



COUNTY GOVERNMENT OF LAIKIPIA

LOCAL PHYSICAL AND LAND USE DEVELOPMENT PLAN FOR MORUPUSI COMMUNITY LAND (2026 - 2036)



LAIKIPIA
CONSERVANCIES
ASSOCIATION

WYSS
ACADEMY
FOR
NATURE



CERTIFICATION & APPROVAL

I certify that this Plan has been prepared and published as per the requirements of the Physical and Land Use Planning Act, No. 13 of 2019 and County Government Act, 2012 Amended 2020, and other Planning Standards and Guidelines.

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APPROVED BY:

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County Assembly of Laikipia

DEPARTMENTAL REFERENCE No.....

APPROVED DEVELOPMENT PLAN No.....

FOREWORD



The Morupusi Community Land is endowed with extensive rangelands, valuable natural resources, rich cultural heritage and a resilient community whose livelihoods are closely linked to the land and its environment. Despite this potential, the community continues to face development challenges, including land degradation, inadequate water supply, human–wildlife conflict, limited infrastructure and insufficient access to essential social services. Addressing these challenges requires a coordinated, inclusive and sustainable approach to land use planning and natural resource management.

The County Government of Laikipia, through the Department responsible for Lands, Housing and Urban Development, has collaborated with the County Technical Team led by Plan. Michael Mudeny, Laikipia Conservancies Association (LCA), the Wyss Academy for Nature, and the State Department for Physical Planning in preparing the Morupusi Community Land Local Physical and Land Use Development Plan. This collaborative initiative seeks to establish a practical framework for guiding land use, strengthening community land governance, conserving natural resources and improving the livelihoods and well-being of the Morupusi community. The Plan is anchored in the principles of the Constitution of Kenya, 2010, and the Community Land Act, 2016, which provide for the protection of community land rights, public participation and the sustainable management of land and natural resources.

The preparation of this Plan has been guided by a participatory planning process that recognizes the community as a central partner in determining the future of its land. Key activities have included community mobilization and engagement, field surveys, geographical information system (GIS) mapping of land resources and infrastructure, and the documentation of environmental, socio-economic and cultural characteristics. These activities have helped establish a planning framework that reflects the community’s aspirations, local knowledge and development priorities.

The Plan provides strategies and land use guidelines for addressing critical issues affecting Morupusi Community Land. These include overgrazing, rangeland degradation, invasive species, inadequate access to water, limited health and education facilities, infrastructure gaps and human–wildlife conflict. It also seeks to promote sustainable livestock production, protect wildlife habitats and movement corridors, conserve culturally significant areas, improve



settlement planning and strengthen the sustainable use of available natural resources. Through these interventions, the Plan aims to promote a balanced approach that recognizes the interdependence of people, livestock and wildlife.

The successful implementation of the Plan will depend on the collective commitment of the Morupusi community, the County Government of Laikipia, relevant national government institutions, development partners, conservation organizations, the private sector and other stakeholders. I therefore call upon all concerned parties to work together in mobilizing resources, strengthening community participation and translating the Plan's proposals into practical interventions. Regular monitoring, coordinated implementation and periodic review will be essential to ensure that the Plan remains responsive to emerging needs and changing environmental conditions.

It is my sincere hope that the adoption and implementation of the Morupusi Community Land Local Physical and Land Use Development Plan will provide a strong foundation for sustainable land management, improved livelihoods, effective community land governance and the conservation of our natural and cultural heritage. Together, we can safeguard Morupusi's resources and create opportunities for a more secure and prosperous future for present and future generations.

Signature.....

H.E. Joshua Wakahora Irungu, EGH

Governor

County Government of Laikipia.



PREFACE



The preparation of the Morupusi Community Land Local Physical and Land Use Development (Zoning) Plan (2026–2036) marks a significant milestone in the community’s journey towards sustainable land management, improved livelihoods and inclusive development. The Plan provides a long-term spatial framework for addressing the interconnected challenges and opportunities facing Morupusi Community Land, while safeguarding its rich natural resources, pastoral heritage and ecological integrity for present and future generations.

The Plan is the product of a deliberate, consultative and collaborative planning process that brought together the Morupusi community, community leaders, technical professionals and relevant government institutions. Through community engagement, field assessments, surveys, geographical information system (GIS) mapping and analysis of environmental, socio-economic and cultural conditions, the planning process sought to ensure that the community’s aspirations, priorities and indigenous knowledge were meaningfully incorporated into the proposed land use framework. This approach reflects the principle that effective development planning must be informed by the people whose lives, livelihoods and future are directly shaped by the decisions being made.

I wish to express my sincere appreciation to the Laikipia Conservancies Association (LCA) and the Wyss Academy for Nature for their valuable partnership and support in advancing this important initiative. I also commend the County Technical Team and the State Department for Physical Planning for their professional expertise, technical guidance, coordination and commitment throughout the planning process. The collaboration among these institutions and the community has been instrumental in shaping a Plan that seeks to balance development priorities, community interests and the sustainable conservation of natural resources.

Beyond identifying land use zones, the Plan establishes a strategic framework for guiding settlement development, strengthening livestock production and rangeland management, improving access to water and essential social services, enhancing infrastructure, and promoting sustainable socio-economic opportunities. It also provides a basis for addressing land degradation, managing human–wildlife conflict, protecting wildlife habitats and



movement corridors, and strengthening the coexistence of people, livestock and wildlife. In doing so, the Plan recognizes that the long-term prosperity of Morupusi depends on an integrated approach to human well-being, productive pastoral landscapes and environmental conservation.

The County Government of Laikipia remains committed to supporting the implementation of this Plan in collaboration with the community, relevant national government institutions, development partners, conservation organizations and other stakeholders. However, the success of the Plan will ultimately depend on collective ownership, sustained investment, effective coordination and the willingness of all partners to translate its proposals into tangible development outcomes. I therefore call upon the Morupusi community, government agencies, development partners, the private sector and other interested parties to embrace the Plan and contribute to its implementation, monitoring and periodic review.

It is my conviction that the Morupusi Community Land Local Physical and Land Use Development Plan (2026–2036) will serve as an important instrument for strengthening community land governance, promoting responsible land use, improving livelihoods and securing the natural and cultural heritage upon which the community depends. Through shared responsibility and sustained commitment, we can build a more resilient, equitable and prosperous Morupusi; one in which people, livestock and wildlife thrive together.

Signature.....

Ekwam Nabos
County Executive Committee Member
Infrastructure, Land & Physical Planning, Housing, Energy and Urban Development
County Government of Laikipia



ACKNOWLEDGEMENT

The preparation of the Morupusi Community Land Local Physical and Land Use Development Plan (2026–2036) marks an important milestone in strengthening community land governance, securing land rights and promoting sustainable development in Laikipia County.

I wish to express my sincere appreciation to the Morupusi community and the Community Land Management Committee (CLMC) for their active participation, cooperation and commitment throughout the planning process. Their local knowledge, lived experiences and collective aspirations have been invaluable in shaping a Plan that reflects the community's priorities and provides a practical framework for the responsible management and development of their ancestral land. The community's willingness to engage in dialogue and contribute to planning decisions demonstrates the importance of local ownership in achieving sustainable and lasting development outcomes.

I also acknowledge the Laikipia Conservancies Association (LCA), the Wyss Academy for Nature, the County Technical Team, the dedicated planning team and the State Department for Physical Planning for their technical expertise, collaboration and support in preparing the Plan.

Guided by the Community Land Act, 2016, the Physical and Land Use Planning Act, 2019, and relevant county and national planning frameworks, the Plan seeks to balance pastoral livelihoods, settlement development, infrastructure and social services with the conservation of rangelands, water resources, wildlife habitats and cultural heritage.

The County Government of Laikipia remains committed to working with the Morupusi community, the CLMC, relevant government institutions and development partners to support the Plan's implementation. Through shared responsibility, sustained collaboration and effective resource mobilization, the Plan can contribute to secure community land rights, improved livelihoods, responsible natural resource management and greater resilience for present and future generations.

It is my hope that the Morupusi Plan will provide a strong foundation for community-led development and offer valuable lessons for similar pastoral and community land planning initiatives across Laikipia County and Kenya.

Signature.....

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County Government of Laikipia



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CHAPTER ONE: INTRODUCTION

1.1. Background

Morupusi Community Land is a community-controlled area where the community has a high cultural identity, livestock farming, natural resources, wildlife, vegetation, water resources and human settlements are scattered. Livestock keeping is an important aspect of the local livelihoods as cattle, goats, sheep and poultry are part of the household's livelihoods. There is also potential for an ecology of beekeeping, ecology of tourism, ecology of conservation, ecology of carbon-credit, and other natural resource-based economy such enterprises in the community.

Land forms include hills, seasonal rivers and drainage ways, rock catchment areas, vegetation, salt licks, viewing areas and other natural features that have an Laikipia conservancies Association on settlement, grazing, environmental conservation and infrastructure development. They provide ecological and livelihood functions which are important and need a coordinated and sustainable land-use management.

The Constitution of Kenya, Physical and Land Use Planning Act No. 13 of 2019, Community Land Act of 2016, County Government Act of 2012, the National Spatial Plan, the National Land Use Policy and the Laikipia County Spatial Plan provide guidance to the preparation of the Morupusi Local Physical and Land Use Development Plan. The planning process emphasizes the need for community involvement, and involves consideration of the wishes, needs and priorities of the people of Morupusi.

The community of Morupusi, like many communities in the region, has a number of spatial, environmental, social and infrastructural issues that necessitate coordinated land-use planning. An imbalance of access and delivery of critical services and infrastructure is one of the key issues. In certain areas, especially in the north and northeast of the community land, there are increased distances to schools and health care services. The current health center is primarily situated in the southwest of the community, and people in other parts of the community have poor access to the health center.

The distribution of water also is uneven. While there are many water sources in the central and southern parts of the area, other northern and peripheral areas are less dense, and residents and animals must travel further distances to access water. Livestock grazing areas might also be quite distant from water supplies, and the seasonal dry period and poor maintenance of water systems during dry seasons adds to vulnerability.



Environmental sustainability is also an issue. Natural resources, grazing areas, vegetation, wildlife habitats, water resources and environmentally sensitive areas of the community should be protected from inappropriate development and degradation. Wildlife also pose a potential risk of human-wildlife conflict, especially when development limits wildlife habitats and movement.

Lack of management as well as a lack of capacity and technical resources within the community can also limit the development potential.

1.2. Justification

The preparation of the Morupusi Local Physical and Land Use Development Plan is required to enable land and land use to be managed in a coordinated manner and for future development. The plan will serve as a tool to guide land use, infrastructure development, protect sensitive areas, and coordinate various land use development activities among sectors and institutions.

The plan is very significant because Morupusi has great opportunities related to livestock production, bee keeping, tourism, conservation, natural resources and development for the community. Good spatial planning can help to ensure that these opportunities are created in a way that does not threaten the ecological systems and natural resources that support community livelihoods.

The plan will also ensure equitable access to infrastructure and services, recognizing areas where there is a lack of infrastructure or services and guiding the placement of new schools, health facilities, water points, roads and other public services. It will also contribute to the protection of wildlife habitats, grazing lands, water resources and other environmentally sensitive areas, and to livelihoods of the communities.

The benefit of the planning process is further to support increased community ownership of development decisions. The Morupusi planning process includes community members in the planning to include local needs, knowledge, aspirations and priorities into the planning process.

1.3. Purpose

The purpose of the Morupusi Local Physical and Land Use Development Plan is to provide a comprehensive spatial framework for sustainable land-use management and development of Morupusi Community Land.

Specifically, the plan seeks to:

- Guide and coordinate future land development and infrastructure provision.
 - Promote appropriate and compatible land-use allocation.
-



- Improve access to essential services and community facilities.
- Protect grazing areas, water resources, wildlife habitats, and environmentally sensitive areas.
- Promote sustainable livestock production and other community-based economic activities.
- Reduce land-use conflicts and potential human-wildlife conflicts.
- Promote environmental conservation and sustainable utilization of natural resources.
- Strengthen community participation and ownership of development decisions.
- Provide a framework for coordinated implementation of development projects.
- These purposes are consistent with the functions of local physical and land-use development plans, including zoning, infrastructure coordination, land-use regulation, sectoral coordination, and development control.

1.4. Planning Context

Morupusi Community Land is located in Laikipia County within Laikipia North Sub-County and falls administratively under Mukogodo West Ward. The community land covers an area of approximately 10,527 Hectares, functions primarily for communal pastoral grazing, conservation, and tourism, and comprises eight villages which include **Lorubae, Soit Oudo, Kurum, Saramba, Leruk, and Morupusi**. It serves 2,457 people as per the socio-economic survey.

1.4.1. Scope of Work

The scope of the planning area covers the entire spatial extent of the delineated Morupusi Community Land, encompassing an approximate total planning area of 10,527 hectares. This core area serves as the primary zone of preference for community-led resource management, rotational grazing, infrastructure placement, and conservation zoning over the next 10-year planning horizon. The surrounding functional hinterland—extending across the broader Naibunga Community Conservancy network and bordering units such as Nkiloriti, Musul, Kijabe, Ilpolei, Munishoi, Makurian and Kurikuri represents the outer spatial sphere that absorbs seasonal livestock movements, regional wildlife dynamics, and shared hydrological impacts.

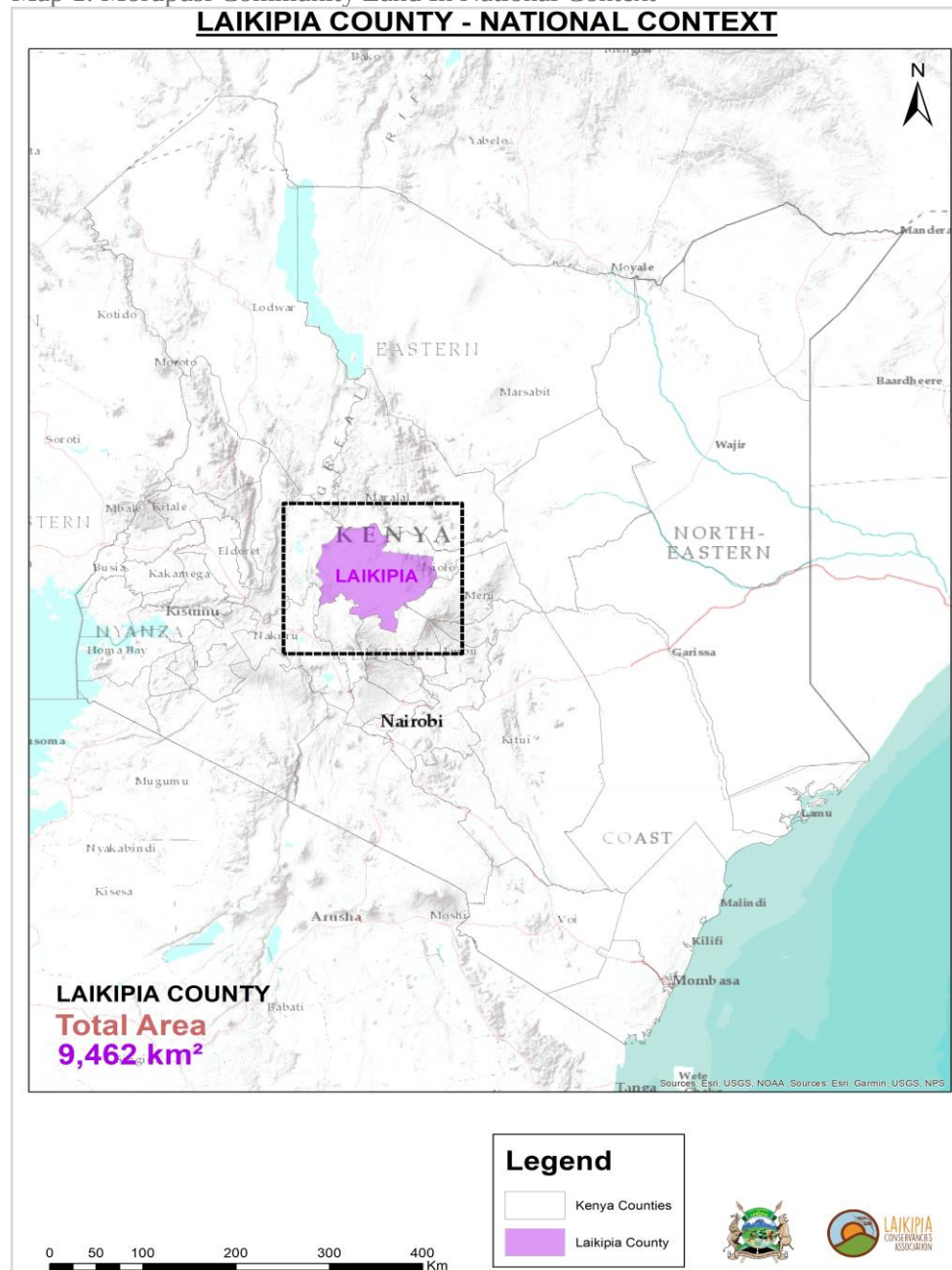
1.4.2. Location Context

Morupusi Community Land is located in Laikipia County, Laikipia North Constituency, within Mukogodo West Ward, in the Mukogodo area of northern Laikipia. The area lies approximately between 0°30' and 0°45' North latitude and 36°50' and 37°05' East longitude. Morupusi is



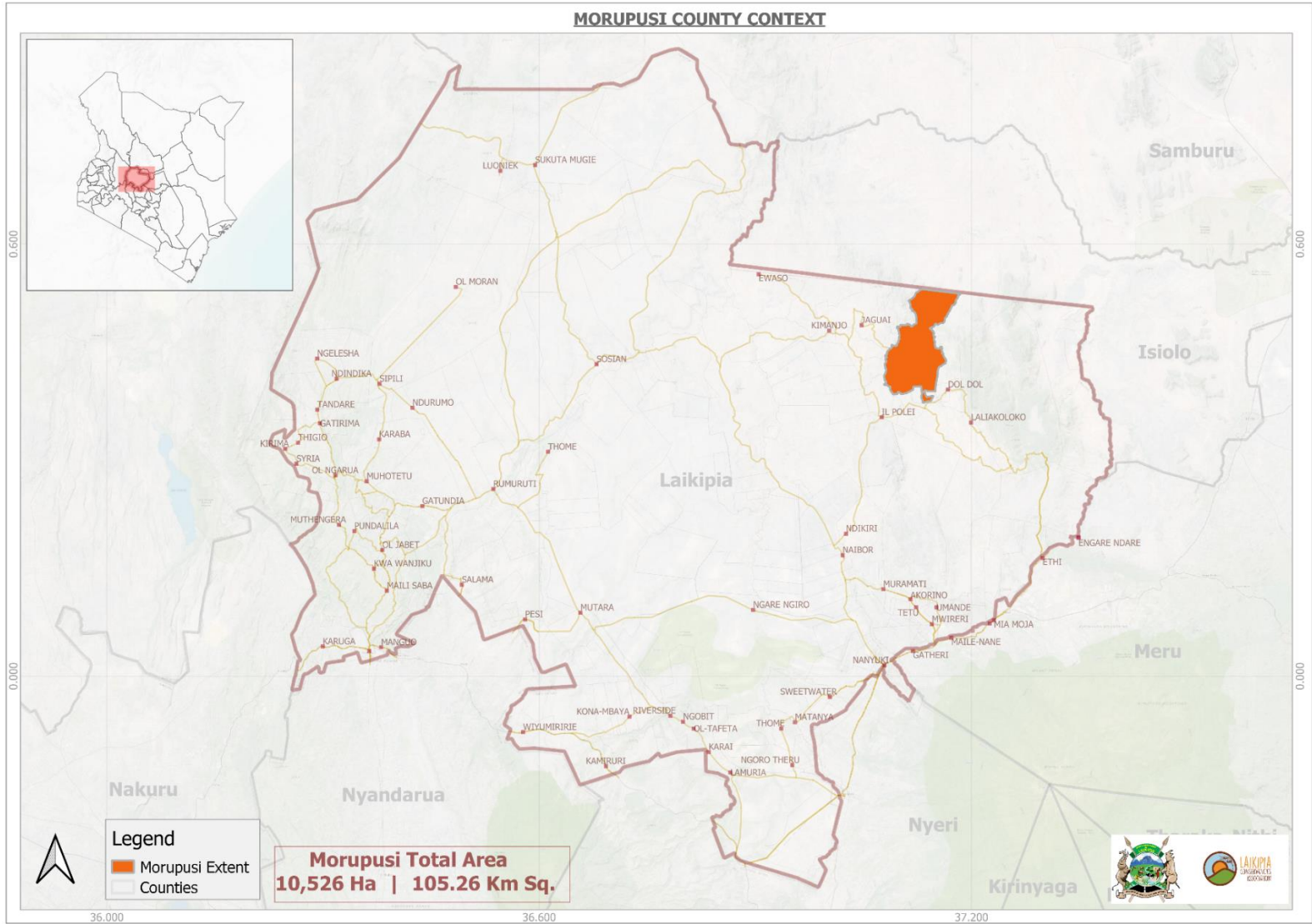
mainly a dry pastoral rangeland where the community depends on livestock keeping, grazing, water resources, and other natural resources for their livelihoods. The land is also part of the wider conservation landscape of northern Laikipia, where communities work with conservation partners to protect wildlife and manage natural resources. Its location within Laikipia North Constituency and Mukogodo West Ward is therefore important for understanding the community's administration, land governance, development activities, and conservation initiatives.

