Locally led Adaptations for Resource Management and Inclusive Climate, Peace, and Security in the Transboundary Region of the Horn of Africa

Context

The borderland region between Turkana and West Pokot counties in Kenya, Karamoja in North-East Uganda, and South-West Ethiopia is a transboundary region that shares homogenous conditions which include climatic stressors, source of livelihood, culture, and language. The region has a population of 3.72 million and fourteen pastoral tribes with common characteristics of nomadic lifestyles, shared natural resources, and cultural exchanges. The region has a unique ecosystem which is predominately Arid and Semi-Arid Lands (ASAL), hence the communities have ecosystems that are sharing of deep cultures and traditions with the environment and its ecosystem benefits.

Source: Catley et al., 2021 and IGAD, 2020

The region faces significant climate-induced vulnerabilities, persistent conflicts, and socio-economic challenges due to prolonged droughts, erratic rainfall, extreme temperatures, flush floods, and heat waves which has resultant impacts such as diminishing pasture and water resources, negatively impacting pastoral and agro-pastoral activities in the region. Climate change is also aggravating food insecurity and acute malnutrition, pests and diseases, land degradation, water insecurity and climate-induced human mobility and resource-based conflicts.

Although climate change does not directly and inherently cause violent conflicts, however it amplifies existing vulnerabilities and exacerbates the drivers of communal conflicts. The continued escalation of climate risks and impacts over competition for land, water, and grazing resources in the fragile regions has led many pastoralists to migrate beyond borders, especially across the traditional grazing routes (Stites, 2022). This climate-induced mobility are increasingly heightening tensions and conflicts within the cross-border region, disrupting traditional coexistence and resource-sharing mechanisms. Climate-induced migration is straining relations between host and

migrant communities. The vulnerable groups especially women, children and the elderly are the most affected.

Over the last decade, there have been several programmes and projects which have been implemented with the objective of addressing the complex challenges of climate and conflict risks. Government and non-state actors, including international and local NGOs, civil society organizations (CSOs), and faith-based organizations (FBOs), have implemented various initiatives to tackle water, food, and livelihood insecurities. The general mapping of the programmes and projects carried out focused on livelihood support and diversification, peace building and conflict resolution, natural resource and environmental management, research and knowledge management, technology transfer, and disaster risk management (Chilambe et al, 2022). While many of these interventions have achieved short-term successes, they often lack sustainability and long-term scalable impacts. The causal effects of maladaptation have also remained contentious issue because interventions on a borderline can unintentionally trigger cascading adverse effects on other border communities undermining efforts to build resilience and stability across the region. It is therefore important to build upon those successful interventions by scaling up the activities, breaking silos, and taking a community-led multistakeholder approach to ensure synergies for the sustainability of interventions towards climate resilience and peace in the region.

A significant gap in climate policies observed in the Horn of Africa region is the conflicting institutional mandates within countries that fail to account for the transboundary cascading climate impacts. Although Memoranda of Understanding (MoUs) signed by regional organizations have been implemented on transboundary climate, peace and security, their implementation has been inconsistent. In some cases, partial implementation which is limited to one country, has resulted in maladaptation, where solutions in one area inadvertently creating new challenges in neighbouring country(ies). One of the major gaps in most climate policies such as the Nationally Determined Contribution and the National Adaptation Plans is lack of reference as to how the transboundary climate adaptation risks would be addressed.

The causal link between climate risks and conflicts has consistently gained attraction, with climate change being increasingly recognized as a "threat multiplier" that exacerbates resource-based conflicts. There is a growing interest in sustainability and green development as pathways of integrating climate finance and sustainable livelihoods into national and regional policies. Strengthening community-led adaptation initiatives remains a priority to ensure long-term food security and resilience. Kenya and Uganda have both emphasized community-based climate adaptation and integrating local knowledge into national planning frameworks. Ethiopia is focusing on strengthening climate resilience in conflict-prone areas thus recognizing the causal link between environmental degradation and insecurity.

Target group:

The target group of the project are pastoral and vulnerable communities who are susceptible to the effects of climate change and the transboundary cascading climate risks. Pastoralism is the main economic activity among the communities in the Horn of Africa. The region is vulnerable to the adverse climate risks such as heat stress, flash floods, and frequent and prolonged droughts. The communities usually migrate across borders in search of water and pasture for their animals.

