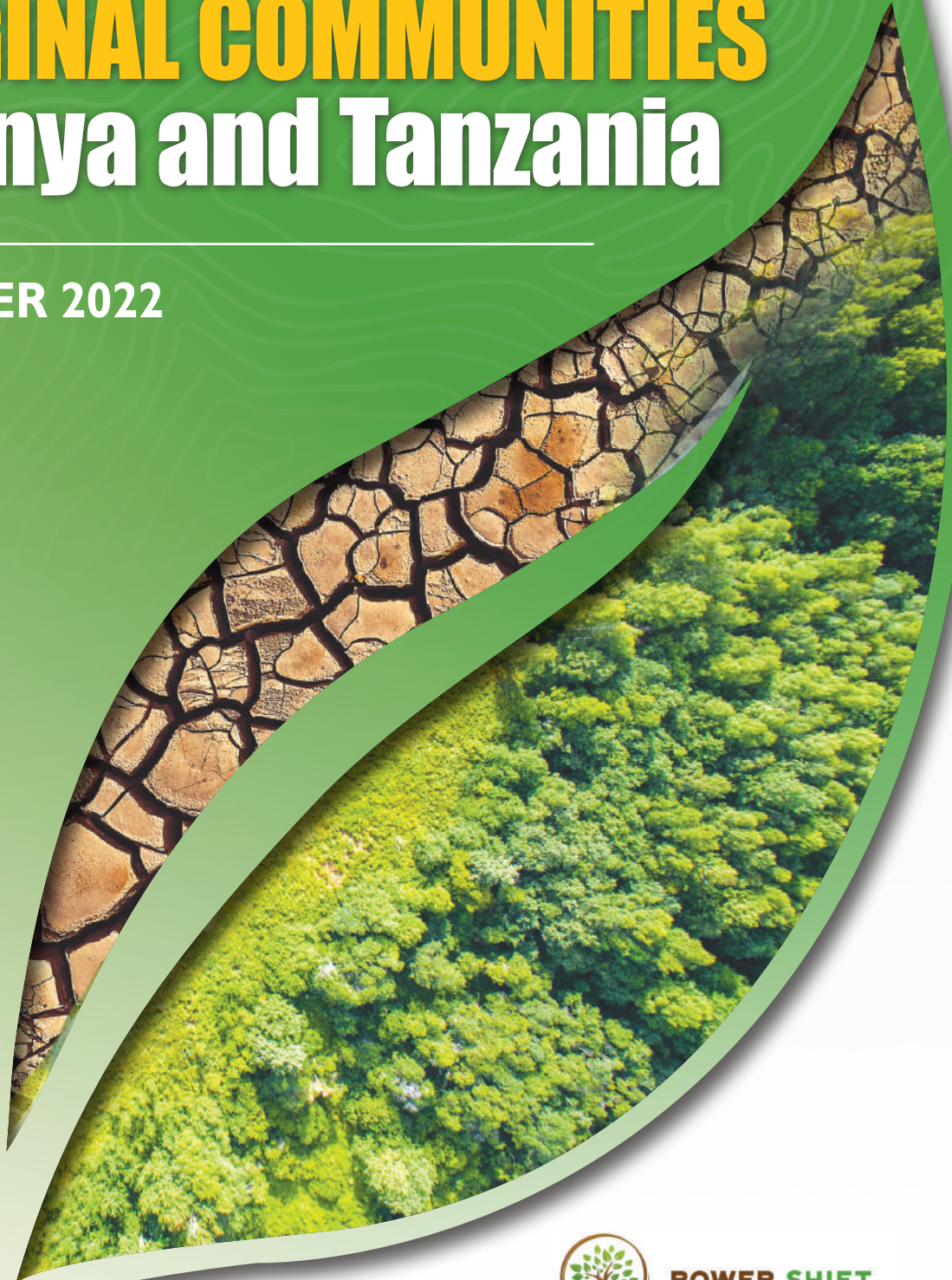


Research on Sustainable Land Use
and Rights for Climate Adaptation

**AND RESILIENCE AMONG
MARGINAL COMMUNITIES**
in Kenya and Tanzania

NOVEMBER 2022



POWER SHIFT
AFRICA



Consolidating Knowledge, Mobilizing People Power and Strengthening Governance for Effective African Leadership in Sustainable Land Use and Rights for Climate Resilience

**Research on Sustainable Land Use and Rights for
Climate Adaptation and Resilience among Marginal
Communities in Kenya and Tanzania**

NOVEMBER 2022

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Executive Summary

This report presents the findings of a study conducted in Kenya and Tanzania as an attendant deliverable to a PSA Robert Bosch Stiftung funded project dubbed: Consolidating knowledge, mobilizing people power and strengthening governance for effective African leadership in sustainable land use and rights for climate resilience. This is an 18-month project that runs between the 5th of May 2020 and 6th November 2023. This report presents the findings of a study that aimed at consolidating communities' and stakeholders' views and perceptions aimed at addressing existing structural barriers that hinder communities' effective participation in international debates on sustainable land use and rights and climate adaptation and hence resilience.

The target study sites were purposively selected against the criteria of being marginal and vulnerable to the vagaries of climate change: geographically present arid and semi-arid conditions and experience extreme climatic conditions. In Kenya, the study was conducted in Turkana and Garissa counties while in Tanzania, the study was conducted in Kilimanjaro region in Same and Hai districts. The target population comprised women, youth, indigenous peoples and people living with disabilities, who are more vulnerable to the impacts of climate change since they are disproportionately impacted. Key informants were purposively selected in both counties based on their knowledge of and involvement in land rights, land use and climate adaptation and resilience issues. Subsequently, relevant local government and national government officials, community elders and civil society representatives, were interviewed and their responses collated. Targeted focus group discussions and key informant interviews were conducted. Participant observation of key land rights and use and climate adaptation-related phenomena were recorded using targeted photography. The collated data were analyzed qualitatively using a comprehensive thematic matrix.

Land rights and use and climate adaptation present a complex and yet an inextricable



nexus among communities in the sampled sites. A positive connection between secure community land rights and the willingness and ability to employ innovative approaches to adapt to climate change impacts is apparent. Additionally, inadequate or lack of requisite knowledge as pertains climate change tend to impede the ability of communities to adapt, with a majority of community members attributing the climate change crisis to God/Allah, and therefore, outside their sphere of control. Poor leadership and governance structures, especially at the local level, and particularly unguided priorities, misappropriation of available funds and non-accountability, was glaringly beamed as another barrier to the ability of affected communities to cope with and adapt to climate change impacts.

Communities pointed out that they were hardly aware of public participation calls at local governance structures, and that, if they were, they were denied the opportunity to effectively participate in key decisions affecting their livelihoods, including budgeting, livelihood alternatives and discussions around early warning systems, opportunities for sustainable livelihoods, adaptation and resilience. Subsequently, resources would be channeled to development projects that, in the eye of communities, are not considered priorities. The inadequate, or lack of effective public participation, further exacerbates the gruesome climate change impacts to such communities.

For communities to engage in adaptive decision-making, they require information, knowledge and skills that enable them to actively address climate risks to their livelihoods. This includes information on weather and climate projections, market locations and prices and availability of different resources. Knowledge of the costs and benefits of different strategies under different climate scenarios is critical. The skills needed include practical skills in climate-resilient agriculture, livestock rearing and natural resource management, but also skills to analyze information and use it to make decisions about their livelihoods.

Acronyms and Abbreviations

AEZs	Agro-ecological zones
ALRMP	Arid Lands Resource Management Project
ASALs	Arid and Semi-Arid Lands
CAPs	County Action Plans
CBO	Community-Based Organization
CCCAP	County Climate Change Adaptation Programme
CDDCF	County Drought Development and Contingency Fund
CoEs	Council of Elders
CoG	Council of Governors
DM	Disaster Management
DRR	Disaster Risk Reduction
FGD	Focus Group Discussion
FSMP	Food Security Master Plan
GDI	Gender Development Index
GHGs	Green House Gases
GII	Gender Inequality Index
HDI	Human Development Index
HSNP	Hunger Safety Net Programme
KARMO	Kaputir Resources Management Organization
KII	Key Informant Interview
KPHC	Kenya Population and Housing Census
KRC	Kenya Red Cross
LAPSSET	Lamu Port-South Sudan-Ethiopia Transport
LR	Land Registration
NDCF	National Drought Contingency Fund
PSA	PowerShift Africa
RBS	Robert Bosch Stiftung
RDDST	Resilience Diagnostic and Decision Support Tool
RTI	Right to Information
SHARED	Stakeholder Approach to Risk Informed and Evidence Based Decision Making
SSDs	Sub Surface Dams
SWAP	Sector Wide Approach Program
TUBAE	Turkana Bio Aloe Organization
YDI	Youth Development Index

Glossary

Agro-ecological zones:	Land units defined on the basis of combinations of soil, landform and climatic characteristics
County	Geographical units envisioned by the 2010 Constitution of Kenya as the units of devolved government
County Government:	Means the county government provided for under Article 176 of the Constitution
Disaster Risk Reduction:	Disaster risk reduction is the concept and practice of reducing disaster risks through systematic efforts to analyse and reduce the causal factors of disasters. Reducing exposure to hazards, lessening vulnerability of people and property, wise management of land and the environment, and improving preparedness and early warning for adverse events are all examples of disaster risk reduction
Institutional Framework:	The systems of formal laws, regulations, and procedures, and informal conventions, customs, and norms, that shapes socioeconomic activity and behaviour
Stakeholder Approach to Risk Informed and Evidence Based Decision Making (SHARED):	A tailored methodology that builds interaction between people and accessible evidence for decisions that yield sustainable impact at scale. The methodology enhances cross-sectoral and multi-stakeholder approaches to decision making
Stakeholders:	Those who have a stake in the outcome of an action and can include, for example, community members, women, youth, CBOs, NGOs, government actors, donors, among others
Vulnerability:	Defined by the Inter-governmental Panel on Climate Change (IPCC) as 'the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extreme events.

Background

1.1 Introduction

The impacts of climate change to rural communities, especially the poor and vulnerable households in Sub-Saharan Africa, have never been so real. These impacts, including rising temperatures, more erratic rainfall and increasing frequency and severity of droughts and floods, have critical consequences for livelihoods, particularly for the poorest households in these rural areas. These households are heavily reliant on land for their food and income security, making them highly sensitive to climate-related shocks and stresses. Poverty, social, cultural and political marginalization and limitations on access to information inhibit the capacity of poor women, youth, indigenous peoples and people living with disabilities to adapt to the changes occasioned by climate change.

The PSA RBS-funded project aims at addressing existing structural barriers that hinder Africa's effective participa-

tion in international debates on sustainable land use and rights and climate resilience by filling the subsisting capacity gaps among key African decision makers and civil society, mobilizing and enabling cooperation especially among existing social movements and marginalized groups of youth, peasants, rural women and indigenous people. PSA will engage African policy makers, civil society organizations and communities of indigenous people, youth, and women in the marginalized regions to strengthen their agency and effective participation in policy and decision making about land and climate resilience.

This project is anchored on the fact that the convergence of the climate crisis, land grabs and rising food imports in Africa is a recipe for catastrophe. Unless actions are taken to build up local food systems and reverse the growing reliance on imports of cereals and other staple



Bare land in Kilimambogo – Tanzania. The land was cultivated in preparation for the rainy season, but it has not rained for over 2yrs yet they do not have enough resources to practice irrigation. PHOTO/ PSA

foods, there will be multiple and more severe repeats of the 2007/2008 food crisis. There is need for real African leadership to achieve the critical systemic change in land use practices and policies across the continent to stimulate and enable climate resilience especially among the excluded and marginal communities. African participation

THIS PROJECT IS ANCHORED ON THE FACT THAT THE CONVERGENCE OF THE CLIMATE CRISIS, LAND GRABS AND RISING FOOD IMPORTS IN AFRICA IS A RECIPE FOR CATASTROPHE.



in the international debates especially around sustainable land use and rights for livelihood and climate resilience

is still inconsistent, and often with low knowledge, the role of Africa has never been more important. Galvanizing effective participation of African officials and experts, civil society and marginalized groups in the African COP27 in Egypt will be important in realizing the much-needed climate ambition especially in attaining systemic change in land resource management and use for effective climate change adaptation and resilience. Further, ahead of COP27, key political moments such as the renewed EU-AU partnership and the G7 and G20 summits are opportunities to build momentum towards COP27 and strengthen global leadership for ambitious climate action. The findings from this study provide a backdrop against which such engagements and partnerships can be made.

