RESPONSIBLE LAND GOVERNANCE IN LDN PROGRAMMES

KENYA
CASE STUDY

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GSW2021: Kenya Country Report

Monitoring the impact of Land Degradation Neutrality measures on legitimate tenure rights of forest-adjacent communities: a follow-up of the implementation of the UNCCD Decision 26/COP.14 on land tenure.

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Acronyms

BMZ	German Federal Ministry for Economic Cooperation and Development
CEC	County Executive Committee
CFA	Community Forest Association
CBO	Community-Based Organization
CSO	Civil Society Organization
FAO	Food and Agriculture Organization of the United Nations
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (German national development cooperation agency)
GSW	Global Soil Week
GSW 2021	Global Soil Week 2021
IFAD	International Fund for Agricultural Development
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
ITPS	Intergovernmental Technical Panel on Soils
KEFRI	Kenya Forest Research Institute
KENVO	Kijabe Environment Volunteers Organization
KFS	Kenya Forest Service
KICOFA	Kereita Integrated Community Forest Association
KNBS	Kenya National Bureau of Statistics
KWS	Kenya Wildlife Services
LDN	Land Degradation Neutrality
NEMA	National Environment Management Authority
PELIS	Plantation Establishment and Livelihood Improvement Scheme
PFMP	Participatory Forest Management Plan
UNCCD	United Nations Convention to Combat Desertification
UNCCD COP	UNCCD Conference of the Parties
VGGT	Voluntary Guidelines on the Responsible Governance of Tenure for Land, Fisheries and Forests in the context of National Food Security
WRA	Water Resource Authority

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Preface

The Decision on Land Tenure (Decision 26/COP.14) by the United Nations Convention to Combat Desertification (UNCCD) recognises the importance of responsible land governance for sustainable land management and restoration, as well as for combatting desertification, land degradation and drought. The decision, recognizing the importance of responsible land governance in the implementation of Land Degradation Neutrality (LDN) activities, encourages stakeholders to comply with the principles of tenure governance set down in the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests (VGGT). The VGGT are a globally accepted framework of reference for improving the governance of tenure of land, fisheries, and forests with the overarching goal of achieving food security for all. While many countries have expressed their commitment to combatting land degradation by setting national-level targets to achieve LDN, few have adopted the land tenure decision. LDN measures often prioritise conservation over the tenure security of forest-adjacent communities.

TMG Research's Global Soil Week (GSW) 2021 seeks to identify how LDN measures can promote responsible land governance, with a focus on tenure security for smallholder farmers and other marginalised natural resource users in Kenya and Benin. In Kenya, the GSW 2021 partnered with the Kijabe Environment Volunteers Organization (KENVO), the Kereita Integrated Community Forest Association (KICOFA), and the Kenya Forest Service (KFS) to document, in a participatory mapping process, the tenure rights of the community living adjacent to Kereita Forest in Kiambu County. This community practices crop cultivation and livestock grazing within Kereita Forest while

contributing to restoration efforts within Kenya's forest co-management framework. Other user rights conferred to the community through the KICOFA Participatory Forest Management Plan include the gathering of firewood and medicinal herbs, water resource use, and honey harvesting.

The mapping results reveal that forest-adjacent communities are highly dependent on secure access to forest resources for household food security and income. As a result, LDN measures that focus on forest conservation and restoration by restricting access to forests directly impact the tenure rights of forest-adjacent communities and, in turn, affect their food security and livelihoods. Additionally, while co-management structures are generally provided for in the legal and institutional framework for forest management, enforcement can be hindered by the limited capacity of community organizations to participate in decision-making.

The findings of the GSW 2021 provide the basis for TMG Research and partners to develop a monitoring approach that can be replicated by other civil society or community-based organizations supporting local communities. Additionally, the findings of GSW 2021 can inform engagement with other civil society organizations, helping to refine the implementation methodology for land restoration projects so that the tenure rights of communities are safeguarded and strengthened as countries implement the UNCCD Land Tenure Decision. These findings will form the empirical basis for discussions with national ministries and government agencies implementing LDN measures, and inform the reporting on land governance and tenure rights at the upcoming UNCCD COP15.

1. Introduction

Sustainable land use is a key factor in many of the most pressing socio-ecological challenges of our time. As the United Nations Convention to Combat Desertification (UNCCD) states, "healthy and productive land can play an unparalleled role as an engine of economic growth and a source of livelihood for billions worldwide, including the most vulnerable populations". Land degradation neutrality can become an accelerator for achieving the United Nations Sustainable Development Goals (SDGs) by contributing to the restoration of natural resources and improving food security, thus reducing poverty and hunger and stimulating economic growth

(UNCCD, 2021). Approximately 33% of the Earth's soils are already degraded. This figure could rise to 90% by 2050 (FAO and ITPS, 2015; IPBES, 2018) unless robust protective measures are taken. Land Degradation Neutrality represents one of the most promising tools to achieve SDG Target 15.3 ("combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world") and ensure that the amount and quality of land resources needed to support ecosystem services and enhance food security, remains stable or increases.

1.1 LDN and land governance

In many places with high levels of land degradation, for example in Asia and Sub-Saharan Africa, sustainable land use is likely to become widespread only through the efforts of smallholder farmers. Their importance in this respect parallels their widely recognised role in achieving global food security and providing rural employment (IFAD, 2011). However, smallholder farmers' efforts to sustainably manage land resources are often hampered by insecure access to land and other natural resources and exclusion from the processes through which land is managed and land rights asserted. As a consequence, many smallholder farmers are

unable to invest in sustainable land use.

If smallholder farmers are to drive the adoption of sustainable land management, and benefit from its sustainable use, responsible land governance structures must be established. This means guaranteeing tenure security for smallholder farmers and other marginalised resource users. It is against this background that the UNCCD's land tenure decision 26/COP.14 explicitly recognises the relevance of legitimate tenure rights, based on the VGGT, for the implementation of Land Degradation Neutrality (LDN) measures.

2. Project implementation approach

2.1 GSW implementation approach

The Global Soil Week (GSW) is organised by TMG Research in partnership with the German Federal Ministry for Economic Cooperation and Development (BMZ) and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). It is a unique international platform that brings together a range of actors to develop new policies and strengthen existing actions on sustainable soil management and responsible land governance. The GSW's transdisciplinary format allows sustainable soil management and responsible land governance to be addressed in an integrated way that acknowledges their closely related characters and thus helps develop innovative approaches to sustainable land management.

Since its launch in 2012, the GSW has accumulated a large volume of knowledge and experience from both its practical and theoretical work, while its focus and design have evolved in response to ongoing policy debates and land management programming. Since 2019, the GSW has closely followed processes towards achieving LDN and contributed to a stronger focus on LDN through responsible land governance approaches, and prioritising tenure security for smallholder farmers and other marginalised resource users. TMG's commitment to this approach provides the thematic focus of Global Soil Week 2021: "Creating an enabling environment for green recovery".

GSW 2021: Linking local knowledge to international policy-making arenas

A key aim of GSW 2021 was to help create an enabling environment in which the tenure rights of vulnerable communities are protected within LDN initiatives. The GSW's approach combines the pro-active generation of local knowledge with experience-based action research through participatory mapping, drawing on the platform's longstanding expertise in feeding lessons learned locally into international policy arenas.

The first component of the GSW 2021, action research, can help civil society organisations monitor the effects of LDN measures on land tenure rights. A participatory tenure mapping approach was applied in two case study regions in Kenya and Benin. The participatory use of a customised digital tenure mapping tool empowers marginalised land users to monitor potential or existing conflicts between forest restoration goals and their rights to use forest resources.

The second component, linking local knowledge to international policy making, contributes directly to the implementation of the UNCCD 26/COP.14 decision on land tenure. The GSW pilot studies accordingly provide the basis for empirically sound reporting on land governance and tenure rights at the upcoming UNCCD COP15. Beyond the reporting at the UNCCD COP, the approach described here can also highlight the relevance of land governance and tenure rights for implementation of the other two Rio Conventions (on Biodiversity and Climate Change).

