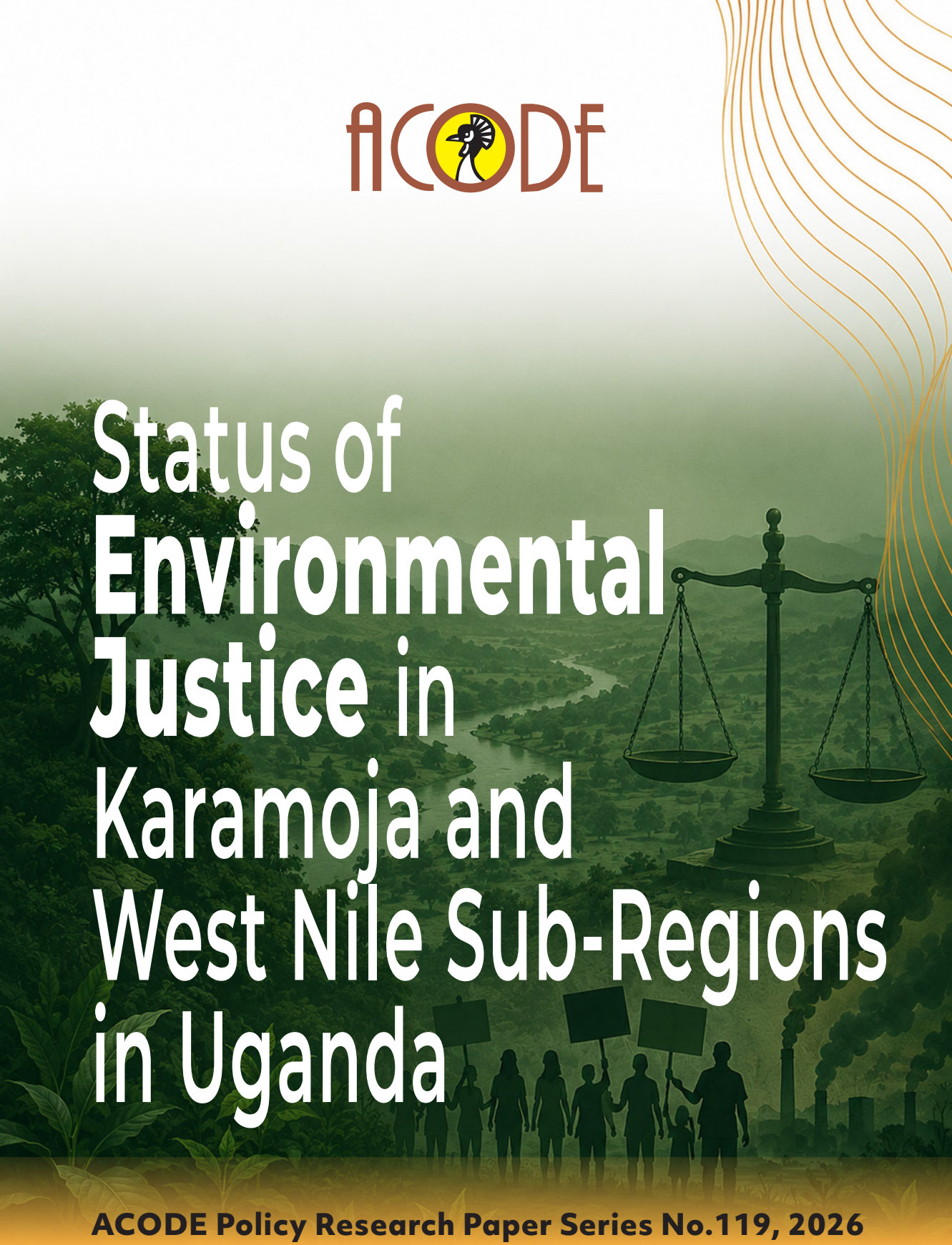
Status of Environmental Justice in Karamoja and West Nile Sub-Regions in Uganda



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ACRONYMS

ACODE	Advocates Coalition for Development and Environment
AHW	Animal Health Worker
ASM	Artisanal and Small-scale Mining
CBFM	Community-Based Forest Management
CBO	Community-Based Organization
CDA	Community Development Agreement
CEFORD	Community Empowerment for Rural Development
CLA	Communal Land Association
COP	Conference of the Parties
CRRF	Comprehensive Refugee Response Framework
CSR	Corporate Social Responsibility
DCA	DanChurchAid
DLG	District Local Government
DRC	Danish Refugee Council / Democratic Republic of Congo
DRDIP	Development Response to Displacement Impacts Project
EIA	Environmental Impact Assessment
EPER	Swiss Church Aid (HEKS/EPER)
ESIA	Environmental and Social Impact Assessment
EUTF	European Union Trust Fund for Africa
FAO	Food and Agriculture Organization of the United Nations
FGD	Focus Group Discussion
FPIC	Free, Prior, and Informed Consent
GBV	Gender-Based Violence
GCF	Green Climate Fund
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HEKS	Swiss Church Aid

HUMC	Health Unit Management Committee
ICRAF	World Agroforestry
JICA	Japan International Cooperation Agency
KADEP	Karamoja Agro-Pastoral Development Program
KHH	Karamoja Herders of the Horn
KII	Key Informant Interview
LC	Local Council
LPG	Liquefied Petroleum Gas
MADEFO	Matheniko Development Forum
MDAs	Ministries, Departments, and Agencies
MEMD	Ministry of Energy and Mineral Development
MPU	Minerals Protection Unit
MoLHUD	Ministry of Lands, Housing and Urban Development
MWE	Ministry of Water and Environment
NDC	Nationally Determined Contribution
NDP	National Development Plan
NEMA	National Environment Management Authority
NFA	National Forestry Authority
NGO	Non-Governmental Organization
NPA	National Planning Authority
NRM	Natural Resource Management
NWSC	National Water and Sewerage Corporation
OPM	Office of the Prime Minister
PDM	Parish Development Model
PWD	Person(s) with Disability
RDC	Resident District Commissioner
RELON	Refugee Led Organisations Network
RETI	Refugee Education and Technical Institute (Consortium)
RLO	Refugee-Led Organization
RWC/RWCs	Refugee Welfare Council(s)

SGBV	Sexual and Gender-Based Violence
UBOS	Uganda Bureau of Statistics
UGX	Uganda Shillings
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees
UWA	Uganda Wildlife Authority
VHT	Village Health Team
VSLAs	Village Savings and Loan Associations
WCS	Wildlife Conservation Society
WENDA	West Nile Development Association
WENRECO	West Nile Rural Electrification Company
WFP	World Food Programme
WHO	World Health Organization
WN-IDT	West Nile Industrialization and Development Think Tank
WUC/WUCs	Water User Committee(s)
YLP	Youth Livelihood Programme

DEFINITION OF KEY TERMS / CONCEPTS

Key Term	Definition
Accountability	Obligation of institutions to explain and take responsibility for resource management decisions.
Agro-pastoralism	A mixed system that combines livestock rearing and crop production.
Agroforestry	Integration of trees into farming systems for sustainability and income.
Artisanal and Small-Scale Mining (ASM)	Low-tech, labour-intensive mineral extraction. This mining activity is deeply linked to livelihoods and environmental risks.
Benefit Sharing	Equitable distribution of benefits from natural resource use.
Biodiversity	A variety of plant and animal species in ecosystems.
Biomass Energy	Energy from firewood and charcoal. Biomass energy is dominantly used in the study areas.
Climate Justice	Fair distribution of climate impacts and responsibilities.
Collaborative Forest/ Wildlife Management	Co-management between communities and state agencies.
Communal Land Associations (CLAs)	Legal entities managing collective land rights.
Corporate Social Responsibility (CSR)	Voluntary company contributions to communities.
Customary Land Tenure	Community-based land ownership under customary norms.
Degazettement	Removal of protected status from land.
Displacement	Forced movement due to conflict, vagaries of nature, like climate cange and/or development.
Distributional Justice	Fair allocation of environmental benefits and burdens.
Ecosystem Services	The benefits people obtain from ecosystems.
Elite Capture	Disproportionate benefit by powerful actors.
Encroachment	Unauthorized use of protected or communal land.
Energy Transition / Clean Cooking	Shift to cleaner energy sources.

Key Term	Definition
Environmental Governance	Systems guiding natural resource management.
Environmental Justice	Equity in environmental benefits, processes, and recognition.
Food Security	Access to sufficient, safe, and nutritious food.
Free, Prior, and Informed Consent (FPIC)	Community consent before projects affect resources.
Gazettement	Legal designation of protected areas.
Grievance Redress Mechanisms	Processes to resolve disputes.
Groundwater	Subsurface water accessed via wells and boreholes.
Host Community	Local populations that are sharing resources with refugees.
Household Survey	Structured quantitative data collection.
Hybrid Governance	Integration of customary and statutory systems of governance.
Human–Wildlife Conflict	Negative interactions between people and wildlife.
KoboToolbox	A digital data collection platform.
Land Degradation	Decline in land productivity.
NVivo	Software for qualitative data analysis.
Pastoral Mobility	Seasonal movement of livestock.
Political Ecology	Framework linking power and environmental outcomes.
Procedural Justice	Fairness in decision-making processes.
Rangeland	Grasslands used for grazing.
Recognition Justice	Respect for rights and identities.
Refugee–Host Interface	Interaction space between refugees and hosts.
Refugee Policy Framework (Uganda Model)	Uganda's policy of granting refugees land and services.
Resettlement	Relocation of displaced populations.
Restorative Justice	Repairing harm and restoring relationships.

Key Term	Definition
Rights-Based Approach	Framework prioritizing rights and accountability.
Sedentarization	Transition from nomadic to settled lifestyles.
Social Equity	Fair distribution of opportunities and resources.
Tenure Security	Confidence in land rights protection.
Triangulation	Use of multiple data sources for validity.
Wetland Encroachment	Conversion of wetlands for agriculture or settlement.

EXECUTIVE SUMMARY

Introduction

This report presents a comprehensive assessment of the status of environmental justice in Uganda, with a particular focus on the Karamoja and West Nile regions. These two regions, though distinct in ecological and socio-economic characteristics, are united by their position which is at the frontline of environmental change, governance challenges, and livelihood vulnerability. Karamoja is characterized by semi-arid landscapes and pastoral livelihoods, faces intensifying pressures from climate variability, land degradation, and expanding extractive and conservation activities. West Nile, by contrast, represents a complex humanitarian–ecological interface shaped by one of the largest refugee-hosting contexts in Africa. West Nile is where population influxes are placing unprecedented strain on land, forests, and water resources. These two regions provide a critical lens through which to understand how environmental governance systems shape outcomes like equity, inclusion, and sustainability in Uganda.

Why this study matters

The importance of this study lies in its focus on environmental justice as a central pillar of sustainable development. Uganda's natural resource base, including land, water, forests, rangelands, and minerals, underpins both national economic growth and the livelihoods of millions of citizens. However, increasing pressures from climate change, population growth, land-use change, and resource extraction are intensifying competition for these resources. In this context, environmental challenges cannot be understood solely in ecological or economic terms. Environmental challenges are fundamentally questions of fairness, power, and governance.

Communities across Karamoja and West Nile consistently report that environmental burdens, such as land degradation, water scarcity, and restricted access to resources; are disproportionately borne by the poor and marginalized, while the benefits of resource exploitation often accrue elsewhere. At the same time, many communities remain excluded from meaningful participation in decision-making processes, and accountability and redress mechanisms remain weak. These dynamics highlight the urgent need to examine how environmental governance systems function in practice, particularly in marginalized and high-pressure contexts, and to ensure that development pathways are both environmentally sustainable and socially equitable.

Objectives of the Study

The overall objective of this study was to assess the status of environmental justice in Karamoja and West Nile, focusing on equity, participation, recognition, and access to remedies within environmental governance systems.

Specifically, the study aim was to analyse the legal and institutional frameworks governing environmental protection and community participation; assess how the implementation of policies, laws, and development interventions affects equity and fairness; document lived experiences of environmental justice and injustice; identify gaps and challenges; and propose actionable policy, legal, and institutional reforms.

Methodology

The study adopted a mixed-methods approach, combining quantitative and qualitative approaches to ensure a comprehensive, empirically grounded analysis. A household survey of 200 respondents provided quantitative insights into environmental exposure, access to resources, and perceptions of governance. This was complemented by 22 Key Informant Interviews (KII) and 12 Focus Group Discussions (FGDs), which captured institutional perspectives and community experiences across diverse social groups, including women, youth, pastoralists, refugees, and host populations.

Case studies and field observations offered in-depth contextual understanding of environmental justice dynamics in mining, conservation, and refugee-host settings. A document review of national laws and policies further contextualized the findings. The analysis was conducted at the household, local government, and national levels, with triangulation being used to strengthen the validity and reliability of the results.

Key Study Findings

Legal and Institutional Frameworks: Progressive Design, Uneven Implementation

The study finds that Uganda has developed a relatively strong legal and institutional framework for environmental governance, anchored in the Constitution, the National Environment Act (2019), and the Climate Change Act (2021). These frameworks provide for environmental protection, public participation, and access to justice. However, their effectiveness in promoting environmental justice is constrained by significant implementation gaps.

Institutional fragmentation, weak sectoral coordination, and limited district-level capacity undermine enforcement and accountability. In practice, the existence of progressive laws does not translate into equitable outcomes, particularly in marginalized regions such as Karamoja and West Nile. As a result, governance systems often fail to address the needs and realities of vulnerable communities.

Implementation, Equity, and Fairness: Unequal Distribution of Costs and Benefits

The study reveals persistent inequalities in the distribution of environmental benefits and burdens. In both Karamoja and West Nile, communities depend heavily on natural resources for their livelihoods, yet they face increasing restrictions and environmental degradation.

In Karamoja, mining activities and conservation initiatives have limited community access to land and natural resources, often without adequate compensation or benefit-sharing. Communities bear the environmental costs, such as land degradation and water pollution, while receiving limited economic returns. In West Nile, the rapid expansion of refugee settlements has intensified pressure on forests, wetlands, and agricultural land, leading to deforestation, water scarcity, and land conflicts. Host communities, in particular, often experience environmental costs without commensurate support. These patterns highlight a systemic imbalance in which environmental burdens are disproportionately borne by the poor and marginalised, while benefits are unevenly distributed.

Lived Experiences of Environmental Justice and Injustice

The study documents a wide range of lived experiences that illustrate how environmental injustice is experienced at the community level. In Karamoja, pastoralists and agro-pastoralists report restricted access to grazing land and water sources occasioned by conservation boundaries and mining operations, thereby undermining traditional livelihood systems and mobility patterns. In West Nile, both refugees and host communities face challenges in accessing land and natural resources, leading to natural resource-based tensions and competition.

Across both regions, communities' express concerns about exclusion from decision-making processes, lack of transparency in resource governance, and inadequate compensation for environmental harm. Women and youth, in particular, face additional barriers related to land access, participation, and recognition of their roles in natural resource management. These experiences underscore the importance of addressing not only material inequalities but also issues of voice, recognition, and dignity.

Gaps, Challenges, and Opportunities in Environmental Justice

Several cross-cutting gaps and challenges emerge from the analysis. These include weak enforcement of environmental regulations, limited institutional capacity, inadequate recognition of customary land tenure systems, and insufficient integration of environmental considerations into humanitarian and development interventions. Access to grievance redress mechanisms remains limited, particularly for rural and marginalised communities.

At the same time, the study identifies opportunities for strengthening environmental justice. These include leveraging existing legal frameworks, enhancing community-based natural resource management approaches, integrating customary and statutory governance systems, and improving coordination across sectors. There is also a significant potential to align environmental governance with climate adaptation and resilience-building strategies.

Policy, Legal, and Institutional Reform Needs

The findings point to the need for targeted reforms to address systemic governance challenges. Strengthening tenure security, particularly for customary and communal land, is critical for ensuring equitable access to resources. Enhancing transparency and accountability in resource governance, including in mining and conservation sectors; is essential for improving benefit-sharing and trust in institutions.

There is also a need to institutionalise meaningful participation, which ensures that communities are not only consulted but actively involved in decision-making processes. Improving access to justice through more accessible grievance redress mechanisms and legal support is equally important. Finally, integrating environmental justice into climate and humanitarian policies is necessary to address the complex, evolving challenges in regions such as the West Nile.

Implications for Policy and Practice

The findings of this study underscore the fact that environmental injustice in Uganda is primarily a function of governance failures rather than the absence of legal frameworks. Addressing these challenges requires a shift from policy formulation to effective implementation, with a strong emphasis on equity, inclusion, and accountability. This would ideally include strengthening local institutional capacity, improving cross-sector coordination, enhancing community participation, and ensuring that development interventions align with environmental justice principles. Policymakers must also recognise communities as rights-holders and active participants in governance, rather than passive beneficiaries.

Conclusion

Achieving environmental justice is essential to advancing Uganda's broader goals of sustainable development, social stability, and resilience. The experiences of Karamoja and West Nile underscore both the urgency of addressing environmental governance challenges and the real opportunity for transformative change. These demonstrate that while Uganda has a strong policy and legal foundation, meaningful progress depends on how effectively these frameworks are implemented in practice.

This study highlights the need for a decisive shift from policy formulation to implementation, which is grounded in principles of equity, participation, and accountability. Strengthening institutional capacity and enforcement mechanisms is critical to ensuring that environmental laws translate into tangible outcomes. At the same time, empowering communities as rights-holders rather than passive beneficiaries is essential to building inclusive and responsive governance systems. Equally important is integrating environmental, social, and economic policy agendas to address the interconnected nature of development challenges. Ultimately, environmental justice is not only a moral imperative but also a practical necessity. It is fundamental to ensure that natural resources are managed sustainably, that development benefits are shared equitably, and that Uganda's communities are resilient in the face of environmental and socio-economic change.

1. INTRODUCTION

1.1 Background

Uganda's natural resource base made up of land, forests, rangelands, minerals, wetlands, and water resources constitutes the backbone of the national economy and forms the foundation for community livelihoods. Sectors such as agriculture, forestry, fisheries, and mineral extraction collectively support millions of households and contribute substantially to the country's Gross Domestic Product (GDP) (World Bank, 2023; UBOS, 2024). However, the country's ecosystems are increasingly under strain due to demographic pressures, rapid urbanisation, extensive land-use change, refugee influxes, and weak environmental governance (NEMA, 2020). These challenges are further compounded by climate variability and long-term climate change (IPCC, 2022). As competition over land, water, and forest resources intensifies, questions of fairness, equity, and accountability become central to the discourse on environmental management in Uganda.

In recent years, environmental justice has emerged as a critical theoretical and practical lens for understanding how environmental benefits and burdens are distributed, whose voices are prioritized in decision-making, and what mechanisms exist for remediation and accountability (Schlosberg, 2007; Walker, 2012). Although Uganda has established a progressive legal and policy framework—including the Constitution of the Republic of Uganda (1995), the National Environment Act (2019), and the Climate Change Act (2021) significant disparities persist between these legal provisions and the lived experiences of communities. This gap is particularly acute for those residing in ecologically fragile and socio-economically marginalized regions (Asiimwe, 2018).

To address this critical knowledge gap, the Advocates Coalition for Development and Environment (ACODE) commissioned this study to assess the status of environmental justice in two strategically important yet highly vulnerable regions: Karamoja in north-eastern Uganda and West Nile in the north-western part of the country (ACODE, 2023). These sub-regions represent distinct environmental and governance landscapes shaped by climatic stress, resource extraction, conservation pressures, displacement, and demographic change. Collectively, they offer a unique opportunity to examine how environmental justice is understood, implemented, and experienced in diverse ecological and socio-political contexts.

1.2 Environmental Context and Rationale

1.2.1 Karamoja: A frontier of climate stress, fragile ecosystems, and resource extraction

Karamoja is a semi-arid region characterized by recurrent droughts, erratic rainfall, rising temperatures, flash floods, and advancing desertification (Mwangi & Dohrn, 2008). The region's pastoral and agro-pastoral communities depend heavily on livestock, seasonal mobility, and communal land systems (Agrawal, 2001). However, these traditional livelihood systems are increasingly disrupted by severe environmental degradation and frequent climate shocks. While Karamoja possesses substantial natural resources including mineral reserves such as gold, marble, limestone, and iron ore, as well as significant conservation areas like Pian Upe, Matheniko, and Kidepo Valley National Parks; these endowments have not translated into inclusive and sustainable development. These resources have not translated/resulted into inclusive and sustainable development. Instead, the region faces:

a) Accelerating deforestation driven by charcoal production, overgrazing, and fuel-wood scarcity.

b) Severe land degradation and loss of vegetation cover.

c) Resource conflicts that are driven by competition over grazing lands and livestock watering points.

d) Displacement and restricted access to land, which are linked to mining activities and conservation boundaries.

e) Deep and persistent poverty affecting nearly 70% of the population (UBOS, 2024).

These pressures are compounded by structural inequalities that limit community participation, especially for women, youths, elderly persons, and pastoral communities. In spite of the government and development initiatives that have been institututed, governance gaps (weak enforcement, limited transparency, poor benefit-sharing, and inadequate recognition of customary systems) continue to shape environmental outcomes in Karamoja. Therefore, understanding the dynamics of environmental justice in Karamoja is central to improving equity and appreciating the role of Karamoja region in Uganda's development as well as in Uganda's natural resource governance.

1.2.2 West Nile: A humanitarian-ecological interface under strain

The Ugandan region of West Nile hosts one of Africa's largest refugee populations under the government's celebrated 'open-door refugee policy' (UNHCR, 2024). The influx of refugees from South Sudan and the Democratic Republic of Congo has dramatically reshaped the region's socio-economic and environmental landscape. Refugee settlements, such as Rhino Camp in Madi-Okollo district, Bidi-Bidi in Yumbe district, Imvepi in Terego district, Palorinya in Obongi district, and Nyumazi, Ayilo, Baratuku, Mireye, Boroli, Pagirinya, Elema, Oluwa 1 & 2, Alere 1 & 2, Oligi, Agojo, Maagi 1, 2 & 3 in Adjumani district, have expanded rapidly, exerting immense pressure on forests, water sources, wetlands, and agricultural land. The consequence of this phenomenon has been the heightening of conflicts between refugee populations and host communities. Although the region is endowed with rich ecological systems, including forests, woodlands, wetlands along the Nile, and biodiversity hotspots linked to Murchison Falls National Park and Ajai Wildlife Reserve; it is currently experiencing significant environmental stress. The region faces a myriad of environmental and socio-economic challenges:

a) Accelerating deforestation driven by rising demand for firewood, fuel-wood scarcity, charcoal, and construction materials.

b) Declining groundwater levels, increased borehole failures, and general water scarcity.

c) Wetland degradation and conversions for agriculture and settlement

d) Population-driven land fragmentation, soil exhaustion, and the influx of refugees.

e) Climate-related hazards, particularly recurrent droughts and flooding

f) The ever-lingering socio-economic inequality is high, with nearly 60% of the propla living in poverty (UBO, 2024).

Refugees, women, and youths face additional barriers in accessing land, participating in environmental decision-making, and benefiting from natural resource-based programs and projects. The declining humanitarian funding further amplifies resource tensions, making West Nile a critical case for analysing environmental justice in contexts of refugees, displacements, scarcity, and institutional complexity.

1.3 Why Environmental Justice Matters?

Across both the Karamoja and West Nile regions, communities have consistently articulated concerns that go beyond environmental degradation, and pointed to deeper systemic issues of fairness, power, and accountability in environmental governance. These concerns reflect how environmental risks and benefits are distributed, how decisions are made, and whose rights and knowledge are recognized within existing governance systems.

Community perspectives captured from Citizens Engagement Meetings (CEMs) and Community dialogue meetings highlighted unequal access to and control over critical natural resources, including land, grazing areas, forests, wetlands, and water sources. These are resources that underpin livelihoods, cultural practices, and local economies. In many instances, access is further constrained by the expansion of mining activities, conservation areas, infrastructure development, and urbanization. This has resulted in restricted mobility and the erosion of customary use rights, particularly for pastoralists, agro-pastoralists, and forest-dependent communities (Agrawal, 2001).

Furthermore, systematic exclusions from environmental decision-making and planning processes have been reported. These exclusions often pertain to land allocation, licensing of extractive activities, conservation management, and development projects. Where consultation has occurred, it was often perceived as tokenistic, poorly timed, or inaccessible due to technical language barriers, limited information disclosures, and significant power imbalances between communities, private actors, and state institutions (Asiimwe, 2018).

Concerns regarding weak enforcement of environmental regulations, limited transparency in resource management, and inconsistent application of laws have also been reported, undermining trust in institutions and exacerbating perceptions of injustice. These governance challenges are compounded by limited access to grievance redress mechanisms, inadequate compensation for environmental harm or displacement, and the absence of effective restorative measures to address past and ongoing environmental damage.

Together, these concerns underscore the importance of examining environmental governance not only through ecological sustainability or economic efficiency lenses but also through rights-based and equity-centred frameworks. Environmental justice provides a framework by foregrounding questions of who bears environmental burdens, who benefits from resource use, who participates in decision-making, and how harms are remedied (Schlosberg, 2007; Walker, 2012).

Accordingly, this study adopted a multidimensional environmental

justice framework, encompassing:

- Distributional Justice: The fair allocation of environmental benefits and burdens.
- Procedural Justice: Meaningful participation, access to information, and access to justice.
- Recognitional Justice: Respect for rights, identities, and indigenous and local knowledge systems; and
- Restorative Justice: Accountability, compensation, and rehabilitation.

This framework enabled a comprehensive assessment of fairness, inclusion, and accountability in environmental governance across Karamoja and West Nile. It provided a robust basis for identifying pathways toward more equitable and sustainable resource governance in Uganda.

1.4 Objectives of the Study

1.4.1 Overall Objective

The overall objective of this study was to assess the status of environmental justice in the Karamoja and West Nile regions, with a focus on equity, participation, recognition, and access to remedies in environmental governance.

1.4.2 Specific Objectives

The specific objectives of this study included:

1. Analyzing the legal and institutional frameworks governing environmental protection and community participation in West Nile and Karamoja.
2. Assessing how the implementation of various environmental policies, laws, regulations, procedures, practices, and plans, as well as projects, impacts equity and fairness among people and the entire ecosystem.
3. Documenting case studies and experiences of environmental justice or injustices (social, economic, human rights, ecological, cultural) in Karamoja and West Nile
4. Identifying gaps, challenges, and opportunities in promoting environmental justice.
5. To recommend legal, institutional, and policy interventions to strengthen environmental justice at the local and national levels.

1.5 Research Questions

The following research questions guided the study:

1. ***Legal and institutional frameworks.***

   a) What legal and institutional frameworks existed to guide environmental protection and community participation in West Nile and Karamoja?

   b) How effective were these frameworks in promoting inclusive participation, transparency, and accountability in environmental governance at both local and national levels?

2. ***Implementation, equity, and fairness.***

   a) How did the implementation of environmental policies, laws, regulations, procedures, practices, and projects influence equity and fairness among different social groups and the ecosystem in West Nile and Karamoja?

   b) To what extent did current environmental governance practices ensure fair distribution of environmental benefits and burdens across communities?

3. ***Experiences of environmental justice and injustices.***

   a) What were the lived experiences and case examples of environmental justice and injustice (social, economic, human rights, infrastructural, ecological, or cultural) within Karamoja and West Nile?

   b) How did different population groups (women, youth, indigenous communities, refugees, PWDs, and host populations) perceive and respond to environmental injustices in their local contexts?

4. ***Gaps, challenges, and opportunities.***

   a) What were the significant gaps and challenges hindering the promotion and realization of environmental justice in Uganda's decentralized environmental governance system?

   b) What opportunities existed to strengthen community participation and accountability in environmental management at sub-regional and national levels?

5. ***Policy, legal, and institutional reforms.***

a) What legal, institutional, and policy interventions were needed to enhance environmental justice in Karamoja and West Nile?

b) How could existing environmental governance structures be strengthened to ensure equitable, inclusive, and sustainable management of natural resources?

1.6 Contribution of the Study

By grounding environmental justice analysis in empirical evidence from Karamoja and West Nile, which are two ecologically fragile and socially complex regions, this study made several significant contributions to environmental governance and policy discourse in Uganda.

First, the study contributed to efforts to strengthen inclusive and accountable environmental governance by systematically documenting how environmental benefits, burdens, decision-making power, and access to justice are distributed across different social groups. By amplifying community perspectives alongside institutional and policy analysis, the study highlighted gaps between legal commitments and lived realities, thereby supporting more responsive and transparent governance arrangements.

Second, the findings provide evidence to inform climate resilience and adaptation strategies for vulnerable populations, particularly pastoralists, smallholder farmers, refugee-hosting communities, women, youth, and indigenous groups. By linking environmental justice dimensions to livelihoods, mobility, and access to natural resources, the study demonstrated how inequitable governance arrangements can undermine resilience and exacerbate vulnerability to climate and environmental shocks.

Third, this study offered policy-relevant insights to support legal and institutional reforms grounded in equity, human rights, and environmental justice. The analysis identified implementation gaps, coordination challenges, and accountability deficits within existing legal and policy frameworks, generating actionable recommendations to improve participation, benefit-sharing, grievance redress, and enforcement mechanisms at both national and subnational levels.

Finally, the study directly supported ACODE's mandate of advancing environmental governance, democracy, the rule of law, and sustainable development. By producing evidence-based analysis tailored to marginalized regions, the study strengthened advocacy, public interest litigation, and policy engagement to promote fairness, transparency, and citizen participation in environmental governance.

Overall, the study contributed to Uganda's broader transition toward a more just, participatory, and sustainable environmental governance system. This broad transition is one in which all communities, regardless of location, context, livelihood system, or social status, are recognized as rights- holders and active stewards of natural resources.

1.7 Structure of the Report

This report synthesizes empirical evidence from the study and presents policy-relevant insights to advance environmental justice in Uganda. The report is organised as follows:

a. Chapter 1 introduces the study context, rationale, and objectives.

b. Chapter 2 outlines the conceptual and analytical framework underpinning the assessment of environmental justice.

c. Chapter 3 describes the methodology and study design, including data collection and analytical approaches.

d. Chapter 4 presents the legal and policy context of Environmental Governance and Justice in Uganda.

e. Chapter 5 presents the study findings across the four dimensions of environmental justice in Karamoja and West Nile. It also presents a comparative analysis of environmental justice across the two regions, along with selected case studies that illustrate environmental justice dynamics in practice.

f. Chapter 6 discusses the implications of the findings for policy, law, and institutional practice.

g. Chapter 7 concludes the report and provides actionable recommendations to strengthen environmental justice in Uganda.

2. CONCEPTUAL AND ANALYTICAL FRAMEWORK

This section establishes the theoretical boundaries of the study, defining key concepts of environmental justice and governance while outlining the analytical framework used to interpret findings from the Ugandan context. It builds upon a multidisciplinary body of literature, drawing from political ecology, environmental law, and development studies to situate the research within interacting theoretical traditions. The framework presented here is not merely descriptive but rather, it serves as an interpretive scaffold for the empirical analysis in subsequent chapters, providing the conceptual tools necessary to disentangle the complex relationships between governance structures and justice outcomes.

2.1 Definition and Dimensions of Environmental Justice and Environmental Governance

Environmental justice refers to the principle that all people, regardless of gender, ethnicity, socio-economic status, or geographic location, should enjoy fair treatment and meaningful involvement in environmental decision-making, equitable access to environmental benefits, and protection from disproportionate environmental harms. The concept has evolved significantly from its origins in the United States of America (USA), the civil rights and environmental activism movements of the 1980s, which initially focused on the racialised positioning of hazardous waste facilities (Bullard, 1990; Suman, 1992). Over subsequent decades, environmental justice scholarship has expanded globally to encompass broader concerns relevant to the Global South, including land dispossession, resource extraction, and climate change impacts. Contemporary theorists have broadened the concept beyond its initial distributional focus to include procedural, recognitional, and restorative dimensions (Schlosberg, 2007; Fraser, 1997). Environmental justice is now understood not only as an outcome but as a process requiring not just the equitable distribution of resources but a transformative engagement with the power structures that produce inequality. In Sub-Saharan Africa generally, and Uganda specifically, environmental justice concerns are deeply intertwined with postcolonial governance structures, the political economy of resource extraction, and acute vulnerability to climate variability.

This study adopts a multi-dimensional conceptualisation of environmental justice, recognising its four interrelated dimensions of: distributional justice, procedural justice, recognitional justice, and restorative justice. These dimensions are mutually constitutive. No single dimension can be achieved in isolation. Procedural injustice such as exclusion from decision-making often produces distributional inequity, as those without a voice are unable to defend their interests. Similarly, a lack of recognition silences those most burdened by environmental change, rendering their suffering invisible to policymakers. Without restorative mechanisms to address past harms, injustice is perpetuated across generations, creating path dependencies of marginalisation.

Distributional justice is the most historically recognised dimension of environmental justice, rooted in the observation that environmental harms are systematically concentrated among the poor and marginalised, while benefits accrue to the wealthy and powerful (Walker, 2012). It concerns the fair allocation of environmental benefits (such as land, water, forests, and ecosystem services) and burdens (including pollution, land degradation, displacement, and climate risks). In Uganda, structural inequalities in land tenure, compounded by weak enforcement of environmental regulations, mean that resource extraction for instance; happens in Karamoja and and goes on with limited benefit to local communities. The expansion of mining concessions particularly for gold and limestone has generated income for national actors and foreign investors while leaving pastoral communities with degraded rangelands, polluted water sources, and inadequate compensation schemes. Similarly, climate-induced hazards such as drought, flash floods, and soil erosion fall disproportionately on subsistence-dependent households in both Karamoja and West Nile, in spite of these regions contributing negligibly to greenhouse gas emissions.

Procedural justice goes beyond the formal provision of participation rights to examine the quality, inclusiveness, and meaningfulness of decision-making processes (Young, 1990; Fung, 2006). It emphasises access to information, participation in environmental governance, and access to justice. In Uganda, the National Environment Act (2019) and accompanying NEMA regulations require public consultation during Environmental and Social Impact Assessments (ESIAs) for all Class I and Class II projects. However, studies have documented persistent procedural failures: consultations are frequently held in languages inaccessible to affected communities, notices are given at

impromtly and inadequately disseminated, and local voices are systematically discounted by project proponents and government agencies (Kisubi & Ssozi, 2025). The result is a participatory architecture that formally satisfies legal requirements while structurally excluding those most affected. Procedural justice also extends to access to information (the right to know about proposed activities, their likely impacts, and available remedies); an area where Uganda's Access to Information Act (2005) has had limited practical effect at the community level.

Recognitional justice, advanced by theorists such as Fraser (1997) and Young (1990), holds that distributive and procedural injustices often flow from deeper failures of recognition in form of systematic misrepresentation, non-recognition, or active denigration of the identities, knowledge systems, and cultural practices of marginalised groups. In the Ugandan context, recognition failures take several forms. First, indigenous and customary land rights particularly those of the Ik people in Timu Forest, the Tepeth of Mount Moroto, and Batwa communities are inadequately documented and often overridden by formal legal instruments. Second, traditional ecological knowledge held by pastoralists and agro-pastoralists regarding seasonal grazing, water management, and drought coping strategies is marginalised in technocratic governance processes. Third, women's land rights and environmental roles are undervalued despite their central importance to household food security and natural resource management. And fourth, the agency of refugees and refugee-hosting communities particularly in West Nile districts of Arua, Madi Okollo, and Terego is often reduced to that of passive beneficiaries rather than active rights-holders in environmental governance.

Restorative justice in the environmental context encompasses three interrelated obligations: accountability (holding polluters and governance actors responsible for harms), remedy (providing adequate compensation and rehabilitation to affected communities), and restoration (rehabilitating degraded ecosystems to restore their ecological functions and services). In Uganda, while both judicial and quasi-judicial pathways exist for seeking environmental redress including the National Environment Tribunal, the civil courts, and NEMA's administrative complaints mechanism have been underutilised due to structural barriers. These include the high cost of legal representation, geographic remoteness of affected communities from judicial centres, low levels of environmental legal literacy, and the frequent prioritisation of

national development interests over community claims. Restorative justice ideally also demands ecological restoration (not merely financial compensation) as a condition for justice, a principle enshrined in the National Environment Act (2019) but unevenly applied in post-extraction rehabilitation practice.

Closely linked to environmental justice is environmental governance, defined as the set of formal and informal institutions, laws, policies, actors, and decision-making processes through which societies manage environmental resources and address environmental problems (Lemos & Agrawal, 2006). Contemporary scholarship has moved beyond state-centric conceptions to embrace polycentric and multi-level governance models that acknowledge the roles of non-state actors, customary institutions, and international regulatory frameworks (Ostrom, 1990; Biermann et al., 2012). In Uganda, environmental governance operates across at least four institutional tiers: the national state (line ministries and agencies), decentralised local governments, customary and traditional authority structures, and civil society organisations. These tiers often operate with overlapping mandates, unclear demarcations of responsibility, and misaligned incentive structures, producing governance gaps that are particularly acute in remote and resource-rich regions.

Uganda's environmental governance architecture is anchored in the National Environment Act (2019) (which replaced the 1995 Act) and is further shaped by the Climate Change Act (2021), the Land Act (Cap. 227), the Water Act (Cap. 152), the National Forestry and Tree Planting Act (2003), and the Mining Act (2003). These instruments collectively vest primary environmental oversight in NEMA, while sector-specific functions are distributed among the Ministry of Water and Environment (MWE), Uganda Wildlife Authority (UWA), National Forestry Authority (NFA), and the Department of Geological Survey and Mines. The challenge of inter-agency coordination, compounded by inadequate financing of district environment offices, undermines the coherence and effectiveness of this overall governance system.

Critically, environmental governance is not value-neutral. Governance arrangements reflect and reproduce power relations, determining who gains access to natural resources, who bears regulatory burdens, and whose knowledge is privileged in decision-making. Effective environmental governance (characterised by legitimacy, accountability, inclusiveness, and adaptability) is therefore a necessary but not sufficient precondition for environmental justice. As the framework developed in this section, the manner in which governance institutions operate in practice, particularly at the interface between national

mandates and local realities, is a central determinant of justice outcomes.

2.2 Theoretical Underpinnings

This study draws on three interlocking theoretical traditions including political ecology, rights-based approaches, and climate justice which together provide a multi-layered explanatory framework for understanding how environmental governance produces differential justice outcomes. These frameworks are not treated as competing alternatives but as complementary lenses that illuminate different dimensions of the same underlying problem. By synthesizing insights from these fields, the study moves beyond technical evaluations of policy compliance to interrogate the structural drivers of environmental inequity.

2.2.1Political Ecology and Environmental Governance

Political ecology provides a foundational lens for understanding environmental justice and governance by analysing how power relations, political economy, and historical processes shape access to and control over natural resources. The field emerged in the 1980s as a synthesis of cultural ecology and political economy, responding to the perceived limitations of apolitical environmental science (Blaikie & Brookfield, 1987). Key contributions came from Piers Blaikie's work on soil erosion and political economy, and later from Paul Robbins' systematic framework for examining how land degradation, biodiversity loss, and environmental exclusion are products of power-laden governance arrangements (Robbins, 2012). Political ecology foregrounds three analytical questions: Who gains and who loses from environmental changes? Through what political, economic, and institutional mechanisms do these outcomes occur? And what forms of resistance or alternative governance are possible?

In East Africa, political ecology has been used to explain how conservation initiatives, large-scale land acquisitions, and extractive projects often reconfigure land access and livelihoods to the disadvantage of local communities. In Uganda, political ecology has been deployed to interrogate the consequences of fortress conservation through the exclusion of local communities from national parks and wildlife reserves as well as the displacement effects of large infrastructure projects such as the Karuma and Isimba hydroelectric dams. In Karamoja, a region historically subjected to disarmament campaigns, pastoralist sedentarization programmes, and large-scale land alienation, political ecology provides a conceptual vocabulary for

understanding why communities continue to face livelihood precarity despite a formal governance framework that nominally protects their rights. The region's mineral wealth including gold, marble, and vermiculite has attracted intensified extraction since the 2000s, with governance arrangements that systematically favour national revenue generation over local benefit-sharing and environmental stewardship. In West Nile, political ecology illuminates how the presence of over one million refugees has reshaped environmental governance dynamics: refugee settlements have led to significant deforestation, pressure on water sources, and land competition, while formal governance mechanisms have struggled to manage these pressures equitably between refugee and host populations.

Political ecology also highlights the importance of scale, recognising that local environmental governance processes are embedded in national political economies and global commodity chains. The gold extracted from Karamoja for instance enters global supply chains; the land pressures in West Nile are partly a function of global refugee flows; and the carbon emitted globally fuels the climate risks that Ugandan communities bear. Political ecology insists that these scalar connections be made visible in any adequate analysis of environmental justice.

2.2.2 Rights-Based and Climate Justice Approaches

Rights-based approaches frame environmental protection as inseparable from human rights, including the rights to life, health, property, information, participation, and a clean and healthy environment. These approaches gained significant traction following the adoption of the UN Framework Principles on Business and Human Rights (Ruggie, 2011) and the Special Rapporteur on Human Rights and the Environment's elaboration of procedural and substantive environmental rights (Knox, 2018). These principles establish that states have obligations to respect, protect, and fulfil human rights in the context of environmental decision-making including obligations to ensure access to information, participation, and justice. In Uganda, these obligations are reflected not only in Article 39 of the Constitution but also in Uganda's ratification of the African Charter on Human and Peoples' Rights, which has been interpreted by the African Commission on Human and Peoples' Rights to include rights to a satisfactory environment. Uganda's commitments under the Paris Agreement and the Convention on Biological Diversity further reinforce the rights-environment nexus in the international legal framework. Nonetheless, the gap between formal rights recognition and substantive rights

realisation remains wide, particularly for communities living in resource-frontiers where the state's regulatory presence is weak and corporate actors operate with limited accountability.

Climate justice, a related framework, highlights the ethical and equity dimensions of climate change, emphasising that those who contribute least to climate change often suffer its most severe impacts. The framework, introduced by scholars such as Shue (1992) and more recently elaborated in IPCC assessment reports (IPCC, 2022) and political philosophy (Caney, 2010), rests on three foundational equity principles: (i) the principle of common but differentiated responsibilities, which holds that historically high-emitting countries bear the primary obligation to reduce emissions and support adaptation; (ii) the principle of vulnerability-weighted burden-sharing, which requires that adaptation and loss-and-damage support be prioritised for those most exposed and least able to adapt; and (iii) the principle of intergenerational equity, which demands that current governance decisions do not foreclose the environmental options available to future generations. In Uganda, all three principles are implicated: Uganda contributes less than 0.1% of global greenhouse gas emissions yet faces some of the continent's most severe climate change impacts, including intensifying droughts in the northeast, erratic rainfall patterns affecting smallholder agriculture, increasing frequency of landslides in highland areas, and rising lake levels threatening lakeshore communities. These impacts are not distributed evenly within Uganda, they are concentrated in the most marginalised, least-served regions.

Both rights-based and climate justice approaches converge on the principle of substantive equality — the recognition that formal legal equality is insufficient when structural inequalities systematically prevent marginalised groups from accessing the protections those laws purport to provide. This study adopts this principle as a normative baseline, using it to evaluate not only whether Uganda's environmental governance framework is legally adequate but whether it is materially effective in advancing justice for the communities most at risk.

2.3 Analytical Framework for Environmental Governance and Justice in Uganda

This study adopts an integrated analytical framework that links environmental governance systems with environmental justice outcomes. The framework draws on the institutional analysis and development (IAD) framework (Ostrom, 2005), combined with environmental justice scholarship, to create a three-dimensional lens

through which governance-justice interactions can be examined. The framework is designed to be analytically tractable across different governance contexts — from formal national institutions to customary local arrangements — while remaining sensitive to the specific political, socioeconomic, and ecological characteristics of the two study regions: Karamoja and West Nile. The framework examines:

- Governance inputs: Legal and policy frameworks including the National Environment Act (2019), the Climate Change Act (2021), the Land Act, the Water Act, the Mining Act, and associated regulations provide the normative and procedural architecture within which governance actors operate. Institutional mandates determine which agencies bear responsibility for environmental oversight, enforcement, and redress. Decentralisation arrangements as defined under the Local Governments Act (Cap. 243) shape the distribution of authority between national and sub-national levels. International commitments, including Uganda's Nationally Determined Contribution (NDC) under the Paris Agreement and obligations under the Convention on Biological Diversity, create additional normative expectations that governance inputs must satisfy.
- Governance processes: Participation mechanisms determine whose voices are heard in environmental decision-making, including through ESIAs, district environment committees, and national policy consultations. Transparency and accountability refer to the degree to which governance actors disclose information, justify decisions, and are held responsible for environmental outcomes. Coordination across sectoral agencies between NEMA, MWE, UWA, NFA, and district local governments is critical to avoiding governance gaps and conflicting mandates. Enforcement mechanisms determine whether environmental regulations translate into changed behaviour by extractive actors, land users, and government agencies. The strength of these processes, and the degree to which they are accessible to marginalised and geographically remote communities, is a central variable in this study's analysis.
- Justice outcomes: Justice out-comes are assessed across all four dimensions: distributional (Who gets what?), procedural (Who decides, and how?), recognitional (Whose identity, knowledge, and rights are acknowledged?), and restorative (Who receives remedies, and are ecosystems rehabilitated?). These outcomes are not treated as binary (either present or absent) but as existing on a spectrum of realisation, shaped by the interaction of governance

inputs and processes with the political economy and ecological conditions of each study region.

2.3.1Integration of Justice, Environment, and Livelihoods

Environmental justice and governance are inseparable from livelihood systems, particularly in resource-dependent regions. The analytical framework explicitly integrates a livelihoods perspective, drawing on the Sustainable Livelihoods Framework (DFID, 1999; Chambers & Conway, 1992) and its recognition that livelihood outcomes are shaped by the interaction of assets (natural, physical, human, social, and financial capital), governance structures, and vulnerability processes. In resource-dependent regions like Karamoja and West Nile, natural capital in the form of land, water, forests, and biodiversity constitutes the primary productive asset for the majority of households. Governance decisions that restrict access to these assets, degrade their quality, and/or exclude communities from benefit-sharing directly translate into livelihood insecurity, food poverty, and forced migration.

In Karamoja, the pastoralist livelihood system is characterised by high mobility, communal resource governance, and a sophisticated indigenous knowledge base for managing climatic variability. These adaptive capacities are, however, increasingly constrained by sedentarization pressures, boundary demarcation for conservation and mining areas, and climate-induced degradation of rangelands. The governance of watering points, seasonal grazing routes, and communal land in Karamoja is a microcosm of the broader justice-governance nexus this study seeks to interrogate.

In West Nile, the integration of refugee and host community livelihoods has created complex governance challenges. The presence of large refugee populations — predominantly from South Sudan and the DRC, with significant numbers from Burundi and Ethiopia — has generated both economic opportunities (through humanitarian markets and aid flows) and environmental pressures (through deforestation for firewood and construction, pressure on water sources, and land competition for liveable land). The Office of the Prime Minister (OPM) and UNHCR coordinate refugee responses, but enviromental governance institutions particularly NFA and district forestry departments have been inadequately integrated into the humanitarian response architecture, resulting in significant ecosystem degradation in settlement zones.

2.4 Conceptual Framework

The conceptual framework for the study synthesises the theoretical perspectives outlined in Section 2.2 with the analytical framework in Section 2.3 to produce an integrated model of the governance-justice relationship. The model is consistent with what scholars have termed a "governance-justice nexus", inotherwords, the recognition that environmental justice outcomes are neither naturally occurring nor randomly distributed, but are systematically produced through governance arrangements that reflect and reproduce underlying power relations (Schlosberg, 2007; Lemos & Agrawal, 2006). The framework positions environmental governance comprising of laws, policies, institutions, and actors operating across multiple scales as the central mediating variable between structural pressures and community-level justice outcomes.

Within this framework, external pressures including climate change, population growth, extractive and infrastructure development, land-use change, and displacement; - interact with governance systems. Climate change is manifesting through increasing frequency of ENSO-driven droughts and floods as well as shifting rainfall patterns. Uganda's population growth rate of approximately 3% per annum intensifies competition for land and natural resources. Extractive and infrastructure developments, such as gold mining in Karamoja and oil in the Albertine Rift, are reshaping local economies. Land-use change and displacement, including the hosting of the world's third-largest refugee population, creates profound environmental stressors. Depending on the strength; inclusiveness and accountability of governance arrangements, these pressures can either exacerbate environmental injustice or contribute to more equitable and resilient outcomes.

At the core of the framework, communities and livelihoods are not passive recipients of governance outcomes but active agents who negotiate, resist, and sometimes reshape governance arrangements. The framework therefore conceptualises community agency including indigenous governance institutions, civil society advocacy, and informal resistance as a constitutive element of the governance system, instead of being merely an external input. This is consistent with recent scholarship on adaptive governance (Folke et al., 2005) and environmental citizenship (Dobson, 2003), which emphasise the importance of civic engagement in sustaining ecological governance systems over time.