As highlighted in the executive summary, this study was conducted in Kenya and Tanzania with a specific focus on marginalized ASAL areas that are vulnerable to the climate crisis. Ultimately, the project aims at enhancing and amplifying African voices in key international decision-making platforms and debates leveraging effective leadership in sustainable land use and rights for climate adaptation and resilience.

1.2 Land and Climate Change

Land plays a significant role in the ecosystem as it is one of the main factors of production. It is a big source of livelihoods as it can be used to produce food for people and feeds for animals as well as energy (Masson-Delmotte, 2019). The paradox is that land is both a contributor and a solution to climate change.

Land use change is known as the second largest contributor to GHG emissions after the use of fossil fuels. Between 2007 and 2016, land contributed 5.2 ± 2.6 GtCO₂ yr⁻¹ of global net CO₂ emission (Masson-Delmotte, 2019). This is mostly true in areas where there are high levels of deforestation and land degradation as a result of weak land tenure systems or inadequate property rights (Masson-Delmotte, 2019; Mitchell & van der Molen, 2016). Land degradation and desertification are also caused by increases in temperatures which further exacerbate stress on land and risks to livelihoods and human ecosystems (Masson-Delmotte, 2019). The situation has been

made worse by high population growth rates and rising per capita consumption in agriculture, forestry, and industry. Moreover, there has been rising surface temperatures since the pre-industrial period because of poor land usage thereby accelerating climate change. As Masson-Delmotte (2019) puts it, “People living in already degraded or desertified areas are increasingly negatively affected by climate change” (Masson-Delmotte, 2019, p. 7)

The marginalized are highly affected by weak land tenure systems and are further vulnerable to food insecurity and poverty exacerbated by climate change (MRG, 2015). Globally, demand for land for investment and agriculture is on the rise and so are populations. This pressure on land has often led the marginalized communities being deprived of the resource and thus their access to food and their source of livelihoods. The need for protection of land rights comes against the backdrop of land grabbing, landlessness, and climate change. Land rights also af-



A family in Loima, Turkana County using a part of their land to grow subsistence crops through irrigation.
PHOTO/ PSA

fect other human rights such as the right to health, food, water, and equal rights. These rights are infringed upon in cases of insecure land tenure systems or poor access to land and related resources such as water and forests. Land right denials can ultimately lead to conflicts and civil wars (MRG, 2015).

Persuaded by theoretical underpinnings that individual property rights are critical to increase access to credit by using land as collateral, investment security and efficient land management, the colonial government in Kenya began land registration in 1956. In Tanzania, indigenous land ownership existed since the 1920s and did not change significantly even with colonialism. Where individual ownership of land existed, it was abolished by the first African government in Tanzania and perpetrated by their counterparts in Kenya. The Tanzanians feared that individual property rights could lead to unequal distribution or landlessness amongst the poor (Pinckney & Kimuyu, 1994).

Although the land tenure systems in Kenya and Tanzania are different with the former being characterized by stronger and commercial based property rights and the latter still under indigenous tenure systems with huge

pieces of land belonging to communities and the state, there are no huge differences in the outcomes of the uses of land. This was revealed in an old study of two communities in Kenya and Tanzania by Pinckney and Kimuyu (1994). According to them, land titling did not lead to huge inequality as feared by Tanzanians (Pinckney & Kimuyu, 1994).

However, both countries have discriminated against minority or indigenous peoples land rights beginning from the colonial period. Tribes such as the Endorois and Ogiek in Kenya and the Maasais in Tanzania have had their land taken away through land grabbing and violent evictions by the colonial masters and after the post-colonial periods, have not properly been compensated or, the vice has been further perpetuated (Gilbert, 2017). Despite successful international litigation requiring proper demarcations, titling and compensation for the three communities, the legal instruments within the countries have not succeeded in enforcing the rulings. Litigations have nevertheless led to more awareness and attitude change and higher satisfaction levels. For sustainable impact, litigations must be accompanied by legal empowerment, outreaches, inclusion in policy making and advocacy (Gilbert, 2017).

I.3 Climate Governance and Nationally Determined Contributions

The Paris Agreement requires all parties to submit NDCs to achieve its goals. As part of their commitment to the Agreement, both Tanzania and Kenya have submitted their Nationally Determined Contributions (NDCs) to the UNFCCC secretariat. NDCs are national climate action plans that describe efforts by each country to reduce national emissions and adapt to the impacts of climate change. The submitted NDCs include both mitigation and adaptation components.

In its revised NDC 2020, Kenya increased its GHG reduction ambition levels from 30% to 32% by 2030 carbon emissions under the Business as Usual (BAU) scenario of 143MtCO₂eq and Tanzania from 10-20% to 30-35% despite both countries not being major contributors to climate change. On adaptation, Tanzania aims to embark on a climate resilient development pathway by reducing the impacts of climate change variability and associated extremes such as droughts and floods, which have long-term implications to all productive sectors and ecosystems, particularly the agriculture and land sector. Similarly, Kenya aims to ensure a climate resilient society and mainstreaming climate change in various sectors including agriculture and land use sectors. Kenya seems to be more specific while Tanzania has provided a range (ICPAC, 2021).

Kenya has set up clear multi sectoral measures such as improving information flows, strengthening monitoring and evaluation and risk management as well as resilience in its NDC and the National Adaptation Plan (NAP). The sector coverage includes Agriculture, Forestry and other Land Use (AFOLU) (de Carvalho, 2021). The country commits to initiatives such as a 10% forest cover, use of non-renewable and clean energy and climate smart agriculture in the NDCs. Climate change actions have also been mainstreamed across sectors such as Health and Education. Specific mention is made of initiatives for youth, gender, and vulnerable populations in the NDCs. These include safety nets, animal insurance schemes and other food security measures (de Carvalho, 2021).

The country has made clear financial commitments of approximately USD 62 billion up from USD 40 Billion in the initial NDCs. Although most of the funding for Kenya's first NDCs was based on conditional support, the country has committed to fund 13% of the budget in the updated NDCs (GOK, 2020). The rest of the support would be based on fully conditional international support. Between 2020 and 2030, Kenya has budgeted for the use of USD 17,725 million for mitigation activities, 79% of which is to come from international support. Around USD 43,927 million is meant for adaptation activities with 90% being raised internationally.

In 2016, the country enacted the Climate Change Act with clear governance arrangements. The Act set up a national climate change council, as the high-level policy arm, chaired by the president and a climate change directorate



30% to 32%

Kenya increased its GHG reduction ambition levels from 30% to 32% by 2030 carbon emissions under the Business as Usual (BAU) scenario of 143MtCO₂eq

as the technical arm at the Ministry of Environment and Forestry. All non-state actors (NSAs) are supposed to report through the system on their adaptation and mitigation activities and results. The policy making process for plans and laws such as the Climate Change Act, the



Solar panels aerial view.

National Climate Change Response Strategy (NCCPS, 2013) and the National Climate Change Action Plan (NCCAP, 2013) and the NDCs are said to be participatory and consultative involving a multiplicity of stakeholders from the national and county government, the civil society, academia, the private sector and other environmental experts. There is, however, little evidence on how the input of each stakeholder was incorporated especially the youth, women, and vulnerable members of the society. A look at the Tanzanian NDCs shows the country is determined to fight climate change and its effects through adaptation in the following areas: In agriculture, the country aims at better land and water resource management, climate smart agriculture and safety nets for farmers. In the livestock sector, the country commits to livestock insurances, research and development among other measures (URT, 2021). In forestry, Tanzania proposes participatory sustainable forest and wildlife management and protection. Other measures are in the Energy, Coastal, Marine Environment and Fisheries, Water, Sanitation, and Hygiene, Tourism, Land Use and Human Settlements Development, Health, Infrastructure, Disaster Risk Reduc-

tion, Gender Mainstreaming, Capacity Building, Research and Systematic Observation and Technology Development and Transfer. Priority sectors for mitigation include energy, transport, forestry, and waste (URT, 2021).

The NDCs and the priority areas were informed by the National Climate Change Response Strategy (2021) and the Zanzibar Climate Change Strategy (2014) among other policies, laws, plans and initiatives. The National Adaptation Plan (NAP) further elaborates on the adaptation and implementation measures. The process of NDC development was noted to be consultative and inclusive with participants representing ministries, departments, and agencies (MDAs); local government authorities (LGAs); development partners (DPs); civil society organizations (CSOs); academic and research institutions; and the private sector (URT, 2021).

Unlike in Kenya where the Ministry of Environment and Forestry is the focal point for climate change, the role of overall coordination falls on the vice president in Tanzania. The Department of Environment in the Vice President's Office (VPO) is also responsible for Monitoring and Evaluation (M&E). The National Climate Change Fo-

cal Point (NCCFP) is supported by the National Climate Change Steering Committee (NCCSC) and Zanzibar Climate Change Steering Committee (ZCCSC) in terms of coordination the National Climate Change Technical Committee (NCCTC) and Zanzibar Climate Change Technical Committee (ZCCTC) with regards to technical advice. Actual implementation of mitigation and adaptation measures is done by ministries and LGAs. The information and MRV system is managed at the National Carbon Monitoring Centre at the Sokoine University of Agriculture (SUA)(URT, 2021).

Those in charge, however, face challenges due to inadequate finance, capacity and inefficient coordination. In 2012, the Government of Tanzania developed a National Climate Change Communication Strategy (NCCCS) to enhance public awareness on climate change and its effects. However, a study 5 years later revealed low awareness about the instruments and processes of climate change. Another study showed that several documents were not yet translated into Swahili (TaTEDO, 2019). Other challenges that were identified in Tanzania's first NDCs were poor access to technology, low implementation capacity and inadequate participation of key stakeholders as well as lack of funds (URT, 2021). The cost of implementing the NDCs in Tanzania is not clear. However,

it is estimated that each year the country would spend up to USD 500 million in climate change adaptation and mitigation with the possibility of the cost doubling before 2030. In general, the cost for mitigation is around 1 to 2% of the annual Tanzania GDP. By 2050, the investment cost for renewable energy alone would hit USD 160 Billion(URT, 2021).

A comparative analysis by ICPAC (2021) of the different East African countries shows that Kenya has done better in terms of recognition of minority rights, accessibility of information and risk management systems for all, budgetary allocation, and implementation plans, while Tanzania outperforms Kenya in terms of links to other policies and enforcement plans. Kenya and the other east African countries except Tanzania have set out budgetary allocations for NDCs. Despite not having a clear budget line, Tanzania has outlined structures, roles and responsibilities for implementation but have no monitoring and controlling mechanisms. Kenya on the other hand has an integrated information management system. The two countries are at par in the areas of inclusion (ICPAC, 2021). Due to low funds, the East African countries require more support from the international community to effectively address climate change and its effects (ICPAC, 2021).

1.4 Civil Society and Community Participation

The civil society plays an important role in raising awareness on issues related to the marginalization of people as well as building capacity for climate change adaptation and resilience. The world has seen unprecedented action by several NGOs who have been engaged in building partnerships, networks and lobbying on matters climate change and its effects (Rabbani & Zvigadza, 2012).

The Kenyan Government has shown an enhanced approach to CSOs and community engagements in climate change. Key national policy documents acknowledge the importance of public awareness and stakeholders' engagement, and the government regularly involves stakeholders in planning processes with various coordination structures at various levels including CSOs representation.

ALTHOUGH THE GOVERNMENT OPENLY ACKNOWLEDGES THE CIVIL SOCIETY'S ROLE IN CLIMATE ADAPTATION AND RESILIENCE WORK, CSOS ARE NOT EFFECTIVELY INVOLVED IN ALL POLICY AND DECISION-MAKING PROCESSES



However, there is scope to improve public participation and access to information especially in the marginalized areas which have limited influence on decision-making processes. On its side, Tanzania, has many Civil society organisations (CSOs) in climate change, with many of them working at the grassroots level and filling gaps that government structures cannot due to capacity issues. Although the government openly acknowledges the Civil Society's role in climate adaptation and resilience work, CSOs are not effectively involved in all policy and decision-making processes. For example, they have not been included in the National Adaptation Plan team and in updating NDCs.

