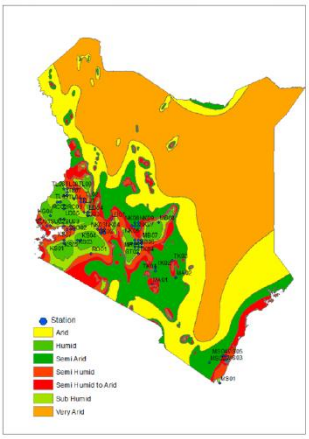
Building the Adaptive Capacity of Rangeland Communities towards Food-, Water-, Ecosystem-, Energy- and health- Security in Kenya

A. Context and baseline

Kenya's Climate Vulnerabilities and Impacts:

1. Kenya is classified as a low-middle-income country and is among the fastest-growing economies in Sub-Saharan Africa (SSA). Its economy ranks third largest in SSA and boasts the most diverse economy in the Horn of Africa, acting as a gateway to a market of nearly 300 million people. As of 2023, the Service, Agriculture, and Industry sectors contributed 55.42%, 21.81%, and 16.86%, respectively, to the economy. The agriculture sector, being significant, contributed 26% directly to the GDP annually in 2024, an increase from 21.81% in 2023, and an additional 25% indirectly. This sector accounts for 65% of Kenya's total exports and provides over 70% of informal employment. Therefore, the agricultural sector serves not only as the primary driver of Kenya's economy but also as a crucial source of livelihood for a large segment of the rural population.
2. Kenya's agriculture is practiced at both subsistence and commercial levels, primarily in rural areas but also growing in urban settings. About 98% of agriculture relies on rainfed systems and bimodal rainfall patterns. The country has seven agro-climatic zones (Fig 1a) , each with specific crops and livestock suited to its moisture, temperature, and rainfall conditions. These zones are the major determinants of land-use and agricultural systems in Kenya (Fig 1b).



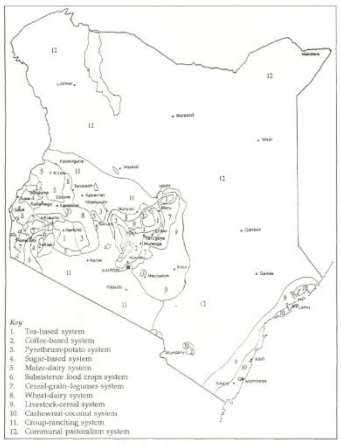


Figure 1(a): *Kenya Agro-ecological Zones* ***Figure 1(b):*** *Major land-use systems in Kenya*
Source: Agcenture *Source: World Agroforestry Centre*

3. **Pastoralism and Agro-pastoralism are the predominant livelihood in Kenya's ASAL rangeland counties,** with communities depending largely on livestock production for their sustenance and economic activities. ASAL regions host over 70% of Kenya's livestock, including cattle, sheep, goats, and camels. Livestock production contributes approximately 10% to the national GDP and about 50% to agricultural GDP. Pastoralism employs around 90% of the population in ASAL counties, indicating its central role in livelihoods and local economies (National Livestock Policy, 2020). Beyond this, particularly in the Northern arid and semi-arid (ASAL) regions, pastoralism plays an important social, economic and cultural role among communities.