TMG Research follows the concept of a counter-current principle, reasoning that international reporting processes require well-founded contextual information generated from experience and local knowledge. At the same time, local knowledge and experience, generated for example from participatory tenure mapping, can better inform and shape policies at national and international level, thereby increasing accountability.

3. Kenya's LDN Targets: Institutional setting and policy framework

3.1 Policy and legal framework

The Ministry of Environment and Forestry is the guarantor of Kenya's national commitments to achieving land degradation neutrality and is the line ministry coordinating the country's forest restoration efforts. Kenya is a signatory to the UNCCD, and the government has expressed its commitment to the LDN response hierarchy through a government high-level note endorsed by the Ministry of Environment and Forestry in August 2017. The government is party to the following ongoing initiatives that are contributing to ending land degradation:

- UNCCD commitment to combatting desertification and mitigating the effects of drought

- National Strategy for Achieving and Maintaining over 10% Tree Cover (included in Article 69 of the Constitution of Kenya)

- Kenya's commitment to the Bonn Challenge of restoring 5.1 million hectares of degraded forests and landscapes by 2030

- AFR100 Initiative: A pan-African effort to restore 100 million hectares of deforested and degraded landscapes by 2030

- Reforesting and rehabilitating the main water towers and water catchment areas: A priority for Kenya due to livelihood and biodiversity improvements

3.1.1 LDN Target Setting Programme

The Land Degradation Neutrality Target Setting Programme (LDN TSP) of the Ministry of Environment and Forestry sets national targets for LDN for the entire country, taking into account all LDN indicators (land use, land cover, land productivity, soil organic carbon) (Ministry of Environment, 2017). The aim of the LDN targets is to achieve a balance between anticipated land degradation (losses) and planned positive actions (gains) in order to ensure no net loss of healthy and productive land by 2030.

The LDN TSP lists the following targets for Kenya to achieve land degradation neutrality by avoiding, minimizing, and reversing land degradation:

1. Achieve and maintain forest cover above 10%

2. Increase forest cover through afforestation/agroforestry in existing forests, areas of shrubs/grassland, wetlands, and croplands by 5.1 million hectares

3. Increase by 16% the net land productivity of forests, shrubland, grassland and cropland through SLM practices

4. Increase soil organic carbon in cropland by 319,626 tonnes through SLM practices

5. Halt the conversion of forests to other land cover classes by 2030

6. Rehabilitate all abandoned mining and quarrying areas

At the sub-national level, Kenya's LDN targets are as follows:

1. LDN to be achieved in Ewaso Ngiro North (Lak Dera 2) by 2030 (no net loss)

2. LDN to be achieved in the Tana River catchment zone by 2030 and improvement of an additional 16.7% of the zone (net gain)

3. LDN to be achieved in the Athi River catchment zone (Galana, Pangani, Kenya Southeast Coast) by 2030 (no net loss)[1]

4. LDN to be achieved in the Rift Valley catchment zone (Lake Turkana, Naivasha, Natron) by 2030 and an additional 9% of the zone improved (net gain)

5. LDN to be achieved in the Lake Victoria region (Nile basin) by 2030 and an additional 9% of the zone improved (net gain)

3.1.2 Policies, Legislation & Programmes

Kenya's commitment to overcoming land degradation is accompanied by several policies supporting LDN implementation (summarised in the box below).

Kenya's policies supporting LDN

The Economic Blueprint Vision 2030 requires the country to work towards achieving forest cover of at least 10% of the national land area and to ensure sustainable resource use, economic growth and employment creation.

The Green Economy Strategy and Implementation Plan (GESIP) seeks to facilitate a transition to a green economy.

The National Forest Policy 2015 supports the rehabilitation of degraded dryland forests and encourages tree planting on arid and semi-arid lands.

The National Environmental Policy of 2013 proposes the implementation of soil conservation mechanisms, for example to enhance the protection of slopes to prevent soil erosion.

Kenya National Climate Change Action Plan 2018-2022 (NCCAP) addresses options for a low-carbon, climate resilient development pathway.

Kenya's National Action Programmes (NAP) 2015 create an enabling framework for LDN implementation and capture information on best practices to address land degradation, droughts and desertification, and support livelihoods on arid and semi-arid lands.

Figure 1: Kenya's policies supporting LDN

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1 The Aberdare Forest Reserve is part of the Athi River catchment zone. The pilot study area of Kereita Forest is one of the nineteen forest stations that make up the Aberdare Forest Reserve

Kenya has also enacted laws and established a legal framework for its various policies supporting LDN. The Forest Conservation and Management Act of 2016 provides an institutional framework for development and sustainable management of forest resources in Kenya. The Act is an improvement on the Forests Act of 2005, with provisions to ensure conformity to the country's 2010 Constitution. The Act also distinguishes between public, private or community forests, and between indigenous forests (naturally regenerating trees primarily native to Kenya) and plantation forests (sources of wood and other forest resources for commercial purposes).

The Act provides for the management of forests and forest resources as a shared function between the Kenya Forest Services and forest-adjacent communities through agreements with Community Forest Associations (CFA).

Co-management comes into effect upon the signing of a forest management agreement between the CFA and KFS, subject to a forest management plan. The management agreement between KFS and a CFA confers various user rights on the community, regarding the following:

- the gathering of medicinal herbs

- the harvesting of honey

- the harvesting of timber and fuel wood

- grass harvesting and grazing

- the collection of forest products for community-based industries

- ecotourism and recreational activities

- scientific and education activities

- plantations established through non-resident cultivation (under the PELIS system)

Figure 2: A woman showing proof of her right to collect firewood from Kereita Forest. Credit: Nelson Muiru, KENVO.

- contracts to assign to specific forestry operations

- community-led timber and non-timber forest-based industries

- other benefits that may be agreed between the CFA and KFS

The Forest Conservator and the CFA determine the rules to guide conferment of these rights. Among them, the establishment of plantations under the PELIS system is of key importance because it safeguards access of forest-dependent communities to forest resources while directly contributing to restoration efforts.

The Forest Conservation and Management Act also calls for investors in forests to share the benefits of their investments with local communities through infrastructure development, education, employment, provision of social amenities, and in other ways in accordance with the law.

"The Forest Conservation and Management Act of 2016 provides for the management of forests and forest resources as a shared function between the Kenya Forest Services and forest-adjacent communities through agreements with Community Forest Associations (CFA)."

PELIS system

The Plantation Establishment and Livelihood Improvement Scheme (PELIS) is a scheme that was introduced following the enactment of the Forest Act, 2005. The PELIS system is part of Kenya's co-management framework for forests, whereby forest-adjacent communities are allowed to plant food crops for subsistence and small-scale commerce provided they replant trees in sections where timber has been harvested. The KFS allocates plots to CFA members after a mature plantation has been harvested. The communities contribute to forest restoration by planting and tending to seedlings while cultivating crops on the land (non-resident cultivation). The system depends on continuous harvesting of the plantation forest which frees up new spaces that can be divided into plots and allocated among the community. With the PELIS system, not only are plantations established continuously (the PELIS site cycles last for about 2–3 years), the forest-adjacent communities also gain through poverty reduction, employment creation and food security.