Overall, CSO networks, however, face challenges such as inadequate funding; lack of coordination between local, national and international NGOs and slow action and prioritization by governments (Rabbani & Zvigadza, 2012). There is, therefore, the serious matter of participation and voices of the poor being lost in the process. Rabbani and Zvigadza (2012) recommended that CSOs expand their stakeholder analysis, involvement and share information regularly and avoid duplication by building synergies. They then can as strong units increase their visibility through target messaging and marketing as well as using the media more (Rabbani & Zvigadza, 2012).

1.5 Objectives of the study

The overall objective of the study is to examine existing structural barriers around land rights and access that hinder marginalised communities in Kenya and Tanzania from effective participation in national and international decision making processes on sustainable land use and

rights and climate adaptation and resilience.

The study was anchored on the following three specific objectives:

- a) To establish barriers to land use, access and ownership among marginalised communities in Kenya and Tanzania.
- b) To determine the nexus between gender specific climate change vulnerabilities and land access, ownership and control; and,
- c) To explore potential interventions to address existing gender specific vulnerabilities related to land rights among the marginalized communities and enhance their adaptive capacities and build resilience.

2. Study area and Methodology

2.1 Study locations

2.1.1 Kenya

2.1.2 Tanzania

2.2 Methodology

2. Study area and Methodology

2.1 Study Locations

2.1.1 Kenya

Turkana County

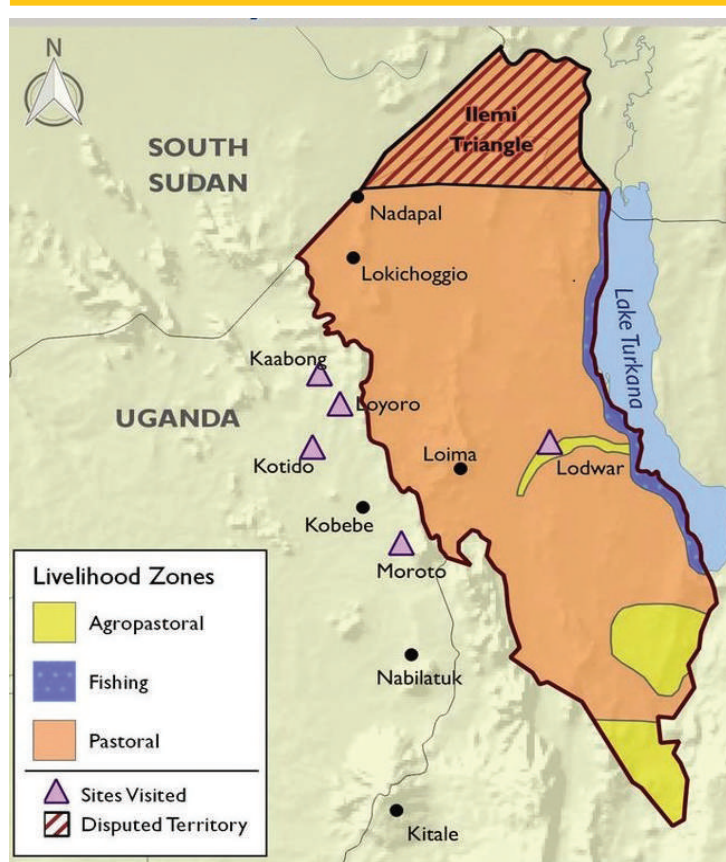
Turkana County is the second largest of 47 counties in the Republic of Kenya. It covers an area of 71,597.6 km², accounting for 13.5% of the total land area in Kenya¹. It lies between Longitudes 34° 30'E and 36° 40'E and between Latitudes 10° 30'N and 50° 30'N. Turkana is located in the Northwest of Kenya and borders Uganda to the west, and South Sudan and Ethiopia to the north and northeast respectively.

Internally, it borders West Pokot and Baringo counties to the south, Samburu County to the southeast, and Marsabit County to the east. Turkana County is traversed by the extensive Eastern African Rift System.

The topography of Turkana varies between semi-arid and arid landscapes consisting of low-lying plains and isolated hills and mountain ranges².

The altitude extends from 369m at Lake

Turkana to the highest point at around 900m near the Ugandan border in the west. Turkana has a hot, dry climate with temperatures ranging between 20°C and 41°C and with a mean of 30.5°C. Rainfall in the area is bimodal and highly variable³. The long rains occur between April and July and the short rains between October and November. Annual rainfall is low, ranging between 52 mm and 480 mm with a mean of 200 mm. Rain patterns and distributions are erratic and unreliable. Rain usually comes in brief, violent storms



¹ Turkana Investment Plan, 2016-2020

² Opiyo et al., 2015

³ Ibid

that result in flash floods. The driest periods (akamu) are in January, February and September and the county is highly prone to drought. At least 80% of the county is categorized as either arid or very arid. The study partici-

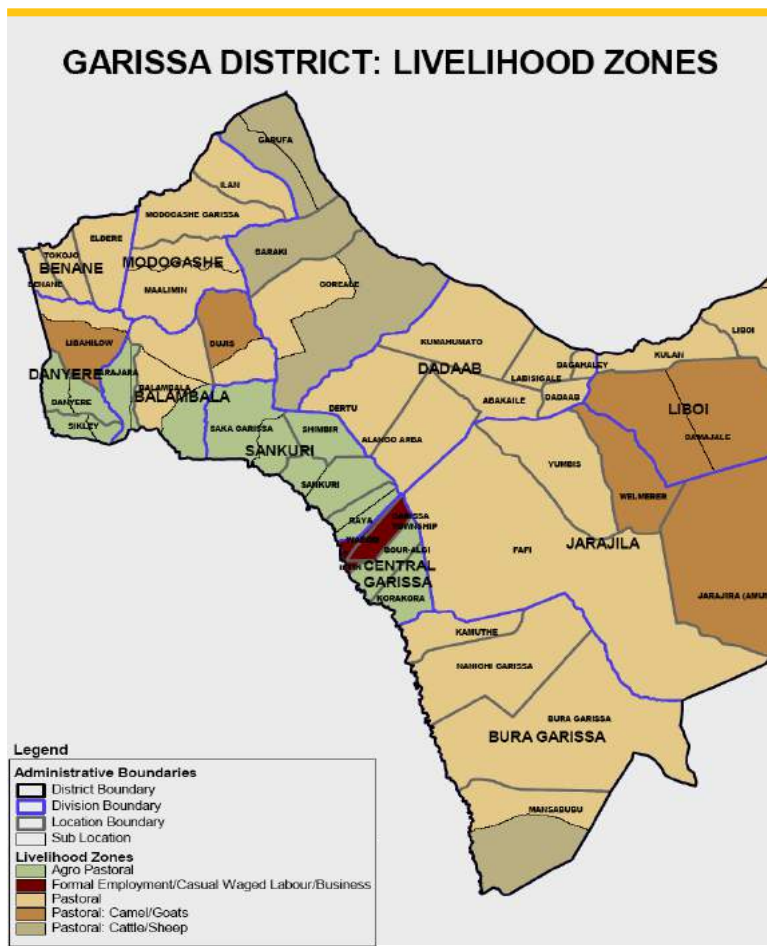
pants were drawn mainly from Lodwar town and Turkwel and Loima sub-counties as presented in the subsequent map, which also presents the livelihood zones in Turkana County.

Garissa County

Garissa County is one of the three counties in the North-Eastern region of Kenya. It covers an area of 44,174.1 Km² and lies between latitude 10 58'N and 20 1'S and longitude 380 34'E and 410 32'E. The county borders the Republic of Somalia to the East, Lamu County to the South,

Tana River County to the West, Isiolo County to the North-West and Wajir County to the North. Garissa County is basically flat and low lying without hills, valleys and mountains. It rises from a low altitude of 20m to 400m above sea level. The major physical features are seasonal Laghas⁴ and the Tana River Basin on the western side. River Tana has tremendous effect on the climate, settlement patterns and economic activities within the county. Given the arid nature of the county, there is great potential for expansion of agriculture through harnessing of River Tana and Laghas.

The county is principally a semi-arid area falling within ecological zone V-VI⁵ and receives an average rainfall of 275 mm per year. There are two rain seasons, the short rains from October to December and the long rains from March to May. Rainfall is normally in short torrential downpour making it unreliable for vegetation growth. The southern parts of the County such as Hulugho, Masalani and Bura receive more rainfall than the northern parts. Balambala and Fafi constituencies practice rain-fed agriculture on small scale. During the dry season, there is a general migration of livestock from the hinterland to areas near River Tana where water is readily available. However, some pastoralists move with their livestock to adjacent counties of Tana River and Lamu in search of pasture. Much of the county's livestock population are indigenous sheep, goats and cattle, found in the southern parts which receive more rain while camels occupy the drier north.



⁴ Shallow temporary water-holding pans

⁵ Agro-ecological Zones in Kenya

The soils range from the sandstones, dark clays to alluvial soils along the Laghas, River Tana Basin and the Lorian swamp. White and red soils are found in Balambala Constituency where the terrain is relatively uneven and well drained. The soils have low water retention capacity but support vegetation. These soils have potential for farming. Given the arid nature of the county, temperatures are generally high throughout the year and range from 200C to 390C.

The average temperature is however 360C. The hottest months are September and January to March, while the months of April to August are relatively cooler. The humidity averages 60g/m³ in the morning and 55 g/m³ in

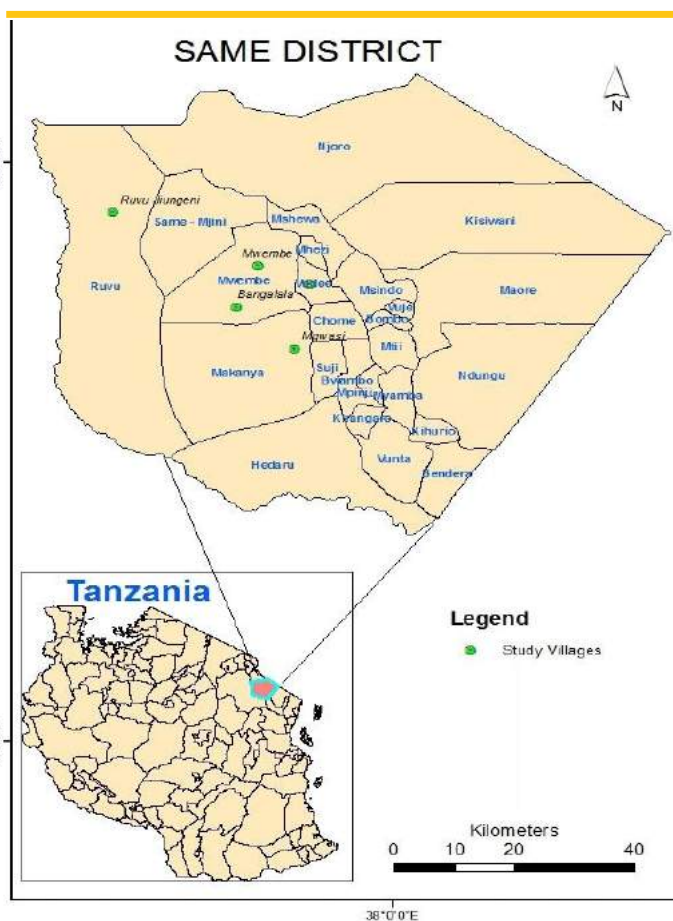
the afternoon. An average of 9.5 hours of sunshine is received per day. Strong winds are also experienced between April and August with the rest of the months getting calm winds. Climate change has, however, occasioned changes in the rainfall and temperature patterns. Thus, the county is prone to drought and flood emergencies leading to a significant threat to livelihoods.

This study had its focus in Garissa town and Lagdera Constituency, specifically, Benane, Modo Gashe and Garbatulla in Isiolo County. Like Turkana County, in Garissa County, the impacts of climate change are already being felt by communities, who are seeking ways to adapt to the changes and to build resilient livelihoods.