Map 1: Morupusi Community Land In National Context





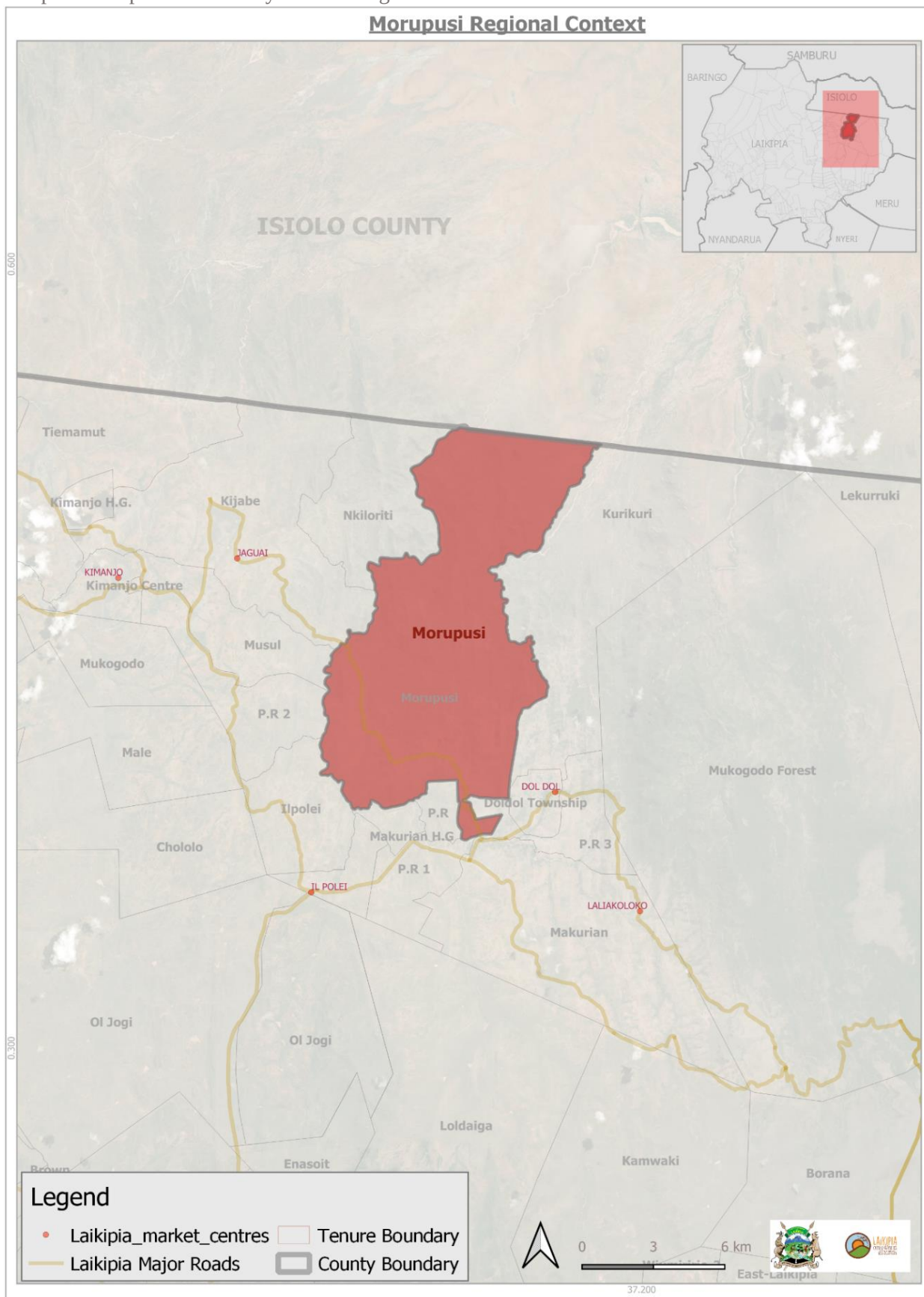
Map 2: Morupusi Community Land in County Context



Source: Compiled from Survey of Kenya Data, 2026



Map 3: Morupusi Community Land in Regional Context



Source: Compiled from Survey of Kenya Data, 2026

Map 4: Morupusi Community Land Extent



Source: Laikipia County GIS Lab, 2026



1.5. History Of Morupusi Community Land

At the height of colonial administration 1904 -1914 local Maasai and Samburu pastoral communities were unlawfully and forcefully evicted from the fertile Laikipia plateau to give way for the then proposed “White Highlands”. The evictees were forced to settle in the dry peripheral of Laikipia North, forming the framework for trust lands.

Post independence, the Land Adjudication Act of 1968 along The Land Adjudication order of 1972 were enacted which formally encompassed the trust land under government led adjudication programs. The government sought to formalize communal grazing rights and subsequently established 13 formal group ranches, among them Morupusi group ranch within Mumunyot I Adjudication Section.

Historically, this pastoral area was managed through communal grazing and ecological monitoring by indigenous communities. However, around 1999, nine group ranches concerted efforts to kickstart the Naibunga Initiative of participatory resource management. They included: Morupusi, Tiemamut, Kijabe, Koiya, Ilmotiok, Musul, Nkiloriti, Ilpolei & Munishoi. In 2001, with the aid of Laikipia Wildlife Forum, the nine group ranches officially formed the Naibunga Conservation Trust in an effort to merge wildlife conservation with sustainable livestock grazing. Currently, Morupusi forms The Naibunga Upper Conservancy alongside Ilpolei and Munishoi community lands

Legislation of the Community Land Act of 2016 provided a framework for, and accelerated adjudication processes in Laikipia North, fast tracking transition of the 13 group ranches to community lands. Consequently, Morupusi successfully completed its transition processes between 2019 to 2023. The Morupusi community has recently given a green light to the development of a 10-year comprehensive Land use & Management Plan

1.6. Vision

To build a thriving, resilient and united Morupusi community where land rights are secure, natural resources are sustainably managed, cultural heritage is safeguarded, biodiversity and wildlife flourish, degraded habitats are restored, and inclusive, community-led governance creates sustainable livelihoods and a prosperous future for present and generations to come.

1.7. Objective of the Plan

1.7.1. Overall Objectives

To provide a sustainable, integrated, participatory, and spatially coordinated framework for the development and management of Morupusi Community Land while improving livelihoods, infrastructure, environmental conservation, and community well-being.



1.7.2. Specific Objectives

- Promote sustainable land-use management through appropriate zoning and allocation of land for residential, livestock, conservation, infrastructure, social, economic, and other compatible uses.
- Strengthen livestock-based livelihoods by protecting and improving grazing areas, livestock water infrastructure, and related value-addition opportunities.
- Improve access to social and physical infrastructure, including roads, schools, health facilities, water points, and other community facilities.
- Protect and conserve natural resources including vegetation, water sources, wildlife habitats, hills, rivers, salt licks, and environmentally sensitive areas.
- Promote coexistence between people, livestock, and wildlife by protecting wildlife movement routes and minimizing settlement and development within sensitive wildlife areas.
- Promote economic diversification through beekeeping, tourism, conservation, natural-resource-based enterprises, and other sustainable livelihood opportunities.
- Strengthen community participation and ownership in land-use planning, implementation, monitoring, and management.
- Provide a framework for future development control and coordinated implementation of public and private development projects.
- Build resilience to climate variability through sustainable management of water, grazing land, vegetation, and other natural resources.

1.8. Guiding Principles of the Plan

The essential principles in the development and implementation of Morupusi Land Use Plan are as highlighted below.

- Sustainable Development** – Development must serve the needs of the current generation without harming the potential of future generations to use the land and natural resources. The economic, social and environmental considerations will hence be weighed in the process of land-use decision making.
- Environmental Conservation** – Sites of ecological value, including those sensitive to environmental degradation, water resources and habitat for wildlife and vegetation, will be recognized, protected and managed appropriately.



- iii. **Integrated Land-Use Management** – Land uses need to be planned together so as to minimize competing uses between settlements, livestock, conservation, infrastructure, agriculture, tourism and other uses.
- iv. **Equity and Accessibility** – Development should ensure equitable access to services, infrastructure, water, education, healthcare, transportation and economic opportunities, but place an emphasis on underserved areas.
- v. **Cultural Preservation** – The plan will acknowledge and safeguard Morupusi’s cultural heritage, traditional knowledge, community identity and culturally significant resources.
- vi. **Livelihood Improvement** – Land use planning to assist sustainable livelihoods, especially livestock, beekeeping, tourism, conservation and other economic activities that are appropriate to local communities.
- vii. **Climate Resilience** – Planning and development should be resilient to climate variability, water scarcity, environmental degradation and other climate related issues.
- viii. **Balanced Human-Wildlife Coexistence** – Settlement and development should be directed around critical wildlife habitat and movement corridors to minimize habitat fragmentation and human-wildlife conflict, and benefit community livelihoods.
- ix. **Evidence-Based Planning** – Socio-economic surveys, spatial analysis, GIS mapping, consultation with stakeholders, environmental assessments and other evidence should support planning decisions.

1.9. Planning Approach and Methodology

A participatory, integrated, evidence-based and spatial planning approach will be applied in the preparation of Morupusi Local Physical and Land Use Development Plan.

1.9.1. Community and Stakeholder Involvement

The planning process will be based on community participation. The community was engaged by holding meetings, and the Community Land Management Committees (CLMCs) were reached out via these meetings. The participatory process was created to ensure that the community's voice was heard and that ownership of the plan was enhanced.

1.9.2. SWOT Analysis

A community SWOT analysis was conducted to understand the strengths and weaknesses of the community, along with opportunities and threats. Strengths identified during the exercise included Cultural Heritage, Community Networks, Livestock Resources, Beekeeping Potential, Natural Resources, Vegetation, Public Facilities, Transport Infrastructure and



Tourism Opportunities. It also assisted in identifying any weaknesses and development challenges that require to be addressed in the plan.

1.9.2. Socio-Economic Assessment

The planning process will consider the conditions of demographic, livelihood, economic, social, infrastructure and service delivery in the community. It will be used to pinpoint the current development trends, the needs for services, livelihood opportunities and the priority areas for intervention.

1.9.3. Spatial and GIS Analysis

GIS and spatial analysis were done to create maps of existing land uses, settlements, infrastructure, water sources, grazing areas, environmental resources, wildlife areas, roads and other features. Underserved areas should be identified and future infrastructure and facilities should be located using accessibility and proximity analysis. For instance, access to water and other services has been analyzed using GIS and gaps in the access were identified in Morupusi.

1.9.4. Evaluating environmental conditions.

Conservation and sustainable use of natural resources and environmentally sensitive areas were identified and assessed. Special emphasis will be placed on the vegetation, the hills, rivers, water sources, grazing areas, wildlife habitat, salt licks and other key ecological features.

1.9.5. Infrastructure and Services Assessment

Existing roads, schools, health facilities, water infrastructure, community facilities, and other public infrastructure were evaluated in terms of their location, condition, accessibility, capacity and future needs. The region with poor access will be noted and will be targeted for future interventions.

1.9.6. Land-Use Planning and Zoning;

The output of a community consultation, socio-economic assessment, environmental assessment and GIS analysis will be combined to define the appropriate land-use zones and development proposals. The zoning will aim to reconcile the following human and environmental interests: human settlement, livestock production, conservation, infrastructure, economic activities and wildlife.

1.9.7. Validation and Consensus Building.

Land-use areas, development approaches and projects will be shared with stakeholders for review and validation. The results of community and institutional feedback will be used to further enrich the plan and foster a sense of consensus.



1.9.8. Implementation, Monitoring and Review

Implementation strategies, priority projects, responsible institutions and monitoring mechanisms will be included in the final plan. The objectives of the plan will be periodically monitored and reviewed to ensure that land-use changes, development of infrastructure, environmental conditions and community priorities continue to support the objectives of the plan.

1.10. Methodology

1.10.1. Overview

The methodology for planning Morupusi Community Land involves a structured approach to data collection, analysis, and stakeholder engagement to ensure informed and sustainable decision-making. The process begins with data collection, which includes field surveys, GIS mapping, remote sensing, and stakeholder consultations. Socio-economic and environmental assessments are conducted to understand community needs, land use patterns, and ecological constraints. The collected data is then analyzed using statistical and spatial analysis tools such as GIS, SPSS, and Excel to identify trends, opportunities, and challenges.

Community participation is integrated through focus group discussions, participatory mapping, and public consultations to incorporate local knowledge and priorities. Finally, findings are synthesized into a comprehensive land use plan, ensuring compliance with legal frameworks and sustainable development principles. This methodology ensures a balanced, inclusive, and data-driven approach to land use planning.

1.10.2. Planning Purpose

Planning is essential for organizing land use, guiding development, and ensuring sustainable growth. It helps prevent disorderly expansion, promotes efficient infrastructure, and supports economic opportunities while protecting the environment. Good planning ensures access to essential services like roads, water, and public spaces while addressing social equity and community needs. It also aligns development with legal policies, reduces land conflicts, and enhances climate resilience.

1.10.3. Planning Objectives

The first step in planning Morupusi Community Land is defining clear objectives that align with local, regional, and national development goals. The primary aims include:

Sustainable Land Use Allocation – Ensuring that land resources are optimally utilized to support residential, commercial, agricultural, and public needs.



Infrastructure and Service Provision – Planning for adequate roads, water supply, sanitation, and social amenities.

Environmental Conservation – Protecting natural resources such as forests, rivers, and wildlife corridors.

Community Livelihood Enhancement – Supporting local economic activities, including, ecotourism, trade, and small enterprises.

1.10.4. Pre-Planning

Pre-planning is the initial stage where Laikipia Conservancies Association, with partnership with County Government of Laikipia and Wyss Academy, organized public participation on the ground level to create awareness, formulation of work schedules and work plans for the preparation of the local physical and land use development plan.

This also included forming a planning team, identifying stakeholders, preparing the work plan, securing financial and technical resources, and establishing the planning schedule. Existing plans, legal requirements, and planning guidelines were reviewed to ensure compliance with national policies and standards.

1.10.5. Visioning and Objective

During this stage, the community and stakeholders developed a shared vision for the community land. The vision reflects the desired future of the locality over the planning period. Specific objectives were then formulated (as seen on the intention to plan gazettelement annexed) to achieve this vision, focusing on sustainable land use, economic growth, environmental conservation, infrastructure development, housing, transportation, and public services.

1.10.6. Reconnaissance survey methodology

A reconnaissance survey was conducted within Morupusi Community Land using a UTM Geo Map to identify, locate, and map both natural and man-made resources. The survey aimed to obtain a general understanding of the area's physical features, land use, and resource distribution before undertaking detailed field mapping and assessment.

The exercise involved traversing the community land, observing and documenting key natural resources such as rivers, streams, caves, cultural shrines, animal corridors, camping sites, forests, grazing areas, viewpoints and water resources. Man-made resources and infrastructure, including roads, footpaths, schools, health facilities, markets, boreholes, dams, bridges, power lines, communication facilities, and settlement areas, were also identified.



Data collected during the reconnaissance survey were recorded on the UTM Geo Map and supported with field notes, GPS coordinates where applicable, and photographs. The information gathered provided a baseline for preparation of a base map.

1.10.7. Preparation Of the Basemap

During the reconnaissance survey of Morupusi Community Land, field observations were conducted to identify and document the distribution, condition, and accessibility of natural and man-made resources. The team traversed different parts of the community land while recording observations using the UTM Geo Map, field notebooks, and photographs.

Natural resources observed included rivers and seasonal streams, forests and woodlands, grazing areas, hills, rocky outcrops, and water sources such as boreholes and dams. The team also noted signs of environmental degradation, including soil erosion, overgrazing and invasive plant species.