Conceptual Framework Levels

- ***The structural level:*** Uganda's constitutional and legislative framework is relatively progressive by regional standards. Article 39 of the 1995 Constitution (as amended) recognises the right to a clean and healthy environment; Article 245 imposes a duty on Parliament to enact laws to protect the environment; and the National Objectives and Directive Principles of State Policy include provisions on environmental conservation. The National Environment Act (2019) introduced significant reforms, including recognition of the environmental rights of future generations, provisions for ecosystem services valuation, and enhanced requirements for strategic environmental assessment. The Climate Change Act (2021), as one of the first stand alone climate legislation instruments in East Africa, establishes a National Climate Change Advisory Committee and mandates the mainstreaming of climate change into sector planning. In spite of this progressive architecture, implementation is undermined by limited NEMA funding (receiving less than 0.1% of the national budget), inadequate staffing at district level, unresolved conflicts between the Land Act's recognition of customary tenure and the mining regime's primacy of state ownership of subsoil resources, and weak mechanisms for public environmental accountability.
- ***Implementation level:*** Conservation area management by UWA illustrates how implementation translates or fails to translate governance frameworks into just outcomes. Buffer zone communities surrounding national parks and wildlife reserves are formally entitled to revenue-sharing under the UWA revenue-sharing scheme, which allocates 20% of gate fees to surrounding communities. However, studies have documented persistent failures in the disbursement and governance of these funds, limited community input into park management decisions, and ongoing human-wildlife conflict without adequate compensation mechanisms. Similarly, the mineral licensing regime administered by the Ministry of Energy and Mineral Development (MEMD) and the Department of Geological Survey and Mines operates with limited integration with NEMA's environmental oversight mandate, resulting in cases where mining licences are issued or renewed without adequate environmental review or community consent. In the refugee context, implementation-level decisions regarding settlement planning, resource allocation, and environmental mitigation fall primarily to OPM and UNHCR, with limited integration of environmental governance institutions.

- ***Community level:*** Community-level experiences of environmental injustice in the study regions include: (i) displacement from ancestral lands for conservation, mining, or infrastructure purposes, often without adequate prior consultation or compensation; (ii) restricted access to water sources, grazing lands, and forest resources within or adjacent to protected areas; (iii) loss of livelihoods due to environmental degradation caused by upstream extractive activities; (iv) exclusion from benefit-sharing arrangements that are formally mandated but poorly implemented; and (v) inadequate access to grievance and redress mechanisms due to cost, distance, language, and institutional barriers. The cumulative effect of these experiences is a deep distrust of formal governance institutions documented in community perceptions surveys in Karamoja and a resort to informal and self-help mechanisms for managing environmental resources and conflicts.
- ***Feedback loops:*** Feedback processes in Uganda's environmental governance system operate through multiple channels. Civil society organisations including the Africa Institute for Energy Governance (AFIEGO), the National Association of Professional Environmentalists (NAPE), and district-based natural resource management committees play an important watchdog and advocacy role, although their effectiveness is constrained by funding limitations and, in some cases, regulatory pressure on NGO operations. Judicial interventions have produced important precedents: the 2015 High Court ruling in the Binyina case established that environmental impact assessments conducted without genuine public participation are procedurally deficient, creating an enforceable standard for participatory governance. Community-based monitoring including participatory environmental monitoring initiatives supported by NEMA and development partners represents an emerging feedback mechanism through which community knowledge can be institutionalised in governance processes. The effectiveness of these feedback mechanisms in driving governance reform is variable and context-dependent, but their presence highlights the potential for environmental governance systems to be progressively improved through civic engagement and institutional learning.

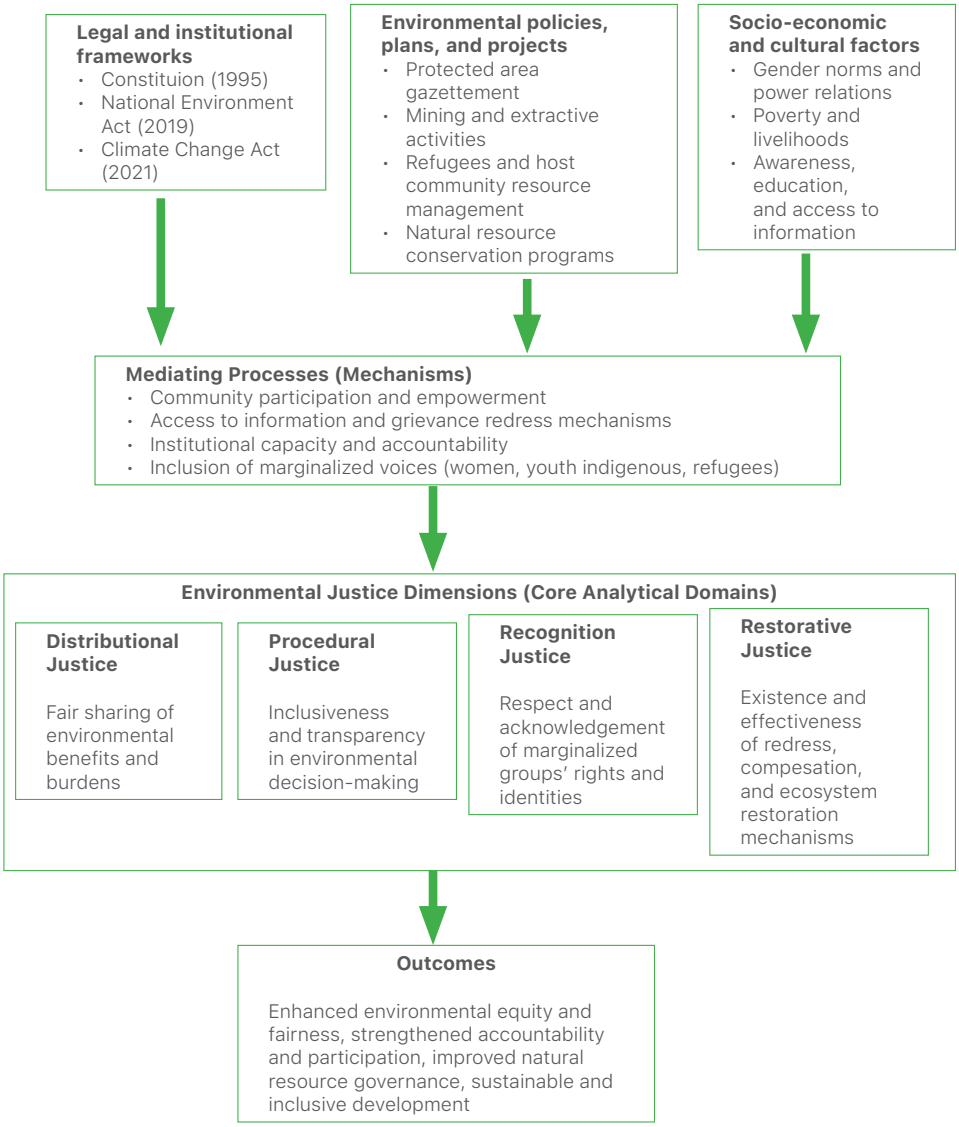
The framework treats communities not as homogeneous units but as internally differentiated social formations in which gender, age, ethnicity, wealth, and displacement status produce different relationships to natural resources and different experiences of governance. Women, for example, bear disproportionate burdens of environmental degradation

as primary collectors of water and fuelwood, as smallholder farmers dependent on rainfall, and as caregivers in contexts of food insecurity yet are systematically underrepresented in environmental governance institutions. Youth face specific vulnerabilities, including exclusion from land tenure systems and limited access to livelihood alternatives when environmental resources are degraded or restricted. The framework therefore requires gender-sensitive and socially disaggregated analysis at every level. The outcomes of these interactions are reflected in the degree to which environmental justice is realized, including:

- Equitable allocation of environmental benefits and burdens (distributional justice). This involves assessing whether local communities receive a fair share of resource revenues and whether environmental risks are minimised for vulnerable groups.
- Inclusive, transparent, and meaningful participation in decision-making (procedural justice). This requires evaluating whether consultation processes are accessible, timely, and capable of influencing final decisions.
- Recognition and respect for diverse identities, rights, and knowledge systems (recognition justice). This entails examining whether customary rights, indigenous knowledge, and marginalised identities are validated in governance processes.
- Effective access to remedies, compensation, and ecosystem restoration (restorative justice). This involves determining whether mechanisms for redress are accessible and effective in restoring both livelihoods and ecosystems.

Ultimately, the framework underscores that strengthening environmental justice in Uganda requires integrated legal, policy, and institutional reforms that enhance coordination, accountability, gender and social inclusion, and access to justice. The framework is explicitly normative because it takes the realisation of environmental justice as a desirable and achievable governance objective; and it evaluates existing governance arrangements against that standard. It is also explicitly contextual. The framework is calibrated to the specific political economy, ecological conditions, and institutional landscape of Uganda, with particular attention to Karamoja and West Nile as regions that exemplify both the challenges and the potential of environmental governance reform. By linking governance inputs, processes, and outcomes to concrete justice dimensions, and by recognising the centrality of community agency and feedback loops in shaping governance trajectories, the framework provides a robust analytical foundation for the empirical chapters that follow.

Figure 1: Conceptual model for the study



Source: Adapted from: Schlosberg (2007); Lemos & Agrawal (2006); Ostrom (2005); Blaikie & Brookfield (1987)

3. METHODOLOGY

3.1 Study Design and Approach

This study adopted a mixed-methods research design to comprehensively assess the status of environmental justice in the Karamoja and West Nile regions of Uganda. This approach was selected specifically because it allows for the simultaneous capture of measurable patterns of environmental inequality and the nuanced lived experiences of communities affected by environmental risks, resource governance, and decision-making processes.

Quantitative methods were employed to generate household-level data on exposure to environmental hazards, access to land, water, forests, and other ecosystem services, as well as perceptions of fairness, inclusion, and accountability. Qualitative methods complemented this statistical evidence by providing deeper insights into power relations, institutional practices, historical marginalization, and community narratives of ecological injustice and resilience.

The methodological framework was anchored in three core environmental justice principles:

- ***Distributive Justice:*** Examining the allocation of environmental benefits and burdens across different social groups.
- ***Procedural Justice:*** Assessing participation, voice, and representation in environmental decision-making processes.
- ***Recognitional Justice:*** Evaluating the acknowledgement of rights, diverse identities, and indigenous knowledge systems.
- ***Restorative Justice:*** Exploring modes of addressing and repairing historical and ongoing environmental harms inflicted on communities and ecosystems, with emphasis on healing damaged relationships between people, institutions, and the natural environment, and on restoring rights, livelihoods, and ecological integrity to those most adversely affected.

This framing ensured that the study moved beyond biophysical assessments to examine governance, equity, and accountability dimensions. The design was further informed by Uganda's legal and policy frameworks, including the Constitution of Uganda (1995), the National Environment Act (2019), and the Climate Change Act (2021).

3.1.1 Multi-level Analytical Framework

Recognizing that environmental injustices are produced and experienced at multiple scales, the analysis was conducted at three mutually reinforcing levels. This multi-level approach enabled systematic triangulation of evidence across quantitative and qualitative data sources, strengthening analytical rigor.

a) Household and community levels: Focusses on lived experiences of environmental risks, access to natural resources, livelihood impacts, coping strategies, and perceptions of inclusion or exclusion in environmental decision-making processes.

b) Local government (district) level: Examines institutional capacity, planning and enforcement mechanisms, service delivery, conflict resolution systems, and the availability and effectiveness of grievance redress and accountability mechanisms.

c) Policy and governance level: Examines the relevance, adequacy, and implementation of policy and legal frameworks, coordination among institutions, and alignment with national commitments on environmental protection, climate change, and social equity.

This multi-level approach enabled systematic triangulation of evidence across quantitative and qualitative data sources, strengthened analytical rigor, and enhanced the credibility and robustness of study findings.

3.2 Study Area Overview and Selection Criteria

The study was conducted in Karamoja, located in north-eastern Uganda, and West Nile, located in north-western Uganda. The two regions have distinct ecological and socio-economic characteristics but share challenges related to environmental justice. Both areas face high exposure to climate and environmental risks, as well as structural inequalities in access to resources, services, and decision-making processes. While Karamoja has experienced historical marginalization, West Nile hosts refugees. Within these regions, Moroto District (Karamoja) and Madi-Okollo District (West Nile) were purposively selected to enable in-depth and comparative analysis.

The following benchmarks/factors guided the selection of study sites:

a) High exposure to environmental risks, including climate variability, land degradation, deforestation, flooding, and resource depletion;

b) Presence of historically marginalised and vulnerable populations, including refugees;

c) Ongoing pressures related to land use change, conservation, extractives, settlement dynamics, and refugees; and

d) Policy relevance to national debates on environmental justice, decentralization, and natural resource governance.

3.3 Regional and District Contexts

The study examined both regional and district-level dimensions of environmental justice, capturing the underlying pressures and interventions that shape these dynamics. At the regional level, the analysis primarily used qualitative methods, including key informant interviews and thematic case studies, to explore governance structures, policy frameworks, and cross-cutting environmental challenges in the districts of Moroto, Kotido, Kaabong, and Amudat of the Karamoja sub-region, and the districts of Arua, Yumbe, Moyo, Madi Okollo, and Nebbi in West Nile. At the district level, in-depth assessments were conducted in Moroto District (representing Karamoja) and Madi-Okollo District (representing West Nile). These assessments employed mixed-methods, combining household surveys for quantitative data and focus group discussions for qualitative insights to capture local experiences, perceptions, and institutional responses.

3.3.1.1 Karamoja Region and Moroto District

Karamoja is characterised by semi-arid to arid landscapes, erratic and low rainfall, prolonged dry seasons, and increasing frequency of droughts. Livelihoods are predominantly pastoral and agro-pastoral, underpinned by communal land tenure systems and seasonal mobility. Limited infrastructure, dispersed settlements, and constrained access to social services exacerbate vulnerability.

Moroto District, located at the heart of Karamoja, exemplifies these dynamics. Recurrent droughts, water scarcity, pasture depletion, and land degradation pose significant risks to livelihoods and food security. In recent years, the district has experienced increased pressure from extractive activities, particularly mining (mainly gold, marble, limestone, and iron ore), alongside expanding conservation initiatives (Pian Upe, Matheniko, and Kidepo Valley National Park), and infrastructure development. These processes have intensified environmental justice concerns related to land access, displacement, participation in decision-making, environmental degradation, and benefit-sharing. Weak institutional capacity and limited access to

grievance redress mechanisms further constrain community agency. These characteristics make Moroto a critical case for examining environmental justice in dry lands, resource-constrained, and historically marginalized contexts.

3.3.1.2 West Nile Region and Madi-Okollo District

West Nile has relatively higher and more reliable rainfall, fertile soils, and a mix of savannah and wetland ecosystems. Livelihoods are largely agriculture-based, dominated by smallholder crop farming, complemented by livestock rearing, fishing, petty trade, and natural resource–based activities such as wood fuel production. Population density is higher than in Karamoja, increasing pressure on land and natural resources.

Madi-Okollo District is shaped by both productive ecosystems and significant demographic pressures arising from refugee settlements. The presence of refugees and host communities has intensified demand for land, wood fuel, water, and agricultural inputs, contributing to deforestation, wetland encroachment, and localized environmental degradation. While humanitarian and development interventions have expanded services and infrastructure, they have also introduced new governance and equity challenges, particularly around resource access, participation, and perceived fairness between population groups. Madi-Okollo, therefore, provides an essential lens for analysing environmental justice in contexts of resource abundance but increasing governance and demographic pressures.

3.4 Sampling and Data Collection

The study employed a combination of purposive, stratified, and convenience sampling techniques to capture diverse social groups, livelihood systems, and governance actors across the two districts.

Purposive sampling was used to select case study districts in each region, enabling in-depth analysis of context-specific manifestations of environmental (in) justice. Stratified sampling was then applied to identify relevant stakeholder groups, ensuring representation of the multi-sectoral and multi-dimensional characteristics of community and ecological systems in Karamoja and West Nile. During fieldwork, non-probabilistic convenience sampling was used to select respondents based on accessibility, availability, and willingness to participate.

The household survey involved a sample of 200 respondents, selected using both statistical principles and practical field considerations. Initially, Cochran's (1977) formula for large or unknown populations

was applied:

[n_0 = \frac{Z^2 p q}{e^2}]

where (n_0) is the initial sample size, (Z) is the Z-score for the desired confidence level, (p) is the estimated proportion of the attribute of interest, (q = 1 - p), and (e) is the margin of error. This yielded an initial estimate of approximately 384 respondents.

Given that the household populations in the selected sub-counties are finite, the finite population correction (FPC) was applied:

n = n0 / [1 + (n0 – 1)/N]

Where N is the total number of households in the sampling frame. This adjustment reduced the required sample size while maintaining statistical robustness.

Given the relatively small, spatially dispersed populations in Rupa, Katikekile, and Tapac (Moroto District) and Rhino Camp (Madi-Okollo District), a final sample of 200 households was deemed adequate. This is consistent with Yamane (1967), who suggests that samples of 200 or more are sufficient for descriptive surveys when stratification ensures representation of key subgroups. Additionally, Israel (2013) notes that stratified sampling improves precision relative to simple random sampling for a given sample size.

The final sample was proportionally allocated across strata defined by livelihood systems and proximity to environmental risk areas. The chosen sample size is also consistent with comparable mixed-methods environmental governance studies in sub-Saharan Africa (e.g., Béné et al., 2014; Lestrelin et al., 2012).

3.4.1 Household survey design

A structured household survey was designed and administered to 200 respondents across three selected sub-counties in Moroto (Rupa, Katikekile, and Tapac) and Madi-Okollo district (Rhino camp sub-county). Stratified random sampling was used to select households, ensuring representation across key variables such as:

a) Livelihood systems: pastoralist, agro-pastoralist, smallholder farming, artisanal mining;

b) Proximity to environmentally sensitive or contested areas, such as forests, mining sites, conservation areas, or refugee settlements.

In the survey, we collected data on environmental exposure, access to natural resources, participation in decision-making, awareness of rights and grievance mechanisms, and perceptions of fairness,

accountability, and institutional responsiveness.

3.4.2 Key informant interviews and Focus group discussions

A total of 22 Key Informant Interviews (KIIs) were conducted with purposively selected information-rich stakeholders, including district and/or sub-county technical officials, political leaders, cultural and traditional institutions, civil society organizations, community-based organizations, and development partners. At the district level, Natural Resources/Environment Officers, Community Development Officers, and political leaders were prioritised for engagement, as well as NGOs like Karamoja Herders of the Horn (KHH), Matheniko Development Forum (MADEFO), Karamoja Agro-Pastoral Development Program (KADEP), Youth groups, West Nile Development Association (WENDA), Community Empowerment for Rural Development (CEFORD), and Oxfam. Development partners consulted for interviews included officials from the United Nations High Commissioner for Refugees (UNHCR) and FAO. Government Ministries, Departments, and Agencies (MDAs) engaged included officials from the National Forestry Authority (UWA), Office of the Prime Minister (OPM), and Uganda Wildlife Authority (UWA).

The KIIs focused on eliciting information on existing operational engagements, planning, and programming of interventions within the context of environmental justice and the inclusion of various groups. The duration of interactions with multiple respondents ranged from 45 minutes to 1.5 hours.

A total of 12 Focus Group Discussions (FGDs) were conducted with community members, disaggregated by gender, age, and social status where appropriate, to ensure inclusive participation. In Karamoja (Moroto district), FGDs included youths, artisanal miners, women, men, pastoralists, and communities near the Mountain Moroto Forest Reserve and the Pian Upe National Game Park expansion area. In Madi Okollo, refugees, host communities, leaders and elders from host communities, women, and youths were engaged in interactions. The FGDs lasted between 1.5 and 2 hours. They were aimed at exploring community experiences of environmental change, governance processes, exclusion and inclusion dynamics, conflict-resolution mechanisms, and locally perceived pathways to advancing environmental justice.

3.4.3 Case Studies and Observations

The study employed a case study approach and field-based observations in selected communities affected by mining activities, conservation

area gazettement, and refugee–host community dynamics to provide in-depth contextual understanding of environmental justice outcomes. These case studies were selected to reflect diverse ecological and governance contexts across the study regions and to illustrate how environmental decisions translate into lived experiences at the community level.

Direct observations complemented interviews and discussions by documenting patterns of resource access, land use, mobility restrictions, and community–institution interactions. Together, the case studies and observations provided concrete, real-life examples of both environmental justice and injustice, enriching the analysis and grounding it in local realities.

3.4.4 Document Review

A document review was undertaken to examine the legal, policy, and institutional context shaping environmental governance and justice in Uganda. The review covered international conventions, national laws and policies, district development and environmental plans, and selected reports from government agencies, particularly MWE, NEMA, NFA, and UWA, as well as donors, civil society and non-governmental organisations. These documents were analysed to assess policy intent, implementation arrangements, and gaps related to participation, accountability, benefit-sharing, and access to justice.

3.5 Data Collection Tools

The study used complementary data-collection tools developed in line with the environmental justice framework and its objectives. These included:

a) A structured questionnaire combining closed-ended and open-ended questions.

b) Semi-structured KII guides tailored to different institutional and governance actors.

c) FGD guide designed to facilitate participatory, reflective, and inclusive discussions.

All data collection tools were pre-tested and refined to ensure cultural sensitivity, clarity, and relevance to the local context. The finalized household survey questionnaire was then uploaded to KoboToolbox, an open-source, online digital data collection platform, to facilitate secure, efficient, and real-time data capture during fieldwork. A thematic coding framework was developed to guide qualitative analysis, structured around distributive, procedural, and recognitional

justice dimensions.

3.6 Data Analysis and Synthesis

Quantitative data were cleaned, coded, and analysed using SPSS V26. Descriptive statistics were used to examine patterns of environmental exposure, access to resources, and perceptions of governance across districts and social groups. Qualitative data from KIIs and FGDs were transcribed, coded, and analysed thematically using NVivo. This analysis focused on institutional performance, power relations, participation, accountability mechanisms, and community narratives of injustice and resilience. Quantitative and qualitative findings were integrated through triangulation and narrative synthesis, enabling convergence, complementarity, and explanation of observed patterns.

3.7 Ethical Considerations and Quality Assurance

The study adhered to established ethical research standards, including informed consent, confidentiality, voluntary participation, and data protection. Particular attention was paid to local power dynamics and potential risks to participants, with deliberate measures taken to protect vulnerable groups, including women, youth, refugees, and indigenous communities. Engagement with communities was conducted respectfully and in ways that recognized local knowledge systems and social contexts.

Quality assurance measures included comprehensive training of enumerators and facilitators, close supervision during data collection, routine data quality checks, and validation of preliminary findings through stakeholder feedback.

Effective community engagement was central to the study's successful implementation. The research team leveraged existing networks within the two regions, working closely with Moroto and Madi-Okollo District Local Governments, civil society organizations, and local community guides and researchers with prior experience in the study areas. ACODE provided official introduction letters and facilitated linkages with its partners in both regions, including NGOs and district technical staff, to support coordination, trust-building, and smooth field engagement.

3.8 Limitations of the study and mitigation measures

Methodological and operational limitations: The study's cross-sectional design presents a limitation, as it captures conditions and perceptions at a single point in time, limiting the ability to assess temporal change or establish causal relationships. In addition, the sensitivity of land and resource governance issues may have influenced respondents' willingness to speak openly, potentially introducing social desirability bias. Operational challenges also arose from the remote and logistically difficult nature of the study areas, including poor road infrastructure, seasonal weather constraints, and dispersed settlements, all of which can affect access and coverage.

To mitigate these limitations, methodological triangulation was employed by combining quantitative household survey data with qualitative insights from key informant interviews and a review of historical and policy documents. Retrospective accounts and documentary evidence were used to reconstruct plausible trends over time, strengthening inference despite the absence of longitudinal data. To reduce response bias, field teams comprised both local researchers and external supervisors, and all data collectors were trained in ethical protocols, neutral facilitation, and non-leading questioning. Interviews were conducted privately where possible, and respondents were assured of confidentiality and anonymity. Logistical challenges were addressed through phased fieldwork scheduling, reliance on locally based researchers and community liaisons, and the use of digital data-collection tools. In hard-to-reach areas, cluster-based approaches and central meeting points were used to ensure coverage while minimizing non-response bias.

Generalizability of Findings: A key limitation of the study relates to the generalizability of its findings. The purposive selection of case study sites and the diversity of ecological, socio-economic, and governance contexts across Uganda mean that the results are not statistically generalizable to all regions of the country. The findings, therefore, reflect context-specific dynamics within Karamoja and West Nile rather than nationally representative patterns.

To address this limitation, the study adopted an analytical generalization approach. The patterns identified, are particularly those that are related to governance gaps, resource competition, and social exclusion. These pattern are interpreted in the context of broader structural conditions and are likely transferable to regions with similar livelihood systems,

institutional arrangements, and environmental pressures.

I***mpact of Population Diversity on Data Quality:*** The diversity of study populations, including differences in livelihood systems, ethnicity, gender, and refugee status, pose challenges for data consistency and comparability. Variations in language, cultural norms, and levels of awareness of governance processes often times influence how respondents interpret and answer questions, potentially leading to inconsistent responses.

For this research report, this diversity was a strength, whcih enabled the study to capture a wide range of perspectives and experiences and reflecting the multidimensional nature of environmental justice across different contexts.

To mitigate potential drawbacks, the study employed trained local enumerators familiar with local languages and cultural contexts, supported by external supervisors to ensure neutrality. Structured translation protocols were used to minimise interpretive bias, and data were triangulated across household surveys, key informant interviews, and document review to enhance consistency and validity.

Ramifications of the Limitations to the Study: A broader challenge lies in translating study findings into actionable policy and practice, particularly in contexts where institutional fragmentation, resource constraints, and competing priorities may limit implementation. Without deliberate integration into policy frameworks, there is a risk that identified environmental justice issues may persist or deepen.

To address this, the study provides evidence-based, context-sensitive recommendations to strengthen inclusive and integrated environmental governance. The findings highlight the need to address distributional inequities, enhance meaningful participation, and improve coordination between customary and statutory institutions. They also underscore the importance of aligning climate adaptation, humanitarian response, and natural resource management interventions with environmental justice principles to reduce conflict risks and enhance resilience.

4. ENVIRONMENTAL GOVERNANCE AND JUSTICE CONTEXT IN UGANDA

Uganda's environmental governance framework has expanded substantially over the past three decades, reflecting growing recognition of the links between environmental sustainability, socio-economic development, and social equity. The country now has a relatively broad constitutional, legal, policy, and institutional architecture for environmental management, underpinned by the Constitution of the Republic of Uganda (1995), sector legislation, and a range of national and international commitments. On paper, this framework includes many core elements of environmental justice, including rights to a healthy environment, public participation, access to information, regulation of environmental harms, decentralized governance, and safeguards for vulnerable groups (Kisubi & Ssozi, 2025; Serucaca, 2022).

However, the central challenge is not simply whether frameworks exists or not, but whether they produce fair outcomes in practice. Across Uganda, and especially in historically marginalized regions such as Karamoja and West Nile, significant gaps remain in the distribution of environmental benefits and burdens, meaningful participation in environmental decision-making, recognition of local rights and knowledge systems, and access to effective remedy when harm occurs (ACODE, 2025; Serucaca, 2022; Schlosberg & Collins, 2014). These gaps are intensified by the country's heavy dependence on climate-sensitive natural resources and sectors such as agriculture, forestry, fishing, mining, and tourism. Environmental degradation, climate variability, rapid demographic change, and expanding extractive and infrastructure development have all deepened inequalities in access to resources, exposure to environmental risks, and institutional protection. NEMA (2019) estimates that Uganda loses approximately 2.6% of GDP annually due to environmental degradation, with the greatest burdens falling on rural and poorer populations.

These justice concerns are especially acute in Uganda's humanitarian context. Uganda is Africa's largest refugee-hosting country, sheltering approximately 1.8 million refugees and asylum seekers as of 2024/2025. These are mainly from South Sudan, the Democratic Republic of Congo (DRC), and Sudan (UNHCR, 2024). The concentration of refugee

populations in ecologically fragile and institutionally weak areas, particularly in West Nile, increases pressure on forests, wetlands, land, and water resources, often without commensurate environmental safeguards or equitable compensation for host communities (World Bank, 2019; UNHCR, 2022). Internal displacement linked to conflict, drought, and disasters also continues to affect parts of Uganda, including Karamoja (IDMC, 2023). In such contexts, environmental justice is not a peripheral concern but a core governance issue: it shapes who bears the costs of displacement, who participates in decisions over land and resources, whose rights and knowledge are recognized, and who can access remedies for environmental harm (Schlosberg & Collins, 2014).

The review undertaken for this study suggests that Uganda's framework is normatively progressive but operationally uneven. The strongest protections exist at the levels of constitutional principles, sector laws, and international commitments, but these are weakened by design gaps, uneven policy coherence, institutional fragmentation, underfunding, and limited access to other remedies. These weaknesses are particularly visible in Karamoja and West Nile, where environmental risks intersect with customary tenure systems, displacement, pastoral mobility, weak district capacity, and longstanding patterns of social and political marginalization.

3.1 International and Regional Framework

Uganda's environmental governance and justice architecture is shaped by a wide range of international and regional instruments that establish norms on environmental protection, human rights, participation, equity, and accountability. These frameworks are important because they provide normative benchmarks against which domestic laws and institutions can be assessed, particularly in relation to distributional, procedural, recognition, and restorative justice (UNEP, 2023; Schlosberg & Collins, 2014).

3.1.1 International Environmental and Human Rights Instruments

The Rio Declaration on Environment and Development (1992) provides a foundational basis for environmental democracy. Principle 10 affirms the rights to environmental information, public participation, and access to justice in environmental matters (United Nations, 1992). These principles are highly relevant to environmental justice and have influenced Uganda's domestic framework, particularly the National Environment Act (2019) and the Climate Change Act (2021).

The United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement commit Uganda to climate action based on participation, information-sharing, and cooperation. Uganda's Climate Change Act (2021) gives these commitments domestic force, but international climate law remains stronger on state obligations and planning than on individual-level remedies (MWE, 2020).

The Convention on Biological Diversity (CBD) and the Nagoya Protocol are relevant because they link biodiversity governance with well-being, equitable benefit-sharing, recognition of indigenous peoples and local communities, and respect for traditional knowledge. These principles are reflected only partially in Uganda's domestic framework, particularly in provisions on genetic resources under the National Environment Act (2019).

The UN Convention to Combat Desertification (UNCCD) is especially relevant to dryland and degradation-prone contexts such as Karamoja, where drought, desertification, and land degradation intensify livelihood vulnerability and conflict (Navarro et al., 2025).

The Sustainable Development Goals (SDGs) reinforces environmental justice norms through commitments on poverty, water, gender equality, reduced inequalities, climate action, terrestrial ecosystems, and strong institutions (United Nations, 2015; Schlosberg & Collins, 2014). While non-binding, these are influential in national planning and provide an important framework for policy coherence.

The African Charter on Human and Peoples' Rights (1981) is especially important because Article 24 recognizes the right to a satisfactory environment favourable to development. African human rights jurisprudence, including SERAC v. Nigeria (2001), has interpreted this right to include participation, access to information, and state obligations to regulate corporate activities that cause environmental harm (African Commission on Human and Peoples' Rights, 2001).

At the regional level, the African Convention on the Conservation of Nature and Natural Resources (revised 2003), Agenda 2063, and the East African Community (EAC) Treaty reinforces principles of conservation, participation, prior informed consent, benefit-sharing, and sustainable development (African Union, 2015).

3.1.2 Frameworks on Refugees and Internal Displacement

Uganda's humanitarian-environmental governance context is also shaped by refugee and displacement laws. The 1951 Refugee Convention and its 1967 Protocol do not explicitly address environmental rights, but their provisions on movement, work, education, and access

to services create an indirect basis for environmental entitlements (Georgetown Journal of International Affairs, 2024; University of Chicago International Law Review, 2024).

The OAU Refugee Convention (1969) provides a broader regional definition of refugees, while the Kampala Convention (2009) explicitly addresses displacement caused by disasters and climate change, linking displacement governance to rights to food, water, shelter, and the environment (African Union, 2009). The UN Guiding Principles on Internal Displacement (1998) likewise provides an important non-binding standards on adequate living conditions, land, and dignity (UN OCHA, 2004).

The Global Compact on Refugees (2018) is particularly relevant because it promotes responsibility-sharing and more development-oriented refugee responses, including attention to environment, energy, and climate dimensions in host areas (Global Compact on Refugees, 2023). This is important for Uganda, where refugee-hosting has become a major environmental governance issue.

Taken together, these instruments provide a relatively strong normative basis for environmental justice. However, they do not themselves resolve the domestic design and implementation problems that shape lived outcomes in Uganda. The key challenge is therefore not normative absence, but the weak and uneven domestic translation of these standards into accessible, enforceable, and locally meaningful governance arrangements.

3.2 National Legal Framework

Uganda's national legal framework contains several provisions relevant to environmental justice. However, the legal framework remains uneven in how it addresses the four dimensions of justice, and some laws are stronger on rights declaration than on operational safeguards or enforceable remedies.

3.2.1 Constitution of the Republic of Uganda (1995)

Uganda's Constitution provides the primary legal foundation for environmental governance. Article 39 guarantees every Ugandan the right to a clean and healthy environment, while Objective XXVII of the National Objectives and Directive Principles of State Policy mandates sustainable development and environmental stewardship (Onoria, 2019). The Constitution also supports environmental justice indirectly through provisions on access to information (Article 41), civic participation (Article 38), freedom of expression and association

(Articles 29 and 43), property rights, and protections for women and minorities.

Analytically, the Constitution of Uganda is strong in normative terms, but it does not by itself resolve the procedural and distributive barriers faced by communities in remote or marginalized areas. Constitutional rights are only meaningful where institutions, procedures, and legal aid systems enable communities to exercise them in practice.

3.2.2 National Environment Act (2019), Cap 181

The National Environment Act (2019), Cap 181, is Uganda's core environmental management law. It strengthens public participation in environmental decision-making, access to environmental information, civil remedies for environmental harm, public interest litigation, and enforcement of environmental rights. It also introduces the emerging concept of the "rights of nature" and includes provisions relevant to genetic resources and district-level environmental planning (EcoJurisprudence Monitor, 2019; NEMA, 2022).

While the Act is one of the strongest legal instruments for environmental justice in Uganda, its effectiveness is undermined by weak enforcement, low public awareness, limited access to technical information, and a lack of local-level regulatory presence. The problem is therefore less one of legal absence and more one of implementation and enforceability.

3.2.3 Climate Change Act (2021)

The Climate Change Act (2021) domesticates Uganda's commitments under the UNFCCC and the Paris Agreement. It provides for public awareness, climate information, integration of climate change into planning and budgeting, recognition of indigenous knowledge, and gender and human rights mainstreaming (Afriwise, 2021; CAN-U, 2024).

While the Act is notable for mainstreaming climate governance across sectors, it remains weak in specifying how climate-related justice claims; especially by remote, poor, or displaced communities can operationalize it at their local level. District-level climate planning is a promising entry point, but implementation capacity remains limited.

3.2.4 Land Act (1998) and Land Acquisition Act, Cap 236

The Land Act (1998), Cap 236, recognizes customary tenure and communal arrangements, which are central to Karamoja and parts of West Nile. It provides for lawful and bona fide occupancy rights, as well as the certificate of customary ownership as a means of formalization

(USAID, 2016). The Land Acquisition Act (Cap. 235) governs compulsory acquisition for public purposes and is therefore highly relevant where development, extractive, or settlement projects affect land rights.

Analytically, land law is one of the most important arenas of environmental justice in Uganda. The main problem is that formal recognition of customary tenure has not been sufficiently operationalized, especially in pastoral and communal settings. In Karamoja, communal land governance remains weakly legislated and poorly administered, leaving communities vulnerable in the context of mining, conservation, and land acquisition (ASF Belgium, 2020). The Land Acquisition Act also remains weak in procedural safeguards, especially regarding consultation, communal tenure, consent, and equitable compensation.

3.2.5 Mining and Minerals Act (2022)

The Mining and Minerals Act (2022) introduces transparency, licensing procedures, compensation, community participation, and Community Development Agreements (CDAs) as binding instruments between mining companies and host communities (IIED, 2022). These provisions potentially strengthen distributive and procedural justice.

However, the study context suggests that the main gap lies in operationalization. In governance-weak areas such as Karamoja, communities still face difficulty in accessing information, influencing licensing decisions, and securing meaningful benefit-sharing (ACODE, 2025). The Act is therefore progressive in design, but current implementation arrangements are insufficient to shift power relations in favour of host communities.

3.2.6 Forestry and Tree Planting Act (2003), Cap 160,

The Forestry and Tree Planting Act (2003), Cap 160, supports community, private, and state forest ownership, collaborative forest management, and regulated domestic access to forest resources. It therefore has important procedural and recognitional justice potential. However, weak enforcement, rising biomass demand, and pressures from settlement and agricultural expansion continue to undermine equitable outcomes (Serucaca, 2022).

3.2.7 Uganda Wildlife Act (2019), Cap 315

The Uganda Wildlife Act (2019), Cap 315, provides for community participation, wildlife-use rights, collaborative management, and a 20% revenue-sharing arrangement for local governments and communities adjacent to protected areas (UWA, 2023; IUCN, 2022). This framework is important for distributive justice, but the evidence indicates persistent problems in benefit distribution, human–wildlife conflict,

accountability, and access to remedy for affected communities.

3.2.8 Local Governments Act (1997, as amended 2020)

The Local Governments Act decentralizes environmental governance, empowering district and lower local governments to manage natural resources, plan locally, enact bylaws, and engage communities in decision-making (Green, 2013; Bashaasha et al., 2011). The Act is important because environmental justice is ultimately realized locally. However, districts, and especially those in Karamoja and refugee-hosting West Nile, often lack the staffing, fiscal transfers, technical resources, and political autonomy to exercise these powers effectively (Kisubi et al., 2022; UNHCR, 2025).

3.2.9 Local Council Courts Act (2006)

The Local Council Courts Act supports affordable, local dispute resolution, especially on land and by-law-related matters. It can strengthen procedural and restorative justice in practice. However, these courts remain under-resourced and poorly equipped to deal with complex environmental and land disputes.

3.2.10 Refugees Act (2006) and Refugees Regulations (2010)

The Refugees Act and Regulations constitute Uganda's primary domestic refugee framework. They provide for settlement administration, land allocation, and access to services, and are central to the environmental governance of refugee-hosting districts (Betts et al., 2019; IFC, 2025).

However, this framework contains a significant environmental justice gap. The Act does not explicitly provide for environmental rights, host-community safeguards, participatory environmental governance in settlements, or clear obligations on natural resource management in refugee-hosting areas (Agaba, 2024). This is one of the clearest areas where legal reform is warranted.

3.2.11 National Policy for Internally Displaced Persons (2004)

The National Policy for Internally Displaced Persons (IDPs) aligns with the UN Guiding Principles on Internal Displacement and addresses land, property, livelihoods, return, and resettlement. It has some relevance to environmental justice, especially in relation to sustainable return and property restoration (Brookings Institution, 2006).

However, its main weakness is enforceability. Uganda has not enacted the IDP Policy into law, thereby limiting access to remedies and weakening institutional accountability in contexts where displacement

intersects with environmental harm (IDMC, 2023).

3.3 Legal Gaps Constraining Environmental Justice

A cross-cutting review of the available frameworks reveals several key legal gaps that constrain environmental justice in Uganda.

1. Uganda lacks a single explicit environmental justice framework that systematically integrates distributional, procedural, recognition, and restorative justice across sectors. Relevant provisions exist, but they are dispersed across laws and often weakly connected.
2. Customary and communal land rights remain insufficiently operationalized, especially in pastoral and displacement-affected regions. This is a major constraint in Karamoja and parts of West Nile (ASF Belgium, 2020).
3. The Refugees Act (2006) does not adequately address environmental governance in settlement areas. It lacks explicit provisions on environmental rights, host-community safeguards, participatory natural resource governance, and environmental grievance mechanisms (Agaba, 2024).
4. The National Policy for IDPs (2004) remains a policy rather than an enforceable law, limiting remedies for displaced populations facing environmental harm (IDMC, 2023).
5. The Land Acquisition Act remains weak in relation to communal tenure, meaningful consultation, and equitable compensation in environmentally sensitive and socially vulnerable contexts (ASF Belgium, 2020).
6. Although participation rights exist in environmental and climate law, procedural safeguards remain weak in practice, especially around access to information, consultation quality, language accessibility, and timing of public engagement (Serucaca, 2022).
7. Remedy remains difficult to access, especially for remote, poor, refugee, and pastoral communities due to costs, distance, legal complexity, and limited legal aid (Kasimbazi, 2011).

3.4 Policy Framework and Gaps

Uganda's environmental justice landscape is shaped not only by legal instruments but also by a range of national policy frameworks that guide implementation, planning, coordination, and resource allocation. These

policies are important because they translate broad legal principles into sector priorities and operational strategies. As with the legal framework however, the main challenge is not simply the existence of policy commitments, but whether these policies adequately integrate environmental justice concerns and are supported by coherent implementation systems.

3.4.1 National Environment Management Policy

The National Environment Management Policy (1994) provides the overarching policy direction for sustainable environmental management in Uganda. It promotes conservation, sustainable resource use, inter-sectoral coordination, public awareness, and integration of environmental concerns into development planning. A key strength of the policy is that it recognizes the need to mainstream environmental management across sectors and to involve multiple stakeholders in environmental governance. It also provides a broad basis for linking ecological protection with development planning.

Unfrtoynately, the policy is less explicit on environmental justice as such. While it supports sustainability and participation, it does not sufficiently address the unequal distribution of environmental burdens and benefits, the specific rights of marginalized groups, or the need for accessible remedies. In practice, the policy has been weakened by uneven implementation and limited district-level operational capacity.

From an environmental justice perspective, the policy is therefore important as a broad enabling framework, but insufficiently specific on the distributive, recognitional, and restorative dimensions of justice.

3.4.2 National Climate Change Policy

The National Climate Change Policy (2015) specifies Uganda's policy framework for adaptation and mitigation and has strongly influenced subsequent legal and planning frameworks, including the Climate Change Act (2021). It emphasizes resilience-building, mainstreaming climate change into sector planning, and protecting vulnerable populations from climate risks. Its key strength lies in recognizing that climate change has differentiated impacts across social groups and that adaptation must be integrated into development planning. The policy also acknowledges gender, vulnerability, and the importance of local knowledge in responding to climate risks. This makes it highly relevant to environmental justice, especially in climate-vulnerable regions such as Karamoja and West Nile.

The policy's main weakness is that like much of Uganda's climate governance, it is stronger on mainstreaming and planning than

on enforceable entitlements and local accountability. It does not sufficiently define how vulnerable communities can influence climate priorities, access information, or seek remedies where adaptation failures or exclusionary planning deepen environmental harm. Implementation has also been constrained by limited local financing, technical incapacity, and weak coordination across sectors. As a result, while the policy contributes to recognitional and procedural justice in principle, its distributive and restorative dimensions remain underdeveloped in practice.

3.4.3 National Land Policy

The National Land Policy (2013) is one of the most important policy instruments for environmental justice because it addresses land tenure, equity, land-use planning, and the rights of vulnerable groups. It seeks to strengthen tenure security, protect customary rights, regulate land use, and improve land administration. A major strength of the policy is its recognition of customary tenure and its acknowledgment of the vulnerabilities associated with insecure land rights, land conflicts, and weak land governance. This is especially relevant in Karamoja and West Nile, where communal and customary land systems remain central to livelihoods and environmental stewardship.

Unfortuntley, the policy has not been fully translated into operational reforms, especially regarding communal tenure administration, the protection of pastoral mobility, and safeguards for customary land in contexts of conservation, extraction, and the expansion of refugee settlement areas. Its implementation has also been hindered by weak institutions, underfunded land administration systems, and persistent tension between statutory land governance and customary practice. The policy is therefore normatively strong on recognition and tenure justice, but weaker in implementation, especially where land governance intersects with environmental pressures and social marginalization.

3.4.4 Settlement Transformation Agenda (STA) and Comprehensive Refugee Response Framework (CRRF)

The Settlement Transformation Agenda (STA) introduced in 2015, and the Comprehensive Refugee Response Framework (CRRF) (introduced globally under the New York Declaration in 2016 with Uganda as a pilot country) are not “policies” in the strict legal sense and can be better understood as strategic frameworks or policy-operational frameworks that guide Uganda’s refugee response and its integration into national systems. They aim is to move from emergency relief to a development-oriented model by integrating refugees and host communities into district planning, service delivery, and livelihood systems (OPM,

2019). Their main strength is that they explicitly recognize the need to address the shared needs of refugees and host communities, rather than treating refugee assistance as separate from local development. This creates an important foundation for distributional justice, especially in high-pressure refugee-hosting regions such as West Nile. The frameworks also open space for more integrated approaches to environment, energy, livelihoods, and district planning.

Their weakness, however, is that environmental justice is not consistently embedded as a core objective. While the frameworks acknowledge issues such as deforestation, energy access, and pressure on natural resources, they do not provide sufficiently clear safeguards for host community rights, community participation in environmental decision-making, or accessible environmental grievance mechanisms. In practice, implementation often remains dominated by humanitarian priorities, with environmental governance treated as a secondary or project-based concern.

These frameworks are therefore progressive in their inclusion and development orientation, but still weak in procedural and restorative justice, particularly where host communities bear environmental burdens without commensurate benefits or voice.

3.4.5 National Policy for Internally Displaced Persons

The National Policy for Internally Displaced Persons (2004) provides the main policy framework for preventing displacement, protecting displaced persons, and supporting return, resettlement, and recovery. It addresses land, property, livelihoods, and state responsibilities in displacement settings. Its key strength is that it recognizes displacement as a governance issue requiring coordinated state response, and it includes provisions relevant to land tenure, return, and reintegration. This is important for environmental justice in contexts such as Karamoja, where displacement intersects with drought, land degradation, and conflict.

Its main weakness is that it remains a policy rather than a binding law, limiting enforceability and weakening accountability. It also does not sufficiently address environmental governance, access to natural resources, or remedies for environmental harm in displacement contexts. This leaves a significant gap in the policy treatment of the environment-displacement nexus. The policy, therefore, makes an important contribution to protection and recognition but remains weak on enforceability and on explicit environmental justice content.

3.4.6 National Development Plan IV (NDP IV)

The NDP IV for the period 2025/26-2029/30 strengthens the integration of environmental sustainability, climate resilience, and inclusive development within Uganda's national planning framework. It recognizes environmental degradation as a constraint to growth and acknowledges the disproportionate vulnerability of rural and marginalized populations, thereby contributing to the distributional and recognitional dimensions of environmental justice (NPA, 2025).

However, the plan does not explicitly frame environmental justice as a policy objective, and its provisions remain largely programmatic rather than rights-based. In particular, it lacks clear mechanisms for equitable benefit-sharing, meaningful community participation, and accessible grievance redress. Furthermore, the plan's effectiveness is constrained by persistent implementation challenges at the district level, especially in environmentally stressed and displacement-affected regions such as those of Karamoja and West Nile. As a result, while NDP IV enhances policy coherence, it remains limited in its ability to translate environmental justice principles into enforceable, locally accessible outcomes.

3.4.7 Cross-Cutting Policy Gaps

Across these policy instruments, three major gaps stand out.

1. Environmental justice is rarely framed explicitly as a policy objective, even where policies touch on vulnerability, participation, and equity. This weakens coherence and reduces visibility of justice-related outcomes.
2. Second, policy coherence remains limited, particularly across land, environment, climate, refugee response, and decentralization frameworks. In practice, environmental governance in high-pressure areas often remains fragmented across institutions and programs.
3. Implementation support is weak, especially at the district level. Many policies depend on local governments for delivery, yet districts such as Moroto, Madi-Okollo, and other environmentally vulnerable areas often lack the staffing, financing, technical support, and monitoring systems required for effective implementation (Kisubi et al., 2022; UNHCR, 2025).

Overall, Uganda's policy framework is relatively progressive in its recognition of sustainability, resilience, participation, and inclusion. Its main weaknesses are not a total absence of policy but partial integration of environmental justice, weak coherence across sectors, and limited

implementation capacity. In practice, these shortcomings are most visible in marginalized and environmentally stressed areas such as Karamoja and West Nile, where policy ambitions are not matched by local institutional support, enforceable safeguards, or adequately resourced delivery systems.

3.5 Institutional Framework and Coordination

Uganda's environmental governance is implemented through a multi-institutional architecture comprising sector ministries, regulatory agencies, local governments, courts, humanitarian actors, and non-state actors. In principle, this arrangement provides broad coverage across sectors and administrative levels. However, its effectiveness in delivering environmental justice outcomes depends on strong coordination, adequate capacity, and clear institutional mandates. In practice, these conditions are not consistently met, and environmental justice outcomes are often constrained by institutional fragmentation, uneven capacity, and weak coordination (Kisubi & Ssozi, 2025; Lemos & Agrawal, 2006).

3.5.1 Core Institutions

The core institutions and their roles are outlined below.

1. The Ministry of Water and Environment (MWE) provides policy leadership on water, forests, wetlands, and climate change, and coordinates Uganda's international environmental commitments (MWE, 2020). Following a 2025 government restructuring, the core functions of the National Forestry Authority (NFA) were re-integrated into MWE, with implications for coordination, regulatory continuity, and oversight of forest resources.
2. The National Environment Management Authority (NEMA) is the principal environmental regulator, with responsibility for compliance, audits, ESIAs, and enforcement of environmental standards (NEMA, 2022).
3. The Uganda Wildlife Authority (UWA) manages protected areas and implements community conservation and revenue-sharing arrangements (IUCN, 2022; UWA, 2019).
4. Local governments are frontline implementers of environmental governance, responsible for planning, bylaws, environmental monitoring, and local service delivery (Kisubi et al., 2022; Bashaasha et al., 2011).