2.1.2 Tanzania

Same District

Same is one of the seven districts of the Kilimanjaro Region of Tanzania. It is bordered to the north by the Mwangi District, to the northeast by Kenya, to the south and south-east by the Korogwe District and Lushoto District of Tanga Region, and to the west by Simanjiro District of Manyara Region. The district capital is the town of Same, Tanzania. The population of Same has risen to 269,807, according to the 2012 Tanzania National Census. The district covers an area of 6,221 km² (2,402 sq mi) and has an average elevation of 1,034m (3,392 ft)⁶. The tallest point being Shengena Peak at 2,463m. The district is home to Mkomazi National Park, and a few other protected areas such as Chome Forest Reserve which is home to the South Pare white-eye, an endemic bird found only in the district. The district's main income source is agriculture, for both commercial and subsistence needs. The main commercial agricultural product in Same is sisal. However, tourism is gradually becoming a source of foreign exchange with the popularity of Mkomazi National Park and the Chome Forest Reserve. Notably, both the two sectors are climate sensitive. Some sections of Same District exhibit arid and semi-arid climatic conditions, with rainfall patterns that have been very irregular, at least in the recent past.



⁶ <https://www.citypopulation.de/en/tanzania/northern/admin/>

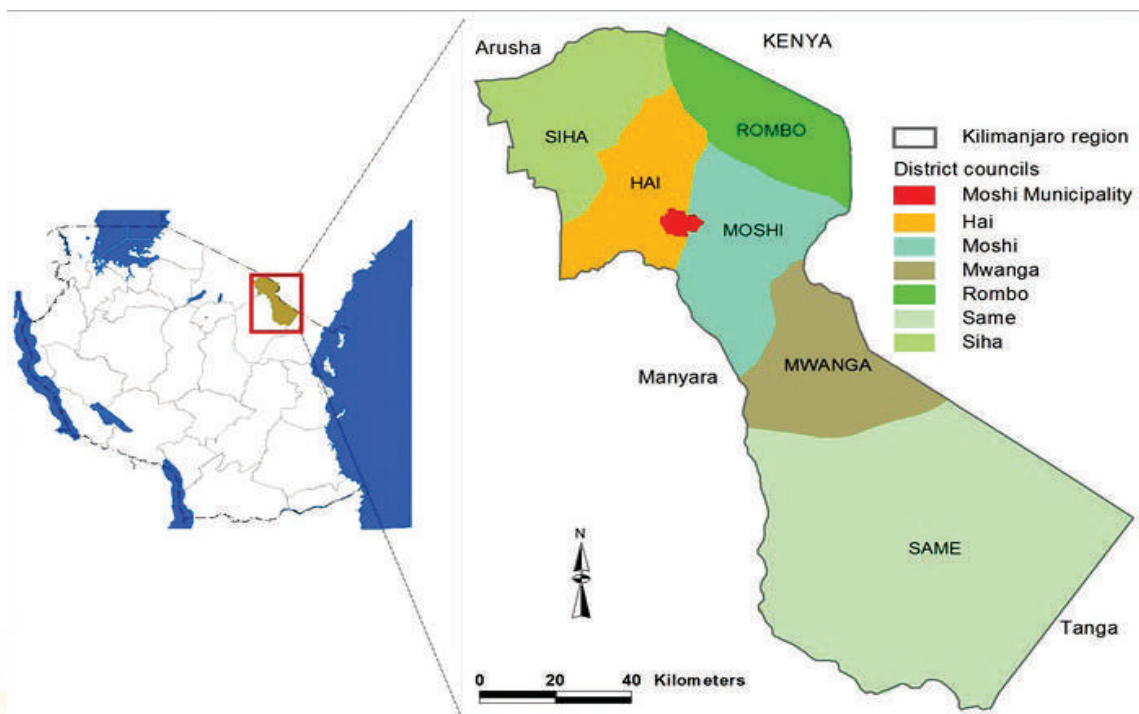
Zone	Approximate Area (Km ²)	%Total
I. Agro-Alpine	800	0.1
II. High Potential	53,000	9.3
III. Medium Potential	53,000	9.3
IV. Semi-Arid	48,200	8.5
V. Arid	300,000	52.9
VI. Very Arid	112,000	19.8
Rest (Waters etc)	15,600	2.6

Hai District

Like Same, Hai is one of the seven districts of the Kilimanjaro Region of Tanzania. The district covers approximately 1,217 square kilometers (470 sq mi). A total of 46,506Ha is arable land; 27,297Ha is suitable for livestock; 14,154Ha is covered by forest; and 13,143Ha is non-arable land which is covered by rocks, hills and gullies⁷. It is bordered to the southwest by the Meru District of Arusha Region, to the west by the Siha District, and to the east by the Moshi Urban District and Moshi Rural District and the Rombo District to the far north. The western breach part of Mount Kilimanjaro is located in the Hai District. According to the 2012 census, the population of the Hai

District was 210,533. The Chagga and the Maasai make up the two main ethnic groups in the district. The Chagga live mostly in the mountain areas while the Maasai occupy the lowlands. Other smaller groups in the district are Wapare and Wanyaturu who also reside in the lower zones⁸.

Hai District Council is at altitude of 700m to 1700m above the sea level. The district is characterized by mountainous topography on the Northern part which forms the Kilimanjaro Mountain, while moving towards the south, are the lowlands. The economy of the Hai District Council is mainly dependent on the agriculture sector, which has largely been affected by climate variability.



⁷ Hai District Council Strategic Plan for year 2016/17 – 2020/2021

⁸ Ibid

2.2 Methodology

This study employed a participatory mixed-method approach in which both secondary and primary data were collected. Data collected were mainly qualitative in nature gathered through focus group discussions, key informant interviews and participant observation.

A set of three [3] separate focus group discussions of at least 9 participants, for women, youth and indigenous peoples, were conducted in Turkana County, while in

Garissa County, focus group discussions were held with groups of women, youth, and the Council of Elders.

Key informants interviews were purposively conducted with representatives of county government institutions, civil society organizations and village elders.

Table I presents a summary of the FGDs conducted and key informants that were interviewed in this study.

Table I: Summary of FGDs and KIIs in Turkana and Garissa Counties, Kenya

Location		FGDs	KIIs
Turkana County			
i.	Loima	Indigenous Peoples [1]	1 [Sub-County Administrator]
ii.	Turkwel	Women [1]	1 [KARMO Programmes Manager]
iii.	Town	Youth [1]	1 [TUBAE Executive Director]
Garissa County			
i.	Benane	Women [1]; CoG [1]	
ii.	Modo Gashe	Youth [1]	
iii.	Garbatulla	Mixed [1]	
iv.	Dudjjs		1 [Village Elder]
v.	Town		2 [NDMA Director; Directorate of Environment]
Total		7	6

Table II: Summary of FGDs and KIIs in Same and Hai Tanzania

Location		FGDs	KIIs
Kilimanjaro District			
iv.	Same-Mabillioni	3	3
v.	Hai-Mkombozi	3	3
Total		6	6

Data were analyzed qualitatively using a comprehensive thematic matrix integrated with Nvivo qualitative analysis software and presented qualitatively in analyzed description clusters as well as in direct verbatim. Photos were used to supplement descriptions of responses collated from participants.

3. Findings and Discussions

3.1 Access, Use and Control of Land Resources

3.2 Land Rights and Land Use Policy

3.2.1 Context

3.2.2 Key Findings

3.3 Climate Change Adaptation and Resilience

3. Findings and Discussions

3.1 Access, Use and Control of Land Resources

3.1.2 Garissa and Turkana Counties

Land resource is vastly distributed in Turkana County with at least each adult member having access to at least 1 acre of land. Land ownership is divided into two main tenure systems: communal and privately owned land. However, there are no titles but allotment letters for the privately owned land. A majority of the men own land privately while women and youths access land under the

custody of their husbands and fathers, respectively. Decisions on privately owned land majorly lie with the family Head, being the male counterparts. This has proven challenging as it limits women and the youth from optimizing their productivity and creativity. Community leaders are the key implementors and executioners of decisions about how communal land is



A group photo of youth FGD at Turk Reef Hotel in Lodwar, Turkana County. PHOTO/ PSA



A youth FGD in Lodwar, Turkana County, conducted by Emmanuel to discuss how climate change has affected their land rights and land use policy. PHOTO/ PSA

used. Noteworthy, is the fact that the county government has eased the process of allocation of land through local administration, within the urban areas, by issuance of receipts that signify ownership and hence access to use as opposed to the previous allotment letter which was utilized during the municipality era. The community now has a say on how the land resources are accessed and used, albeit to a low extent. For example, before the construction of the national road, the government asks for the people's opinion, although, the public participation is grossly ineffective.

Livelihoods in the target areas of Turkana and Garissa counties are dominated by pastoralism. Pastoralists are mobile livestock herders who gain more than 50% of their incomes from livestock and livestock products. The herders in these regions raise a range of livestock that include cattle, goats, sheep and camels.

Communities in the two counties practice differing levels of mobility, from sedentary herds that move within a



I have access to our family land whose management solely falls under the purview of my father, who is the owner of the land. Nothing can happen on the land without his consent and express permission.

[A youth speaking during an FGD in Lodwar town]



Group photo with Council of elders and women FGD in Garbatulla, Isiolo County. PHOTO/ PSA

“

...even though the county government purports to engage community members in discussions around development projects, most of these discussions are done discreetly and with a few selected individuals. In fact, in most cases, a majority of us are never aware of such meetings or planned developments. For example, we are told that this road (pointing at an all-weather road) is to be expanded in the next few months, and that we shall not be compensated when our structures are pulled down. The government claims that we have no title to claim ownership and that we are the ones who encroached on the road reserve! These are serious issues about which the government should have candid discussions with us, but, all we are hearing are rumours!

[An agitated woman in Garbatulla, Garissa County]



Camels along the road to Garissa, Kenya. Photo: Flore de Preneuf. PHOTO / WBG

locality, to transhumant herders who move between locations on a regular basis, to nomadic herders who have high mobility without regular patterns.

With limited surface water and localized groundwater resources across the two counties, pastoralists are heavily dependent on rainfall and rainwater storage for their domestic and livestock water needs. Further, livestock nutrition and productivity are reliant on the availability of pasture, which is significantly influenced by rainfall. This means that they are highly sensitive to erratic and uncertain rainfall and to drought.

Notably, pastoral livelihood systems within the two target counties are inherently adapted to the harsh and unpredictable



We have vast community land in this county which we essentially utilize for grazing our animals. The land is managed by community elders who zone the land to ensure that we practice rotational grazing, especially now that droughts have become so frequent and severe. The community can also allocate land to a community member in need of one, in which case, the one who has been allocated [a man], will have the prerogative of utilizing the piece of land.

[An Adult man during an FGD in Loima, Turkana County]



Goats feeding on dry prosopis juliflora in Loima, Turkana County. Prosopis juliflora is popular in the ASAL region. PHOTO/ PSA



The people in Loima, Turkana County burn charcoal as a source of income to sustain their livelihoods. PHOTO/ PSA

climatic conditions in the two counties. Decisions about herd size and composition are made based on the environmental and climatic conditions within the range area.

Mobility is an essential adaptive strategy, enabling livestock herders to access water, pasture and other critical resources and services by moving with their animals to areas where these resources are more abundant. Land degradation is extremely common: extreme soil erosion, drying up of land, loss of tree and other vegetation cover and general loss of biodiversity.

Charcoal burning has even worsened the already deteriorating forest cover, further drying the soils. The community is reforesting the area [with neem tree] and Mathenge [*Prosopis Juliflora*] especially along riverine areas, albeit in small quantities. Rotational farming is also another practice to ensure land retains its fertility.



When it is too dry here, we move our cattle to places where pasture and water can be accessed. For instance, my animals are all in Lamu County now...when it gets tougher there, they will be brought back. Although I always lose some on the way due to fatigue, especially the very young ones...