Plantation Management Cycle
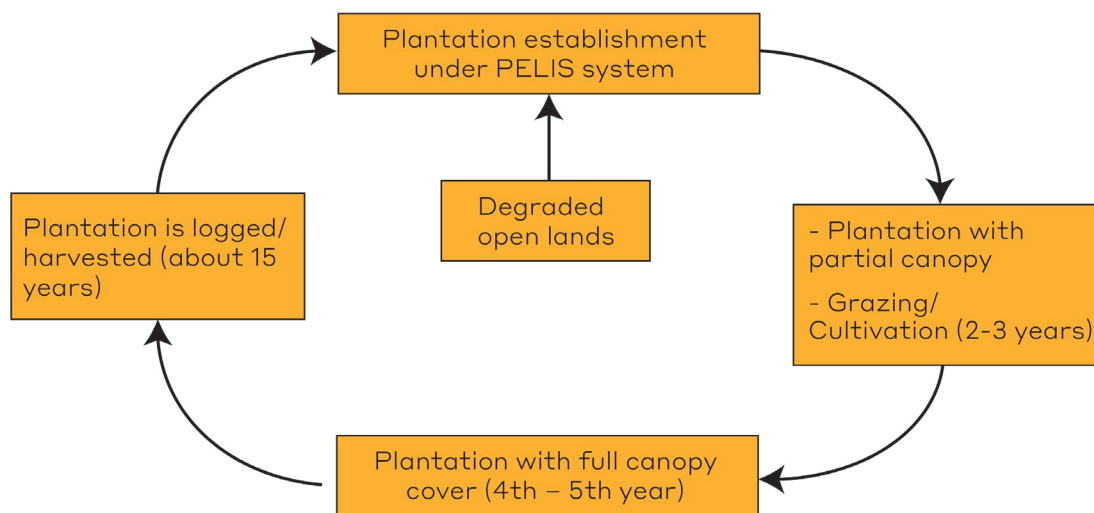
Figure 3: The PELIS system

3.2 Institutional framework: forest management

The Ministry of Environment and Forestry is the line ministry responsible for implementing LDN measures and the guarantor of the country's commitments to achieving LDN. The Kenya Forest Service (KFS) is the agency mandated to conserve, protect and manage all public forests, and to lead restoration efforts on public lands. KFS is principally responsible for conserving protecting and managing all public forests, for preparing and implementing forest management plans (in partnership with forest-adjacent communities) and issuing licences and permits for exploitation of specific forest resources. KFS also establishes and implements benefit-sharing agreements, and helps local county governments to build capacity in forestry and forest management through forestry education and training. With respect to licensing and trading in forest products, KFS is responsible for issuing permits, timber licences, special use licences, contracts, joint management agreements, and concession agreements.

KFS is managed by a Board of Directors. The KFS Board establishes the forest conservation areas as provided for in the Forest Conservation and Management Act. At regional level, a Regional Head of Forest Conservancy oversees forestry operations within the larger forest conservation area. The Central Highlands is an example of a forest

conservation area covering several counties in Central Kenya.

At county level, each conservation area has a forest conservation committee charged with making recommendations to the KFS Board and to county governments on the conservation and utilisation of forests. This committee is also responsible for identifying and recommending areas for creation of public forests. This committee is comprised of the respective County Executive Committee (CEC) member responsible for forestry, the forest officer in charge, and three other persons nominated by the CFAs, the forest industries, and a relevant CSO involved in forest conservation. Committee members hold office for three years.

These conservation areas are further divided into ecosystems, with a County Ecosystem Conservator overseeing forestry activities at county level. Within a county, the ecosystems are further organized into forest stations that are coordinated by Forest Station Managers. Forest Rangers operate at the village level and support the Forest Conservation Managers in executing their duties. Villages are assigned one or more forest rangers depending on the workload in the forest area adjacent to the village (for example, a village could have more than one Forest Ranger if there are frequent illegal activities in the adjacent forest area). Forest Station Managers directly interact with the Community Forest Associations (CFAs) to co-manage forests. Station Managers also participate in CFA meetings to develop work plans.

CFAs present their proposals for use of forest resources and protection of biodiversity. CFAs are responsible for co-managing the forest and forest resources including protecting,

conserving and managing the forest and assisting authorities in enforcing the law in relation to illegal harvesting of forest products. CFA membership is dependent on membership to various user rights groups established by forest-adjacent communities. User rights groups are groups of community members who access specific resources within the forest. For example, a village may have user groups for grazing, beekeeping, aquaculture, ecotourism, farming, and more. Each user group is coordinated by a fifteen-member committee. The user group members of all user groups within a forest station make up the CFA membership. CFA officials (chairperson, secretary, treasurer, etc.) oversee the day-to-day activities of the CFA. Community members pay an agreed fee to access different user rights within the forest. Grazing and firewood collection payments are made per month while PELIS site payments are made annually.

The CFA members hold meetings at least once every month. However, with the government restricting meetings and public gatherings to contain the spread of Covid-19, CFAs have recently met less often. The CFA also carries out sensitization meetings at village level to update members on developments in forest management.

The CFA has different avenues to report different types of grievances in relation to forest management and access to user rights. In the event of conflicts between community members/CFA members and forest rangers, aggrieved persons or parties may report the matter to the CFA chairperson and the Forest Station Manager. In the event of a dispute between the CFA and the Station Manager, the matter is referred to the Ecosystem Conservator (county level).

"User rights groups are groups of community members who access specific resources within the forest. For example, a village may have user groups for grazing, beekeeping, aquaculture, ecotourism, farming, and more."

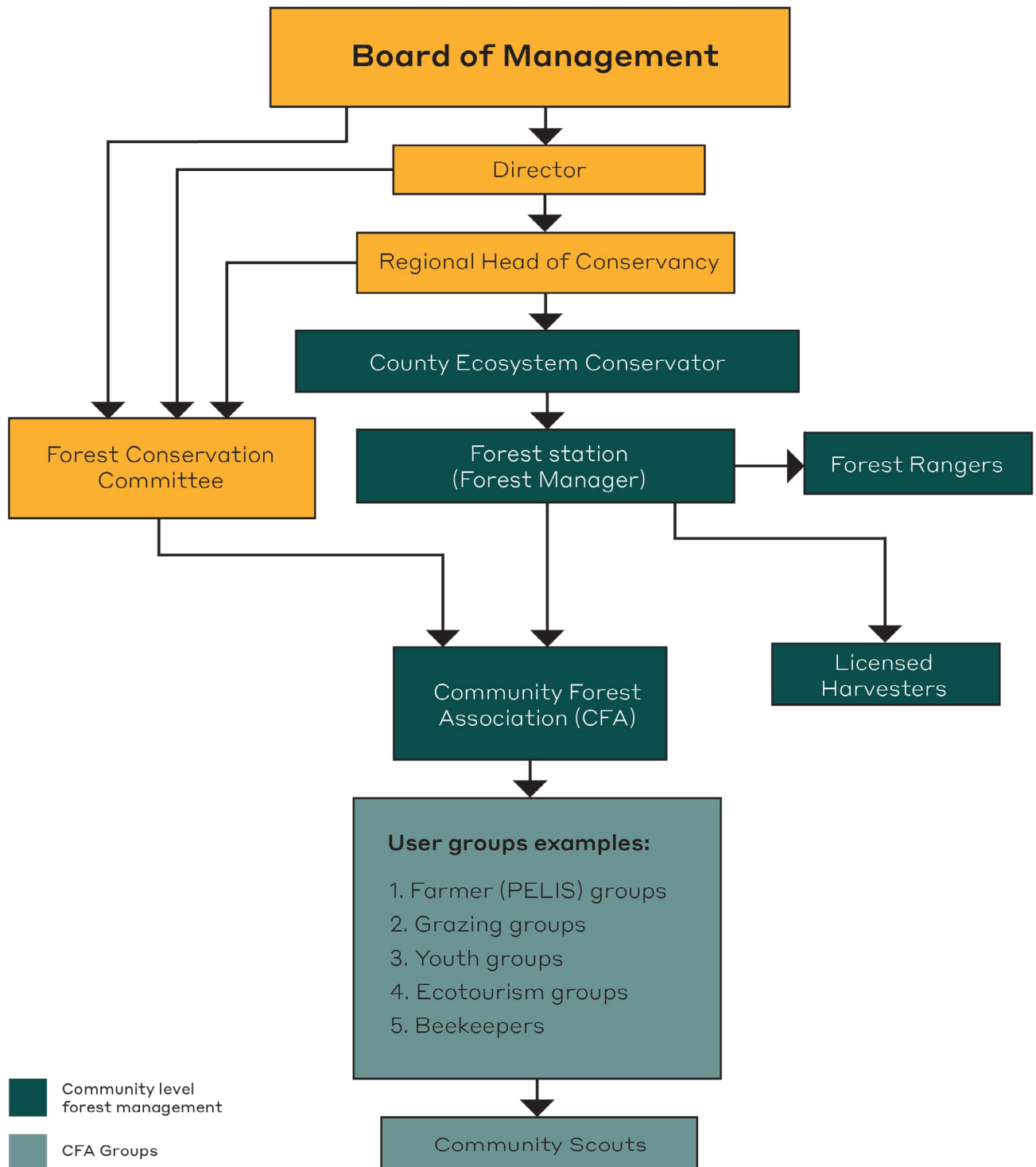# Institutional Management of Forests in Kenya

Figure 4: Institutional Management of Forests in Kenya

4. Case study: Kereita Forest

4.1 Kereita Forest

Kereita Forest is located in Lari sub-county within Kiambu county, about 50 km north-west of Nairobi. The Kereita block borders the Uplands Forest Station to the East and Kinale Forest Station to the North. To the West it borders farmlands that are under food crop production. The forest has been greatly fragmented towards the South boundary and only scattered remnants of trees and shrubs remain. The forest forms part of the Kikuyu escarpment forests within the Aberdare Forest Reserve and covers a total area of 4,722 hectares. It was gazetted under legal notice No.7 of 1943 for the purpose of conservation.[2] The forest forms one of the most important catchment areas in Kenya and provides water to neighbouring communities and urban centres including Nairobi.

