <https://doi.org/10.1525/aa.2003.105.3.531>.
- Lesorogol, C. K. 2008. Land Privatization and Pastoralist Well-being in Kenya. *Development and Change*, 39(2), 309–331. Available at: <https://doi.org/10.1111/j.1467-7660.2007.00481.x>.
- Lesorogol, C. K. 2009. Asset Building through Community Participation: Restocking Pastoralists Following Drought in Northern Kenya. *Social Work in Public Health*, 24(1–2), 178–186. Available at: <https://www.tandfonline.com/doi/abs/10.1080/19371910802569740>.
- Levy, B. 2014. Working with the Grain: Integrating Governance and Growth in Development Strategies. Oxford: Oxford University Press.
- Little, P. D. 2003. Rethinking Interdisciplinary Paradigms and the Political Ecology of Pastoralism in East Africa. *African Savannas: Global Narratives and Local Knowledge of Environmental Change*, 161-77.
- Little, P. D., Mahmoud, H., & Coppock, D. L. 2001. When Deserts Flood: Risk Management and Climatic Processes among East African Pastoralists. *Climate Research*, 19, 149-159. Available at: <https://www.int-res.com/abstracts/cr/v19/cr019149>
- Little, P. D., Smith, K., Cellarius, B. A., Coppock, D. L., & Barrett, C. 2001. Avoiding Disaster: Diversification and Risk Management among East African Herders. *Development and Change*, 32(3), 401-433. Available at: <https://www.int-res.com/abstracts/cr/v19/cr019149>.
- Marshak, A., & Venkat, A. 2021. Climatic variability and disasters in Kenya's arid and semi-arid lands: Nawiri desk study. Feinstein International Center, Tufts University. Available at: https://fic.tufts.edu/wp-content/uploads/Nawiri_climatechange_11.1.21.pdf.
- Mganga, K.Z., et al. 2018. Determinants and rates of land degradation: Application of stationary time-series model to data from a semi-arid environment in Kenya. *Journal of Arid Land* 10, 1–11. Available at: <https://doi.org/10.1007/s40333-017-0036-0>.
- Miller, S. E., et al. 2020. Assessment of a spatially and temporally consistent MODIS derived NDVI product for application in index-based drought insurance. *Remote Sensing*, 12(18), 3031. Available at: <https://doi.org/10.3390/rs12183031>.
- Mohamed, T. 2022. *The Role of the Moral Economy in Response to Uncertainty Among the Pastoralists of Northern Kenya* PhD Thesis. University of Sussex. Available at: https://sussex.figshare.com/articles/thesis/The_role_of_the_moral_economy_in_response_to_uncertainty_among_Borana_pastoralists_of_Northern_Kenya_Isiolo_County/23494508?file=41202650.
- Mohamed, T. 2023. Responding to uncertainties in pastoral northern Kenya: The role of moral economies. *Pastoralism, Uncertainty and Development*. https://library.oapen.org/bitstream/handle/20.500.12657/92755/1/10_3362_9781788532457%20%283%29.pdf#page=96.
- Mutanda, N. A., & Kimaru, S. 2022. The Effect of Market Operations on Drought Induced Livestock Mortality in North Horr Ward of Marsabit County of Kenya. *The International Journal of Humanities and Social Studies*, 10(4). Available at: <https://www.internationaljournalcorner.com/index.php/theijhss/article/view/169555/115791>.