[Council of Elders member, Garissa County]



A youth FGD in Modogashe, Lagdera Constituency in Garissa County to discuss climate change and its effects on their land rights and land use policy. PHOTO/ PSA

“

Ideally, we, as the Council of Elders should oversee the management of movements of our animals during drought seasons and how to ensure sustainable use of our resources. However, ever since the Chief's Act was repealed, we no longer have the wherewithal to do any land use and land resource management, since, we would literally draw our authority and powers to enforce from the chiefs. We should be playing an important role in facilitating sustainable management of land and water resources, mitigating resource conflicts, and promoting mutual support and collective action during times of crisis. But the truth is, sadly, we have now been reduced to solving domestic issues, including family fights... because we cannot enforce what we could hitherto to the repealing if the Act

[Council of Elders member, Garissa County]



CAN-Tanzania project, to provide water for irrigation to the people in Kilimambogo, Tanzania. PHOTO/ PSA

Noticeable with the communities in these two counties is the fact that they have somewhat developed coping strategies that they employ to manage shocks, including herd splitting, building up herd sizes as a buffer against shocks and loans or redistribution of livestock and other assets to family or community members, planting food crops with any available rainwater, and erecting water tanks. Making hay, building and construction, collection of fuel and dry wood, collection of wild berries, collection of fruits, collection of walnuts and beekeeping have also been incorporated to earn them extra income.

Humanitarian organizations such as the Red Cross Society (RCS) have also devised alternative initiatives of helping the communities in Garissa County to thrive under the adversities of climate change. During dry seasons, RCS encourages communities that own goats to slaughter them for meat to supplement protein nutrient component, especially in children, by mobilizing them to share the meat with at least five households within their neighborhoods. In compensation, RCS pays the owners of the goats a flat figure of Ksh. 3,000 [\$30] to help them either restock the herds when the drought is over, or venture into other potentially sustainable economic activities. This initiative serves to cushion the communities during such dry and hard times from a double tragedy of losing the animals and suffering famine and malnutrition simultaneously.



Water storage tanks constructed by the county to provide water for irrigation to the people in Loima, Turkana County. PHOTO/ PSA

Within the target counties, these pastoral communities face several challenges that constrain their ability to employ adaptive mechanisms effectively. Increasingly, erratic rainfall and more frequent droughts have undermined the efficacy of traditional strategies to predict and manage these shocks and stresses. Population growth and allocation of land for other purposes such as tourism, urban development and refugee camps has led to increased competition over land, often leading to conflict between different communities and between humans and wildlife.



This lagar overflows during the rainy seasons and displaces families living near the lagar. Some families own lands along this lagar, and they grow crops through irrigation to sustain their livelihoods. PHOTO/ PSA

Inadequate maintenance of infrastructure such as roads and water points along the migration routes makes movement much more difficult for the herders and their animals. This is exacerbated by poor planning by both county governments and development actors, including haphazard creation of water points, settlements and relief food distribution centers. Some government policies also favour sedentarization, including policies around basic education, which has an impact on mobility and reduces the labour available for herding livestock. The insecurity in Somalia has also limited cross-border movement and increased insecurity and conflicts, particularly, in Garissa County.

The laghas that pass through the community land are seasonal. On rainy days, the floods displace the people living around that area, sweep away livestock and destroy crops. The existence of bandits from neighboring communities is also another challenge, since they compromise security and cause loss of life and livestock, as well as create tension in the affected areas.

Arrangements with regards to land use may be termed unfair since, in some scenarios, community members face bias at the Ministry of Land offices at the county level

where land registration is done. Some community members are likely to be favored due to connections with individuals at the ministry, as others without connections, suffer. Poor leadership and governance structures, especially at the county level which do not prioritize community needs, such as, irrigation, borehole drilling, security et cetera were also highlighted as a major challenge to the communities' adaptive capacities. In fact, there was a general feeling that county structures serve those in urban areas such as Garissa, where the county offices are headquartered, with little, if any, concerns about the grassroots communities, who have been left to figure out how they live with and use their land resources.

Mega projects such as LAPSSSET which occasions dispossession of land from the community, with little to no compensation, which is unjust, is equally a major barrier to adaptability. Additionally, such mega projects cause massive land degradation, further curtailing the ability of communities to utilize their land resources optimally, to be able to adapt and become resilient. The community, through the community leaders, manage the land resource which is communally owned. However, these rights might be infringed by the government should there be any developmental projects underway.

The Drought Resilience and Sustainable Livelihood Programme (DRSLP) seems to have been riddled with structural and systemic governance challenges and, therefore, unable to effectively attend to the vulnerable groups, especially in times of famine or floods. This undermines the initial objective of the initiative which was to: “launch regional projects to address the underlying causes of vulnerability in drought-prone areas, with particular emphasis on pastoralists and agro-pastoralists to promote disaster risk reduction, ecosystem rehabilitation and sustainable livelihood base transformational and developmental practices”.

Further, unsustainable management of land, water and other natural resources has led to rapid deterioration in ecosystem health and reduced quality and availability of critical resources for livelihoods. These issues are exacerbated by climate change, which acts as a driver of environmental degradation, for example, through increasing soil erosion due to increasingly variable rainfall. Climate change may also be a driver of poor resource management, as people resort to increasingly unsustainable coping strategies to manage recurrent shocks to their livelihoods.

In light of these challenges, an increasing number of

households in the target counties are transitioning out of nomadic pastoralism into other livelihood strategies, notably crop production. Often, the household will continue to keep some livestock, but the herd is managed in a different way. Agriculture may have some positive results in terms of providing new sources of food and income,

23.9 million

The climate crisis has sparked a crisis of mobility: Around the world, in 2019 alone, some 23.9 million people were involuntarily displaced by weather-related disasters

but it may expose people to new risks and it may have negative consequences in terms of land use management. Other vulnerable households are relying increasingly on



A photo of goats feeding on dry prosopis juliflora in Loima, Turkana County. Prosopis juliflora is popular in the ASAL region. In Turkana, the prosopis is planted along the Lagar to reduce overflowing during rainy seasons. The long-term effects of prosopis are, it affects the teeth and digestive system of animals. PHOTO/ PSA

non-land-based sources of income such as casual wage labour, salaried jobs and remittances. Although these strategies are potentially less sensitive to climate impacts, they often involve migration to urban centers, either temporarily or permanently.

The climate crisis has sparked a crisis of mobility: Around the world, in 2019 alone, some 23.9 million people were

involuntarily displaced by weather-related disasters. That dwarfs the 8.5 million people displaced by the factors we so often associate with migration and displacement: conflict and violence. Diversification of livelihoods is an important strategy for building resilience to climate change, but it must be done in an informed and empowered way to be effective.

3.1.2 Same and Hai Districts



Ms. Sharon CAN – Tz representative, conducting women FGD in Kilimambogo, Tanzania to discuss how climate change has affected their land rights and land use policy. PHOTO/ PSA

Each adult member has access to at least an acre of land. Land ownership is majorly communal and government owned. Community elders oversee implementation and execution of decisions on how communal land is used while the government makes decisions on public land. However, the government can seize part or the whole of communal land for ‘government projects’ as was the case with indigenous Maasai cultural land in Loliondo in

which the government cordoned off and forcibly and violently evicted the Maasai community from their 1,500km² ancestral land in favour of a project that they termed, ‘wildlife protection’.

Gender norms have, however, led to women being left out of planning and decision making of land use. Their rights are unrecognized hence limiting their productivi-

ty levels by leaving their needs unmet. There is need to change attitudes of men, to make them realise the importance of women to be actively involved in land governance processes.

Arrangements in terms of land use may appear as fair since the government through the local administration facilitates the communities' agricultural processes by issuing fertilizers and seedlings for planting. A majority of the people use the land for farming, grazing, building and construction, agroforestry, source of fuel, drying woods and digging boreholes. Landowners do not pay to use their land while leaseholders pay the local administration depending on the purpose, size, and value of the land.

One of the major challenges affecting land use is lack of water. On rainy days, the floods displace the people living around that area, their livestock are carried away by the floods and their crops destroyed. Bandits from neighbouring communities are also a challenge. During drought pastoralists migrate with their cattle in search of greener pastures. The hostile communities that live in those areas fight back leading to the deaths of their livestock and people. Most farmers cannot afford herbicides hence most of their crops are destroyed by pests and the few that depend on cheap crops suffer huge losses since the crops are not result oriented.

Land degradation is extremely common. The community members have opted to use mixed farming and rotational farming to counter its effects. Rotational farming has, however, not been very counter effective due to attacks from the neighbouring Maasai community. The study establishes that land resource management aimed at identifying and implementing sustainable and productive land use policies and strategies, has proven to have created a great impact in these two districts.

Some of the approaches used in contributing towards land resource management are by the disaster coordination office and district forest officers and include creating awareness about the significance of sustainable development, enforcing rules and by-laws against destruction of the environment, ensuring the court reprimands those who breach the laws on land use by reporting such incidents, and propagating for cultivation of fruit trees such

as the avocado tree, and equally supporting and supervising planting of indigenous tree species.

Respondents indicated that land degradation, which is either a temporary or permanent decline in the productive capacity of land, has proven to be a great challenge in land management in the two districts. However, officials at the district and ward level seek to address degradation concerns especially among the marginalized through:

- ▶▶ Establishing safety net government projects, such as the Tanzania Social Action Fund [TASAF] scheme, which is strategized at reducing poverty, has helped community members to acquire incentives to support their livelihoods.
- ▶▶ Community members from the study districts benefit from the occasionally conducted seminars where knowledge on proper land use is passed on. For instance, the Maasai are encouraged to reduce the number of livestock reared on bare land with an aim to curb land degradation.
- ▶▶ Establishment of sustainable income generating activities as an alternative source of income, such as engaging in hay production for sale during dry seasons.
- ▶▶ Ensuring participation and inclusion of the marginalized community during decision making and land management issues.
- ▶▶ Advocating for sustainable farming through programs such as Kilimohai and educating the communities on climate change and afforestation activities.

The land tenure system practiced in the study sites is communal land tenure system. Land is owned through customary rights, though at Hai district, families, but not individuals, can own land. The common land practices are agriculture, livestock keeping, beekeeping and sisal farming, which is majorly commercial.

The community controls use and access of the land resource.

Community members acknowledge that one of the major constraints limiting the use of land is climate change [mabadiliko tabianchi] associated impacts i.e. droughts and floods. The participants did indicate that other limiting constraints to land access and use are: inadequate or lack of education on sustainable land use systems/ap-

proaches; conflicts over land among neighbouring communities; and, lack of proper land use plans in the villages.

Community members highlighted potential opportunities that would aid in ensuring effective and sustainable land use within the study areas: formulation of new policies and by-laws that would help achieve sustainable land use practices; practicing crop rotation; and, creating awareness on proper land use.

3.2 Land Rights and Land Use Policy

3.2.1 Context

In Kenya, the centrality of land is underscored in Chapter 5 of the Constitution of Kenya (2010), with an entire chapter dedicated to land and the environment. However, realizing marginal groups' rights and particularly, women's right to access, control, and improvement of land and management of natural resources, remains a challenge, particularly in arid and semi-arid regions. The unequal treatment between men and women in land governance systems is linked to specific roles and relationships that are regulated by sociocultural norms.

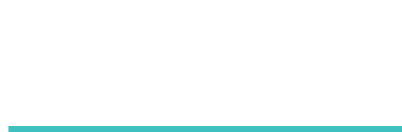
As a result, women – particularly poor women – have fewer options for participating in land governance and natural resource management and for dealing with related crises. This in turn increases their vulnerability and limits their capacity to access, use, and own land. In agro-pastoral systems, women play a central role as land and natural resource managers, income generators, and service providers.

Pastoral women are not only “primary” users of land, but are also major “secondary” users, collecting rangeland products such as firewood, grass, fodder, wild fruit, medicinal plants, gum, and resin. However, many pastoralist societies are patriarchal, and men own all the livestock and land resources.

While pastoral women's property rights have been afforded a certain degree of protection by customary institutions, the sustainability of such protection is likely to be lost as a result of weakening traditional institutions and new developments in land reforms. In Kenya, the enactment of the Community Land Act aims at operationalizing the provisions of Article 63 of the Constitution, which

deals with community land. Land reforms seek to harmonize the multiple and often overlapping legal frameworks on tenure of land and natural resources.

THE UNEQUAL TREATMENT BETWEEN MEN AND WOMEN IN LAND GOVERNANCE SYSTEMS IS LINKED TO SPECIFIC ROLES AND RELATIONSHIPS THAT ARE REGULATED BY SOCIOCULTURAL NORMS. AS A RESULT, WOMEN – PARTICULARLY POOR WOMEN – HAVE FEWER OPTIONS FOR PARTICIPATING IN LAND GOVERNANCE AND NATURAL RESOURCE MANAGEMENT AND FOR DEALING WITH RELATED CRISES.