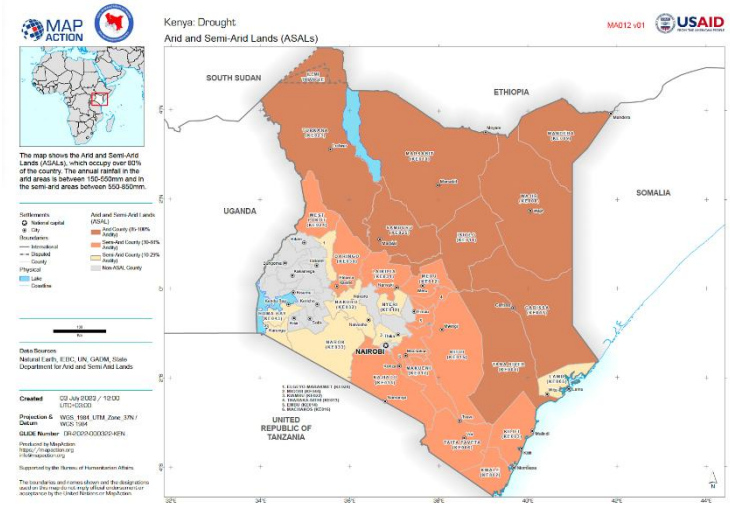


Fig 2: Map of Kenya's ASAL regions
Source: NDMA Bulletin, 2023

5. ASAL agricultural production is heavily susceptible to climate shocks with **key climate risks include erratic rainfall and Flash floods, recurrent droughts, and heat waves**. , These climate risks exacerbate existing vulnerabilities of poverty, livelihood loss, triple burden of malnutrition and conflicts. The declining water levels during droughts are negatively impacting agricultural dependent livelihoods (crops and livestock) and in the worst cases also led to loss of livelihoods. It is estimated that droughts impact an estimated 6.5 million (13% of the population) Kenyans annually and projections indicate that will rise to 34% of the population in the future and account for losses estimated at 8% of the GDP every five years with the biggest impact being in the livestock dependent ASALs of Kenya. In Kenya, the recurrence of extreme rainfall events leads to floods and inundation. Major floods periodically afflict the ASAL areas and especially the Lower Tana basin, and the coastal regions impacting an average of 75,000 Kenyans annually. The estimated costs of floods are about 5.5% of GDP every seven years. Between 1990 and 2015, a total of 43 flood disasters happened in Kenya. This is equivalent to an average of 1.65 flood disasters per year. On average, each flood disaster affected 68,000 people (NCCAP 2023 – 2027).
6. **Prolonged and persistent droughts have led to widespread food, water and livelihood insecurities across the ASAL regions.** The region has endured three severe droughts in the last decade (2010-2011, 2016-2017 and 2020-2022). The 2020–2022 drought was the most prolonged and severe in decades, causing extensive livelihood losses, displacement, and unprecedented livestock mortality. In 2023, over 2.6 million livestock deaths were recorded across the ASAL counties. Nearly 4.4 million people required humanitarian assistance, and over 970,000 children under five, alongside 142,000 pregnant and breastfeeding women, faced acute malnutrition risks (NDMA, 2023). These dire impacts are not short-term: between 2008 and 2011, drought-related livestock losses amounted to roughly Kshs. 700 billion, while over the past two decades, an estimated 30% of livestock owners have been pushed out of pastoralism (GOK-NCCAP, 2023 - 2027). Beyond immediate human and economic costs, protracted droughts undermined the long-term resilience of both communities and ecosystems.

9. **Kenya has experienced a clear warming trend since 1979, with maximum temperatures rising from 29.0°C to approximately 30.5°C by 2020, an increase of over 1.5°C**. This temperature rise has had severe consequences on ecological balance, livestock production, and public health with projections indicating that Kenya's temperatures could increase by 1.2°C to 3.2°C by 2080, compared to pre-industrial levels. Consequently, the population affected by heatwaves is projected to increase from 0.6% in 2000 to 6.0% by 2080, underscoring the urgency for climate adaptation and mitigation interventions.
10. **Ecosystem degradation in Arid and Semi-Arid Lands (ASALs) is also on the increase driven by deforestation, land use and land use changes (LULUC)** resulting in vegetation loss and diminished ecosystem services thereby, exacerbating the intensity and frequency of droughts and floods, water scarcity, overgrazing, soil erosion, and the proliferation of the invasive plant species. These interconnected impacts accelerate ecosystem degradation and further destabilizing the region's ecological balance. According to the Africa sustainable livestock sector brief of 2050 by FAO (2018), the projected livestock average growth rates (AGR) between the year of 2018 and 2050 in Kenya will decline due to changes in land tenure, continued land degradation and climate change. Using the projections, the population of cattle and shoats in the ASALs will decline at a rate of -1.6% and -0.7% respectively. Bearing in mind the importance of livestock for provisioning ecosystem services, this will likely lead to rise in poverty levels further enhancing the vulnerabilities of the livestock keepers.
11. **ASAL region suffer Acute food insecurity and Acute Malnutrition Analysis,** in 2023, around 4.4 million people (27% of the ASAL population) are facing high levels of Acute Food Insecurity – IPC AFI Phase 3 (Crisis) or above, of which about 774,000 people are in IPC AFI Phase 4 (Emergency). Compared to the same period in 2022, this represents a 43% increase in population in IPC Phase 3 (Crisis) or above, while compared to the previous analysis period (October-December 2022). Projections represent the highest magnitude and severity of acute food insecurity in the ASAL areas in years: urgent action is required to reduce food gaps, protect their livelihoods, and prevent and treat acute malnutrition (IPC, 2023).