5. In humanitarian contexts, the Office of the Prime Minister (OPM) leads refugee management and settlement administration, while UNHCR provides technical and operational support. Coordination occurs through inter-agency structures and working groups, including the Livelihoods and Environment Working Group (LEWG) (OPM, 2019; UNHCR, 2025).

3.5.2 Institutional Gaps

The study review indicates several recurring institutional gaps that directly constrain environmental justice.

1. Fragmentation of mandates. Environmental governance responsibilities are spread across MWE, NEMA, UWA, OPM, district local governments, and humanitarian actors, but coordination remains uneven. This is particularly visible in refugee-hosting areas, where environmental regulators and humanitarian institutions do not consistently share data, co-plan interventions, or apply common standards (UNHCR, 2025; World Bank, 2019).
2. Sub-national capacity gap. Districts in Karamoja and West Nile often lack sufficient environment officers, technical staff, equipment, transport, and operational budgets. Even where legal mandates exist, they are not matched by the resources to implement them.
3. Weak regulatory presence in remote and high-burden areas. NEMA and other regulators have limited operational presence in remote districts and settlement contexts, reducing surveillance, follow-up, and enforcement.
4. Local justice mechanisms are underpowered. Local Council Courts improve accessibility, but they are not well-equipped for complex environmental disputes involving extractives, land acquisition, or conservation.
5. Weak integration between environmental and humanitarian governance. OPM and UNHCR are central to settlement management, but environmental justice concerns, such as host community burdens, biomass pressure, wetland encroachment, participation, grievance redress, are still insufficiently embedded in refugee governance systems.

Uganda's institutional challenge is therefore not simply one of institutional absence. Rather, it is a problem of overlapping mandates, weak coordination, chronic under-resourcing, and uneven local operationalization. These weaknesses create the gap between a

strong formal architecture and weak justice outcomes on the ground.

3.6 Laws and Policy Areas Requiring Reform or Strengthening

Based on the foregoing legal and policy analysis, some areas require strengthening of implementation, while others would benefit from legal or policy reform.

3.6.1 Areas requiring amendment or stronger legal provision

The laws and policies requiring amendment, or stronger legal provisions, to advance environmental justice are outlined below.

a) The Refugees Act (2006) and the Refugees Regulations (2010) should be amended to incorporate environmental governance, host-community safeguards, participation in natural resource decisions, and clearer environmental responsibilities in settlement administration.

b) The National Policy for IDPs (2004) should be operationalized by enacting a relevant law or otherwise strengthened to improve enforceability and remedy.

c) The Land Acquisition Act should be revised to strengthen procedural safeguards, consultation, compensation, and protection of customary and communal tenure.

d) The Land Act implementation framework requires stronger operational provisions for communal and customary tenure recognition, especially in pastoral areas.

3.6.2 Areas requiring operationalisation rather than major amendment

The areas requiring operationalisation rather than major amendments are outlined below.

a) The Mining and Minerals Act (2022) requires stronger regulations and enforcement on CDAs, disclosure, participation, compensation, and grievance handling.

b) The National Environment Act (2019) and Climate Change Act (2021) require stronger local-level implementation, public awareness, enforcement, and access mechanisms rather than wholesale legal redesign.

c) The Local Governments Act framework requires better financing and technical support to make decentralised environmental governance functional in practice.

3.7 Environmental Justice in Practice: Coherence and Implementation Gaps

Uganda's legal and policy frameworks increasingly align with environmental justice principles, but implementation remains uneven across four dimensions.

3.7.1 Distributional Justice

Benefit-sharing mechanisms exist in law, including wildlife revenue-sharing and mining-related community obligations. Yet environmental burdens remain concentrated in high-risk and marginalized settings such as Karamoja and West Nile, where communities experience deforestation, extractive pressure, land degradation, conflict, and limited benefit capture (ACODE, 2025; New Vision, 2025; NEMA, 2019).

3.7.2 Procedural Justice

Participation and access to information are recognized in law but, in practice, are constrained by short consultation periods, inaccessible technical language, delayed disclosure of information, and limited community influence over outcomes (Serucaca, 2022). In refugee contexts, decisions on settlement land, environmental management, and resource allocation remain especially top-down (Agaba, 2024; UNHCR, 2022).

3.7.3 Recognition Justice

Although some laws and policies acknowledge indigenous knowledge, women, and vulnerable groups, recognition remains uneven where customary tenure, pastoral mobility, refugee-host relations, and local ecological knowledge are not systematically integrated into planning and licensing processes (ASF Belgium, 2020).

3.7.4 Restorative Justice

Formal courts, public interest litigation, and administrative complaint mechanisms exist and have produced important jurisprudence, including Greenwatch v. Attorney General, Greenwatch v. UEDCL, TEAN v. Attorney General and NEMA, and ACODE v. Attorney General and NFA (Kasimbazi, 2011; Kisubi & Ssozi, 2025). Yet restoration and remedy remain difficult to access in practice, especially for remote communities and displaced populations.

3.8 Role of Non-State Actors

Non-state actors are central to Uganda's environmental justice landscape, particularly where state institutions are weak or absent. In both Karamoja and West Nile, CSOs, faith-based actors, community-based organizations, research institutions, and international NGOs have played important roles in community mobilization, legal awareness, environmental restoration, mediation, policy advocacy, and public-interest litigation (Serucaca, 2022; ACODE, 2025).

In Karamoja, organizations such as ACODE, ActionAid Uganda, Caritas Moroto, Mercy Corps, Save the Children, KHH, MADEFO, FAO, VSF Uganda, KADEP, and Oxfam have supported participation, legal literacy, pastoral recognition, and grievance documentation in relation to mining, land, and conservation (ACODE, 2025).

In West Nile, CARE Uganda, DRC, Oxfam, World Vision, ActionAid, Save the Children, WENDA, CEFORD, Uganda Red Cross, and other actors have addressed competition over forests, water, land, and energy through livelihood support, community forest and wetland management, natural resource user groups, wood-fuel interventions, and environmental restoration (CARE Uganda, 2021; UNHCR, 2022; Oxfam, 2019). Actors such as IFC, CIFOR-ICRAF, and Partnerships on Accountability, Civic Engagement, and Rights (PACER)-Program-linked partners have also contributed through energy access, agroforestry, restoration, policy dialogue, and institutional strengthening. The PACER Program is particularly notable for combining policy engagement, regional coordination, and practical resilience-building in West Nile and Karamoja.

Analytically, non-state actors help bridge the gap between law and lived reality, but they face funding volatility, shrinking civic space, limited access to official information, and variable cooperation from state agencies (Humanitarian Action, 2026; Serucaca, 2022). Their role is therefore vital, but cannot substitute for state reform.

3.9 Emerging Trends in Environmental Accountability

Environmental accountability in Uganda is evolving through youth-led advocacy, non-judicial grievance systems, increased recognition of the climate-displacement nexus, and wider use of digital tools.

(i) Youth-led activism has increased scrutiny of extractives and infrastructure, including EACOP, and has strengthened demands for transparency and participation (CAN-U, 2024; Serucaca,

2022). Refugee youth organisations are also increasingly raising environmental rights and clean energy concerns in humanitarian forums (IRC, 2024).

(ii) Non-judicial grievance mechanisms are expanding within development and humanitarian programming, but their fairness depends on accessibility, independence, information quality, and enforceability of outcomes (Kisubi & Ssozi, 2025).

(iii) Recognition of the climate-displacement nexus is growing, reflected in the Uganda Country Refugee Response Plan environment-energy dashboard and UNHCR's climate-resilience commitments (ReliefWeb, 2025; UNHCR, 2025).

(iv) Digital tools, including remote sensing, GIS, open-data platforms, the Uganda EITI process, and UNHCR's data portals, are also improving monitoring and transparency, though important data and access gaps remain (EITI, 2024; UNFPA, 2025; World Bank, 2019).

3.10 Implications for Karamoja and West Nile

The environmental governance and justice context reviewed above is especially significant for Karamoja and West Nile, where environmental risks intersect with historical marginalization, livelihood dependence, displacement, and weak local institutional capacity.

In Karamoja, the most significant justice gaps arise from the weak operationalization of communal and customary tenure, limited local capacity, extractive-sector pressures, and the poor fit between formal law and pastoral systems. Communities, including groups such as the Ik and Tepeth, remain vulnerable to exclusion, dispossession, and low benefit capture in mining and conservation contexts (ASF Belgium, 2020; Monitor, 2025; ACODE, 2025). Internal displacement linked to drought, conflict, and land degradation adds further pressure, underscoring the importance of inclusive dryland governance and restoration (IDMC, 2023; Navarro et al., 2025).

In West Nile, the central challenge is the weak integration of humanitarian governance and environmental justice. Large refugee populations have increased pressure on forests, wetlands, land, and water, while host communities often experience declining resources without adequate safeguards or benefit-sharing (World Bank, 2019; CARE Uganda, 2021; Global Compact on Refugees, 2023). Although Uganda's refugee model is progressive in broad protection terms, environmental governance within settlements remains weakly

embedded in law, policy, and district systems.

Across both regions, the principal gap is the disconnect between progressive norms and lived outcomes. Strengthening environmental justice will therefore require not only better enforcement of existing laws, but also targeted reforms in refugee governance, land governance, district institutional capacity, public participation, information access, and grievance handling. Investments in legal literacy, district environmental staffing, climate-adaptive livelihoods, clean energy transitions, community-based ecosystem management, and civil society oversight are especially important in these regions (UNHCR, 2025; World Bank, 2019; CARE Uganda, 2021).

3.11 Conclusion: From Normative Strength to Justice in Practice

Uganda's environmental governance framework is relatively strong in normative terms. The Constitution, major sector laws, and a range of policy and international commitments provide an important foundation for environmental justice. However, this analysis shows that environmental justice deficits persist because of three interlinked problems: (i) legal design gaps in selected areas, (ii) weak policy coherence and implementation pathways, and (iii) institutional fragmentation and under-capacity.

The most important legal gaps concern refugee settlement governance, the weak enforceability of IDP protections, land acquisition safeguards, and the incomplete operationalization of customary and communal tenure. The most important policy gaps concern the weak integration of environmental justice as an explicit objective, limited coherence across environmental and humanitarian systems, and inadequate support for district-level implementation. The most important institutional gaps concern mandate overlap, under-resourced local governments, weak environmental oversight in remote and displacement-affected areas, and limited access to effective remedies.

For Karamoja and West Nile, these gaps are not abstract. They shape access to land, forests, wetlands, water, participation, benefits, and remedies in ways that reproduce environmental inequality. Reform, therefore, needs to move beyond describing Uganda's progressive framework and instead focus on how to operationalize justice where burdens are greatest and instittional protection is weakest.

4. STUDY FINDINGS

5.1 Socio-demographic profiles of respondents

Key messages

The respondent profile is predominantly female (68%), with low levels of formal education (46% with none) and significant exposure to displacement and migration (36% migrants, 23% forcibly displaced). These vulnerabilities vary across districts. Moroto exhibits a deeper structural disadvantage, with 80% of respondents being female and 65% having no formal education, alongside lower mobility, which limits participation and adaptive capacity. In contrast, Madi-Okollo shows relatively higher levels of education (54% primary, 16% O-level) and higher migration (28%), reflecting its refugee-hosting context and associated resource pressures. These characteristics shape environmental justice outcomes by influencing exposure to risk, access to resources, and participation in governance, underscoring the need for gender-responsive and context-specific interventions.

The study's household survey involved 200 household participants, comprising 100 respondents from each of the districts - Moroto and Madi-Okollo (see Figure 2).

Figure 2: Key socio-demographic characteristics of the respondents

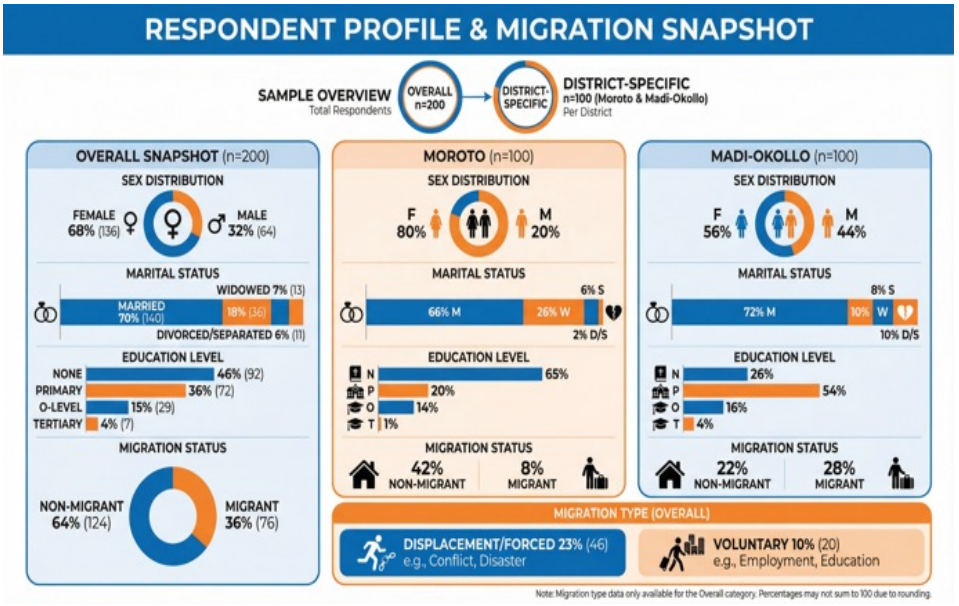


Figure 2 above shows sthe key socio-demographic profile of the surveyed households, highlighting marked vulnerabilities in gender, education, migration, and income, with notable contrasts between Moroto and Madi-Okollo. Overall (n=200), 68% of respondents were female and 32% male; 70% were married, 7% widowed, and 6% divorced or separated. Nearly half (46%) reported no formal education, 36% had primary (O-level) education, and 4% had tertiary education. Regarding migration, 36% were migrants and 64% were non-migrants, with displacement/forced movement accounting for 23% of the overall sample and voluntary migration accounting for 10%.

District contrasts are notable. In Moroto (n=100), women made up 80% of respondents and men 20%; 66% were married, 26% widowed, and 2% divorced/separated. Education in Moroto was heavily skewed toward no formal schooling (65%), with 20% at primary and 14% at O-level, and only 1% at tertiary. Moroto was less mobile: 42% non-migrants versus 8% migrants (migration-type details reported at the overall level).

In Madi-Okollo (n=100), the sample was more gender balanced (56% female, 44% male); 72% were married, 8% widowed, and 10% divorced/separated. Education levels were higher than in Moroto: 26% had no formal education, 54% had primary education, 16% had O-level education, and 4% had tertiary education. Migration was more common in Madi-Okollo, with 28% of residents being migrants and 22% non-migrants.

These findings underscore a sample dominated by women, with overall low educational attainment and substantial exposure to displacement. Nearly one in four respondents experienced forced displacement, and migrants comprise over a third of the sample patterns that should shape targeting for protection, legal assistance, and livelihood programming.

5.2 Environmental and livelihood conditions

Key messages

Livelihoods in both regions are heavily dependent on natural resources and highly climate-sensitive, with crop farming (41%) and mining in Moroto (34%) forming the backbone of household survival. This dependence, combined with widespread environmental degradation, including deforestation driven by 98% reliance on firewood and significant land and water stress, undermines livelihood sustainability. Water scarcity affects 66% of households, while drought is nearly universal (95%), reinforcing vulnerability.

Food insecurity is pervasive, and particularly severe in Moroto, where it is near-universal, compared to still widespread but more variable conditions in Madi-Okollo. In response, households rely primarily on short-term coping strategies, such as reducing food consumption, selling assets, and relying on external assistance.

These patterns reflect deep structural vulnerabilities, limited adaptive capacity, and entrenched environmental justice challenges linked to unequal exposure to risks, constrained access to resources, and weak resilience pathways.

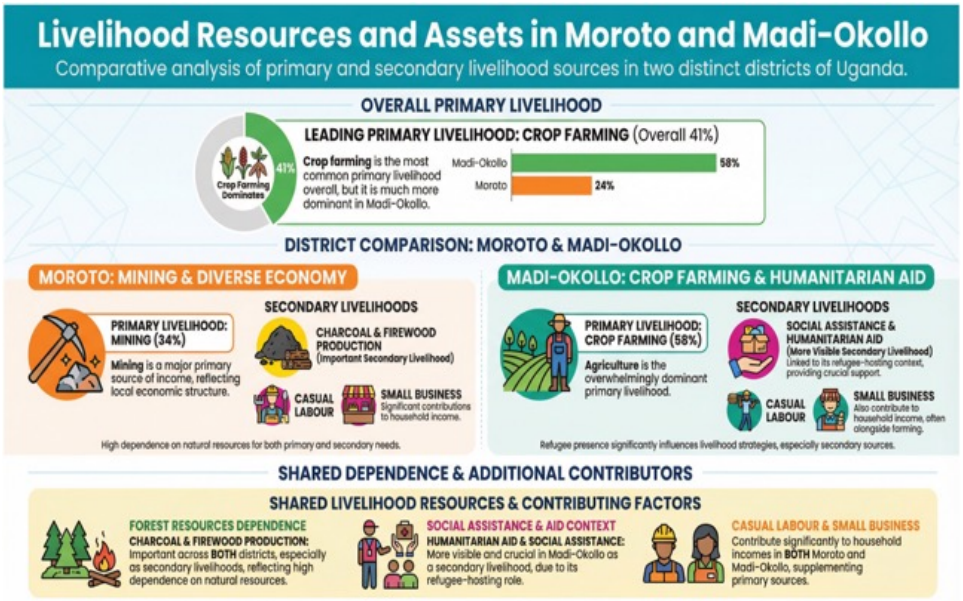
5.2.1 Overview of livelihood resources and assets

The study examined respondents' livelihood sources, identifying both primary and secondary means of survival across the two districts. Figure 3 compares livelihood resources and assets in Moroto and Madi-Okollo and highlights distinct livelihood profiles and vulnerability risks. Crop farming is the dominant livelihood overall (41%), but its role differs by district i.e., 58% of households in Madi-Okollo rely primarily on crop farming versus only 24% in Moroto, where crop agriculture is far less central. Instead, mining is a major primary livelihood in Moroto, reported by 34%.

Secondary and supplementary incomes also vary. Charcoal and firewood production are important across both districts (notably as a secondary source, around 16%), whereas social assistance and humanitarian aid play a more significant secondary role in Madi-Okollo than in Moroto.

The key vulnerability insight is that most livelihoods depend on natural resources, leaving communities highly exposed to environmental degradation, restrictive access to resources, and climate shocks such as droughts and floods risks that threaten both primary and secondary income sources.

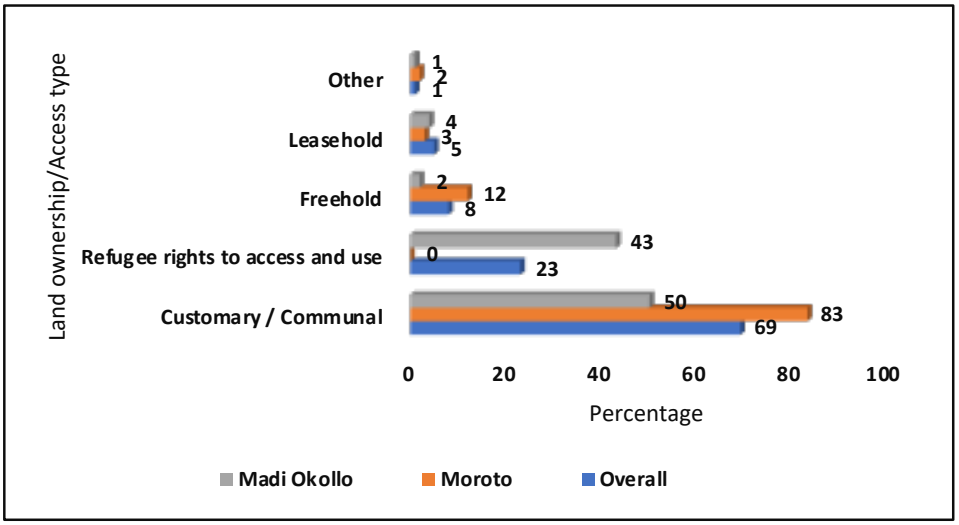
Figure 3: Primary and secondary means of livelihood among respondents. (See Annex 2 for details)



5.1.1.1 Land ownership and access

The study further examined patterns of land ownership, access, and use across the two study regions. The analysis reveals marked contrasts in land ownership, access, and use across the two study districts of Moroto and Madi-Okollo, as shown in Figure 4. These differences reflect variations in land tenure systems and demographic contexts.

Figure 4: Land ownership and access patterns



The results illustrated in Figure 4 show that customary or communal land tenure is by far the most dominant form of land holding or access. This is particularly pronounced in Moroto, where nearly 80% of respondents rely on customary or communal land, which reflects the pastoral and customary land governance systems prevalent in the region. Madi Okollo also shows a high dependence on customary land, though at a slightly lower level (50%), while the overall average remains substantial.

Refugee rights to access and use land are the second most important category, but this seems to be only prevalent in Madi Okollo, where refugee settlements and host–refugee land-sharing arrangements are common. Therefore, refugee-related land access and use constitute a significant, though secondary, pathway to land use. This highlights the growing role of displacement and humanitarian land arrangements in shaping local land tenure systems.

In contrast, formal land tenure arrangements, including the freehold and leasehold land tenure systems, account for a relatively small share of land access across the two study areas. Although limited across both study regions, freehold tenure is more prevalent in Moroto than in Madi Okollo, while leasehold tenure is minimal in both regions. The category labelled "other" accounts for only a negligible proportion, suggesting that alternative or informal arrangements outside the main tenure categories are rare.

In all, the study results highlight the predominance of customary and communal land systems, the increasing relevance of refugee-related land access, and the limited penetration of formal land tenure systems. These patterns have important implications for land governance, tenure security, environmental justice, and the design of development, humanitarian, and environmental and climate adaptation interventions, particularly in regions characterised by customary land management and refugee and displacement pressures.

5.1.1.2 Primary sources of energy and water

The study also examined household sources of water and energy for cooking. The findings indicate a strong dependence on traditional natural resources, alongside apparent differences between Moroto and Madi-Okollo districts, as shown in Table 1.

Table 1: Energy and water resources used by respondents.

Energy and water	Variable	Overall (f=200)		District specific (%)	
		Frequency (f)	Percentage (%)	Moroto	Madi Okollo
Main source of energy	Firewood	195	98	97	98
	Charcoal	5	2	3	2
Main source of water	Borehole	95	48	93	2
	Piped water/gravity scheme	87	44	5	82
	Stream/River	10	5	1	8
	Spring/well	8	4	1	8
Reliability of water sources	Permanent source	161	80	99	62
	Seasonal source	39	20	1	38

Firewood is the dominant source of household energy, used by 98% of respondents, with similarly high dependence in both Moroto (97%) and Madi Okollo (98%). Charcoal use is negligible, reported by only 2%of households. This overwhelming dependence on biomass energy highlights persistent energy poverty and continued pressure on natural resources in both districts.

In contrast, water access shows marked district-level differences. Overall, boreholes (48%) and piped water or gravity schemes (44%) are the primary sources of water. However, their distribution varies sharply by district. In Moroto, access is overwhelmingly dependent on boreholes (93%), reflecting limited piped water infrastructure in the semi-arid region. Conversely, in Madi Okollo, the majority of households rely on piped water or gravity-fed schemes (82%), indicating relatively better water infrastructure development. The use of streams, rivers, springs, and wells as water sources remains limited in the study regions, but is more common in Madi Okollo than in Moroto. This suggests greater surface water availability in Madi Okollo, but also potential exposure to water quality and seasonal risks.

Differences are also evident in the reliability of water sources. Overall, 80% of households report access to permanent water sources, while

20% depend on seasonal sources. In Moroto, nearly all households (99%) rely on permanent sources, primarily boreholes, highlighting the critical role of groundwater in a drought-prone environment. In contrast, only 62% of households in Madi Okollo report permanent water access, with 38% dependent on seasonal sources, reflecting vulnerability to rainfall variability and climate shocks.

Taken together, the findings indicate uniform energy vulnerability across both districts due to heavy reliance on firewood, alongside significant spatial inequalities in water access and reliability. These patterns have important implications for environmental justice, sustainability, climate resilience, and public health, particularly amid increasing ecological degradation, climate variability, and rising demand for water and energy services.

5.2.2 Ecological resources and degradation patterns

The Karamoja and West Nile sub-regions are naturally diverse and support a variety of land uses, natural resources, and conservation systems. These ecosystems support local livelihoods but are under increasing pressure from interacting climatic, socio-economic, political, and demographic factors, leading to extensive environmental degradation and rising ecological justice issues.

5.2.2.1 Ecological and environmental context of Karamoja

Karamoja, located in north-eastern Uganda, is a predominantly semi-arid landscape covering approximately 27,200 km². The region is characterized by open savannah grasslands, woodlands, shrublands, and bushlands, with five dominant land-cover classes: subsistence farmland, woodlands, grasslands, thickets or shrublands, and bushlands. These ecosystems support more than 30 grass species, which are essential for pastoral and agro-pastoral livelihoods, providing seasonal forage for livestock. Dominant woody species include acacia, combretum, and terminalia, alongside grasses such as Hyparrheniaand Themeda (Egeru et al., 2020).

Rainfall is low and highly variable, typically ranging from 500–800 mm in lowland areas, with slightly higher precipitation in mountainous zones. Seasonal variability strongly influences resource availability, with forage biomass peaking during the wet season and becoming scarce during prolonged dry periods (Anthony et al., 2015; Nakalembe et al., 2017). Although pockets of land support rain-fed agriculture, pastoralism remains the dominant livelihood system, increasingly complemented by agro-pastoralism and diversification into charcoal production, brick-making, and artisanal mining (Filipová & Johanisova,

2017; Namutebi, 2017).

Over the past two decades, Karamoja has undergone significant land-use and land-cover change. Government policies promoting sedentary agriculture, combined with population growth, have driven a rapid expansion of cropland and settlements. Cropland increased by nearly 300% between 2000 and 2011, particularly in Moroto District (Muwanga et al., 2020). This expansion has mainly occurred at the expense of rangelands, woodlands, wetlands, and grazing reserves, undermining livestock-based livelihoods and accelerating soil degradation. Studies indicate declines of up to 87% in natural vegetation cover in some areas, alongside reduced soil organic carbon and increased compaction on converted croplands (Filipová & Johanisova, 2017).

Environmental degradation is most pronounced around artificial water points, where high livestock concentrations have created biospheres characterized by nutrient depletion, altered soil chemistry, and shifts toward hardy perennial species. These degradation effects extend up to 2 km from water points, with broader ecological impacts detectable up to 9 km (Egeru et al., 2020). Despite expanded cultivation, food insecurity persists, with over half of cultivated land left fallow and recurrent crop failures linked to climatic variability.

Karamoja's water resources are limited, unevenly distributed, and highly seasonal. Communities depend on rivers, seasonal streams, boreholes, valley dams, and tanks. Valley dams such as Kobebe (Moroto) and Nakicumet (Napak) are critical dry-season lifelines, serving tens of thousands of people and livestock daily (Mugerwa et al., 2014; Aseete et al., 2024). However, water scarcity is intensifying due to climate change, overuse, siltation, and poor maintenance. Women and children are disproportionately affected, often travelling over 6 km to fetch water during drought periods (Auma & Badr, 2022). Water quality is further compromised by erosion, overgrazing, deforestation, and effluent from abandoned mining sites.

Karamoja is also mineral-rich, hosting over 50 commercially viable deposits including gold, copper, iron ore, limestone, and gemstones. Both artisanal and industrial mining have contributed to deforestation, land scarring, water pollution, and social conflict, particularly in Moroto, Amudat, and Nakapiripirit districts (Namutebi, 2017). Open-cast mining and limestone burning have degraded large areas, compounding the impacts of climate change and charcoal production. These pressures create reinforcing cycles of vulnerability, in which environmental degradation undermines livelihoods, intensifies food insecurity, and heightens conflict risks (Twinomuhangi et al., 2023).

Karamoja's forests and wildlife areas remain ecologically significant despite mounting threats. The region contains over 322,000 hectares of forest reserves, including Mount Moroto, Mount Kadam, Mount Napak, and Mount Zulia, which serve as critical water catchments, biodiversity refuges, and cultural landscapes for communities such as the Tepeth, Ik, and other indigenous groups. Forests provide wild foods, fuel wood, medicinal plants, and safety nets during food shortages. However, deforestation, agricultural encroachment, de-gazettement, and mining continue to erode forest cover.

Wildlife conservation areas, including Kidepo Valley National Park, Pian Upe (now a National Park), Bokora, and Matheniko, support diverse fauna and play an increasingly important role in local economies through tourism. Community-based conservation initiatives, such as the Karenga Community Wildlife Area, have shown promise, although conservation has often proceeded with limited community participation, contributing to land-use conflicts and perceptions of exclusion (Rugadya, 2020; Ojelel et al., 2019).

5.2.2.2 Ecological and environmental context of the West Nile region

The West Nile region is ecologically rich, forming part of the Albertine Rift, which is one of Africa's most bio-diverse landscapes. It comprises savannah grasslands, woodlands, wetlands, riverine forests, and scattered plantations. Rainfall is relatively higher than in Karamoja, ranging from 800 mm in lowland areas to over 1,500 mm in highland zones, supporting diverse agricultural systems dominated by smallholder crop farming.

West Nile hosts both local populations and large numbers of refugees, placing significant pressure on land, forests, wetlands, and water resources. Rapid expansion of settlements, subsistence farming, and refugee infrastructure has led to widespread deforestation, wetland encroachment, soil erosion, and declining ecosystem services (Barasa et al., 2022; Akpan et al., 2024). Land scarcity and fragmentation are particularly acute in high-fertility zones near the Nile-Congo divide, while marginal lowlands remain sparsely settled due to poor soils and disease burdens.

The region's forests, including Mount Otzi, Mount Kei, Zoka, and Agoro-Agu Central Forest Reserves, are critical biodiversity hotspots but face intense pressure from agricultural expansion, illegal logging, and refugee movements. Restoration efforts supported by NGOs such as WCS and JICA emphasize agroforestry, law enforcement, and community participation, although benefit-sharing mechanisms remain weak. KIIs highlighted Mount Kei as especially vulnerable due to

its role as a refugee migration corridor and the lack of trans-boundary resource governance.

West Nile also supports valuable tree species, notably the Shea tree (Vitellaria paradoxa), which is central to local livelihoods and cultural practices. Traditional institutions play an essential role in Shea conservation, yet weak statutory protection and overharvesting threaten its long-term viability (Acema et al., 2021).

Wildlife conservation in West Nile is anchored around Ajai Wildlife Reserve, which is undergoing ecological restoration following severe historical depletion. Current efforts led by UWA, in collaboration with NGOs, focus on restocking wildlife, restoring habitats, strengthening park boundaries, and revitalizing tourism. Despite progress, challenges remain, including wildlife trafficking, habitat degradation, and the region's role as a transit route for illegal wildlife products.

West Nile's water resources are derived mainly from the Nile system and its tributaries, wetlands, and groundwater aquifers. These resources are essential for domestic use, agriculture, and fisheries, but are increasingly degraded by wetland reclamation, riverbank encroachment, and climate variability. Initiatives such as the River Enyau restoration project and water-for-production programs seek to improve sustainability, yet many water points remain non-functional due to inadequate funding and maintenance (Schlemm et al., 2025).

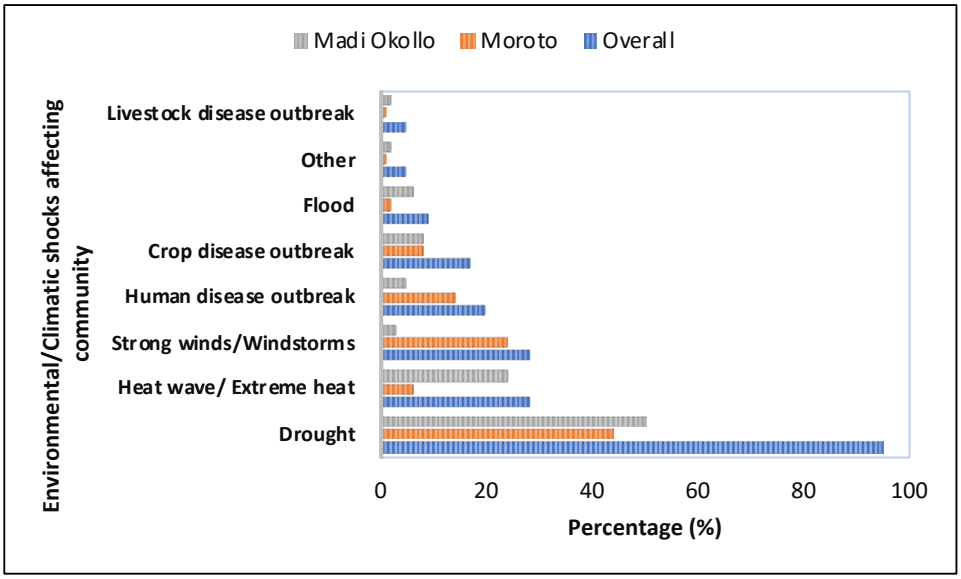
5.2.2.3 Implications for Environmental Justice

Across both regions, environmental degradation is closely intertwined with livelihood vulnerability, land access, conservation governance, extractive development, and refugee dynamics. In Karamoja, rangeland loss, water scarcity, and mining disproportionately affect pastoralist and indigenous communities, while in West Nile, population pressure and refugee settlement intensifies competition over land, forests, and water. These dynamics underscore the importance of addressing environmental challenges through environmental justice lenses, particularly distributive, procedural, recognitional, and restorative justice, to ensure that conservation, development, and climate responses are equitable, inclusive, and sustainable.

5.2.3 Climate hazards, environmental shocks, and stresses

The study examined the main climate hazards, environmental shocks, and stresses that affect households and communities in Moroto and Madi Okollo districts over the past five years, and the findings are presented in Figure 2.

Figure 5: Main environmental and climatic shocks experienced in the community for the last 5 years.



The results reveal that drought is the most widespread and severe shock, reported by an overwhelming majority of respondents (95%) across both districts. This highlights drought as the dominant climate-related stressor that shapes livelihoods, resource availability, and vulnerability in the study areas. Heat waves or extreme heat are significant climate shocks or stressors, particularly in Madi Okollo (44%), where a higher proportion of respondents reported experiencing extreme heat than in Moroto (6%). This suggests increasing temperature-related stress that affects water availability, crop productivity, and human health.

Strong winds or windstorms also feature prominently, more especially in Moroto, reflecting Karamoja's exposure to extreme weather events that damage housing, crops, and community infrastructures. These events contribute to livelihood instability and compound the impacts of prolonged dry periods. Human disease outbreaks and crop disease outbreaks are notable secondary shocks, with higher reporting in Moroto than in Madi Okollo. This pattern points to the interaction between climatic stress, such as drought and heat, and increased disease risks affecting both people and agricultural systems. The health challenges to human life reported included diseases like malaria, typhoid, trachoma, brucellosis, flu, yellow fever, malnutrition, and hypertension. Livestock diseases such as foot-and-mouth disease, anthrax, tick-borne infections, and crop diseases, notably cassava mosaic, were also noted. These health impacts were widely perceived

to be exacerbated by drought, heat stress, and water scarcity.

In contrast, flooding was reported by a relatively small proportion of respondents overall. However, it is more evident in Madi Okollo than in Moroto, likely reflecting differences in rainfall patterns, topography, and proximity to river systems. Livestock disease outbreaks and shocks were reported least frequently, though their presence highlighted the diverse and compound nature of climate-related risks faced by communities.

In all, the findings demonstrate that communities are exposed to multiple, overlapping climatic and environmental shocks, with drought acting as the central driver of vulnerability. The variation between Moroto and Madi Okollo highlights the importance of context-specific climate adaptation and resilience strategies, tailored to local hazard profiles and livelihood systems.

5.2.4 Environmental and/or natural resource challenges

Respondents were asked to identify the main environmental and/or natural resource challenges they had experienced over the past five years. The findings, presented in Table 2, shows that households have faced a range of resource-related impacts associated with environmental change and degradation.

Table 2: Major environmental or resource-related challenges that affected households in the past 5 years.

Major environmental / natural resource challenges affecting household	Overall		District specific (f=100 each)	
	Frequency (f)	Percentage (%)	Moroto (%)	Madi Okollo (%)
Water scarcity	131	66	24	42
Conflict over land	88	44	23	24
Conflicts over water	70	35	10	30
Mining-related impact	31	16	18	0
Restriction to protected/ conservation areas	27	14	15	0
Pasture scarcity	14	7	2	4
Displacement by a climatic/ environmental shock	5	3	3	0
Eviction	4	2	3	0
Relocation	3	2	2	0

The findings indicate that water scarcity is the most prevalent environmental and/or natural resource challenge affecting households across the study areas. Overall, 66% of households reported experiencing water scarcity, with a higher proportion in Madi Okollo (42%) compared to Moroto (24%). This highlights water stress as a widespread and persistent challenge, particularly in Madi Okollo, where seasonal variability and reliance on surface and piped water sources increase vulnerability. Conflict over land is also a significant concern, reported by 44% of households overall. The incidence is relatively similar across districts, affecting 23% of households in Moroto and 24% in Madi Okollo. This suggests that land-related disputes are a significant issue in both pastoral and agrarian contexts, reflecting pressures from population growth, tenure insecurity, and competing land uses.

Conflicts over water were reported by 35% of households, with a stark district-level contrast. Such conflicts are far more pronounced in Madi Okollo (30%) than in Moroto (10%), indicating that competition over shared water sources is particularly acute in the West Nile context, especially during dry periods. Events linked to extractive activities and conservation policies are concentrated almost exclusively in Moroto. Mining-related impacts affect 18% of households in Moroto but are absent in Madi Okollo, while restrictions related to protected or conservation areas affect 15% of Moroto households and none in Madi Okollo. These findings reflect the unique governance and land-use pressures in Moroto, where mining activities and conservation regimes intersect with customary land systems and pastoral livelihoods. Other events, including pasture scarcity, displacement due to climatic or environmental shocks, evictions, and relocation, are reported less frequently overall. However, their occurrence is mainly in Moroto, suggesting underlying vulnerabilities associated with pastoral systems, climate stress, and land governance dynamics. Insights from the FGDs and key informant interviews revealed widespread concerns about environmental pollution, unsafe working conditions, frequent injuries, tunnel collapses, land encroachment by investors, delayed payments, and deforestation. Participants reported that mining activities have degraded rangelands and water sources, intensified land-related conflicts, and undermined local livelihoods.

Overall, the findings indicate that although water scarcity and land-related conflicts affect households in both districts, pressures linked to resource governance, particularly mining, conservation restrictions, and displacement, are more pronounced in Moroto. These differences highlight the uneven nature of environmental vulnerability across the

study areas and point to the need for context-specific approaches to resource governance and conflict mitigation that reflect local socio-ecological realities. Taken together, the results illustrate how climate shocks and environmental degradation interact with governance structures, land use systems, and access to natural resources, shaping patterns of vulnerability and contributing to environmental injustice in both regions.

5.2.5 Livelihood vulnerabilities and coping mechanisms

Livelihoods in Karamoja and West Nile are shaped by intersecting environmental, socio-economic, and political vulnerabilities, with both regions experiencing high poverty, food insecurity, and exposure to climate-related shocks. While these challenges overlap, their manifestations and community responses differ across contexts (See comparative Figure 7).

In Karamoja, traditional pastoralist livelihoods have been severely disrupted by recurrent droughts, erratic rainfall, livestock disease, insecurity, and policy interventions such as disarmament. Key informant interviews revealed widespread livestock losses, environmental degradation, and declining rangeland productivity, forcing households to diversify into agro-pastoralism, charcoal production, artisanal mining, and casual labour. These alternatives are often low-return, unstable, and in some cases environmentally damaging. Chronic food insecurity is pervasive, with high levels of malnutrition, particularly among women and children, and limited access to markets, health services, and education further exacerbates vulnerability. Gendered impacts are pronounced, with women and youth bearing disproportionate livelihood and care burdens.

In West Nile, livelihood vulnerability is driven primarily by climate variability, reliance on rain-fed agriculture, and demographic pressures associated with large refugee populations. Drought and rising temperatures undermine crop productivity and seed availability, while competition over land and water has intensified in refugee-hosting areas. KIIs and FGDs highlighted constrained access to quality seeds, declining soil fertility, and increasing dependence on rented land, casual labour, and small-scale trade. Refugee households, particularly in Rhino Camp, face reduced food assistance and limited livelihood options, increasing reliance on host communities and informal coping strategies.

Analysis of food security conditions shows severe deprivation in both districts, with particularly acute conditions in Moroto, where nearly all respondents reported frequent food shortages, skipped meals, and

limited dietary diversity (see Table 3). In Madi Okollo, food insecurity is shaped by distinct pressures, notably declining humanitarian assistance and limited opportunities for self-reliance among refugee populations, despite their formal classification as vulnerable (see Table 4).

Table 3: Food insecurity experience markers in Moroto district (f=100)

Food insecurity experience marker	Response (%)	Frequency (%)			
	Yes	No	Rarely	Sometimes	Often
In the past year, was there a time when you were worried you would not have enough food to eat because of a lack of money or other resources?	98	2	6	42	52
Reflecting on the last year, was there a time when you were unable to eat healthy and nutritious food due to a lack of money or other resources?	96	4	4	40	56
Was there a time when you ate only a few kinds of foods because of a lack of money or other resources?	96	4	8	34	58
Was there a time when you had to skip a meal because there was not enough money or other resources to get food?	96	4	4	40	56
Was there a time when you ate less than you thought you should because of a lack of money or other resources?	98	2	6	40	54
Was there a time when your household ran out of food because of a lack of money or other resources?	94	6	4	54	42
Was there a time when you were hungry but did not eat because there were not enough money or other resources for food?	96	4	6	44	50

The findings (Tables 3 and 4) indicate that food insecurity is widespread in both Moroto and Madi Okollo, affecting food availability, dietary quality, and meal frequency. However, the severity, frequency, and underlying dynamics of food insecurity differ between the two districts.

In Moroto district, food insecurity is near-universal and particularly severe. Almost all households reported worrying about having enough food over the past year, with the majority experiencing this concern frequently rather than occasionally. Access to nutritious, diverse food is limited, as nearly all respondents reported being unable to afford healthy food and relying on only a few types. These patterns suggest prolonged coping under chronic food stress rather than short-term or seasonal hardship.

Severe manifestations of food insecurity are also more pronounced in Moroto. A very high proportion of households reported skipping meals, eating less than they felt they should, and going hungry due to lack of resources, with many indicating that these experiences occurred often. Household food depletion was common, with most respondents reporting that their households ran out of food at least once during the year, suggesting sustained periods of shortage. Overall, food insecurity in Moroto is characterised by high intensity, frequency, and chronicity, reflecting deep structural vulnerabilities linked to poverty, livelihood fragility, and environmental stress.

Moroto's acute food insecurity stems from a combination of environmental, economic, and social drivers that interact and reinforce one another. The semi-arid climate defined by frequent droughts and heat undermines crop and pasture production, while widespread land degradation from deforestation, mining, and concentrated grazing reduces long-term productivity. In addition, heavy reliance on livestock and low-return informal activities leaves households with few alternatives when herds or crops fail. KIIs showed that weak water-for-production infrastructure, limited markets, and scant agricultural services constrain recovery, and frequent human and animal disease outbreaks also erode household capacity. These pressures were found to be compounded by governance and tenure barriers, mining and conservation restrictions, high rates of female-headed and low-education households, and inadequate social protection, thereby producing chronic, repeated food shortfalls rather than seasonal shortages.

Table 4: Food insecurity experience markers in Madi Okollo district (f=100)

Food insecurity experience marker	Response (%)		Frequency (%)		
	Yes	No	Rarely	Sometimes	Often
In the past year, was there a time when you were worried you would not have enough food to eat because of a lack of money or other resources?	88	12	12	42	36
Reflecting on the last year, was there a time when you were unable to eat healthy and nutritious food due to a lack of money or other resources?	88	12	16	45	39
Was there a time when you ate only a few kinds of foods because of a lack of money or other resources?	94	6	18	44	38
Was there a time when you had to skip a meal because there was not enough money or other resources to get food?	88	12	18	47	35
Was there a time when you ate less than you thought you should because of a lack of money or other resources?	94	6	20	41	39
Was there a time when your household ran out of food because of a lack of money or other resources?	88	12	26	26	48
Was there a time when you were hungry but did not eat because there were not enough money or other resources for food?	90	10	29	43	28
Was there a time when you went without eating for a whole day because of a lack of money or other resources?	86	14	23	52	23

In Madi Okollo (Table 6), food insecurity is also widespread but appears less intense and more variable in frequency. A large majority of households reported worrying about food access and being unable to afford healthy, nutritious food. However, a greater share described these experiences as occurring sometimes rather than often. Dietary

diversity remains constrained, with many households reporting reliance on a limited range of foods, indicating ongoing but comparatively less severe food stress than in Moroto.

Indicators of reduced food intake, such as skipping meals and eating less than desired, are common in Madi Okollo, though they tend to occur less frequently than in Moroto. While many households reported running out of food or experiencing hunger, these outcomes were more often described as intermittent rather than constant. Experiences of going without food for an entire day were reported by a substantial proportion of households, highlighting vulnerability, but again with lower frequency than observed in Moroto.

Madi-Okollo's food insecurity is widespread but generally less severe and more variable because more favourable agro-ecological conditions (higher, more reliable rainfall and better soils) and greater water availability support consistent crop production and home gardening. A predominance of crop-based livelihoods, combined with income diversification (petty trade, casual labor, remittances) and stronger market access, gives households multiple ways to smooth consumption aftershocks Slightly lower levels of environmental degradation, better access to agricultural services and inputs, and more effective humanitarian and local institutions further speed recovery. Moreover, shocks tend to be seasonal or localized rather than system-wide, which makes effects more local than regional. Combined, these factors make food shortfalls in Madi-Okollo more episodic and easier to recover from than the chronic, deep insecurity seen in Moroto.

5.2.5.1 Coping mechanisms

Households and communities reportedly employed a range of coping mechanisms, including reducing food consumption, selling livestock, temporary migration, casual labor, reliance on social networks, and participation in aid programs. Figure 6 illustrates the relationships between environmental and climate-related shocks and the coping strategies adopted by households in Karamoja and West Nile. In both districts, households experience multiple, overlapping shocks, and the width of the flows highlights the relative prominence of different coping responses.

In Moroto (Karamoja), the most frequently reported shocks include drought, crop and livestock diseases, deforestation, pasture scarcity, and food insecurity. These shocks are closely interconnected and typically trigger multiple coping strategies simultaneously, rather than a single response.

Among the clearly defined strategies, reducing food consumption is among the most prevalent responses, particularly in response to drought, food insecurity, and crop failure, indicating that dietary reduction is a primary short-term coping mechanism under severe resource stress. Receiving assistance from government, NGOs, or community networks is also prominent, especially in response to drought, flooding, and livestock disease outbreaks, underscoring the importance of external and social support systems in Moroto.

Environment and livelihood-based responses are strongly evident. Re-afforestation activities are closely linked to deforestation and land degradation, suggesting local engagement in restoration as both a coping and adaptation strategy. Similarly, the sale of animals and temporary migration are frequently associated with pasture scarcity, drought, and livestock disease, reflecting coping strategies typical of agro-pastoral and pastoral livelihood systems. Financial coping mechanisms, such as borrowing or taking loans, are present but less dominant, suggesting limited access to credit or reluctance to take on debt. Water-related responses, such as trucking or purchasing water, and reliance on constructed dams are mainly associated with drought and water shortages but remain relatively uncommon, reflecting infrastructure and affordability constraints.

However, among defined responses, reducing food consumption is even more prominent, particularly in response to water shortages, flooding, drought, and food insecurity, and highlighting widespread dependence on consumption-smoothing as an immediate response to stress.

Re-afforestation and external assistance feature strongly in Madi Okollo as well. Re-afforestation is closely associated with deforestation and land degradation, reflecting efforts to restore degraded landscapes or respond to conservation pressures. Assistance from government, NGOs, or community actors is commonly linked to flooding, drought, and livestock disease, indicating the continued importance of humanitarian and social protection support.

