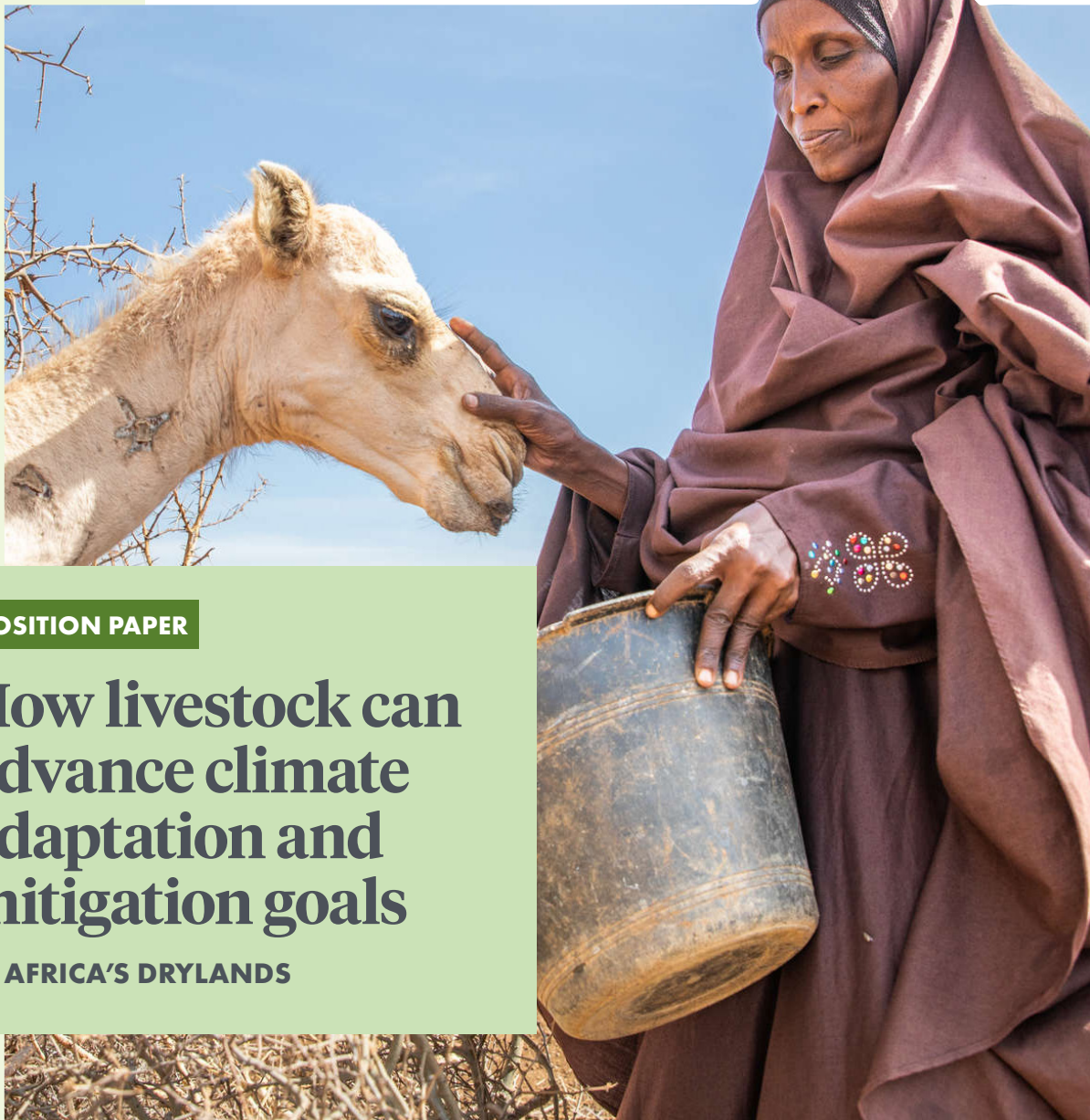


Climate: Possible



POSITION PAPER

How livestock can advance climate adaptation and mitigation goals

IN AFRICA'S DRYLANDS

February 2022, Beidoa, Somdila. Ezra Millstein/Mercy Corps

The impacts of climate change have reached crisis levels in much of the Global South. Climate-related disasters and dire environmental conditions are devastating communities, weakening critical infrastructure, threatening lives and livelihoods, and forcing millions to flee their homes in search of safety and better opportunities.¹



June 2021, Karamoja, Uganda. Ezra Millstein/Mercy Corps

Urgent relief and support for recovery after each climate-driven emergency is not enough. As this crisis intensifies, we need to partner with communities around the world as they work to adapt to the impacts of climate change and build resilience for the long term.