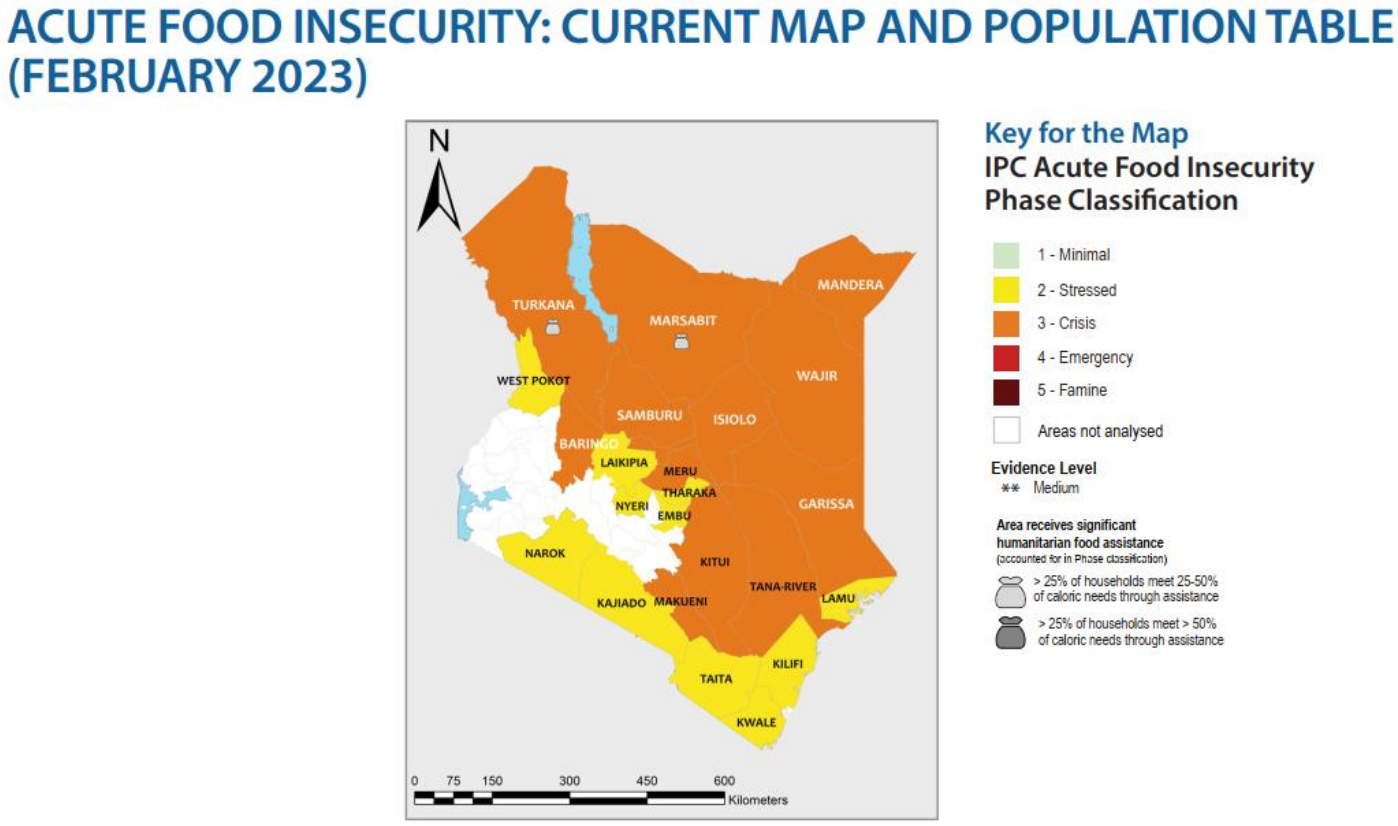


Fig 3: Map of Kenya's County IPC Acute Food insecurity phase classification
Source: NDMA Bulletin, 2023

11. **Water scarcity is a persistent challenge in Kenya's ASALs, with over 60% of households lack reliable access to safe drinking water** (NDMA, 2023). This scarcity is exacerbated by prolonged and persistent droughts and inadequate water infrastructure, forcing communities to travel long distances to access water. Enhancing water security through investment for scaling up water resources is essential to increasing the adaptive capacities of communities.
12. The **prevalence of animal diseases within the pastoral communities in the ASAL regions has risen** due to prolonged droughts and flooding occurrences. These diseases have significantly reduced livestock productivity within the ASAL communities. ASAL household nutrition is inextricably intertwined with livestock production, particularly considering the low crop production potential of these areas. As such, livestock health and productivity are key to ASAL household nutrition (Irungu, 2021).
13. **Kenya's agricultural emissions are projected to increase by 73% by 2050 relative to 2020 levels** mainly from pastoral livestock production. Enteric fermentation and manure management accounted for 17% of national emissions in 2015 (GOK-LTLEDS, 2022). The non-dairy cattle, sheep, goats and camels mainly kept in the pastoral and agro-pastoral production systems accounted for 82% of all livestock emissions mainly in the form of enteric methane (Kenya's TNC, 2024).
14. Kenya has benefited from country specific GCF funded adaptation projects, the **Towards Ending Drought Emergencies (TWENDE) and the Enhanced community resilience and water security in the upper Athi River catchment area projects**. TWENDE which is an