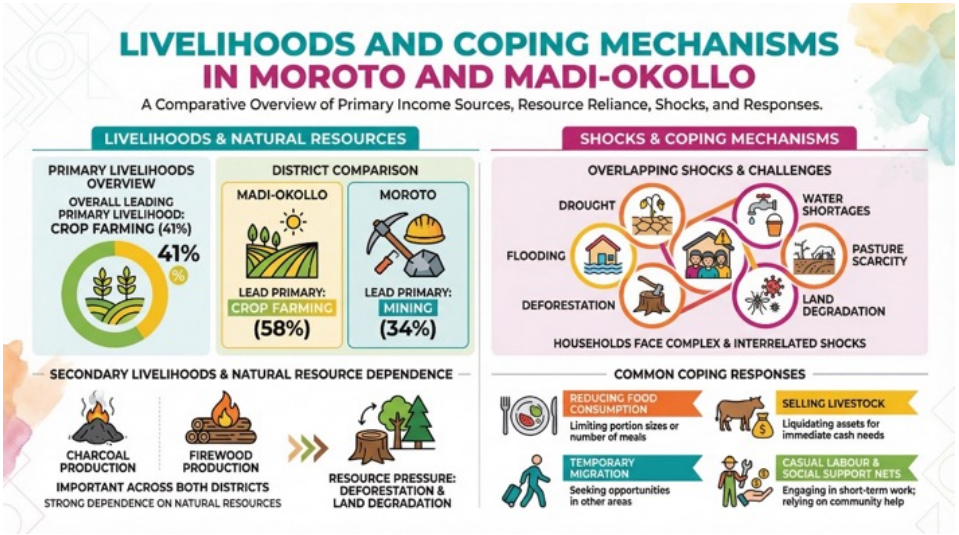
Livelihood-based coping strategies, including the sale of animals and temporary migration, are also evident in Madi Okollo, particularly in relation to pasture scarcity and drought. While these strategies provide short-term relief, they may erode resilience in the long term if productive assets are depleted. As in Moroto, financial coping mechanisms and water-purchasing strategies are reported less frequently, suggesting constraints in access to credit and water infrastructure.

Overall, Figure 6 shows that households in both regions rely

predominantly on short-term coping strategies, such as reduced food consumption, asset sales, and external assistance, rather than on longer-term adaptive measures. While the patterns are broadly similar, Moroto exhibits stronger linkages between shocks and livelihood-disrupting responses, reflecting higher exposure to chronic climatic stress and land-use pressures. In contrast, Madi Okollo shows a greater emphasis on consumption-smoothing responses, particularly in response to water-related shocks.

Taken together, these findings point to high vulnerability and limited adaptive capacity in both contexts, underscoring the need for interventions that move beyond short-term coping to strengthen water security, livelihood diversification, ecosystem restoration, and social protection systems tailored to local socio-ecological conditions. Overall, the findings highlight deeply entrenched livelihood vulnerabilities in both regions, underscoring the need for integrated, justice-centred approaches that strengthen climate resilience, address resource governance inequities, and support sustainable livelihood pathways.

Figure 6: Primary income sources, resource reliance, shocks, and responses



5.3 Study Findings on Environmental Justice in Karamoja

Key messages

Environmental justice in Karamoja is constrained by entrenched inequalities in resource access and benefit-sharing, in which communities bear environmental costs while elites and external actors

capture most of the gains. Weak participation, limited access to information, and low community influence undermine accountability, while marginalised groups—including women, youth, and pastoralists—remain insufficiently recognised in decision-making. Together, these factors reinforce systemic exclusion, erode trust in institutions, and contribute to unsustainable resource governance.

5.3.1 Distributional Justice

Distributional justice in Karamoja is shaped by deep and persistent inequalities in access to and benefits from land and natural resources. Although the region is well endowed with land, minerals, forests, wildlife, and water, research evidence shows that control over these resources and related decision-making processes is primarily concentrated among political elites and external actors, often at the expense of local communities (Rugadya & Kamusiime, 2013; Kabiito, 2021). As a result, many households experience limited access to basic resources and services, high levels of poverty, and chronic food insecurity, even as resource extraction and land-use transformations generate significant benefits for a relatively small group of actors (Czuba, 2024; Schumann et al., 2025).

While various interventions, such as targeted humanitarian assistance, climate resilience and livelihood diversification programmes, and participatory development initiatives, have sought to address these disparities, evidence suggests that their impacts remain constrained by structural barriers, including insecure land tenure, weak infrastructure, and the continued exclusion of communities from governance processes (Kabiito, 2021; Rugadya & Kamusiime, 2013). Consequently, advancing distributional justice in Karamoja requires not only more equitable benefit-sharing arrangements but also meaningful community participation in resource governance and decision-making to ensure that development outcomes are inclusive and locally grounded.

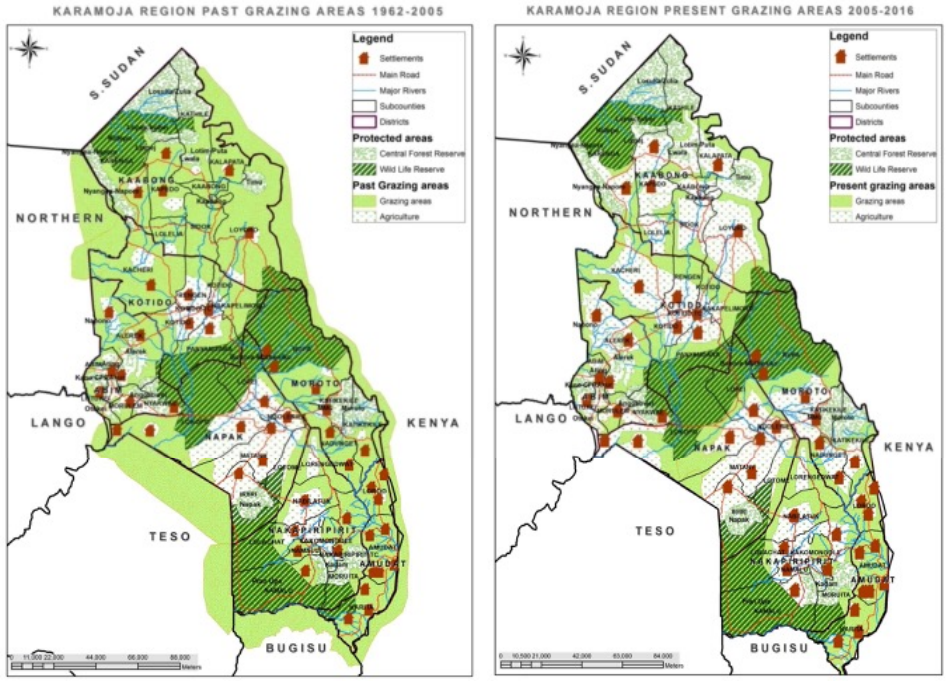
5.3.1.1 Access to grazing land, forests, and water

Access to natural resources in Karamoja is shaped by a combination of environmental change, policy interventions, and evolving livelihood strategies, resulting in both shared and district-specific challenges. The region's traditional pastoral systems depend heavily on communal grazing lands. Yet, research shows that land-use change, sedentarisation policies, and population growth have increasingly constrained the availability of pasture needed to sustain pastoral livelihoods (Osaliya et al., 2020; Nicol et al., 2022).

Access to grazing land

Figure 7 illustrates changes in past and current grazing areas across the districts in the Karamoja region, highlighting the uneven spatial impacts of land-use change and governance interventions. In the Moroto district, rapid expansion of cropland has been a major driver of pasture loss. Between 2000 and 2011, cropland area increased by an estimated 299%, substantially reducing communal grazing areas and intensifying competition over remaining pasture resources (Osaliya et al., 2020; Nicol et al., 2022). These changes have weakened traditional mobility patterns that previously allowed pastoralists to manage climatic variability and drought.

Figure 7: Past and present grazing areas in the Karamoja region (Source: Nabaasa & Lwasa, 2019)



In Kotido district, access to grazing land has been further constrained by the enclosure of commons through conservation gazettement, particularly following the expansion of Pian Upe Wildlife Reserve. Studies indicate that these conservation measures have disrupted established grazing systems, contributing to localized overgrazing, increased pressure on marginal lands, and biodiversity decline (Muwanga et al., 2020). By contrast, Kaabong has pursued more adaptive and negotiated approaches to resource access. Cross-border resource-sharing arrangements, most especially the Loyolo Agreement between

communities in Karamoja and neighbouring Turkana pastoralists, have facilitated shared access to pasture and water during periods of stress, illustrating the region's complex political economy of natural resource governance and cooperation (Nicol et al., 2022). These cases demonstrate how access to natural resources in Karamoja is not only environmentally determined but also shaped by policy choices, governance arrangements, and inter-community relations.

Access to forest resources

Forest resources play a central role in sustaining livelihoods, food security, and cultural identity in Karamoja. The region's woodlands, bush lands, and mountainous forest reserves provide a wide range of essential resources, including wild edible plants, fuel wood, construction materials, and medicinal products. Empirical studies show that communities surrounding Mount Moroto, Mount Napak, Mount Kadam, and Akur depend heavily on these forest systems, with more than 100 wild edible plant species documented as critical nutritional supplements, particularly during periods of food scarcity (Ojelel et al., 2019).

Despite their importance, forest ecosystems in Karamoja are undergoing rapid and extensive decline. Evidence from Napak and Moroto indicates that woodland and grassland cover has decreased by between 68% and 87%, driven primarily by agricultural expansion, settlement growth, charcoal production, and mining activities (Egeru et al., 2014; Muwanga et al., 2020). This loss of forest cover has reduced water retention capacity, increased soil erosion, and weakened the provision of key ecosystem services, thereby exacerbating environmental vulnerability and undermining the resilience of forest-dependent communities.

The KIIs indicate that household energy needs across the entire Karamoja are overwhelmingly met by firewood, and charcoal production is on the rise, making wood extraction both a central livelihood strategy and a significant driver of environmental/forest degradation. Empirical evidence shows substantial losses in woody vegetation cover, particularly in Moroto (16%) and Nakapiripirit (36%) between 1985 and 2002, mainly attributable to commercial charcoal production and brick-making activities (Filipová & Johanisova, 2017). In addition, across Karamoja districts, including Kotido, Moroto, Amudat, Nakapiripirit, and Nabilatuk, wood fuel functions as a primary or supplementary source of income for many households. This widespread reliance reinforces a self-perpetuating cycle in which energy poverty, reliance on biomass for livelihoods, and deforestation mutually intensify environmental stress and resource depletion.

The study findings further indicate that a combination of tenure insecurity, conservation gazettement, mining expansion, and limited community participation in decision-making increasingly constrains access to forest resources in Karamoja. The growing commercialisation of charcoal and firewood, particularly in Moroto and Nakapiripirit, has accelerated deforestation and intensified pressure on already fragile forest ecosystems. At the same time, land conversion, overgrazing, and mineral extraction, especially within the Mount Moroto Central Forest Reserve, have undermined ecological integrity and disrupted indigenous livelihoods, with particularly severe impacts on Tepeth communities who depend heavily on forest resources for subsistence and cultural practices (Filipová & Johanisova, 2017; Rugadya & Kamusiime, 2013).

Access to water resources

Access to water in Karamoja is highly uneven, shaped by differences in infrastructure distribution, ecological conditions, and governance arrangements. Moroto has a relatively high concentration of livestock dams. While this has improved local water availability, studies show that it has also contributed to localized overgrazing and land degradation around dam sites (Mugerwa et al., 2014). In contrast, Nakapiripirit is the most water-stressed district in the region, with only four dams serving extensive areas, placing sustained pressure on both livestock and pastoral livelihoods.

Large multipurpose dams, including Kobebe and Nakicumet, play a critical role in supporting livestock watering, small-scale irrigation, and fisheries. However, their effectiveness is increasingly undermined by sedimentation, declining water quality, and inadequate maintenance. Governance challenges further constrain water management, as only 33–40% of water user associations in Karamoja are fully functional, limiting collective action, accountability, and long-term sustainability (Aseete et al., 2024). In some areas, adaptive governance arrangements have emerged: cross-border water-sharing agreements, particularly in Kaabong, allow pastoralists to access water alongside Turkana and Pokot communities during the dry season, helping to reduce drought-related stress (Nicol et al., 2022).

At the household level, access to water for domestic use remains labour-intensive. Survey findings indicate that households spend an average of 13–14 minutes per round-trip to collect water in both the wet and dry seasons, typically making three trips per day. This burden is highly gendered, with water collection primarily undertaken by women (48%), followed by girls (20%) and boys (16%), while men account

for only 2% of water collection responsibility. Although just over half of respondents did not perceive water collection as a significant burden, a substantial proportion reported slight to moderate difficulty, reflecting persistent gendered labour demands and uneven access across districts.

These findings highlight how water scarcity in Karamoja is not only a physical challenge but also a governance and social equity issue, shaped by infrastructure distribution, institutional capacity, and gendered divisions of labour. Strengthening water governance, improving infrastructure maintenance, and addressing gendered access constraints are therefore central to enhancing water security and resilience in the region.

5.3.1.2 Synthesis of key natural resource issues in Karamoja

Table 5 below synthesizes key natural resource challenges across the districts in Karamoja, drawing on the existing literature to highlight both the common pressures and district-specific dynamics affecting grazing land, energy, forests, and water resources.

Table 5: Key resource issues in Karamoja mapped across the literature

District	Grazing Land	Energy	Forests	Water
Moroto	Cropland expansion reduces pasture; High dam concentration in Rupa	Significant woody cover loss; charcoal production	Deforestation, woodland decline	Kobebe dam critical; water quality issues
Napak	Competing land uses; Nakicumet dam important	Charcoal, firewood extraction	Woodland loss, cropland expansion	Nakicumet dam; water for irrigation/ fisheries
Kotido	Commons enclosure, Overgrazing, Soil degradation	Firewood/ charcoal for household key income	Biodiversity loss, soil erosion	Limited water infrastructure
Kaabong	Resource-sharing with Turkana; cross-border grazing	Wood energy extraction	Forest pressure from population	Peace corridors, shared water points

District	Grazing Land	Energy	Forests	Water
Nakapiripirit	Most water-stressed; only 4 dams	Deforestation from energy extraction	High woodland loss	Poor water access, especially outside Namalu

In Moroto, land-use change emerges as a dominant driver of resource pressure. Rapid cropland expansion has reduced available grazing land, while the relatively high concentration of livestock dams has contributed to localized overgrazing and land degradation. At the same time, significant woody cover loss, primarily driven by charcoal production, has accelerated deforestation and woodland decline. Water access remains highly dependent on major infrastructure, such as the Kobebe dam, which is critical for livestock and domestic use but faces persistent water-quality and maintenance challenges.

In Napak, competition among land uses, particularly between grazing, cultivation, and settlement, has intensified pressure on pastoral systems. The Nakicumet dam plays a central role in supporting irrigation and fisheries, yet surrounding land-use change and continued reliance on charcoal and firewood extraction have contributed to woodland loss and cropland expansion. These interconnected pressures underscore the tight coupling between energy needs, forest degradation, and water management in the district.

In Kotido, the enclosure of communal lands, overgrazing, and soil degradation are widely documented, reflecting long-standing tensions around commons governance. Household reliance on firewood and charcoal as key sources of income has increased pressure on forest resources, contributing to biodiversity loss and soil erosion. Water infrastructure remains limited, constraining both domestic use and livestock production and reinforcing vulnerability to drought.

By contrast, Kaabong demonstrates a more negotiated approach to resource access. Cross-border grazing and resource-sharing arrangements with Turkana communities have helped manage pasture and water scarcity, particularly during dry seasons. However, growing population pressure and continued wood energy extraction have increased stress on forest resources. The establishment of peace corridors and shared water points illustrates how cooperative governance mechanisms can partially mitigate resource conflict, even under conditions of scarcity.

Finally, Nakapiripirit stands out as the most water-stressed district, with only four dams serving extensive areas. Severe water scarcity is

compounded by high levels of woodland loss and deforestation, driven mainly by energy extraction. Outside relatively better-served areas such as Namalu, water access remains poor, heightening vulnerability for both pastoral and agro-pastoral households.

Overall, the synthesis highlights that while resource pressures are widespread across Karamoja, their drivers, manifestations, and governance responses vary significantly by district. Grazing land fragmentation, biomass energy dependence, forest degradation, and uneven water infrastructure intersect in different ways across local contexts. These patterns reinforce the need for district-specific, integrated resource governance strategies that address energy needs, land-use planning, water management, and forest conservation in a coordinated manner, while recognising the social and institutional realities shaping access and use.

5.3.1.3 Perceived distribution of community resources

Table 6 presents the household survey findings on community perceptions of how fairly different natural resources have been distributed in Moroto over the past five years. Overall, the findings suggest mixed perceptions of fairness, with notable variation across resource types.

Table 6: Perceived distribution of community resources in Moroto

Community resources in Moroto	Perceived level of distribution in the past 5 years (Percentage-%)				
	Very fair	Fair	Neither fair nor unfair	Unfair	Very unfair
Grazing land/Communal rangelands	15	42	37	5	1
Arable land/Farmland	28	44	15	10	3
Water for livestock	12	40	34	12	2
Water for domestic use	42	46	6	6	0
Forest products	13	64	6	16	1
Energy for use (firewood and charcoal)	24	62	3	10	1
Access to protected area/ conservation area buffer resources	6	52	12	22	8

Grazing land and communal rangelands are primarily perceived as moderately well distributed, with 57% of respondents rating access as either very fair or fair. However, a substantial proportion (37%) viewed

distribution as neither fair nor unfair, indicating ambivalence or uneven access across communities. Only a small minority (6%) perceived the distribution of grazing land as unjust or very unfair, suggesting that customary systems may still play a role in moderating exclusion, despite increasing pressure on rangelands. Perceptions of arable land or farmland are more positive overall, with 72% of respondents reporting fair or very fair distribution. Nevertheless, 13% perceived access as unfair or very unfair, reflecting growing tensions linked to land-use change, agricultural expansion, and competition between cultivation and grazing.

Access to water for livestock is more contested. While 52% perceived distribution as fair or very fair, more than one-third (34%) reported neutral views, and 14% perceived access as unfair or very unfair. This reflects localized water scarcity, competition around dams, and unequal access during dry seasons. In contrast, water for domestic use is perceived as the most equitably distributed resource. An overwhelming 88% of respondents rated domestic water access as fair or very fair, with virtually no respondents describing it as very unfair. This suggests relatively effective prioritisation of household water needs compared to productive uses.

Perceptions of access to forest products and energy resources (firewood and charcoal) are generally positive, with 77% and 86% of respondents, respectively, reporting fair or very fair distribution. However, a minority (17% for forest products and 11% for energy resources) perceived access as unfair, highlighting emerging pressures linked to deforestation, commercialization, and restrictions on forest use. The most contested resource category is access to protected or conservation area buffer resources. Only 58%perceived access as fair or very fair, while nearly 30% viewed it as unfair or very unfair. This indicates significant dissatisfaction with conservation-related access arrangements, likely reflecting restricted access, weak benefit-sharing mechanisms, and limited community involvement in conservation governance.

Overall, the findings show that while many community resources in Moroto are perceived as moderately to fairly distributed, important pockets of dissatisfaction persist, particularly around water for livestock and access to conservation areas. These perceptions point to underlying distributional justice concerns and highlight the need for more inclusive and transparent resource governance mechanisms that balance conservation objectives with local livelihood needs.

5.3.1.4 Perceived changes in the distribution of community resources

Table 7 presents community perceptions of changes in the distribution of key natural resources in Moroto over the past five years. The results indicate that most resources are perceived as either stagnant or worsening, with improvements reported mainly for domestic water access.

Table 7: Perceived changes in the distribution of community resources in the past 5 years

Community resources in Moroto	Perceived changes in distribution (Percentage-%)				
	Much better	Better	No change	Worse	Much worse
Grazing land/Communal rangelands	3	2	76	16	3
Arable land/Farmland	2	5	66	20	7
Water for livestock	2	17	60	16	5
Water for domestic use	24	47	23	5	1
Forest products	2	15	32	45	6
Energy for use (firewood and charcoal)	1	15	36	44	4
Access to protected area/ conservation area buffer resources	1	10	37	43	9

Perceptions of change in grazing land and communal rangelands suggest relative stability rather than improvement. A large majority of respondents (76%) reported no change in distribution, while nearly 19% perceived access as worse or much worse. Only 5% reported any improvement. This pattern suggests that while grazing access may still be governed by customary norms, increasing pressure from land-use change and climate stress has not been accompanied by improvements in equitable access. A similar trend is observed for arable land (farmland). Two-thirds of respondents (66%) perceived no change, while 27% reported that access had worsened over the past five years. The relatively high proportion reporting deterioration reflects growing competition over arable land driven by agricultural expansion, settlement growth, and tenure insecurity.

Perceptions regarding water for livestock are mixed but lean toward stagnation and decline. While 19% of respondents perceived some improvement, the majority (60%) reported no change, and 21%

perceived worsening access. This likely reflects the uneven functionality of livestock dams, localized overuse, and weak management arrangements. In contrast, water for domestic use stands out as the only resource showing clear perceived improvement. A substantial majority (71%) reported that distribution had improved or much improved, while only 6% reported deterioration. This finding suggests relative success in domestic water interventions compared to other resource sectors, possibly due to prioritization of household water supply. FGDs and KIIs further confirmed that the improvement in domestic water access has not been matched by similar gains in other communal resources, many of which continue to face mounting pressure and uncertain long-term sustainability.

Perceptions of forest products have deteriorated markedly. Nearly 51% of respondents reported that access had worsened or much worsened, compared with only 17% who reported improvement. This decline likely reflects increased deforestation, commercialization of wood resources, and restrictions linked to conservation and forest governance. A similar pattern is observed for energy resources, particularly firewood and charcoal. Almost half of the respondents (48%) reported worsening access, while only 16% perceived improvement. These perceptions are consistent with growing pressure on woody biomass, increased demand, and declining forest cover.

The most negative perceptions relate to access to protected-area buffer resources. Over 52% of respondents reported that access had worsened or become much worse, while only 11% perceived improvement. This highlights persistent dissatisfaction with conservation-related access arrangements and suggests increasing tension between conservation objectives and local livelihood needs.

In all, the findings indicate that improvements in resource distribution have been limited and uneven, with domestic water access representing a notable exception. Most productive and livelihood-critical resources, such as grazing land, forests, energy, and conservation buffer resources, are perceived to be stagnating or deteriorating, pointing to growing distributional pressures and governance challenges. These trends underscore the need for more inclusive, adaptive, and participatory resource governance approaches that respond to both environmental change and community livelihood realities.

5.3.1.5 Perceived beneficiaries of community resources in Moroto

Table 8 below presents community perceptions of the primary beneficiaries of local natural resources in Moroto, based on respondents' ranking of beneficiary groups. The findings reveal a

highly differentiated pattern of perceived benefit distribution, reflecting underlying power relations and governance dynamics.

Table 8: Major beneficiaries from community resources in Moroto

Major beneficiaries from local natural resources in Moroto	First rank (%)	Second Rank (%)	Third Rank (%)	Total (%)
Ordinary residents/host communities	34	15	18	67
Investors	37	9	7	53
Government agencies	14	22	17	53
Political leaders	3	19	26	48
Government workers/ officials	4	12	11	27
Traditional leaders	2	10	10	22
Others	4	8	6	18
Elites	2	2	3	7
Brokers	0	2	2	4
Refugees	0	1	0	1

Ordinary residents and host communities are most frequently identified as beneficiaries, with 67% of respondents ranking them among the top three beneficiaries. However, they are less often ranked first (34%) than investors, who receive the highest first-rank score (37%). This suggests that while local communities do benefit from natural resources to some extent, they are not perceived as the primary beneficiaries.

Investors and government agencies emerge as dominant actors in the distribution of resource benefits. Both groups are ranked among the top three beneficiaries by 53% of respondents. Investors' prominence in the first-rank category indicates strong perceptions that commercial actors derive substantial and immediate benefits from land, forest, and mineral resources. Government agencies, while less frequently ranked first, appear consistently across all ranking levels, pointing to their central role in resource control and allocation.

Political leaders also feature prominently, with 48% of respondents ranking them among the primary beneficiaries. Although they received a low first-rank score (3%), their high second- and third-rank placements suggest widespread perceptions of indirect or mediated benefit capture through political influence and decision-making authority. In contrast, government workers, traditional leaders, and other local actors are

perceived as secondary beneficiaries, with moderate representation across rankings. Traditional leaders, in particular, are less frequently identified as primary beneficiaries, which may reflect the erosion of customary authority in formal resource governance processes. Marginalised groups, including refugees, brokers, and informal actors, are perceived to benefit the least. Refugees, in particular, are almost absent from the rankings (1% total), highlighting their limited access to and benefit from community natural resources.

Overall, the findings point to a distributional imbalance in access to and benefits from natural resources in Moroto. While local communities remain involved in resource use, investors, state institutions, and political elites are perceived to capture a disproportionate share of benefits, reinforcing long-standing concerns around inequitable resource governance. These perceptions underscore the importance of strengthening inclusive benefit-sharing mechanisms, transparency, and community participation to address distributional justice challenges in the management of natural resources.

FGDs identified several barriers that limit community members' ability to benefit from development projects in Moroto. Participants pointed to the absence of national identification documents as the main constraint, alongside exclusion stemming from non-registration or from registrations reportedly overlooked. Limited outreach by project implementers further reduced awareness and participation, particularly among remote and marginalised households. Respondents also highlighted favouritism, often linked to education levels or connections to local leaders, as shaping who ultimately benefits from projects. Inadequate access to information about available opportunities and participation procedures was repeatedly cited, while cases of discrimination against persons with disabilities were reported, further undermining inclusive access to project benefits.

5.3.1.6 Household access to resources in Moroto district

Table 9 below summarises household perceptions of access to key natural resources in Moroto district. The findings reveal substantial variation in both the reliability and adequacy of access across resource types.

Table 9: Household access to resources in Moroto district

Household access to resources in Moroto	Perceived level of access (%)				
	Reliable and adequate	Regular but limited	Occasional but inadequate	Limited or irregular	No access
Grazing land	50	26	10	6	8
Farmland	55	30	6	6	3
Water sources	70	23	4	3	0
Forest products	37	43	5	14	1
Energy for cooking (firewood / charcoal)	43	44	7	6	0
Mining sites	48	17	9	11	15

Access to water sources is perceived as the most secure, with 70% of households reporting reliable and adequate access and a further 23% indicating regular but limited access. Notably, no households reported having no access to water, suggesting a relatively strong prioritisation of domestic water supply over other resources. Access to farmland and grazing land is also relatively favourable, though less uniform. For cropland, 55% of households reported reliable and adequate access, while 30% described access as regular but limited. Grazing land shows slightly lower adequacy: 50% report reliable access, and 26% report regular but limited access. However, nearly one-quarter of households (24%) experience occasional, irregular, or no access to grazing land, indicating emerging pressures on communal rangelands.

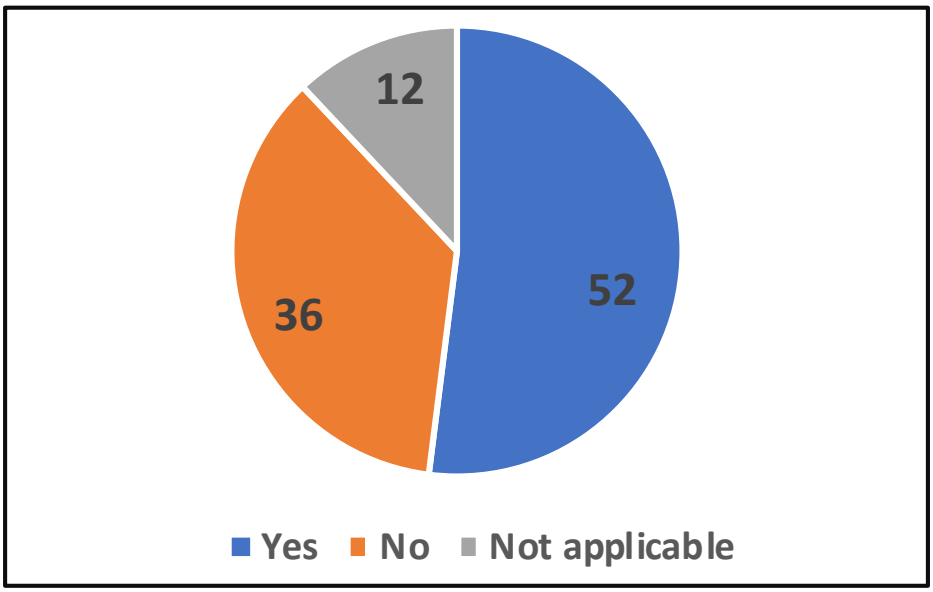
Access to forest products and cooking energy (firewood and charcoal) is more constrained. While 80% of households reported either reliable or regular access to forest products, 15% reported limited or irregular access, and 1% reported no access. Similarly, access to cooking energy is widespread but increasingly constrained, with 44% reporting regular but limited access, reflecting growing pressure on woody biomass resources. Access to mining sites is the most unevenly distributed resource. Although 48% of households reported reliable and adequate access, likely reflecting engagement in artisanal or small-scale mining, a substantial proportion (35%) reported limited, irregular, or no access. This variability highlights the selective nature of mining opportunities and suggests that benefits from extractive activities are not evenly shared across households.

Overall, the findings indicate that while basic resources such as water and farmland are relatively accessible, access to productive and income-generating resources, particularly forests, energy, and mining sites, is more uneven and increasingly constrained. These patterns reflect underlying distributional and governance challenges and underscore the need for more inclusive and sustainable resource management approaches in Moroto.

5.3.1.7 Access to livelihood improvement projects and benefits

Figure 8 shows whether households have ever benefited from development or intervention projects, while Table 10 summarises the types of benefits they have accessed. Together, the results indicate that although a substantial proportion of households' report having benefited from projects, access to benefits is uneven and varies in both depth and form. The findings in figure 8 suggest that project benefits are not universal, with a notable share of households reporting no direct benefit. Among households that have accessed project support, the benefits are predominantly short-term and material, rather than transformative or sustained.

Figure 8: Ever benefited from projects



As detailed in Table 10, the most common benefits include food assistance, agricultural inputs, livestock support, water-related infrastructure, and training or sensitisation activities. These forms of support primarily address immediate needs and coping capacity.

Table 10: Nature of benefits accessed by households

Nature of benefits accessed in Moroto	Percentage (%)
Cash	22
Food	13
Services	16
Farm inputs	16
Jobs	5
Compensation	3
Others	2

Less frequently reported are benefits linked to long-term livelihood strengthening, such as access to credit, durable income-generating assets, or secure employment opportunities. This pattern suggests that while projects contribute to short-term welfare improvements, their capacity to deliver sustained livelihood impacts remains limited.

Overall, the combined evidence from Figure 8 and Table 10 points to selective and uneven access to project benefits, reinforcing earlier findings on perceived inequities and barriers to participation. The dominance of short-term assistance further underscores the need for development interventions that move beyond episodic support toward inclusive, transparent, and resilience-oriented programming that reaches a broader cross-section of households.

The insights from KIIs and FGDs indicate that mining companies, particularly Tororo Cement and Sunbird Minerals, have provided compensation for land acquired for mining operations and supported community welfare through corporate social responsibility (CSR) initiatives. Reported CSR contributions include the construction of water sources, the provision of food assistance, support for health services (including ambulance donations), and the provision of education scholarships. Regarding compensation, participants reported that communities in Tapac sub-county received approximately UGX 40 billion from Tororo Cement for limestone mining activities. By comparison, communities in Rupa sub-county received about UGX 8 billion from Sunbird Minerals in compensation for marble extraction. While these payments and CSR initiatives were acknowledged as significant, discussions also highlighted variations in compensation scales across locations, raising questions about equity, transparency, and longer-term livelihood outcomes.

5.3.1.8 Inequities in mineral extraction and benefit sharing

Despite the region's substantial endowment of gold, marble, and limestone, mineral extraction in Karamoja is characterised by deep inequities in both the exploitation processes and the benefits shared. Empirical studies consistently show that mining activities have delivered limited and uneven livelihood improvements for local communities, while the majority of economic gains accrue to political elites and external investors. At the same time, local populations disproportionately bear the costs of environmental degradation, social disruption, and economic marginalisation, reinforcing long-standing patterns of exclusion (Ategeka, 2022; Houdet et al., 2014; Namutebi, 2017; Czuba, 2024).

Evidence from KIIs and FGDs further points to widespread elite capture of mining rights. Participants reported that politically connected individuals, including senior government officials and their affiliates, have acquired extensive land and mineral licences, facilitated by weak protection of communal land tenure, limited transparency in licensing processes, and, in some cases, the de-gazettement of conservation areas (Czuba, 2024). These dynamics have systematically excluded communities from meaningful participation in decisions over mineral access and use.

Opportunities within the mining value chain remain largely inaccessible to the local populations. The absence of skills development programmes, targeted capacity building, and enforceable local content requirements has resulted in the dominance of external actors, including expatriate labour. In contrast, local residents remain confined to low-paid, informal, and high-risk activities. Although more than 140 mining companies were operating in Karamoja by 2015, artisanal and small-scale miners—predominantly local residents, received minimal returns and worked under hazardous conditions. FGDs documented fatalities from tunnel collapses, frequent occupational injuries, and exploitative labour arrangements, with women and youth disproportionately affected.

Furthermore, promised benefits associated with mining, such as employment opportunities, compensation, and infrastructure development, were reported to be inconsistently delivered and often short-lived. Customary land tenure systems have been further weakened by speculative land acquisition and the licensing of land to external actors, eroding community bargaining power and intensifying land-related conflict. Low literacy levels, limited access to information, and reliance on traditional decision-making structures further constrain

communities' ability to negotiate fair compensation or assert mineral rights effectively (Rugadya, 2020).

These processes have contributed to escalating tensions between communities, mining companies, and state authorities, with reported cases of forced evictions, restricted access to water, environmental damage, and violent confrontations involving security forces. Overall, mining in Karamoja has reinforced structural inequalities, privileging short-term economic extraction over social and ecological well-being and deepening mistrust between communities, investors, and the state (Czuba, 2024). Addressing these inequities requires strengthening legal protection for communal land, enforcing transparent and inclusive benefit-sharing mechanisms, and embedding meaningful community participation across all stages of the mining value chain, from licensing and extraction to revenue management and post-mining restoration.

5.3.2 Procedural Justice

In Karamja, procedural justice is shaped by the interaction between weak formal state institutions and strong customary governance systems. Access to formal justice mechanisms, such as courts and police, is severely constrained by limited institutional capacity, corruption, geographic remoteness, and poor alignment with local norms. In practice, most serious cases are handled by a single travelling magistrate, leaving large sections of the population with minimal access to timely and impartial state justice (Hopwood et al., 2018).

Consequently, justice is mainly administered through customary forums (ekokwa) led by male elders. These mechanisms emphasise collective responsibility and typically impose sanctions such as cattle fines, compensation payments, or corporal punishment. While customary systems are widely regarded as culturally legitimate and more accessible than formal courts, evidence shows that they are often costly, exclusionary, and gender-biased, limiting effective participation by women, youth, and other marginalised groups. Moreover, their reliance on patriarchal norms and punitive practices can reinforce social hierarchies and expose vulnerable individuals to harsh or discriminatory outcomes (Hopwood et al., 2018).

In all, procedural justice in Karamoja is characterised by restricted access to impartial state justice and heavy reliance on customary mechanisms that, although locally accepted, provide uneven protections and limited safeguards for vulnerable populations. This dual system underscores the need for justice reforms that strengthen state presence while engaging constructively with customary institutions to promote inclusivity, fairness, and rights-based protections.

5.3.2.1 Participation and Representation of Pastoralists, Women, and Youth in Environmental Governance

Across the Karamoja region, participation in environmental governance by pastoralists, women, and youth is shaped by a combination of shared structural constraints and district-specific dynamics. Historically, communal land management systems, such as those practiced by the Jie in Kotido, played a central role in regulating access to rangelands and natural resources. However, state-led interventions, including disarmament, enclosure of grazing lands, and the formalisation of grazing areas, have progressively disrupted these systems. These changes have weakened customary authority over rangelands, constrained pastoral mobility, and reshaped local governance arrangements, prompting many households to diversify livelihoods into activities such as charcoal production and brick-making. These shifts affect elders, herdsmen, women, and youth alike, altering both resource-use patterns and participation in governance processes (Filipová & Johanisova, 2017).

Despite these transformations, decision-making authority remains highly concentrated, particularly among male elders, while women's and youth's participation remains limited and largely informal. Women's roles are often confined to implementation and labour rather than governance, even though they play central roles in natural resource use, household livelihoods, and climate adaptation. Some NGO-led initiatives have begun to promote women's involvement in natural resource management, peace building, and conflict resolution, especially around strategic water points and migratory corridors, signalling incremental but uneven progress toward more inclusive governance (Filipová & Johanisova, 2017). However, these initiatives have not fundamentally shifted entrenched power relations within local decision-making structures.

Climate resilience and livelihood diversification programmes have further reshaped gender roles, particularly in districts such as Nabilatuk, where men are increasingly engaged in crop farming. At the same time, women are shouldering expanding responsibilities in petty trade, household labour, and income generation. Although women's economic contributions have grown, their exclusion from formal governance structures has largely persisted, resulting in heavier workloads without corresponding decision-making power. While community consultations often include both men and women, meaningful participation remains limited, with elders retaining decisive authority over access to and use of key resources (Schumann et al., 2025).

These qualitative patterns are reflected in the household survey findings on representation in environmental decision-making structures in Moroto district (Table 11). The elderly are the most represented group, with 40% indicating they are fully described and 28% to a large extent. This underscores the continued dominance of age-based authority and customary leadership in environmental governance. Indigenous groups also show relatively higher representation, with 29% reported as fully represented and 20% to a large extent. However, the fact that 43% reported limited or no representation indicates that recognition of indigenous identity does not consistently translate into meaningful influence, particularly where external actors, conservation regimes, or commercial interests are involved.

Table 11: Social groups' representation on local environmental committees or decision-making structures

Social groups	Representation on local environmental committees or decision-making structures				
	Fully represented	To a large extent	To some extent	To a small extent	Not at all
Women	18	24	18	22	18
Youths	18	20	18	24	20
Refugees	1	6	2	13	78
Indigenous groups	29	20	8	23	20
Elderly	40	28	9	12	11
Persons with Disabilities (PWDs)	15	14	22	27	22

In contrast, women and youth exhibit moderate but constrained representation. Only 18% of respondents reported that women are fully represented, while a combined 40% indicated that women are represented to a small extent or not at all. Similarly, youth representation remains limited, with 44% reporting small or no representation. These patterns highlight persistent gendered and generational exclusion from formal decision-making spaces, despite women's and youth's central roles in livelihoods and adaptation strategies. Persons with Disabilities (PWDs) face pronounced marginalisation: less than one-third were reported as entirely or largely represented. At the same time, 49% were perceived as having little or no representation, pointing to structural barriers and weak inclusion mechanisms within local governance institutions.

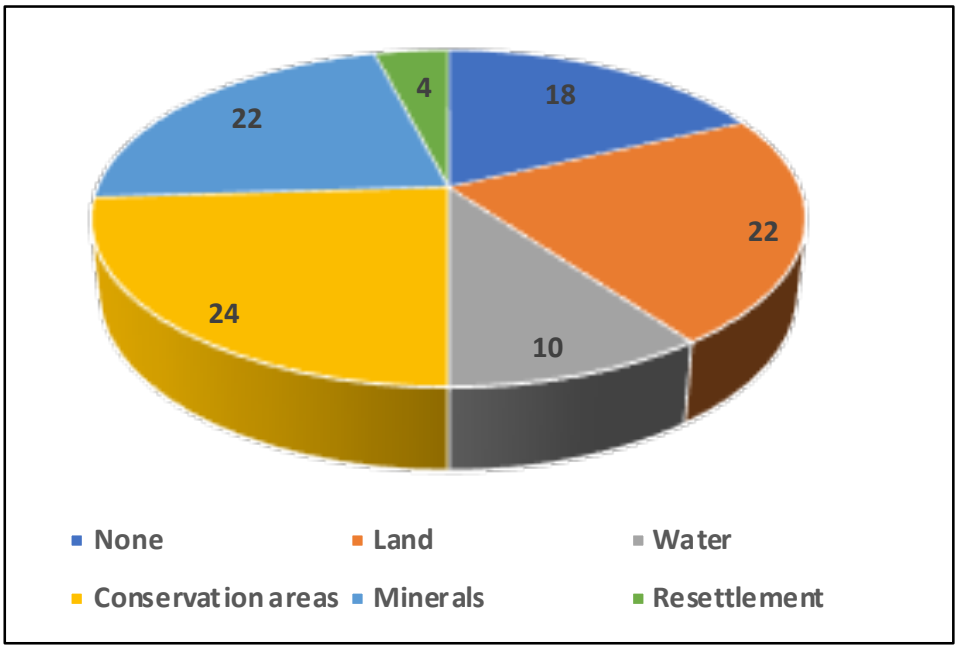
The most severe exclusion is observed among refugees, with 78% of respondents reporting no representation at all. This finding reflects Karamoja's status as a non-refugee-hosting region, while underscoring broader patterns of recognitional exclusion in which non-local or marginalised groups are absent from environmental governance processes.

Overall, the findings demonstrate that environmental decision-making structures in Karamoja remain dominated by socially powerful groups, particularly elders, while women, youth, PWDs, and refugees experience limited or negligible representation. This imbalance reinforces procedural and recognitional injustice by restricting meaningful participation in decisions over resource access, management, and benefit-sharing. Addressing these gaps will require deliberate institutional reforms to expand inclusive representation, recognise marginalised groups as legitimate governance actors, and strengthen procedural fairness in local environmental governance systems.

5.3.2.2 Awareness of decisions made on community resources

During the household survey in Moroto, respondents were asked if they were informed about the decisions affecting community resources. The results, shown in Figure 9, highlight uneven and selective access to information across different resource sectors. Overall, 24% of respondents reported being informed about decisions related to conservation areas, making this the most commonly cited area of awareness. This is followed by land and mineral resources, each cited by 22% of respondents, suggesting that information dissemination is somewhat more visible where conservation restrictions, land allocation, or extractive activities are involved. By contrast, awareness of decisions concerning water resources is notably lower, with only 10% of respondents indicating that they were informed. Even more limited is awareness of resettlement decisions, reported by just 4% of respondents.

Figure 9: Awareness of decisions made on community resources



Notably, 18% of respondents reported not being informed about decisions regarding community resources, underscoring a significant information gap within local governance processes. Where information is noted, it is often partial or delayed, indicating that consultation frequently occurs after key decisions have already been made rather than during planning or negotiation stages. This pattern reflects weak transparency and limited downward accountability in community resource governance.

These findings point to a procedural justice gap. Although decisions with significant implications for livelihoods and access to land, water, and minerals are being made, many community members, especially women, youth, and pastoral households, remain excluded from timely and meaningful information flows. This limited awareness undermines trust in institutions, weakens accountability, and constrains communities' ability to influence outcomes that directly affect their well-being.

5.3.2.3 Medium for disseminating information on environmental decisions

Table 14 summarises the main channels through which information on environmental and natural resource decisions is communicated to communities in Moroto district. The findings show that information dissemination relies heavily on local administrative and traditional

structures, with limited use of mass or digital communication platforms.

Table 12: Medium of disseminating information on environmental decisions in Moroto district

Medium of exchange of information	Environmental resources (%)				
	Land	Water	Conservation areas	Minerals	Resettlement
LC/Community meeting	70	58	54	63	20
Traditional leaders	34	12	13	12	15
Radio	2	0	2	4	0
NGOs/CBOs	0	0	2	0	0
Noticeboard	0	0	0	0	0
Phone and/or Social media	2	0	0	0	0
Local resources management committees	20	12	19	2	2
Others	2	0	19	7	7

Local Council (LC) and community meetings are the dominant medium across all resource categories. They account for 70% of information dissemination on land-related decisions, 58% for water, 54% for conservation areas, and 63% for minerals. However, their role is markedly weaker for resettlement-related decisions (20%), suggesting that information on displacement or relocation is less systematically shared with affected communities.

Traditional leaders play a secondary but still notable role, particularly in land-related matters (34%), reflecting the continued relevance of customary authority in land governance. Their involvement is much lower for water, conservation, and mineral resources, indicating a more limited role in technically or externally driven decision processes. The role of local resource management committees is uneven. While they are relatively visible in land (20%) and conservation (19%) decisions, their involvement in mineral (2%) and resettlement (2%) decisions is minimal, pointing to institutional marginalisation in high-stakes or investor-driven sectors. In contrast, radio, NGOs/CBOs, noticeboards, and phone-based or social media communication play a negligible role across all resource categories. NGOs such as KHH, Welthungerhilfe, and VSF Belgium were mentioned as information sources, but their role remains underutilized. Village Health Teams (VHTs) and Animal

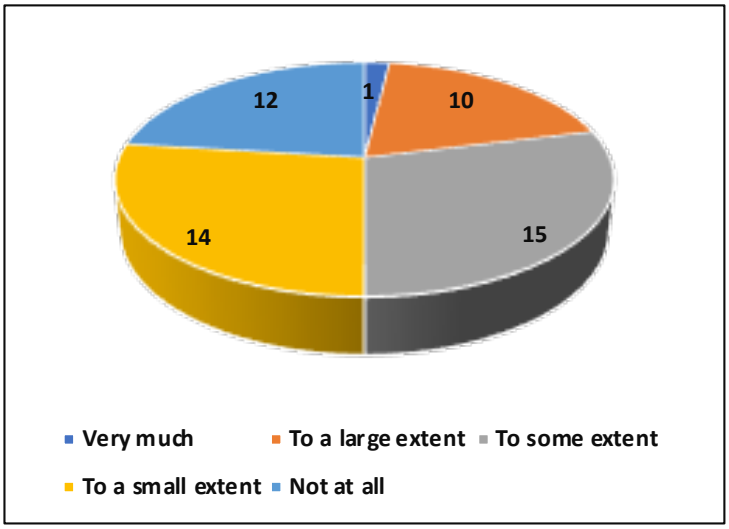
Health Workers (AHWs) also serve as secondary information channels. Radio accounts for only 2–4% of information dissemination for land, conservation, and minerals, while NGOs/CBOs and noticeboards are virtually absent. The limited use of digital platforms further reflects infrastructural constraints and weak institutional investment in inclusive communication strategies.

These findings indicate that information on environmental decisions in Moroto is highly centralized within face-to-face and authority-driven forums, which may exclude women, youth, persons with disabilities, and more mobile pastoral households who are less able to attend meetings. This communication pattern reinforces existing procedural justice gaps, as access to information, and thus participation, remains contingent on proximity to local power structures rather than guaranteed through transparent and inclusive systems.

5.3.2.4 Influence of community views on resource-related decision-making

Despite some reported engagement in decision-making in Moroto, the influence of community views on resource-related decisions in the district remains limited. The study's findings, shown in Figure 10, illustrate respondents' perceptions of the extent to which community views influence decisions related to natural resources. The results indicate that community influence on decision-making is generally limited, with relatively few respondents perceiving strong responsiveness from decision-makers.

Figure 10: The extent to which community views influence decision-making on resources



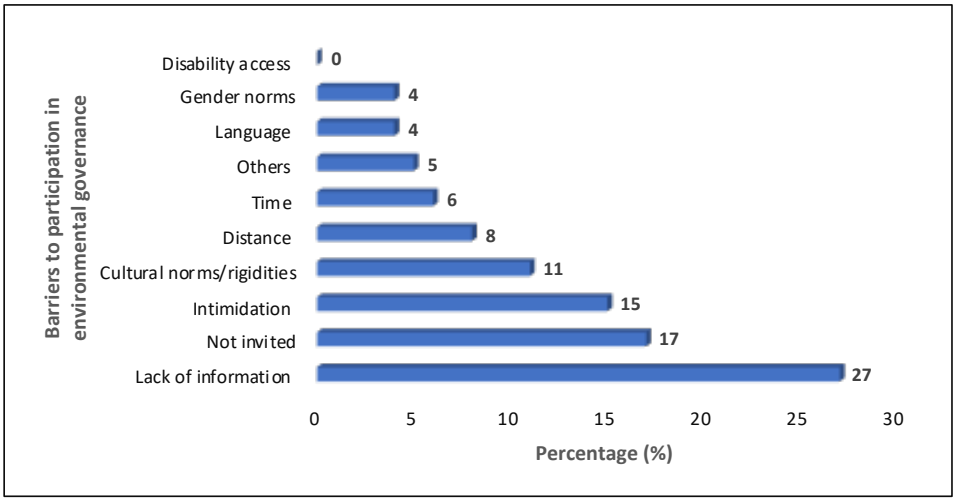
Only 1% of respondents reported that community views influence decisions very much, while 10% indicated that they influence decisions to a large extent. Together, these findings suggest that just 11% of households perceive a high level of community influence in resource governance processes. By contrast, the largest share of respondents (15%) reported that community views influence decisions to some extent, indicating partial or inconsistent consideration of local input. A further 14% stated that influence is to a small extent, while 12% reported that community views are not considered at all. Taken together, these results show that more than one-quarter of respondents (26%) perceive minimal or no influence over decisions affecting community resources.

Overall, the findings point to a significant procedural justice deficit. Although consultation mechanisms may exist, they appear to offer limited substantive influence, with community input often acknowledged but not meaningfully integrated into final decisions. This pattern reinforces earlier evidence of weak transparency, limited information sharing, and uneven representation, and suggests that participation is frequently symbolic rather than empowering. The limited perceived influence of community views undermines trust in governance institutions and constrains communities' ability to shape decisions over land, water, conservation, and mineral resources that directly affect their livelihoods and wellbeing. Strengthening procedural justice will require moving beyond consultation toward genuine co-decision-making, where community perspectives are systematically incorporated into planning, implementation, and monitoring processes.

5.3.2.5 Barriers to Participation in Environmental Governance

The study identified several barriers that significantly limit community participation in environmental governance. Figure 11 presents respondents' perceptions of the main obstacles limiting community participation in environmental governance. The findings indicate that informational, institutional, and socio-cultural constraints play a central role in shaping who participates and who is excluded from decision-making processes.