3.2.2 Key Findings



Ms. Sharon CAN – Tz representative, conducting women FGD in Same, Kilimanjaro District in Tanzania to discuss how climate change has affected their land rights and land use policy. PHOTO/ PSA

The communities in Turkana and Garissa counties affirmed that traditional land management systems exist. There are councils of elders [Ng'ikasukou-in Turkana] that ensure that every community member has access to land and to sort out land-related disputes at the community level. Those who want to access community land for investment, or any other business have to negotiate with the elders, in consultation with the chief and relevant government officials. However, women, youth, and other vulnerable groups (those with disabilities, indigenous peoples, etc.) are seldom involved in discussions on land-related matters, further depriving them of their right to access and utilize land resources. In particular, women are not allowed to participate in the decision-making forums that pertain to land management.

In terms of ownership systems, there is a customary land tenure system in which access is mainly through inheritance, with no formal documentation. The community



Here, most of the land coverage belongs to the community...the council of elders decide on how land should be utilized. The most unfortunate thing is that women have little say in such discussions, save for some wives of prominent people...the rest of us are never consulted and our views do not count...

[Woman FGD participant in Benane, Garissa County]



Mr. Dickson CAN – Tz representative, conducting a youth FGD in Kilimambogo, Tanzania to discuss how climate change has affected their land rights and land use policy. PHOTO/ PSA

traditionally demarcates land using indicators such as family graves, large old trees, such as the neem, and watering wells. Nearly all the interviewees asserted that women have no land ownership rights in Turkana County, though daughters of chiefs or women from rich families are allocated land. However, at times, this land can be taken away by their brothers once the parents are dead. The situation is, however, different in Garissa County, in which, women, at least the ones in the urban set-up, have land ownership rights.

NEARLY ALL THE INTERVIEWEES ASSERTED THAT WOMEN HAVE NO LAND OWNERSHIP RIGHTS IN TURKANA COUNTY, THOUGH DAUGHTERS OF CHIEFS OR WOMEN FROM RICH FAMILIES ARE ALLOCATED LAND.



In both counties, insecure tenure exists due to a lack of title documents. All that the communities rely on are pronouncements by CoEs and allotment letters that are issued by land authorities. Additionally, mega infrastructural development projects such as The Lamu Port–South Sudan–Ethiopia Transport Corridor project [LAPSSET], in which large tracts of land are set aside by the government and some other land purchased by investors as well as the gazettement of forests and ranches, were noted as eviction threats. In both counties, the resource-based conflicts are mainly over grazing areas, water points, boundaries, urban expansion, and the fencing of livestock passage routes, conservancies, and refugee camps.

It was noted that the communities in both counties had very little knowledge and awareness about the Constitution of Kenya. The legal frameworks on community land governance exist, but the chiefs had only basic knowledge of community land matters and disseminated what they knew to the community during barazas⁹. Communities have very little knowledge about what is enshrined in the Constitution regarding communal land governance. Their understanding of land administration and related issues is

⁹ Community gatherings that are usually convened and addressed by the chief

very limited. Provision of civic education on land matters by relevant authorities is critical.

A couple of reasons were identified as potential barriers to women and youth's access and ownership of land (particularly in Turkana County). Strong religious beliefs that women should not mingle with men; low literacy levels among women; and lack of female role models who have succeeded in accessing land (particularly in Turkana County), present such an obstacle to access and ownership of land among women and youth. Other factors include high poverty levels manifested through low Human Development Index (HDI) and low Youth Development Index (YDI) as highlighted in the County Integrated Development Plans (CIDPs) of both counties; and, rampant systemic corruption arising from poor leadership and weak governance structures. Other factors of significance are also lack of political good will, with low priority given to the land question and high priority given to political interests; gender inequality due to cultural barriers and discriminatory traditions; and, poor access to information and inadequate knowledge about existing legal frameworks on land.

The increasingly noted challenge affecting communities in the target counties is land degradation especially among the marginalized communities. Subsequently, the national and county governments seek to address this challenge by:

- ▶▶ Creating awareness on the impact of climate change
- ▶▶ Providing cash donations to the vulnerable as a safety net measure
- ▶▶ Provision of a platform for communities to plant indigenous trees along the riverbanks so as to curb soil erosion and ensure water levels are in check
- ▶▶ The government also ensures communities receive insurance services for their livestock through a partnership program with the private sector at an affordable cost

Among the global agendas that seek to strengthen resilience to climate change are the National Adaptation plans

(NAPs) and the National Determined Contributions (NDCs) that are incorporated in all Garissa and Turkana County programmatic activities on adaptation. Hence increasing coherence, efficiency and effectiveness towards development outcomes that are resilient and sustainable. Activities such as zoning of land to allow for rotational grazing are some of the best practices that have ensured implementation of sustainable management practice by the community elders.

However, one of the major constraints limiting use of land is drought, with limiting access to water which has led to extreme cases of loss of cattle. Another common constraint is floods that wash away both cattle and crops. Subsequently, resource conflicts become a norm during such times leading to more deaths and destruction to property. Conflicts usually ensue around the Benani area, which is the boundary between Garissa and Isiolo counties and endowed with pasture and fairly permanent springs.

An increase in immigrants has caused major strains on natural and economic resources, ethnic tensions, socio-economic tensions and burden on infrastructure and services. Community gatekeepers in Isiolo County allow their neighbors to graze their cattle during drought, but only when this is done under their terms. The cattle stock is counted, a fee charged and a specific place for grazing allocated. In most cases, communities from Garissa County sneak in their cattle at night and graze haphazardly without the consent of community gatekeepers in Isiolo County. When this happens, gruesome conflicts arise, leading to death of people and animals.

Irrigation, identified as an important practice, to ensure sustainability, comes in handy especially in preparation of climatic uncertainties. Investment in large scale irrigation schemes seeks to address sustainability concerns. Linked closely with the irrigation scheme is renewable power. Investment in renewable energy to power the irrigation scheme given the abundant sunlight intensity and duration, would be an important milestone in these drought-stricken regions.

The Climate Act of 2016 gives counties the latitude to establish county adaptation plans. Key informants indicated that there was involvement of county representatives in drafting of the County Climate Change Adaptation Policy, even though implementation of these policies is not on course due to structural and systemic barriers at the counties, especially in Garissa.



FGD youth – Modogashe, Lagdera in Garissa County. The man was contributing to a discussion on the effects of climate change on the people of Lagdera. PHOTO/ PSA



Counties were mandated to have a directorate in charge of climate change. Garissa County complied with that directive because it's a legal Act of Parliament. Instead of forming a new ministry in charge of climate change, the environment and natural resources department established offices and advertised for positions of a director in charge of climate change, environmental associate and one in charge of environmental and social safeguards e.g. issues of social security and GBV. The climate change department also established Garissa County Climate Change Policy.

[Key Informant, NDMA]

The implementation of the provisions of the Climate Change Act 2016 cannot be ascertained. However, funding from both the county and national government will ensure the county climate action plan is in place. All key stakeholders including community representatives, the livestock sector, the water department, agriculture and irrigation department should take charge.

Research should be conducted and data collected to enable the development of an action plan. There is a need for provisions of the UNFCCC to address the identified problems and ensure uniformity from planning for implementation.

Due to lack of resources, the approach of creating awareness on matters climate change has derailed. Lack of sensitization on the matter of climate change and how it affects the community and environment at large has resulted in a lack of dissemination of information.



The community radios are also paid for. If the journalists are aware of what it is they are airing, some of them will do it on a pro bono basis, but perhaps one of the reasons they are not doing that is because they do not understand it themselves.

[Key informant, Directorate of Environment, Garissa]

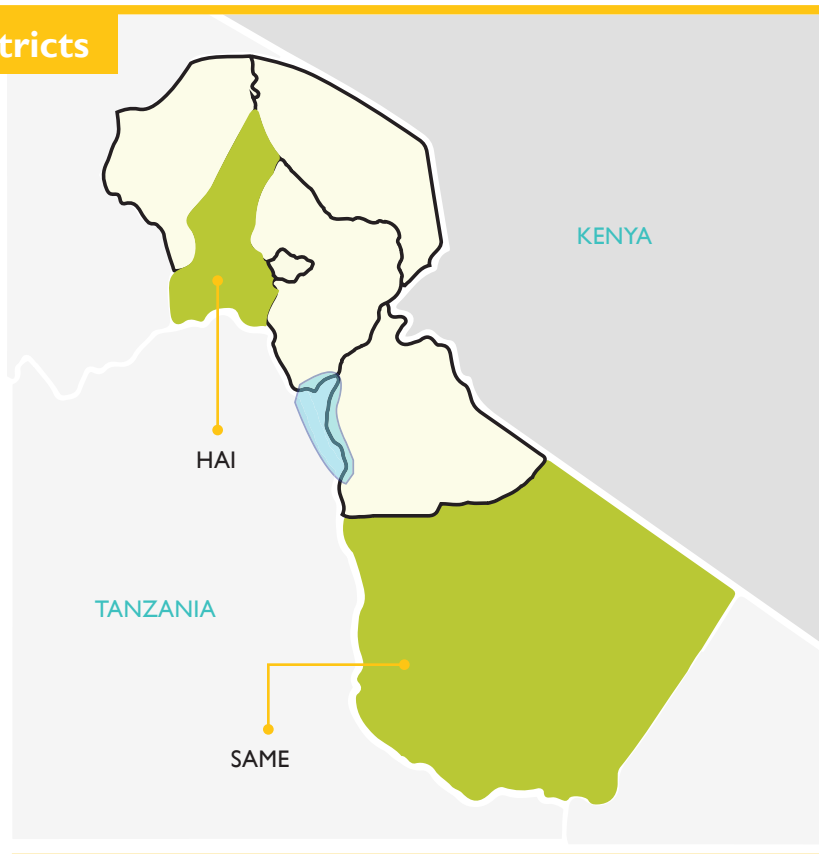
Notwithstanding these obstacles, there are opportunities, which could be taken advantage of in trying to reverse the status quo by ensuring that women and youth are able to access and own land and hence boost their adaptive capacities, in the long run.

Such opportunities include: working closely with religious leaders, county administrators, existing councils of elders, and women's groups to advocate land access rights; using women's advocacy forums such as Sauti ya Kina Mama and vernacular radio stations for community sensitization and awareness creation, especially on land rights issues; and, using civic education to disseminate information on matters to do with communal land governance.

Same and Hai Districts

It was established that only a few community members understand land rights and use policy. Land rights and use policy is not well understood in the community. The community members are not aware of the prevailing laws and policies due to their high illiteracy levels. They, however, expressed interest in being included in decision making about their land uses. This certainly calls for a need for sensitization on land rights and use policy to enable the community members make informed decisions. In a bid to maintain harmony and to ensure effectiveness in land uses, the local governance structures in the study areas

have designed bespoke regulations that are faithfully adhered to by the community members. One of the rules set in place is, animals should not trespass other farmers' crop lands, usually between August and November; failure to which, the local administration would decide on a suitable punishment. This way, food security is ensured since there are no pre-harvest losses



occasioned by animal destruction. What is more disturbing is the fact that community members rarely participate in planning and decision making on their land use hence the general feeling is that some of the rules are not a representation of their needs and interests. However, they have immense interest in decision making addressing major concerns such as allocation of land use rights, improvement of land, protection of land from fires and proper land use and planning.

Of significance would be the need to create awareness of members' land rights and ensure all members of the community have equal rights of ownership and access to land.

This approach would spur and motivate immense interest in decision making that addresses major concerns, such as, allocation of use rights, improvement of land resources and maintenance of land.

Additionally, there is need to ensure inclusive, participatory, and representative decision making in all matters land use if adaptive capacities of the communities are to be bolstered. Land policies must recognize the role of local and community-based land administration alongside those of the government. The age-old rigidities in traditional structures and systems which tend to discriminate against women should be abolished.