Figure 1: UTM Geo-Map Data Collection software

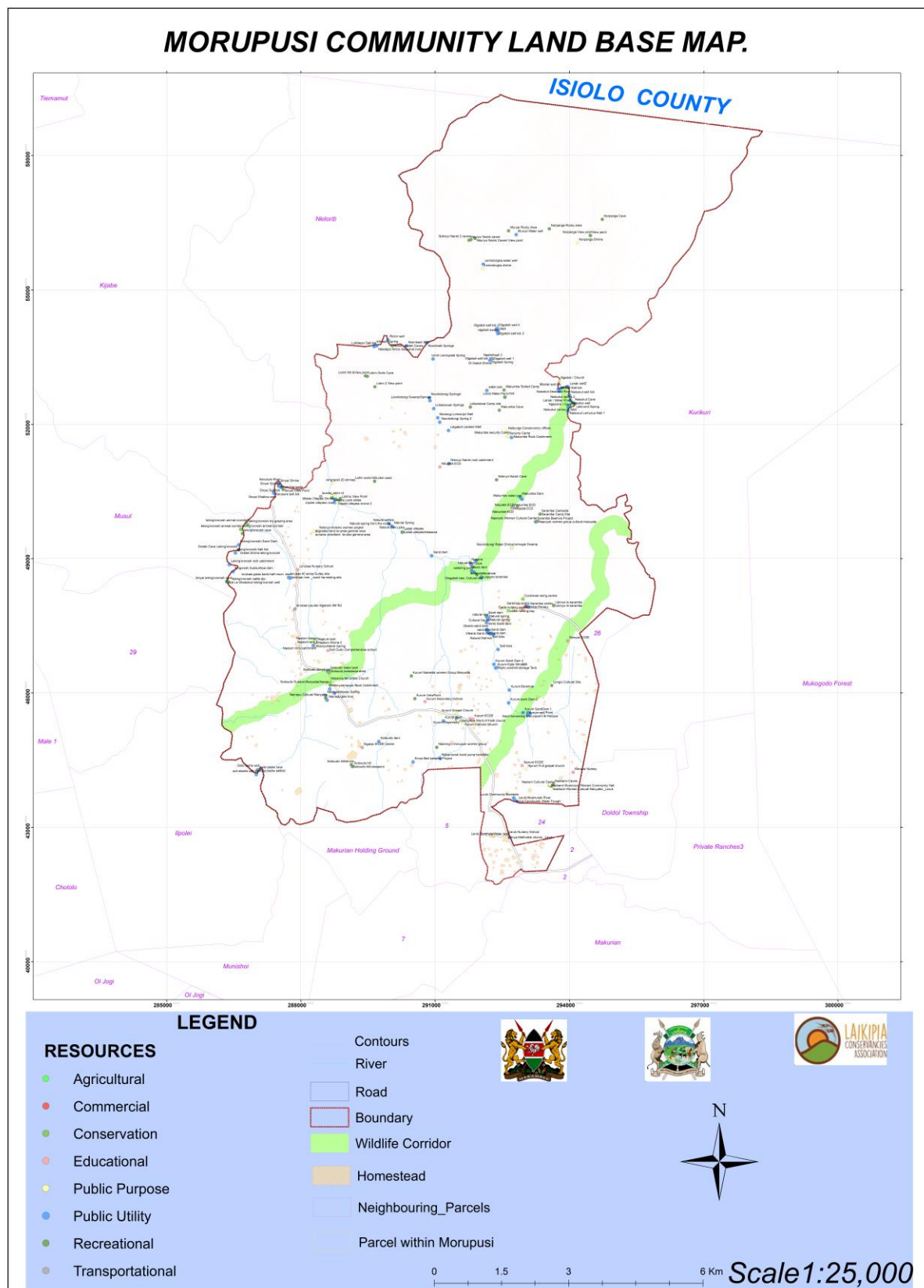


Source: Laikipia County GIS Lab, 2026

GPS data collection was used to capture accurate locations of features in Morupusi Community Land during the reconnaissance survey. Coordinates of resources such as water points, viewpoints, roads, caves, cultural shrines, health facilities, educational facilities, and religious facilities were recorded using handheld GPS and mobile devices. The data was later uploaded into GIS software for mapping and analysis to ensure accuracy.



Map 5: Morupusi Community Land Basemap



Source: Laikipia County GIS Lab, 2026



1.10.8. Photography and Documentation

Photography and documentation were used during the reconnaissance survey of Morupusi Community Land to support field observations and provide visual records of identified natural and man-made resources. Photographs of features such as rivers, vegetation, settlements, and infrastructure were taken. All images and notes were properly labeled, organized, and stored and later used to support report writing.

Plate 1: Morupusi Community Land Landscape



Source: Field Survey, 2026

1.10.9. Methods of Data Collection

The planning of Morupusi Community Land entailed comprehensive data collection to ensure informed decision-making and sustainable land use management. Various methods are employed to gather accurate and relevant data, integrating both qualitative and quantitative approaches.



1.10.10. Primary Data Collection

1.10.10.1. Field Surveys and On-Site Assessments

Field surveys were conducted to physically assess the land, document existing conditions, and gather spatial data on current land use identifying residential, educational, public utilities, conservation, commercial, and public spaces.

Other features are topography and physical features which include resources and other infrastructure that help the community. There was also mapping natural features such as rivers, caves, hills, and forests. Infrastructure services included evaluating the availability of roads, electricity, water, and social amenities.

1.10.10.2. Remote Sensing and GIS Mapping

Advanced geospatial techniques were used to collect and analyze land-related data through satellite imagery to provide high-resolution visuals of land cover and settlement patterns. Remote Sensing analysis was used in mapping and analyzing spatial relationships, extents, zoning, and development trends.

1.10.10.3. Questionnaire Surveys

Structured digital questionnaires through Kobo collect were issued to households, and institutions to collect first-hand information on socio-economic conditions, livelihood activities and their intended future in all aspects. It was essential to collect data on housing typology and needs and infrastructure demands including perceptions of environmental sustainability and land management.

1.10.11. Review of Existing Documents and Policy Frameworks

Analyzing legal and historical records provides a foundation for planning and ensures compliance with regulations. This record includes 1973 & 1976 Registry Index Maps, Community Register and Community Constitution.

Land Ownership Records and Tenure Systems – Reviewing title deeds, land registry data, and customary land tenure arrangements.

Urban and Regional Planning Policies – Ensuring alignment with national and county spatial plan.

Previous Land Use Plans and Development Reports – Assessing past planning initiatives and their impact such as left out conservation area, grazing areas and residential areas.



1.10.12. Statistical Data Analysis Procedures and Tools

The analysis of data collected during the planning of Morupusi Community Land involves systematic statistical methods and tools to ensure accuracy, reliability, and meaningful insights. This chapter outlines the procedures and tools used to analyze qualitative and quantitative data, enabling informed decision-making in land use planning.

1.10.12.1. Statistical Data Analysis Procedures

Community data was collected, reviewed and validated to ensure accuracy and consistency. These include identifying and correcting errors such as duplicate or missing values, standardizing data formats, and removing outliers that could distort analysis results.

A meeting was also held together with the development partners to review the data collected, comment on it and make recommendations.

1.10.12.2. Spatial Data Analysis

Given the geographic nature of the site, spatial statistical methods are used to analyze patterns and trends. Geostatistical techniques were used to study spatial relationships between land uses and environmental factors. Hotspot analysis was essential in identifying areas of high development activity, environmental risks, and human-wildlife conflicts.

1.10.12.3. GIS Software (ArcGIS, QGIS)

The software was used to perform spatial analysis and mapping as well as remote sensing analysis to integrate statistical data with geographic information. These supports land use classification and environmental issues.

1.10.12.3. Data Visualization Techniques

To effectively communicate the findings, various visualization methods were used:

- **Bar and Pie Charts** – Show the distribution of land use categories.
- **Histograms** – Analyze demographic trends and infrastructure access.
- **Maps** – Represent spatial patterns and development intensity.

A combination of statistical methods and GIS tools facilitates a data-driven approach to planning the Morupusi Community Land. These procedures offer insights into current land use trends, socio-economic conditions, and future development needs, allowing planners to make informed, evidence-based decisions.



1.11. Public Participation

1.11.1. 1st Stakeholder Engagement

1.11.11.1. Expertise Inception Engagement Meeting

The inception meeting was held at Jaqanaz Hotel, Nanyuki–Narumoru area, and brought together key government institutions, technical experts, development partners, community stakeholders, and other relevant actors involved in the preparation of the Local Physical and Land Use Development Plan (LPLUDP). The meeting provided an opportunity to introduce the planning process, establish a common understanding of the objectives and scope of the plan, and bring together stakeholders whose mandates, interests, resources, and technical expertise are relevant to physical and land-use planning.

The broad representation at the meeting underscored the **multi-sectoral and participatory nature of the planning process**. The participation of national and county government institutions, local leadership, communities, private-sector actors, environmental agencies, infrastructure providers, and development partners is expected to strengthen coordination and ensure that the plan reflects the diverse development needs, opportunities, environmental considerations, and land-use interests of the planning area.

The meeting further established a basis for continued consultation and collaboration throughout the preparation, validation, approval, and implementation stages of the Local Physical and Land Use Development Plan.

Plate 2: Inception Meeting at Jaqanaz Hotel, Narumoru





Source: Laikipia County Government, 2026

1.11.12. Community Inception Meetings

The first community engagement meeting was held at Naatum Women Cultural Manyatta to initiate the planning process and brief the community on the objectives, their involvement, and expected deliverables for successful preparation of the Local Physical and Land Use Development Plan for Morupusi Community Land. The meeting brought together members of the local community and representatives from neighboring communities including to create awareness and build a common understanding of the planning process.

During the meeting, community members were sensitized on the importance of land-use planning, the purpose and objectives of the proposed plan, and the expected benefits to the Morupusi community. Residents were also briefed on the overall planning process, including the various stages of plan preparation and the importance of their active participation in shaping the future development and land-use structure of the area.

The community participation schedule was presented and explained to the residents, outlining the opportunities and stages at which they would be engaged throughout the planning process.



Emphasis was placed on ensuring that local knowledge, community priorities, concerns, and aspirations are adequately incorporated into the plan.

To ensure broad and inclusive participation, three community participation meetings were held during this phase. The meetings provided an opportunity to engage the wider Morupusi community as well as neighboring stakeholders, thereby ensuring that the planning process captured diverse perspectives and strengthened community ownership of the proposed land-use plan.

1.11.13. Second Stakeholders Participation Meeting at Morupusi Community Land

A strategic consultative meeting was held with members of the Community Land Committee Members to validate the preliminary data collected during the socio-economic and spatial assessments of the Morupusi community land. This meeting served as a crucial participatory platform where community representatives actively engaged in reviewing and verifying the accuracy of the data, ensuring that it reflects the realities and lived experiences on the ground. The session was not only instrumental in building local ownership of the findings but also in strengthening the transparency and legitimacy of the data for future planning and decision-making.

During the validation process, the Community Land Committee members provided invaluable insights that enriched the analysis. Their feedback affirmed the key challenges previously identified; particularly those related to water scarcity, human-wildlife conflict, and degraded infrastructure while also highlighting under recognized strengths and untapped opportunities within the community land.

Plate 3: Community Stakeholder meeting at Kurum Center



Source: Laikipia County Government, 2026



CHAPTER TWO: LEGAL AND POLICY FRAMEWORK

2.1. Policy Framework

2.1.1. Kenya Vision 2030

Kenya Vision 2030 is the country's long-term development blueprint, which seeks to transform Kenya into a newly industrializing, middle-income country providing a high quality of life to its citizens. Its emphasis on environmental sustainability, infrastructure development, and improved livelihoods provides a policy foundation for sustainable land management and orderly settlement development.

The Morupusi Community Land Plan supports these objectives by guiding the allocation and management of land for human settlements, livestock production, wildlife conservation, community facilities, and supporting infrastructure. It seeks to minimize land-use conflicts, protect environmentally sensitive areas, and improve access to essential services while safeguarding natural resources for present and future generations.

2.1.2. Kenya National Spatial Plan, 2015–2045

The Kenya National Spatial Plan provides a long-term framework for coordinating national spatial development, infrastructure investment, natural resource management, and the distribution of economic activities. It seeks to promote integrated, balanced, and sustainable development through coordinated planning across national, regional, county, and local levels.

The Morupusi Community Land Plan translates these broad spatial planning objectives into locally appropriate land-use proposals. It provides for designated residential areas, grazing zones, conservation areas, wildlife corridors, water infrastructure, and community facilities. These proposals seek to optimize land utilization, guide settlement growth, protect ecological systems, and coordinate the provision of infrastructure and services. The plan should remain consistent with applicable national and county spatial planning frameworks.

2.1.3. National Land Use Policy, Sessional Paper No. 1 of 2017

The National Land Use Policy provides a framework for the sustainable, productive, and equitable utilization of land and land-based resources. It addresses land-use conflicts,



environmental conservation, land-use planning, public participation, and coordination between different levels of spatial planning.

The policy is particularly relevant to Morupusi because of the interdependence between pastoral livelihoods, human settlements, and wildlife conservation. The plan applies these principles by designating compatible land uses, protecting grazing areas and wildlife corridors, guiding settlement expansion, and promoting restoration of degraded rangelands. It also provides a basis for resolving competing demands for land through participatory planning and clearly defined zoning and development guidelines.

2.1.4. Laikipia County Spatial Plan, 2023–2033

The Laikipia County Spatial Plan provides a ten-year framework for coordinating land use, infrastructure, economic development, environmental management, and settlement patterns across the county. As documented in the existing Morupusi planning draft, the County Spatial Plan promotes coexistence between human settlements and wildlife by guiding development away from critical wildlife habitats and movement corridors while safeguarding grazing areas.

The Morupusi Community Land Plan should operationalize these county-level objectives through locally defined residential, grazing, conservation, and infrastructure zones. It should also support coordinated management of wildlife corridors, protection of ecological connectivity, reduction of human–wildlife conflict, and sustainable pastoral production. The final zoning proposals should be checked against the approved County Spatial Plan and other applicable county development policies to ensure consistency.

2.1.5. Physical and Land Use Planning Handbook, 2025

The Physical and Land Use Planning Handbook, 2025, issued through the State Department for Lands, provides an important technical reference for physical and land-use planning practice in Kenya. It was developed to standardize planning approaches and provide guidance and standards for decision-making, taking account of the Constitution, the Physical and Land Use Planning Act, the National Land Use Policy, and emerging issues such as climate change and disaster management.

The Handbook should guide the preparation and application of the Morupusi zoning proposals, including the designation of residential, public-purpose, recreational, transportation, grazing,



and conservation areas. Its principles of accessibility, compatibility, conservation, efficiency, resilience, equity, sustainability, health, and safety are relevant to determining the location and intensity of development.

In applying the Handbook, the planning team should use the relevant standards for settlement layouts, plot sizes, access roads, public facilities, building development, environmental buffers, and infrastructure provision, as appropriate to the rural and pastoral context of Morupusi. The specific standards adopted should be identified and justified in the plan, taking account of site conditions, community needs, customary land-use practices, and applicable legal requirements.

The Handbook is a technical planning reference; it should be applied alongside the relevant Acts and regulations rather than treated as a substitute for statutory requirements.

2.2. Legal Framework

2.2.1. Constitution of Kenya, 2010

The Constitution provides the supreme legal foundation for land governance, environmental protection, public participation, and spatial planning in Kenya.

Article 60 establishes the principles of equitable access to land, security of land rights, sustainable and productive management of land resources, transparent and cost-effective land administration, and sound conservation and protection of ecologically sensitive areas. These principles guide the allocation of land for settlements, grazing, conservation, and community infrastructure in Morupusi.

Articles 61 and 62 classify land in Kenya and define public land, while Article 63 provides for community land and recognizes the rights of communities to land held on the basis of ethnicity, culture, or similar community of interest. Community land includes qualifying ancestral lands, community forests, grazing areas, and other land recognized under the Constitution. Unregistered community land is held in trust by county governments on behalf of the relevant communities, subject to the Constitution and applicable legislation.

Article 66 empowers the State to regulate the use of land and interests in land in the public interest, including for land-use planning, public safety, public health, and other constitutionally recognized purposes. This provides the constitutional basis for land-use zoning and development regulation, subject to applicable law and protection of lawful land rights.



Articles 42 and 69 establish environmental rights and State obligations relating to environmental protection and sustainable use of natural resources. Article 70 provides for enforcement of environmental rights. These provisions support the identification and protection of wildlife habitats, water resources, wetlands, riparian areas, and other environmentally sensitive areas within Morupusi.

Article 10 establishes national values and principles of governance, including public participation, inclusiveness, transparency, and accountability. These principles are relevant to consultation on proposed zoning, settlement arrangements, conservation measures, and decisions affecting community land rights.

Article 174 and the Fourth Schedule provide the broader framework for devolved government and county functions, including county planning and development. The plan should therefore be prepared and implemented through the appropriate county planning authority, with meaningful participation by the community and coordination with relevant national agencies.

2.2.2. Community Land Act, No. 27 of 2016

The Community Land Act gives effect to Article 63 of the Constitution and provides for the recognition, protection, registration, management, and administration of community land. It establishes the legal framework within which community land rights and interests are recognized and community land is managed.

The Act is central to the preparation of the Morupusi Community Land Plan because the proposed zoning affects communal grazing areas, residential settlements, conservation areas, wildlife corridors, and land reserved for community facilities.

The plan should be implemented in a manner that respects the community's legally recognized tenure and decision-making structures. The relevant community institutions should participate in determining land-use priorities, managing communal and reserve land, and overseeing implementation of the plan in accordance with the Act.

The designation of land for residential use, grazing, conservation, or public purposes should not, by itself, be interpreted as transferring ownership or extinguishing existing rights. Any allocation, change in use, lease, investment, or other transaction affecting community land must



follow the applicable statutory procedures and the community's lawful decision-making arrangements.

The planning process should also consider customary land-use practices, pastoral mobility, communal access to water and grazing, and the interests of vulnerable community members. These safeguards are particularly important where conservation zoning, wildlife corridors, or infrastructure proposals may affect existing land uses.

2.2.3. Physical and Land Use Planning Act, No. 13 of 2019

The Physical and Land Use Planning Act, 2019, is the principal statute governing physical and land-use planning in Kenya. It establishes the framework for the preparation, approval, publication, implementation, and revision of physical and land-use development plans.

Sections 45–51 address local physical and land-use development plans, including their purpose, preparation, contents, public notification, approval, publication, and amendment or revision. Section 46 identifies purposes that include zoning, coordinating infrastructure development, regulating land use and development, and providing a framework for coordinating sectoral agencies. Section 48 provides for the inclusion of survey reports and GIS-based maps and descriptions to show proposed land uses.

For Morupusi, the Act provides the statutory foundation for translating the situational analysis into a spatial plan with mapped land-use zones and associated development guidelines. The plan should identify the permitted and restricted uses of each zone, establish development parameters, protect infrastructure reserves, and guide decisions on settlement expansion and land-use change.

The plan must also follow the applicable procedures for public participation, consideration of representations and objections, statutory approval, publication, and subsequent amendment or revision. These procedures are important for ensuring transparency, legal compliance, and community ownership of the final plan.



2.2.4. Physical and Land Use Planning Regulations, 2021

The regulations made under the Physical and Land Use Planning Act provide more detailed procedures for plan preparation, institutional responsibilities, development permission, and development control.

The relevant instruments include:

- Physical and Land Use Planning (Local Physical and Land Use Development Plan) Regulations, 2021, which guide the preparation and processing of local plans.
- Physical and Land Use Planning (Development Permission and Control) (General) Regulations, 2021, which provide the framework for development permission and control.
- Physical and Land Use Planning (Institutions) Regulations, 2021, which address planning institutions and their functions.
- Physical and Land Use Planning (Liaison Committees) Regulations, 2021, which relate to planning liaison committees and applicable dispute and appeal procedures.
- Physical and Land Use Planning (Planning Fees) Regulations, 2021, which address prescribed planning fees.