Figure 11: Barriers to participation in environmental governance



The most frequently reported barrier is lack of information, cited by approximately 28% of respondents. This highlights persistent weaknesses in communication, transparency, and outreach, and reinforces earlier findings that many community members are unaware of decisions, meeting processes, or opportunities to engage in resource governance. The second most frequent barrier is not being invited to participate (18%), suggesting that exclusion is often procedural rather than voluntary. This points to gatekeeping practices within local institutions, where participation is mediated through selective invitations rather than open and inclusive processes. Intimidation was reported by roughly 15% of respondents, indicating that fear of authority figures, political actors, or powerful community members discourages active engagement. This reflects power asymmetries within governance structures and undermines safe and meaningful participation, particularly for women, youth, and marginalized groups.

Cultural norms and rigidities account for approximately 12% of reported barriers, underscoring the role of entrenched social hierarchies, especially age and gender-based norms, that restrict who can speak, influence decisions, or challenge authority. Related structural barriers include distance to meeting venues (9%) and time constraints (7%), which disproportionately affect pastoral households, women with care responsibilities, and poorer community members. Lower but still notable barriers include language limitations (5%), gender norms (4%), and other factors (approx. 6%), while access constraints for persons with disabilities were reported least frequently (approx. 1%). Although disability access appears less frequently cited, this likely

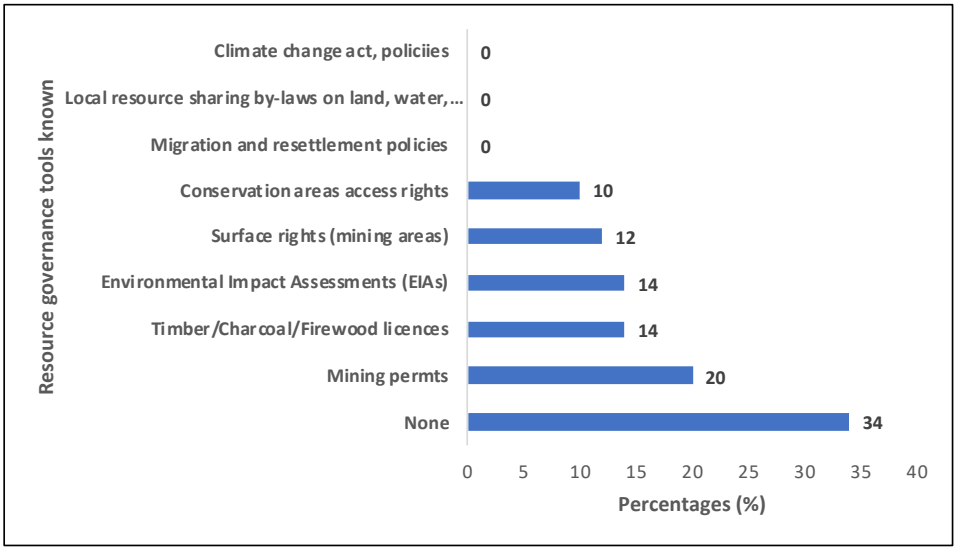
reflects under-recognition rather than absence of barriers, consistent with broader patterns of exclusion identified in representation and participation data.

Overall, the findings demonstrate that barriers to participation in environmental governance are systemic rather than individual, rooted in limited information flows, exclusionary institutional practices, power imbalances, and socio-cultural norms. These constraints contribute to a pronounced procedural justice deficit, where participation opportunities exist in principle but remain inaccessible in practice for many community members. Addressing these barriers will require deliberate reforms to improve transparency, broaden invitations, protect participants from intimidation, and adapt governance processes to be more inclusive of diverse social groups.

5.3.2.6 Awareness of Resource Governance Tools in Moroto District

The study examined the environmental governance tools used in Karamaja. Figure 12 below illustrates respondents' awareness of key natural resource governance tools operating in Moroto district.

Figure 12: The known resource governance tools in Moroto district



The findings reveal very low overall familiarity with formal governance instruments, pointing to significant gaps in knowledge, transparency, and civic engagement. More than one-third of respondents (35%) reported not being aware of any natural resource governance tools. This substantial lack of awareness highlights a critical information deficit. It suggests that many community members engage with natural resources without knowledge of the legal and regulatory frameworks

governing access, use, and benefit sharing.

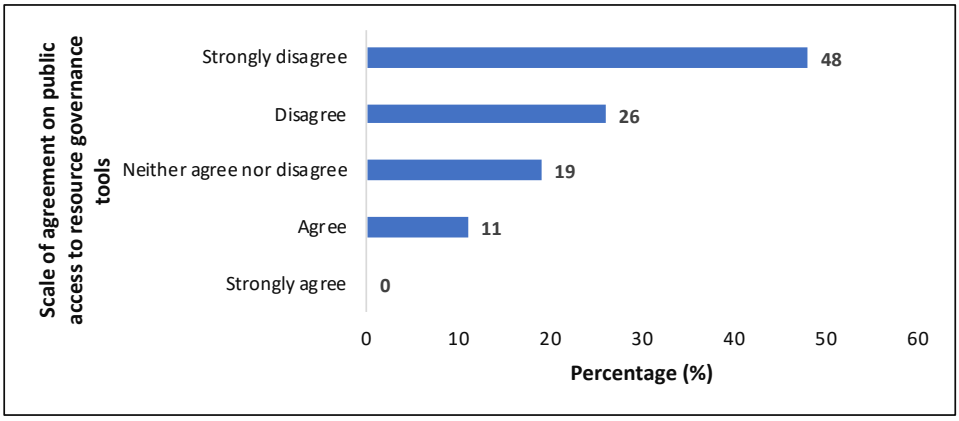
Among respondents who reported some awareness, mining permits were the most commonly known tool (20%), followed by timber, charcoal, and firewood licensing systems (15%) and Environmental Impact Assessments (EIAs)(15%). Awareness of surface rights in mining areas was reported by 12%, while conservation area access rights were cited by 10%. In contrast, awareness of broader policy frameworks, such as the Climate Change Act and related policies, local resource-sharing by-laws, and migration or resettlement policies, was negligible.

These patterns indicate that community awareness is concentrated around extractive and enforcement-oriented instruments, particularly those associated with mining and biomass regulation, while rights-based, participatory, and protective governance tools remain invisible primarily to local populations. This imbalance reflects a governance environment in which regulatory mechanisms are experienced mainly through restriction and compliance rather than empowerment and co-management.

The above findings point to a pronounced procedural and recognitional justice gap. Limited awareness of governance tools constrains communities' ability to claim rights, engage meaningfully in decision-making, or hold authorities and investors accountable. Without deliberate efforts to improve legal literacy, transparency, and community outreach, formal governance frameworks risk reinforcing exclusion rather than supporting equitable and sustainable resource management.

In Figure 13 below, respondents' perceptions of the extent to which the resource governance tools are publicly available and accessible in Moroto are summarised.

Figure 13: Perceived public availability and access to resource governance tools



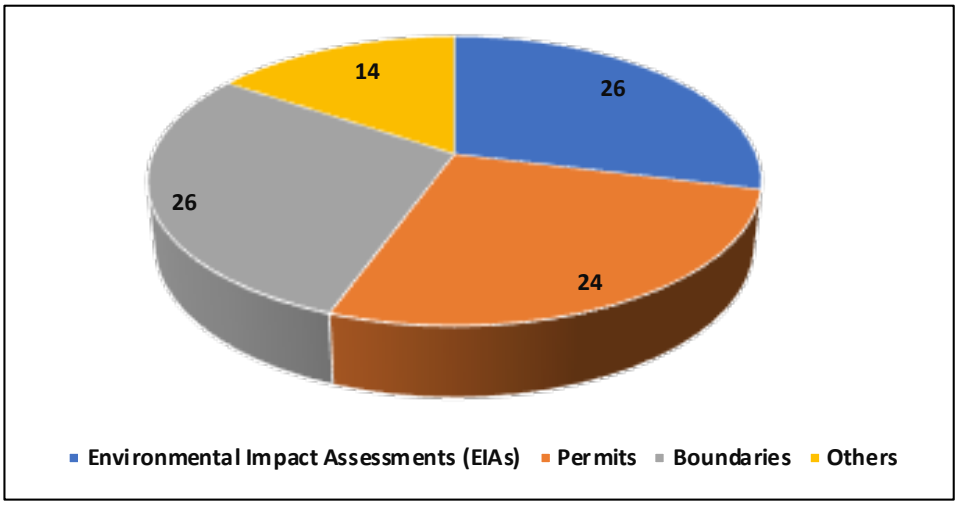
The findings indicate minimal perceived access, reinforcing earlier evidence of weak transparency and low legal awareness. The majority of respondents expressed negative views. Nearly 50% strongly disagreed that resource governance tools are publicly accessible, while a further 27% disagreed, meaning that approximately three-quarters of respondents (about 77%) do not perceive that resource governance tools are readily available to the public. This strong consensus points to a widespread perception that laws, permits, guidelines, and decision-making instruments are opaque and inaccessible to ordinary community members. Around 20% of respondents neither agreed nor disagreed, suggesting uncertainty or limited exposure rather than confidence in access. Only a small proportion (about 10%) agreed that governance tools are publicly available, and virtually no respondents strongly agreed, underscoring the depth of the perceived access gap.

These findings reveal a pronounced procedural and recognitional justice deficit. When governance tools are not visible or accessible, communities are unable to understand their rights, obligations, or avenues for participation and redress. This lack of access limits meaningful engagement in resource governance, weakens accountability of authorities and investors, and reinforces power asymmetries between local communities and decision-makers. Improving public access to governance tools through transparency, legal literacy, and inclusive communication remains essential to advancing equitable and participatory environmental governance in Moroto.

Furthermore, the study found that access to information on environmental governance in Moroto is severely constrained (see

Figure 14). The findings indicate difficulties are most frequently reported for accessing Environmental Impact Assessments (EIAs) and information on resource boundaries, each cited by 26% of respondents. Limited access to EIAs suggests that communities are often excluded from information on environmental risks, mitigation measures, and compliance processes associated with development and extractive activities. Similarly, challenges in accessing information on boundaries, including land, conservation, and mining boundaries, point to uncertainty and contestation over resource access and jurisdiction.

Figure 14: Resource governance tools that are difficult to access in Moroto



Permits are another commonly cited difficult-to-access governance tool, reported by 24% of respondents. This reflects procedural barriers in understanding, obtaining, or engaging with permitting systems for land use, mining, and natural resource extraction, which are often centralized, technical, and poorly communicated at the local level. A smaller proportion (14%) identified other governance tools as difficult to access, indicating the presence of additional, context-specific obstacles not fully captured by the main categories.

These findings highlight a pronounced procedural justice deficit in resource governance. When key tools such as EIAs, permits, and boundary information are inaccessible, communities are unable to meaningfully participate in decision-making, monitor compliance, or seek redress for environmental harms. These access barriers reinforce power asymmetries between communities, state institutions, and investors, and contribute to perceptions of exclusion and mistrust. Addressing these challenges requires improving transparency,

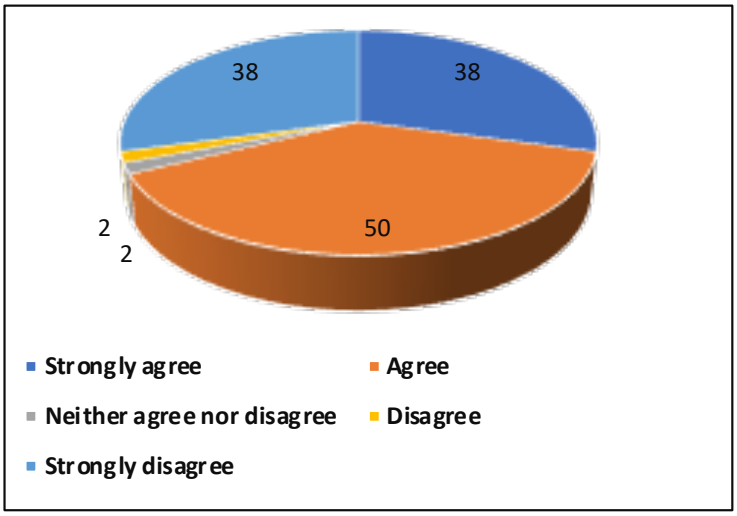
decentralizing access to governance information, and strengthening community-facing mechanisms for engagement and accountability.

5.3.2.7 Transparency in the disclosure of project revenues and benefits

The study also examined the degree of transparency in the disclosure of project revenue and benefits. Figure 15 presents respondents' views on whether local leaders disclose revenues or benefits derived from development and resource-related projects. The results reveal sharply divided perceptions, indicating contested levels of transparency and accountability in local governance.

Half of the respondents (50%) agree that local leaders disclose project revenues or benefits, while a further 38% strongly agree. Taken together, this suggests that 88% of respondents perceive some level of disclosure, indicating that information-sharing does occur in specific contexts or for particular projects. However, a significant minority expressed opposing views. Thirty-eight percent (38%) strongly disagreed, and an additional 2% disagreed, indicating that 40% of respondents perceive little or no disclosure of project-related revenues or benefits. A small proportion (2%) neither agreed nor disagreed, suggesting uncertainty or inconsistent exposure to disclosure practices.

Figure 15: Degree of agreement on whether local leaders disclose revenues or benefits from projects



The coexistence of high agreement and high disagreement points to uneven and selective transparency, where disclosure may depend on the type of project, location, leadership practices, or the social position of community members. This divergence aligns with earlier findings on

limited access to governance tools, uneven information dissemination, and restricted participation in decision-making processes.

These findings highlight a procedural and accountability justice gap. While some communities perceive openness in revenue and benefit disclosure, a substantial proportion remain excluded from information flows, undermining trust in leadership and limiting communities' ability to hold authorities accountable. Strengthening standardized disclosure mechanisms, inclusive communication, and community oversight structures is therefore critical to ensuring equitable and transparent benefit-sharing in local resource governance.

5.3.2.8 Role of local and traditional institutions in decision-making

The study found that local and traditional institutions play a central, though contested, role in decision-making across Karamoja. Authority has historically been vested in male elders who govern livestock management, migration, and natural resource use through communal gatherings at sacred sites (akirikets). Together with kraal leaders, these institutions have relied on indigenous knowledge and consensus-based approaches to manage pastures and water sustainably (Filipová & Johanisova, 2017).

Despite decentralization reforms, traditional and formal governance systems primarily operate in parallel rather than in an integrated manner. KIIs and FGDs revealed that customary institutions remain widely preferred for dispute resolution, as they are viewed as more accessible, legitimate, and culturally resonant than formal courts, which are often perceived as slow, corrupt, and disconnected from local realities (Obonyo & Muhumuza, 2021). Consequently, councils of elders and traditional tribunals (akiwo) continue to resolve most local disputes, particularly minor civil cases.

Traditional institutions have also been instrumental in facilitating resource sharing and conflict resolution across national borders. Cross-border agreements, such as Kenya–Uganda grazing arrangements, enable reciprocal access to pasture and water for Turkana and Karamojong pastoralists during dry seasons, reducing conflict (See Figure 16). Local structures supporting coordinated livestock mobility, boundary mediation, and trust-building have further strengthened peaceful resource access. Increasingly, women and youth are participating in localized governance structures, particularly peace committees, water management groups, and pastoral mobility tracking teams, helping to narrow gender gaps in resource governance.

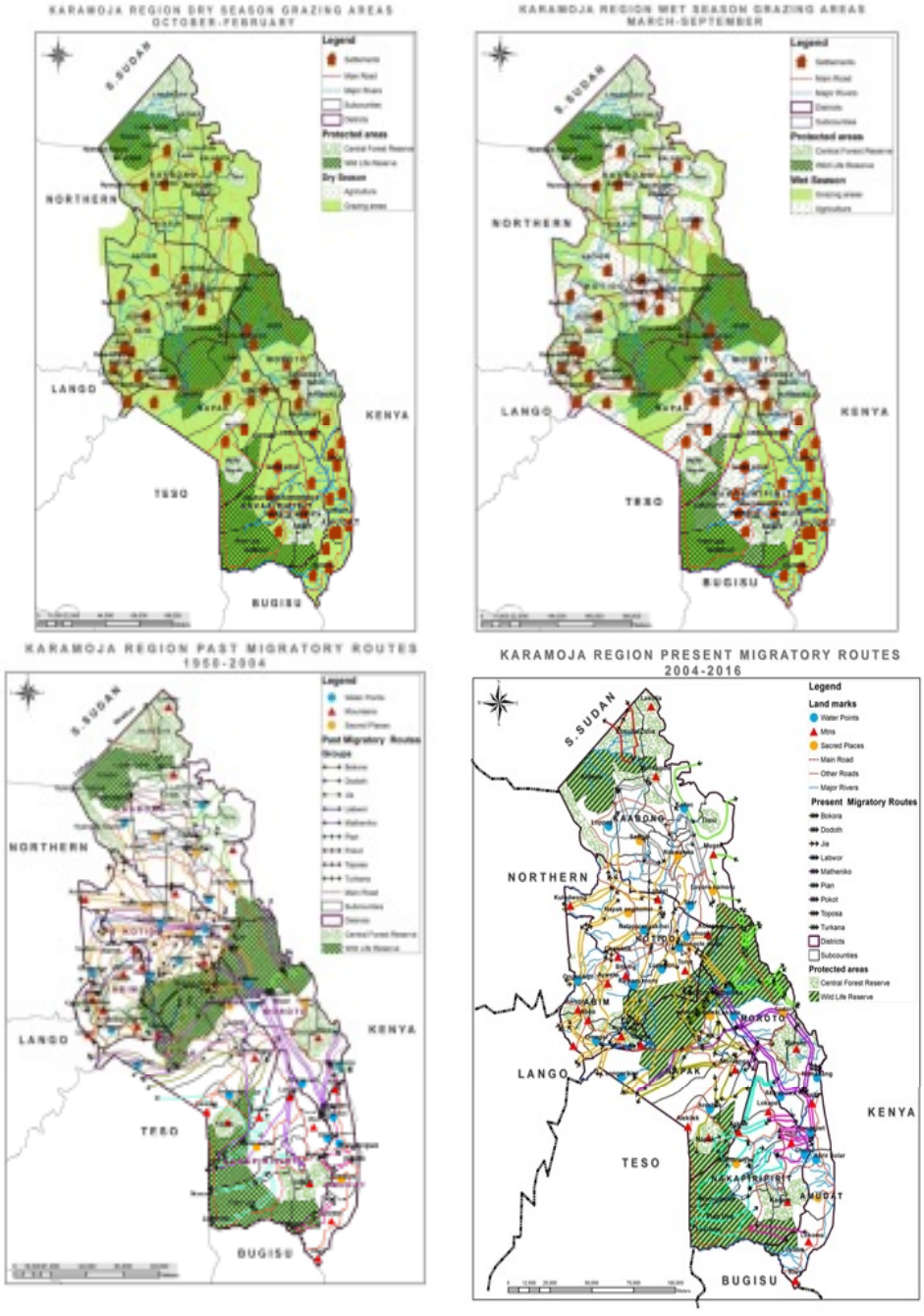
At the same time, water resource management remains politically

complex, shaped by local, national, and cross-border interests. Water infrastructure projects, including dams and valley tanks, are often implemented without adequate consideration of local power relations, leading to conflict and inefficiency. Community-based structures such as Water User Associations exist but face challenges of weak enforcement, limited capacity, and free riding; only 33–40% are considered functional across Karamoja (Aseete et al., 2024; Nicol et al., 2022).

The lack of effective integration between traditional and formal systems has undermined governance outcomes. Government programs frequently face resistance or failure when traditional leaders are excluded, while community-based resource management initiatives often lack legitimacy without elder endorsement (Filipová & Johanisova, 2017). The literature suggests that hybrid models—such as gender-balanced councils of elders embedded within local government structures—could enhance legitimacy, service delivery, and sustainability. However, such reforms would require policy and constitutional changes (Obonyo & Muhumuza, 2021).

Overall, traditional institutions remain deeply embedded in Karamoja's social fabric and are essential for legitimate and effective decision-making. Strengthening collaboration between customary and formal governance systems is critical for equitable and sustainable natural resource governance in the region.

Figure 16: Seasonal outlook of grazing areas and pastoral mobility patterns/ flows over time as mapped by pastoral communities. (Source: Nabaasa & Lwasa, 2019)



5.3.3 Recognition Justice

In Karamoja, recognition justice focuses on acknowledging the rights, identities, knowledge, and lived experiences of local communities, particularly pastoralists, regarding land, water, conservation areas, and mineral resources. Historical and ongoing marginalization have led to the frequent exclusion of community voices from decisions on land tenure, resource management, and benefit-sharing, resulting in persistent social and environmental injustices (Kabiito, 2021; Rugadya, 2020; Rugadya & Kamusiime, 2013).

Recognition justice is foundational to addressing these injustices because it goes beyond legal acknowledgment to include respect for indigenous knowledge, cultural practices, and community priorities in governance processes. Where recognition is absent, interventions risk reinforcing power imbalances and elite control over resources. Interviews revealed that key decisions—such as the degazettement of conservation areas and the allocation of mining concessions—are often made by political elites without adequate consultation or information-sharing, leaving communities vulnerable to dispossession and exploitation (Rugadya, 2020; Rugadya & Kamusiime, 2013).

5.3.3.1 Perceived Manifestation of Recognition Justice in Moroto District

The qualitative patterns are further triangulated by the household survey findings from Moroto district, which highlight uneven progress in recognition justice. Table 13 presents respondents' perceptions of how recognition justice is manifested in land allocation and environmental decision-making processes in Moroto district. The findings reveal a mixed and uneven pattern of recognition, with specific social identities and knowledge systems acknowledged in some contexts, while others remain marginalised or contested.

Perceptions regarding the respect for local and indigenous knowledge and customs are divided. While nearly half of respondents (49%) either agreed or strongly agreed that such knowledge is respected in land and environmental decisions, a substantial minority (36%) disagreed or strongly disagreed. This split suggests that recognition of indigenous systems is partial and inconsistent, often dependent on the type of decision or the actors involved. Recognition of pastoral mobility is particularly weak. Only 31% of respondents agreed or strongly agreed that pastoral mobility is considered in land allocation and environmental decisions, while 32% disagreed or strongly disagreed, and a large proportion (37%) expressed neutral views. This indicates significant uncertainty and inconsistency in how pastoral livelihoods are acknowledged within formal governance frameworks.

Table 13: Perceived manifestation of recognition justice in Moroto district

Manifestation of recognition justice	Level of agreement				
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Local/indigenous knowledge and customs are respected in land allocation and environmental decisions	5	44	15	23	13
Pastoral mobility is considered/respected in land allocation and environmental decisions	3	28	37	20	12
Refugees/migrants are treated fairly in resource access arrangements	4	10	20	18	48
Host communities are treated fairly in resource access arrangements	12	31	15	22	20
Women's rights, voices, and knowledge are respected in meetings and environmental decisions.	12	38	20	14	16
Youth's rights, voices, and knowledge are respected in meetings and environmental decisions	9	40	21	16	14
Minority ethnic groups' rights, voices, and knowledge are respected in meetings and environmental decisions	10	35	22	18	15
Cultural access to sacred/natural sites has changed due to mining/conservation/ refugee sites	10	47	16	11	16
I feel safe expressing views on environmental issues.	32	30	17	17	4

Perceptions of fairness toward refugees and migrants are overwhelmingly negative. More than half of respondents (66%) disagreed or strongly disagreed that refugees and migrants are treated fairly in resource access arrangements, with nearly half (48%) strongly disagreeing. This reflects profound recognitional injustice toward non-local or transient populations, who are widely perceived as excluded from equitable access to resources and decision-making. Views on the treatment of host communities are also divided. While 43% agreed or strongly agreed that host communities are treated fairly, 42% disagreed or strongly disagreed, indicating contested perceptions of equity even among resident populations.

In contrast, perceptions related to gender and youth recognition are moderately more positive, though still mixed. Half of respondents (50%) agreed or strongly agreed that women's rights, voices, and knowledge are respected, while 30%disagreed or strongly disagreed. Similarly, 49% agreed or strongly agreed that youth voices are respected, compared to 30% who disagreed or strongly disagreed. These findings suggest incremental progress, but also persistent barriers to full recognition of women and youth in environmental governance. Recognition of minority ethnic groups follows a similar pattern, with 45% agreeing and 33% disagreeing that their rights and knowledge are respected. This indicates partial inclusion, but ongoing marginalisation in decision-making spaces.

Respondents widely acknowledged that cultural access to sacred and natural sites has changed due to mining, conservation initiatives, or refugee settlements. The majority (57%) agreed or strongly agreed that such access has been altered, pointing to significant cultural and spiritual disruptions associated with land-use change and external interventions. Finally, perceptions of safety in expressing views on environmental issues are comparatively positive. Nearly two-thirds of respondents (62%) agreed or strongly agreed that they feel safe expressing their opinions, while 21% disagreed or strongly disagreed. This suggests that while formal space for expression may exist, recognition does not necessarily translate into influence or equitable outcomes.

Overall, the findings demonstrate that recognition justice in Moroto is uneven and contested. While some progress is evident in acknowledging women's, youth, and indigenous voices, significant gaps persist—particularly in relation to pastoral mobility, refugees and migrants, and cultural access to land and sacred sites. These patterns underscore the need for governance approaches that move beyond consultation toward systematic recognition of diverse identities, knowledge systems, and livelihood practices in environmental and land-use decision-making.

5.3.3.2 Cultural rights

Cultural rights in Karamoja are closely tied to pastoralist livelihoods, communal land ownership, and indigenous governance systems. Historically, the Karamojong have relied on shared land and natural resources managed through cultural institutions that support sustainable use and fair access. However, colonial and post-colonial policies, especially the enclosure of commons and sedentarization, have disrupted these systems, weakening cultural identity and

resource-based livelihoods (Filipová & Johanisova, 2017).

Although Uganda's legal framework recognizes communal land tenure, practical obstacles, such as low awareness, illiteracy, and complex registration processes, hinder the realization of cultural rights. Development initiatives and extractive projects often fail to secure free, prior, and informed consent (FPIC), thereby undermining cultural protections and silencing local voices (Mitchell, 2023). While some respondents recognized efforts to relocate cultural sites with respect, dissatisfaction with consultation processes and compensation remains widespread. Gender roles further complicate cultural rights, as traditional norms intersect with evolving social responsibilities. When development actors do not meaningfully engage with cultural institutions, social dislocation and project failure often follow (Hopwood et al., 2018). Protecting cultural rights in Karamoja, therefore, requires integrating indigenous governance, respecting communal land rights, and ensuring genuine participation in resource-related decisions.

6.3.3.2 Customary land tenure: ownership, access, and user rights

Customary land tenure is the dominant system governing land ownership and use in Karamoja, rooted in communal traditions and pastoral mobility. Land is primarily held collectively by clans or communities, with elders overseeing allocation and dispute resolution. Individual rights typically apply to homesteads and gardens, while grazing areas and sacred sites remain communal. Boundaries are flexible and negotiated according to seasonal needs.

Despite the constitutional recognition under Uganda's 1995 Constitution and the 1998 Land Act, customary tenure remains weakly protected due to low registration rates, limited awareness, and complex administrative procedures (Filipová & Johanisova, 2017; Rugadya & Kamusiime, 2013). These gaps have exposed communities to land grabbing, mining concessions, and speculative leasing by external actors. The expansion of mining, urbanization, and infrastructure development has intensified pressures on communal land, often without fair compensation or meaningful negotiation.

Access under customary tenure is generally inclusive for community members and supports pastoral mobility, an essential adaptation to climate variability. However, enclosures for conservation, mining, and state-led development have increasingly restricted access, undermining livelihoods. The study documented cases in which communities lost access to resources within forest reserves or mining areas despite prior agreements, leading to conflict and distrust.

Customary tenure provides a "bundle of rights" encompassing use, management, and intra-community transfer, but sub-surface and mineral rights remain largely under state control. Women, youth, and refugees face additional barriers due to gender norms and limited participation in decision-making. Emerging community institutions, such as land trusts and negotiated benefit-sharing arrangements, show promise but require stronger legal and institutional support.

5.3.3.3 Local Knowledge Systems

Local knowledge systems in Karamoja are central to sustainable resource management and community resilience. Indigenous knowledge of wild edible plants, grazing patterns, water sources, and seasonal cycles enables adaptation to drought, food scarcity, and environmental change. Practices such as the use of wild edible plants reflect both ecological understanding and cultural continuity (Ojelel et al., 2019).

Traditional leaders and cultural institutions play a critical role in managing land and water resources and resolving conflicts. However, exclusion from formal governance structures undermines sustainability and community ownership. Knowledge transmission occurs primarily through oral traditions and practice, making it vulnerable to erosion as biodiversity declines and modernization accelerates.

There is growing recognition of the need to integrate indigenous and scientific knowledge systems. Collaborative and participatory approaches can enhance equity and sustainability, but persistent power imbalances and weak institutional frameworks continue to limit meaningful integration (Brondízio et al., 2021; Yanou et al., 2023).

5.3.4 Restorative Justice

Restorative justice offers a culturally resonant framework for addressing resource-related conflicts in Karamoja. Emphasizing dialogue, reconciliation, and collective responsibility, restorative justice aligns closely with customary practices that prioritize social harmony over punitive measures (Darmawansyah et al., 2025; Surono, 2017). Evidence from this study indicates that community-led mediation, often facilitated by elders and women, has been effective in resolving land and resource disputes, including through compensation in livestock or harvests. Women were found to play a particularly significant role in peacebuilding and conflict resolution committees.

However, structural inequalities, power imbalances between communities and investors, limited recognition of customary processes, and widespread illiteracy constrain the application of restorative justice.

NGOs and development actors often lack sufficient understanding of rights-based approaches to natural resource governance, further exacerbating injustices. Integrating restorative justice with customary systems and formal governance could strengthen legitimacy, reduce the recurrence of conflict, and promote sustainable resource management.

5.3.4.1 Grievance Mechanisms

Grievance redress in Karamoja operates through traditional, formal, and hybrid mechanisms, each of which faces significant limitations (See Table 14). Customary justice systems led by elders remain central and culturally legitimate but have been weakened by militarization, erosion of authority, and exclusionary practices (Hopwood et al., 2018). While women are increasingly involved in reconciliation processes, patriarchal norms continue to limit inclusivity.

Formal justice systems are widely perceived as inaccessible, corrupt, and disconnected from local realities. Limited judicial capacity, weak local councils, and the state's association with coercive security measures undermine trust and compliance (Czuba, 2024). Hybrid mechanisms, such as local councils, act as intermediaries but lack autonomy and effectiveness due to centralized control. Table 16 compares the main grievance redress mechanisms operating in Karamoja, highlighting their respective strengths and limitations. The findings illustrate a pluralistic but fragmented justice landscape, in which no single mechanism provides comprehensive, equitable, and effective redress for environmental and resource-related grievances.

Table 14: Comparisons across grievance redress mechanisms in Karamoja

Mechanism Type	Strengths	Limitations/Challenges
Traditional/Elders	Culturally legitimate, accessible	Marginalized, sometimes elitist, less effective in new conflicts
Formal/State Courts	Legal authority, potential for rights-based redress	Inactive, corrupt, culturally misaligned, inaccessible
Local Government	Intermediary role, local knowledge	Limited autonomy, centralized power, military oversight
Community/NGO Hybrid	Participatory, evidence-based, cross-border	Sustainability, legitimacy, and scale issues

Traditional and elder-led mechanisms remain the most culturally legitimate and accessible form of dispute resolution. Their strength lies

in familiarity, social acceptance, and proximity to affected communities. However, these systems are increasingly challenged by their limited inclusivity, with women, youth, and marginalised groups often excluded from decision-making. Moreover, traditional mechanisms have proven less effective in addressing new and complex conflicts, such as those related to mining, conservation, land commodification, and cross-border disputes, where customary norms offer limited guidance.

State courts possess apparent legal authority and the potential to deliver rights-based remedies. In practice, however, their effectiveness is severely constrained by inactivity, corruption, geographic inaccessibility, and cultural misalignment with local norms. As a result, formal justice institutions are rarely utilised by communities in Karamoja, reinforcing perceptions of exclusion from state-based legal protection.

Local government structures play an intermediary role between customary and formal systems, benefiting from local knowledge and administrative presence. Nevertheless, their effectiveness is limited by restricted autonomy, strong centralisation of power, and, in some cases, military oversight, which undermines their independence and credibility in resolving disputes impartially.

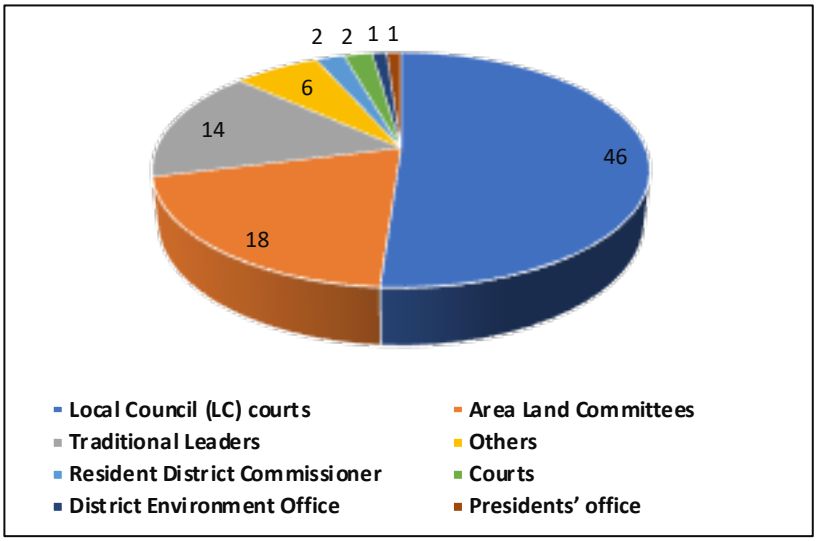
Community and NGO-led hybrid mechanisms offer more participatory, evidence-based, and adaptive approaches, particularly in addressing cross-border conflicts and environmental grievances that span administrative boundaries. These mechanisms are often better aligned with inclusive governance principles. However, their impact is constrained by challenges related to long-term sustainability, scalability, and formal legitimacy, especially when external funding or project support ends.

The comparison reveals that grievance redress in Karamoja is characterised by procedural gaps and uneven access to justice, with each mechanism addressing some needs while failing to protect others. The coexistence of multiple systems reflects adaptive responses to institutional weakness but also underscores the absence of an integrated, inclusive, and rights-based grievance framework. Strengthening environmental justice in Karamoja will require better coordination among grievance mechanisms, enhanced inclusion of marginalised groups, and reforms that bridge customary legitimacy with formal legal protections.

The above qualitative findings are further triangulated by the household survey in Moroto, whose findings are presented in Figure 17. The survey respondents were asked about their awareness of available grievance

redress channels for resolving environmental and resource-related disputes in Moroto district. The findings reveal a highly uneven pattern of awareness, with firm reliance on locally embedded mechanisms and minimal knowledge of formal or higher-level avenues.

Figure 17: Known grievance redress channels in Moroto district



The Local Council (LC) courts emerge as the most widely recognised grievance channel, cited by 46% of respondents. This reflects the central role of LC structures as the most accessible and familiar entry point for dispute resolution at the community level. Area Land Committees are the second-most-commonly identified channel (18%), underscoring their relevance in land-related disputes, though their visibility remains substantially lower than that of LC courts. Traditional leaders are recognized by 14% of respondents, indicating that customary authorities continue to play a role in grievance handling. However, their prominence appears to be declining relative to statutory local institutions. A further 6%of respondents mentioned other mechanisms, suggesting the existence of informal or ad hoc pathways that fall outside standard governance structures.

In contrast, awareness of formal and higher-level grievance institutions is minimal. Only 2% of respondents identified the Resident District Commissioner (RDC), while 2% mentioned courts, 1% the District Environment Office, and 1% the President's Office. This pattern highlights a significant procedural justice gap: institutions with formal authority and potential for rights-based redress are largely unknown or perceived as inaccessible to community members.

The findings indicate that grievance redress in Moroto is highly

localized and procedurally constrained, with communities relying predominantly on nearby, familiar structures rather than formal judicial or administrative systems. While local mechanisms enhance accessibility, their dominance also raises concerns about limited legal protection, elite influence, and inconsistent outcomes, particularly in complex disputes involving mining, conservation, or external investors. Strengthening environmental justice in Moroto will therefore require not only improving the effectiveness of local grievance mechanisms but also expanding awareness, accessibility, and trust in formal and hybrid redress institutions, alongside more explicit linkages between customary, local government, and state systems.

Over the past two years, 30% of respondents reported having experienced harm resulting from environmental decisions, particularly those linked to restricted access to forest resources and evictions. The remaining 70% indicated no direct harm. FGDs revealed that harm often stemmed from exclusion from mining-related decision-making and the politically influenced cancellation of a national investor's marble trading license, which reportedly created monopolistic conditions and reduced earnings for artisanal miners. Among those affected, only 40% sought grievance redress, indicating limited uptake of available mechanisms despite awareness of harm.

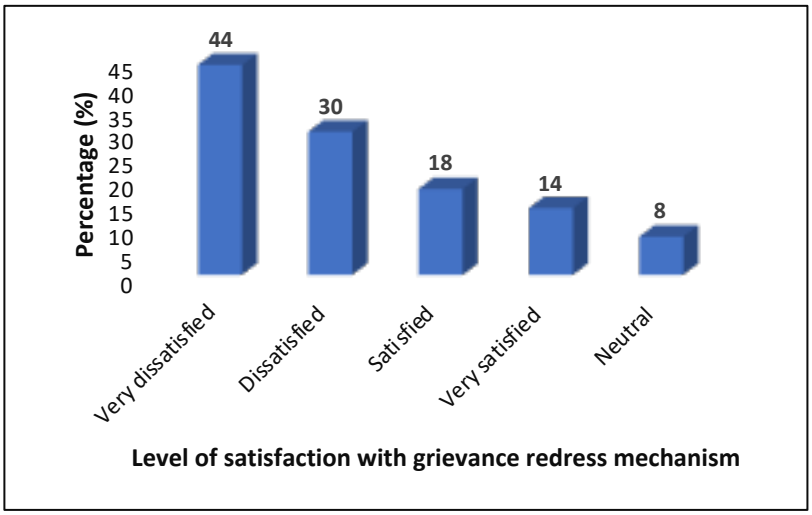
Multiple barriers constrained grievance-seeking behavior. These included a lack of information (12%), perceived complexity of redress procedures, and the belief that grievances were not severe enough to pursue (6% each). Other respondents reported feeling unheard or intimidated, or lacking clarity on appropriate reporting channels. FGDs further revealed frustration over unfulfilled promises by the National Forestry Authority (NFA), including alternative livelihood support, food assistance, and seed provision. Allegations of bribery and weak guidance from local leaders further undermined trust in grievance systems. Among those who sought redress, LC courts were the most commonly used mechanism (44%), followed by Area Land Committees and traditional leaders (8% each). Outcomes varied considerably: 36% of cases were fully resolved, 26% remained unresolved, and 6% were partially resolved or pending, reflecting uneven effectiveness across grievance mechanisms.

5.3.4.2 Satisfaction with grievance redress mechanisms in Moroto District

The survey respondents were asked to state their levels of satisfaction with existing grievance redress mechanisms in Moroto district. The results shown in Figure 18 reveal predominantly negative perceptions

of their effectiveness, with nearly 45% of respondents reporting very high dissatisfaction and a further 32% reporting dissatisfaction. Taken together, this means that over three-quarters (77%) of respondents expressed dissatisfaction with how grievances related to environmental and resource issues are handled. This points to widespread frustration with both the processes and outcomes of available redress mechanisms.

Figure 18: Level of satisfaction with grievance redress mechanisms



Only a minority of respondents reported positive experiences. About 20% indicated they were satisfied, and 16% reported being very satisfied, suggesting that while some grievances may be resolved successfully, these cases are relatively few. A small proportion (10%) expressed a neutral position, possibly reflecting limited engagement with grievance mechanisms or mixed experiences.

From an environmental justice and procedural justice perspective, these findings highlight a critical gap between the existence of grievance channels and their perceived fairness, accessibility, and effectiveness. High levels of dissatisfaction suggest challenges such as delayed resolution, perceived bias, lack of transparency, limited enforcement of decisions, or exclusion of marginalized groups. Combined with earlier findings showing low awareness of formal grievance institutions, the results indicate that grievance redress systems in Moroto are not only unevenly known but also widely viewed as inadequate.

The above evidence underscores the need to strengthen grievance redress mechanisms by improving accessibility, transparency, accountability, and linkage between customary, local government, and formal state systems, particularly for disputes involving land, mining,

conservation, and water resources.

Access to compensation and grievance redress for environmental harm remains extremely limited and widely perceived as ineffective. Only 12% of households reported ever receiving compensation for environmental damage or displacement, while 88% reported never receiving any compensation. Among the few beneficiaries, perceptions of adequacy were largely negative: 52% described the compensation as very inadequate, and 8% as inadequate. Only 24% considered it fair, while a combined 16% viewed it as adequate or very adequate. These findings point to profound dissatisfaction with both the scale and fairness of compensation processes, reinforcing perceptions of environmental injustice.

Access to grievance redress mechanisms also presents significant challenges. While 27% of respondents reported high ease of access, a combined 41% indicated low or very low ease of accessing grievance mechanisms. A further 20% rated access as moderate, suggesting uneven and unreliable availability of redress pathways. Trust in these mechanisms is similarly constrained: only 15% expressed very high trust, and 27% high trust. In comparison, nearly half of respondents (47%) reported low or very low trust in the fairness and transparency of grievance handling processes.

Collectively, these findings reveal systemic weaknesses in Moroto's compensation and grievance redress systems, characterized by limited access, low trust, and widespread dissatisfaction. The lack of effective remedies not only undermines procedural and restorative justice but also deepens community mistrust toward institutions responsible for environmental governance. Strengthening accessible, transparent, and community-responsive grievance mechanisms, anchored in both customary and formal systems, is therefore critical to advancing environmental justice in the district.

5.3.4.3 Conflict resolution mechanisms

Conflict in Karamoja is rooted in historical marginalization, resource scarcity, and cattle raiding, and resolution mechanisms have evolved under changing social and political conditions. Traditional systems led by elders historically managed conflict through mediation and compensation but have weakened due to arms proliferation, marginalization of elders, and state encroachment (Chapman & Kagaha, 2009; Niamir-Fuller, 2001). State-led disarmament reduced large-scale raids but raised human rights concerns, disrupted livelihoods, and had long-term social impacts. Reports of prolonged detention, lack of compensation, and limited post-conflict recovery continue to shape

mistrust toward formal systems (Catley et al., 2021; Czuba, 2024).

Table 15 provides a comparative overview of the main conflict-resolution mechanisms operating across the Karamoja region, highlighting their key features and persistent limitations. The findings illustrate a pluralistic yet fragmented landscape of conflict resolution, shaped by the coexistence of customary, state, community-based, and informal early warning systems.

Table 15: Comparisons across conflict resolution mechanisms in Karamoja region

Mechanism Type	Key Features	Limitations/Challenges
Traditional/Elders	Mediation, compensation, social order	Marginalized, less effective with modern arms, Exclusion of women and youth
State/Disarmament	Security enforcement, formal justice	Human rights concerns, livelihood disruption, Familial unit collapse, Border porosity, Resource constraints, Corruption.
Community/Hybrid	Peace committees, education, cross-border work, Resource sharing dialogues, Natural resources management	Sustainability, integration with state needed, less male participation, Female and youth structural exclusionary tendencies, Resources
Early Warning/Social	Indigenous alerts, risk-pooling friendships, Surveillance, Aversion, Deterrence	Sometimes escalate conflict, limited reach, Resources, Enduring poverty, Vested interests of security forces.

Traditional and elder-led mechanisms remain central to conflict resolution in Karamoja. Their strengths lie in cultural legitimacy, accessibility, and emphasis on mediation, compensation, and restoration of social order. However, their effectiveness has been eroded by changing conflict dynamics, particularly the proliferation of modern firearms, and by entrenched exclusion of women and youth from decision-making processes. These limitations constrain their ability to address contemporary, large-scale, or externally driven conflicts.

State-led mechanisms, including disarmament and formal justice institutions, prioritize security enforcement and legal authority. While intended to reduce violence, these approaches are widely associated with human rights concerns, disruption of livelihoods, and breakdown

of family and social structures. Structural weaknesses, such as corruption, limited resources, porous borders, and weak institutional presence, further undermine their credibility and effectiveness, often generating mistrust among local communities.

Community and hybrid mechanisms, including peace committees, cross-border dialogues, and natural resource management initiatives, offer more participatory and context-sensitive approaches. These mechanisms are fundamental in addressing resource-based conflicts and fostering cooperation across administrative and national boundaries. Nonetheless, their sustainability is fragile, as they often depend on external support and lack formal integration with state systems. Despite participatory intentions, gender and youth exclusion persist, reflecting more profound structural inequalities within community governance.

Early warning and social mechanisms, grounded in indigenous knowledge, social networks, and risk-pooling relationships, play a preventive role by enabling communities to anticipate and respond to emerging threats. However, their reach is uneven, and in some cases, they may inadvertently escalate tensions through surveillance or deterrence practices. Chronic poverty, limited resources, and vested interests, particularly among security actors, further limit their effectiveness.

These findings underscore that no single mechanism is sufficient on its own. While traditional systems offer legitimacy and accessibility, state mechanisms provide formal authority, and community-based approaches enhance participation, structural, institutional, and social justice challenges constrain each. From an environmental and procedural justice perspective, strengthening conflict resolution in Karamoja requires better integration across mechanisms, safeguards for human rights, and deliberate inclusion of women, youth, and other marginalized groups. Hybrid approaches that link customary legitimacy with state authority and community participation appear most promising for addressing the region's complex, resource-driven conflicts.

5.3.4.4 Environmental restoration

In Karamoja, environmental restoration reflects a complex interaction of ecological degradation, conflict, and livelihood transitions. The shift away from traditional pastoralism toward agriculture, mining, charcoal production, and brick-making has accelerated land degradation and loss of ecosystem services (Filipová & Johanisova, 2017; Schumann et al., 2025). Restoration efforts increasingly emphasize participatory,

justice-oriented approaches integrating indigenous knowledge. Key practices include agroecology, rangeland management, and rehabilitation of mined lands, water management, nature-based solutions, and adaptive monitoring. Traditional rotational grazing, area exclosures, and natural regeneration, often supported through cash-for-work schemes, have shown promise.

Agroforestry, kitchen gardening, soil fertility management, and rainwater harvesting enhance both ecological health and food security. GIS-based monitoring and early warning systems, such as FEWSNET, support adaptive decision-making across districts. However, climate change, recurrent droughts, social conflict, and limited government support continue to undermine restoration efforts. Sustainable pathways require long-term, integrated strategies that link ecological recovery with social justice, inclusive governance, and economic development (Schumann et al., 2025).

5.3.4.5 Gender and Inclusion Dynamics

Gender and inclusion in Karamoja are shaped by entrenched patriarchy, livelihood disruption, and uneven development interventions. While women's roles have expanded following disarmament and livelihood transitions, these shifts often increase workloads without transforming power relations (Hopwood et al., 2018; Naisiko, 2024).

Women increasingly engage in petty trade, agriculture, and artisanal mining, yet remain excluded from decision-making and lucrative opportunities. Cultural norms, weak formalization, and limited access to services reinforce gender inequalities. Interventions that focus narrowly on women without engaging men have contributed to crises of masculinity and social tension. Youth face marginalization due to limited education, land access, and employment, yet represent critical agents of change when supported through skills development and inclusive governance. Minority ethnic groups and the poorest households face compounded exclusion linked to conservation, mining, and land governance, resulting in food insecurity and loss of cultural identity.

Addressing gender and inclusion challenges requires intersectional, culturally grounded strategies that empower women, youth, and marginalized groups while engaging traditional institutions and men in transformative change (Namara et al., 2024; Serwajja & Mukwaya, 2020).

Case Study 1: Mining, Access, Community Trust, and Power Dynamics in Karamoja

The Karamoja region, located in north-eastern Uganda, is endowed with significant mineral resources, including gold, marble, limestone, and a range of industrial and precious minerals. This geological potential has triggered a rapid "mineral rush," attracting both foreign and domestic investors and transforming Karamoja into a major extractive frontier. Exploration licences reportedly cover close to a quarter of the region, with more than 35 companies holding concessions for mineral exploration and extraction (Catley et al., 2021; Namutebi, 2017). Overall, Karamoja is estimated to host over 50 different mineral types, positioning it as a strategic zone for Uganda's extractives-led development agenda (Ssebunya & Okyere-Manu, 2017).

While mining has generated new economic opportunities, it has also intensified contestation over land, livelihoods, and benefit-sharing. The rapid expansion of extractive activities has disrupted established land-use systems, particularly pastoralism and small-scale farming, and raised critical questions about community access, compensation, and the distribution of power in resource governance.

Artisanal and small-scale mining (ASM): livelihoods of last resort

Alongside large-scale operators, artisanal and small-scale mining (ASM) has expanded rapidly across Karamoja. It is estimated that between 18,000 and 20,000 Karamojong (men, women, and children) are engaged in artisanal mining of gold, gemstones, marble, and other minerals (Serwajja & Mukwaya, 2020). Findings from key informant interviews (KIIs) and focus group discussions (FGDs) indicate that participation in ASM is primarily driven by livelihood distress rather than opportunity. Declining pastoral productivity, recurrent droughts, and limited alternative income sources have pushed many households into mining as a survival strategy.