ecosystem-based adaptation in Kenya's Arid and Semi-Arid rangelands (2019) awarded to the International Union for Conservation of Nature (IUCN). Its main objective is to reduce the cost of climate change induced drought on Kenya's national economy by increasing resilience of the livestock and other land use sectors in restored and effectively governed rangeland ecosystems. The main activities include adapted planning, restoration of rangeland, and ecosystem management. The project targets 12 ASAL counties including Samburu, Marsabit, Isiolo, Wajir, Garissa, Tana River, Meru, Tharaka Nithi, Kitui, Taita Taveta, Makueni and Kajiado.

16. The "**Enhanced community resilience and water security in the upper Athi River catchment area"** (2021) awarded to the National Environment Management Authority of Kenya (NEMA), aims to support the targeted counties to integrate climate change adaptation and mitigation in the planning processes and to build the capacities of local level governance structures in addressing the impacts of climate change. The main activities include enhancing hydrological and meteorological monitoring system, building, enhancing, and rehabilitating prioritized water infrastructure, strengthening water and adaptation planning, institutional and regulatory framework. The project targets 4 counties including Machakos, Kiambu, Nairobi and Nyandarua. This project will support the expansion of investment in adaptation, tackling the identified barriers in the remaining areas which have not been targeted by GCF Investment.
17. The "**Transforming Livelihoods through Climate Resilient, Low Carbon, Sustainable Agricultural Value Chains in the Lake Region Economic Bloc, Kenya (CRLCSA)"** approved (2022) to FAO (Kenya) aims to transform the agricultural production within the Lake Region Economic Bloc (LREB) towards low-carbon and climate-resilient pathways. The target value chains include dairy, poultry, coffee, tea, fruit trees and vegetables. The targeted counties in Kenya include Busia, Bungoma, Trans-Nzoia, Kakamega, Siaya, Vihiga, Kisumu, Kericho, Bomet, Nyamira, Kisii, Homa Bay, Migori and Nandi.
18. The **Building Climate Resilience for Food and Livelihoods in the Horn of Africa (BREFOL)** project, approved in 2024, is set to be implemented across Djibouti, Ethiopia, Kenya, Somalia, and South Sudan. This initiative aims to address the pressing issue of food insecurity exacerbated by erratic rainfall patterns by enhancing the adaptive capacity of communities throughout the region. BREFOL seeks to achieve its objectives through the improvement of local agricultural and food systems, alongside better management of rangeland and agro-pastoral landscapes. The project will implement a range of resilience-building solutions, including infrastructure for water harvesting, sustainable land management practices, and access to innovative climate-smart technologies. Additionally, it will support agricultural insurance and provide capacity building for cooperatives and micro, small, and medium enterprises (MSMEs) involved in agribusiness.

Alignment with Kenya's Policies

18. Rangeland ecosystem restoration is essential in enabling communities to fully benefit from the ecosystem services while also enhancing the carbon sequestration potential. This approach aligns with Kenya's priority policy documents including **Kenya's Nationally Determined Contributions (NDC), which aims to reduce greenhouse gas emissions by 32% by 2030**, and **the National Adaptation Plans (NAPs 2015 - 2030), which emphasize sustainable land management and enhancing resilience of the agricultural value chain in the face of climate change by 2030**. Kenya has also developed the **National Climate Change Action Plan (2023-2027)** which has identified priority actions that will support adaptation needs needed in the ASALs. At the County

level, **County Climate Change Acts** have been developed and adaptation actions with mitigation co-benefits mainstreamed the County Integrated Developed Plans. By promoting practices such integrated land management practices with fodder management, the aim is to mitigate impacts of climate variability on livestock production.