Currently, progress toward climate adaptation goals is falling woefully short. From a civil society perspective, insufficient investment in climate adaptation is the primary culprit. Many donors and investors cite the lack of evidence-based solutions that have the potential to support adaptation and resilience at scale as the main barrier. The result is a deadlock, where adaptation progress is continually and significantly outpaced by the impacts of climate change.

This need not be the case. Impactful, scalable approaches to climate adaptation exist.

Mercy Corps has worked with local communities for over four decades to meet complex challenges with comprehensive, innovative solutions.

From proactive and rapid emergency response to restorative agricultural practices and renewable energy sources, our programming helps people cope with the immediate impacts of climate-related events, adapt to changing conditions, and make a **more** resilient future possible.

We launched the **Climate: Possible campaign** because we know what climate resilience looks like and we understand what it takes to get there. Each of the position papers in our Climate: Possible series articulates proven and high-potential solutions to climate challenges, drawing on Mercy Corps' extensive experience, evidence, and insights gathered from operating in the most fragile, climate-vulnerable contexts.

One adaptation strategy that is often ignored, or even actively limited, is investment in strengthening pastoralist livestock production and marketing systems in climate-vulnerable regions.

While global supply chains and intensive livestock production systems common in Western countries deliver affordable animal-source foods to consumers, it comes at a high environmental cost. In Africa, national and regional supply chains sourced from extensive pastoralist systems offer a pathway to reducing greenhouse gas emissions while enhancing the resilience of the populations and the landscape. These pastoralist systems, when well-managed, lead to lower full life cycle



March 2019, Hartashek, Ethiopia. Ezra Millstein/Mercy Corps

emissions and are the most efficient use of the fragile arid and semi-arid rangelands that dominate this region.

In this position paper, we challenge the application of the negative global narrative on livestock production to livestock systems in Africa's drylands. We argue that through investments in animal health, regeneration and improved governance of rangelands, enhanced access to risk management information and services, and investments in the carbon sink capacity of rangelands, livestock systems in the drylands can provide both adaptation and mitigation benefits as the climate changes.

David Nicholson



*Chief Climate Officer,
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September 2024*

Climate and livestock

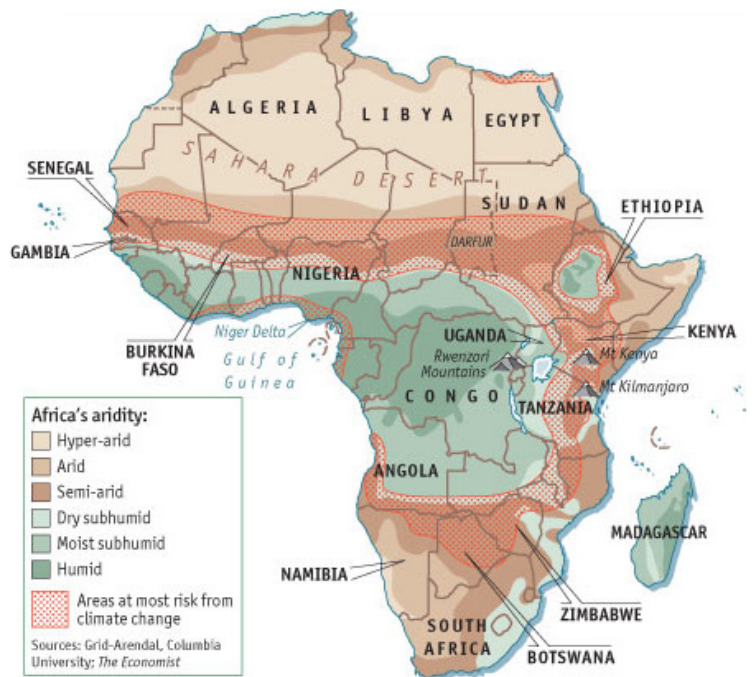
Reducing or eliminating livestock production has become a central focus of many climate action campaigns and commitments, which argue that the sector is a major driver of environmental degradation, deforestation, and excessive greenhouse gas emissions. This perspective is largely based on the impact of intensive and industrial livestock production systems, which consist of farms rearing hundreds to thousands of animals at a time under controlled conditions. Animal feed and water is brought to them and their waste removed, requiring high labor inputs to sustain their diet and care. These systems, prevalent in Western societies—and increasingly on the rise in Africa and Asia—are significant net emitters of greenhouse gases².