The project will take a community-led approach in addressing the challenges faced by the communities which are exacerbated by climate change. The youth are the ones who usually move with their animals in search of water and pasture across both intra and cross-border while the women, children, old and the sick are often left behind. This project will further target those who are left behind to: (1) reduce their vulnerability to the impacts; (2) enhance their adaptive capacity to climatic stressors; and (3) strengthen their resilience through specific targeted adaptation and livelihood interventions.

Results Logic

The proposed project aims to drive transformative change by strengthening equitable resource management and sustainable livelihoods for long-term climate, peace, and security in the transboundary region of Ethiopia, Kenya and Uganda. The region hugely faces the acute incidence of climate change and extreme weather events with the resultant impacts to land degradation, biodiversity loss and resource-based conflicts. By restoring the degraded landscapes through sustainable use of rangeland resources, and enhancing the pastoral and agropastoral livelihoods, the project is expected to address the prevailing climate risks and foster social cohesion in the transboundary area. The project will integrate indigenous knowledge systems with innovative approaches while fostering locally led approaches in promoting sustainable peace among communities and building climate resilience to achieve a transformative change.

To achieve the impact, the project will be delivered through four main outcomes. Firstly, the **Sustainable management and restoration of transboundary pastoral resources**. This outcome mainly focuses on restoring degraded rangelands and improving pasture and grazing management regimes. Secondly, **improved access and application of actionable agro-advisory information, early warning, and anticipatory action** for effective decision-making. Thirdly, the **enhanced agropastoral and agro-pastoral productivity and market**. The fourth is **strengthened policy and governance frameworks for transboundary resource management and conflict resolution.** The outcome focuses on harmonizing cross-border policies for effective management of the nature-shared scarce resources while preventing conflicts arising from resource scarcity.

The project has four major work packages (WP). The **WP1** is the **transboundary ecosystem-based resource management** resulting in the restoration of degraded grazing lands and pasture and croplands. Participatory mapping and spatial analysis of rangeland degradation hotspots will be conducted in the targeted restoration areas across the transboundary migration routes informed by future climate scenarios. The process will involve working with pastoralists, governments at national and subnational levels and non-state actors to co-create priority areas of focus on the transboundary ecosystem-based resource management. This will entail modelling of future climates and migratory routes.

The **WP2** will address **development of digital technologies and agro-advisory services, including multi-hazard early warning system**. This will entail the development of innovative decision support tools (DSTs), including spatial planning and digital monitoring tool for tracking transboundary resources. Real-time data will be provided to monitor resource availability and trends across different seasons, thereby enabling communities to make well-informed decisions on their pastoral

movements in the border region. The tool is expected to serve as a conflict prevention mechanism by promoting data-driven resource-sharing, especially during the drought periods. The tool will further incorporate and scale up index-based livestock insurance aimed at protecting pastoralists livelihoods during the drought periods. A multi-hazard early warning and anticipatory action system will also be developed to enable timely identification of anticipatory threats from extreme weather events which include droughts, floods, crop, and livestock diseases, to provide opportunity for proactive measures that can minimize losses. These tools would be deployed from the application of machine learning and artificial intelligence as emerging technologies in addressing climate change, with information disseminating though local languages for easy understanding by the primary beneficiaries. Development of anticipatory actions will take a locally led participatory approach to ensure that indigenous knowledge is incorporated into the tools.

The **WP3 aims** at **enhancing pastoral and agropastoral productivity and market**. Focus will be on deployment and assimilation of climate smart technologies and practices at scale targeting the most vulnerable groups especially women and youth. In addition, the project will focus on the health of the animals as well as abattoirs to facilitate easy access to markets while reducing livestock travel distances. Scaling up of quality of livestock by-product value chains including hides and skins, horns, and hooves, by providing women and youths with capacity enhancement value addition that meets emerging market requirements and standards.

The **WP4** aims at **strengthening policy and governance frameworks for effective transboundary resource management and conflict resolution**. This work package will address the gaps that have hindered effective implementation of transboundary agreements. This may also entail harmonization of transboundary policies and agreements. Establishment Cross-border Multistakeholder Resource Management, and Peace and Conflict Resolution Committees will be essential.