3.3 Climate Change Adaptation and Resilience

In view of the preceding discussions, it's notable that Turkana and Garissa counties in Kenya and Same and Hai districts in Tanzania face several comparable ecological, economic, and political challenges, which have had an influence on resident communities. In Garissa, for example, growing water scarcity, widespread economic decline and historical privatization of land have come together to de-stabilize local livelihoods.

The pastoralist populations in the study areas, similarly, confront increasing land fragmentation, ineffective governance, conflict and competition over pasture and water, and climate change.

In Tanzania, the communities in these study areas understand climate change and have witnessed, first-hand, in their surroundings. They strongly believe that human activities like gas emission from green houses and deforestation are the main causes of global climate change. They are, however, not aware of climate policies aimed at mitigating climate change impacts, locally or otherwise.

In the face of these challenges and precarity, communities in the study areas have devised various localized ad-

THE PASTORALIST POPULATIONS IN THE STUDY AREAS, SIMILARLY, CONFRONT INCREASING LAND FRAGMENTATION, INEFFECTIVE GOVERNANCE, CONFLICT AND COMPETITION OVER PASTURE AND WATER, AND CLIMATE CHANGE



aptation approaches that challenge pre-existing popular notions about livelihoods, mobility and resilience, while compelling a shift in how policymakers and practitioners envision these.



Aerial view of solar panels on a sunny day. power farm producing clean energy.

In both countries, mobile and diversified livelihoods have emerged as a key response to these shifting ecological and economic circumstances. Individuals move to exploit unevenly distributed resources in the rural and urban landscape, with these movements tending to be bi-directional (rural to urban and vice versa). Improvements in transportation and communication infrastructure, attributed to devolution efforts, in Kenya, have further propelled these movements.

Mobility and migration in this context arise from a complex set of environmental, socioeconomic and political factors and from both choice and coercion. However, diversified livelihoods transcend physical migration; social relationships and livelihood connectivity across the rural-urban spectrum have critical repercussions for linked economies and overall understanding of household re-

silience.

From the study, it is evident that in both countries, adaptation has historically been a key strategy in the face of uncertainty and change. Although the popular view of drylands among policymakers and practitioners is one of vulnerability and degradation, pastoralists recognize and exploit the variability that drylands offer.

Mobility, herd and livelihood diversification, and social networks are some of the principal ways pastoralists in these counties ensure their 'resilience'. Importantly, pastoralists' constant adaptation to changing circumstances is at odds with development practice, which tends to not only view them as passive beneficiaries of aid but is also unable to keep pace with the dynamism inherent in pastoralism.

4. Conclusion and Recommendations

4.1 Conclusions

4.2 Recommendations

4.2.1 Recommendations for Policy

4.2.2 Recommendations for Practice

4. Conclusion and Recommendations

4.1 Conclusions

It is apparent that climate change is causing devastating impacts to the African continent in general and in the study sites in particular, hitting the most vulnerable hardest, and causing food insecurity, population displacement, insecurity and water stress as a result of recurrent and more intense droughts, devastating floods and an invasion of desert locusts among other impacts. As the impacts increase, socially vulnerable communities such as women, youth and other vulnerable groups in the region are disproportionately experiencing the detrimental effects.

One of the key factors for their particular vulnerabilities to these shocks and stresses is marginalization entrenched in social norms and practices including limited access, ownership and control over land resources, which heralds their adaptive capacity. Climate change adaptation is fundamental for building resilient socio-economic and ecological systems. It is an important part of efforts to implement not only the Paris Agreement and Sendai Framework for Disaster Risk Reduction, but also the 2030 Agenda for Sustainable Development.

From an economic standpoint, land is regarded as a key factor of production against which livelihoods are hinged. Its ownership, access and use are, therefore, critical in addressing climate action. In both Kenya and Tanzania, the centrality of land is underscored in the respective constitutions, with an entire chapter dedicated to land and the environment, in the case for Kenya. However, realizing marginal groups' rights and particularly, women's right to access, control, and improvement of land and management of natural resources, remains a challenge, particularly in arid and semi-arid regions.

The unequal treatment between men and women in land governance systems is linked to specific gender roles and relationships that are regulated by sociocultural norms. As a result, vulnerable groups, particularly women, have fewer options for participating in land governance and natural resource management and for dealing with related crises.

LAND IS REGARDED AS A KEY FACTOR OF PRODUCTION AGAINST WHICH LIVELIHOODS ARE HINGED. ITS OWNERSHIP, ACCESS AND USE ARE, THEREFORE, CRITICAL IN ADDRESSING CLIMATE ACTION. IN BOTH KENYA AND TANZANIA



This in turn increases their vulnerability and limits their capacity to access, use, and own land. In agro-pastoral systems, women play a central role as land and natural resource managers, income generators, and service providers.

From the foregoing, it is imperative that discussions



around land use, control and ownership, relative to how these circumvent climate impacts through adaptation and the subsequent resilience, adopt a Justice, Equity, Diversity and Inclusion [JEDI] perspective. This way, climate adapt-

ability approaches will be hinged on the various practical inclusive perspectives that are not only sustainable but those that ensure that communities thrive amidst the impacts of the crisis.

4.2 Recommendations

4.2.1 Recommendations for Policy

▶▶ Against the backdrop of the findings of this study, we recommend that practitioners and policymakers must not only re-examine established ideas that may lack nuance and complexity, but also strive to incorporate new knowledge and community perspectives about how people adapt to their shifting circumstances. It is only by questioning entrenched approaches that development practitioners and policymakers contribute to the resilience of communities in areas as varied as Garissa and Turkana counties in Kenya and the Kilimanjaro region in Tanzania.

▶▶ With understanding of the implications of climate change in Turkana and Garissa counties, the County Annual Development Plans [CADP] have emphasized the need to set up county climate change advisory units that will collate and provide evidence based advisory services on climate change for effective decisions. While this noble idea has been in the previous county plans for the respective counties, its realization remains in limbo since no recruitment of such experts is yet to be done. Cross review of previous and current county planning and budgeting tools in Garissa and Turkana counties indicate that

climate change has not been adequately prioritized in county planning and budgeting processes as revealed by the relatively low budget allocation for climate actions. Effective climate change responses call for robust financial mechanisms, including public and private facilities that are available at local, national and multilateral levels. Climate actions are substantially expensive investments that demand significant financing. The level of climate financing in the two counties remains relatively low. This is attributable to lack of robust climate policy instruments and frameworks to support resource mobilization for climate actions.

▶ Governments need to entrench ambitious and actionable adaptation strategies related to marginal groups' land rights and access in NAPs and NDCs, as a stand-

alone thematic component with measurable outcomes. This way, the citizenry, civil society and other stakeholders can hold the government to account when adaptation provisions are not actioned.

▶ While developing adaptation plans, the government needs to be cognizant of the interconnectedness and interdependence of both the rural and urban areas' needs. Young people would ideally migrate to urban areas when the climate crisis bites, with the hope of securing employment. There needs to be policies in place aimed at managing the potential population explosion and risks that this mobility may pose to urban areas even as the government puts in place measures to address the climate crisis in the rural and peri-urban areas.

4.2.2 Recommendations for Practice

▶ Given the inextricable connection between land rights and land ownership with adaptive capacity of vulnerable groups, funders, like RBS need to comprehensively integrate women and youth empowerment on land rights and use, as a programmatic outcome.

▶ Effective climate change governance in the context of climate financing requires strong political leadership, technical knowledge, policy coherence and stakeholder engagement. The County Annual Development Plans (CADPs) for both counties in Kenya, outline key climate action areas including public sensitization on climate change adaptation and mitigation, building climate resilience among the community members, training technical staff on fundraising, mainstreaming stakeholders' engagement in climate actions, establishing early warning committees and formulating legal frameworks on climate change, all of which have not taken effect. There is need for county and district governance structures to fast track this process.

▶ Informed, adaptive and forward-looking decision-making is central to adaptive capacity. Poor people in the study sites are in an ongoing process of making decisions to sustain their livelihoods in the face of multiple, evolving

challenges. Climate change is among the most serious of these challenges, exacerbating existing problems, exposing people to new and evolving risks and creating further complexity in decision-making. For people to respond to and anticipate changes and to engage in adaptive decision-making, they require information, knowledge and skills that enable them to actively address climate risks to their livelihoods. Governments need to ensure that adaptation efforts aim to facilitate access to information and the development of the skills and knowledge needed for adaptation, while also working with institutions and policies to ensure an enabling environment for local adaptation efforts.

▶ The study reveals that adaptive capacity is shaped by gender. Within the target communities and households, women and men have differing levels of adaptive capacity. To some extent, communities in the study areas place limitations on women's voice, movement and participation in public and household decision-making, which in turn creates constraints on their adaptive capacity. This limits the ability of families and communities to realize the potential contribution of women's specific knowledge and skills to adaptation efforts. Policy makers need to ensure that analysis of vulnerability and adaptive capac-

ity uncover these differences and build understanding of the specific roles, responsibilities and challenges faced by women and men in securing their livelihoods and adapting to climate change.

▶▶ Increasing exposure to climate shocks and stresses is only one dimension of increasing vulnerability to climate change in the target counties. The adaptive capacity of pastoralists and agro-pastoralists is dynamic, affected by a range of social, environmental, economic and political variables, many of them beyond the control of the community. Analysis of vulnerability must go beyond exposure and sensitivity to climate impacts, to explore the different dimensions of adaptive capacity and identify barriers that communities face in applying their existing capacity to respond to climate impacts. This leads to identification of adaptation options that reinforce and build upon existing adaptive capacity.

▶▶ Land rights and land use policy is not vastly understood and familiar to the residents of the study countries. There is need for further enlightening of the community on issues around land rights and existential land use policies. Some of the land rules and policies do not consider the interests and needs of the community because the community is not involved in participation on matters affecting them and their lands and neither are they informed or educated on those matters. There is need for inclusivity in decision making with regards to the land resource.

▶▶ As the impacts of climate change become more apparent and households are increasingly required to shift from their traditional livelihood strategies and practices, there is potential for changes in gender roles and relations. These changes have both positive and negative implications, with the potential for increased empowerment of women, but also the possibility of repercussions for women as they move beyond traditional roles and responsibilities. Adaptation efforts must take these ongoing changes in gender relations into account and facilitate dialogue and negotiation within communities to enable positive change for women and avoid potential backlash.

▶▶ There is immense interest by the community groups, especially women, in participating in decision making pro-

cesses that address major concern such as water; water being the biggest challenge the communities are facing, as well as equal involvement in decisions relating to irrigation schemes. Local governance structures must integrate women and youth voices in strategies aimed at managing community resources, including water and land, if, adaptive capacities and subsequent resilience mechanisms are to be enhanced and made realistically achievable.

▶▶ There is need for the countries to partner with the civil society space especially, that which deals with land legal issues, so that issues of community land rights violations are dealt with. Such organizations can also enhance knowledge of these communities on land rights issues using some paralegal approach which is integrated in capacity building so that such communities have a say with regard to the way resources, including land, within their jurisdiction are managed.

LOCAL GOVERNANCE STRUCTURES MUST INTEGRATE WOMEN AND YOUTH VOICES IN STRATEGIES AIMED AT MANAGING COMMUNITY RESOURCES, INCLUDING WATER AND LAND



▶▶ Climate adaptation initiatives should identify and address gender-specific impacts of climate change particularly in areas related to energy, water, health, agriculture, food security, conflict and disaster management. Gender issues associated with climate change adaptation should be considered, such as resource access inequalities, including but not limited to credit, extension and training services, information and technology.

▶▶ There is need to ensure inclusive, participatory, and



representative decision making in all matters land use if adaptive capacities of the communities are to be bolstered. Land policies must recognize the role of local and community-based land administration alongside those of the government. The age-old rigidities in traditional structures and systems which tend to discriminate against women should be abolished.

- ▶▶ Development planning and funding decisions need to be made with women's priorities in mind. Women should be included at the decision-making tables at national and local levels regarding allocation of resources for climate change initiatives.
- ▶▶ There is need to promote adult education to improve on literacy level so then community members can be in a better position to unpack translation and contextualization of the land rights and policies in their favour.
- ▶▶ Funding organizations and donors should take into account women-specific circumstances when developing and introducing technologies related to climate change adaptation and try to eliminate the economic, social and cultural barriers that could potentially constraint women

from benefiting and making use of them. Women must be included in the development of new technologies which will bolster their adaptive capacities. Mainstreaming gender perspective into national policies and strategies, as well as related sustainable development and climate change plans and interventions is a key touch point in adaptation and resilience discourses.