PASTORALISM

is defined by the Food & Agriculture Organization (FAO) and International Fund for Agricultural Development (IFAD) as a diverse range of livestock-based livelihoods that manage grazing patterns to improve animal diets and welfare. Extensive animal husbandry is where domesticated animals are released onto large vegetated outdoor lands for grazing and livestock sales are the only or majority source of income to the household. Men and women may engage in other economic activities but at a very small scale and/or seasonally. Animals may migrate seasonally, but women, children and older people typically remain behind³.

Map of the arid and semi-arid zones throughout Africa

Roughly 45% of Africa's land is defined as arid or semi-arid, and approximately 50% of people in Africa live in these areas.



As such, it is argued that the international community, countries, and the private sector must reduce animal-based agriculture by divesting from it; replace the livestock sector with livelihood sources less harmful to the environment; and promote meat-free diets^{4,5}.

However, this argument takes a blanket approach to livestock production, leading to a widespread negative perception of all forms of livestock. While the criticism of emissions borne from intensive livestock systems is justified, this generalized stance has permeated global discourse, unfairly targeting extensive livestock practices like pastoralism⁶. As a result, investments in efforts to strengthen livestock systems in

climate-vulnerable regions like the drylands have been discouraged or inhibited.

The vilification of livestock in emissions reduction planning without sufficient consideration of context is a threat to millions of people in places like the Horn of Africa and the Sahel. Often labeled as regions of 'bad geography' due to aridity and poor market access, drylands are frequently marginalized in development efforts (see map above), and the significant contributions of dryland agriculture, particularly

livestock production, to national economies, are underrecognized.

In these regions, approximately 70% of people depend on livestock for food security, income, and as a critical strategy for managing risks associated with increasingly severe climate change impacts. In sub-Saharan Africa alone, pastoral systems support the livelihoods of around 100 million people and contribute an average of 40% to the region's agricultural GDP⁷.

REFRAMING THE NARRATIVE

Mitigation and adaptation approaches focused on climate outcomes without consideration of socio-economic factors, especially traditional systems and norms, risk further marginalizing vulnerable groups.

Mercy Corps seeks to reframe the prevailing narrative that places an undue onus of greenhouse gas emissions mitigation on African livestock producers to a more nuanced and equitable narrative that:

- Recognizes and values the central role of sustainable, extensive livestock systems in the resilience and adaptive capacity of climate-vulnerable communities across Africa.
- Centers nature-based solutions to climate action that are aligned to the incentives and motivations of diverse stakeholders within the drylands.
- Acknowledges and seeks to reverse the marginalization of vulnerable groups, especially women, youth, and pastoralists, and engages these groups in climate action planning processes.
- Acknowledges the importance of meat and milk in low-income and low-emitting countries for nutrition, especially for women in their reproductive years and young children.
- Applies context-appropriate data to any analysis that reflects the realities of the millions of African livestock producers.
- Encourages greater investment in the development and use of context-appropriate, productivity-enhancing solutions, such as preventative animal health, drought-tolerant fodder varieties, and improved forage conservation techniques.

In this context, livestock systems efficiently produce animal source foods, the most affordable bio-available nutrient-dense food, with minimal reliance on cereals and fossil-fuel-based inputs and make sustainable use of rangelands that are otherwise unsuitable for crop production⁸.

While Mercy Corps recognizes the global need to address the climate impacts of livestock, our work in sub-Saharan Africa has taught us that a nuanced view is needed when evaluating and supporting livestock systems. Our analysis and experience point to approaches to livestock production that can contribute to both climate change mitigation and adaptation goals.

Mitigation strategies and livestock

There is no doubt that livestock systems can have a significant impact on the environment, including air, land, soil, water, and biodiversity. The context-specific data and analysis that Mercy Corps has gathered on livestock production systems in Africa's drylands indicate that livestock systems can be valuable for climate change mitigation and adaptation^a. The following lessons, gained during Mercy Corps' work in the past decade in sub-Saharan Africa, can support global efforts to reduce Greenhouse Gas (GHG) emissions, primarily through restoring rangeland health and

improving the year-round productivity of livestock to reduce emissions intensity. Few investments in livelihood production and resilience currently focus on emission reduction. We see significant potential for doing so on a landscape scale through further funding. These lessons, and the actions that flow from them, can begin a shift of focus from approaching livestock as a universal problem for the climate and environment—in some contexts—to building sustainable livestock systems that are part of the solution for reducing emission totals.