Figure 19: Artisanal miners operate under precarious conditions in Karamoja

As one FGD participant noted, "My main activity is gold mining," underscoring the centrality of mining to local economies. However, access to mineral wealth is highly unequal. Artisanal miners often work under exploitative conditions, selling crushed stone or ore at remarkably low prices to intermediaries. Another participant lamented, "The community has to break those small stones… but the prices are very low," highlighting limited bargaining power and economic marginalisation.

ASM is also associated with significant environmental and health risks. Field evidence points to extensive land clearance, open pits, landscape scarring, and mercury contamination in gold-mining areas, often exceeding safe soil and water thres holds. Limestone burning for lime production has further contributed to localised deforestation and long-term land degradation.

According to an official from the Minerals Protection Unit (MPU):

> *"Artisanal miners are often caught in a vicious cycle of survival, driven not by greed but by necessity… As they scramble for basic needs, the environmental consequences of their actions go unchecked, harming the entire community."*

Formal mining, customary land, and structural conflict

Mining access in Karamoja is governed by a dual system that juxtaposes formal statutory licences with customary land tenure. While customary systems clearly define surface land rights, sub-surface mineral rights remain poorly recognised, weakening community leverage in negotiations over access, compensation, and royalties (Rugadya, 2020). The state issues exclusive exploration and mining licences to

companies, often with minimal consultation of customary landholders (Namutebi, 2017).

Artisanal miners operating within company concessions are frequently labelled trespassers, pushing them into legal grey zones and exposing them to eviction, harassment, or arrest. This structural imbalance, where corporate rights are legally protected while customary and ASM claims remain informal, fuels conflict, mistrust, and community resentment. Formal mechanisms to translate land value into transparent compensation or royalty-sharing arrangements remain limited, further undermining trust between communities, companies, and the state.

Corporate social responsibility and community perceptions

Large-scale mining companies in Karamoja typically negotiate with central government authorities' first, and engage communities later, if at all. This approach has eroded local trust and reinforced perceptions of exclusion. Corporate Social Responsibility (CSR) initiatives do exist and have included boreholes, health centres, ambulances, scholarships, food aid, and water provision.

However, information from KIIs and FGDs consistently described CSR as patchy, discretionary, and unevenly distributed. Examples include Sunbelt's support to health services and scholarships in Rupa sub-county, as well as Tororo Cement's provision of food aid, water, and scholarships in Tapac sub-county. While these interventions are valued, they are often perceived as short-term risk-management tools that benefit selected groups or local elites rather than addressing structural development needs. As a result, CSR has not consistently translated into broad-based community development or long-term trust.

Box 1. Evolution of Community Trusts and the Rupa Community Development Trust (RUCODET)

Community trusts in Karamoja emerged in response to the rapid influx of mining investors and the associated risks of land alienation and elite capture. As external actors sought to acquire land and mineral rights, local leaders and civil society organisations (CSOs) recognised the need to demarcate customary land and establish formal governance mechanisms to protect community interests. The formation of the Rupa Community Development Trust (RUCODET) in Rupa Sub-county marked the first structured attempt to transition from informal customary land management to a more organized, legally recognized model of collective land governance.

Key informants from VSF Belgium and the Matheniko Development Forum (MADEFO) indicated that deliberate learning processes, including exposure visits

to mining regions in South Africa, informed this transition. These visits enabled local actors to observe how communities elsewhere had institutionalized land governance and negotiated with extractive companies, providing practical lessons that were adapted to the Karamoja context. As one respondent noted, these experiences "formed a basis for incorporating best practices in governance mechanisms that were evolving in Karamoja." Subsequent sub-counties, including Tapac and Katikekile, drew on RUCODET's experience when exploring similar trust-based arrangements.

RUCODET represents a pioneering model of community-led land governance and negotiation in Karamoja. Established with support from development partners such as USAID's Civil Society Strengthening Activity (CSSA) and the Africa Leadership Institute (AFLI), the trust was designed to secure land rights, represent community interests, and negotiate compensation with mining companies. By holding formal land titles on behalf of its members, RUCODET has strengthened local communities' bargaining position in engagements with mining firms, including Sunbelt Limited (now Sunbird Minerals).

Through negotiated agreements, RUCODET has secured substantial compensation for surface damages and land leases from companies such as DAO Marble and Jan Mangul. These include previously received payments of approximately UGX 1.8 billion, ongoing negotiations for an estimated UGX 8 billion in surface rights compensation, and a proposed UGX 24 billion earmarked for community development projects. These resources have been invested in community infrastructure and education, including scholarships for primary, secondary, and university students. FGDs further indicated that some women have directly benefited from individual compensation payments, using the funds to start small businesses or invest in agriculture, thereby enhancing household livelihoods and economic agency.

Despite these achievements, several challenges remain. Although communities are legally entitled to a share of mineral royalties—commonly cited at 3%—concerns have been raised regarding transparency in the calculation, distribution, and management of compensation and royalty payments. Activists and community members have called for greater openness and accountability, particularly to prevent elite capture. KIIs also highlighted risks that some land associations may not fully represent original landholders, raising fears of exclusion and land grabbing under the guise of formalization.

Another critical issue relates to the monitoring of mineral extraction. The absence of reliable measurement systems, such as functional weighbridges, undermines communities' ability to verify extraction volumes and ensure that royalty payments accurately reflect production levels. Without such mechanisms, trust between communities, companies, and the state remains fragile.

Overall, RUCODET illustrates both the potential and the limitations of community trusts as vehicles for securing local rights and benefits from extractive industries. When supported by legal recognition, capacity-building, and transparent accountability mechanisms, such entities can enhance community bargaining power and promote more equitable benefit-sharing. At the same time, the experience underscores the need for sustained oversight, inclusive governance, and stronger institutional safeguards to ensure that community trusts remain representative, accountable, and capable of delivering long-term development outcomes.

Source: KIIs, FGDs, and literature.

Community trusts and benefit-sharing mechanisms

In response to growing inequities, community trusts, such as Communal Land Associations (CLAs) and Community Development Agreements (CDAs), have emerged as key instruments for negotiating surface rights, compensation, and CSR benefits. These frameworks aim to reconcile customary land ownership with large-scale mineral extraction and to channel benefits toward community priorities.

In some cases, community trusts have successfully negotiated land compensation, education funds, and health infrastructure. However, their effectiveness has been undermined by governance weaknesses, limited financial literacy, and elite capture. FGDs revealed inflated beneficiary lists, limited downward accountability, and inadequate consultation with the broader community. One elder in Rupa sub-county remarked, "The views of the community were not respected," reflecting a breakdown in trust.

Evidence from the literature reinforces these findings, documenting elite and political capture of mining benefits by local politicians and traditional leaders (Frederiksen, 2019; Rugadya, 2020), as well as frustration over the destruction or neglect of cultural and sacred sites that lack formal protection in mining agreements (Namutebi, 2017; Ssebunya & Okyere-Manu, 2017). Early CLAs supported by civil society organisations, such as the Uganda Land Alliance, have in some cases collapsed due to internal governance failures.

Figure 20: Poorly managed post-mineral extraction ditches threaten life and the environment

Power dynamics and development outcomes

The mineral rush in Karamoja has reinforced asymmetrical power relations between the state, investors, local elites, and ordinary community members. While mining offers revenue and employment potential, its current governance arrangements have delivered limited livelihood transformation for most residents and intensified land pressure, environmental degradation, and social tension. The acceleration of land acquisition and mineral licensing has raised doubts about the region's long-term mining development potential.

Figure 21: Marble stone acknowledgement receipt for materials on credit given to artisanal miners in Karamoja

Implications

This case study highlights the need for stronger recognition of customary land and mineral rights, transparent and enforceable benefit-sharing mechanisms, and meaningful community participation in mining governance. Without institutional reforms that address power imbalances, strengthen community trusts, and protect environmental and cultural assets; mineral extraction in Karamoja risks deepening inequality rather than contributing to inclusive and sustainable development.

Case Study 2: Access Restrictions, Livelihood Constraints, and Collaborative Forest and Wildlife Management in Karamoja's Matheniko Forest Reserve and Pian Upe Game Reserve

Overview of conservation landscapes as lived spaces

Karamoja's conservation landscape is shaped by a long history of state-led protection intersecting with pastoral and agro-pastoral land use. Matheniko Forest Reserve and Pian Upe Game Reserve exemplify this tension. While legally protected, they are also integral to grazing, cultural identity, and survival in a region characterised by climate variability, insecurity, and increasing land pressure (Abrahams, 2020; Kabiito, 2021). As one National Forestry Authority (NFA) official observed, Karamoja's protected areas are largely "gazetted on the rocks, on the mountains," a topography that fundamentally shapes how people, livestock, wildlife, and resources interact.

These conservation areas are not uninhabited wildernesses but shared and lived landscapes. Indigenous groups, including the Tepeth around Mount Moroto, have long-standing historical and cultural ties to these areas. Attempts to impose strict separation between people and protected spaces, through evictions, access restrictions, or rigid zoning, have often deepened tensions rather than resolving them. Key informants from NFA and the Uganda Wildlife Authority (UWA) interviewed acknowledged that efforts to exclude communities from reserves without adequate compensation or alternatives have intensified vulnerability in a context where livelihoods are already undermined by drought, climate stress, and insecurity (Catley et al., 2021).

Evictions, restrictions, and livelihood impacts

This study established that conflicts between conservation objectives and local survival needs are particularly pronounced in Matheniko and Pian Upe. NFA's decisions to evict households from Mount Moroto Forest Reserve or to confine remaining families to tiny plots were widely perceived as dismissive of community realities. District officials noted that many households moved into mountainous areas during periods of heightened insecurity and have remained there due to a lack of viable alternatives. Evictions undertaken without compensation have therefore generated feelings of disenfranchisement and mistrust.

While NFA maintains that permanent settlement within forest reserves is not permitted, communities are often allowed conditional access to

certain resources. This partial access regime has created ambiguity and conflict, complicating the balance between conservation enforcement and indigenous rights. As a key informant from UWA explained, communities openly acknowledge state ownership of the land but emphasise that "we have nowhere to go," highlighting the gap between legal frameworks and lived realities.

Pastoral mobility, grazing corridors, and emerging negotiations

For pastoral systems in Karamoja, mobility is central to resilience. Seasonal rivers, such as Acolcol dry up during prolonged droughts hence intensifying competition over water and pasture between herders and wildlife. As Pian Upe gets elevated to national park status and surrounding areas get re-zoned; debates have intensified over how to accommodate pastoral mobility alongside conservation and tourism priorities. Participatory mapping of historic and current grazing routes has emerged as a key strategy for managing these tensions. This study found that mapping exercises, covering corridors across Moroto, Napak, Kotido, and extending into Turkana in Kenya, are informing decisions on areas suitable for flexible use, de-gazettement, or negotiated access. These efforts are aimed at securing corridors to water points, pasture, wild foods and firewood; while ring-fencing core conservation and tourism zones.

Cross-border and inter-regional resource-sharing arrangements have also been established. Respondents from VSF Belgium and the Karamojong networks reported agreements with neighbouring regions, such as Teso, and with Turkana pastoralists in Kenya to facilitate seasonal grazing and water access. However, shrinking rangelands due to park expansion, settlement growth, and mining concessions continue to strain these arrangements. As one community leader described, gazetted grazing corridors now overlap with wildlife zones, generating new conflicts over access and control.

Figure 22: Mount Moroto Forest Reserve is at the crossroads of competing livelihood demands and the emerging mining economy.

Figure 23: seasonal Rivers like Acolcol dry up during drought periods, fuelling water and pasture resources

Figure 24: Livestock grazing in Pian Upe Wildlife reserve, Nakapiripirit district

Livelihood diversification under conservation constraints

As pastoral space contracts, households increasingly diversify livelihoods into fishing, artisanal extraction, casual labour, and small-scale farming. While such diversification can buffer households against climate and conflict shocks, it is often constrained by conservation rules and external control over extractive activities. Revelations from FGDs revealed mixed experiences with collaborative management. In Katikekile Sub-county, youth and women reported that NFA had granted conditional permission for small-scale mining within forested areas, subject to environmental safeguards such as refilling pits and avoiding tree damage. In Tapac Sub-county, agrarian communities described receiving training on sustainable farming practices, including agroforestry, manure use, cover crops, and early-maturing crop varieties.

At higher altitudes, restrictions on expanding shelters and farmland are more stringent, and efforts to curb illegal timber and sandalwood extraction, particularly across the Kenya border, have intensified. Local governments have introduced bylaws against charcoal burning and deforestation, though enforcement is uneven. KIIs highlighted that influential individuals, including politicians and security actors, often violate these by-laws with impunity, reinforcing perceptions of double standards.

Attempts at livelihood-based collaboration also face setbacks. An

initiative to support fish farming within a forest water point, implemented by VSF Belgium in agreement with NFA, collapsed after disputes over ownership of harvested fish, underscoring unresolved ambiguities in benefit-sharing arrangements.

Collaborative management, dialogue, and power asymmetries

NFA and UWA officials emphasized ongoing efforts to promote collaborative forest and wildlife management by registering and empowering community groups and clarifying access rights. However, the study found that collaboration remains uneven and fragile. Participatory dialogues and multi-stakeholder platforms have improved communication and facilitated negotiations on grazing, kraal placement, and seasonal access, particularly in conflict-prone areas such as Kobebe (Catley et al., 2021; Tyrrell et al., 2017).

Several local networks, such as Women Peace Forums, Natural Resource Management Teams, Livestock Mobility Mapping champions, and Reformed Youth groups, have emerged as essential actors in peacebuilding and resource governance. These platforms have facilitated inter- and intra-community dialogue, cross-border coordination, and greater inclusion of women and youth in discussions traditionally dominated by elders and security actors. Respondents noted that such initiatives have influenced shifts in government pacification strategies and improved trust in some areas.

However, evidence from this study and wider the literature cautions that collaborative management can reproduce or deepen inequalities if power imbalances are not addressed. Elite capture, weak representation of women and poorer households, and limited recognition of pastoral land tenure often constrain the transformative potential of dialogue-based approaches (Bugabo et al., 2022; Jagger et al., 2018). Traditional governance institutions, such as elders' councils and age-set systems, retain legitimacy and ecological knowledge but they are rarely integrated into formal land-use planning or granted legal authority, perpetuating a disconnect between customary and statutory systems (Rugadya, 2020).

Human–wildlife conflict and perceptions of injustice

As protected areas expand and pastoral land contracts, human–wildlife conflict is increasing. Livestock entering conservation zones in search of pasture encounter dangerous wildlife, while households bear the costs of injury, loss, and crop destruction. FGDs in Rupa Sub-county reported incidents of elephants entering trading centres, destroying property and gardens. Compensation mechanisms for such losses

are minimal or absent, which intensifies resentment toward wildlife conservation authorities.

Communities frequently perceive enforcement as uneven, strictly applied to local residents but weak or opaque when powerful outsiders, such as mining companies or traders, are involved (Abrahams, 2020; Rugadya, 2020). While UWA and NFA continue to prioritise community sensitisation and the development of collaborative management frameworks, trust remains fragile where livelihood losses are not adequately addressed.

Figure 25: Bush burning/wildfires are common environmental challenges in Pian Upe

Implications

This case study illustrates the complex interplay between conservation, pastoral livelihoods, and power in Karamoja. While collaborative forest and wildlife management offers pathways toward negotiated access and reduced conflict, its effectiveness depends on addressing structural inequalities, recognising pastoral land rights, ensuring equitable benefit-sharing, and strengthening accountability. Without these safeguards, conservation expansion risks further marginalising already vulnerable communities and undermining long-term ecological and social sustainability in landscapes such as Matheniko and Pian Upe.

Study Findings on Environmental Justice in the West Nile region

Key messages

- Environmental justice in West Nile is under pressure across distributional, procedural, recognitional, and restorative dimensions, threatening livelihoods, cohesion, and ecosystem health.
- Population growth and large refugee inflows heighten competition for land, water, forests and energy, driving rapid loss of savannah and woodlands and worsening access to forest products and cooking fuel.
- Distribution is seen as unfair: households report declining access to forests, energy and water; land fragmentation and resource scarcity amplify tensions between hosts and refugees.
- Participation and transparency are weak in such a way that most people are poorly informed, excluded from conservation/mining decisions, and face institutional barriers (not being invited, lack of information) rather than unwillingness to engage.
- Recognition gaps persist. Women, youth, PWDs and other minority groups are under-represented and their knowledge or mobility needs (e.g., pastoralism) are often ignored; refugees are comparatively better represented but not always influential.
- Grievance handling systems rely on local/customary channels that are accessible but deliver mixed outcomes and low satisfaction. Formal and impartial redress is limited.
- Promising solutions include aligning customary and statutory governance, inclusive and proactive participation, transparent allocation rules, nature-based restoration (with community co-design), energy alternatives to reduce biomass pressure, and stronger multi-level grievance mechanisms.
- Rhino Camp (West Nile) shows a tight wood-fuel–deforestation nexus: large refugee inflows, severe energy poverty and small land plots drive intense firewood and charcoal extraction, causing rapid loss of woodlands around settlements and market corridors.
- Refugees and hosts both rely on biomass (over 70% use firewood; only ~1.2% have electricity). Reductions in aid push many into commercial firewood/charcoal production, worsening forest loss.
- Water and land scarcity compound tensions: Small allocated plots, rising land rents, boundary and crop–livestock conflicts, and inadequate, contaminated water supplies (often ~10 L/person/day) fuel everyday disputes—especially affecting women and the poor.

- Governance is fragmented and under-resourced: Selective enforcement penalizes vulnerable collectors while commercial actors operate with limited oversight; complex institutional roles (OPM, UNHCR, NFA, local gov't, NGOs) and reduce transparency and host participation.
- In spite of the conflict, transactional exchanges (land rentals, shared water access, labour for access) support coexistence but often reproduce inequalities.
- What works: Scaled agroforestry, community woodlots, participatory tree planting, and affordable modern cooking options (LPG, solar, briquettes, improved stoves) reduce pressure when linked to clear benefits.
- Priority actions: Strengthening inclusive institutions and communication, scaling up services and restoration of equitable benefit-sharing, institutionalization of participatory monitoring and accountability, scaling up modern energy access, investing in equitable water infrastructure, aligning settlement planning with customary landholders, strengthening local enforcement and grievance mechanisms, regulating charcoal markets, and shifting from short-term humanitarian responses to integrated, long-term strategies combining energy, tenure security and restoration.

5.3.5 Distributional Justice

In West Nile, distributional justice concerns how access to, benefits from, and responsibilities for land, water, forests, and seed/resources are shared across host communities, refugees, and marginalized groups. Given displacement histories, ethnic diversity, and accelerating environmental pressure, perceived fairness in resource distribution remains a central governance issue. Local institutions strongly shape distribution outcomes. For culturally and economically important resources such as the Shea tree, compliance with conservation rules is higher where communities participate in rule-making and enforcement. However, participation can be uneven by age, education, and ethnicity. Aligning customary institutions with statutory frameworks is consistently identified as necessary for equitable and sustainable management (Acema et al., 2021).

Population growth and large refugee inflows (notably from South Sudan and the DRC) have intensified competition over land and biomass energy (firewood/charcoal), increasing tensions where access is constrained or perceived as unequal (Barasa et al., 2022; Lwasa et al., 2021). Fair, transparent sharing arrangements are therefore crucial

for social stability and the provision of basic needs for both hosts and refugees (Miura & Tabata, 2022). Ecosystem services (e.g., water, fisheries, carbon storage) are spatially uneven, and local priorities do not always align with conservation planning based solely on technical mapping. Incorporating stakeholder values into planning improves alignment with livelihoods and strengthens distributional legitimacy (Schlemm et al., 2025).

Overall, elite capture, limited community influence in formal decision-making, and exclusion linked to ethnicity, gender, or refugee status continue to undermine distributional justice. Blending formal and informal governance, strengthening trust, and institutionalizing local knowledge are repeatedly emphasized as pathways to fairer distribution (Acema et al., 2021; Patel & Lucey, 2024; Schlemm et al., 2025).

5.3.5.1 Access to forests, water, and agricultural land

Access to forests, water, and agricultural land in West Nile reflects the interplay of ecological, demographic change (including refugee settlement), and overlapping customary–statutory management systems.

Forest resources (woodlands, savannah-grasslands, plantations, and key species such as Shea) underpin livelihoods through fuelwood, construction materials, foods, and medicines. In Arua and Nebbi, Shea butter governance illustrates that stronger community involvement in rule-setting and enforcement correlates with higher compliance and clearer access expectations; participation is nonetheless shaped by socio-demographic factors, and integration of traditional governance into statutory frameworks remains a priority (Acema et al., 2021).

Figure 24 and Table 16 highlights the accelerating loss of natural vegetation and forest-related land cover between 2016 and 2019, mainly driven by agricultural expansion and urban growth. Savannah, representing the dominant natural vegetation type, experienced the most severe decline, losing more than 1,440 sq km and dropping from 46.5% to 35.3% of the total area. Woodlands also contracted sharply, decreasing by about 269 sq km, while wetlands declined by nearly 200 sq km. Together, these trends point to widespread conversion of natural ecosystems and vegetated landscapes.

Although tree plantations expanded by 86 sq km, this gain was small relative to the scale of loss in natural savannahs and woodlands, and does not compensate for the reduction in ecological integrity and biodiversity associated with natural vegetation cover. The expansion of subsistence farming, by over 1,600 sq km, emerges as

the primary driver of this vegetation loss, alongside growth in built-up areas. Overall, the table shows a pattern of rapid deforestation and vegetation degradation, with natural forests and non-forest vegetation progressively replaced by agriculture and settlements over a short period.

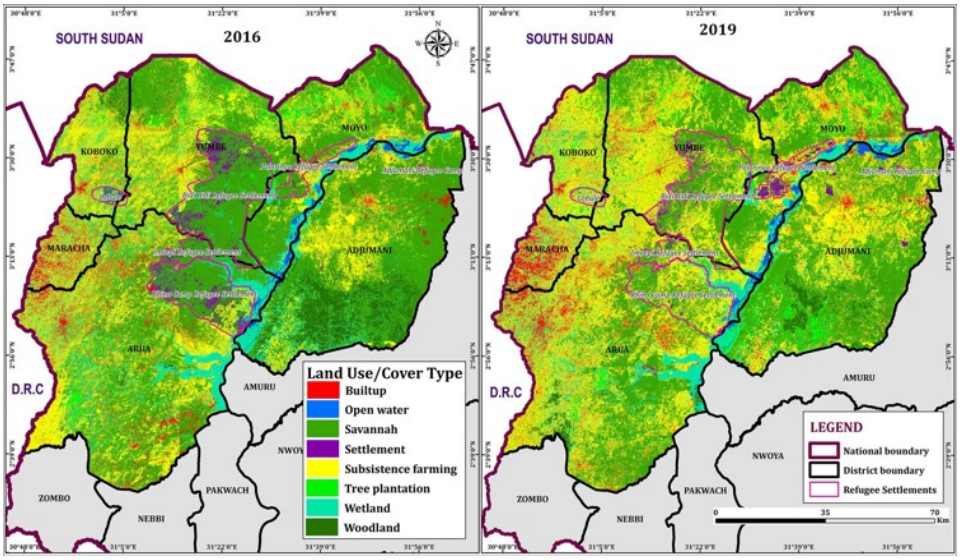
In Yumbe, evidence points to severe forest loss since 1990, linked to the expansion of subsistence agriculture and increased biomass demand associated with large settlements such as in Bidibidi, alongside land conflict dynamics between refugees and hosts (Alule et al., 2023; Barasa et al., 2022). In Zombo, refugee-related pressure is relatively lower, but land fragmentation and agricultural expansion continue to convert forested and mixed-use landscapes, including highland systems (Huppertz et al., 2021; Komakech et al., 2019). Transboundary dynamics further complicate the management of corridor-like forest resources where interventions are not coordinated across borders. Across West Nile, degradation is concentrated in savannah-grasslands, woodlands, and plantations, reinforced by bush-burning, charcoal production, and limited alternative energy options (Alule et al., 2023).

Table 16: Land use changes in West Nile Region between 2016-2019

Year	2016		2019		2016–2019 Net change	
	Area (sq.km)	Area (%)	Area (sq.km)	Area (%)	Area (sq.km)	Area (%)
Land use/cover types						
Built-up	606.4	4.7	805.2	6.3	198.8	1.6
Commercial farming	13.3	0.1	22.3	0.2	9.0	0.1
Open water	125.7	1.0	126.5	1.0	0.8	0.0
Settlements	239.2	1.9	246.6	1.9	7.3	0.1
Savannah	5,974	46.5	4,531.8	35.3	−1,442.2	−11.2
Subsistence farming	3,621.1	28.2	5,227.7	40.7	1,606.6	12.5
Tree plantation	357.3	2.8	443.3	3.5	86.0	0.7
Wetland	1,310.4	10.2	1,113.1	8.7	−197.3	−1.5
Woodland	594.2	4.6	325.2	2.5	−269.1	−2.1

Source: Barasa et al., 2022

Figure 26: Spatial extent of land use change in West Nile region between 2016-2019



Source: Barasa et.al.2020

The findings from KIIs revealed that District Local governments (DLGs) and development partners (e.g., UNHCR, OXFAM, Care International, Welthungerhilfe) have supported practices such as selective harvesting, tree planting, regulated pruning, and protection of sacred sites, with variable effectiveness depending on education levels and the fit between local practices and formal systems (Alule et al., 2023). Access conditions also differ between public forests (e.g., NFA-managed) and community forests (cultural/local government stewardship), including differentiated permissions for activities such as apiary, fruit gathering, and firewood collection (Alule et al., 2023).

Water access is shaped by climatic variability, settlement expansion, and uneven infrastructure. Rainfall varies across the region (including higher totals in highland areas). It supports both surface and groundwater, but year-to-year reliability affects agriculture and household water security (Kansiime & Mastenbroek, 2016). KIIs/FGDs indicate reliance on rivers, streams, springs, boreholes, and taps, with rising pressure and localized scarcity in refugee-hosting districts (e.g., Yumbe, Adjumani, Madi-Okollo), including reported conflicts at collection points and increased vulnerability for women and children. Borehole distribution and functionality are uneven; FGDs in Madi Okollo indicate very long collection times relative to WHO/UNICEF guidance (WHO & UNICEF, 2015, 2021).

Although some climate analyses suggest improving regional water balance trends, local disparities persist and can be acute in specific settlements and seasons (Onyutha et al., 2021). Nile Basin upstream–downstream interdependence reinforces the need for integrated, cooperative water management beyond district boundaries (Gebrehiwot et al., 2019; Merem et al., 2020; Miura & Tabata, 2022).

Land access is shaped by livelihood zones, agro-ecology, customary tenure, and displacement pressures (Browne & Glaeser, 2010). Highland systems (e.g., Zombo) tend toward intensive mixed perennial cropping with smaller plots, while other zones emphasize annual crops and tobacco as a cash crop, with constraints varying by rainfall and disease/ecological conditions (Kansiime & Mastenbroek, 2016; Kansiime et al., 2018; Middleton & Greenland, 1954).

Refugee arrivals have intensified competition and contributed to land fragmentation. KIIs/FGDs indicate refugees are typically allocated small settlement plots (e.g., approx. 30×30m) for shelter and subsistence farming, while hosts primarily rely on clan-based inheritance and customary allocation; constrained land access is associated with lower crop diversity and income (Kang et al., 2023). Urbanization and markets have expanded rental and purchase dynamics, while refugees often lack long-term tenure security, limiting land investment. The region reportedly hosts a substantial share of Uganda's refugees (UBOS, 2025).

Perceptions in Madi Okollo indicate widespread concerns about fairness and deterioration in access to grazing land, arable land, water, forest products, and cooking energy, alongside gendered burdens in water collection (See Tables 21-24). Biomass assessments around Imvepi and Rhino Camp identify high extraction pressure and short depletion timelines under current use patterns, consistent with reported fuelwood conflicts in KIIs/FGDs (Duguma et al., 2019).

The survey results (see Table 17) reveal that community resources in Madi Okollo are widely perceived as being inequitably distributed, with "unfair" and "very unfair" responses outweighing perceptions of fairness across most resource categories. Access to water for livestock is perceived as the most unjust, with over half of respondents (54%) rating its distribution as unfair or very unfair. Similarly, access to domestic water is viewed negatively by nearly half of respondents (47%), suggesting persistent stress over water availability and allocation.

Table 17: Perceived distribution of community resources in Madi Okollo district

Community resources in Madi Okollo	Perceived level of distribution (%)				
	Very fair	Fair	Neither fair nor unfair	Unfair	Very unfair
Grazing land/Communal rangelands	5	28	18	38	11
Arable land/Farmland	6	40	4	40	10
Water for livestock	2	22	22	50	4
Water for domestic use	4	42	7	46	1
Forest products	1	20	22	40	17
Energy for use (firewood and charcoal)	4	34	4	42	16
Access to protected area/ conservation area buffer resources	4	24	28	24	20

Land-related resources also reflect significant perceived inequities. Both grazing land and arable land record high levels of perceived unfairness (49% and 50%, respectively), pointing to contestation over land access and control. Forest-related resources are among the most contentious: 57% of respondents perceive forest product distribution as unfair or very unfair, and 58% report similar views regarding access to energy resources such as firewood and charcoal. Access to protected areas and conservation buffer resources is particularly polarized, with perceptions distributed across fair, neutral, and unfair categories, yet one in five respondents rated access as very unfair.

Overall, the pattern suggests deep-rooted concerns about distributive justice in natural resource governance, especially for land, water, and forest-based resources that are central to livelihoods. The low proportions reporting "very fair" access across all categories underline limited confidence in existing allocation and management systems. The survey findings, summarised in Table 18, indicate that most community resources in Madi Okollo are perceived as either stagnant or deteriorating in their distribution, with negative trends clearly outweighing improvements.

For grazing land and arable land, about half of the respondents reported no change. Still, a substantial proportion, 45% and 51%, respectively, perceived conditions as worse or much worse, signaling increasing pressure on land-based resources. Water access shows a similarly troubling pattern. While domestic water access records some

improvement (32% reporting better or much better), this is outweighed by 44% who perceive worsening conditions. Water for livestock is primarily seen as unchanged or declining, reflecting growing stress on shared water sources.

Table 18: Perceived changes in the distribution of community resources

Community resources in Madi Okollo	Perceived changes in distribution (%)				
	Much better	Better	No change	Worse	Much worse
Grazing land/Communal rangelands	1	4	50	42	3
Arable land/Farmland	1	8	40	48	3
Water for livestock	1	12	42	43	2
Water for domestic use	9	23	24	44	0
Forest products	0	3	32	49	16
Energy for use (firewood and charcoal)	0	5	20	55	20
Access to protected area/ conservation area buffer resources	1	3	44	32	20

Forest-related resources show the most pronounced deterioration. Nearly two-thirds of respondents perceive access to forest products as worse or much worse, while energy resources such as firewood and charcoal register the strongest negative trend, with 75% reporting declining access. Access to protected area and conservation buffer resources is also increasingly constrained, with over half of respondents indicating worsening conditions.

Overall, the results suggest a progressive tightening of access to critical natural resources, particularly forests and energy sources, alongside sustained pressure on land and water. These perceptions point to intensifying resource scarcity and governance challenges, with implications for livelihoods, equity, and local resilience.

The results, summarised in Table 19, show that local natural resources in Madi Okollo are perceived to primarily benefit ordinary residents and refugees, far more than institutional or elite actors. Ordinary residents/ host communities are the most frequently cited beneficiaries, with 86% of respondents ranking them among the top three, and nearly half identifying them as the primary beneficiaries. Refugees are similarly prominent, with 87% ranking them within the top three beneficiaries, reflecting the central role of natural resources in sustaining both host

and refugee livelihoods.

In contrast, political and traditional leaders are perceived as secondary beneficiaries, each cited by about one-third of respondents, suggesting some degree of influence or advantage but not dominance. Government agencies and government officials are less frequently identified as major beneficiaries, indicating that state actors are not widely seen as the primary recipients of local resource benefits at the community level. Elites, brokers, and investors are rarely mentioned, implying limited direct benefit or visibility in local resource use.

Table 19: Major beneficiaries from community resources in Madi Okollo district

Major beneficiaries from local natural resources in Madi Okollo	First rank (%)	Second Rank (%)	Third Rank (%)	Total (%)
Ordinary residents/host communities	47	31	8	86
Refugees	30	35	22	87
Political leaders	3	13	18	34
Traditional leaders	13	8	10	31
Government agencies	2	4	20	26
Government workers/officials	1	6	6	13
Elites	0	2	5	7
Others	4	0	3	7
Brokers	0	1	5	6
Investors	0	0	3	3

Overall, the pattern suggests that natural resource benefits are perceived to be concentrated among everyday resource users, the refugees and host communities, rather than captured by elites or investors. However, the notable presence of political and traditional leaders among higher ranks also hints at underlying power dynamics that may shape access and control over local natural resources.

The results (see Table 20) indicate that household access to key natural resources in Madi Okollo is generally constrained, with most households reporting only partial, unreliable, or inadequate access. For grazing land and farmland, access is more common but rarely secure: while about half of households report regular access, only a small minority consider it reliable and adequate, and a sizeable proportion experience limited or irregular access, reflecting growing

land pressure.

Table 20: Household perceived level of access to resources in Madi Okollo district

Household access to resources in Madi Okollo	Perceived level of access (%)			
	Reliable and adequate	Regular but limited	Occasional but inadequate	Limited or irregular
Grazing land	17	32	7	18
Farmland	13	39	15	26
Water sources	6	55	15	24
Forest products	7	25	26	30
Energy for cooking (firewood /charcoal)	7	37	30	25
Mining sites	0	2	0	1

Water sources are the most widely accessed resource, with over half of households reporting regular but limited access. However, only 6% describe this access as reliable and adequate, underscoring persistent challenges in water availability and reliability. Forest-based resources and energy for cooking are the most vulnerable. Around one-quarter to one-third of households report only occasional or inadequate access to forest products and firewood or charcoal, highlighting increasing scarcity and restrictions on forest use.

Overall, the pattern suggests that while households are not entirely excluded from essential resources, access is predominantly insecure and insufficient, particularly for forest products and energy. This reinforces perceptions of declining resource availability and uneven access, with implications for livelihoods, coping strategies, and environmental sustainability in Madi Okollo.

5.3.5.2 Resource and service allocation dynamics in refugee and host communities in West Nile

Resource allocation between hosts and refugees is shaped by Uganda's refugee policy, biophysical limits, and the practical requirements of coexistence. Land-sharing arrangements support settlement and cultivation but also intensify competition for land, fuelwood, thatch, and grazing resources, with disputes reported over harvesting timing, regeneration, and livestock-related damages (Khasalamwa-Mwandha, 2021; Miura & Tabata, 2022).

Integrated service models in health and education increasingly

serve both groups (Komakech et al., 2019). In Koboko municipality, KIIs/FGDs describe a local-government-led coordination approach ("Koboko model") that mobilizes partnerships and external financing to mainstream refugee and host priorities in municipal planning, including recent funding to support economic inclusion (Mwanje, 2025).

However, KIIs/FGDs indicate that perceived aid allocation ratios (e.g., 70/30 refugee/host) can generate grievances, with hosts feeling insufficiently compensated for land and resource contributions, especially during shared shocks. In urban settings, KIIs/FGDs describe perceived price effects on housing, education, health, and land markets linked to refugee economic participation, with implications for inequality and social tension.

Economically, evidence suggests hosts often have higher average incomes and consumption than refugees, while both rely on aid and remittances; refugees also engage in market linkages (including resale of rations) and informal-sector work, contributing to local economies and tax bases (IFC, 2021). Vocational training and enterprise support initiatives have been reported across settlements, alongside identified value chains (e.g., cassava, simsim, groundnuts). Water conflicts are reported less frequently than land/biomass disputes but occur where shared water points serve multiple uses and management rules are weak (Khasalamwa-Mwandha, 2021; Miura & Tabata, 2022).

The study's findings, summarised in Table 21, revealed that the shared resource and service allocation in refugee-hosting areas in the West Nile has become a key source of tension between host communities and refugees. The examples of resource and service allocations (Table 21) in West Nile illustrate how shared provision arrangements between refugees and host communities, while intended to promote coexistence, often generate distributional tensions and governance challenges. Across multiple sectors, allocation patterns reflect a reliance on host–refugee sharing mechanisms that are not always matched by adequate expansion of resources or services.

In the case of land for farming, refugees in districts such as Bidi Bidi, Adjumani, Yumbe, Madi Okollo, and Teregoare allocated plots by host communities. While this arrangement supports refugee livelihoods and aligns with Uganda's progressive settlement model, it has also led to competition over land, fragmentation of holdings, and localized disputes, particularly in areas with high population density and limited arable land. Access to firewood and thatch grass is similarly based on shared collection areas. This has resulted in over-harvesting and environmental degradation, placing additional pressure on surrounding

ecosystems and exacerbating tensions between hosts and refugees as resources become increasingly scarce.

Table 21: Examples of resource/service allocations in West Nile region

Resource/Service	Allocation Pattern/ Example	Tension/Outcome
Land for farming	Refugees allocated plots by hosts (Bidi Bidi, Adjumani, Yumbe, Madi Okollo, Terego)	Competition, land fragmentation, disputes
Firewood/thatch grass	Shared collection areas	Over-harvesting, environmental degradation
Health services	Integrated facilities (Arua, Adjumani, Koboko, Yumbe, Moyo)	Perceived inequity in aid/ service ratios
Food aid	Refugees receive rations, hosts do not	Resale in markets, host resentment
Water points	Shared waterholes in settlements	Contamination, usage disputes, host communities remain largely uncatered for.

For health services, the use of integrated facilities in districts such as Arua, Adjumani, Koboko, Yumbe, and Moyo has improved overall service availability. However, perceptions of inequitable aid and service ratios persist, with host communities often viewing refugees as receiving disproportionate support, contributing to grievances despite shared infrastructure. Food aid represents one of the most visible sources of tension. Refugees typically receive regular food rations, while host communities do not, leading to the resale of food aid in local markets and heightened resentment among hosts who experience similar levels of poverty and food insecurity but lack comparable assistance.

Finally, water points are commonly shared within and around settlements. While this promotes integration, it has also led to contamination, overcrowding, and disputes over use, particularly where infrastructure is insufficient. Host communities frequently report being less adequately served, reinforcing perceptions of unequal prioritisation. These examples highlight how resource-sharing arrangements in West Nile, though designed to foster inclusion and resilience, often produce distributional and procedural justice challenges when not accompanied by sufficient investment, transparent allocation processes, and inclusive planning. Addressing these tensions requires scaling up services for both hosts and refugees, strengthening local governance mechanisms, and ensuring that allocation decisions are perceived as

fair, transparent, and responsive to the needs of all affected groups.

5.3.6 Procedural Justice

Procedural justice concerns the fairness, transparency, and inclusiveness of decision-making processes regarding resources and services in settings where hosts, refugees, and diverse social groups must negotiate shared scarcity. In West Nile, procedural legitimacy depends on whether women, youth, refugees, and other marginalized groups can participate meaningfully, access information, and influence outcomes (Acema et al., 2021; Lemke & Claeys, 2020).

Evidence from Shea governance suggests better compliance and sustainability where community members participate in crafting and enforcing rules, although participation is shaped by education, ethnicity, and boundary clarity (Acema et al., 2021). In contrast, post-conflict settlement processes can prioritize rapid stability over inclusive justice; the West Nile peace process illustrates how victim voices may be sidelined, weakening long-term perceptions of fairness (Bogner & Neubert, 2013). Broader assessments also show a gap between legal recognition of community land rights and actual inclusion of marginalized groups in practice (Lemke & Claeys, 2020).

Strengthening procedural justice, therefore, requires participatory mechanisms that are consistent, representative, and linked to both customary and statutory systems, alongside capacity support and accessible information.

5.3.6.1 Participation in environmental decision-making and planning

Participation in environmental decision-making in West Nile is widely recognized as essential but uneven in practice. Decentralized environmental governance assigns districts responsibility for resource management, intending to increase local ownership and context-specific solutions (Omoding et al., 2020). Evidence from participatory natural resource management elsewhere in Uganda demonstrates that involving user groups and local leaders can improve sustainability and knowledge transfer (Oosterveer & Van Vliet, 2010).

The KIIs conducted in West Nile highlight institutional capacity gaps at sub-county/LC levels (e.g., missing technical positions in environment/forestry/water/land positions, understaffing, and underfunding), with planning often limited to awareness activities. Program-based financing was also reported to contribute to discontinuity in planning and implementation.

Across settings, communities are often engaged more in implementation than in planning and budgeting, which can reduce ownership and

sustainability; meaningful participation is strongest when communities are treated as resource managers/owners rather than passive users (Chirenje et al., 2013). Aligning scientific tools with local priorities is also essential, as shown by ecosystem service assessments emphasizing stakeholder valuation of livelihood-relevant services (Schlemm et al., 2025).

These qualitative patterns are reflected in the household survey findings on representation in environmental decision-making structures in Madi-Okollo district (Table 22), which present respondents' reported frequency of participation in decision-making processes across key environment and natural resource areas. Overall, the results point to low, irregular, and highly uneven participation, with meaningful engagement confined mainly to land, water, and resettlement issues, and complete exclusion from conservation and mineral-related decision-making.

Table 22: Frequency of participation in decision-making processes on key resources

Resources	Frequency of participation in decision making (%)				
	Always	Often	Sometimes	Rarely	Never
Land	2	8	16	6	6
Water	4	13	19	13	6
Conservation areas	0	0	0	0	0
Minerals	0	0	0	0	0
Resettlement	3	11	17	6	14

Participation in land-related decisions is limited. Only 2% of respondents reported consistently participating, while 8% reported often participating and 16% reported sometimes participating. However, a notable proportion reported rare participation (6%) or none (6%), indicating that engagement in land governance is sporadic and far from institutionalised. A similar pattern is observed for water governance, where participation is slightly higher but still constrained. Only 4% of respondents indicated always participating and 13% often, while the largest share reported participating sometimes (19%). Combined, 19% reported rare or no participation, suggesting that even in a sector where community engagement is relatively more common, participation remains inconsistent and limited in depth.

In contrast, participation in decisions related to conservation areas and mineral resources is absent, with no respondents reporting participation. This complete lack of engagement highlights a profound

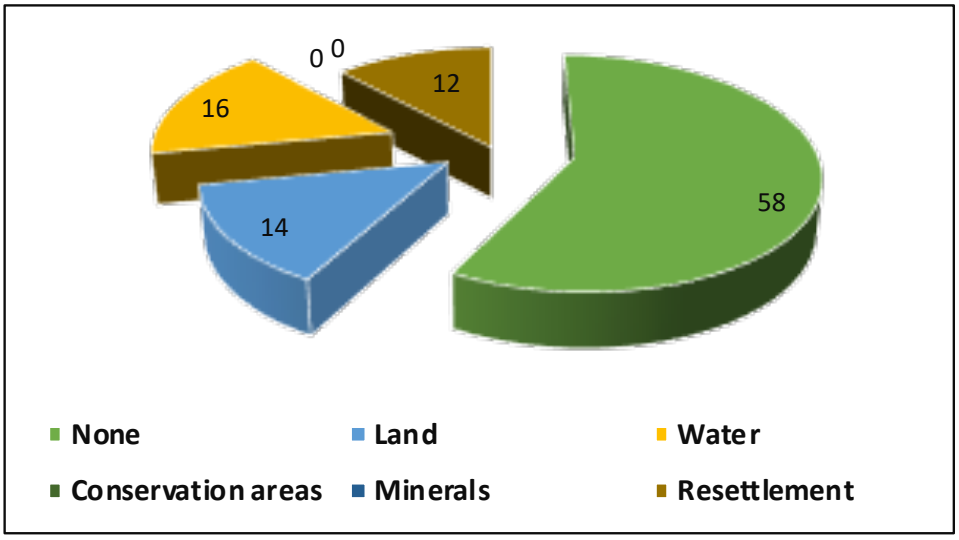
procedural exclusion, particularly in sectors often associated with land alienation, restricted access, environmental degradation, and conflict. Decisions in these domains are made through centralized or external processes with no meaningful community consultation. Participation in resettlement-related decisions shows modest engagement: 3% report always participating and 11% often, while 17% report sometimes participating. However, a substantial proportion (14%) reported never participating, underscoring the vulnerability of affected households in decisions that directly shape displacement, compensation, and livelihood outcomes.

Taken together, the findings demonstrate that community participation in environmental decision-making is largely ad hoc, selective, and exclusionary. While some limited engagement exists around land, water, and resettlement, participation is neither regular nor comprehensive, and is absent in conservation and mining governance. From an environmental justice perspective, this reflects a significant procedural justice deficit, where communities, particularly those most affected, are denied consistent, meaningful opportunities to influence decisions over critical resources. Addressing these gaps will require institutional reforms that move beyond symbolic consultation toward structured, predictable, and inclusive participation mechanisms, especially in high-stakes sectors such as conservation and extractives, where exclusion currently appears most entrenched.

5.3.6.2 Awareness of Decisions on Community Resources in Madi Okollo

Respondents in the household survey in Madi-Okollo were asked whether they were aware of decisions affecting community resources, and the results, illustrated in Figure 27, reveal generally low levels of information and limited inclusion in decision-making processes. The majority of respondents (58%) reported not being informed about decisions regarding community resources, indicating widespread information gaps and weak transparency in local resource governance. Among those who reported some level of awareness, water-related decisions were the most commonly cited, with 16% of respondents indicating they were informed. Awareness of decisions related to minerals was reported by 14%, while resettlement-related decisions accounted for 12%. In contrast, no respondents (0%) reported being informed about decisions concerning land or conservation areas, despite these resources being central to livelihoods, environmental management, and conflict dynamics in the district.

Figure 27: Awareness of decisions made on community resources in Madi Okollo district



The distribution of responses points to a pronounced procedural justice deficit in Madi Okollo. Decision-making processes affecting critical resources occur with minimal downward information flow to communities, particularly regarding land and conservation governance. Where information does exist, it is fragmented and unevenly distributed across resource types, suggesting selective communication rather than systematic consultation. These findings indicate that most households lack timely, meaningful access to information on resource governance, limiting their ability to engage, influence outcomes, or hold authorities accountable. Such exclusion is likely to disproportionately affect women, youth, and other marginalised groups, reinforcing existing inequalities and undermining trust in local institutions. Strengthening transparency, inclusive communication channels, and community engagement mechanisms is therefore essential for improving procedural fairness in resource governance in Madi Okollo.

5.3.6.3 Media for disseminating information on environmental decisions

Table 23 below presents the main channels through which information on environmental resource decisions is disseminated in the study area, disaggregated by resource type. The results reveal a narrow and uneven communication landscape, with heavy reliance on a limited number of informal and face-to-face mechanisms, and substantial gaps across several critical resource sectors.

Table 23: Medium of disseminating information on environmental decisions

Medium of exchange of information about decisions on environmental resources	Environmental resources (%)				
	Land	Water	Conservation areas	Minerals	Resettlement
LC/Community meeting	36	70	0	0	35
Traditional leaders	20	20	0	0	11
Radio	0	4	0	0	2
NGOs/CBOs	0	0	0	0	0
Noticeboard	2	0	0	0	0
Social media/phone	2	0	0	0	0
Local resources management committees	4	10	0	0	4
Others	6	0	0	0	2

Local Councils (LCs) and community meetings emerge as the dominant channels for information dissemination, particularly for water-related decisions, with 70% of respondents identifying these channels. LCs also play a role in communicating decisions on land (36%) and resettlement (35%), underscoring their central position in local governance structures. However, LC meetings are not used at all to disseminate information on conservation areas or mineral resources (0%), indicating a significant exclusion of communities from decision-making processes in these sectors.

Traditional leaders constitute the second most important channel, particularly for land (20%), water (20%), and resettlement (11%). This reflects the continued relevance of customary authority in local governance. However, similar to LC structures, traditional leaders play no role in communicating decisions related to conservation areas or minerals, suggesting that decisions in these sectors are largely centralized or externally driven, with minimal engagement of customary institutions.

Formal and mass communication channels are largely absent. Radio, social media/phone, and noticeboards are used only marginally, and primarily for land or water decisions, each accounting for 4% or less. Notably, NGOs/CBOs are absent (0%) as a channel across all resource categories, despite their frequent involvement in environmental programmes and community engagement. This points to missed

opportunities for structured, inclusive, and rights-based information dissemination. Local resource management committees play a limited role, cited by 10% of respondents for water-related decisions and 4% for land and resettlement. Their minimal visibility suggests weak institutionalisation or limited authority in practice.

These findings indicate that information dissemination is highly selective, resource-specific, and concentrated around water. At the same time, decisions concerning land, conservation areas, and mineral resources, often the most contested and politically sensitive, are communicated poorly or not at all. This pattern reflects a significant procedural justice gap, where communities are inadequately informed about decisions that directly affect their livelihoods, access to resources, and environmental well-being. The reliance on informal and elite-mediated channels further risks excluding women, youth, persons with disabilities, and other marginalised groups who may face barriers to attending meetings or accessing traditional leadership spaces. Strengthening procedural justice will therefore require diversifying communication channels, institutionalising transparent information-sharing mechanisms, and ensuring that all major resource sectors, particularly conservation and mining, are subject to timely, accessible, and inclusive public disclosure processes.