For Morupusi, the regulations should inform the plan's preparation and approval process and subsequent implementation. Development proposals should be assessed against the approved zoning, relevant development standards, environmental requirements, and applicable permission procedures. The zoning plan should also provide sufficient clarity for the county planning authority to assess proposals that may affect settlements, grazing areas, conservation zones, and public infrastructure.

2.2.5. Land Act, No. 6 of 2012

The Land Act provides for the administration and management of public and private land and includes provisions relevant to community land and land-based resources. It supports the sustainable administration and management of land within the broader framework established by the Constitution and other land legislation.

In Morupusi, the Act is relevant to the lawful administration and use of land, protection of land rights, and consideration of land-based investments and infrastructure proposals. Its provisions



should be read together with the Community Land Act when dealing with community land, and with the Physical and Land Use Planning Act when regulating the spatial use and development of land.

The plan's proposals should respect existing lawful rights and applicable procedures for any acquisition, reservation, easement, lease, or other land transaction required for implementation.

2.2.6. Land Registration Act, No. 3 of 2012

The Land Registration Act provides the framework for registration of interests in land and maintenance of land registers. It includes provisions relevant to cadastral information and the community land register.

The Act is relevant to establishing the spatial and tenure information needed to support the Morupusi plan. The preparation and implementation process should use available cadastral maps, verified boundaries, and other authoritative land records to ensure that proposed zoning corresponds to the correct community land extent and recognized land interests.

Where necessary, the plan's GIS database should be coordinated with relevant land registration and survey records. The zoning plan should not be treated as a substitute for legal registration, adjudication, survey, or determination of disputed land rights.

2.2.7. County Governments Act, No. 17 of 2012

The County Governments Act provides a framework for county planning, integrated development, public participation, and coordination between national and county development priorities. Section 110 provides for county spatial plans as GIS-based frameworks forming part of county integrated development planning. The Act also provides for public participation and coordination of county development activities.

The Morupusi Community Land Plan should therefore be consistent with applicable county planning instruments, including the Laikipia County Spatial Plan and relevant County Integrated Development Plan priorities. Its proposals should also be coordinated with county programmes relating to roads, water, livestock production, health, education, environmental management, and community development.



2.2.8. National Land Commission Act, No. 5 of 2012

The National Land Commission Act establishes the National Land Commission and provides the legislative framework for carrying out its constitutional functions relating to land administration and management.

The Commission's involvement in the Morupusi planning process should be understood within its statutory mandate and the specific role assigned to it in the relevant planning and land governance procedures. Coordination with the Commission and other responsible institutions may be necessary where proposals affect public land, land administration, historical land issues, or other matters falling within their respective mandates.

The plan should not assume that the Commission replaces the county planning authority or community institutions in functions assigned to them by law.

2.2.9. Environmental Management and Co-ordination Act, No. 8 of 1999

The Environmental Management and Co-ordination Act (EMCA) establishes the principal statutory framework for environmental management in Kenya and provides for environmental assessment, monitoring, conservation, and enforcement mechanisms. The National Environment Management Authority (NEMA) is the principal government institution responsible for coordinating environmental management under the Act.

EMCA is relevant to Morupusi because the proposed plan includes conservation areas, wildlife corridors, settlement zones, grazing land, water infrastructure, and other uses that may affect environmental quality. Environmental considerations should be integrated into the plan through identification of sensitive areas, protection of water resources, sustainable waste management, control of erosion, and measures to prevent habitat degradation.

Where required under applicable law, the relevant strategic environmental assessment, environmental impact assessment, environmental audit, or other approval procedures should be undertaken before implementation of the relevant plans, programmes, or projects. Approval of the land-use plan should not be interpreted as automatically granting all subsequent environmental approvals.



2.2.10. Wildlife Conservation and Management Act, No. 47 of 2013

The Wildlife Conservation and Management Act provides the statutory framework for wildlife conservation and management in Kenya. It is relevant to wildlife habitats, dispersal areas, migratory routes, and the coexistence of wildlife and human activities, including on community land.

The Morupusi plan should apply the Act by identifying and safeguarding conservation areas and wildlife corridors, guiding settlement growth away from sensitive wildlife habitats, and coordinating grazing and water infrastructure with wildlife movement. The plan should also promote measures to reduce human–wildlife conflict and support community participation in conservation management.

Any proposed fencing, tourism development, habitat restoration, or other intervention affecting wildlife should be assessed against applicable wildlife legislation and relevant approvals. Fencing should be planned carefully to avoid obstructing critical wildlife movement or creating additional conflict hotspots.

2.2.11. Forest Conservation and Management Act, No. 34 of 2016

The Forest Conservation and Management Act provides for the development, conservation, sustainable management, and rational utilization of forest resources.

The Act is relevant where Morupusi's conservation and restoration proposals involve forest resources, woody vegetation, or areas subject to applicable forest protection requirements. The plan should promote restoration using ecologically appropriate species, protection of existing vegetation, and measures to prevent degradation of forested or wooded areas.

Any activities affecting legally protected forests or forest resources should comply with the relevant authorization and management requirements. Reseeding, woodland restoration, and other interventions should be informed by ecological suitability rather than applied uniformly across all land types.



2.2.12. Climate Change Act, No. 11 of 2016, as amended in 2023

The Climate Change Act provides the framework for climate change governance, mainstreaming climate action into planning and budgeting, and promoting climate resilience and low-carbon development. The Climate Change (Amendment) Act, 2023, introduced provisions relating to carbon markets and carbon projects. The Act is relevant to Morupusi's proposals for rangeland restoration, sustainable grazing, woodland conservation, water security, and climate-resilient livelihoods. These interventions can contribute to adaptation and resilience while supporting ecosystem health.

The community may explore eligible carbon-credit initiatives as a potential source of finance for restoration and conservation. However, any carbon project must comply with the applicable carbon-market requirements, including relevant approvals, project documentation, monitoring, reporting, verification, and benefit-sharing arrangements. The land-use plan itself does not establish carbon-credit eligibility or guarantee revenue.

Green bonds may also be explored as a potential financing mechanism for eligible environmental infrastructure and restoration projects. Their feasibility, repayment obligations, eligible uses, and governance arrangements should be separately assessed; they should not be treated as a direct requirement of the Climate Change Act.

2.2.13. Water Act, No. 43 of 2016

The Water Act provides the legal framework for water resources management and water services in Kenya. It is relevant to the proposed water points, dams, livestock watering facilities, and other water-related infrastructure within Morupusi.

Water infrastructure should be planned with due regard to water availability, catchment protection, water quality, applicable permits, and the responsibilities of relevant water institutions. The plan should also protect water sources from contamination by livestock, sanitation facilities, and waste-disposal activities.

Where dams or other water projects are proposed, technical assessments and applicable regulatory approvals should be obtained before implementation. Their locations should be coordinated with settlement, grazing, and wildlife conservation zones to promote equitable access and reduce environmental impacts.



2.2.14. Public Health Act, Cap. 242

The Public Health Act provides a legal basis for addressing conditions that may affect public health, including sanitation, waste management, and environmental health hazards.

The Act is relevant to Morupusi's proposed settlements, schools, dispensaries, recreational facilities, livestock infrastructure, and community centres. Development proposals should provide for safe sanitation, suitable waste disposal, drainage, and measures to prevent contamination of water sources and the spread of disease.

The plan should promote appropriate separation and management of domestic water sources, livestock facilities, waste-disposal areas, and other uses that may pose public health risks.

2.2.15. Physical Planners Registration Act, No. 3 of 1996

The Physical Planners Registration Act provides for the registration and regulation of physical planners in Kenya. It is relevant to ensuring that planning work is undertaken by appropriately qualified and registered professionals in accordance with the law.

Preparation, finalization, and certification of the Morupusi Community Land Plan should follow the applicable professional requirements. The plan's maps, zoning proposals, development guidelines, and supporting technical reports should be prepared and reviewed through the appropriate professional and institutional processes.



CHAPTER THREE: SITUATIONAL ANALYSIS

3.0. Overview

The chapter comprises a situational analysis from field data collection, community engagement, and stakeholder concerns in Morupusi Community Land. The chapter entails population and demographic characteristics, site analysis, physical and social infrastructure, and existing environmental issues and conservation practices. The analysis provides a grounded understanding of the current context, which is essential for identifying planning priorities and guiding sustainable land use interventions.

3.1. Physiographic Dynamics

3.1.1. Hill Shade Analysis

The Morupusi Community Land hill shade map provides a three-dimensional representation of the terrain by simulating the effect of sunlight and shadows across the landscape. The dark and light areas indicate variations in terrain orientation and steepness, with strongly contrasting areas generally representing more rugged or steep terrain. The map shows that Morupusi has a varied and relatively rugged terrain, with numerous ridges, valleys and undulating surfaces distributed across the community land.

3.1.2. Elevation Analysis

Elevation map visualizes terrain height, ranging from a low of **1,169 meters** (red/yellow zones in the north) to a high of **1,169–1,940 meters** (blue zones spanning the central and southern regions). The community land is dominated by an elevated plateau or mountainous ridge system that slopes sharply downward toward the northern boundary.

The hill shade map models sunlight and shadows across the terrain to highlight its 3D texture. The stark contrast between bright whites and deep blacks reveals an extremely fractured landscape cut by deep valleys, steep ridges, and heavy soil drainage channels running down the mountain flanks.

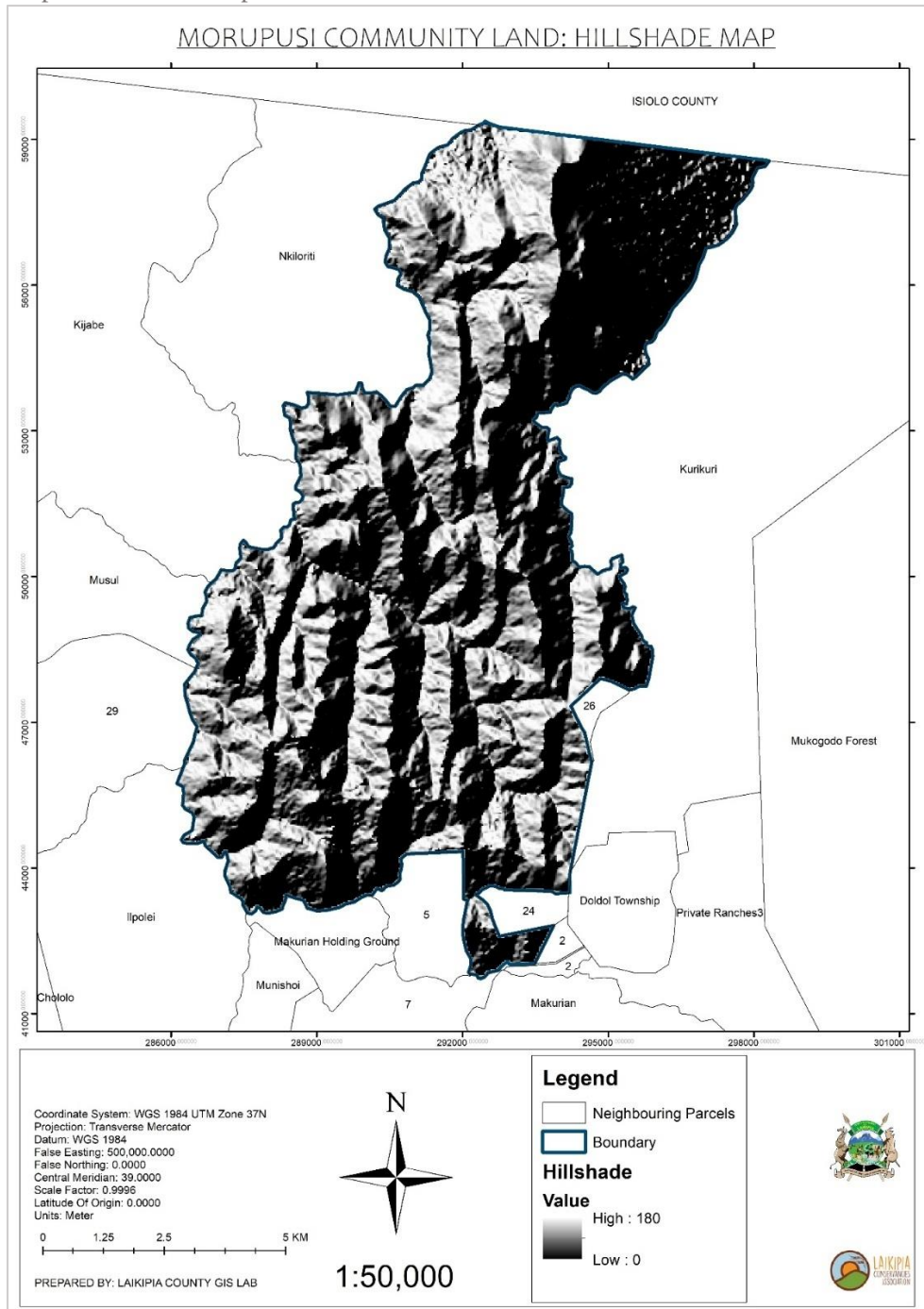
3.1.2.1. Emerging Issues and Planning Implications

- **High Soil Erosion Risks:** The combination of steep hillsides (Hill shade) and high elevation drops (Elevation) means heavy rains will cause severe down-slope soil erosion and landslides if vegetation cover is lost.
- **Water Catchment Infrastructure:** Terracing, check-dams, and contour bunds must be engineered along the deep valley networks shown on the Hill shade map to slow down water runoff and recharge local groundwater tables.



- **Lowland Flood Management:** Infrastructure planning in the lower-elevation northern sector (red/yellow zone) must account for flash floods, as rainwater from the high southern blue plateaus will rapidly drain directly into these lowlands.
- **Zoning and Accessibility Constraints:** The central rugged terrain is too steep for stable building or road construction; development should be restricted to the flatter, lower valley bases or gentler plateaus.