Kereita Forest neighbours five main villages: Kambaa, Bathi, Magina, Gatamaiyu and Nyanduma. A significant proportion of the population in these villages relies on the forest; it is a vital resource for extraction of forest products such as timber, wood fuel, construction material, fodder, herbal medicine, and as a grazing ground among other uses. The forest has both plantation and indigenous sections and the community activities such as crop cultivation under the PELIS system are carried out periodically within the plantation sections (after harvesting of mature plantations). The forest-adjacent communities in Kereita Forest, defined as those living within 2km of the forest boundary, are estimated to comprise 41,680 people in 14,126 households.

Biodiversity at Kereita

The soils in the forest area are highly fertile and suitable for agriculture. The forest block also hosts the sources of several rivers, including the Bathi, Githoito, Nduriri, Karatina, Wanjura, Gatamaiyu, Kiruiru and Komothai (KICOFA and KENVO, 2018). The main vegetation in Kereita is indigenous forests, followed by forest plantations. Bushland, grasslands, and Nyayo Tea zones form less than 6% of the plant cover. The forest is also home to large mammals such as African elephants, black and white colobus monkeys, Sykes' monkeys, small antelopes, bush babies, porcupines, and several species of

carnivore. It is classified as an Important Bird Area (IBA) due to its rich avifauna, comprising over 138 bird species. At least 39 of Kenya's 67 Afrotropical Highlands biome species occur in this forest. The forest also hosts a diverse variety of other animal life, including three endemic species of butterflies.

Socio-economic value and forest degradation

Its rich range of resources make Kereita Forest an important source of livelihood for the adjacent communities. The several streams flowing out of the forest supply water to nearby rural communities, towns and trading centres. Honey and medicinal herbs are commonly harvested by the adjacent communities. The forest has considerable ecotourism potential given its major attractions – waterfalls, caves, the Gatamaiyu fishing camp, the Kikuyu cultural centre, Bathi Dam, Mai ma Nyoni (birds waterhole), an elephant maternity centre, and scenic viewing points.

Due to the favourable climatic conditions, vegetable farming in the forest under the Plantation Establishment and Livelihood Improvement (PELIS) programme is a major source of income for local communities. According to a socio-economic survey undertaken by Kijabe Environmental Volunteers (KENVO) in 2017, the average monthly income of community members ranges from US$50 to US$100, and very few households reach an income of US$200.

In recent years, the forest has experienced massive exploitation, which has resulted in degradation and the illegal logging of some of its most valuable trees. Other illegal activities include charcoal production and excessive fuel wood collection. According to the Kereita Participatory Forest Management Plan 2017, forest degradation in Kereita has led to loss of biological diversity, reduced agricultural production, reduced income among local communities, closure of local forest-based industries due to a lack of raw materials, siltation of rivers and dams leading to water scarcity, and accelerated soil erosion.

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2 Gazetting refers to the process of mapping and legal recognition of a forest by the state. Gazetted forests are reserved and protected under forestry and environmental laws.

Legal and administrative status of Kereita Forest

Kereita Forest is a public forest managed by the Kenya Forest Service (KFS) and is categorized as public land. It is managed by a Forest Station Manager who reports to the Ecosystem Conservator of Kiambu County based at Muguga. The forest block lies within the Central Highlands Conservancy. The Forest Conservation and Management Act No 34 of 2016 and its predecessor, the Forest Act 2005, have provided the necessary instruments for the co-management of forests by the state and forest-adjacent communities.

Kereita Forest is thus co-managed by the Kenya Forest Service and the Kereita Community Forest Association. The two parties entered into a forest management agreement in 2010 after developing the Kereita Participatory Forest Management Plan 2010. The Kereita Forest block comprises five small administrative units, namely Station, Muiri, Bathi, Gatamayu, and Nyanduma.

Kereita Integrated Community Forest Association (KICOFA)

Community self-organisation leading to the present-day Kereita Integrated Community Forest Association (KICOFA) dates to the year 2000 when farmers living adjacent to Kereita Forest and undertaking non-residential cultivation in the forest joined forces with KENVO to monitor and police forest destruction. At the time, forest destruction occurred mainly through illegal tree cutting for charcoal production and timber.

The collaboration initially gave rise to the Kenya Forest and Wildlife Conservation Association (KFWCA) which was registered as a Community Based Organisation (CBO) under the Ministry of Gender and Social Services. It later transformed itself into a Community Forest Association (CFA). In 2009, the CFA merged with Kereita Forest Management and Conservation (KIFOMACO) and Gatamaiyu Wildlife Conservancy (GWC) to form KICOFA.

KICOFA envisions participatory community management of the forest to improve the livelihoods of forest-adjacent communities. It seeks to build the capacity of its members to develop, organise, and maintain a culture of forest protection and to achieve sustainable forest management.

In addition to conservation activities such as establishing tree nurseries for (re)afforestation work, KICOFA collaborates closely with KENVO and other partners to engage in livelihood improvement projects based on forest resources – among them eco-agriculture, beekeeping, forest restoration, eco-tourism, and fish farming.

Other state institutions which are directly or indirectly involved in the management of Kereita Forest at the community level include the Kenya Forest Research Institute (KEFRI), the Water Resource Authority (WRA), the Ministry of Agriculture Livestock and Fisheries (MAL&F), Nyayo Tea Zones (NTZ), the Kenya Wildlife Service (KWS), and the National Environmental Management Authority (NEMA).

4.2 Partnership development process

The tenure mapping process has been implemented in close cooperation with local civil society organisations and relevant authorities in Keraita Forest as well as a digital mapping service provider. The following provides a brief introduction to these partners.

Kijabe Environment Volunteers Organization (KENVO) is a community-based organization that develops sustainable nature conservation programmes. KENVO's main goal is to promote conservation of the Kikuyu escarpment ecosystems while supporting community livelihoods. KENVO's scope of activities include capacity building, forest restoration, youth empowerment, ecotourism, and research. KENVO's experience in working with the Kereita Integrated Community Forest Association (KICOFA) and the Kenya Forest Service (KFS) informed their choice as the main partner to coordinate project activities at Kereita Forest.

Cadasta Foundation develops and promotes the use of simple digital tools and technology to support efficient documentation, analysis, storage and sharing of land and resource rights information. Cadasta develops accessible digital records of land and resource rights to empower different

stakeholders to make informed decisions on resource management. Cadasta was responsible for providing the mapping platform and for training community participants on data collection.

Groots Kenya is a national movement of grassroots women-led community-based organisations (CBOs) and self-help groups (SHGs). Groots works to facilitate effective engagement by women in development through movement building, leadership and advocacy. Groots informed the engagement strategy with the community and added a gender perspective to the mapping exercise and the resource governance discussions.

The Kenya Forest Service (KFS) is the main state agency responsible for forest conservation and is mandated to provide for the development and sustainable management, conservation and rational utilization of all forest resources. The KFS coordinates the implementation of LDN measures and restoration efforts guided by the Department of Multilateral Environmental Agreements under the Ministry of Environment and Forestry.