19. Similarly, the project aligns with Kenya's Vision 2030 and the Bottom-Up Economic Transformation Agenda. **Kenya Vision 2030 targets an average GDP growth rate of 10% annually, promoting shared prosperity and ensuring a high quality of life in a clean and secure environment**. This vision is anchored in strategic initiatives that prioritize key sectors, including the agricultural sector. Meanwhile, **Bottom-Up Economic Transformation Agenda (BETA 2022 – 2027) focuses on grassroots empowerment through agricultural transformation and inclusive growth**. By fostering innovative business models in the ASAL regions, the project seeks to create sustainable economic opportunities that directly benefit local communities, with particular emphasis on the marginalized groups.
20. Rangeland ecosystem restoration project is aligned to the Kenya Climate Smart Agriculture Implementation Framework and the development in the livestock sector as represented in the draft livestock bill 2024. **KCSAIF promotes the integration of climate-smart agricultural practices into farming systems, focusing on building resilience to climate change while improving productivity**. Similarly, the **Livestock Bill 2024 aims to increase access to quality livestock services for farmers**, thereby supporting the overall health and productivity of livestock. Through resource management practices and linkage to community animal health workers, the project seeks not only to enhance the quality of livestock services but also promote the integration of climate-smart practices within livestock production.
21. The intersectionality of vulnerabilities to prolonged recurrent droughts, erratic rainfall, Flashfloods, food and water insecurity, fragile livelihoods, increased prevalence of animal diseases and resource use conflicts is most pronounced in the ASAL counties. According to NDMA (2023), the most affected counties during the 2020-2023 drought period included Turkana, Marsabit, Garissa, Samburu, Mandera, and Isiolo (The northern ASAL Belt counties). Due to migration in search of livestock resources, counties neighboring the affected areas were also impacted by the large influx of livestock leading to additional vulnerability to climate shocks and increased resource use conflicts in parts of Wajir, Baringo, and West Pokot. In this Counties, the loss especially of the cattle was up to 70% during the drought. According to MOALD, 2024, **Turkana** (3.6m), **Garissa** (1.2m), **Wajir** (0.75m), **Mandera** (0.6m), **West Pokot** (0.5m), **Baringo** (0.4m), **Samburu** (0.3m), and **Isiolo** (0.17m) hold more than 50% of the total national herd and therefore will be part the proposed project which will support rangeland rehabilitation, restoration and protection for enhanced livestock productivity.

Risks and barriers exacerbating vulnerabilities of rural communities.

22. **Rangeland degradation has been identified as critical driver of environmental vulnerability, particularly in the Horn of Africa.** The IPCC Special Report on Climate Change and Land (IPCC, 2019) indicate that land degradation will exacerbate climate-related challenges, particularly in vulnerable regions like the HoA. Land-use changes, combined with global warming, will increase the likelihood of crop failures, declines in agricultural productivity, and livestock losses. Degradation and climate risks will force migration, increase resource competition, and strain on governance systems. The

IPCC highlights the urgent need to address land degradation and unsustainable land-use practices to avoid catastrophic outcomes under worsening climate scenarios. Without intervention, land systems could reach tipping points where recovery is no longer possible.

23. **Proliferation of invasive species within the ASAL regions is a compounding consequence of landmass degradation**. The allelopathic nature of the invasive species causes depletion of soil nutrients and inhibits growth of other beneficial crops, creating environmental vulnerability, food insecurity, and a vicious cycle of poverty.
24. **Poverty and limited access to resources pose significant challenges faced by communities within the rangeland ecosystems**. Marginalized groups, including women, the minority tribes, and the low-income families, often struggle to secure essential livelihood resources such as land, water, and livestock. Extreme events such as droughts lead to disruption of the already marginalized pastoralist communities and at the worse end leads to loss of livestock assets further enhancing the vulnerability of poor. During droughts women must travel longer distances to access water and fuelwood for the households. Increased conflicts and insecurity due to declined resources lead to frequent displacement of the minority tribes and low-income families thus disrupting socio-economic activities. This inequitable access compounded by the extreme drought events exacerbates existing vulnerabilities and hinders their ability to improve livelihoods and engage in sustainable resource management practices.
25. **Women and youth are often marginalized in decision-making processes, restricting their participation in governance and limiting their influence on resource managemen**t. Additionally, socio-cultural norms within certain Kenyan communities prevent women from owning land or livestock, such as cows, donkeys, and camels. In some cases, women are regarded as dependents rather than stakeholders, which diminishes the likelihood that their perspectives will be valued in community discussions. This dual challenge not only restricts their involvement in rangeland conservation practices but also hinders the exploration of the full potential benefits offered by these ecosystems.
26. **Inadequate institutional capacities to provide services such as livestock extension and advisory services and early warning systems on animal production and healt**h have contributed to decline in livestock productivity and subsequently retrogressive livelihood development.
27. **Resource use conflicts and cattle rustling are contributing** to underdevelopment of the ASALs. Resource use conflicts are mainly brought by the declining resource base, frequent migrations to areas that are further and exacerbated by the increasing population.
28. **Extreme weather events including prolonged droughts, flash floods and heatwaves** are leading low productivity due to heat stress, decline in soil health and water quality. This has an overall effect of reducing livestock productivity and eroding the socio-economic status of pastoralists.
29. **Limited access to digital services for spatial planning** are hampering development and monitoring of effective resource use plans for the ever-changing fragile range ecosystems which are often vast is size. This ultimately leads to poor production planning.
30. **Lack of adequate livestock development services** e.g. animal health; inputs (feeds, breeding inputs, etc); extension; finance services is leading to perennial scarcity of critical inputs and high transaction costs leading to pastoralists being unable to compete fairly in local, national and global markets