Impact(s)
Equitable transboundary resource management for sustainable livelihoods and long-term peace and Stability in the cross-border region

Outcome Level			
Outcome I	**Outcome II**	**Outcome III**	**Outcome IV**
Sustainable management and restoration of transboundary pastoral resources	**Improved access and application of actionable agro-advisory information, early warning system, and anticipatory action**	**Enhanced pastoral and agropastoral productivity and market**	**Strengthened policy and governance frameworks**

Key assumptions of how uptake of outputs will contribute to the outcome:

- Ecosystem-based Adaptation strategies will restore the integrity of the land in combination with the governance frameworks for sustainable management of the pastoral resources.
- Agro-advisories provided by the developed tools are useful for the targeted beneficiaries, hence enhancing its utilization.
- Implementation of harmonized cross-border policies will provide a clear framework for utilization in strengthening governance of transboundary resources and conflict resolution mechanism.

Key assumptions regarding uptake of outputs by target groups:

- The established multi-stakeholder resource management, peace and conflict resolution committee will spearhead the use of agro-climatology advisory services and the dissemination of the information to the pastoralists and other stakeholders.
- Women and youths will uptake value addition of livestock by-products and other value chains.
- National and subnational governments will be willing to implement cross-border policies.

Output Level:				
Output I: Cross-border rangeland ecosystems rehabilitated and restored through ecosystem based adaptation strategies.	**Output II:** Agro-climatology advisory services integrated into resource management and sharing.	**Output III:** Pastoral and Agropastoral livelihood productivity enhanced through value addition and value chain enhancement	**Output IV:** Capacity building initiatives undertaken for pastoralists on peace-promoting adaptation measures, financial management for MSMEs, and value addition	**Output V:** Policy and governance frameworks and policies reinforced to promote sustainable peace and stability.

Activities / Inputs:

Component 1: Transboundary ecosystem-based resource management

Activity 1: Participatory mapping and spatial analysis of rangelands degradation hotspots for targeted restoration/rehabilitation
Activity 2: Rehabilitating degraded rangelands through locally-led climate smart technologies and practices and integration of indigenous knowledge.
Activity 3: Support soil restoration techniques to improve soil fertility, water retention, maximize carbon sequestration potential and reverse the degraded lands.
Activity 4: Invasive weed management to restore ecological balance and enhance biodiversity across the rangeland ecosystem.
Activity 5: Restoration of rangelands through reseeding native vegetation and promote native seed banks and distribution services.
Activity 6: Maintenance, restoration, and establishment of climate-resilient water infrastructure to address water scarcity.

Component 2: Digital technologies and agro-advisory services, including multi-hazard early warning system.

Activity 1: Spatial planning and digital monitoring: Development of tools for tracking cross border resources such as pasture, and water resources.
Activity 2: Development of multi-hazard early warning and anticipatory systems integrating indigenous and local knowledge including animal disease control.
Activity 3: Participatory scenario and anticipatory action planning: Engaging communities to co-create future-focused action plans.
Activity 4: Establish dissemination strategies including translation of the advisories into local languages.

Component 3: Enhance pastoral and agropastoral productivity and market.

Activity 1: Scale index-based livestock insurance to mitigate climate related risks and protect farmer livelihoods.
Activity 2: Facilitate establishment of strategic feed reserves for fodder production; Establishing community breeding centers and promoting drought-tolerant fodder and supplements to enhance livestock nutrition.
Activity 3: Strategic establishment of waste-to-energy, self-sustaining sub-national abattoirs.

Activity 4: Capacity build local MSMEs on unlocking and attracting finance and link them to financial service providers.
Activity 5: Training pastoralists and agro-pastoralists on value addition and to meet market requirements and standards.

Component 4: Strengthening transboundary policy and governance frameworks
Activity 1: Building the capacity of regional, national and local stakeholders in co-developing and implementing peace-promoting adaptation measures.
Sensitize regional, national and local stakeholders on adaption needs and gaps identified in the preparation phase to co-develop and implement inclusive peace-promoting adaption measures.
Activity 2: Establishment of cross-border multistakeholder resource management, peace and conflict resolution committees.
Activity 3: Co-create and co-implement sustainable governance measures for peace keeping using a multi-stakeholder approach.
Activity 4: Harmonization of transboundary policies for shared resource management and conflict resolution.

Key assumptions about context:

- Pastoral communities and other stakeholders are willing to work together in implementing project activities.
- National and sub-national governments will support and enforce policies promoting transboundary resource management and conflict resolution.
- There is continued demand for livestock products and by-products ensuring marketing viability.