- Mutiga, J. K., et al. 2015. Water allocation as a planning tool to minimise water use conflicts in the Upper Ewaso Ng'iro North Basin, Kenya. *Water Resources Management*, 24(14), 3939-3959. Available at: <https://doi.org/10.1007/s11269-010-9641-9>.
- Nassef, M., et al. 2023. Causes of farmer–herder conflicts in Africa: A systematic scoping review. London, UK: SPARC (Supporting Pastoralism and Agriculture in Recurrent and Protracted Crises). Available at: <https://www.sparc-knowledge.org/sites/default/files/documents/resources/causes-of-farmer-herder-conflicts-report.pdf>.
- Ngigi, M.W., & Muange, E.N. 2022. Access to climate information services and climate-smart agriculture in Kenya: a gender-based analysis. *Climatic Change* 174, (21). Available at: <https://doi.org/10.1007/s10584-022-03445-5>.
- OECD. 2023. “Climate adaptation: Why local governments cannot do it alone”, *OECD Environment Policy Papers*, No. 38. Paris: OECD Publishing. Available at: <https://doi.org/10.1787/be90ac30-en>.
- Ogutu J.O., et al. 2016. Extreme Wildlife Declines and Concurrent Increase in Livestock Numbers in Kenya: What Are the Causes? *PLoS ONE* 11(9): e0163249. Available at: <https://doi.org/10.1371/journal.pone.0163249>.
- Omoyo, N.N., Wakhungu, J. & Oteng'i, S. 2015. Effects of Climate Variability on Maize Yield in the Arid and Semi-Arid Lands of Lower Eastern Kenya. *Agriculture and Food Security*, 4(8). Available at: <https://doi.org/10.1186/s40066-015-0028-2>.
- Oord, A., Collenteur, R., & Tolck, L. 2014. Hydrogeological Assessment of the Merti Aquifer, Kenya. Gouda, The Netherlands: Acacia Water. Available at: <https://www.worldagroforestry.org/sites/default/files/TR1%20ARIGA-%20Hydrological%20Assessment%20of%20the%20Merti%20Aquifer%20Kenya.pdf>.
- Radhakrishnan, B., & Santara, M. 2025. “Building Bonds of Trust: The Relationship between Conflict Resolution Committees and Social Cohesion in Mali.” Washington, DC: Mercy Corps. Available at: <https://www.mercycorps.org/sites/default/files/2025-01/building-bonds-of-trust-social-cohesion-mali.pdf>.
- Rahman, M.F., Falzon, D., Robinson, Sa. et al. 2023. Locally led adaptation: Promise, pitfalls, and possibilities. *Ambio*, 52, 1543–1557. Available at: <https://doi.org/10.1007/s13280-023-01884-7>.
- Raj, R. et al. 2020. Improving women’s access to climate information services and enhancing their capability to manage climate risks. *APN Science Bulletin*, 10(1). Available at: <https://doi.org/10.30852/sb.2020.946>.
- Recha, C. W., et al. 2017. Determination of seasonal rainfall variability, onset and cessation in semi-arid Tharaka sub-county, Kenya. *Theoretical and Applied Climatology*, 130(1), 177-188. Available at: <https://doi.org/10.1007/s00704-011-0544-3>.
- Robinson, L. W., Ontiri, E., Alemu, T., & Moiko, S. S. 2017. Transcending Landscapes: Working Across Scales and Levels in Pastoralist Rangeland Governance. *Environmental Management*, 60(2), 185–199. Available at: <https://doi.org/10.1007/s00267-017-0870-z>.
- Schetter, C., Mkutu, K., & Müller-Koné, M. 2022. Frontier NGOs: Conservancies, control, and violence in northern Kenya. *World Development*, 151, 105735. Available at: <https://doi.org/10.1016/j.worlddev.2021.105735>.
- Schrieks, T., Botzen, W. J. W., Haer, T., & Aerts, J. C. J. H. 2024. Drought risk attitudes in pastoral and agro-pastoral communities in Kenya. *Journal of Behavioral and Experimental Economics*, 108, 102143. Available at: <https://doi.org/10.1016/j.socec.2023.102143>.
- Scott, J. C. 1976. *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*. Yale University Press.

- Shariff, T. 2020. 'I exist because you exist': The 'moral economy' of pastoralists' in response to COVID-19. Pastoralism, Uncertainty and Resilience - PASTRES. Available at: <https://pastres.org/2020/05/01/i-exist-because-you-exist-the-moral-economy-of-pastoralists-in-response-to-covid-19/>.
- Sheely, Ryan. 2018. "Participatory Research, Empowerment, and Accountability: Assessing Participant Driven Evaluation." Paper Presented at the Annual Meetings of the American Political Science Association . Boston, MA.
- Sloan, B. 2024. Participatory Evidence Generation and Learning: Approaches for Jointly Realizing our Evidence Driven and Locally Led Commitments. Washington, DC: Mercy Corps.
- Sloan, B., al-Zubaidi, K., & Khalil, Q. 2023. Participatory Action Research in Complex Crises: Lessons and Opportunities from Northeast Syria. Washington, DC: Mercy Corps.
- Sloan, B., Radhakrishnan, B., & Sheely, R. 2024. Participatory Adaptations in the COVID-19 Era: Learning from the Past and Preparing for the Future. Washington, D.C.: Mercy Corps. Available at: <https://www.mercycorps.org/research-resources/covid-19-learning-and-preparing>.
- Soanes, M., et al. 2021. Principles for locally led adaptation: A call to action. London: IIED. Available at: <https://www.iied.org/sites/default/files/pdfs/2021-01/1021IIED.pdf>.
- Tye, S., & Suarez, I. 2021. "Locally Led Climate Adaptation: What Is Needed to Accelerate Action and Support?" Working Paper. Washington, DC: World Resources Institute. Available at: <https://publications.wri.org/locally-led-climate-adaptation>.
- United Nations. 2022. "Why Women Are Key to Climate Action." United Nations Blog. <https://www.un.org/en/climatechange/science/climate-issues/women>.
- Vaughn, L. M., & Jacquez, F. 2020. Participatory Research Methods—Choice Points in the Research Process. *Journal of Participatory Research Methods*, 1(1). Available at: <https://doi.org/10.35844/001c.13244>.
- Virinder, S., et al. 2014. Supporting local climate adaptation planning and implementation through local governance and decentralised finance provision. *Development in Practice*, 24:4, 579-590. Available at: <https://doi.org/10.1080/09614524.2014.907240>.
- Watson, D. J. 2008. Community farmer field school animal health facilitators: Hybridizing private animal health care and capacity building in remote pastoralist areas (Research Report No. 14). ILRI.
- Yala, J. A., et al. 2020. Adaptation Measures to Mitigate the Impacts of Climate Variability among Pastoralists in Kajiado, Kenya. *Asian Journal of Agricultural Extension, Economics and Sociology*, 38 (10):156-66. Available at: <https://doi.org/10.9734/ajaees/2020/v38i1030442>.
- Zeller-Berkman, S. M. 2014. Lineages: A past, present, and future of participatory action research. In P. Leavy (Ed.), *The Oxford Handbook of Qualitative Research* (pp. 518–532). Oxford University Press.

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