Figure 5: Staff of Kijabe Environment Volunteers (KENVO) inspect a waterpoint inside Kereita Forest. Credit: Nelson Muiru, KENVO.

The Kereita Integrated Community Forest Association (KICOFA) co-manages Kereita Forest in accordance with the 2016 Forest Conservation and Management Act.
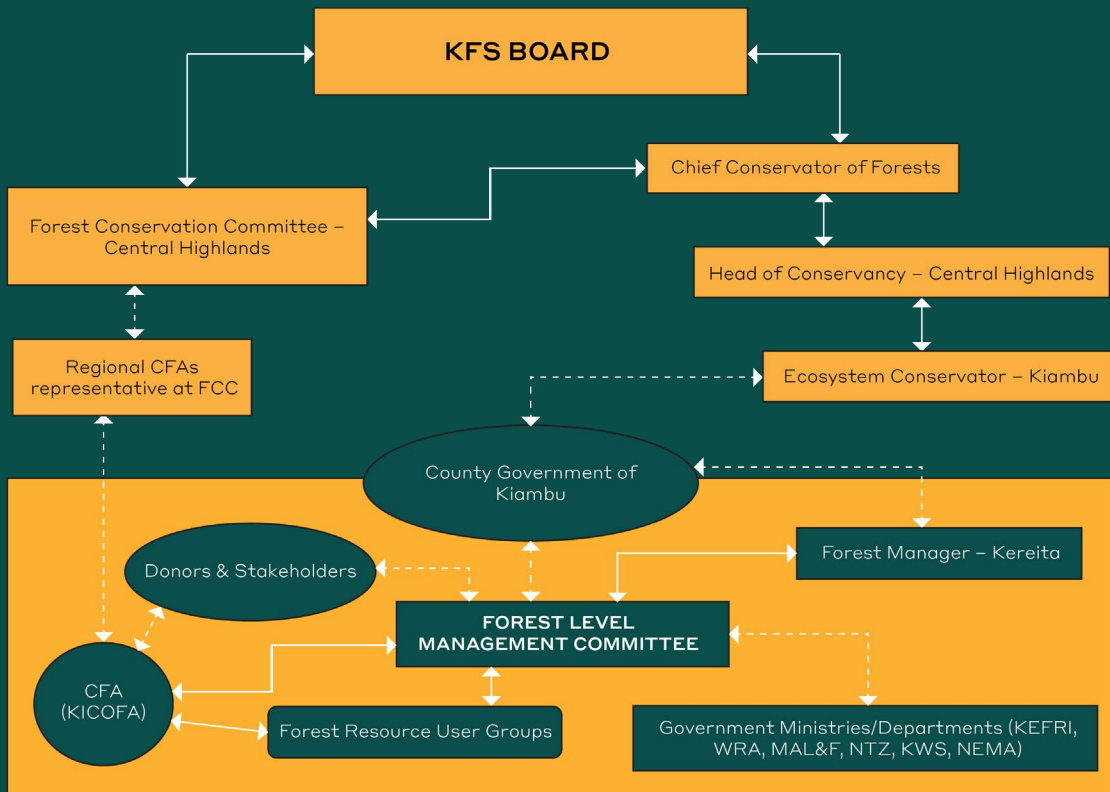
Institutional Framework of Kereita Forest Management

Figure 6: Institutional Framework of Kereita Forest Management

5. Mapping communities and user rights

5.1 Mapping results

TMG Research, in partnership with Kijabe Environmental Volunteers Organization (KENVO), GROOTS Kenya and Cadasta Foundation, set out to help the community of Kereita Forest to use tenure mapping as a tool to document forest resources and associated tenure rights, whether formally recorded or not. The aim of this study was to understand how forest restoration and protection measures impact legitimate tenure rights as stipulated in the VGGT and, thereby, potentially compromise forest-based livelihoods, as well as conservation efforts.

To undertake this initiative, TMG Research and its partners conducted stakeholder engagement meetings and a household survey to collect quantitative and qualitative data on the issues around access, use and management of forest resources within Kereita Forest. A total of 432 respondents from the five villages adjacent to Kereita Forest were interviewed.

Figure 7: TMG Research staff in conversation with local smallholder farmer at Kereita Forest. Credit: William Onura, TMG Research.

Cadasta Foundation provided the online data collection platform that was used in quantitative data collection on access to and use of forest resources. Cadasta also trained the respective forest-adjacent communities on how to collect point, line and polygon GPS data to map out community resources within the forest and designed the online forms that were used for the mapping exercise.

Community members from each of the five villages adjacent to Kereita Forest participated in the data collection. Each data collection team consisted of one CFA official, one community member, and one or two KFS Rangers. The collection of mapping data was a community-led process, which ensured that both the process and the contents of the map focused on community forest tenure rights.

On completion of the community-led mapping exercises, Cadasta produced three maps capturing community resources within and adjacent to the forest. These features included sites designated under PELIS (the Plantation Establishment and Livelihood

Improvement Scheme), where forest-adjacent communities can cultivate crops, ecotourism sites, cultural sites, and grazing areas. The community reviewed these maps for consistency and to ensure that all forest resources relevant to their livelihoods were captured.

The plantation forest can be distinguished from the indigenous forest in Figure 8 below by the electrical fence line on the map (running from North-West to South-East within the forest boundary). As the map shows, a lot of space within the plantation forest has been opened for livestock grazing and cultivation under the PELIS system.[3] Timber harvesting is only allowed in plantation forests and the PELIS system is dependent on continuous timber harvesting that opens up new spaces for concurrent crop cultivation and tree planting.

Various ecotourism activities including ziplining, nature walks, and camping are also carried out within the forest. The campsites and ecotourism sites are located both in the plantation forest and in the indigenous forest.

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3 These are the two main uses of forest land by the community living adjacent to Kereita Forest

The community does not have the capacity to run the ecotourism activities, as provided for through the conferment of ecotourism user rights under the Forest Management and Conservation Act, and only benefits from this through employment opportunities as tour guides.

Additionally, there is a natural carbon dioxide extraction plant within the plantation forest. The community benefits from employment opportunities and support from the company in tree planting and maintaining planted sites.

The community living adjacent to Kereita Forest also collects firewood from the forest but is not allowed to fell trees. Other user rights conferred upon the community through the agreement between KICOFA and KFS include beekeeping and honey harvesting, water harvesting, and collection of medicinal herbs. Water harvesting occurs at various water intake points within the forest from which the water is piped to villages outside the forest (see Fig. 9).
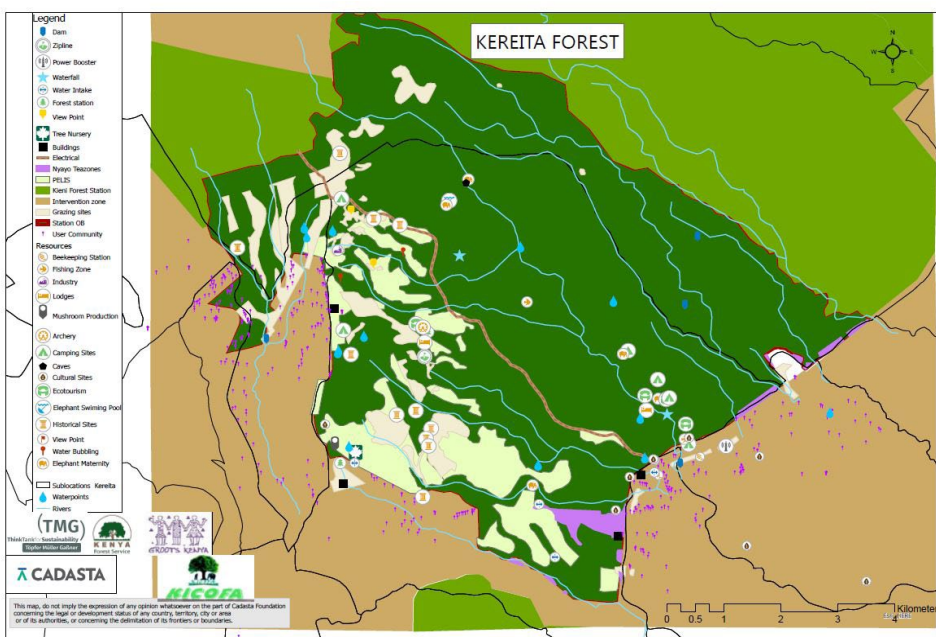