31. **Poor market linkage** manifested through limited capacity and knowledge of market dynamics, unorganized markets, lack of market information systems have combined to erode the value of pastoralist productivity and led to unsustainable livestock production systems.

    The project aims to enhance the adaptive capacity of pastoral and agro-pastoral communities towards food, water, energy and health security, by rangeland restoration and rehabilitation, support sustainable value chains, and promote one health. By aligning with Kenya's policy commitments, the programme aims to transition the ASAL regions toward robust, food-secure, and climate-resilient futures through its integrated components. Key cross-cutting considerations such as gender and social inclusion, scalability, and sustainability are embedded within all programme initiatives. Women, youth, and marginalized groups are prioritized in governance structures and benefit-sharing mechanisms to ensure their voices are valued and included.
32. To promote scalability, best practices will be documented, and templates developed for replication across other ASAL regions. Improved rangeland and livestock productivity through proper livestock nutrition, breeding and health are directly linked to enhanced household nutrition security, benefiting vulnerable groups such as children and nursing mothers. Furthermore, by integrating practices that reduce methane emissions and enhance soil carbon storage, the programme will contribute to Kenya's emission reduction targets while fostering sustainable development.

B. Project description

Component 1: Sustainable Rangeland Ecosystem Management

In the face of changing climate, environmental challenges and resource scarcity, sustainable resource management has become more crucial than ever. It is on this basis that Kenya's updated NDC (2020) prioritized the protection and rehabilitation of 4.8 million Ha in the 21 ASAL Counties during the NCCAP III (2023-2027) to enhance livestock productivity. The project through this component will therefore contribute to the critical need for sustainable resource utilization and combat environmental challenges and resource scarcity. This will be undertaken using approaches such as the ecosystem-based adaptation (EbA), integrated crop-agroforestry-livestock (silvo-pastoral) system and Participatory Range Management (PRM) that have shown great results through piloting in the TWENDE and KeLCOP Projects and CGIAR (ILRI). By fostering environmental preservation, economic stability, and social equity, the programme will strengthen the resilience of rangeland ecosystems.

Output 1: 2.4 M Ha of Rangeland rehabilitated and restored to support pastoralist HHs in 21 counties by 2031.

Activities

Activity 1: Enhance capacity for development of grazing plans: Participatory range planning, promotion of community-driven grazing management practices and capacity building of county range/livestock production extension and advisory personnel and local communities. The Programme will support grazing plans that support cross county landscapes in the 3 rangeland clusters of Somali, Karamoja and Mara and support 500,000 pastoralist HHs with 50% of Kenya's livestock units

Activity 2: Support soil and water conservation infrastructure: Promote sustainable land management practices and climate resilient water infrastructure. This will include support to development of soil and water conservation structures in 1.2M Ha of degraded rangeland using technologies such as terraces, pits and micro-basins and gabions. Such structures will support soil health and fertility

Activity 3: Protection, and restoration of degraded rangeland: Rehabilitation and conservation of degraded rangeland through reseeding and silvo-pastoral systems using locally adapted pastures and multipurpose trees and shrubs (MPTS) and development of community seed banks and distribution services. This will support a total of 2.4M Ha and contribute to the NDC target of 4.8M Ha of rangelands to be restored by 2030.

Activity 4: Establishment of inclusive rangeland management committees: Stakeholder engagements to identify inclusive local leadership for overall community guidance and conflict resolution. This will be undertaken through the participatory rangeland management approach which has been piloted by ILRI and will ensure sustainability of outcomes beyond the project period. The target is the 21 ASAL counties in the 3 rangeland clusters.

Activity 5: Support development of Inter- County transhumance protocols: Capacity building of Counties to mainstream the existing IGAD Transhumance protocol and Range Management and Pastoralism Strategy (2021-2031) to manage resource use-based conflicts and restore ecological and biodiversity balance across the rangeland ecosystems.