- ▶▶ In order to facilitate risk management and adaptive decision-making, there is a need for communities to overcome traditional perceptions of wealth in pastoral communities and to build understanding of the value and locally specific characteristics of resilience such as diversifying to agricultural practices. Adapting agriculture and broader food production systems to climate change will be instrumental in achieving SDG 2: Zero Hunger as well as the goals of the Paris Agreement.
- ▶▶ There is need for civil society to put in place strategies to ensure that adaptation discussions at the international level needs to highlight the concerns of vulnerable groups vis land rights and participation in key policy processes. The Global Stocktake process and design of the Global Goal on Adaptation under the UNFCCC, for instance,



needs to consider the different regional contexts in developing the different interventions.

▶▶ Governments need to ensure that climate adaptation initiatives should identify and address gender-specific impacts of climate change particularly in areas related to energy, water, health, agriculture, food security, conflict and disaster management. Gender issues associated with climate change adaptation should be considered, such as resource access inequalities, including but not limited to credit, extension and training services, information and technology. Women can be agents of change in managing climate impacts. Progress towards SDG 5: Achieve gen-

der equality and empower all women and girls will facilitate women's active role in adapting to climate change. Adaptation decisions need to be informed by a nuanced understanding of gender dynamics to avoid entrenching inequalities and vulnerabilities. Gender dynamics are context-specific, varying across countries, cultures, ethnicities and communities.

▶▶ Governments need to strengthen climate institutions at the local levels by recruiting the right experts who can connect land rights with adaptation and resilience issues to development, and, provide a budget for the climate institutions to enhance their operations.

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Annexes

Annex I: Focus Group Discussion Guide

Annex II: Key Informant Interview Guide

Annex III: List of Key Informants

Annexes

Annex I: Focus Group Discussion Guide

Target Groups: Community Members [Women, Youth, IPs]

Introduction

Good morning/afternoon and welcome. Thanks for taking the time to join our discussion

The purpose of today's discussion is to get information that will help us to understand your knowledge, attitudes and practices around land and how you are coping with effects of climate change. We are carrying out a study that addresses existing structural barriers that hinder communities' [in Kenya and Tanzania] effective participation in international debates on sustainable land use and rights and climate adaptation and hence resilience. Participation in the study is voluntary, and you can choose not to take part. However, your participation is important as it will help us reach valid conclusions with respect to the achievements of the project to date. *[Reaffirm from the members that they have come voluntarily to participate in the discussion and that they can still withdraw from the group if they wished to. Seek this consent by a show of hands]*

Your answers to the questions I will ask you will purely be used to understand the objectives of the project. There are no right or wrong answers to the questions I am about to ask. We expect that you will have differing points of view. Please feel free to share your point of view even if it differs from what others have said. We'd appreciate hearing the views of everyone in the group. If you want to follow up on something that someone has said, you want to agree, disagree, or give an example, feel free to do that. Don't feel like you have to respond to me all the time. Feel free to have a conversation with one another about these questions. I am here to ask questions, listen, and make sure everyone has a chance to share.

My colleague **[Nimo]** will be taking notes to help us remember what is said. We are also tape recording the session because we don't want to miss any of your comments. We will be asking you to introduce yourselves by telling us your names, but no names will be included in any reports. Our discussions will take up to 1 hour, 30 minutes. I will appreciate your patience.

Do you have any questions you would like me to respond to before we proceed with the interview?

FACILITATOR'S DETAILS	
Name of Facilitator:	
Name of Note Taker:	
Date of Interview:	
Time of Interview:	
Venue:	

Important: agree on norms and confidentiality

- ▶ Explain the session shall be in form of a discussion and raising of hands to count response for particular opinion
- ▶ Stress that there are no right or wrong answers
- ▶ Ask participants to feel free to say what they think
- ▶ Ask the group to respect what others say and not laugh about it if they have a different opinion

Participants' list

Name	Sex	Age in completed years	Estate/ location

Discussion questions

1. Let's begin by having each person in the room tell us their name, age, the area/estate in which they live
{Please refer to section on participants list}
2. How long have you been living in this area?

Access, use, control of land resources

1. Do you have access to a piece of land? If yes, how big in acres is the piece? How many pieces?
2. Do you own the piece of land? If No, why not?
3. Who makes decisions on how the land is used? How does the decision affect you and your rights?
4. What arrangements do you have with government on accessing and using land resources? How fair or open are these arrangements?
5. Do you pay for the use of land? If yes, how and how much?
6. How do you often use the piece of land (Probe for agricultural or land use practices)?
 - a) Grazing livestock on pastures of Land
 - b) Making hay
 - c) Grow crops on farmland (please specify what exactly)
 - d) Building and construction
 - e) Mixed (crops/ grazing/ trees), incl. agroforestry
 - f) Collect fuel and dry wood
 - g) Collect medicinal and aromatic herbs and plants
 - h) Collect wild berries (specify)
 - i) Collect fruits (specify)
 - j) Collect walnuts
 - k) Collect other nuts (specify)
 - l) Beekeeping on Land
 - m) Any other (specify)

7. How many people use the piece of land for the above practices? What is the consequence of the use?
8. What do you think are the major constraints limiting the communities' use of land resources?
9. Does the community have any say in managing land resources? If Yes, how? If No, why?
10. How common is land degradation? How do you prevent it? Is the practice/method/technology sustainable?

Land rights and land use policy

Now I would like to ask you questions on land use policy and legal arrangements.

1. Do you know the legal rules about land management and use?
 - 1) Yes
 - 2) No
 - 3) Some
 - 4) I am not sure
2. If yes or some, which rules do you know of? What are they about?
3. Do you think these rules consider the interests and needs of people in the community?
4. How do or did the community participate in making the rules?
6. Would you like to participate in decision making on how land resources are managed and used?
 - 1 Yes (specify how)
 - 2 No (why not)
 - 3 In some (specify which ones)
 - 4 Other (specify)
7. If yes, in what decisions would you like to participate the most (mark only two)?
 - 1 Improvement of Land resources
 - 2 Maintenance of Land
 - 3 Protection of Land from fires
 - 4 Allocation of use rights
 - 5 Other (specify)
8. How do you think marginalized communities can best protect their land rights?

Climate change adaptation and resilience

1. What do you know about climate change? Have you experienced it in your community?
2. How much do you think the following has contributed to global climate change?

	Strongly	Moderately	Slightly	Nothing	Don't know
Greenhouse gases					
Land use and land cover					
Sun					
Aerosols					
Melting of Ice or volcanic eruptions					
El Niño or irregular warming of surface water					
Deforestation					

On which of the following platforms, have you heard about Climate change?

- Television
- Radio
- Newspaper
- Internet
- Academic journals/special publications
- Environmental groups
- School/college/university

- Government agencies/information
- Libraries
- Friends or colleagues
- Energy suppliers
- Other

3. What is the level of trust on information about climate change, if you were to receive it from the following?

	A lot	A little	Not very much	Not at all
Family members	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scientists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government bodies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental organizations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Media (TV, radio, newspaper, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. On a scale of 1 to 10, how much do you think climate change has affected land use and rights? Explain
5. Who do you think should have the main responsibility to tackle climate change? Why?
6. Do you think the following entities are taking initiatives to reduce climate change? [Probe further for maladaptation]

	Yes	No	To Some extent
Corporation and industries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Citizens themselves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regional government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
International organizations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What do you and community members do to cope with effects of climate change? How sustainable are the practices?

7. Are you aware of the global policies or initiatives taken by various organizations to reduce climate change/global warming? Specify
8. Would you like to participate in the policies and initiatives? If Yes, how? If No, why not?

Concluding remarks:

- a) As we end the discussion, is there anything that you feel we should have talked about but didn't? [If yes] What is it?
- b) Do you have any question for us? [If yes] Please ask

Once again, thank you for taking the time to join our discussion on this project. Most importantly, thank you for your active participation and for sharing your thoughts and experiences. As I indicated to you earlier, what we have discussed here and all the information that you have shared will remain completely confidential. It is also our hope that on your part, none of you will share details of our discussion with any other person who has not been part of this group. We wish you well in everything that you do.

Annex II: Key Informant Interview Guide

Target Groups: County officials, CSO/CBO leadership, other stakeholders' leadership

Introduction

Greetings! My name is _____. I am here on behalf of Powershift Africa and its project titled, ***'Consolidating knowledge, mobilizing people power and strengthening governance for effective African leadership in sustainable land use and rights for climate resilience'***. We are carrying out a study that aims at addressing existing structural barriers that hinder communities' [in Kenya and Tanzania] effective participation in international debates on sustainable land use and rights and climate adaptation and hence resilience.

The purpose of today's interview is to get information that will help us to understand levels of awareness, uses and control of land and how marginalized communities adapt or cope with climate change and its effects.

You have been identified as one of the key stakeholders who have been instrumental in contributing to the target area of this research. Therefore, we would like to get your views on various aspects of land use, land rights and climate adaptation issues and initiatives within this county and how this links to sustainability.

Participation in this study is voluntary, and you can choose not to take part. However, your participation is important as it will help us reach valid conclusions with respect to the nexus and nuances in climate adaptation and resilience and land rights and use among communities in this county. Your answers to the questions I will ask you will purely be used to understand the mentioned nexus and attendant nuances.

Note that the information you will provide will be analysed at an aggregate level with reference to personal information. You will not be quoted anywhere in the report.

I, therefore, would like to ask you some questions that will take up to 45 minutes. I appreciate your patience and cooperation.

Do you have any questions you would like me to respond to before we proceed with the interview?

INTERVIEWER DETAILS

Name:	
Date of Interview:	
Time of Interview:	
Venue:	

INTERVIEWEE DETAILS

Name:		
Organization/Agency:		
Designation:		
Contact Details:	Mobile No:	Email:



Interview questions

Question	Responses
1. Please, tell me a little about yourself and your role in matters land rights and use and climate change	
2. How do you contribute to land resource management?	
3. How do you help marginalized communities in the area to deal with issues occasioned by climate change, such as land degradation?	
4. How has the NAP and NDC been mainstreamed in your activities?	
5. How do the marginalized communities access and use land in the area? What are some of the common land use practices? Who controls their access and use?	
6. What are the most common land tenure systems in the area? How is land regulated in the area?	
7. What do you think are the major constraints limiting the communities' use of land resources?	

<p>8. What opportunities for sustainable land use exist?</p>	
<p>9. How does climate change affect land use by the marginalized communities in the area? How do the community members cope with the challenges?</p>	
<p>10. Which Land Resource Management Policies are you aware of and how do you implement them? Were you involved in their development? If Yes, How? If No, Why not?</p>	
<p>11. Which Climate Change relate policies are you aware of and how do you assist in the implementation? Were you involved in the development? If Yes, How? If No, Why not?</p>	
<p>12. Looking at marginalised and excluded communities in your jurisdiction, how are they involved in policy development with regards to sustainable land use? How meaningful is their participation and why?</p>	
<p>13. Looking at marginalised and excluded communities in your jurisdiction, how are they involved in policy development with regards to climate change adaptation and resilience? How meaningful is that participation and why?</p>	
<p>14. How can the marginalized communities be mobilized to secure and ensure meaningful participation by marginal and excluded communities in decision-making related to access, use, control and management of land and other natural resources</p>	

Annex III: List of Key Informants

Name	Organization/ Affiliation
Kenya	
Abdi Noor	NDMA-Garissa County
Mohamed Osman	Directorate of Environment-Garissa County
Elvins Emeri	TUBAE-Turkana County
Lucas Ekitela	KAPUTIR -Turkana County
George Lomeri	Directorate of Environment-Turkana County
Abdifattah Hassan	Village Elder-Dudjjs-Garissa County
Tanzania	
David Madauda	Disaster Coordinator Officer – Hai District Council
Fadhili Elaza Mwaga	Chairman- Kilimambogo; Hai District
Elisafi Wilfred Mugonja	Ward Executive Officer - Mabillioni
Ally Mgwaya	District Forest Officer -Same



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