Figure 8: Map 1 showing the communities living adjacent to Kereita Forest and the various resources that community members access within the forest
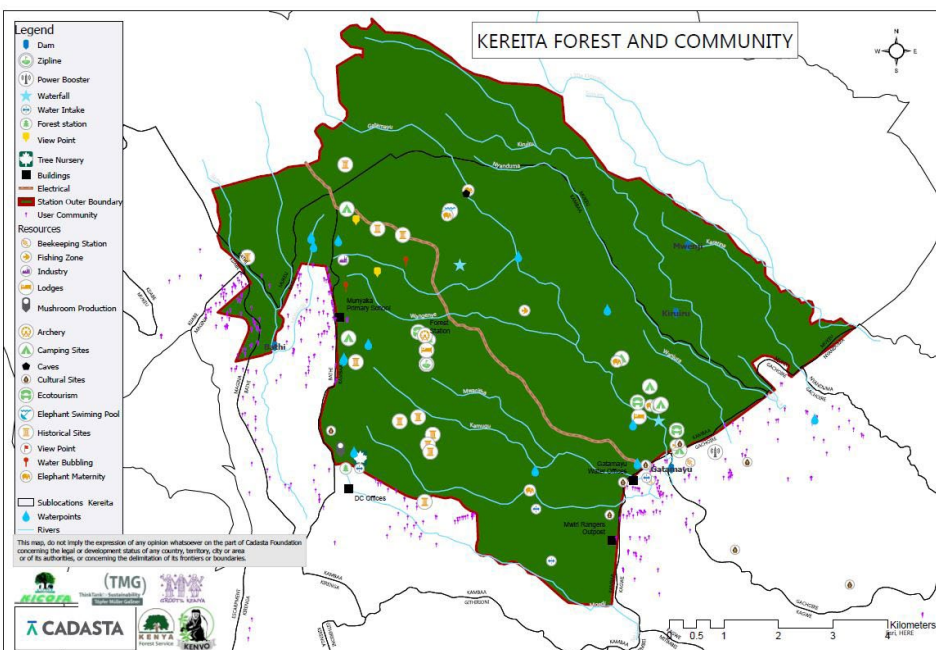

Figure 9: Map 2 showing the communities living adjacent to Kereita Forest and the various resources that the community accesses within the forest (without the PELIS and grazing sites/ user rights)

5.2 Findings: Tenure impacts

The findings of the participatory tenure mapping exercise undertaken for Kereita Forest show that LDN measures have a direct impact on the forest tenure rights of the communities living adjacent to the forest.

In this study, the findings are discussed in the context of a government directive to ban logging activities that could, in the future, further limit user rights to Kereita Forest.

▶ **Government moratorium on logging activities in public and community forests**

In 2018, the government placed a moratorium on all logging activities in public and community forests. This decision was made in response to acute water shortages that were attributed to deforestation, and degradation and encroachment of water towers, catchment and riparian areas. The ban on logging was initially set for a ninety-day period and later extended by six months during which the Cabinet Secretary for Environment and Forestry appointed a taskforce to inquire into forest management and illegal logging.

In November 2018, the task force submitted key recommendations to the ministry that informed an extension of the moratorium for an indefinite period. One of the recommendations was to phase out the PELIS system over a four-year period without opening new PELIS areas.

The ban on logging has resulted in a consistent increase in the area under government forest plantation from 135,100 hectares nationally in 2017 to 141,600 hectares in 2018, 147,600 hectares in 2019 and to 149,600 hectares in 2020 (KNBS, 2021). However, there has been minimal change to the total forest cover for the country – from 7.28% in 2017 and 2018 to 7.29 in 2019 and 2020 (KNBS, 2021). Conversely, the logging ban has resulted in a continuous reduction in accessible PELIS areas for forest-dependent communities. In November 2020, the Ministry of Environment and Forestry (following recommendations from the KFS board) partially lifted this ban to allow for harvesting and disposal of over-mature forest plantations within an area not exceeding 5,000 hectares.

For Kereita Forest, no harvesting took place even after this partial lifting of the ban. The communities living around Kereita Forest fear that the decrease in acreage under PELIS will have significant impact on their food security and livelihoods in the future.

The community living around Kereita Forest depends directly on forest resources for their livelihood, with a majority of community members either benefitting from non-resident cultivation under the PELIS system, from grazing within the plantation forest, or both, as shown in Figures 5 and 6 above. Community members cultivate crops under the PELIS system for subsistence and small-scale commerce. The last timber harvesting activities in Kereita Forest took place in 2018 before the logging moratorium. The trees that were planted since then will be ready for harvest in the next two to three years. The ban on logging means that no new areas have been opened for the PELIS system and once the current cultivation cycle ends (i.e., once the tree canopy closes) no more land will be available for cultivation. This will lead to loss of household food security and income for most community members.

Frequency of use of grazing zones
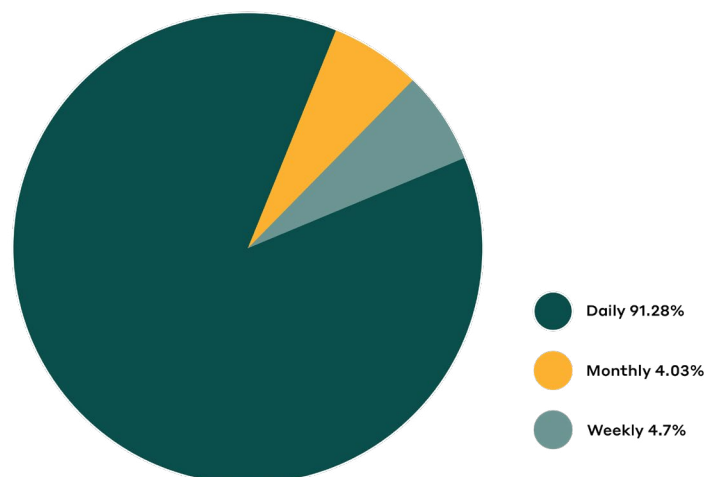

- Daily 91.28%
- Monthly 4.03%
- Weekly 4.7%

Figure 10: Frequency of use of grazing zones within the plantation forest in Kereita Forest
(Source: Kereita Forest Community Household Survey, August 2021)

**Frequency of use of
cultivation zones under
the PELIS program**

- Daily 25.28%
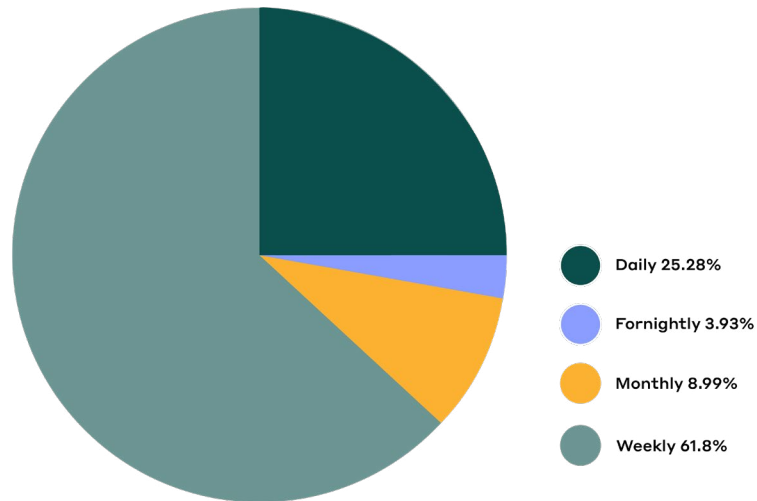- Fornightly 3.93%
- Monthly 8.99%
- Weekly 61.8%

Figure 11: Frequency of use of cultivation areas within the plantation forest in Kereita Forest (Source: Kereita Forest Community Household Survey, August 2021)

▶ **Factors influencing effective community participation in forest management and protection of legitimate forest tenure rights**

The UNCCD Land Tenure Decision (Decision 26/ COP.14), while acknowledging the importance of tenure rights in the context of achieving LDN, encourages parties to take into account the VGGT principles of implementation in activities to combat land degradation and desertification.