Component 2: Digital Agro-climatology Advisory Services for resource management and decision making in the Rangelands.

Digital technologies play a crucial role in enhancing decision-making, resource management, and climate resilience in ASAL communities. The project will leverage on Earth Observation (EO) digital tools developed and piloted by research and other institutions such as the CGIAR (ABC) tool for Real time livestock water source monitoring and risk management system (LWSM) and Normalized Difference Vegetation Index being applied by the DRIVE Project and FEWSNET to support anticipatory planning and climate risk mitigation. These tools will empower pastoralists to anticipate and respond to climate variability, optimize resource use, and transition to more adaptive and sustainable livelihoods.

Output 2: County specific Agro-climatological digital advisories developed and utilized for anticipatory decision making.

Activities

Activity 1: Spatial planning and digital monitoring of rangeland resources: Development of digital tools for tracking rangeland resources (such as feeds, water, and organic soil carbon)

Activity 2: Multi-hazard anticipatory and early warning systems: Participatory scenario and anticipatory action planning by incorporating Local knowledge into early warning systems including systems for livestock diseases to co-create future-focused action plans that will anticipate and reduce losses during climatic extremes.

Activity 3: Capacity building and dissemination of climate information services: Training County extension personnel, rangeland management committees and community members, including women, youth, and marginalized groups to effectively utilize the digital tools. Translation into local languages to increase uptake.

Component 3: One Health for Rangeland sustainability and Resilience

This component applies the One Health approach to enhance the well-being and balance of communities, animals and ecosystems in rangeland regions. The Country has already developed a One Health Framework which is not cascaded to the counties. In addition, Kenya's updated NDC has envisaged 100% vaccination of the livestock in Kenya during the NCCAP III period of 2023-2027. By focusing on the interdependencies between human, animal, and environmental health, this will contribute to sustainable productivity and safety of animal source foods.

Output 3: Health resilience of Rangeland Communities and ecosystems enhanced.

Activities

Activity 1: To enhance delivery of local level veterinary services: Enhance capacity of county veterinary personnel and community animal health monitors to provide accessible veterinary services for disease control, including vaccinations, disease diagnosis, and treatment. This will be targeted to contribute to the 100% vaccination coverage in the NDC/NCCAP

Activity 2: Integrate decision-making responding and managing climate related one health risks: Establish/ strengthen platforms (Pastoral-Hubs) for disease-control technologies, and collaboration between veterinary services, environmental agencies, health departments, and local communities.

Activity 3: Mainstreaming of One Health Approach at the County Level: Capacity building for local-level stakeholders on interconnectedness of human, animal and environmental health, and safe use of antibiotics.

Component 4: Enhance rangeland livestock productivity.

This component focuses on improving the pastoral rangeland ecosystems services to support livestock production and biodiversity by promoting fodder production, scaling insurance to mitigate farmers against climate risks, and capacity build farmers, SMEs, and the MSMEs on value addition and financial management.

Output 4: Livestock productivity enhanced

Activities

Activity 1: Establish strategic feed reserves: Support feed bank development for fodder conservation and promote drought-tolerant fodder and supplements to enhance livestock nutrition. The planned target for the reserves and feed business centres is 500, contributing to the NDC target of 1,500 and support pastoralists in production planning and resilience building

Activity 2: Support community breeding programmes: Develop community-based nucleus and commercial herds through development of breeding plans and supply of breeding stock. The target

is to support community led breeding using selection from already existing and locally adapted cattle, sheep and goats in line with the NCCAP/NDC target for these 3 livestock categories.