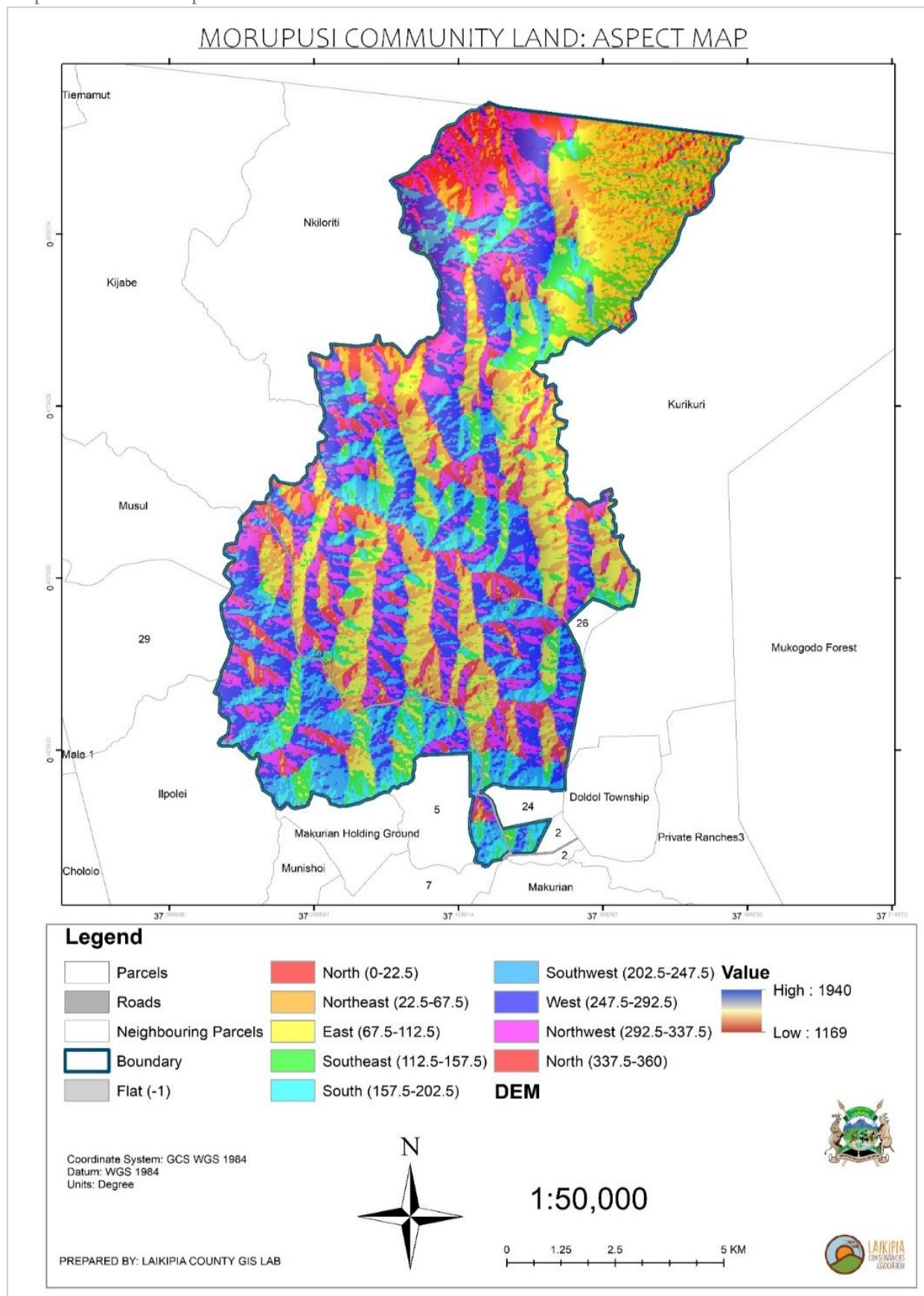
Map 6: Hillshade Map



Source: Laikipia County GIS Lab, 2026



Map 7: Elevation Map



Source: Laikipia County GIS Lab, 2026



3.1.3. Geology and Soils

3.1.3.1. Soil & Lithology

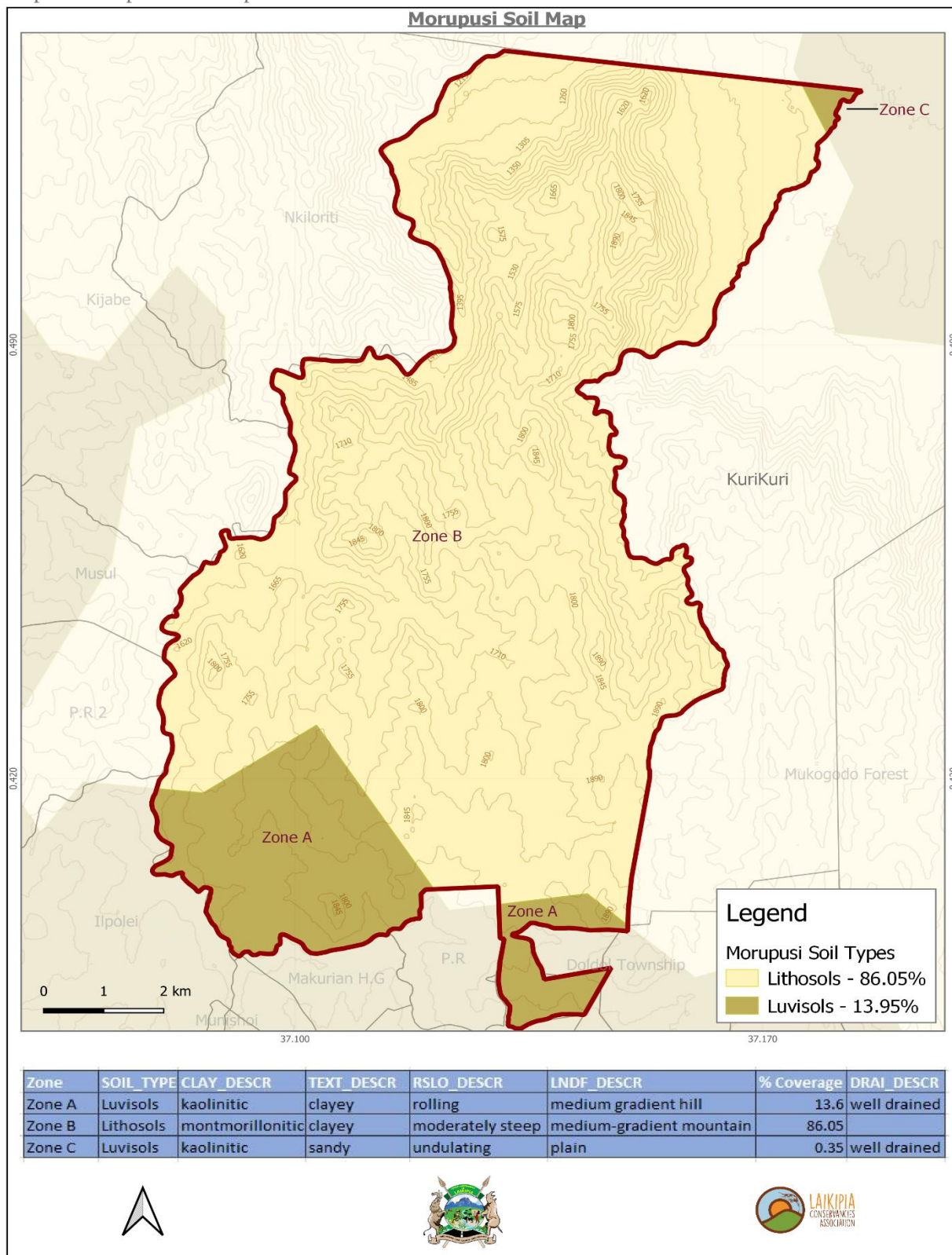
Morupusi landscape, mainly the extensive hilly middle section (**Zone B**) is dominated by Lithosol soils with a clayey texture as shown in the figure below. This type of soil emanates from fragmentation of weathered basic rocks. A combination of windy conditions and heavily undulating or steep surfaces provides a platform for erosion of weakened stone fragments; hence the loose stony soil feel and shallow soil depth. The zone is extensively mountainous with several rocky outcrops and rocky hillsides. This soil type characteristically swells when wet and cracks in dry conditions. The constituent montmorillonite clay mineral composition with a 2:1 phyllosilicate structure, meaning an octahedral sheet formed between two silica tetrahedral sheets, results in a higher retention capacity. Therefore, the moisture and nutrient content i.e. calcium, magnesium and potassium are relatively higher than surrounding types in the study area. However, this type is unsuitable for traditional farming since roots cannot grow deep and unpredictable seasonal soil volumes.

The southern stretch of the study area where there's little to no undulations in the landscape is covered in Luvisol soil. This type is predominant in high soil deposition zones most common in relatively flat areas, in this case, along a Lagga running eastward along the Southern demarcation. The area is well known for sand harvesting, with the lower sections (**Zone A**) having clayey silt deposits while the Northern Luvisol enclave (**Zone C**) is engulfed in sandy deposit. The soil type is consistent of mineral kaolinite clay which is characterized by well drained texture hence poor nutrient and moisture content which is common in top soil eroded from sloppy higher grounds. However, the subsoil is relatively fertile from leaching minerals from newly deposited layers from hillside erosion, with the nutrient level heavily dependent on the composition of the weathered rock soil uphill. Consequently, kaolinite Luvisol offers stable physical workability and low shrink-swell dynamics which makes them predictable soils for agricultural management and construction.

A Lithology analysis of the study area reveals Pallidum rich rocks within the Lithosol soil dominated areas while Quaternary (Alluvium/Colluvium) deposits which may be characterized by unconsolidated sand, silt, gravel, clay or loose rock deposited by modern or recent river systems around the Luvisol dominant spaces.



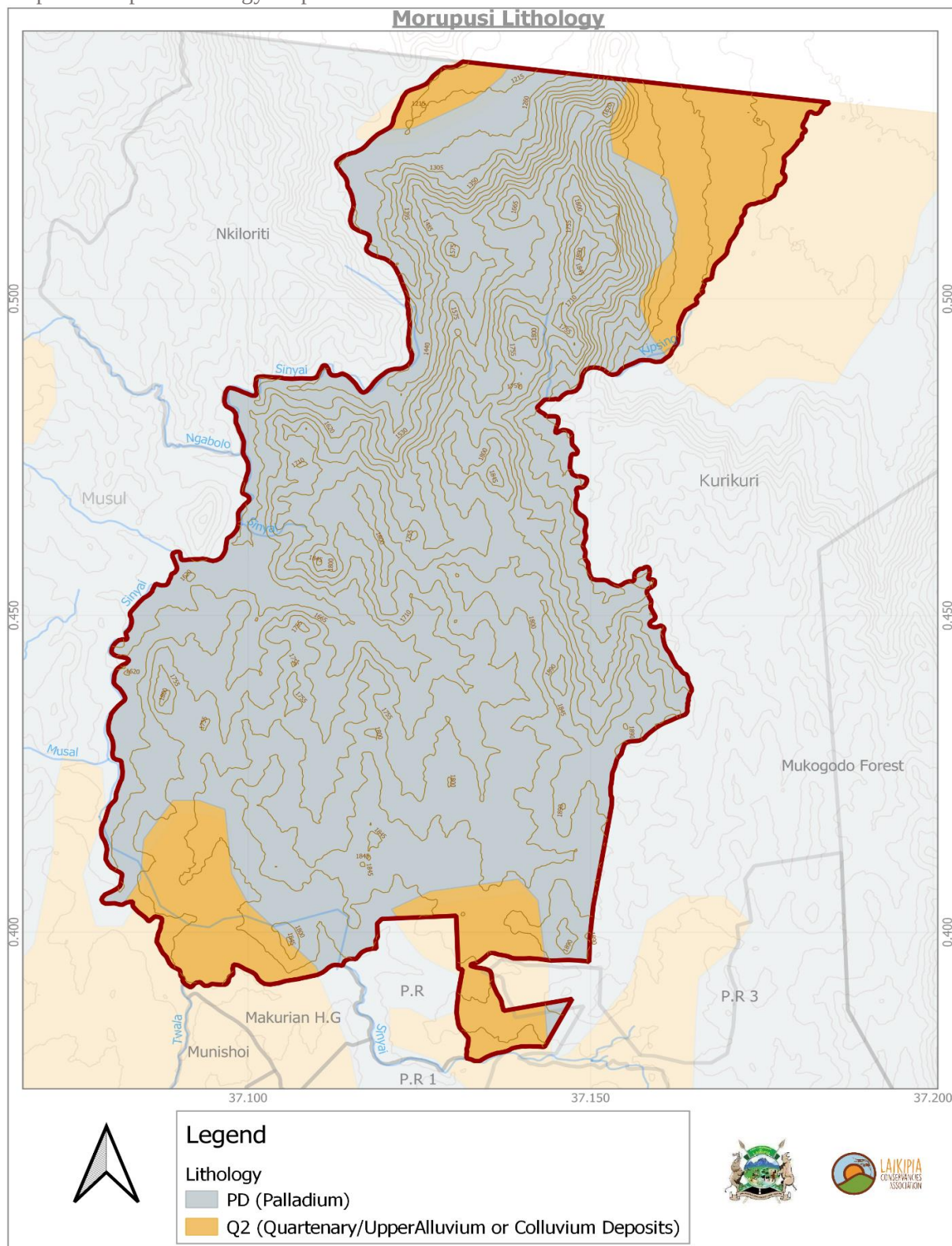
Map 8: Morupusi Soil Map



Source: Laikipia GIS Lab, 2026



Map 9: Morupusi Lithology Map



Source: Laikipia County GIS Lab, 2026

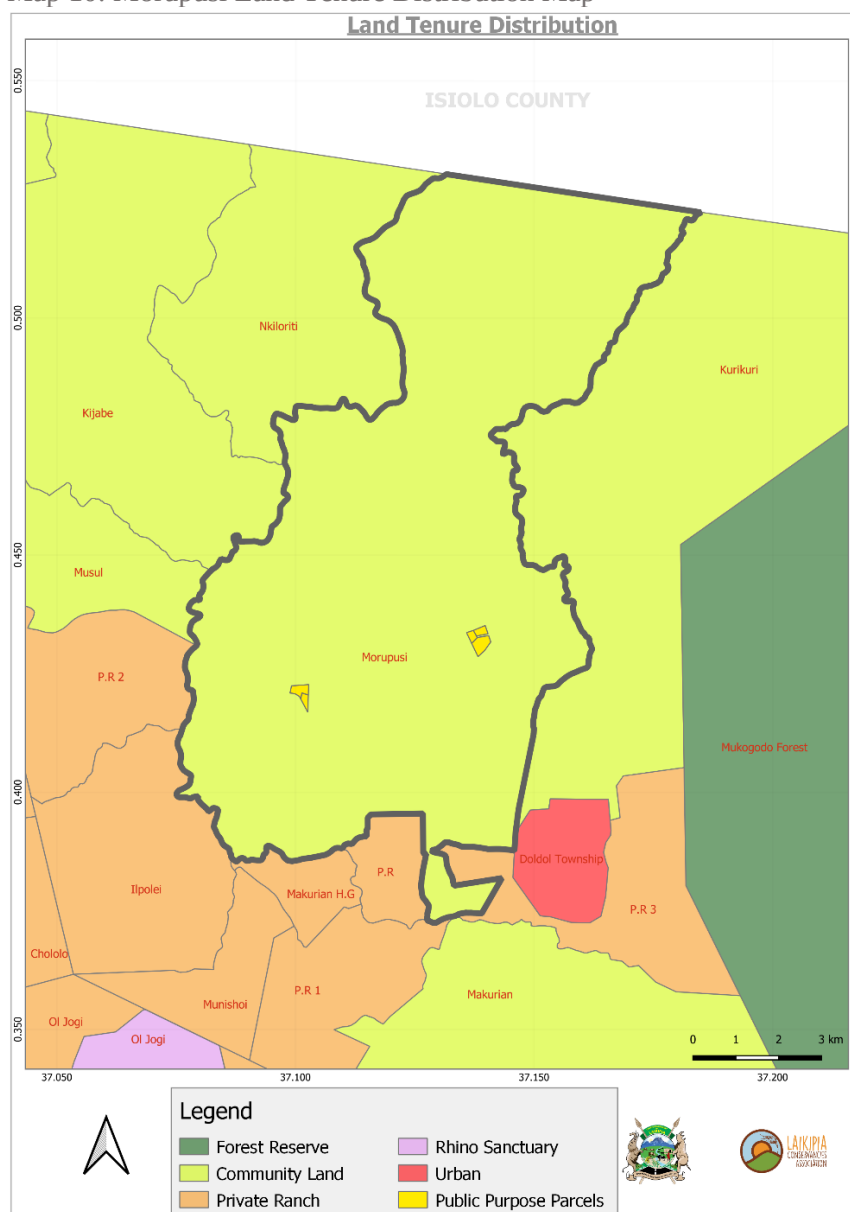
3.1.4. Land Tenure

Morupusi Community Land is mainly community-owned land, as shown by the large green area in the middle of the map. The land belongs to the Morupusi community collectively and is



used for important activities such as livestock keeping, grazing, settlement, and conservation. This means that decisions about how the land is used are generally made for the benefit of the community rather than by individual landowners. Morupusi is also connected to neighboring community lands, making it part of a wider pastoral landscape where people and livestock depend heavily on the available land and natural resources. The land sits within a landscape where community land, private ranches, conservation areas, forest and urban development all meet. This makes good cooperation between communities, private landowners and conservation authorities important for managing land and natural resources sustainably as shown in the map below;

Map 10: Morupusi Land Tenure Distribution Map



Source: Laikipia GIS Lab, 2026



3.1.4.1. Land Availability in Morupusi Community Land

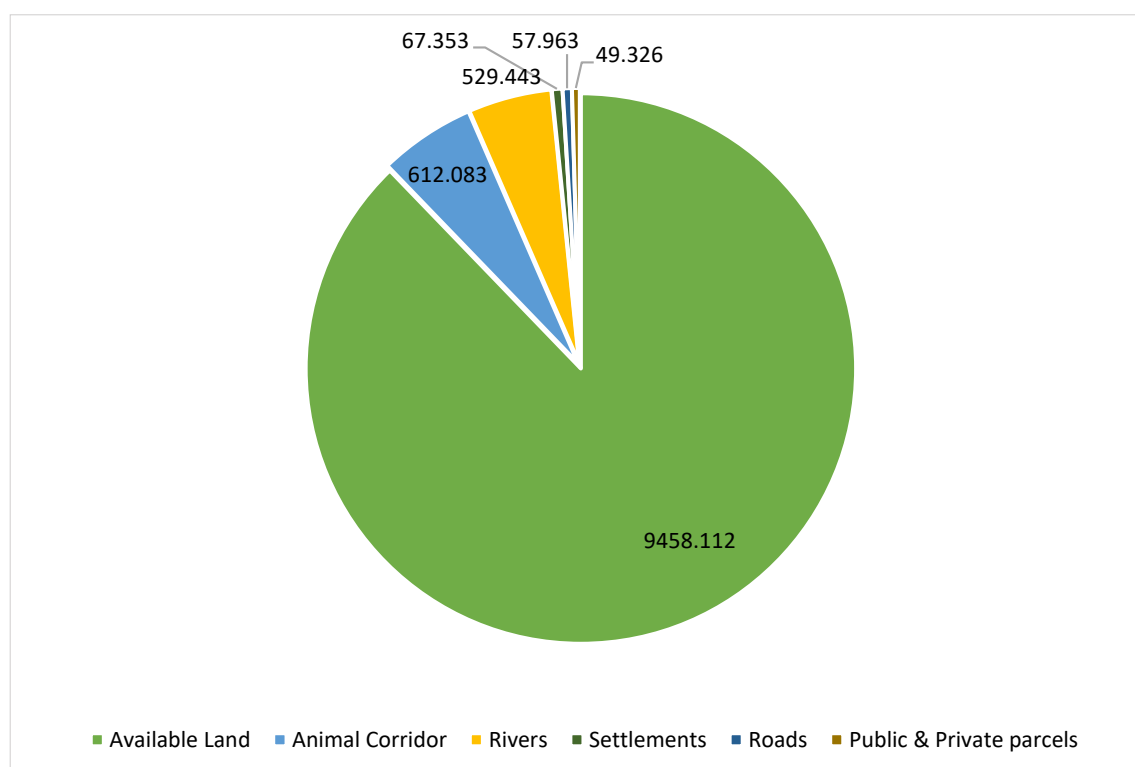
Morupusi Community Land covers a total of **10,774.281 hectares**. Out of this, **1,316.168 hectares** is already taken up by areas such as settlements, roads, rivers, the animal corridor, and public and private parcels. This leaves about **9,458.112 hectares**, or roughly **87.8% of the total land**, still available for future use. This is a good opportunity for the community to support livelihoods and plan for future development.

The available land can be used to support **livestock grazing, settlements, businesses, infrastructure, conservation and other suitable activities**. However, the land needs to be carefully planned to avoid conflicts and problems such as overgrazing, land degradation and encroachment in important areas.

The **animal corridors and rivers** are particularly important and should be protected because they support wildlife, livestock and the environment.

Overall, Morupusi has a **large amount of land available for future development**. Good land-use planning will be important to make sure the land is used wisely and continues to benefit the community in the long term.