In addition to the general principles, the VGGT also provide specific guidelines on tenure rights and tenure governance with respect to public forests. These include the need for policies to ensure that the allocation of rights does not threaten livelihoods by depriving forest communities of access to resources, and equitable distribution of benefits from state-owned land. Additionally, the VGGT provide guidelines on how states should delegate tenure governance and ensure transparency and participation. Information should be provided to all potential participants in applicable languages, and using gender-sensitive messaging. Those who bear management responsibilities within a devolved structure of tenure governance for forests should also receive training and other support so that they can perform their duties effectively.

THE VGGT GENERAL PRINCIPLES

States should:
- Recognise and respect all legitimate tenure rights holders (whether formally recorded or not), and refrain from infringing the tenure rights of others

- Safeguard legitimate tenure rights against threats and infringements, and protect rights holders against arbitrary loss of tenure rights, including forced evictions that are inconsistent with existing state obligations under national and international law

- Promote and facilitate the enjoyment of legitimate tenure rights and ensure that services are accessible to all

- Ensure access to justice to deal with infringements of legitimate tenure rights and resolve disputes over tenure rights, and provide for affordable and prompt enforcement of outcomes

- Prevent tenure disputes, violent conflicts and corruption and take active measures to stop tenure disputes from arising or escalating

Figure 12: The General Principles of the Voluntary Guidelines on Governance of Tenure for Land, Fisheries and Forests in the context of National Food Security (VGGT)

The specific entry points that can contribute to strengthening forest co-management and providing safeguards for the protection of forest tenure rights for communities living adjacent to Kereita Forest in line with VGGT provisions include the following:

a. Community participation in forest management and CFA capacity

In Kereita Forest, the institutional framework of forest management allows for the recognition of legitimate tenure rights holders (forest-adjacent communities) through their involvement as members of the CFA (KICOFA) and as members of user groups permitted to access resources in the forest. (e.g., grazing, PELIS, firewood, etc.).

Beyond accessing various resources within the forest (firewood, PELIS sites, beekeeping etc.), KICOFA contributes to conservation and restoration efforts through tree planting after harvesting in a mature forest plantation section. This labour contribution by the community is voluntary and is acknowledged and documented as part of their contribution to conservation. KICOFA also invites the Kereita Station Manager to its monthly meetings to give feedback to the KFS and to receive information on developments in forest conservation and management. KICOFA has declared the decreasing PELIS acreage to be a threat to members' livelihoods, and emphasized that no timber has been cut in Kereita Forest even since the partial lifting of the logging ban.

Community members accessing resources in Kereita Forest pay a small fee to the KFS and to KICOFA. However, the amounts paid are small and as such the contribution to KICOFA's annual revenues is not enough to further develop the capacity of KICOFA officials and increase their involvement in forest management activities.

The KICOFA Participatory Forest Management Plan (PFMP) acknowledges that the integration of the CFA into forest management is not effective due to most KICOFA members lacking the necessary skills. The PFMP points to the need to build the capacity of KICOFA members in order to further integrate them into the management of forest resources. Building the capacity of KICOFA members and officials on tenure issues may also improve their ability to

publicize the threat posed by policy directives to tenure rights and their potential impact on the community's livelihood and socio-economic wellbeing.

b. Dispute resolution mechanism

KICOFA members offer feedback on potential tenure rights issues by reporting disputes with rangers to the Kereita Station Manager through the CFA chairperson. If the community is not satisfied with the decision by the Station Manager in relation to their right to access a specific resource, they raise the matter with the Ecosystem Conservator. The community also has the option of raising the matter with the Forest Conservation Committee. However, there is no provision for an independent arbiter to resolve tenure disputes between the community and the KFS, and with conflicts occurring from time to time between the community and KFS, this presents a challenge. Since KFS has more capacity and is viewed as the custodian institution, communities often have to accept the final decision of the KFS.

c. Appropriate policies

The logging ban limits the extent to which the community can access resources due to shrinking PELIS lands and potential phasing out of the PELIS system. The creation of policy directives at national level without consideration of their implications for different communities presents a risk to tenure security. While national-level policy decisions may help the state achieve its 10% forest cover target, these decisions may have adverse impacts on the tenure security of forest-adjacent communities and consequently negatively affect household food security and livelihoods.

d. Distribution of benefits

While the community living adjacent to Kereita Forest participates in tree planting and other measures aimed at combating land degradation, it does not receive any monetary benefit (through benefit-sharing agreements) from activities carried out by other private entities that have contracts with the KFS to carry out ecotourism and carbon dioxide sequestration. The only benefit the community derives from these activities is in the form of employment opportunities.

e. Access to information

The VGGT recommend that information should be provided to all potential participants in applicable languages and using gender-sensitive messages. The recipients of the devolved structure of tenure governance for forests should also receive training and other support so that they can perform their duties. KICOFA officials often involve the Kereita Forest Station Manager in their community meetings, and this provides an avenue for community members to be sensitized regarding their roles in conservation as well as providing updates to inform conservation efforts. KICOFA also keeps records of the beneficiaries and user groups accessing forest resources.

Figure 13: Kereita Integrated Community Forest Association (KICOFA) members reviewing the maps showing different user rights/ forest resources they access within Kereita Forest. Credit: Brian Washe Kazungu, TMG Research.

5.3 Challenges: implementing the land tenure decision

While the UNCCD Land Tenure Decision (Decision 26/ COP.14) recognizes responsible land governance as a fundamental component of sustainable land management (with the VGGT as a reference point), the decision does not set specific targets for countries. The lack of such targets at country level presents a challenge when monitoring the implementation of this decision. While LDN measures are implemented in a manner that includes quantitative targets, the implementation of the land tenure decision is arbitrary with no specific quantitative or qualitative targets to track. For Kereita Forest, the lack of specific targets has meant that the forest management institutions only focus on the LDN targets that have been set by the Ministry of Environment and Forestry.

For community forests in Kenya, forest-adjacent communities bear the main responsibility for managing and conserving the forest and forest resources, with support from respective county governments. However, for public forests like Kereita Forest, the KFS is the main institution mandated to manage the forest. Despite efforts to allow for forest co-management through provisions in the legal and institutional framework, the general perception of the communities relying on the forest and forest resources for their livelihoods is that the KFS as the custodian institution wields more decision-making power. Additionally, while the community living adjacent to Kereita Forest participates in forest management and conservation, it is unable to inform decision-making beyond the community level. This became apparent from the decision to ban logging, which failed to consider impacts on the livelihoods of the communities living around Kereita Forest, and from the fact that the community has no channel to represent their concerns at national level.

"Despite efforts to allow for forest co-management through provisions in the legal and institutional framework, the general perception of the communities relying on the forest and forest resources for their livelihoods is that the Kenya Forest Service (KFS) as the custodian institution wields more decision-making power."

6. Conclusion

6.1 Summary and lessons learned

Forest-adjacent communities have a key role to play in international aspirations for Land Degradation Neutrality. Yet, for these communities to become the drivers and beneficiaries of sustainable land use, it is essential to support responsible land governance and tenure security.