EMPLOY CONTEXTUALIZED APPROACHES TO EMISSIONS REDUCTION

The global narrative against livestock production fails to capture how the carbon footprint and water and land usage of livestock production vary significantly across countries, species, and production systems due to differences in breeds, management practices, feed quality, and environmental conditions⁹. Using generalized, non-contextual evidence to determine national and regional development and climate action plans regarding livestock is misguided. It can also undermine the common objectives of the Paris Agreement and the COP28 UAE Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action¹⁰, as well as increase obstacles to achieving the 2030 Sustainable Development Goals in dryland contexts.

a) Mitigating climate change means reducing the flow of heat-trapping greenhouse gases (GHG) into the atmosphere. Climate adaptation is understood as "changes in processes, practices and structures to moderate potential damages or to benefit from opportunities associated with climate change," according to the United Nations Framework Convention on Climate Change.

Important distinctions between intensive and extensive livestock systems are clear across a range of climate factors:

Emissions

The data point most often referenced in arguments against livestock production is that this activity generates 10 to 20 percent of total global GHG, with cattle responsible for about two-thirds of that total¹¹. However, this estimate relies on emission lifecycle assessments of intensive production systems, with less than one percent of the analyses conducted on African production systems¹². This view overlooks that the full lifecycle emissions of extensive livestock systems, like those of sub-Saharan pastoralists, are likely to have much lower absolute GHG emissions than intensive systems^{13,b}.

b) Despite having lower absolute emissions, emissions intensity is higher under pastoralism as is true for most African production systems.

IMPORTANCE OF CONTEXTUALIZATION

Research in Senegal's Sahel region reveals that while one hectare of pastoral ecosystem emits 0.71 tons of carbon equivalent annually, it also sequesters 0.75 tons, resulting in a nearly neutral carbon balance and a net storage of around 40 kilograms of carbon equivalent¹⁴. This finding highlights the potential for extensive pastoral systems to contribute positively to carbon sequestration, challenging the generalized assumptions about livestock emissions¹⁵.

Land use

Conversion of land, especially forested land for livestock or forage production, is a threat to the environment. Yet, there is growing evidence of the role



March 2022, Ngilai, Kenya. Ezra Millstein/Mercy Corps

pastoralists and livestock keepers play in the sustainable management of the land (i.e., rangelands including drylands or grasslands), specifically for biodiversity and GHG mitigation^{16,17,18}.

CHANGING ECONOMIES, DIETS AND EMISSIONS

It is predicted that demand for animal products will increase tenfold by 2050. But local production is not keeping pace with this sharp increase¹⁹. Currently, supply gaps are being met through emission-heavy importation of processed, animal-based products from the Pacific, Asia or South America regions. Investments in strengthening the extensive livestock systems in the region are needed to avoid the environmental burden caused by increased settlement and crop agriculture to meet the growing demand for animal source foods.

When managed for mitigation outcomes, grazing pastures and rangeland ecosystems sequester and store below-ground carbon²⁰ while also providing added ecosystem services such as moisture retention, temperature regulation, erosion control, and a buffer against extreme weather conditions²¹. Globally, grasslands are the most threatened biome, with millions of acres lost to human settlement and conversion to agriculture²². As grasslands are disturbed, carbon is released from the soil, where it can be

stored for decades²³. Across the drylands of Africa, pastoralists play an important role in conserving natural grasslands and biodiversity²⁴ as they move livestock across the land^c. When pastures are removed from grazing, over-exploitation and degradation occurs on the remaining lands. Prioritizing drylands for extensive livestock production and investing in nature-based solutions optimized for livestock production can protect rangelands from conversion to other, potentially more damaging uses such as irrigated crop farming—often monoculture crops—or human settlements.

Water usage

It is estimated that 4,387 km³ of blue and green water is used annually to produce livestock feed, equaling about 41% of total agricultural water use²⁵. Yet this data is based primarily on water usage calculations in intensive systems, where crops for animal feed tend to rely on irrigation. Livestock production in sub-Saharan Africa is largely rainfed²⁶, which does not result in extensive depletion of groundwater resources if the groundwater recharge is responsibly managed.