Chart 1 Land Availability Chart



Source: Laikipia County Government, 2026

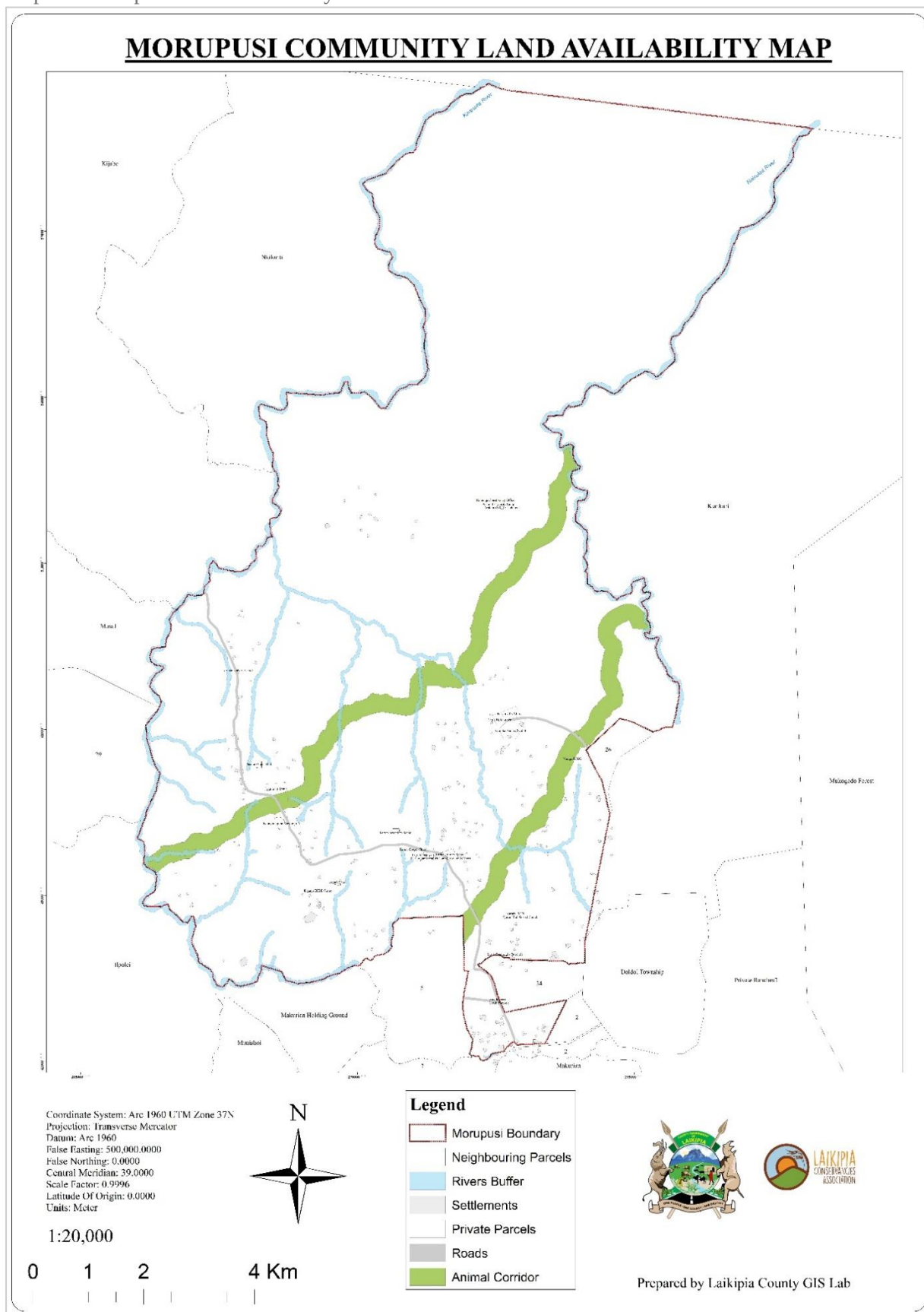


Table 1 Land Availability

Total Area	Use	Area (Ha)
10774.28	Available Land	9458.112
	Animal Corridor	612.083
	Rivers	529.443
	Settlements	67.353
	Roads	57.963
	Public & Private parcels	49.326
	Total	10774.28



Map 11: Morupusi Land Availability



Source: Laikipia County GIS Lab, 2026

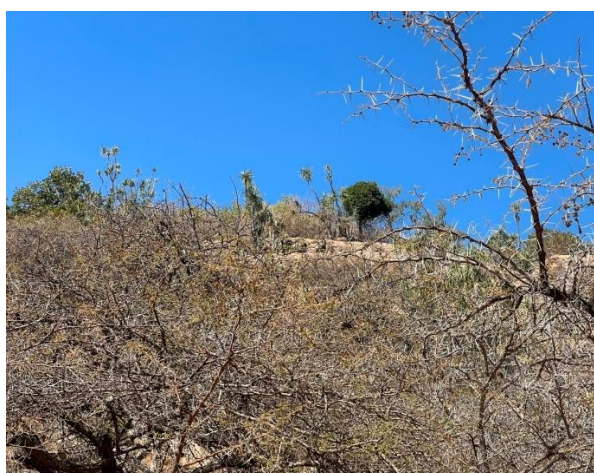
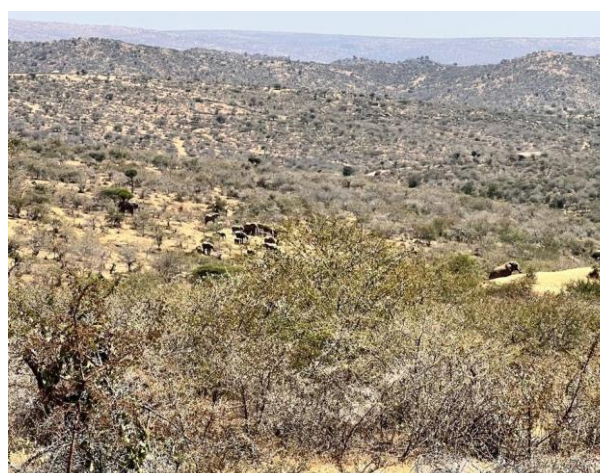


3.1.5. Vegetation Cover

The vegetation cover visible in the Morupusi Community Land is characteristic of a dry, semi-arid environment. The area is dominated by dense, woody thorny shrubs and small trees, many of which have degenerated, indicating dry-season conditions and inadequate soil moisture. Scattered taller trees and succulent or drought-tolerant plants occur on the slightly elevated ground.

The vegetation is generally low to moderately tall and structurally dense, with a thick layer of interwoven thorny branches in the foreground. Herbaceous cover, particularly grasses, appears relatively sparse, suggesting that grazing pressure, prolonged drought, or both may influence the vegetation. The presence of drought-adapted plants and thorny woody species indicates vegetation that is well suited to hot and water-limited conditions. Below is a photograph showing vegetation cover;

Plate 4: Morupusi Vegetation Cover



Source: Field Survey, 2026

3.1.6. Emerging Issues and Planning Implications

- **Need for settlement planning:** The moderate, stable and less steep areas can be planned for settlement.
- **Tourism:** caves, viewpoints and salt licks are scenic view for tourist attraction.
- **Insufficient Roads and infrastructure:** Most parts of the community land are inaccessible.
- **Water and drainage:** preserve natural water drainage and manage water through valleys.
- **Grazing management:** Allow removal of forage from available areas but limit grazing on steep terrain, to minimize erosion.



- **Soil erosion:** Gulley erosion is evident in the community land. Dry season and uncontrolled grazing have resulted to bare land with sparsely placed grass. The bare land is prone to erosion.
- **Environmental conservation:** The rugged, sensitive areas should be conserved for tourism and preserve links with adjacent natural areas.
- **Land-use zoning:** Zoning land based on suitability for settlement, grazing, conservation, infrastructure and water management.
- **Disaster-risk management:** there is need to prevent settlement in areas that are prone to concentrated runoff/ Landslides.

3.2. Climatic Conditions

3.2.1. Land Surface Temperature (LST) Analysis

The land surface temperature analysis shows an overall increase in surface temperatures within Morupusi Community Land between 2014 and 2026. The temperature range increased from 61.85–72.81°C in 2014, to 63.78–75.64°C in 2020, and 73.63–85.51°C in 2026. Higher temperatures are mainly concentrated in the northern and eastern sections, while relatively cooler areas occur mainly in the central and western parts.

The increase in land surface temperature indicates reduced vegetation cover, exposed soils, land degradation, reduced surface moisture and increasing climatic stress.

3.2.1.1. Emerging Issues and Planning Implications

- **Water resources:** Increase provision of boreholes, water pans, wells and other water-harvesting infrastructure in heat- and drought-prone areas.
- **Vegetation conservation:** Protect cooler, well-vegetated areas as important ecological and grazing resources to prevent land degradation.
- **Drought resilience:** Incorporate high-LST (Land Surface Temperature) areas into drought-risk planning and climate adaptation measures to ensure that the regions can be habitable for animals and human settlement.
- **Sustainable land use:** Integrate LST (Land Surface Temperature) with land-cover, water, slope and settlement analyses to guide appropriate zoning and resource management.

The increasing LST (Land Surface Temperature) highlights the need for climate-resilient rangeland management, water security and environmental conservation within Morupusi Community Land.

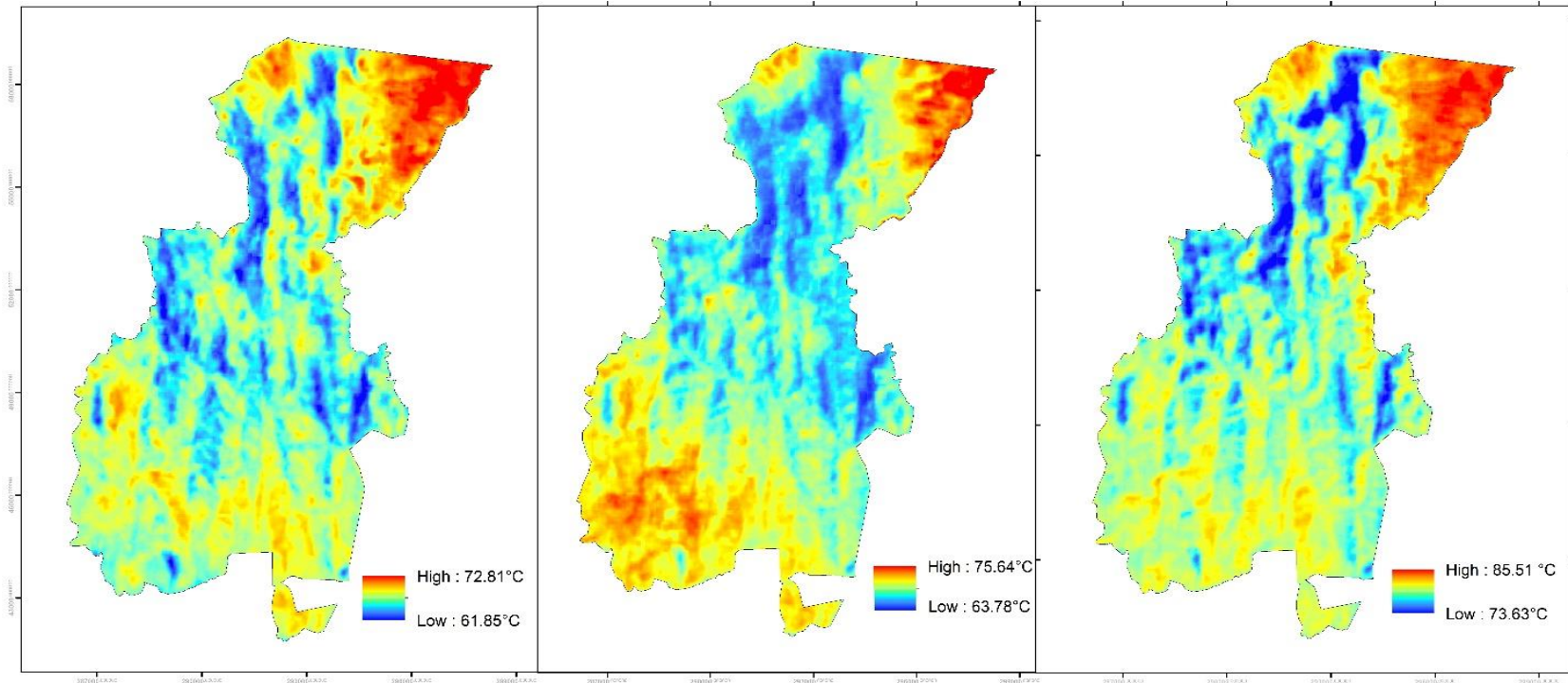


MORUPUSI COMMUNITY LAND: LAND SURFACE TEMPERATURE ANALYSIS

2014

2020

2026



Coordinate System: WGS 1984 UTM Zone 37N
Projection: Transverse Mercator
Datum: WGS 1984
False Easting: 500,000.0000
False Northing: 0.0000
Central Meridian: 39.0000
Scale Factor: 0.9996
Latitude Of Origin: 0.0000
Units: Meter



1:100,000

0 3.25 6.5 13 Kilometers

PREPARED BY: LAIKIPIA COUNTY GIS LAB



Map 12 Morupusi Land Surface Temperature Analysis

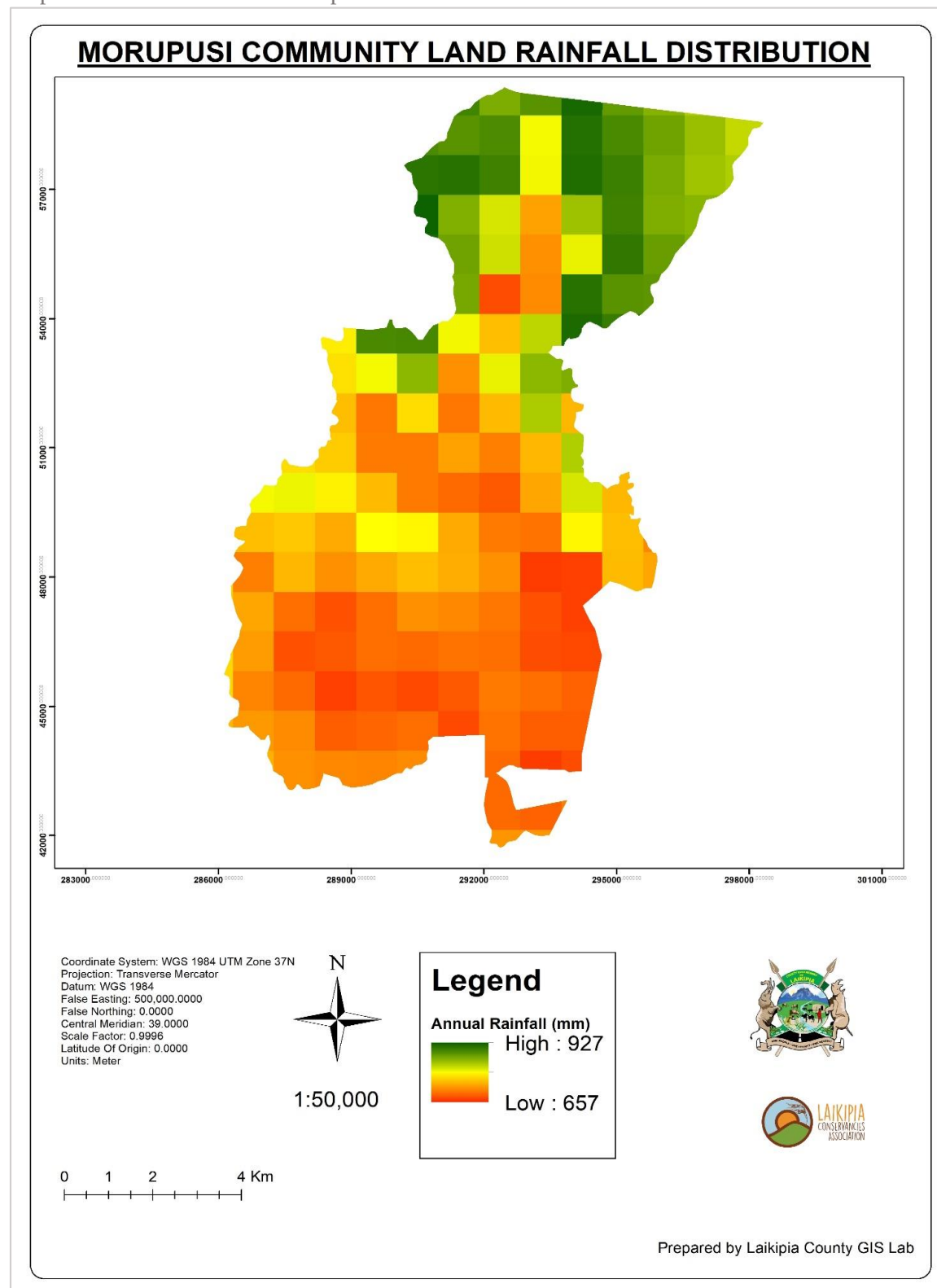


3.2.2. Rainfall Distribution

The map below shows that Morupusi Community receives relatively low to moderate annual rainfall, ranging from about 657 mm to 927 mm. Higher rainfall (green areas) is mainly concentrated in the northern and northeastern parts (Kipsing) of the community, reaching about 927 mm per year. Lower rainfall (yellow, orange and red areas) occurs mainly toward the central (Lorubae, Soit Oudo) and southern parts (Kurum), with values close to 657 mm per year. Overall, the map indicates a gradual spatial variation in rainfall, rather than an even distribution. This variation can influence water availability, crop production, pasture conditions, and livestock management. This pattern is consistent with the wider Laikipia region, where rainfall varies considerably with altitude and relief, with wetter areas generally associated with higher elevations.



Map 13: Rainfall Distribution Map



Source: Laikipia County GIS Lab, 2026

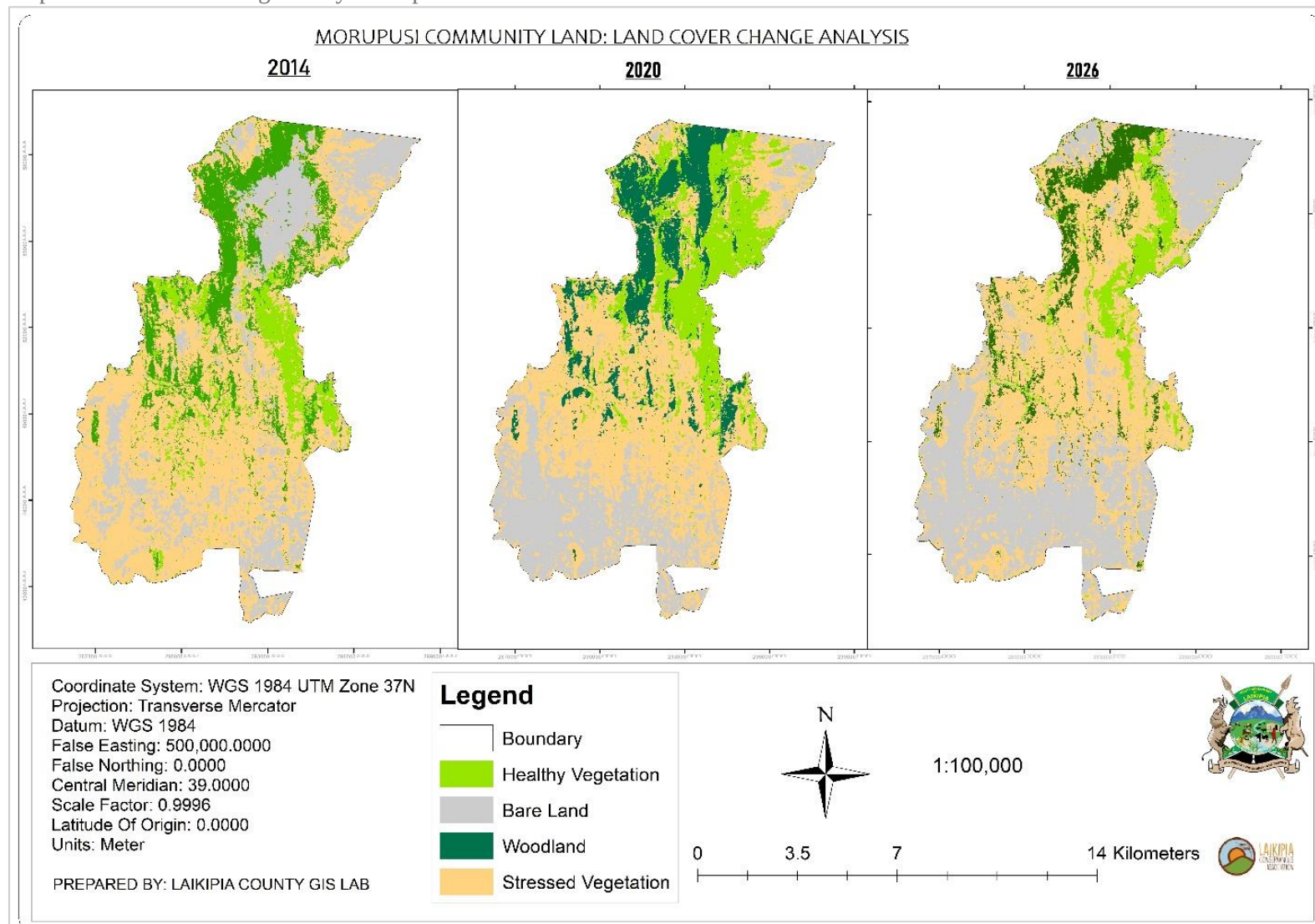


3.2.3. Land Cover Change Analysis

Vegetation cover in Morupusi has been deteriorating over the years, subsequently being replaced by bare land.