The Global Soil Week 2021 linked LDN approaches to responsible land governance, with a focus on tenure security for forest-adjacent communities and other marginalised natural resource users. Special emphasis was placed on demonstrating the potential of participatory tenure mapping approaches to enhance local stakeholder engagement, as well as political accountability for commitments to responsible land governance in the context of LDN implementation. The participatory tenure mapping approach drew on the active participation of the local community to help identify and monitor legitimate tenure rights and potential conflicts in the context of restoration measures. The key messages emerging from this study include:

▶ **Forest adjacent communities are highly dependent on secure access to forest resources for household food security and income.**
The community living adjacent to Kereita Forest depend directly on the PELIS system for their household food security as most community members cultivate food crops for subsistence on the PELIS plots allocated to them. The community also grazes livestock in sections within the plantation forest and collects firewood for domestic use from the forest. Water for domestic use in the five villages around Kereita Forest is sourced from water intakes within the forest. Any limitation on access to these forest resources will have a direct impact on household food security. Additionally, the community benefits from employment opportunities in ecotourism and carbon sequestration projects that are undertaken by private companies within the forest. Other user rights conferred to the community include honey harvesting and the gathering of medicinal herbs.

▶ **LDN forest protection measures affect forest-adjacent communities' tenure rights and, in turn, household food security and income.**
Kenya's LDN targets, set by the Ministry of Environment and Forestry and implemented by the Kenya Forest Service, have a direct impact on how forest-adjacent communities can access and use forest resources, and consequently how secure their forest tenure rights are. The moratorium on logging activities was placed in response to deforestation, including illegal logging activities and unregulated charcoal production, and degradation and encroachment of water towers that resulted in shortage of water flows. The ban on logging is intended to contribute to consistent forest regeneration which will, in turn, contribute to achieving Kenya's LDN target of 10% forest cover. However, for Kereita Forest, this has meant that no new sites have been opened for cultivation under the PELIS system. If no harvesting takes place within Kereita Forest in the next two years, the community will have no new areas in which to cultivate crops. The Task Force on Forest Management and Logging Activities appointed by the Cabinet Secretary for Environment and Forestry, in reporting on forest resources management during the interim period of the moratorium, recommended that the PELIS system be progressively phased out over a four-year period and that no new PELIS areas should be opened. While this may help to increase forest cover, it will have a negative impact on the tenure rights of forest-adjacent communities.

▶ **Co-management mechanisms provide for community tenure rights, but enforcement is hindered by restricted capacities of community organisations and lack of access to impartial grievance mechanisms.**
The Kereita Participatory Forest Management Plan (PFMP), drafted under the provisions of the Forest Conservation and Management Act, is among the mechanisms that allow for recognition and protection of

community forest tenure rights. The PFMP recognises community tenure rights by allowing the community living around the forest to access forest resources. The user groups that make up the Kereita Integrated Community Forest Association (KICOFA) have been allocated various user rights for Kereita Forest including crop cultivation, grazing, firewood collection, water harvesting, tree planting, collection of medicinal herbs, beekeeping and honey harvesting.

However, due to the limited technical and financial capacity of the CFA, the KFS officers play a larger role in forest conservation and management directives (e.g., selection of sections within the plantation forest to be opened under the PELIS system). The KFS also plays the principal role in decision-making and the community is often expected to implement decisions without adequate information. Additionally, with no provision for an independent arbiter to resolve tenure disputes between the community and the KFS, communities often must settle for the final decision on tenure conflicts from the KFS.

▶ **National restoration directives overrule decentralized co-management mechanisms and risk violating communities' tenure rights and threaten their food security.**
Although the forest co-management structure is participatory at the community level, decision-making is often a top-down exercise and directives made at the national level in response to incidents at specific forests affect all forest-adjacent communities within the country. As a result, national restoration directives, such as the nationwide moratorium on logging activities, negatively impact the tenure rights of all forest-adjacent communities. In Kereita Forest, the community expressed fears that if the logging ban is not lifted, they will have no new areas for crop cultivation, posing a threat to their household food security.

▶ **The outcomes of LDN activities do not mention the impact on the forest tenure rights of forest-adjacent communities.**
The Kenya National Bureau of Statistics (KNBS) is the principal government agency responsible for collecting, analysing and

disseminating statistical data in Kenya. The KNBS conducts annual surveys to provide economic data on various sectors. For the forestry sector, the KNBS offers statistics on forest cover and on the sector's contribution to Kenya's GDP and to employment.

However, this information is not presented in the context of land tenure issues, or food security, or employment opportunities to forest-adjacent communities (e.g., number of beneficiaries of the PELIS system, or percentage and acreage of plantation forests under the PELIS system). Thus, while the legitimate tenure rights of forest-adjacent communities are recognised and protected through the co-management framework, which involves the KFS and respective CFAs, the data that should inform tenure decisions is not readily available. One way to use the data to highlight the impact of LDN measures on communities' forest tenure rights is by using the number of beneficiaries of the PELIS system as the qualitative basis for policy discussions on how the moratorium on logging has affected tenure rights of forest-adjacent communities.

For Kereita Forest, the KFS and the CFA (KICOFA) both keep records of all beneficiaries of PELIS plots and can use this data to estimate the total acreage under PELIS. This estimate is also based on the number of trees planted. This data is crucial for recognition of the community's and the KICOFA's contribution to implementing LDN measures, as well as to estimate the impact of LDN activities on the tenure security of Kenya's forest-adjacent communities.

"Although the forest co-management structure is participatory at the community level, decision-making is often a top-down exercise and directives made at the national level in response to incidents at specific forests affect all forest-adjacent communities within the country."

6.2 Recommendations

The Global Soil Week pilot study at Kereita Forest provides a unique opportunity to analyse the complex challenges that communities face in the implementation and monitoring of a participatory forest management plan. Additionally, the pilot study provides the empirical basis for discussing forest tenure rights issues as they pertain to LDN measures in the context of forest conservation and restoration efforts. The findings of the pilot study, and the experience of the participatory process that accompanied it, provide a basis for preliminary recommendations to support he implementation of the UNCCD COP14 decision on land tenure by the following means:

▶ **Strengthening CFA capacity to increase outputs of different forest user rights.**
For forest-dependent communities and other private and public local stakeholders, the pilot offers a new perspective and enhanced access to information that could facilitate a reconciliation of conservation needs with local tenure security. The Participatory Forest Management Plan (PFMP) presents an opportunity to strengthen the community's co-management role by introducing provisions for county governments to build CFA members' capacity by increasing outputs from their current user rights. For example, the county government can build capacities in beekeeping and agriculture to increase outputs from these activities or build capacities to form groups that can gain timber harvesting permits to supplement incomes. Currently timber harvesting is only permitted by commercial entities and the communities at Kereita Forest do not have the financial capacity to participate in this economic activity.

▶ **Establishing feedback mechanisms to allow for targeted decision-making based on issues affecting respective forest stations.**
The current institutional framework for forest management would benefit from a systematic feedback mechanism that allows individual CFAs to present case-specific issues that can inform national directives on LDN measures. The decision to ban all logging activities was taken in response to unsustainable land use practices including illegal logging, timber harvesting, unregulated charcoal production, deforestation, expansion of agricultural and settlement activities into forested areas, and overharvesting of forest resources.

However, although Kereita Forest was not affected by all of these practices, the decision to ban logging directly affects the tenure rights of community members as no new PELIS sites have been allocated for cultivation since the ban. If individual CFAs such as KICOFA could present the extent of unsustainable land use practices to the responsible state authorities, they could make a case for reopening the plantation forest for timber harvesting that would consequently allow for new PELIS sites.

▶ **Including reference to tenure issues in national LDN targets and other conservation and restoration initiatives.**
Data on the forestry sector in Kenya should go beyond employment in logging and national forest cover to include data that can contribute to better recognition of tenure rights of forest communities. For example, data on the number of community members who have been allocated PELIS sites within a forest station can provide a clearer picture of the number of employment and livelihood opportunities that this system supports. This data can also present the case for how adversely the community's household food security and income will be affected by a decision such as the logging ban. Additionally, data on the acreage or percentage of land under the PELIS system for each forest station can be used to present the community's contributions to food security at the local level. This data, once collated for each forest station, can be consolidated to present the national level statistics on community tenure rights of forest-dependent communities. The national data can also be used to assess the impacts of national LDN measures and policy directives such as the moratorium on logging in all public and community forests. Furthermore, this national data can be instrumental in tracking the progress of LDN activities while prioritizing legitimate tenure rights within forest conservation and restoration efforts, in line with the UNCCD COP14 Land Tenure Decision.

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