Reliable methodologies and data are needed to better understand the links between resource management practices, herd management, and mitigation outcomes. Greater inclusion of African research institutions, government officials, and livestock producers is essential to improving emissions measurement practices and national inventories.

c) Pastoralists practices can contribute to rangeland health as their mobility allows them to take advantage of seasonal availability of natural vegetation, moving through dry and wet season pastures. These lands benefit from livestock waste (manure and urine) with periods of rest, which are necessary for seed formation and root growth, occurring when animals migrate to new pastures. Land that cannot be reliably cultivated is optimized for multiple benefits in many pastoralist systems.

INVEST IN NATURE-BASED AND PRODUCTIVITY ENHANCING SOLUTIONS

Support for the livestock sector in sub-Saharan Africa is characterized by many small-scale interventions. While often innovative, few of these small-scale pilot-type programs have produced evidence of their effectiveness towards either climate change mitigation or adaptation outcomes. Greater investment is needed to generate data necessary to inform and strengthen models that evaluate productivity enhancing approaches for climate positive outcomes.

For example, the Mercy Corps USAID **Pastoralist Areas Resilience Improvement through Market Expansion (PRIME)** program in Ethiopia's drylands led to significant improvements in livestock productivity, with increases of 24% to 96% across various value chains. These productivity gains were achieved through interventions such as enhanced animal health, support for feed (the food provided to livestock, including grains, silage, and other nutrient-rich materials) and fodder (coarser plant materials like hay or straw that livestock consume) services, and improved livestock and dairy value chain development. Importantly, despite an overall rise in GHG emissions due to increased average animal weight, the project succeeded in reducing GHG emission intensity—emissions per unit of output.

PRIME's interventions resulted in a notable decrease in emission intensity: dairy cattle saw a reduction of 4%, while non-dairy cattle, sheep, and goats experienced reductions of 39%, 36%, and 42%,



July 2014, Yabello, Ethiopia. Sean Sheridan/Mercy Corps

respectively. These reductions demonstrate that productivity improvements can offset the increases in GHG emissions per animal head. Furthermore, PRIME's holistic approach to managing pasture and water resources had positive environmental impacts, including enhanced soil carbon sequestration and improved pasture quality. Grassland improvements were estimated to sequester 0.1 million tCO₂e per year, further contributing to mitigation efforts.

Similar reductions in absolute emissions and emissions intensity were attributed to the USAID Resilience and Economic Growth in Arid Lands—Accelerated Growth (REGAL-AG) project in Northern Kenya. Improvements to feed quality (goats and cattle) as well as herd size management resulted in an approximate 10% per year reduction in emissions²⁷. Overall, while the complexity of managing livestock emissions remains, both projects highlight that integrating sustainable practices can both boost productivity and significantly reduce emission intensity, contributing to climate change mitigation while supporting resilient and productive pastoral systems.



March 2022, Ngilai, Kenya. Ezra Millstein/Mercy Corps

WHAT HAPPENS IF LIVESTOCK PRODUCTION IN THE DRYLANDS IS REDUCED OR ELIMINATED?

Socio-economic impact: Wide-scale exit from livestock-based livelihoods will drive more people to urban areas, increasing demand for low-skilled jobs, public services, and affordable food and housing; further stressing already stressed public systems. For the vulnerable households that remain behind, they will struggle with subsistence crop-based agriculture or other forms of livelihood that rely on extraction of natural resources (e.g.

charcoal making, sand/stone harvesting). Without greater investment into climate change mitigation and adaptation interventions and supporting systems, the socio-economic outcomes of traditional pastoralist populations will be further eroded²⁸.

Unsustainable use: Many policies and programs in the Horn of Africa are increasing pressure to convert rangelands into irrigated agriculture or settlements²⁹. This shift is negatively impacting wildlife habitat and accelerating biodiversity loss, reducing aquifer recharge and stressing aquifer supply; all leading to further environmental degradation.

Increased emissions: Models suggest emissions could increase and more biodiversity lost as alternatives to the livestock systems using natural vegetation, the current system in the drylands, would require more than double the amount of fossil fuels and lead to further conversion of natural ecosystems^{30,31,32}.

Reduced climate resilience: Livestock in drylands play a crucial role in maintaining ecosystem health³³. The elimination of livestock could reduce the climate resilience of these regions, making them more vulnerable to extreme weather events and further environmental degradation.

Weakened social networks: Livestock ownership and seasonal migration support strong social networks and communal cooperation. Loss of livestock and sedentarization lead to weakened social connections between individual, households and communities and further undermine household and community resilience. Sahelitis is essential that any new policy or intervention is designed to achieve both emissions reductions and enhanced climate resilience.