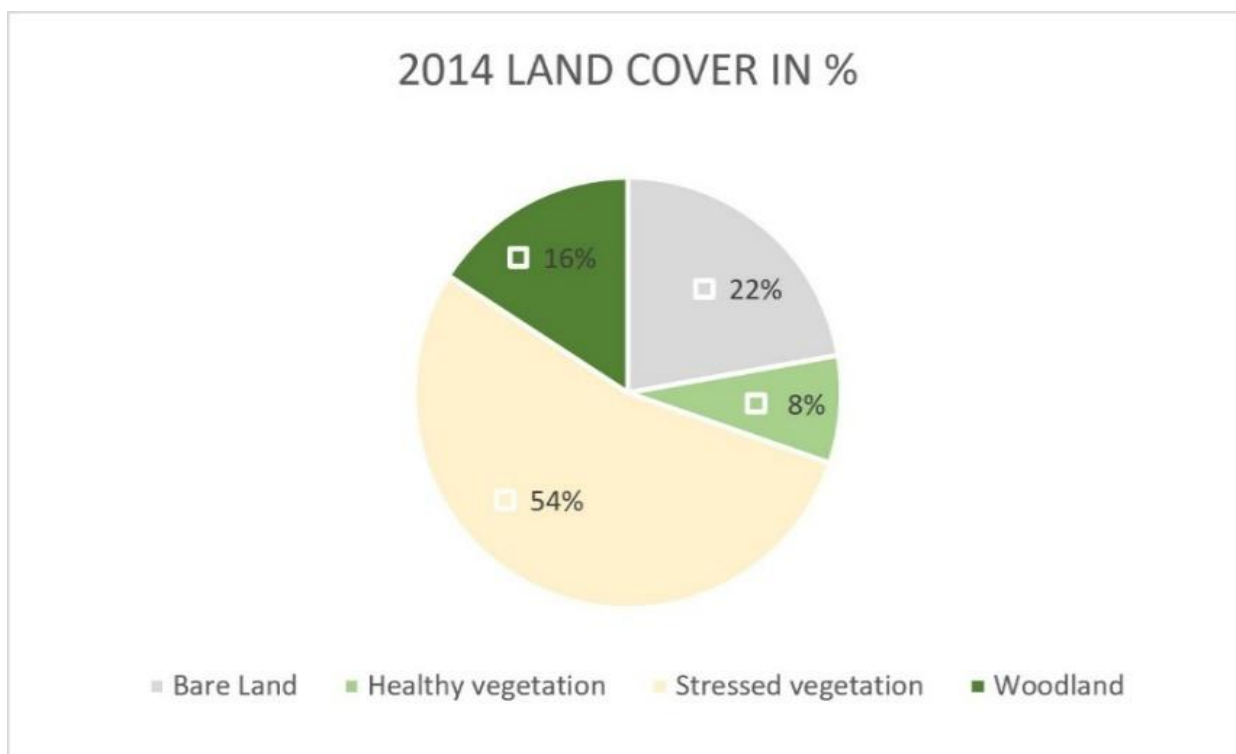
Map 14: Land cover change Analysis Map



Source: Laikipia County GIS Lab, 2026

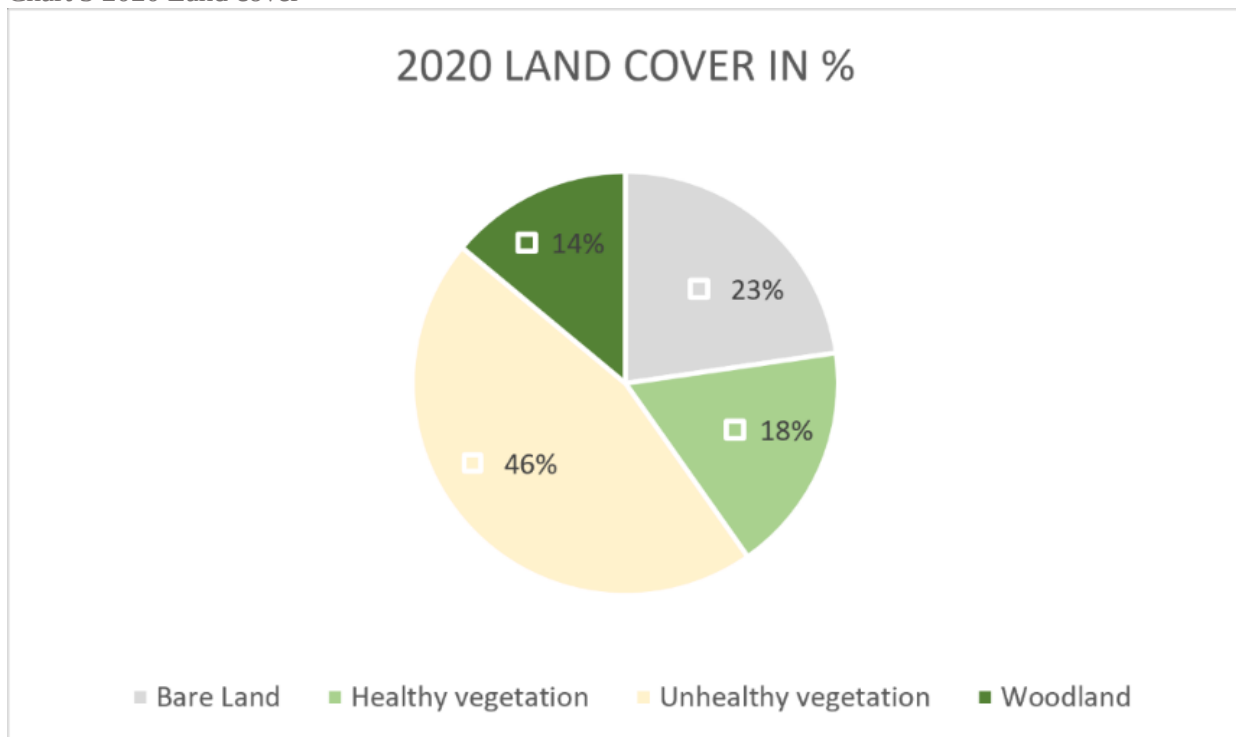


Chart 2 2014 Land cover



Source: Laikipia County Government, 2026

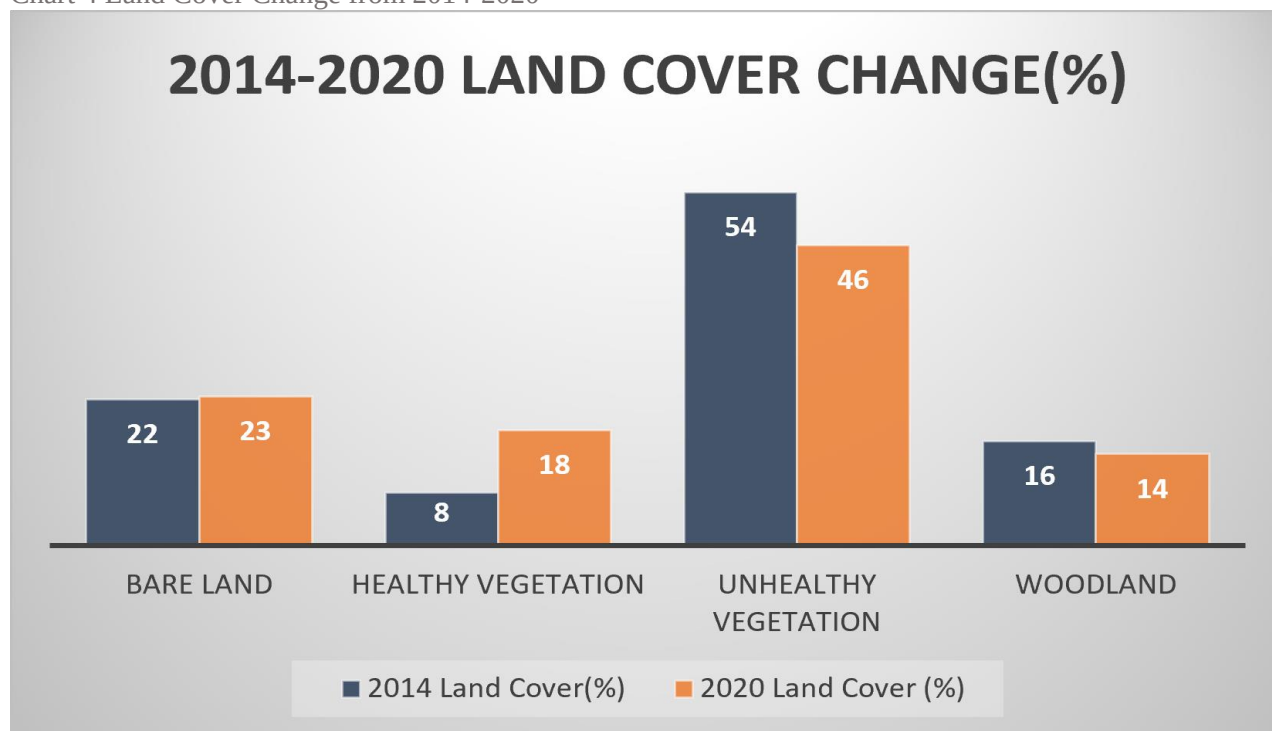
Chart 3 2020 Land cover



Source: Laikipia County Government, 2026



Chart 4 Land Cover Change from 2014-2020



Source: Laikipia County Government, 2026

There was a pronounced positive change in healthy vegetation, which rose from 8% to 18% (+10% absolute change) from 2014 to 2020, and the healthy/stressed vegetation categories fell by 8%. These charts show a changing environmental profile over a 6-year time period.

- **Healthy Vegetation:** This showed a significant relative increase of 125%, from 8% to 18%.
- **Stress Reduction:** Unhealthy/stressed vegetation declined from 54% to 46%, reflecting local ecosystem changes for the better or restoration.
- **Deforestation Signals:** Woodland cover decreased from 16% to 14%, indicating possible logging or land use changes such as agriculture or urban development.
- **Stable Degradation:** Bare land ticked up slightly from 22% to 23%.

3.2.3.1. Emerging issues and Planning Implications

Reforestation Priority: Through environmental planning, degradation can be managed so as to drop the 2% challenge and enhance environmental conservation.

Resource Optimization: As stressed vegetation decreases, land management resources will be allocated to new areas of healthy vegetation being recovered.

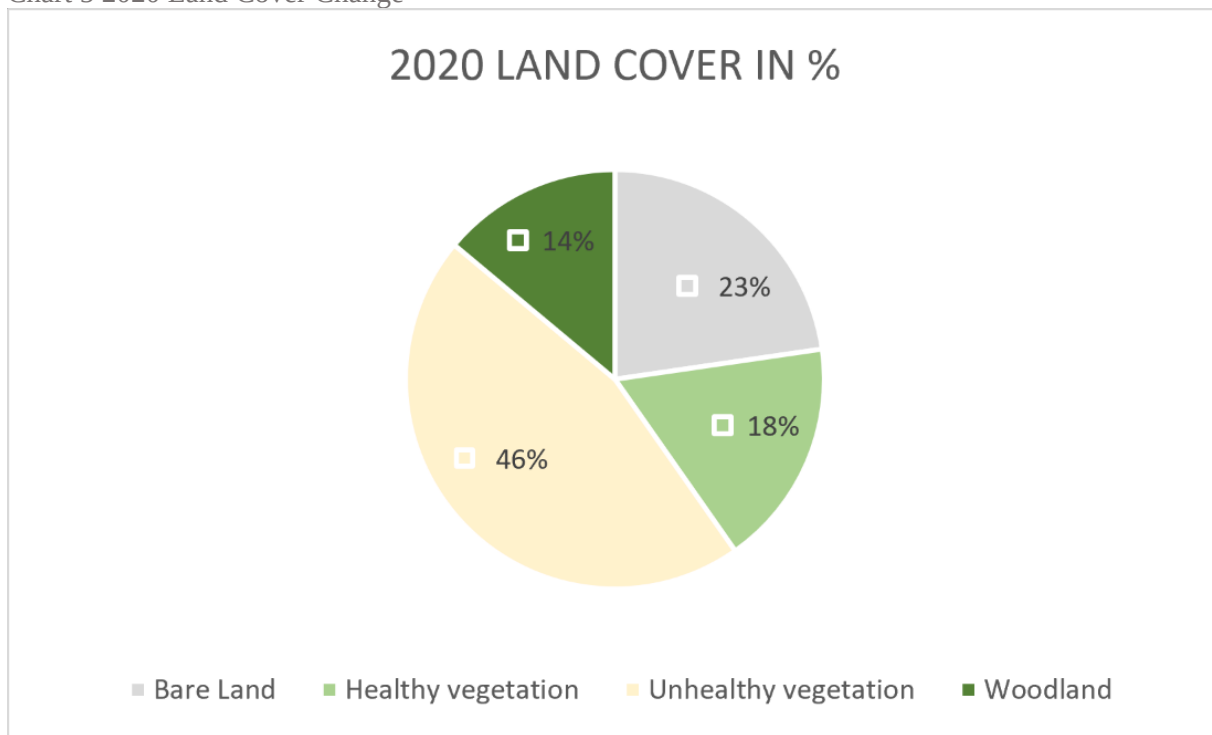
Zoning Enforcement: More stringent urban or agricultural zoning boundaries should be established around existing woodlands to prevent encroachment by humans.



Soil Stabilization: A high baseline of bare land (23%) means that active anti-erosion planning and sustainable farming education is required.

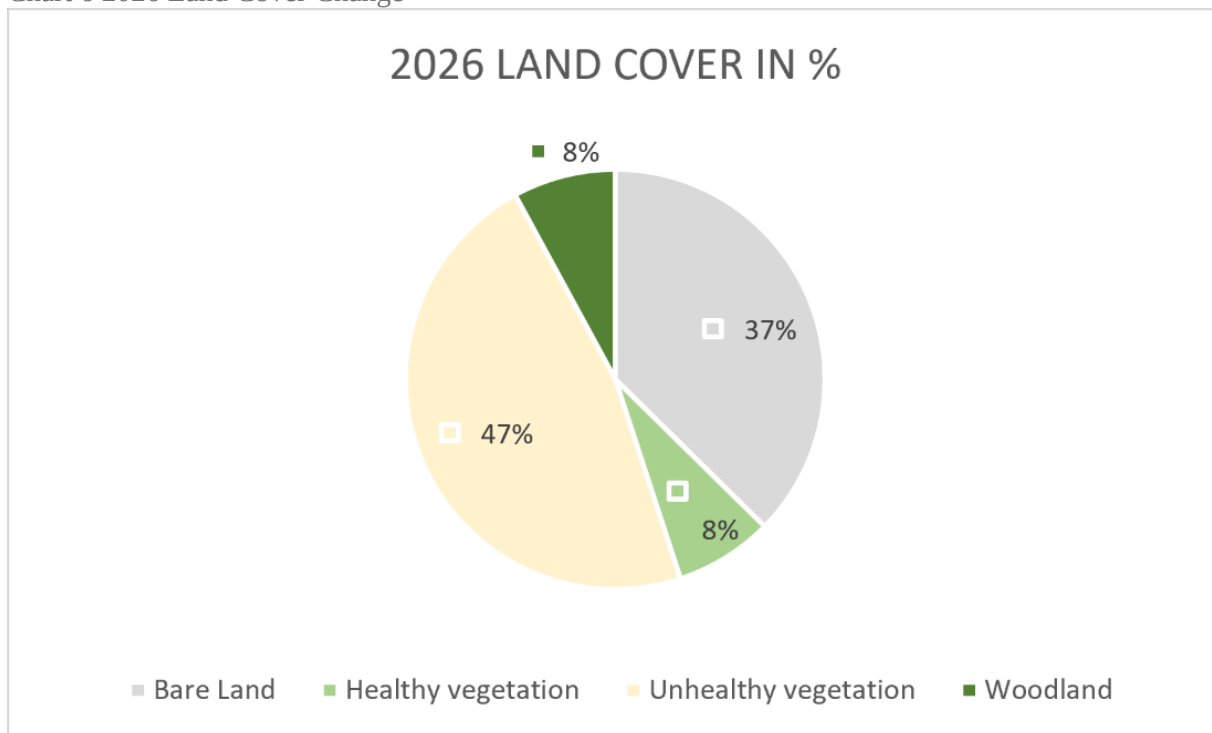
3.2.3.2. 2020-2026 Land Cover Change

Chart 5 2020 Land Cover Change



Source: Laikipia County Government, 2026

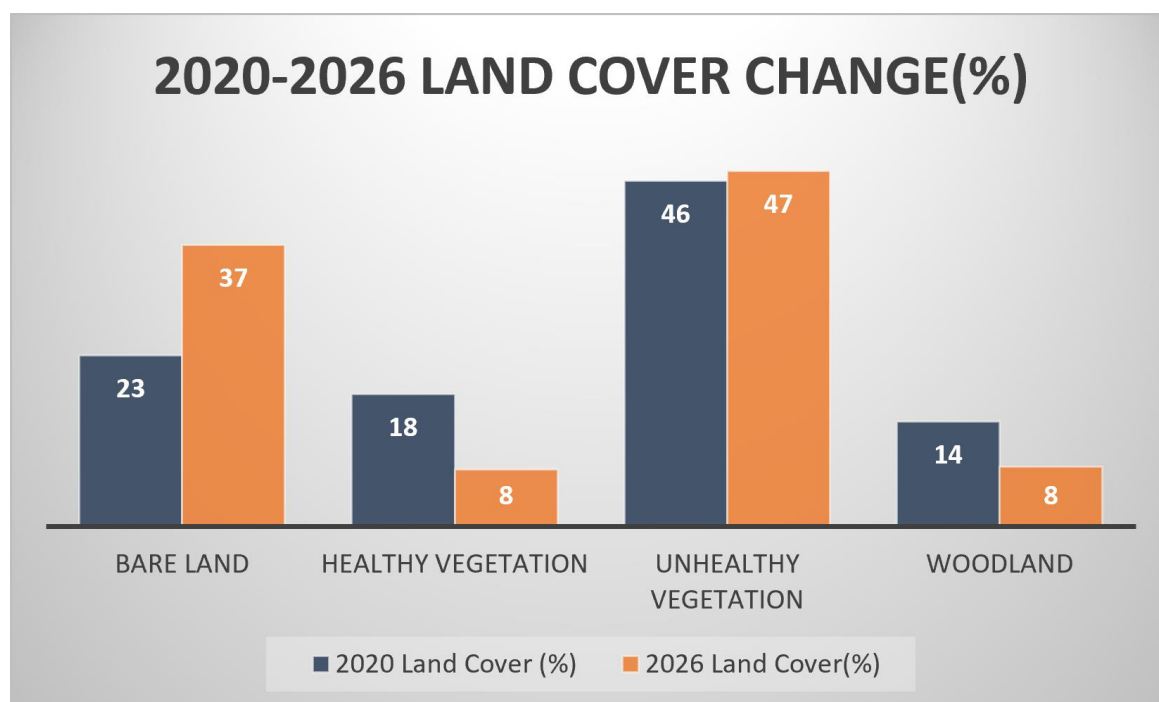
Chart 6 2026 Land Cover Change



Source: Laikipia County Government, 2026



Chart 7 Land cover change from 2020-2026



Source: Laikipia County Government, 2026

The data shows that there is a significant period of environmental degradation from 2020 to 2026, with a large increase in bare ground and a sharp decrease in healthy ecosystems.