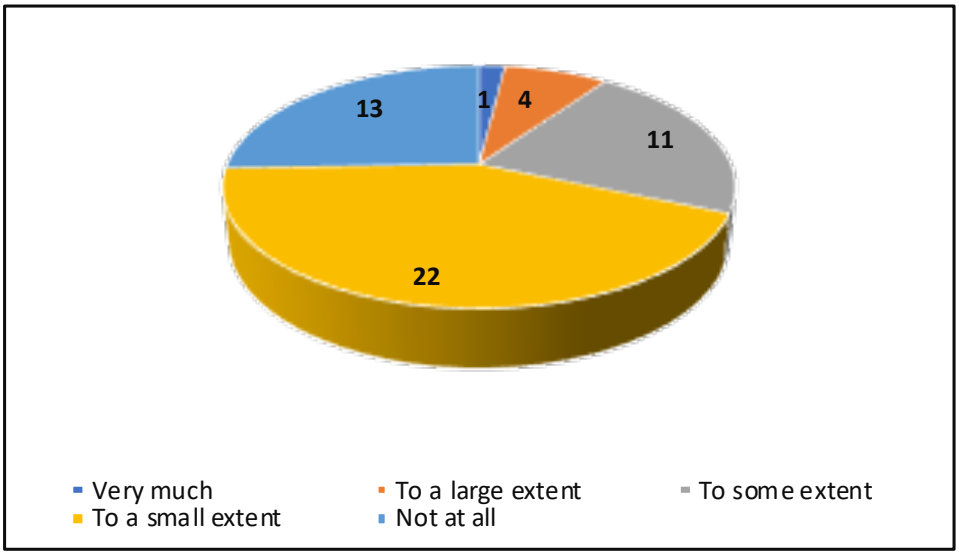
5.3.6.4 Consideration of community views in environmental and natural resource governance

The study further examined the extent to which community views are taken into account in natural resource governance processes. The results, illustrated in Figure 28, reveal limited and largely tokenistic consideration of community perspectives. Only 1% of respondents indicated that community views are considered very much, and a further 4% felt this occurs to a large extent. By contrast, 11% reported that community views are considered to some extent, suggesting partial or selective inclusion rather than substantive influence. The largest proportion of respondents (22%) reported that community views are considered to a small extent, while 13% stated not at all.

These findings show that a clear majority perceive community input as having minimal or negligible influence on decisions related to natural resource governance. From an environmental justice perspective, this pattern reflects a procedural justice deficit, where consultation may occur in form but not in substance. While communities may be invited to meetings or informed after decisions are made, their views rarely shape outcomes. This weak incorporation of local perspectives undermines trust in governance institutions and limits communities'

ability to influence decisions that directly affect their livelihoods, resource access, and environmental well-being. Improving resource governance will thus require moving beyond symbolic participation toward genuine, deliberative, and responsive decision-making processes in which community views meaningfully inform policies, plans, and implementation.

Figure 28: The extent to which community views are considered in resource governance



5.3.6.5 Representation of social groups in local decision-making structures in Madi Okollo

The study also examined the representation of social groups in local environmental committees and decision-making structures in the Madi Okollo district. The findings are summarised in Table 24, which presents respondents' perceptions of how different social groups are represented. Overall, the results reveal uneven and generally low levels of representation, with marked disparities across social groups, indicating significant procedural and recognitional justice challenges.

Table 24: Social groups representation on local decision-making structures in Madi Okollo district.

Social groups	Representation on local environmental committees or decision-making structures (%)				
	Fully represented	To a large extent	To some extent	To a small extent	Not at all
Women	4	8	10	46	32
Youths	0	6	16	44	34
Refugees	9	25	39	20	7
Indigenous groups	10	14	12	50	14
Elderly	13	34	20	22	11
Persons with Disabilities (PWDs)	1	6	13	56	24

Women and youth are among the most under-represented groups. Only 4% of respondents indicated that women are fully represented, while 78% reported that women are represented to a small extent or not at all. Youth representation is even more constrained, with 0% reporting full representation and 78% indicating small or no representation. These findings suggest that, despite women's and youths' central roles in livelihoods, water collection, agriculture, and environmental management, their voices remain largely marginal in formal decision-making spaces.

Persons with Disabilities (PWDs) face pronounced exclusion. Just 1% of respondents perceived PWDs as fully represented, while 80% reported that they are represented to a small extent or not at all. This highlights persistent structural barriers, limited accommodation, and weak institutional mechanisms for inclusive participation. Indigenous groups show mixed outcomes. While 24% of respondents indicated full or large representation, a majority (64%) reported that indigenous groups are represented only to a small extent or not at all. This suggests that recognition of indigenous identity does not consistently translate into meaningful influence over environmental decisions, particularly where land, water, or conservation issues intersect with external interventions.

In contrast, refugees demonstrate relatively higher levels of representation compared to other marginalized groups. A combined 73% reported that refugees are fully represented or represented to

a large extent, and 27% reported that they are represented to some extent. However, 27% still perceived refugee representation as limited or absent, indicating uneven inclusion that may vary by resource type or institutional forum. The elderly emerge as the most consistently represented group. Nearly half (47%) were reported as fully represented or represented to a large extent, reflecting the continued prominence of age-based authority and customary leadership structures in local governance.

Taken together, the findings indicate that local decision-making structures in Madi Okollo remain dominated by socially powerful groups, particularly elders, while women, youth, and PWDs experience systematic marginalisation. Although refugees appear relatively better represented than in many host-community contexts, representation does not necessarily equate to influence. From an environmental justice perspective, these patterns underscore persistent procedural and recognitional justice gaps, in which formal inclusion remains limited and unequal, constraining meaningful participation in decisions on resource access, management, and benefit-sharing.

5.3.6.6 Barriers to participation in environmental decision-making in Madi Okollo

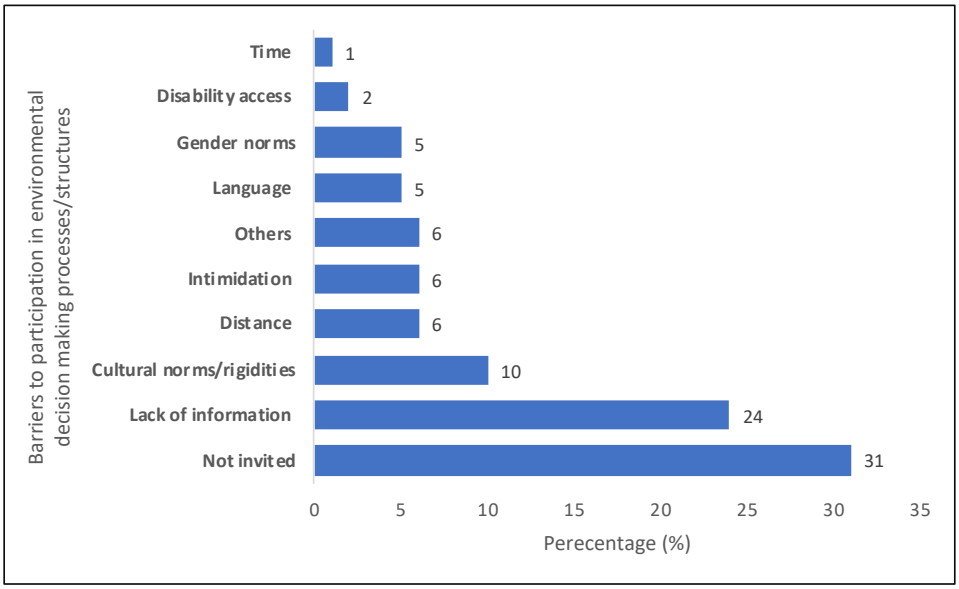
Figure 29 illustrates respondents' perceptions of the key barriers that limit participation in environmental decision-making processes and governance structures in Madi Okollo district. The findings reveal that exclusion is primarily driven by institutional and procedural factors rather than by individual unwillingness to participate. The most frequently cited barrier is not being invited to participate, reported by approximately 30% of respondents. This indicates that exclusion often occurs at the point of entry into decision-making processes, where meetings, consultations, or forums are selectively convened without broad outreach. Closely related to this is the lack of information, reported by about 24% of respondents, suggesting weak communication channels, delayed information sharing, or failure to disseminate information in accessible formats and languages.

Cultural norms and rigidities also play a significant role, with around 10% of respondents identifying them as barriers. These norms often reinforce age, gender, and status hierarchies that privilege elders and male leaders while limiting the participation of women, youth, and other marginalized groups. Distance to meeting venues and intimidation were each reported by roughly 6–7% of respondents, highlighting both physical and social deterrents to engagement, particularly for poorer households, women, and persons with limited mobility. Other barriers

(including language, gender norms, and disability-related access constraints) were mentioned by smaller but notable proportions of respondents, underscoring the layered nature of exclusion. Time constraints were least frequently cited, suggesting that the primary challenge is not lack of willingness or availability, but rather systemic exclusion from governance processes.

Overall, the findings point to a clear procedural justice gap in environmental governance in Madi Okollo. Participation is constrained less by individual capacity and more by how decision-making processes are designed and implemented. Addressing these barriers will require deliberate measures to ensure timely and inclusive information dissemination, proactive invitations to diverse social groups, accessible meeting arrangements, and institutional safeguards against intimidation and exclusion.

Figure 29: Barriers to participation in environmental decision-making processes in Madi Okollo district.



5.3.6.7 Knowledge of natural resource governance tools in Madi Okollo

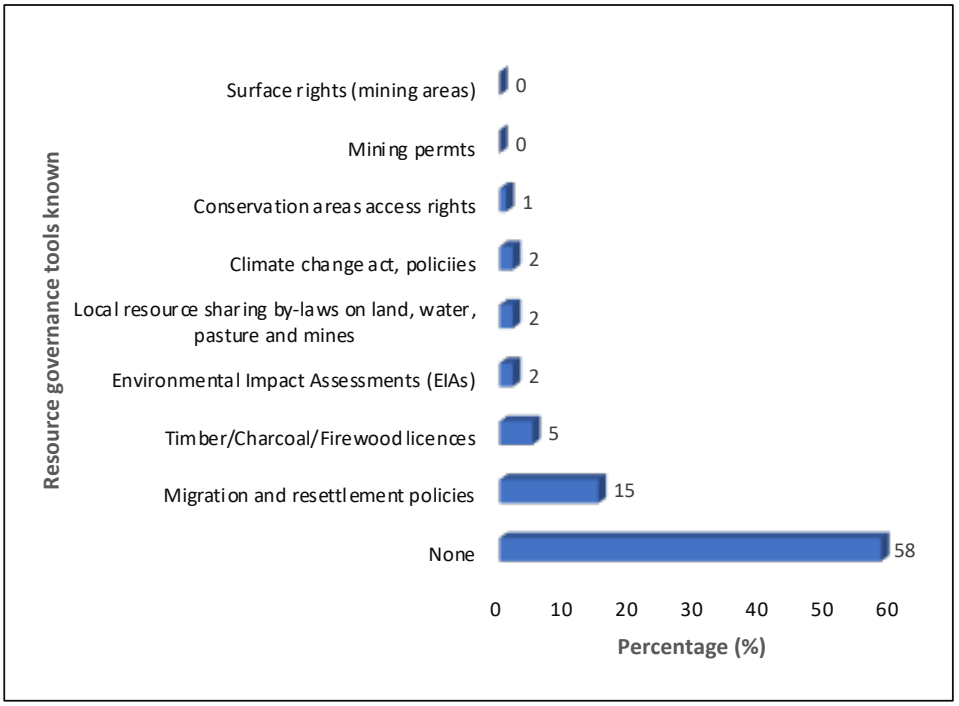
Figure 30 presents respondents' awareness of formal natural resource governance tools relevant to land, water, conservation, mining, and resettlement in Madi Okollo district. The findings indicate very low levels of awareness, pointing to a significant information and transparency gap in local resource governance. The majority of respondents, approximately 60%, reported no knowledge of any resource governance tools. This suggests that most community members are unfamiliar

with the legal, policy, and regulatory frameworks governing access to and management of natural resources, limiting their ability to assert rights, meaningfully engage in decision-making, or seek redress when disputes arise.

Among the minority who reported some awareness, knowledge is uneven and concentrated around a narrow set of issues. Migration and resettlement policies are the most widely known, reported by 18% of respondents, reflecting the prominence of refugee settlement dynamics and resettlement processes in the district. Awareness of timber, charcoal, and firewood licences and Environmental Impact Assessments (EIAs) is considerably lower, each reported by fewer than 10% of respondents. These tools are directly relevant to everyday livelihood activities and environmental protection, yet remain poorly understood at the community level.

Knowledge of more specialized or formal governance instruments, such as local resource-sharing by-laws, climate change policies, conservation area access rights, mining permits, and surface rights in mining areas, is minimal, with only up to 4% of respondents citing them. This indicates that these frameworks are either poorly disseminated, poorly localized, or inaccessible due to language, format, or institutional outreach.

Figure 30: Knowledge of relevant resource governance tools in Madi Okollo district



From an environmental justice perspective, the findings point to a pronounced procedural and informational justice deficit. Limited awareness of governance tools undermines communities' capacity to participate effectively in environmental decision-making, hold authorities and investors accountable, and navigate conflicts over land, water, and natural resources. Without deliberate efforts to improve transparency, public access to information, and civic education, existing power asymmetries between institutions, investors, and local communities are likely to persist. The results underscore the need for proactive dissemination of governance information, tailored community sensitisation, and accessible communication strategies to strengthen informed participation and equitable resource governance in Madi Okollo district.

5.3.7 Recognition Justice

Recognition justice in West Nile concerns whether governance respects local knowledge, cultural identity, mobility systems, and the rights and dignity of diverse groups (hosts, refugees, women, youth, minorities, PWDs). Customary tenure and environmental practices strongly influence land allocation and integration processes, including

reliance on elders and local leaders in settlement decisions. KIIs/FGDs emphasize shared cultural–linguistic ties in some host–refugee settings, thereby facilitating integration. Still, recognition can be undermined where planning is perceived as top-down and consultation is limited (Omoding et al., 2020).

The region's history of conflict and displacement shapes expectations of hospitality and justice. Yet, rapid settlement expansion can disrupt traditional land use, restrict cultural access, and create perceptions that local voices are sidelined. Pastoral mobility and access to grazing lands are frequently contested, with conflicts reported over grazing access, livestock theft, and land-use change (Khasalamwa-Mwandha, 2021). KIIs/FGDs also note emerging but fragmented recognition of urban refugees through local frameworks, with limited mainstreaming into city strategic planning beyond selected initiatives.

In principle, Uganda's refugee policy supports fair access; in practice, barriers in land, water, and biomass energy contribute to negative perceptions and episodic conflict, particularly in high-pressure settlements (Berke et al., 2015; Khasalamwa-Mwandha, 2021; Miura & Tabata, 2022). Recognition gaps also persist for women and youth: women report discrimination in care contexts despite similar service access (Rustad et al., 2021), and youth participation is often limited or deprioritized in community decision-making (Komakech & Orach, 2022). Cultural access to sacred/natural sites may be reduced by conservation and settlement expansion without adequate consultation (P. Berke et al., 2015). Finally, willingness to speak on environmental issues varies across social hierarchies, reinforcing the need for safer, inclusive civic spaces (Komakech & Orach, 2022; Rustad et al., 2021). The findings from the KIIs conducted in this study further suggest that environment and climate change are not consistently prioritized in humanitarian planning, weakening prospects for long-term stewardship in the West Nile region.

5.3.7.1 Integration of refugee and host voices in governance

Integrating refugee and host voices is central to social cohesion and service legitimacy in a major refugee-hosting region. Under CRRF-aligned approaches, OPM and partners support efforts to embed refugee concerns in district planning and budgets through coordination platforms and community dialogue. The KIIs and FGDs conducted in this study revealed that integration mechanisms include local councils, community meetings, and facilitated dialogue spaces (e.g., neighbourhood assemblies, multi-stakeholder dialogues, community radio). Joint management structures (e.g., Health Unit Management

Committees) and integrated livelihood programming (e.g., agricultural production, vocational training, VSLAs) are reported to strengthen collaboration and reduce tensions.

At a regional level, West Nile Development Association (WENDA) is reported to coordinate development and peacebuilding across districts, alongside emerging regional economic initiatives. Field observations also note significant infrastructure investments (e.g., solar power development) with potential shared benefits for both hosts and refugees. However, constraints remain that include competition over scarce resources, funding gaps, language and cultural barriers, restrictive gender norms, and tensions arising from conflicts between customary and statutory jurisdictions (especially over land and urban planning).

5.3.7.2 Recognition of various social groups in environmental decision-making in Madi Okollo

In Madi Okollo district, the household survey findings reveal mixed perceptions regarding recognition of different social groups (refugees, host communities, and other marginalised groups) in environmental decision-making. Table 25 presents respondents' perceptions of the extent to which the knowledge, rights, and voices of different social groups are recognised in natural and ecological resource-related decision-making. The findings reveal mixed and uneven recognition, with contrasts between refugee-host relations and the recognition of gender, youth, and minority perspectives, pointing to persistent recognitional justice gaps.

Table 25: Perceived recognition of refugee and host communities, and other marginalised groups in environmental decision-making in Madi Okollo District

Manifestation of recognition justice	Perceived level of agreement (%)				
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Local/indigenous knowledge and customs are respected in land allocation and environmental decisions	3	44	9	32	12
Pastoral mobility is considered/respected in land allocation and environmental decisions	7	18	16	24	35

Manifestation of recognition justice	Perceived level of agreement (%)				
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
Refugees/migrants are treated fairly in resource access arrangements	18	50	6	8	18
Host communities are treated fairly in resource access arrangements	14	48	10	22	6
Women's rights, voices, and knowledge are respected in meetings and environmental decisions.	5	36	11	44	4
Youth's rights, voices, and knowledge are respected in meetings and environmental decisions	2	33	10	45	10
Minority ethnic groups' rights, voices, and knowledge are respected in meetings and environmental decisions	0	32	20	42	6
Cultural access to sacred/natural sites has changed due to mining/ conservation/refugee sites	2	30	24	38	6
I feel safe expressing views on environmental issues.	29	30	13	22	6

Perceptions of refugee-host relations are relatively more positive than those of other dimensions. The majority of respondents (68%) either strongly agreed or agreed that refugees and migrants are treated fairly in natural resource access arrangements. In comparison, 62% expressed similar views regarding fair treatment of host communities. These findings suggest that, despite underlying pressures on land and services, formal and informal arrangements in Madi Okollo have achieved a degree of perceived balance between host and refugee populations. However, the presence of dissenting views, notably the

26% who disagreed or strongly disagreed on host community fairness, indicates that perceptions of equity remain contested.

In contrast, recognition of local and indigenous knowledge systems shows weaker consensus. While 47% agreed that indigenous knowledge and customs are respected in land allocation and environmental decisions, a substantial 44% disagreed or strongly disagreed. Similarly, respect for pastoral mobility is particularly weak: only 25% agreed that pastoral mobility is considered, compared to 59% who disagreed or strongly disagreed. This highlights a significant disconnect between formal land-use decisions and pastoral livelihood systems, with implications for land access, conflict, and resilience. Besides, pastoral livelihood systems are not predominant in the West Nile region.

Recognition of women's and youth's voices is notably limited. Nearly half of respondents (48%) disagreed or strongly disagreed that women's rights, voices, and knowledge are respected, while 55% expressed the same view regarding youth. These results reflect entrenched gender and generational hierarchies in decision-making spaces, where women and young people may be consulted symbolically but lack meaningful influence over outcomes.

Perceptions are even more negative for minority ethnic groups, with 48% of respondents disagreeing or strongly disagreeing that their rights and knowledge are respected, and none strongly agree. This suggests that minority identities remain weakly recognised within local governance structures, particularly when decisions involve land, conservation, or external interventions.

Changes in cultural access to sacred and natural sites also emerge as a concern. While 32% agreed that access has changed due to mining, conservation, or refugee-related developments, a larger proportion (44%) disagreed or strongly disagreed, indicating divergent experiences and perceptions, likely shaped by location, livelihood, and proximity to development activities.

Finally, perceptions of safety in expressing views are relatively more positive but still mixed. A combined 59% of respondents agreed or strongly agreed that they feel safe expressing opinions on environmental issues, yet nearly 28% disagreed or strongly disagreed. This suggests that while overt repression may not be widespread, social, political, or institutional constraints continue to limit open expression for a significant minority. Taken together, the findings indicate that recognition justice in Madi Okollo is partial and uneven. While host–refugee relations appear comparatively more recognised,

pastoral systems, women, youth, and minority ethnic groups remain inadequately acknowledged in environmental decision-making. These patterns underscore the need for governance approaches that move beyond formal inclusion toward substantive recognition of diverse identities, knowledge systems, and livelihood realities, as a foundation for more just and sustainable resource governance.

5.3.8 Restorative Justice

Restorative justice emphasizes repairing harm, restoring relationships, and co-producing solutions. In West Nile, formal environmental restorative justice programming is limited, but restorative principles appear in community dialogues addressing disputes over land and resource access in post-conflict and displacement contexts. Traditional reconciliation practices and negotiated settlements can support social repair, though they may not directly address environmental harm or broader participation deficits.

Restitution approaches (e.g., compensation linked to conservation or development) exist but can fall short where recognition and procedural fairness are weak. In contrast, tree planting, agroforestry, and afforestation initiatives are reported to deliver co-benefits (fuelwood, fruits, timber). Where farmers participate in design, these interventions can strengthen local ownership and long-term stewardship. Hybrid justice mechanisms (e.g., amnesty and reintegration support) also illustrate how social reconciliation can complement environmental governance by stabilizing relationships and reducing drivers of conflict.

5.3.8.1 Grievance handling mechanisms

Grievance handling combines customary, community-based, and formal systems. Clan elders and traditional leaders commonly mediate land, family, and social disputes through dialogue-oriented approaches that prioritize restoring relationships. However, they may reproduce patriarchal norms in cases such as GBV (Lorist et al., 2022). In refugee settings, refugee-led organizations and networks (e.g., RELON) supported by NGOs are reported to mediate disputes and advocate for vulnerable groups, including those related to water and resource access (OXFAM, 2023; Vancluysen & Ingelaere, 2020). Post-conflict dynamics also shape grievance expectations; victim advocacy groups have emerged where communities perceive gaps in recognition during peace processes (Bogner & Neubert, 2013).

The survey findings indicate that experiences of harm arising from environmental decisions are not widespread in Madi Okollo, but they are nonetheless significant for a notable minority of households. About

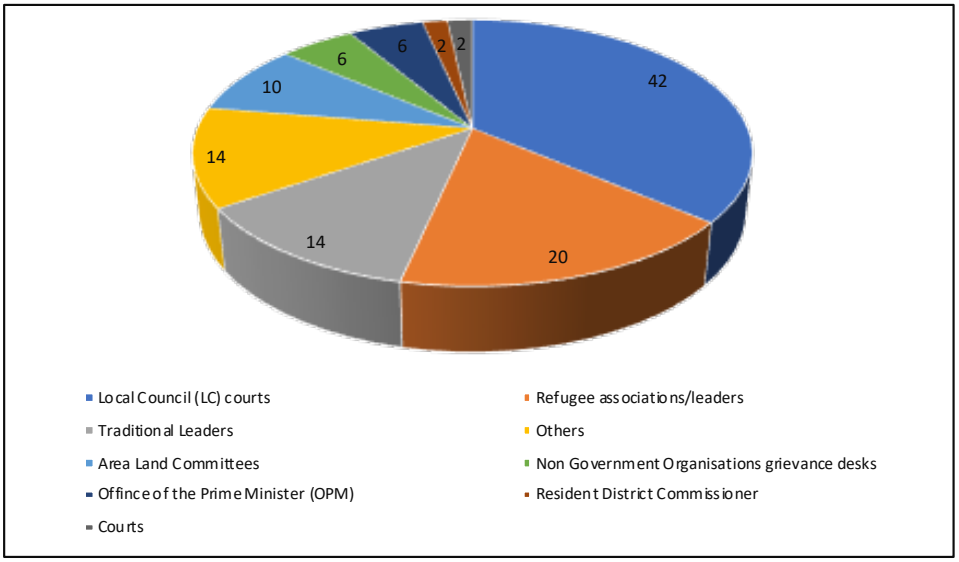
24% of respondents reported having been adversely affected by environmental or resource-related decisions within the past two years, while 76% indicated that they had not experienced such harm. Among those who reported being affected, there was a strong tendency to seek redress. Eighty-six percent of affected respondents reported that they pursued some form of grievance handling, with only 14% indicating that they did not take any action. Respondents who did not seek redress commonly cited perceptions that no meaningful action would be taken or that the process would not yield tangible results.

For those who pursued grievance redress, reliance on informal and localised mechanisms was predominant. Nearly half (48%) reported using "other" channels, which include informal or ad hoc pathways not captured by standard categories. Local Council (LC) courts were the most prominent formal mechanism, used by 44% of respondents. Area Land Committees and NGO grievance desks were each cited by 14%, while traditional leaders and formal courts were mentioned by only 4% each. Engagement with higher-level or sector-specific institutions, such as the Office of the Prime Minister (OPM), World Food Programme (WFP), police, landlords, elders, or refugee complaint desks, was minimal.

Assessment of grievance outcomes shows mixed effectiveness. A majority of respondents (62%) reported that their grievances were fully resolved, while 36% indicated partial resolution. However, 20% stated that their grievances were not resolved, and 10% reported that their cases were still pending at the time of the survey. These findings suggest that while affected households demonstrate a proactive approach to seeking justice, the effectiveness and consistency of grievance redress mechanisms vary considerably. Overall, the results point to a relatively high willingness to seek redress among affected households, but also highlight uneven outcomes and continued reliance on informal or local channels, raising questions about accessibility, consistency, and institutional effectiveness in grievance handling.

Figure 23 illustrates the grievance-handling mechanisms that community members in Madi Okollo district are aware of and rely on when addressing disputes over land, resources, and services. The results show an intense concentration of grievance awareness around formal and semi-formal local institutions, with uneven recognition of alternative or rights-based channels.

Figure 31: Known channels of grievance handling in Madi Okollo district



The Local Council (LC) courts are the most widely known grievance mechanism, cited by 42% of respondents. This reflects the central role of LCs as the first point of contact for community-level dispute resolution, given their physical proximity, familiarity, and perceived authority. Refugee associations and refugee leaders constitute the second most recognised channel (20%), underscoring the importance of parallel governance and representation structures within refugee-hosting contexts in West Nile. Traditional leaders and informal mechanisms also remain significant, with 14% of respondents identifying them as grievance channels. This highlights the continued relevance of customary authority in resolving disputes, particularly those related to land access, social relations, and community norms. A further 14% of respondents reported "other" channels, suggesting the presence of informal, ad hoc, or case-specific pathways that fall outside standard institutional categories.

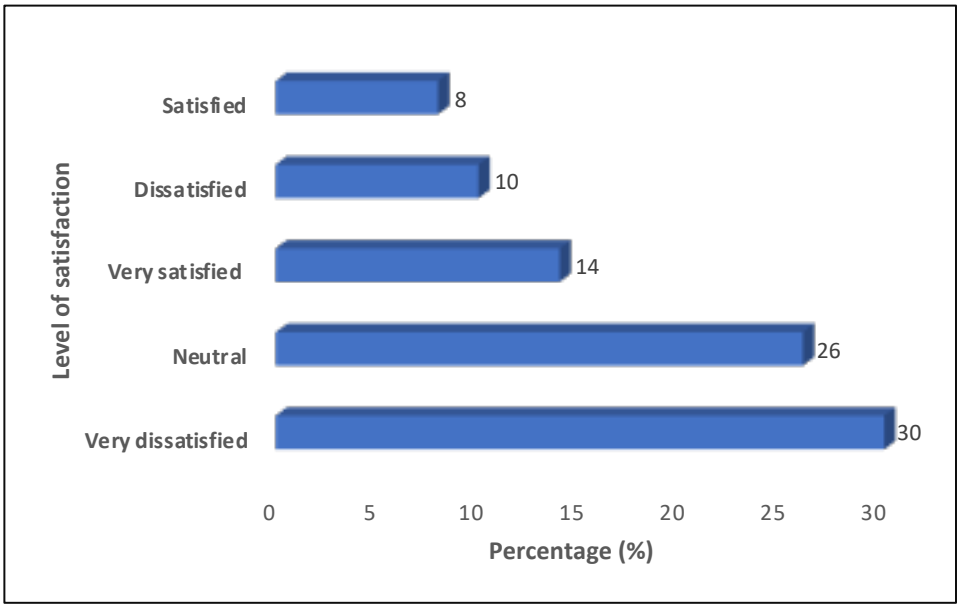
Formal statutory institutions appear far less visible. Area Land Committees account for 10% of responses, while courts and the Office of the Prime Minister (OPM) are each mentioned by 6% of respondents. The Resident District Commissioner is identified by only 2%, and non-governmental organisation (NGO) grievance desks by 6%, indicating limited awareness or accessibility of these mechanisms at the community level.

The results reveal a grievance landscape dominated by localised, community-based structures, with relatively limited visibility of higher-

level state and rights-based mechanisms. From an environmental justice perspective, this pattern points to procedural constraints: while grievances can be raised through familiar local channels, access to impartial, formal, and enforceable remedies, especially for complex disputes involving land, refugees, or environmental harm, remains limited. This reliance on local mechanisms may enhance accessibility but also risks reinforcing power asymmetries, particularly for women, youth, refugees, and other marginalised groups who may face barriers within customary or local governance systems.

Regarding satisfaction with existing grievance redress mechanisms in Madi Okollo district, the findings (Figure 24) indicate generally low confidence in their effectiveness, with dissatisfaction outweighing positive assessments. A substantial proportion of respondents reported being very dissatisfied (30%), while an additional 10% indicated that they were dissatisfied. Together, these figures suggest that four in ten respondents (40%) hold negative views about the performance of grievance handling systems. This dissatisfaction points to perceived shortcomings in accessibility, fairness, timeliness, or enforcement of outcomes.

Figure 32: Satisfaction with existing grievance redress mechanisms in Madi Okollo district.



A further 26% of respondents expressed neutral views, which may reflect uncertainty about grievance processes, limited engagement with the mechanisms, or mixed experiences. In contrast, positive

assessments are comparatively limited: 14% reported being very satisfied and 8% satisfied, indicating that fewer than one-quarter of respondents (22%) view grievance redress mechanisms favourably.

These results highlight a procedural justice deficit in grievance handling in Madi Okollo. While mechanisms exist and are known to communities, their perceived effectiveness remains limited. High levels of dissatisfaction suggest that grievances, particularly those related to land, resources, or refugee–host relations, are not consistently resolved in ways perceived as fair, transparent, or inclusive. Strengthening accountability, improving accessibility for marginalised groups, and ensuring timely, enforceable outcomes are therefore critical to improving trust and confidence in grievance redress systems in the district.

6.4.4.2 Forest conservation and restoration in West Nile region

Forest conservation and restoration in Uganda's West Nile region are shaped by a combination of traditional practices, community-based management arrangements, and externally supported restoration initiatives. While the region faces persistent challenges—such as poverty, reliance on subsistence agriculture, and high demand for forest resources—several district-level experiences demonstrate both progress and continuing gaps in sustainable forest governance.

In Yumbe District, forest management is reported to involve close collaboration between local communities and the National Forestry Authority (NFA). Practices such as selective harvesting, tree planting, and the protection of sacred forest sites are applied in ways that vary by forest type, with traditional approaches used in community forests and more formal management methods applied in public forest reserves. Evidence suggests that the effectiveness of these practices is strongly influenced by community education levels, with higher education associated with improved management outcomes. Studies further indicate that integrating local skills and traditional ecological knowledge into statutory laws and policies enhances sustainability and compliance (Alule et al., 2023).

In Arua and Nebbi districts, conservation of the endangered shea tree (Vitellaria paradoxa) is governed by community-developed rules that regulate harvesting, management, and protection. Compliance is reported to be higher where communities actively participate in rule-making and where resource boundaries are clearly defined. Traditional institutions play a central role in enforcing these rules, and their formal recognition within statutory frameworks is widely regarded as essential for long-term sustainability (Acema et al., 2021).

Across West Nile, community-based forest management (CBFM) has emerged as a key strategy, particularly through the promotion of natural regeneration, protecting forests from further disturbance to allow them to recover. In some communities, this approach is complemented by livelihood diversification, with households combining on-farm activities and regulated extraction of forest products to reduce pressure on forest ecosystems. Participation in conservation groups and social networks has been shown to support further sustainable practices and collective action (Duguma et al., 2019; Mawa et al., 2023).

In Madi Okollo District, CBFM has been especially prominent, including within and around Ajai Wildlife Reserve. Communities reportedly participate in forest management through locally developed by-laws that regulate access to firewood, grass, and wild fruits, alongside monitoring of illegal activities such as charcoal burning and logging. Forest management groups have also organized tree planting initiatives and enforcement efforts, often with support from NGOs and government programmes such as the Parish Development Model (PDM) and the Youth Livelihood Programme (YLP). These interventions commonly provide seedlings, training, and livelihood incentives, reinforcing compliance and stewardship.

The study further found that incentive-based conservation approaches are increasingly applied across the region. In these models, communities establish tree nurseries or plantations—often using indigenous or economically valuable species—in exchange for tangible benefits such as water infrastructure, savings groups, or livelihood support. Evidence indicates that when communities receive clear and direct benefits and retain decision-making influence, forest restoration efforts are more likely to be maintained beyond the duration of external support (Charnley, 2023). Such approaches are particularly relevant for Madi Okollo, where incentives have been shown to motivate longer-term conservation engagement.

Forest restoration in West Nile typically combines active tree planting and assisted natural regeneration. Degraded areas are protected from fire and grazing, while native species are planted to accelerate recovery. In Ajai Wildlife Reserve, restoration activities, including native species planting and maintenance of firebreaks, have reportedly increased tree biomass and species diversity, suggesting positive ecological outcomes.

Several national and international actors support these efforts. A five-year restoration programme launched in 2025 by the Ministry of Water and Environment, in partnership with the Japan International

Cooperation Agency (JICA), aims to expand agroforestry and sustainable land management across selected West Nile districts. The Food and Agriculture Organization (FAO) and World Agroforestry (ICRAF) are also active in Arua, Yumbe, and Moyo, promoting non-wood forest products and the domestication of indigenous species such as shea (Vitellaria paradoxa). DanChurchAid (DCA) has supported the planting of over 4.8 million tree seedlings since 2019, focusing on woodlots and agroforestry to enhance timber supply and carbon sequestration, while World Vision has established community nurseries in refugee-hosting areas, including Maaji settlement. In addition, West Nile Foresters SMC Limited supplies quality seedlings to government agencies, NGOs, and farmers, contributing to regional afforestation efforts.

Agroforestry systems in the region utilize a mix of indigenous and naturalized species. Fast-growing native trees such as Maesopsis eminii (Musizi) are widely adopted for their timber value and compatibility with crops like bananas and coffee. Fruit trees, including mango and avocado, are integrated to enhance food security and income diversification. Shea tree conservation and domestication remain a priority, while fast-growing exotic species such as eucalyptus and pine are planted in designated woodlots for fuelwood and construction. Other species, including Calliandra, teak, and mahogany, are used based on ecological conditions and household needs.

At the policy level, Uganda's commitments under the Bonn Challenge and national forest restoration strategies provide a framework for prioritizing restoration investments, including in districts such as Madi Okollo. Spatial mapping tools are increasingly used to identify areas where restoration can deliver the highest ecosystem service returns, helping guide targeted interventions (Gourevitch et al., 2016). However, persistent challenges remain, including illegal timber harvesting, charcoal production, and weak enforcement of conservation regulations. Evidence consistently shows that successful outcomes depend on active community participation, equitable benefit-sharing, and sustained monitoring. Conversely, projects perceived as externally driven or poorly aligned with local priorities often experience limited uptake and continued degradation.

Overall, forest conservation and restoration in West Nile reflect a hybrid governance model combining statutory enforcement, community-based management, and incentive-driven programming. While promising practices exist, long-term sustainability hinges on strengthening local institutions, aligning incentives with community needs, and ensuring inclusive and accountable forest governance.

6.4.4.3 Environmental rehabilitation

Environmental rehabilitation in Uganda's West Nile region involves a range of interventions to restore degraded land, improve water resources, and rehabilitate wetlands under increasing pressure from population growth, agricultural expansion, and settlement. The study findings indicate that districts such as Arua, Yumbe, and Madi Okollo have experienced extensive land degradation driven by deforestation, overgrazing, and the conversion of natural ecosystems into farmland and residential areas. These processes have contributed to soil erosion, declining soil fertility, and reduced agricultural productivity.

In response, both local authorities and communities have adopted land rehabilitation measures, particularly agroforestry practices that integrate trees into farming systems. These practices are reported to improve soil structure, reduce erosion, and enhance moisture retention. In addition, soil and water conservation techniques, such as contour bunds, mulching, and cover crops, have been implemented in several areas, notably in Madi Okollo and Yumbe, to reduce runoff, conserve soil moisture, and stabilize crop yields.

Water resource conditions in the region are closely linked to land and ecosystem health. Land degradation and wetland loss have contributed to water scarcity and declining water quality in some localities. The study found that nature-based solutions, including reforestation and wetland restoration, have been effective in improving water quality by reducing sedimentation and filtering pollutants. These interventions also contribute to flood risk reduction by slowing surface runoff and increasing water infiltration, thereby strengthening resilience to extreme rainfall events.

Wetlands play a critical role in biodiversity conservation and local livelihoods, but have been increasingly threatened by agricultural encroachment and settlement expansion. Their degradation has reduced key ecosystem services, including water regulation, waste assimilation, and habitat provision. Rehabilitation efforts in West Nile have therefore emphasized community sensitization and participatory wetland management. In Madi Okollo, for example, local bylaws on waste management have been introduced to address indiscriminate waste disposal, thereby improving environmental compliance.

Further measures include clearer demarcation of wetland, forest, and conservation area boundaries, alongside enforcement of regulations to prevent further encroachment. In some areas, replanting native wetland vegetation and restricting activities such as grazing and cultivation have enabled degraded wetlands to recover through natural

regeneration.

These findings suggest that the effectiveness of environmental rehabilitation in West Nile depends on combining technical interventions with strong community engagement and supportive policy frameworks. Nature-based solutions offer cost-effective, environmentally sustainable pathways to restore land, water, and wetland ecosystems, while community participation enhances local ownership and long-term sustainability. Together, these approaches are essential for restoring ecosystem services, sustaining livelihoods, and strengthening resilience to environmental change in the region.

5.3.9 Gender and Social Inclusion

Gender and social inclusion dynamics in West Nile are shaped by the interaction of entrenched patriarchal norms, historical patterns of displacement, and evolving humanitarian and development interventions. While programs have sought to promote gender equality, particularly through education, livelihood support, and prevention of gender-based violence (GBV), field evidence indicates that structural and cultural barriers continue to constrain meaningful inclusion and equitable participation.

Historical governance arrangements continue to influence contemporary patterns of exclusion. During FGDs, elders revealed that prior to large-scale refugee influxes, land and natural resource governance were largely mediated through male-dominated customary institutions. Early refugee settlement decisions, particularly during the 1990s, were made primarily by male elders and landlords, without broader community consultation with women and youth. This established a precedent of exclusionary decision-making that persists in current land allocation and resource governance processes.

Patriarchal norms remain a central organizing feature of social and environmental governance. Key informants consistently described West Nile as a male-dominated context in which men control land and decision-making authority through patrilineal and clan-based systems. Cultural restrictions further limit women's access to certain natural resource spaces, including forests and hunting grounds, reinforcing their marginal role in environmental governance. These structural constraints are reflected in both customary and formal systems, where women's participation remains limited and often indirect.

The post-2014 refugee influx has intensified existing inequalities while introducing new pressures. Information from KIIs and FGDs indicates that humanitarian engagement has largely reinforced male-centered

governance structures, with consultations often limited to landlords and male elders. Women and youth from host communities reported exclusion from key meetings and lack of access to information regarding land agreements, many of which were informal or not widely disseminated. This has contributed to limited transparency and weakened procedural justice in settlement-related decision-making.

Resource scarcity linked to population pressures has had gendered impacts on labor, access, and risk. Women in both host and refugee communities reported increased time burdens associated with collecting water and firewood due to environmental degradation and competition over resources. FGDs highlighted that delays in accessing water directly affect household welfare, including food preparation and caregiving responsibilities. Water points serving both communities have also become sites of tension, with women reporting limited involvement in decisions about infrastructure placement, despite being the primary users. Land access dynamics further illustrate gendered inequality. Rising land rental prices, reported to have increased from approximately UGX 30,000 to UGX 100,000–150,000 per acre annually, have disproportionately affected women, who typically have less access to cash income. Female respondents described displacement from plots due to the inability to meet rising costs, underscoring how market pressures intersect with gendered economic disadvantage.

Refugee women face compounded vulnerabilities linked to household structure, limited assets, and reduced humanitarian support. Many refugee households are female-headed, with women assuming primary responsibility for livelihoods and caregiving. However, small plot allocations (commonly 30 × 30 meters) and declining food rations limit their capacity for self-reliance. Field evidence indicates that unclear or poorly understood ration categorization systems have further exacerbated food insecurity, forcing women into coping strategies such as fuelwood collection (for sale) in host community areas, where they face heightened risks. Exposure to gender-based violence is closely linked to environmental resource use.

Young refugee women reported incidents of sexual violence while collecting firewood, grass, or charcoal materials, particularly in areas outside refugee settlement boundaries. Reporting mechanisms were widely perceived as ineffective, with respondents citing limited police response, weak accountability, and a lack of trust in complaint systems. The inaccessibility of grievance mechanisms and the perception of corruption among local leaders further undermine restorative justice.

Participation in governance remains uneven and constrained. Although

community meetings are key spaces for decision-making, women reported limited opportunities to contribute meaningfully due to social norms, timing constraints, and the dominance of male elders. Refugee women face additional barriers related to safety, mobility, and language. Youth, both host and refugee, are similarly marginalized, with limited influence over decisions related to land, livelihoods, and resource management. In refugee contexts, land and food allocation systems prioritize household heads, effectively excluding adult youth from independent access to resources.

Limited livelihood opportunities further shape youth engagement in environmental outcomes. Field findings indicate that youth often engage in environmentally degrading activities, such as charcoal production and firewood sales, due to a lack of alternatives. While structured engagement platforms exist, such as sports programs, these do not translate into meaningful participation in governance or resource management decisions.

Humanitarian programming has introduced both opportunities and tensions. The 70/30 refugee-to-host benefit-sharing model, intended to reflect need, has generated perceptions of inequity among host communities, particularly in areas with high resource pressures. Similarly, gender-targeted interventions have had mixed outcomes. While programs on GBV awareness, land rights, and livelihood support have improved knowledge and capacity, field evidence shows that benefits are unevenly distributed and sometimes captured by local elites, including cases where equipment intended for women's groups was appropriated by male leaders.

Institutional and coordination challenges further constrain gender-responsive environmental governance. Key informants highlighted the limited representation of women in natural resource management structures, with most collaborative forest management groups dominated by men. Budget constraints at the district level, where environmental budget allocations are often minimal, limit the scope of gender-responsive programming. Weak coordination among government, humanitarian, and civil society actors also reduces the effectiveness and sustainability of interventions.

Despite these challenges, several positive practices were identified. Education initiatives, participatory learning approaches, and economic empowerment programs have shown potential to shift gender norms and improve inclusion (Jones, 2018; Kellett & Gnauck, 2017). Community-based groups, including savings associations and women's networks, provide platforms for collective action and

increased participation, although their sustainability remains uneven (Chikwe et al., 2024; Vincent, 2022). However, evidence suggests that such interventions are most effective when they engage broader social norms and governance structures, rather than focusing solely on individual empowerment.

In all, the findings demonstrate that gender and social inclusion in West Nile are shaped by deeply embedded structural inequalities, which are further intensified by displacement dynamics and resource scarcity. While policy and programmatic efforts have created entry points for inclusion, meaningful participation, equitable access, and effective accountability remain limited. Advancing environmental justice in this context requires integrated approaches that address power relations, strengthen institutional accountability, and align gender-responsive interventions with local socio-cultural realities (Lorist et al., 2022).

5.3.9.1 Women's and youth engagement in environmental governance

In West Nile, the participation of women and youth in environmental governance is increasingly recognized in policy and programming, but remains uneven in practice. While recent interventions have created entry points for engagement, field evidence indicates that participation is often limited in depth and influence, with decision-making still largely dominated by male elders, landlords, and formal authorities.

Women play a central role in natural resource management at the household level, particularly in water collection, fuelwood gathering, and food production. This positions them as critical stakeholders in environmental governance. However, findings from FGDs and key informant interviews show that women's participation in formal decision-making spaces remains constrained. Women reported that they are frequently not invited to meetings on land allocation, water infrastructure, or resource management, and when present, their contributions are often limited by social norms and power dynamics. As a result, their extensive practical knowledge of environmental change is not systematically integrated into governance processes.

Notwithstanding these constraints, targeted interventions by NGOs and community-based organizations have contributed to incremental gains. Women's groups have been engaged in activities such as tree planting, promotion of clean cooking technologies, and community environmental management initiatives. These efforts have strengthened awareness of environmental rights and improved women's visibility in local governance spaces. However, field evidence also highlights risks of elite capture and sustainability challenges, with some resources and benefits intended for women's groups appropriated by local leaders or

not sustained beyond project cycles.

Youth engagement in environmental governance is similarly characterized by a gap between recognition and meaningful influence. While young people are often acknowledged as agents of change, their participation in decision-making structures remains limited. Field findings (KIIs and FGDs) indicate that youth engagement is largely channelled through program-based activities, such as climate awareness campaigns, tree nurseries, and sustainable agriculture training. These initiatives provide valuable skills and livelihood opportunities, but do not necessarily translate into sustained influence over resource governance decisions.

Youth exclusion is further reinforced by structural factors, including limited access to land, employment, and decision-making platforms. In refugee settings, land allocation systems prioritize household heads, effectively excluding adult youth from independent access to productive resources. As a result, many youths rely on environmentally degrading livelihood strategies, such as charcoal production and firewood trade, highlighting the link between exclusion and unsustainable resource use. Collaborative initiatives involving women and youth have shown potential in strengthening inclusive governance. Programs that bring together diverse social groups have facilitated knowledge exchange across generations and supported more locally grounded approaches to environmental management. However, such initiatives remain limited in scale and are often dependent on external support.

In all, while there is growing recognition of the importance of women's and youth participation in environmental governance in West Nile, significant barriers persist. Cultural norms, unequal access to resources, and limited institutionalization of inclusive participation continue to restrict their influence. Advancing environmental justice requires moving beyond symbolic inclusion toward meaningful participation, including representation in decision-making bodies, strengthened accountability mechanisms, and sustained investment in capacity building and livelihood opportunities for both women and youth.

5.3.9.2 Refugee participation and access to natural resources

West Nile hosts a large proportion of Uganda's refugee population, particularly from South Sudan and the Democratic Republic of Congo, significantly reshaping patterns of natural resource access and governance. Uganda's refugee policy framework provides for land allocation, freedom of movement, and the right to work, with the aim of promoting self-reliance and peaceful coexistence with host

communities. However, study findings indicate that actual participation in resource governance and access to natural resources are mediated by complex social, environmental, and institutional constraints.

Refugees are typically allocated small plots of land for settlement and subsistence production (commonly 30 × 30 meters). While this model is intended to reduce dependence on humanitarian assistance, field evidence suggests that plot sizes are often too small to sustain household livelihoods, particularly for large families. As a result, refugees adapt through informal arrangements, including renting additional land or engaging in alternative livelihood activities (e.g., collecting and selling firewood, charcoal production, brick-making). These adaptations have facilitated integration into local economies but have also contributed to increased pressure on forests, wetlands, and rangelands, particularly through fuelwood collection, charcoal production, and agricultural expansion (Berke & Larsen, 2022).

Access to natural resources remains uneven and is a key source of tension between refugees and host communities. Field findings indicate that both groups rely heavily on the same resources (land, firewood, and water) within a context of increasing scarcity. Refugee households, many of whom depend almost entirely on biomass energy, often access resources from host community areas, sometimes without clear or negotiated arrangements. This has heightened perceptions of competition and, in some cases, contributed to localized conflicts. These dynamics are reinforced by broader environmental degradation trends, including deforestation, wetland encroachment, and declining land productivity linked to population pressure and unsustainable resource use (Barasa et al., 2022; Miura & Tabata, 2022).

Participation in environmental decision-making is formally recognized but remains limited in practice. Field findings indicate that decisions on land allocation, settlement planning, and resource management are largely made by government authorities and humanitarian agencies, with limited direct influence from refugee and host communities. While community structures such as Refugee Welfare Councils and local committees exist, their role in natural resource governance is often consultative rather than decision-making. Women and youth within refugee populations face additional barriers related to social norms, time constraints, and limited access to information, further constraining inclusive participation.

Despite these challenges, however, there are emerging examples of collaborative approaches to resource governance. Joint initiatives supported by local governments, NGOs, and humanitarian actors,

such as tree planting, community forestry, watershed management, and promotion of energy-efficient technologies, have contributed to reducing environmental pressure while fostering cooperation between host and refugee communities. However, field evidence also suggests that the effectiveness and sustainability of these interventions depend on transparent benefit-sharing, inclusive participation, and alignment with local livelihood realities.