LEAD WITH CLIMATE JUSTICE

Dryland communities, though well versed in surviving in the harsh environment of arid and semi-arid lands, have routinely been marginalized and are facing the effects of a global climate crisis that they did not create³⁴. The narrow perspective of dominant climate narratives on livestock perpetuates biases that stigmatize forms of livestock production in the drylands of Africa and undermine the potential for these systems to contribute positively to both climate adaptation and mitigation³⁵. A just approach to emissions reductions recognizes the unique contexts and strategies for different geographies and local realities. In the Horn of Africa and the Sahel it is essential that any new policy or intervention is designed to achieve both emissions reductions and enhanced

climate resilience. Through a climate justice lens, we can focus on strengthening pastoralism not only as a means of carbon sequestration but also as a climate-beneficial system that supports the well-being of people, the preservation of ecosystems, and broader climate goals.

Climate adaptation in Africa's drylands

Drylands, which cover approximately 40% of the world's land area³⁶, are particularly vulnerable to the impacts of climate change, facing rising temperatures and an increase in extreme weather events such as heat waves and droughts³⁷. The IPCC's Fifth Assessment Report warns that these impacts will heighten food insecurity and disrupt livelihoods, particularly for farmers and pastoralists who already struggle with limited water resources and declining agricultural productivity³⁸.

Assessing potential adaptation strategies for the livestock sector in the drylands—or anywhere else—must be based on a clear understanding of the risks and vulnerabilities of ecological, social, and economic systems that support livelihoods in that specific region. Few assessments currently include a comparison between livestock production and other land management and livelihood scenarios viable in dryland areas. Beyond productivity and climate resilience gains, adaptation strategies should be evaluated for the potential of being maladaptive as well as mitigation benefits³⁹. Through its programs and research during the past decade in sub-Saharan Africa, Mercy Corps has identified that the main



alternatives to livestock production in the drylands pose significant nutritional, economic, and environmental risks as well as challenges to climate and poverty goals.

Our programming and research underscore the potential of livestock systems, with the right adaptations, to enhance climate resilience in dryland communities while also being environmentally sustainable. As we explore these programmatic examples, the importance of tailored strategies in achieving sustainable development becomes increasingly evident.

STRENGTHEN BOTTOM-UP, PARTICIPATORY PLANNING

Limited participation of pastoralists as stakeholders in government planning processes often leads to misguided development interventions that overlook their specific needs, ultimately undermining livelihoods and increasing vulnerability⁴⁰. To address this, Mercy Corps is implementing the **Ward Development Planning (WDP) model** in Kenya's arid

and semi-arid areas to support pastoralist communities to directly engage in the development planning process. This, and similar models, have proved to be essential in prioritizing development actions that are tailored to specific needs identified by the community. Further, it ensures that foreign investments are contextually relevant, locally appropriate, and effective in avoiding wasteful, redundant, or maladaptive approaches to climate action⁴¹. The WDP model also holds significant potential beyond local development. It can play a crucial role in building trust in government, lifting up marginalized groups, and enhancing community resilience to climate- and conflict-related shocks across drylands in East Africa and beyond.

DESIGN AND EVALUATE NATURE-BASED SOLUTIONS

Nature-based solutions offer simultaneous benefits for human well-being and biodiversity. These are actions to protect, sustainably manage, and restore natural



May 2016, Jijiga, Ethiopia. Sean Sheridan/Mercy Corps

processes and ecosystems to ensure food and livelihood security, healthier diets, and more inclusive rural economies. In the drylands of Northern Kenya, Mercy Corps is integrating indigenous ecological knowledge into governance and decision-making processes to reverse landscape degradation and to support communities to maintain and protect natural resources for drought resilience and improved productivity. Using methodologies such as the **Resilience Design Approach**, we integrate community priorities and knowledge with an assessment of the land and resources for planned use and rehabilitation techniques to rebuild ecosystem services such as water and nutrient cycling, erosion and temperature control. Additionally, we are testing approaches that strengthen gender-inclusive rangeland management to enhance livestock productivity and

motivate communities for collective action to regenerate pastures for inclusive and reliable access⁴².