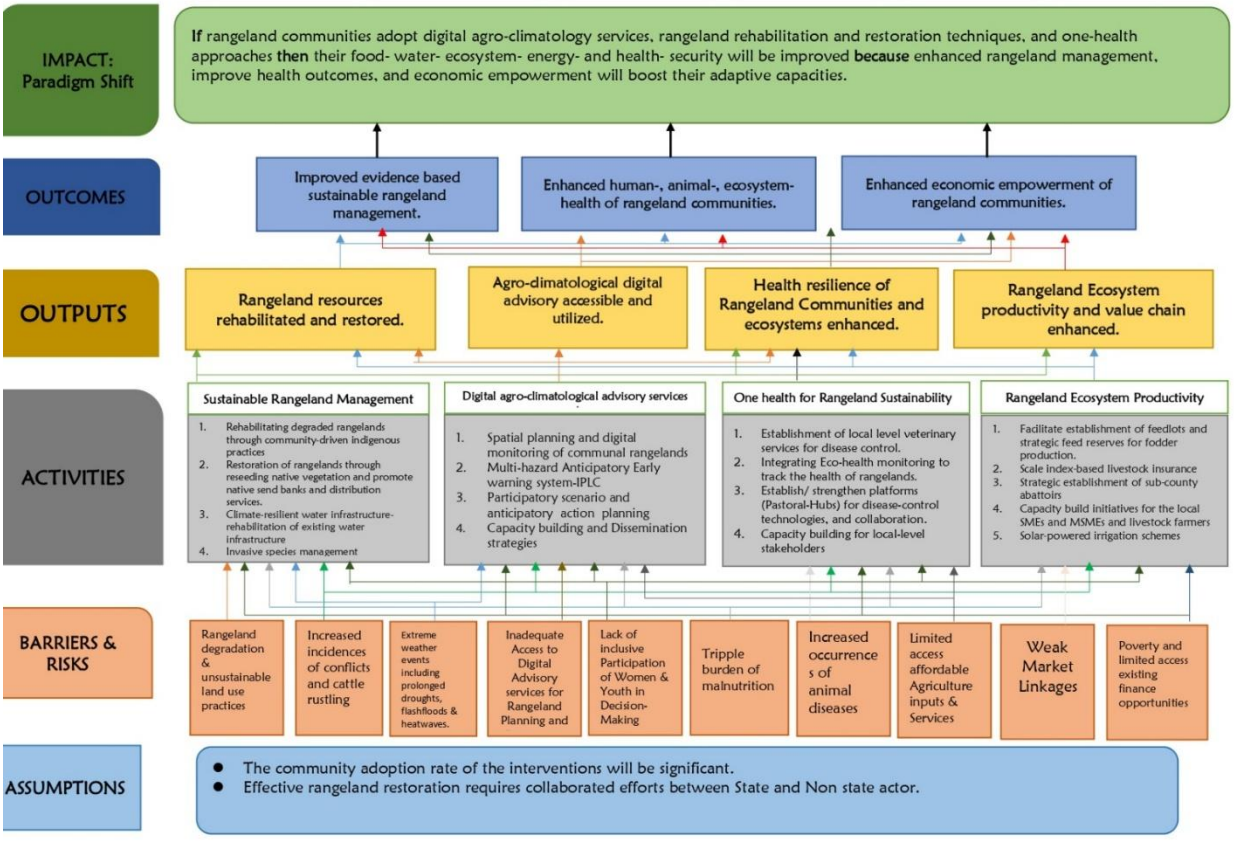
Activity 3: Scale index-based livestock insurance (IBLI) to mitigate climate related risks and protect farmer livelihoods. Under the GOK/World Bank DRIVE Project, a total of 300,000 HH with 5M LUs are benefiting from IBLI. The proposed project aims to build adaptive capacity for additional 200,000HHs and contribute to the NDC target of 700,000 HHs with 10M LUs.

Activity 4: Establishment of feedlots: Build capacity of Counties and local communities in the development of bankable proposals and business plans. This will be private sector driven and contribute to the national target of 450 feedlots and contribute to an offtake target of 1 M LUs annually in the NDC/NCCAP

Activity 5: Capacity build the local SMEs and MSMEs on financial management and link them to financial service providers.

Activity 6: Enhanced market linkages: Training livestock farmers to meet the market requirements and standards and support trade in live animals and meat to the traditional markets in the Middle East and new markets in the EU.

Theory of Change



Justification for funding request

33. The Programme will be implemented in Kenya, whose terrestrial surface area is over 86% arid and semi-arid land (ASAL) which is home to 70% of all ruminant livestock. In the last decade, Kenya's ASAL has become increasingly vulnerable to climate related droughts and rangeland degradation. Being a Lower Middle-Income Country, Kenya has limited budgetary space to devote to the public service activities of a Programme of this nature. It continues to be vulnerable to the adverse effects of climate change, as its economic development, growth and food security are highly dependent on climate-sensitive sectors, especially agriculture (crops and livestock). Additional recent planetary crisis and especially the COVID-19 pandemic and continuing war in Ukraine have continued to negatively affect Kenya's economy, through contractions in supply and demand both in domestic and export markets. The public debt-to-GNI ratio has risen considerably with half of public debt being external. Between 2015 and 2021, external debt relative to gross national income GNI (%) increased from 31.3 to 37.9 percent in Kenya. High debt limits its ability to finance the investments to meet climate change mitigation and adaptation needs in the livestock sector. The implementation of NDCs, NAPs and NAMAs will remain slow without climate finance.