Overall, while Uganda's refugee policy provides an enabling framework for access and participation, implementation gaps remain significant. Resource scarcity, environmental degradation, and limited community influence in decision-making continue to shape refugee–host relations and environmental outcomes. Advancing environmental justice in this context requires strengthening inclusive governance mechanisms, improving equitable access to resources, and investing in sustainable livelihood alternatives that reduce pressure on shared ecosystems.

Case Study 3: Wood Fuel and Deforestation Nexus: A Deep Dive into Rhino Camp Refugee and Host Settings

The West Nile sub-region has emerged as one of Uganda's principal humanitarian hubs following successive displacement crises in South Sudan and the Democratic Republic of Congo (DRC). Uganda's open-door refugee policy, characterized by land allocation, freedom of movement, and the right to work, has enabled large-scale refugee settlement in areas already experiencing environmental stress (Barasa et al., 2022; Miura & Tabata, 2022). As of recent estimates, over 950,000 refugees reside in the West Nile region, placing unprecedented pressure on land, forests, and energy resources.

Satellite-based analyses reveal sharp and sustained losses of woodlands and natural vegetation across West Nile since 2016, closely associated with the establishment and expansion of refugee settlements such as Rhino Camp, Bidi Bidi, and Imvepi (Barasa et al., 2022; Juster et al., 2025). Forest and bushland loss has been most pronounced around settlement peripheries, transport corridors, and market centres, indicating both subsistence and commercial drivers of deforestation.

Dependence on biomass energy and livelihood stress

Both refugees and host communities in West Nile rely overwhelmingly on biomass energy, primarily firewood and charcoal, for cooking and heating. National and regional assessments consistently show that wood fuel remains the dominant energy source in displacement settings, with limited access to electricity or modern cooking alternatives (Barasa et al., 2022; Gianvenuti et al., 2022; Juster et al., 2025).

In Rhino Camp, FGDs revealed that fuelwood collection has increasingly shifted from household subsistence use toward income generation, particularly following reductions in food rations and humanitarian assistance. KIIs further indicated that ration cuts and delays compel refugees to sell portions of their food aid or seek alternative livelihoods, most commonly firewood collection and charcoal production. Land constraints intensify this pressure, as refugee households typically receive plots of approximately 30 × 30 metres, which are insufficient for food production under climate variability (unpredictable rainfall patterns) and rarely contain enough trees to meet wood fuel needs (Barasa et al., 2022; Juster et al., 2025; Lwasa et al., 2021). As a result, refugees increasingly depend on surrounding host lands, communal forests, and protected areas for fuelwood and construction materials.

Indeed, a female refugee in Rhino Camp who participated inone of the FGDs remarked:

> *"If we cannot get food from the organizations, we must find ways to survive. Collecting wood is one way to earn money, even if it means destroying the forest."*

Host communities, facing high poverty levels and limited livelihood alternatives, are similarly drawn into charcoal production and firewood trade, reinforcing a shared but unequal dependence on dwindling forest resources. Only about 1.2% of West Nile's population has access to electricity, and more than 70% of the region's population relies primarily on firewood for cooking, underscoring the depth of energy poverty.

Limited alternatives and uneven interventions

Despite widespread recognition of the importance of sustainable energy access in humanitarian settings, interventions in Rhino Camp and surrounding areas have remained fragmented and insufficiently scaled. While pilot initiatives involving improved cookstoves, agroforestry, briquettes, solar devices, or LPG have been introduced in parts of West Nile, coverage remains limited and short-term relative to the scale and duration of displacement (Bisaga & To, 2021; Grosrenaud et al., 2021; Kay et al., 2021). Respondents from refugee leadership structures and local governments emphasized the absence of reliable, affordable alternatives to wood fuel. The LC III Chairperson, Rhino Camp, had this to say:

> *"UNHCR has not provided us with sustainable options… We must depend on the forests, and when they are gone, what will we do?"*

UNHCR and partner agencies reported a gradual shift away from direct environmental management toward coordination roles, leaving implementation largely to NGOs and district structures that are chronically under-resourced. As a result, wood fuel extraction continues within a broader land-use frontier shaped by settlement expansion, agricultural conversion, and informal energy markets.

Governance constraints and unequal enforcement

The governance of forest and energy resources in West Nile is marked by tensions between national environmental laws and international obligations to protect refugees. Uganda's forestry and environmental legislation formally restricts unsanctioned tree cutting and regulates

charcoal production. In practice, enforcement around refugee settlements is uneven and selective.

KIIs revealed that refugees are sometimes cautioned or penalized for fuelwood collection in protected areas, while wealthier host traders and commercial charcoal actors often operate with limited oversight. Local governments face acute capacity constraints: some sub-counties rely on a single Community Development Officer to handle natural resources, agriculture, and social services simultaneously, severely limiting enforcement, monitoring, and community sensitization. A key informant from the West Nile Development Association (WENDA) remarked:

> *"The local governments here are not strong enough to combat these issues……The entire West Nile region has only three environmental police officers. Practically, how can these few officers police such vast areas?"*

Institutions also face ethical and political dilemmas when enforcing environmental regulations against refugees whose subsistence needs are protected under international conventions. NFA officials noted that this has resulted in the selective application of sanctions, often reinforcing perceptions of injustice among host communities. Transboundary forest landscapes such as Mount Kei further complicate enforcement, as degradation drivers extend beyond Uganda's jurisdiction.

Emerging Responses and Persistent Gaps

Evidence from West Nile suggests that agroforestry, community woodlots, and improved cookstoves can significantly reduce pressure on natural forests when implemented at scale and with strong participation from both refugees and hosts (Anywar et al., 2024; Grosrenaud et al., 2021). KIIs highlighted ongoing tree planting and landscape restoration efforts supported by OPM-led programs (e.g., the DRDIP), NGOs such as OXFAM and CARE, and youth and women's groups across the region.

However, these initiatives remain insufficient to offset the pace of deforestation driven by fuel demand, construction needs, and livelihood pressures. Without robust regulation of charcoal markets, sustained investment in modern cooking energy, and equitable benefit-sharing mechanisms, both refugee and host populations remain locked into an environmentally erosive energy system.

Conclusion

This case study illustrates a tightly coupled nexus between wood fuel and deforestation at the intersection of humanitarian displacement, energy poverty, and weak environmental governance in the West Nile region. Refugees and host communities alike depend on wood fuel, but declining assistance, inadequate alternatives, and expanding land pressures have intensified forest degradation and local grievances. Selective enforcement of environmental rules and under-resourced institutions further undermine sustainable management. Addressing this nexus requires a shift beyond short-term humanitarian responses toward integrated, long-term strategies that combine equitable land and energy access, scaled-up modern cooking solutions, fair regulation of wood fuel and charcoal value chains, and participatory, tree-based interventions that deliver tangible benefits to both refugees and host communities.

Case Study 4: Humanitarian Crisis Driven by Land and Water Conflicts and Resource Sharing in Refugee-Host Communities

The protracted conflict in South Sudan has transformed West Nile, particularly Rhino Camp Refugee Settlement and the neighbouring Rigbo Sub-County, into one of Uganda's most intense refugee–host interfaces. This study finds that the large and sustained influx of refugees into Rhino Camp has fundamentally reshaped land and water resource dynamics, generating new forms of competition, negotiation, and conflict between refugees and host communities.

Interactions with UNHCR and local authorities indicate that Rhino Camp's population has expanded rapidly, reaching 200,000 refugees, and further growth is anticipated. Settlement planning allocates each refugee household a small plot for shelter and cultivation, but this land is drawn from customary domains belonging to Rigbo and surrounding host communities (Berke & Larsen, 2022; Grosrenaud et al., 2021). Local leaders, elders, and landlords initially consented to land provision in exchange for expectations of development benefits, improved services, and historical kinship ties between the Madi community and displaced South Sudanese populations. However, the scale and duration of settlement have increasingly strained the local resource base, intensifying demand for farmland, grazing areas, fuelwood, and water beyond the environment's carrying capacity (Miura & Tabata, 2022).

Land pressure, tenure change, and everyday conflict

Access to agricultural land is central to refugee self-reliance and strongly shapes social relations with host communities. Empirical evidence shows that refugees who report poor access to land and firewood are more likely to perceive strained relations with hosts, particularly in the West Nile region, where land scarcity is acute (Miura & Tabata, 2022). FGDs with both refugees and hosts revealed extensive clearing of forests and bushland around Rhino Camp for shelter construction, agriculture, and firewood collection, accelerating deforestation and resource depletion. These environmental changes underpin emerging tensions over land access and use. The LC III Chairperson, Rigbo Sub-County, remarked:

> *"In the past, we had plenty of trees, but now refugees have cut them down for charcoal and firewood… This scarcity has raised prices and fuels anger between*

us."

In Rigbo, customary landowners continue to view land as their primary asset. Yet, the transfer of large areas for settlement and the spread of informal rental and sharecropping arrangements have altered tenure relations and local power dynamics. Cultivation has expanded into former grazing lands, wetlands, and woodlands, while hosts perceive refugee homestead fencing as undermining customary land-use norms. Although these tensions do not always escalate into open violence, they manifest in frequent boundary disputes, accusations of illegal tree cutting, and grievances over perceived unequal treatment by government and humanitarian actors. Conflicts between crop farmers and livestock keepers, among both refugees and hosts, are particularly volatile. LC III Chairperson and CDO, Rigbo Sub-County, further remarked: "When cattle trespass into crop fields, fights are common. In one case, this escalated into violence that claimed several lives. Since then, mistrust runs deep."

Rising land rental prices have further intensified grievances. FGDs revealed that land previously accessed freely or at low seasonal rates now commands significantly higher fees, reflecting broader trends observed across northern Uganda following refugee inflows and market expansion. A host community member who participated in an FGD in Rigbo Sub-County had this say: "In 2017, an acre could be rented for UGX 30,000 per season. Now it costs up to UGX 150,000."

This inflation has reshaped agrarian relations, disproportionately affecting poorer host households and deepening inequalities, particularly when livestock damage triggers retaliatory clashes.

Water scarcity and contestation

Water has emerged as a critical site of both humanitarian intervention and conflict. While shared water infrastructure (boreholes, tap stands, and tanks) is intended to benefit both refugees and hosts, limited coverage, poor water quality, and inequitable allocation often fuel contestation. Studies in Rhino Camp indicate that water provision averages just over 10 litres per person per day, below international humanitarian standards, with women and girls bearing the primary burden of collection (Semyalo et al., 2024). In addition, microbial contamination has been detected throughout the supply chain, reflecting sanitation challenges, overcrowding, and long queues.

This study confirms that insufficient water points, combined with rapid population growth and climate variability, make water access a persistent driver of tension, as also documented by Atukwatse &

Ogbona (2023). Daily disputes at water points, especially during dry periods and drought, are widely reported, with women and children disproportionately affected by long waiting times and occasional physical confrontations. Another local leader from Rigbo Sub-County reported:

> *"The water tanks are not enough for the many people living here. Some residents travel long distances to rivers or swamps. This breeds frustration."*

Figure 33: A degraded water source in the Rhino Camp Refugee settlement

Figure 34: Dysfunctional water taps and a contaminated river in Madi Okollo put clean water access for refugee and host communities at stake.

Coexistence, exchange, and transactional relations

Despite recurrent tensions, refugee–host relations in Rhino Camp are not defined solely by competition. Evidence from FGDs and ethnographic studies points to the emergence of "transactional communities," where access to resources is embedded in everyday exchanges of labour, goods, and social support rather than rigid group boundaries (Miller & Ulfstjerne, 2020).

Firewood, water, land, and food circulate through informal networks of borrowing, gifting, and small-scale trade. Hosts lease land to refugees in exchange for labour or harvest shares, while refugees share access to taps or storage tanks during shortages (Berke & Larsen, 2022; Grosrenaud et al., 2021). These arrangements can soften the impacts of scarcity but also reproduce inequalities, as better-connected or wealthier actors secure more favourable terms.

Governance and dispute resolution

Dispute resolution mechanisms differ across communities. Refugees primarily rely on Refugee Welfare Councils, police, or NGO complaint desks, though FGDs revealed growing disillusionment due to perceived corruption, delays, and weak enforcement. Host communities generally prefer elders in land and family disputes, but concerns were raised about fairness, especially where youth feel excluded from decision-making. Efforts to reduce conflict include designating separate water points for host communities and adopting benefit-sharing arrangements in humanitarian assistance, with a nominal 70:30 allocations in favor of refugees. However, host leaders reported inconsistent implementation, reinforcing perceptions of procedural injustice.

Institutionally, Rhino Camp is governed by OPM and UNHCR alongside district and sub-county authorities and numerous NGOs. This complex governance landscape often results in fragmented decision-making, limited transparency in land allocation, and weak host participation in infrastructure planning.

Conclusion

This case study illustrates how humanitarian crises can profoundly reshape land and water governance, producing intertwined patterns of conflict and cooperation. In Rhino Camp and Rigbo sub-county, rapid population growth, land scarcity, and stressed water systems have intensified everyday frictions, while informal exchange networks continue to enable coexistence. Addressing these challenges requires more than emergency responses: it demands integrated land-use planning, equitable water investment, transparent decision-making, and inclusive governance mechanisms that recognise both refugee and host vulnerabilities. Strengthening these foundations is essential for sustaining social cohesion and environmental stability in the West Nile's protracted displacement context.

5.4 Comparative Analysis: Karamoja and West Nile

Key messages

Environmental injustice in both Karamoja and West Nile is driven by shared structural pressures: climate variability, environmental degradation, high dependence on natural resources, and weak or poorly coordinated governance. In both regions, these pressures interact to produce unequal access to resources, disproportionate exposure to environmental risks, and limited capacity for marginalized groups, particularly women, youth, pastoralists, and refugees, to adapt and recover. Governance failures, including elite capture, limited transparency, and weak community influence, further reinforce these inequalities.

However, the pathways through which injustice manifests differ. In Karamoja, weak state presence, historical marginalization, and the erosion of customary institutions result in fragmented governance and limited-service delivery, particularly in pastoral areas. In contrast, West Nile benefits from a stronger institutional presence through humanitarian engagement but faces challenges of institutional fragmentation, overlapping mandates, and tensions in refugee–host resource allocation.

Across both regions, participation often remains consultative rather than influential, and environmental interventions risk reinforcing inequalities if distributional impacts are not explicitly addressed. Achieving environmental justice, therefore, requires context-specific reforms that strengthen institutional coherence, embed equity into resource governance, and ensure meaningful inclusion and accountability in decision-making.

5.4.1Drivers of environmental injustice

Both Karamoja and West Nile exhibit environmental injustice arising from a convergence of climatic, ecological, demographic, and governance-related pressures, which operate in similar ways despite the regions' distinct socio-ecological contexts. A central shared driver is high dependence on natural resources for livelihoods, coupled with increasing climate variability and environmental degradation.

In Karamoja, pastoral and agro-pastoral livelihoods depend heavily on rangelands, water points, and seasonal mobility. Recurrent droughts, pasture degradation, and shrinking water sources have intensified competition over grazing areas and livestock corridors.

These pressures have contributed to inter- and intra-community conflict, livestock losses, and heightened food insecurity, particularly for poorer households with fewer animals. In West Nile, although livelihoods are more diversified, subsistence agriculture, fuel-wood collection, and small-scale forestry remain dominant. Deforestation, wetland encroachment, and land fragmentation, exacerbated by large refugee settlements such as Bidi Bidi and Rhino Camp, have increased pressure on land, forests, and water sources, undermining both host and refugee livelihoods.

Climate variability acts as a common risk multiplier in both regions. Prolonged droughts, erratic rainfall, and localized flooding disrupt crop production, livestock productivity, and water availability. These shocks do not affect all groups equally. Households with insecure land tenure, limited assets, or restricted mobility, such as women, youth, poorer pastoralists, and refugees, experience disproportionate losses. In Karamoja, drought amplifies historical vulnerability linked to marginalization and underinvestment in infrastructure. In West Nile, climate stress compounds the pressures of population growth and displacement, intensifying competition between hosts and refugees over already strained resources.

Historical marginalization and weak service delivery further entrench environmental injustice. Karamoja's long history of political and economic exclusion has resulted in limited access to water infrastructure, markets, extension services, and climate adaptation support, leaving communities with few buffers against environmental shocks. Similarly, in West Nile, while humanitarian presence has improved access to some services, gaps remain, particularly in environmental management, land governance, and long-term livelihood support, leading to uneven outcomes across districts and social groups.

Across both regions, governance failures are a critical shared driver. Elite capture of land, water points, and project benefits was reported in both contexts, often side-lining poorer households and women. Decision-making around resource allocation is frequently opaque, with limited disclosure of information on land deals, conservation restrictions, or benefit-sharing arrangements. Community participation tends to be consultative rather than influential, weakening local ownership and trust. In Karamoja, the weak integration of customary institutions into formal governance undermines legitimacy, while in West Nile, overlapping mandates between district authorities, humanitarian agencies, and traditional leaders create coordination gaps and accountability deficits.

Finally, climate and environmental shocks interact with social and political stressors, rather than operating in isolation. In Karamoja, drought intersects with insecurity, disarmament legacies, and poverty, deepening exclusion. In West Nile, environmental stress intersects with displacement dynamics, aid allocation practices, and refugee-host community relations, shaping perceptions of unfairness even when absolute resource availability is higher. In both regions, these interacting drivers reinforce existing inequalities, demonstrating that environmental injustice is produced through structural and governance pathways, not solely by environmental scarcity.

5.5.2 Regional contrasts in institutional capacity and social organization

While Karamoja and West Nile share common structural drivers of environmental injustice, the institutional landscapes and social organization through which these drivers operate differ substantially, shaping distinct justice outcomes.

In Karamoja, natural resource governance is deeply embedded in pastoral social organization and customary institutions. Access to land, water, and rangelands is traditionally regulated through clan systems, elders' councils, and negotiated mobility arrangements that historically enabled risk-sharing and adaptation in a highly variable climate. Elders continue to play a central role in mediating disputes over grazing areas, water points, and livestock, and in maintaining social order within and across communities. However, the effectiveness of these systems has been significantly eroded. Decades of insecurity, militarization, and the proliferation of small arms have disrupted customary authority and weakened inter-clan trust. State-led disarmament processes, while improving security, often sideline traditional governance structures without adequately replacing them with locally legitimate alternatives. As a result, customary and statutory systems usually operate in parallel rather than in coordination, creating gaps in authority, enforcement, and accountability.

State institutional capacity in Karamoja remains comparatively limited. Service delivery, particularly for water infrastructure, rangeland management, agricultural extension, and climate adaptation, has been uneven and often concentrated around district headquarters, leaving remote pastoral areas underserved. Staffing shortages, limited budgets, and weak enforcement capacity constrain environmental governance functions at sub-county and parish levels. This institutional fragility reduces the state's ability to regulate resource use equitably, manage conflicts, or support adaptive livelihoods, reinforcing reliance

on weakened customary systems and exacerbating perceptions of neglect and injustice.

In West Nile, by contrast, institutional capacity is relatively stronger and more visible, shaped in large part by the region's long-standing role as a refugee-hosting area. District local governments, line ministries, and a dense network of NGOs and humanitarian agencies are actively involved in land administration, environmental management, service delivery, and livelihood support. Formal institutions such as local councils, district land boards, forest authorities, and water user committees are more established and accessible than in Karamoja. Resource governance commonly takes the form of hybrid arrangements that blend customary norms with statutory frameworks, for example, in Shea tree management, community forestry, and land allocation for refugee settlements.

However, this institutional density also introduces new governance challenges. Overlapping mandates among district authorities, the Office of the Prime Minister, humanitarian agencies, and traditional leaders (e.g., the Madi chiefdom, the Alur kingdom, Lugbara Kari, etc.) often result in coordination gaps, blurred accountability, and inconsistent enforcement of rules. Community members frequently report uncertainty over which institution has authority over land, forests, or water resources, particularly in refugee-hosting sub-counties. In addition, short-term, project-based humanitarian and development interventions can undermine continuity in environmental planning and weaken local ownership.

Social organization in West Nile is also more heterogeneous, shaped by the coexistence of host communities, refugees, urban migrants, and multiple ethnic groups. While this diversity has enabled forms of social integration and shared governance, it has also generated tensions, especially where resource allocation is perceived as imbalanced between refugees and host communities. Aid targeting ratios, land-sharing arrangements, and access to services are often interpreted through a justice lens, with hosts in particular expressing concerns that their contributions of land and resources are insufficiently compensated.

Overall, the contrast between the two regions highlights that stronger institutions do not automatically translate into equitable outcomes. In Karamoja, limited state capacity and weakened customary systems constrain governance effectiveness, while in West Nile, institutional plurality and humanitarian dominance create complexity and contestation. These differences underscore the need for context-

specific governance reforms that strengthen institutional coherence, clarify authority, and align formal systems with locally legitimate social organization.

5.5.3 Comparative gender and inclusion dynamics

Gender and social inclusion dynamics shape environmental justice outcomes in both Karamoja and West Nile, but they do so through distinct social structures, livelihood systems, and institutional arrangements.

In Karamoja, gender relations are strongly influenced by pastoral norms and clan-based authority, which allocate control over land, livestock, and decision-making largely to men and elders. Women's roles are primarily associated with domestic labour, food preparation, water collection, and care work, responsibilities that intensify during droughts and periods of resource scarcity. As water sources become more distant and pasture degrades, women spend more time securing basic needs, increasing their exposure to physical risks and reducing their opportunities to participate in governance spaces.

Despite being central to household coping and informal adaptation strategies, women have a limited voice in formal rangeland management, water user committees, or district-level planning processes.

Youth exclusion in Karamoja is similarly pronounced. Although young people play critical roles in herding, seasonal migration, and adaptation to climatic variability, they are rarely recognized as legitimate decision-makers. Customary systems privilege seniority, while formal governance structures often lack targeted mechanisms for youth engagement. High levels of insecurity and limited education and employment opportunities further constrain youth agency, increasing vulnerability to marginalization and undermining intergenerational transmission of sustainable resource management practices.

In West Nile, gender and inclusion dynamics are shaped by a more institutionalized and plural governance environment, influenced heavily by humanitarian programming and decentralization. Women, youth, refugees, and persons with disabilities have more formal entry points into community meetings, committees, and service delivery structures, such as local councils, Refugee Welfare Councils, water user committees, and livelihood groups. Women's participation is evident in savings groups, tree planting initiatives, and water management activities, while youth are often engaged in vocational training, agroforestry, and small enterprise development.

However, the study findings show that formal inclusion does not

consistently translate into influence. Participation in West Nile frequently remains consultative, with key decisions on land allocation, conservation restrictions, and resource investments made by government officials, humanitarian actors, or traditional leaders. Refugee status adds a further layer of exclusion: refugee women and youth face tenure insecurity, limited access to productive land, and dependence on shared natural resources, while also navigating social norms that may restrict voice and leadership. Competition over resources in refugee-hosting areas can also heighten gender-based risks, particularly for women and girls involved in water and fuelwood collection.

Across both regions, policy commitments to gender equality and social inclusion outpace practical implementation. Women, youth, minority ethnic groups, pastoralists, and persons with disabilities continue to experience structural barriers to meaningful participation and benefit-sharing. While Karamoja's exclusion is more deeply rooted in customary and security dynamics, and West Nile's in institutional complexity and humanitarian governance, the outcome is similar: environmental governance processes that insufficiently reflect the knowledge, priorities, and lived experiences of marginalized groups. Addressing these gaps requires moving beyond representation toward transformative inclusion, where power, resources, and decision-making authority are more equitably shared.

5.5.4 Emerging lessons on equitable governance

The comparative analysis of Karamoja and West Nile yields several cross-cutting lessons for advancing equitable environmental governance in diverse and fragile contexts in Uganda.

First, the findings underscore that effective integration of customary and statutory institutions is indispensable, but symbolic recognition alone is insufficient. In both regions, customary systems, such as elders' councils in Karamoja and clan-based land governance in West Nile, retain strong local legitimacy and practical relevance. However, where these systems operate parallel to formal state institutions without precise alignment, authority becomes fragmented and accountability weakened. Equitable governance requires clearly defined roles, mutual recognition, and operational linkages between traditional leaders, local governments, and sector agencies, particularly in land, forest, and rangeland management. Formal frameworks must therefore be flexible enough to accommodate local norms while ensuring consistency with constitutional principles of equity and human rights.

Second, the analysis highlights the need to move beyond participation

as consultation toward participation with real decision-making power. Across both regions, communities, especially women, youth, refugees, and other marginalized groups, are often invited to meetings or sensitization activities but have limited influence over final decisions. This gap between presence and power undermines legitimacy and ownership. Equitable governance requires institutionalizing mechanisms that allow marginalized groups to shape priorities, influence budgets, and participate in enforcement and monitoring, rather than merely validating pre-determined plans.

Third, the study demonstrates that environmental and climate interventions must be explicitly distribution-sensitive. Conservation, restoration, humanitarian, and climate adaptation initiatives frequently produce uneven outcomes, with benefits accruing to better-connected actors. At the same time, costs, such as restricted access to land, forests, or water, are borne by poorer households. This is particularly evident in refugee-hosting areas and pastoral landscapes, where resource scarcity is acute. Systematic assessment of who gains and who loses, transparent benefit-sharing arrangements, and locally negotiated compensation or co-benefits are essential to prevent well-intentioned interventions from reinforcing injustice.

Finally, trust-building emerges as a foundational condition for equitable governance. In both Karamoja and West Nile, historical marginalization, conflict, and opaque decision-making have eroded confidence in institutions. Rebuilding trust requires consistent engagement with communities, accessible and credible grievance redress mechanisms, and visible responsiveness to local priorities and complaints. Where communities see grievances addressed fairly and benefits delivered transparently, compliance improves, and conflict risks reduce.

Overall, while Karamoja and West Nile differ in their institutional and social contexts, the evidence shows that inclusive, people-centred governance, grounded in local legitimacy, shared authority, and fairness, is central to reducing environmental injustice and strengthening resilience. These lessons point toward governance reforms that prioritize equity not as an add-on, but as a core objective of environmental and climate action in Uganda.

6 DISCUSSION

6.1 Legal and Institutional Frameworks Governing Environmental Justice

The study confirms that Uganda possesses a relatively robust legal and institutional architecture for environmental governance, anchored in constitutional guarantees and reinforced by sectoral laws and policies. These frameworks align with global principles of environmental justice, which emphasize equitable distribution, meaningful participation, and access to remedies. However, consistent with broader scholarship on environmental governance, the effectiveness of such frameworks depends less on their formal existence and more on how they are implemented across scales and institutions.

The findings resonate with Maria Carmen Lemos and Arun Agrawal's argument that environmental governance is inherently multi-scalar and requires hybrid arrangements that integrate state, market, and community actors (Lemos & Agrawal, 2006). In both Karamoja and West Nile, weak integration between statutory and customary systems undermines this hybrid potential. Customary institutions retain legitimacy in land and resource governance, yet their limited formal recognition creates parallel systems with fragmented authority and weak accountability.

Institutional dynamics differ across the two regions but converge in their implications. In Karamoja, weak state capacity and historical marginalization limit enforcement and service delivery, while in West Nile, institutional plurality, driven by humanitarian actors, produces coordination challenges and blurred mandates. These findings align with earlier Ugandan governance analyses that highlight how power relations and institutional complexity shape environmental outcomes (Bazaara, 2003). Overall, the study demonstrates that legal adequacy alone is insufficient; institutional coherence and coordination are critical for translating legal frameworks into equitable outcomes.

6.2 Impacts of Policy and Legal Implementation on Equity and Fairness

The findings underscore that environmental justice outcomes are shaped primarily by implementation processes rather than policy intent. Although Uganda's legal and policy frameworks promote participation, sustainability, and equity, their implementation often results in an

uneven distribution of environmental costs and benefits.

This reflects a central tenet of environmental justice scholarship: that environmental harms and benefits are rarely distributed equally, with marginalized populations disproportionately exposed to risks. In Karamoja, limited investment in infrastructure and services constrains equitable access to water, rangelands, and markets, reinforcing structural disadvantage. In West Nile, refugee policies, while progressive, have intensified competition over land, water, and biomass energy, producing complex distributional tensions between host and refugee communities.

The study also confirms that environmental and climate interventions can unintentionally reproduce inequality. As noted in broader governance literature, interventions that fail to account for local socio-economic conditions may shift costs onto vulnerable groups while benefits accrue to more powerful actors (Agrawal & Lemos, 2010). This is evident in both regions, where conservation measures, land allocation, and humanitarian programming have, in some cases, limited poorer households' access to critical resources without adequate compensation.

6.3 Case Studies and Lived Experiences of Environmental Justice

The case studies provide grounded insights into how environmental justice and injustice are experienced across social, economic, and ecological dimensions. In both Karamoja and West Nile, environmental change is closely linked to livelihood insecurity, reinforcing the argument that environmental justice must be understood within broader socio-ecological systems.

In Karamoja, pastoral systems illustrate how climate variability and environmental degradation, particularly drought and rangeland decline, interact with governance gaps to produce vulnerability. Mobility restrictions, limited access to water points, and weak institutional support disproportionately affect poorer pastoralists. In West Nile, displacement dynamics reshape resource governance, intensifying pressure on land, water, and forests while altering social relations and perceptions of fairness.

findings align with earlier work in Uganda, highlighting how environmental conflicts emerge at the intersection of resource scarcity, governance, and social inequality (Twinomuhangi et al. 2022; 2023; Oweyegha-Afunaduula, 2005). Across both regions, gendered

and generational inequalities further structure these experiences. Women bear disproportionate labour and risk burdens, while youth and persons with disabilities remain largely excluded from decision-making, despite their critical roles in adaptation.

6.4 Gaps, Challenges, and Opportunities in Advancing Environmental Justice

The study identifies several systemic gaps that constrain environmental justice outcomes. First, governance fragmentation remains a central challenge. In line with environmental governance theory, the lack of coordination across institutions and scales weakens the effectiveness of resource management systems (Lemos & Agrawal, 2006). This is particularly evident in West Nile, where overlapping mandates among government and humanitarian actors create accountability gaps.

Second, participation remains largely procedural rather than substantive. While communities are often consulted, they rarely influence decisions, reflecting what environmental justice scholars describe as "participation without power." This limits the transformative potential of participatory governance. Third, legal and policy gaps persist, particularly in refugee environmental governance, customary land recognition, and access to justice. Weak grievance mechanisms and limited legal literacy further constrain accountability. Fourth, gender and social exclusion remain pervasive. Cultural norms, economic inequalities, and institutional practices continue to limit meaningful participation and equitable access to resources.

Despite these challenges, the study identifies important opportunities. Community-based and hybrid governance models demonstrate the potential for more inclusive and legitimate resource management. Similarly, integrated service delivery and incentive-based environmental interventions offer pathways for aligning environmental sustainability with livelihood needs.

6.5 Pathways for Reform: Legal, Institutional, and Policy Implications

The findings point to several priority reforms necessary to advance environmental justice in Uganda.

First, strengthening the integration of customary and statutory systems is critical. As highlighted in governance literature, hybrid arrangements can improve legitimacy and effectiveness when roles are clearly defined and coordination mechanisms are established (Lemos &

Agrawal, 2006). This is particularly important in pastoral and refugee-hosting contexts. Second, participation must be deepened to ensure meaningful influence. Moving from consultation to shared decision-making is essential for addressing power imbalances and improving governance outcomes.

Third, environmental and climate interventions must be explicitly distribution sensitive. This requires systematic assessment of who benefits and who bears costs, alongside transparent benefit-sharing and compensation mechanisms. Fourth, strengthening accountability through accessible grievance redress systems, improved transparency, and legal empowerment is essential for building trust and reducing conflict.

Finally, environmental justice must be mainstreamed across development, climate, and humanitarian frameworks. In Karamoja, this involves addressing historical marginalization and strengthening service delivery in pastoral systems. In West Nile, it requires improving coordination and ensuring equitable resource governance in refugee-hosting contexts.

In all, this study reinforces the broader insight from environmental governance and justice scholarship: environmental challenges are fundamentally governance challenges. In both Karamoja and West Nile, environmental injustice is produced through the interaction of structural inequalities, institutional gaps, and social exclusion. Addressing it requires integrated, context-specific reforms that embed equity, inclusion, and accountability at the core of environmental governance systems.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 Summary of key findings

This study assessed environmental justice in Karamoja and West Nile using the interconnected lenses of distributional, procedural, recognition, and restorative justice. The findings demonstrate that environmental injustice in both regions is shaped less by absolute scarcity of natural resources and more by how resources, burdens, decision-making authority, and benefits are governed and distributed.

Across both regions, livelihoods are highly dependent on climate-sensitive natural resources, for example, rangelands, forests, water, and agricultural land. Climate variability and environmental degradation, manifested in recurrent droughts (reported by 95% of respondents across both districts), floods, land degradation, and deforestation, directly translate into livelihood insecurity.

The study highlights critical regional contrasts. West Nile benefits from a comparatively stronger institutional presence driven by long-standing humanitarian engagement and decentralized governance structures. However, this is accompanied by complex refugee–host dynamics (notably, a perceived 70:30 aid allocation ratio favouring refugees), overlapping institutional mandates between the Office of the Prime Minister, district local governments, and humanitarian agencies, and

fragmented accountability. These generate new and compound forms of perceived injustice in land, forest, and water governance.

Karamoja, in contrast, is characterized by a weaker and uneven state presence, heavy reliance on customary institutions (with approximately 80% of respondents relying on customary or communal land), and enduring conflict legacies. The region has experienced dramatic land-use change — cropland area increased by an estimated 299% between 2000 and 2011, driven by agricultural expansion and mining activity, with over 50 mineral types identified in the region. While traditional systems remain socially legitimate, their incomplete integration into formal governance undermines equitable resource management and limits access to redress.

In both regions, gender, youth status, refugee status, and disability strongly influence exposure to environmental risks and access to decision-making. Women bear disproportionate environmental and care burdens, including primary responsibility for water and fuel collection, yet only 18% are fully represented in Karamoja and just 4% in West Nile. Youth, refugees, and persons with disabilities experience similarly constrained participation. In West Nile, persons with disabilities have just 1% full representation, while youth have zero full representation in environmental governance bodies.

Although community-based and hybrid governance arrangements, including community forestry, Shea tree conservation in Arua and Nebbi, rangeland management committees, the cross-border Loyolo Agreement, and the ' Koboko Model' of integrated municipal planning — show promise, participation often remains consultative, grievance redress mechanisms are uneven, and benefit-sharing arrangements are frequently perceived as opaque or unfair.

7.2 Conclusions

This study finds that environmental justice in Uganda, particularly in Karamoja and West Nile, is shaped by the interaction of environmental pressures, livelihood systems, and governance structures, rather than by environmental factors alone. While climate variability, ecosystem degradation, and increasing resource demand are significant stressors, the distribution of their impacts and the capacity to respond are mediated by legal frameworks, institutional arrangements, and socio-economic inequalities.

With respect to the legal and institutional frameworks, Uganda has established a comprehensive set of constitutional provisions, laws, and policies that recognize environmental rights, promote sustainable

resource management, and provide for public participation. However, the study finds that these frameworks are unevenly implemented and insufficiently aligned with local governance realities. Weak integration between customary and statutory systems limits the effectiveness of resource governance. In Karamoja, customary institutions remain central to land and rangeland management but are inadequately supported or formally recognized, resulting in fragmented authority. In West Nile, a more extensive institutional presence, including local governments, humanitarian agencies, and NGOs, has improved service delivery but introduced overlapping mandates, coordination challenges, and inconsistent accountability.

Regarding the implementation of environmental policies and laws, the findings demonstrate that formal provisions for participation, equity, and environmental protection do not consistently translate into just outcomes. Environmental governance processes are frequently characterized by limited transparency, short consultation timelines, and technical barriers that constrain meaningful participation. As a result, decision-making remains largely top-down, and benefits from environmental and development interventions are often captured by better-connected actors. The study found that 37% of respondents in Karamoja identified investors as the primary beneficiaries of resource-based projects, while vulnerable groups reported limited access to benefits and limited influence over decisions. These findings underscore that environmental injustice is produced through governance processes, including the allocation of resources, decision-making, and the enforcement of accountability.

The study's case study evidence highlights how environmental justice and injustice manifest across different contexts. In Karamoja, environmental stress is closely linked to recurrent drought, rangeland degradation, and constrained pastoral mobility, with 95% of households reporting drought as a major stressor. These pressures disproportionately affect poorer households with smaller herds, limited access to water infrastructure, and reduced adaptive capacity. In West Nile, environmental dynamics are shaped by high population density and refugee inflows, which have intensified pressure on land, forests, and water resources. The documented loss of over 1,440 sq km of savannah between 2016 and 2019 illustrates the scale of environmental change. Across both regions, women, youth, refugees, and other marginalized groups experience disproportionate burdens, including increased labour demands, reduced access to resources, and heightened exposure to environmental risks and conflict.

The analysis further identifies key gaps, challenges, and opportunities. Major constraints include weak institutional coordination, limited enforcement capacity, inadequate grievance redress mechanisms, and persistent gender and social exclusion. Participation mechanisms often remain consultative rather than influential, limiting communities' ability to shape decisions that affect their livelihoods and environments. At the same time, the study identifies promising practices that demonstrate pathways toward more equitable governance. Community-based and hybrid governance arrangements, such as Collaborative Forest Management (CBFM), Shea tree conservation systems, and locally negotiated rangeland agreements, have shown that when local knowledge is recognized, roles are clearly defined, and benefits are shared transparently, both environmental and social outcomes improve. These approaches enhance legitimacy, strengthen compliance, and reduce conflict.

The study also concludes that advancing environmental justice requires deliberate and coordinated reforms across legal, institutional, and policy domains. Priority actions include strengthening the integration of customary and statutory governance systems; enhancing transparency and accountability in resource allocation and decision-making; ensuring that participation mechanisms enable real influence rather than symbolic inclusion; and embedding equity considerations into environmental, climate, and development interventions. Strengthening grievance redress systems, improving coordination among state and non-state actors, and investing in local institutional capacity, particularly at district and community levels, are also critical.

Overall, the findings demonstrate that environmental degradation, climate variability, and climate change act as risk multipliers, amplifying existing inequalities rather than affecting all groups equally. In both Karamoja and West Nile, environmental injustice is structurally driven, socially differentiated, and governance mediated. Addressing it, therefore, requires moving beyond sectoral or technical solutions toward integrated, people-centered approaches that prioritize equity, inclusion, and accountability. Embedding environmental justice within national development planning, climate policy, land governance, and humanitarian response frameworks is essential for achieving sustainable livelihoods, strengthening resilience, and promoting peaceful and inclusive development in Uganda's most vulnerable regions.

7.3 Recommendations

Drawing on empirical evidence from Karamoja and West Nile, this section presents targeted recommendations to address the structural, institutional, and social drivers of environmental injustice identified in the study. The proposed actions are firmly grounded in field-based findings, with attention to regional variations where relevant. Emphasis is placed on practical governance reforms that streamline efforts, reduce institutional duplication, and build on existing gaps and demonstrated good practices. The recommendations are organized into six strategic action areas.

1. Strengthen integration of customary and statutory governance systems

Weak alignment between customary and formal governance systems undermines legitimacy, enforcement, and equitable resource management, particularly in Karamoja and parts of West Nile. This fragmentation creates accountability gaps and limits fair access to land and natural resources. To strengthen governance coherence, the following actions are recommended:

- The Ministry of Lands, Housing and Urban Development (MoLHUD), the Ministry of Water and Environment (MWE), and the District Local Governments (DLGs) should formalize co-management frameworks that integrate customary institutions (including elders and clan leaders) into district-level land, forest, and rangeland governance.
- The Parliament and MoLHUD should legally recognize customary tenure systems and pastoral mobility within the Land Act and the National Environment Act (2019).
- The Ministry of Energy and Mineral Development (MEMD), in collaboration with Parliament, should amend the Mining and Minerals Act (2022) to operationalize Free, Prior, and Informed Consent (FPIC) and protect surface rights.
- The Office of the Prime Minister (OPM), UNHCR, and DLGs should establish formal coordination protocols for land and natural resource governance in refugee-hosting areas, particularly in West Nile.

2. Move from consultative participation to inclusive decision-making power

Although participation mechanisms exist, they remain largely consultative, with women, youth, refugees, and other marginalized

groups having limited influence over decisions. This results in tokenistic inclusion and weak local ownership. To promote meaningful participation, the following actions are recommended:

- The OPM, Ministry of Gender, Labour and Social Development (MoGLSD), and DLGs should institutionalize representation of marginalized groups with decision-making authority in governance structures, including land boards, water user committees, and forest and rangeland management committees.
- The MoGLSD, National Environment Management Authority (NEMA), and MWE should enforce minimum inclusion thresholds and participation standards in environmental governance and Environmental and Social Impact Assessment (ESIA) processes.
- The MoGLSD and civil society organizations (CSOs) should expand legal literacy, leadership development, and capacity-building programmes to strengthen the effective participation of marginalized groups.

3. Ensure equitable distribution of costs and benefits in environmental and climate interventions

Environmental and development interventions often result in elite capture of benefits, while vulnerable groups bear disproportionate costs. This reinforces inequality, undermines trust, and can exacerbate resource-related conflict. To promote equity, the following actions are recommended:

- NEMA, MWE, and the National Planning Authority (NPA) should require distributional impact assessments and equity safeguards in all environmental, climate, and humanitarian programs.
- The DLGs, MWE, and UWA should establish transparent, locally negotiated benefit-sharing and compensation mechanisms for affected communities.
- The OPM, UNHCR, and development partners should ensure equitable access to land, energy, water, and livelihood opportunities between refugees and host communities.
- The MoLHUD and DLGs should protect and formalize pastoral mobility corridors through participatory land-use planning processes.

4. Strengthen transparency and accessible grievance redress systems

Limited access to information and weak grievance mechanisms reduce

accountability and constrain communities' ability to seek redress, weakening trust in institutions and increasing the risk of conflict. To improve transparency and responsiveness, the following actions are recommended:

- The Judiciary, the Ministry of Justice and Constitutional Affairs, and DLGs should establish integrated grievance redress systems that link customary institutions, Local Council Courts, and formal judicial mechanisms.
- NEMA, MWE, and DLGs should ensure proactive disclosure of environmental information, including land allocations, permits, and ESIAs, through accessible, local, and multilingual communication channels.
- The OPM, UNHCR, and DLGs should strengthen inclusive and gender-responsive grievance mechanisms in refugee-hosting areas to ensure equitable access to redress.

5. Embed environmental justice in policy, planning, and coordination frameworks

Environmental justice principles are not consistently operationalized within national and sub-national planning processes, resulting in fragmented implementation and missed opportunities to address equity across sectors. To institutionalize environmental justice, the following actions are recommended:

- NPA and MWE should integrate environmental justice principles into National Development Plans, National Climate Change Plans (including the Nationally Determined Contribution or NDCs, and National Adaptation Plans or NAPs), District Development Plans, District Climate Change Action Plans, and the District Environment Action Plans and implementation frameworks.
- The MWE, in collaboration with the NPA, should introduce mandatory environmental justice screening for all environmental and climate-related investments.
- The OPM, NPA, and MWE should strengthen coordination among environmental, humanitarian, and development actors through joint planning, implementation, and monitoring frameworks.

6. Scale and sustain community-based and hybrid governance models

Effective community-based and hybrid governance models exist but remain fragmented, underfunded, and insufficiently scaled, limiting the

replication of locally legitimate and impactful approaches. To enhance sustainability and scale, the following actions are recommended:

- MWE, DLGs, and Development Partners should scale up community-based natural resource management models, including Community-Based Forest Management (CBFM), rangeland committees, and Shea value chain systems, through sustained financing and institutional support.
- The OPM and DLGs should replicate integrated planning approaches, such as the Koboko Model, across refugee-hosting districts to strengthen coordination and resource governance.
- The MWE and the Ministry of Foreign Affairs should formalize and support cross-border natural resource governance agreements in Karamoja.
- The MWE and development partners should align community-level initiatives with national and global frameworks, including the Climate Change Act, restoration programs, and the Development Response to Displacement Impacts Project (DRDIP), to ensure coherence and long-term sustainability.

Advancing environmental justice in Uganda requires coherent institutional reform, clear allocation of responsibilities, and deliberate integration of equity into environmental governance and development planning. This entails moving beyond fragmented and consultative approaches toward systems that are inclusive, accountable, and sustained over time.

7.4 Areas for Further Research

Building on the evidence and gaps identified in the study, the following priority research areas are proposed to strengthen understanding of environmental justice dynamics and inform more effective policy and practice in Uganda:

- Longitudinal analysis of environmental justice under climate stress: It is important to track how repeated climate shocks (droughts affecting 95% of households, floods, prolonged resource scarcity) reshape perceptions of fairness, conflict dynamics, and trust in institutions over time. Longitudinal studies would help distinguish short-term coping responses from longer-term shifts in governance legitimacy, social cohesion, and adaptive capacity.
- Urban and peri-urban environmental justice in contexts of displacement: It is important to examine environmental justice outcomes in urban and peri-urban settings hosting refugees and

migrants, focusing on land and housing markets, access to water and sanitation, energy use, exposure to environmental risks, and how urban governance frameworks include or exclude displaced populations and low-income host communities.

- Gender-transformative approaches to environmental governance: It is necessary to identify pathways for transforming power relations beyond increasing participation, examining institutional arrangements, norms, and incentives that enable women and youth particularly in pastoral and refugee-hosting contexts to exercise sustained influence over land, water, forests, and rangelands. Given that women have 0–4% full representation in governance bodies, transformative rather than incremental approaches are needed.
- Mining sector environmental justice: It would be great to conduct dedicated research into the distributional and procedural justice dimensions of artisanal and small-scale mining (ASM) and large-scale mineral extraction in Karamoja, with a focus on community surface rights, benefit-sharing, environmental remediation obligations under the Mining and Minerals Act (2022), and the effectiveness of FPIC processes.
- Performance of grievance and restorative justice mechanisms: There is nedd to assess comparatively the effectiveness of different combinations of grievance redress mechanisms (customary, LC Courts, statutory, humanitarian) in resolving environmental disputes, drawing on the finding that 77% of LC Court users in Karamoja are dissatisfied. It would help, to identify which mechanisms are most trusted, accessible, and durable, and under what conditions restorative approaches could prevent conflict escalation.
- Environmental justice indicators and monitoring frameworks: There is nedd to develop and test context-sensitive, quantitative and qualitative indicators for monitoring distributional, procedural, recognition, and restorative justice within climate adaptation, conservation, and development programmes. Such metrics would enable systematic tracking of justice outcomes, support evidence-based decision-making, and improve institutional accountability.

Together, these research areas would deepen empirical understanding of environmental justice in Uganda and support the design of more equitable, resilient, and conflict-sensitive environmental and climate interventions.

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ANNEXES

Annex 1: Socio-demographic characteristics of respondents

Category	Variables	Overall (f=200)		District Specific (f=100)	
		Frequency (f)	Percentage (%)	Moroto (%)	Madi-Okollo (%)
Sex	Female	136	68	80	56
	Male	64	32	20	44
Marital status	Married	140	70	66	72
	Widowed	36	18	26	10
	Single/Never married	13	7	6	8
	Divorced/Separated	11	6	2	10
Highest level of education	None	92	46	65	26
	Primary	72	36	20	54
	Lower Secondary (O Level)	29	15	14	16
	Tertiary / University (Diploma or Degree)	7	4	1	4
Migration status	Non-migrant	124	64	42	22
	Migrant	76	36	8	28
Migration type	Displacement/Forced migration	46	23	0	70
	Voluntary migration	20	10	13	17
Patterns of migration	Permanent migration	29	15	14	30
	Temporary migration	25	13	0	38
	Not sure	12	6	0	18
Monthly income (UGX)	Below 250,000	183	92	94	90
	250,000 – 500,000	16	8	6	9
	500,000 – 1,000,000	1	1	0	1

Annex 2: Primary and Secondary livelihood characteristics of respondents

Means of livelihood	Primary (Overall)		Primary (District)		Secondary (Overall)		Secondary (District)	
	Frequency (f)	Percentage (%)	Moroto (%)	Madi-Okollo (%)	Frequency (f)	Percentage (%)	Moroto (%)	Madi-Okollo (%)
Crop farming	81	41	24	58	43	22	28	16
Mining	33	17	34	0	15	8	16	0
Charcoal/firewood production/sales	28	14	22	8	32	16	28	6
Businesses/trade (formal or informal)	16	8	10	8	16	8	8	10
Others	12	6	6	8	51	26	14	38
Social assistance/relief or humanitarian aid	11	6	2	10	18	9	2	18
Casual labour	9	5	2	8	12	6	6	6
Remittances from friends or relatives	4	2	3	1	5	3	4	2
Livestock rearing	4	2	2	2	6	3	0	6
Job – wage or salaried employment	2	1	0	2	2	1	0	2

ABOUT ACODE

The Advocates Coalition for Development and Environment (ACODE) is an independent public policy research and advocacy think tank based in Uganda. ACODE's work focuses on four programme areas: Economic Governance; Environment and Natural Resources Governance; Democracy, Peace and Security; Science, Technology and Innovation. For the last eight consecutive years, ACODE has been ranked as the best think tank in Uganda and one of the top 100 think tanks in Sub-Saharan Africa and globally in the Global Think Tanks Index Report published by the University of Pennsylvania Think Tanks and Civil Societies Program (TTCSP).

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