INVEST IN MARKET-BASED SOLUTIONS

Livestock and livestock markets can play a key role in times of climate-driven crisis—for instance, enabling herders to sell their animals during drought conditions. These markets are essential for the timely offtake of animals, reducing pressure on rangeland resources, and allowing livestock producers to generate income and savings. However, effective livestock resource utilization is hindered when pastoralist households lack reliable and cost-effective access to input and output markets. In Ethiopia, Mercy Corps is **creating new business models to catalyze sustainable animal health services** that reach remote communities. Central to Mercy Corps' approach is supporting last-mile communities with technical knowledge on climate-smart animal health practices.

We are also testing alternative business and partnership models to increase the markets' absorptive capacity while stimulating producer motivation to sell. In Ethiopia, Mercy Corps is **partnering with large livestock buyers to employ agents at the regional level to quality-check animals** intended for urban markets. Since adopting this model, community-level livestock aggregators have seen a 193% average increase in the number of livestock sales. This approach reduces uncertainty in transactions and fosters lasting, trust-based relationships when climate crises and other disasters occur.

Socio-economic importance of livestock production

Livestock production is more than an economic activity in sub-Saharan Africa. It is a cornerstone of livelihoods, social stability, and climate resilience, particularly in arid and semi-arid lands where crop-based agriculture is often not feasible. These systems serve as critical sources of income, nutrition, and social capital for millions of people across the region. The sector is integral to sustaining the economies and communities in these fragile environments.

Food security & livelihoods

In the Horn of Africa, livestock is a key economic driver, generating the equivalent of \$1.5 billion USD annually and

contributing 10-30% of GDP across Kenya, Ethiopia, and Somalia⁴³. These arid and semi-arid lands, which constitute more than half of the land mass in these countries, offer limited economic opportunities outside of livestock keeping. Herding livestock is the most economically beneficial use of this land for the greatest number of people⁴⁴, and it continues to be the main livelihood for all but the most vulnerable households. Maintaining mobility or seasonal migration of pastoralists is crucial not only for the health of the herds but also for natural resource conservation, supporting rangeland health while providing milk and income to herding families.

Food systems & nutrition

Livestock production is vital for securing food and nutrition. Despite the growing

MARKET FACILITATION & LAYERED INTERVENTIONS FOR DIVERSE OUTCOMES

Livestock production in Northeast Nigeria illustrates many of these socio-economic benefits, particularly as communities increasingly rely on agro-pastoralism, which integrates farming with livestock rearing to adapt to changing environmental and economic pressures. Through partnerships and targeted market-based interventions, Mercy Corps has worked to enhance these benefits, focusing on gender equality and uplifting women in the livestock sector. By facilitating commercial relationships between livestock producers, traders, and buyers, we helped to create a more vibrant and diverse livestock market in Nigeria.

For instance, Mercy Corps supported one company to mobilize 3,000 women livestock farmers, providing them with quality animal health and extension services, targeted training, and market information. Another initiative invested in improving the quality and reach of animal health services, building a reliable supply chain of veterinary commodities. These efforts have expanded women's choices and participation in competitive markets and increased the value they derive from livestock investments, improving household food security and contributing to Nigeria's broader economic growth. Such initiatives underscore the transformative potential of well-supported livestock systems to drive inclusive economic development and resilience in vulnerable regions.

global demand for protein, many in African countries struggle to afford animal products, with continental per capita meat consumption at just 9.8 kg/year, compared to 79.2 kg/year in North America⁴⁵. This disparity underscores the importance of increasing livestock productivity in sub-Saharan Africa, which, despite accounting for 14% of the world's livestock resources, produces only 2.8% of the world's meat and milk⁴⁶. In the Horn of Africa, pastoralists produce the livestock that supplies 80% of the red meat consumed in the region. Livestock produced by small and medium-scale producers provide nutrition (dairy products) and income (sales) to those families and provide red meat and offal to urban consumers. Food systems that transfer rurally produced foods to urban consumers are cheaper and less energy-intensive than importing from other regions. Optimizing dryland livestock production prevents the conversion of valuable cropland in high rainfall areas to animal feed inputs. Localized and regional food systems, such as pastoralist livestock production, affordably supply a critical source of meat-based protein, and micronutrients.

Gender

Women are one of the most affected and vulnerable groups to climate change. Across pastoralist societies, women play a critical role in the care and management of livestock, which is often central to their families' livelihoods and well-being⁴⁷. Additionally, women serve an important role in the management of natural resources close to homesteads, but these areas are not often considered in rangeland



February 2022, Baidoa, Somalia. Ezra Millstein/Mercy Corps

management or climate action plans. Despite their significant contributions, women are often invisible in livestock management and decision-making processes⁴⁸. Mercy Corps found that women prioritize livestock as a critical livelihood more than men⁴⁹. This is primarily due to the importance of livestock for household nutrition (milk), food security (live animal sales) and stronger social networks (trust, respect) associated with livestock ownership. Greater investment is needed in approaches that bring women's voices, perspectives, and needs to natural resource planning and climate change adaptation. Through women's leadership, we can expect to see greater impacts on household well-being and environmental health, as they are vested in protecting their families' health, food, and livelihood security.

Call to action

The urgency of the climate crisis demands that we harness every available strategy. Livestock production holds untapped potential as a driver of climate-smart development in Africa's drylands, and beyond. Despite its importance, livestock systems in Africa's drylands remain under-supported and misunderstood within the global climate narrative. We see a pathway to reducing GHG emissions while enhancing the community and landscape resilience through a climate justice approach. This requires targeted investments in animal health, protection and restoration of critical natural resources—particularly water and pasture resources essential for dry season feeding and emergency grazing—improved and inclusive governance of rangelands, and enhanced access to risk management information and services.

At Mercy Corps, we are committed to working alongside dryland communities in Africa to develop sustainable livestock production systems. We recognize the importance of these systems in securing livelihoods, mitigating risks, and providing essential nutrition in fragile contexts where crop-based agriculture is not feasible. Our experience and evidence confirm that integrated adaptation and mitigation approaches can simultaneously support food and livelihood security while contributing to global efforts to reduce emissions.

Mercy Corps recommends the following priorities and actions by donors, governments, and partners to maximize the potential of livestock systems toward climate goals:



March 2019, Ale, Ethiopia. Ezra Millstein/Mercy Corps

INVEST IN SUSTAINABLE LIVESTOCK SYSTEMS

Prioritize investments in sustainable, healthy livestock systems as integral components of climate action strategies that address both adaptation and mitigation goals, in close partnership with national governments.

FOCUS ON RANGELAND REGENERATION

Direct investments toward rangeland regeneration to optimize land productivity, reduce herders' production costs, and potentially lower the high costs of humanitarian response by enhancing land resilience against drought and flooding.

SUPPORT COMMUNITY-LED RISK REDUCTION

Enable communities to reduce risks in the short term while transitioning rangeland and herd management practices toward greater climate resilience and ensuring the protection of traditional land rights.

APPLY TAILORED ASSESSMENT METHODS

Use assessment methods that generate evidence for tailored approaches, viewing livestock as a multi-beneficial activity within a broader climate-resilient livelihood strategy. Conduct ecosystem service valuations that include the voices and priorities of women and men livestock keepers.

PROMOTE LIVESTOCK IN CLIMATE POLICY

Advocate for the inclusion of livestock in national climate policy frameworks for both climate adaptation and mitigation. Support the operationalization of livestock where it exists in Nationally Determined Contributions (NDCs) and assist sub-national governments and traditional governance structures in understanding and responding to NDCs and National Adaptation Plans.

ENGAGE LIVESTOCK KEEPERS AND STAKEHOLDERS

Ensure that implementation partners and governments actively engage livestock keepers and other stakeholders to identify and prioritize key challenges and appropriate innovations. Include the voices and priorities of women and men livestock keepers in all activities. This will help avoid maladaptive outcomes and place climate justice at the forefront of adaptation strategies.

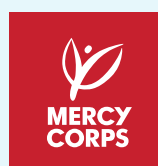
SUPPORT RESEARCH AND COMMUNITY-LED MONITORING

Collaborate with African countries, governments, and research institutions to partner with livestock keepers in mapping GHG sources and sinks within livestock systems.

Establish national inventories and baselines to monitor progress and support community-based organizations in trialing locally appropriate interventions that consider socio-cultural, economic, and emissions outcomes.

The time has come to abandon a one-size-fits-all discourse on livestock production. We urge public and private investors, as well as climate and development practitioners, to embrace a comprehensive understanding of livestock production in Africa's drylands. The path forward is clear: Advance the policies and solutions outlined above to transform livestock production into a cornerstone of global climate adaptation and mitigation.

Now is the time to act decisively, scale these solutions, and ensure that no community is left behind in the transition to a climate-resilient future.



Join us to help make a climate-resilient future possible.

Supporting **Climate: Possible** will fund bold action that helps communities build lasting climate resilience. Your support also expands Mercy Corps' ability to test climate innovations to help prove what works and unlock barriers for further investment.

mercy Corps.org/Climate-Possible

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