The graphs show a stark turnaround in the historically good progress towards environmental recovery. The amount of bare land increased by 60%, from 23% in 2020 to 37% in 2026, relative to the total land area. The trend of vegetation decline was reversed, falling from 18% to 8% of healthy vegetation, and eradicating all improvements from before 2020.

- **Accelerated Deforestation:** A large decrease occurred in wooded areas, from 14% to 8%, which represents very high deforestation levels throughout the region.
- **Persistent Stress:** Unhealthy vegetation increased slightly from 46% to 47% dominating almost half of the region.

3.2.3.3. Emerging Issues and Planning Implications

Emergency Soil Stabilization: In urban areas and agriculture, soil conservation measures like cover cropping and terracing are warranted with the 37% bare land footprint. The woodland collapse to single digits (8%) needs urgent legal protection zones, logging moratoriums and enforcement of the greenbelt. The simultaneous decline in healthy vegetation and increase in bare lands indicate water scarcity, thus, measures should be taken to build rainwater harvesting and efficient drip irrigation systems.

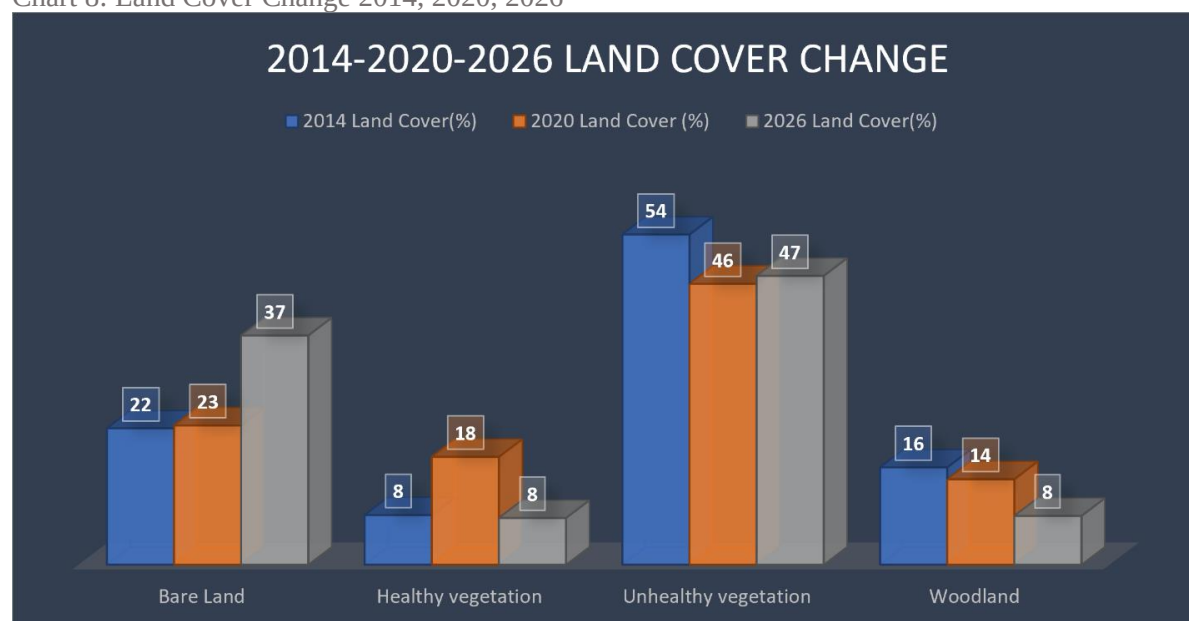


Ecological Remediation Zones: More than half of the region is now without vegetation or vegetation health; land management needs to move from a passive to a proactive, large-scale re-greening initiative.

Overall, the data for 2014–2026 shows that a short-term phase of ecological recovery (up to 2020) was completely overshadowed by high levels of land degradation and deforestation by 2026.

3.2.3.4. 2020-2014-2026 Land Cover Change

Chart 8: Land Cover Change 2014, 2020, 2026



Source: Laikipia County Government, 2026

Table 2: Land Cover Change Trend

Land Cover Category	2014 (%)	2020 (%)	2026 (%)	Net Shift (2014–2026)	Absolute (2014–2026)	Primary Trend Direction
Bare Land	22%	23%	37%	+15%		Continuous Expansion (Accelerated post-2020)
Healthy Vegetation	8%	18%	8%	0%		Temporary Recovery followed by Total Collapse
Unhealthy Vegetation	54%	46%	47%	-7%		Dominant Matrix (Persistent baseline stress)



Land Cover Category	2014 (%)	2020 (%)	2026 (%)	Net Shift (2014–2026)	Absolute (2014–2026)	Primary Trend Direction
Woodland	16%	14%	8%	-8%		Critical Terminal Decline (Halved over study period)

3.2.4. Long-Term Trend Explanation (2014–2026)

This illustrates a sort of "boom and bust" dynamic overtime which leads to an overall negative development for the environment, in comparison with its starting point:

The Deforestation Trend: Woodland has been in a continuous and uninterrupted decline since 2014, from 16% to 14%, and will fall to 8% by 2026, the lowest level ever recorded. The amount of healthy vegetation was also up to 18% in 2020 but dropped back to the baseline of 8% in 2026, thus eliminating a decade of potential development. These changes included the Desertification Surge; bare land remained constant from 2014 (22%) to 2020 (23%), but then increased rapidly to 37% by 2026, the fastest-growing land cover type. The Persistent Stress Baseline: Unhealthy vegetation, the largest and most persistent land cover class over the 12-year period, dropped from 54% to 46% early on, and has remained largely unchanged at 47% over that 12-year period.

3.2.4.1. Emerging Issues Planning Implications

Move from Preservation to Aggressive Restoration: Passive conservation efforts have not yielded the results of the progress made in 2020, so planners need to change their approach to actively rehabilitate the landscape, particularly the loss of 37% of bare land.

Clear-cutting must be stopped now and ecological reserves must be established in the strictly monitored area to provide for half of the woodland cover (16% to 8%).

Climate Resilient Agriculture: Dramatic loss of vegetation health and growth of bare land after 2020 suggests a lack of environmental resilience which is generally attributed to climate shocks. It is necessary for agricultural officers to provide the subsidy for agroforestry and soil moisture retention practices.

Larger water security and watershed management plans should be considered a high priority for preserving the ecosystem as almost half of the map (47%) is persistently infested with unhealthy vegetation and another 37% is completely bare.



3.2.5. Summary

- **Bare Land:** Increasing rapidly to 37% → prioritize land restoration, erosion control and proper grazing management.
- **Healthy Vegetation:** Recovery was temporary → protect areas with good vegetation and promote sustainable grazing and reseedling.
- **Unhealthy Vegetation:** Remains the dominant cover → introduce controlled/rotational grazing and pasture improvement.
- **Woodland:** Reduced by half → strengthen woodland conservation, tree planting and control of tree cutting.
- **Overall:** The area shows increasing land degradation → prioritize rangeland rehabilitation, water conservation and climate-resilient land-use practices.

3.3. Site Analysis

3.3.1. Housing Typology

Based on the socio-economic survey findings, housing in Morupusi Community Land is predominantly temporary, with 203 households occupying temporary structures constructed mainly from locally available materials such as mud, timber, thatch, and corrugated iron sheets. Permanent houses account for 66 households, while 47 households occupy semi-permanent structures. The predominance of temporary housing reflects the community's pastoral lifestyle and the limited financial capacity of many households to invest in durable housing. This housing pattern highlights the need to promote affordable and climate-resilient housing, improve access to quality building materials, and strengthen household livelihoods to enhance housing conditions and resilience to environmental hazards.

Table 3 Housing Structure Types

HOUSING STRUCTURE	NUMBER`	% OF VALID RESPONSES
Temporary only	203	57.8
Permanent only	66	18.7
Semi-permanent only	47	13.3
Permanent and Temporary	22	6.2
Temporary and Semi-permanent	10	2.8
Permanent and Semi-permanent	8	1.1
Total	356	100.0



Chart 9 Housing Typology

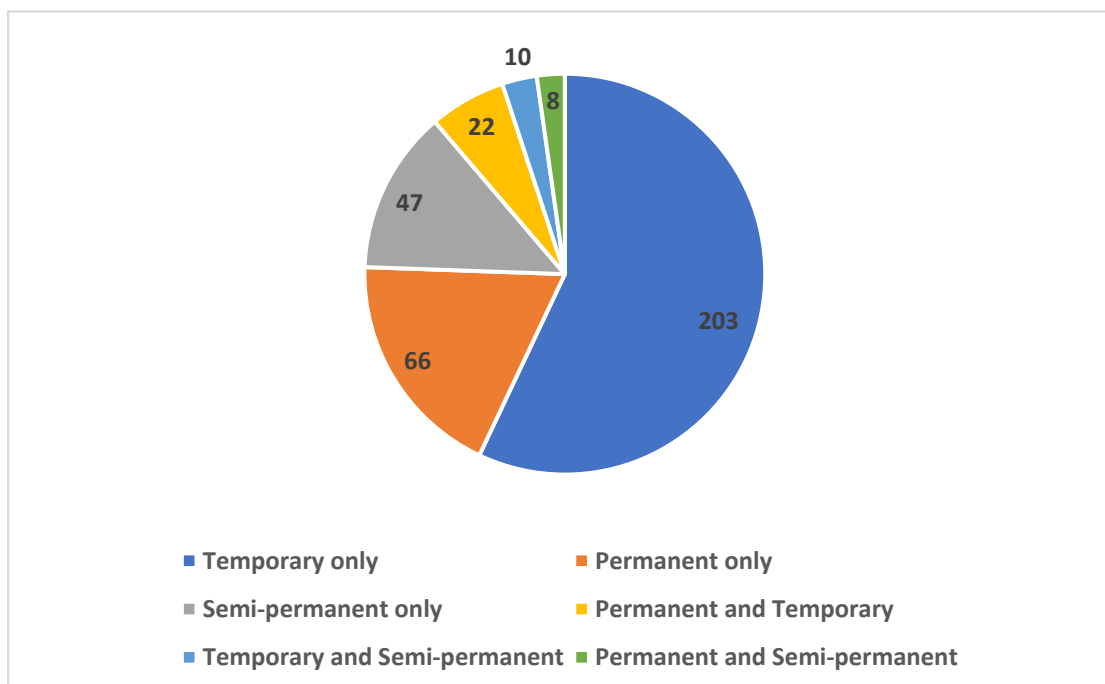


Table 4 Housing typology



Source: Field Survey, 2026

3.3.1.1. Emerging issues and Planning Implications

- **Many families still live in temporary houses:** More than half of the households live in temporary structures, showing that housing remains a major challenge.
- **Few households have permanent homes:** Only 18.7% have permanent houses, meaning most families may not yet have access to strong and long-lasting housing.
- **Housing conditions may be poor:** Temporary and semi-permanent houses may provide less protection from rain, wind, heat and other weather conditions.



- **Risk of housing insecurity:** Poor-quality houses can be easily damaged during adverse weather, leaving families more vulnerable.
- **Need for better housing support:** There is a need for affordable building materials, financial support and housing programmes to help families improve their homes over time.

3.4. Physical Infrastructure

3.4.1. Overview

Physical infrastructure in Morupusi Community Land is not fully developed. The road network is essential for activities of daily living, especially moving livestock and accessing educational facilities, health services, markets, and other facilities, although they can be challenging to utilize during rainy periods due to mud and erosion. The majority of the population walk for longer distances in search of food, water and other basic necessities. A smaller percentage uses motorcycles as a means of transport. The community also has facilities such as schools, water points, health services, livestock facilities, houses, and small trading centers. However, they are not evenly distributed across the area. Some areas have no even a single facility and are inaccessible. Further, these infrastructure supports the community's daily needs, but improvements in roads, water supply, electricity, sanitation, communication, health, and education facilities would improve the quality of life and create better opportunities for the people of Morupusi.

3.4.2. Transport Infrastructure

3.4.2.1. Roads

The community does not have a well-established road network. Despite this challenge, the available road network is mostly made up of unpaved, dusty roads that connect homes, grazing areas, and neighboring commercial centers. During the rainy season, the roads are impassable and develop erosion, making travel challenging. Despite these challenges, the roads are important for helping residents move livestock, access markets, essential services like hospitals, schools and connect with neighboring communities.

The Morupusi Community has a good road network as much as the roads need to be upgraded the area can be well maneuvered and accessible for the community moving from one point to another.



Plate 5: Road Infrastructure in Morupusi



Source: Field Survey, 2026

3.4.2.2. Road Connectivity

The road network map of Morupusi Community Land shows how people and livestock move within the community and how the area connects to neighboring communities.

There are two 40-meter roads passing through Morupusi Community Land and provides an important connection to areas outside the community land. From these main routes, smaller roads and tracks branch into the community, especially in Kurum, Leruk, Soit Oudo and Lorubae areas. These local routes are important because they connect settlements, grazing areas, water sources and neighboring communities.

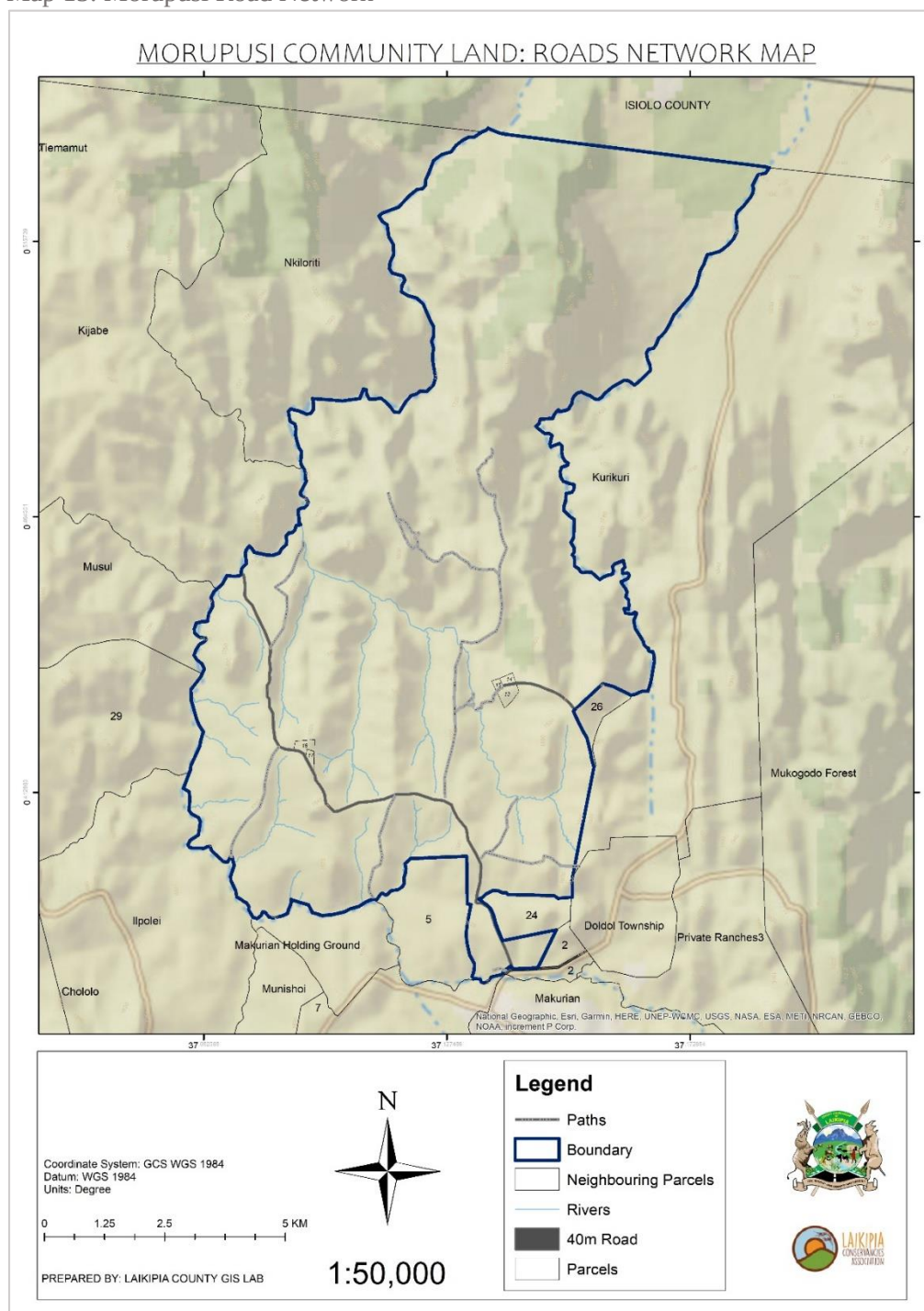
Kurum, Leruk, Soit Oudo and Lorubae areas have better road access because there are more roads and tracks in these areas. Kipsing on the other hand, has fewer visible roads, which may make it more difficult for residents to access some areas, particularly during the rainy season.

3.4.2.3. Non-Motorized Transport

The community is built on a pastoral background making the major transport mode to be through walking. Also, through the survey it was noted that most settlements did not have clear paths to the homesteads, and the people walked through the bushes to access their homes.



Map 15: Morupusi Road Network



Source: Laikipia GIS Lab, 2026

3.4.3. Energy Infrastructure

Morupusi community survey findings indicate that solar energy is the dominant source of household lighting, demonstrating widespread adoption of off-grid renewable energy. The residents indicated that 231 relied on portable solar lanterns (D-light), 91 on torches, 57 on firewood for lighting and cooking, and 26 households have no reliable source of energy.



Plate 6: Mini Solar Panels on Houses

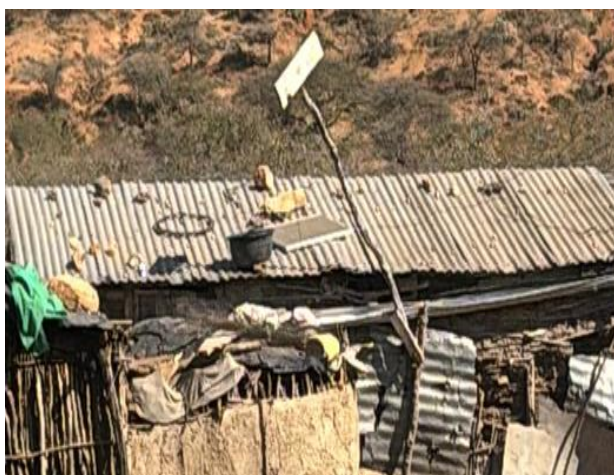
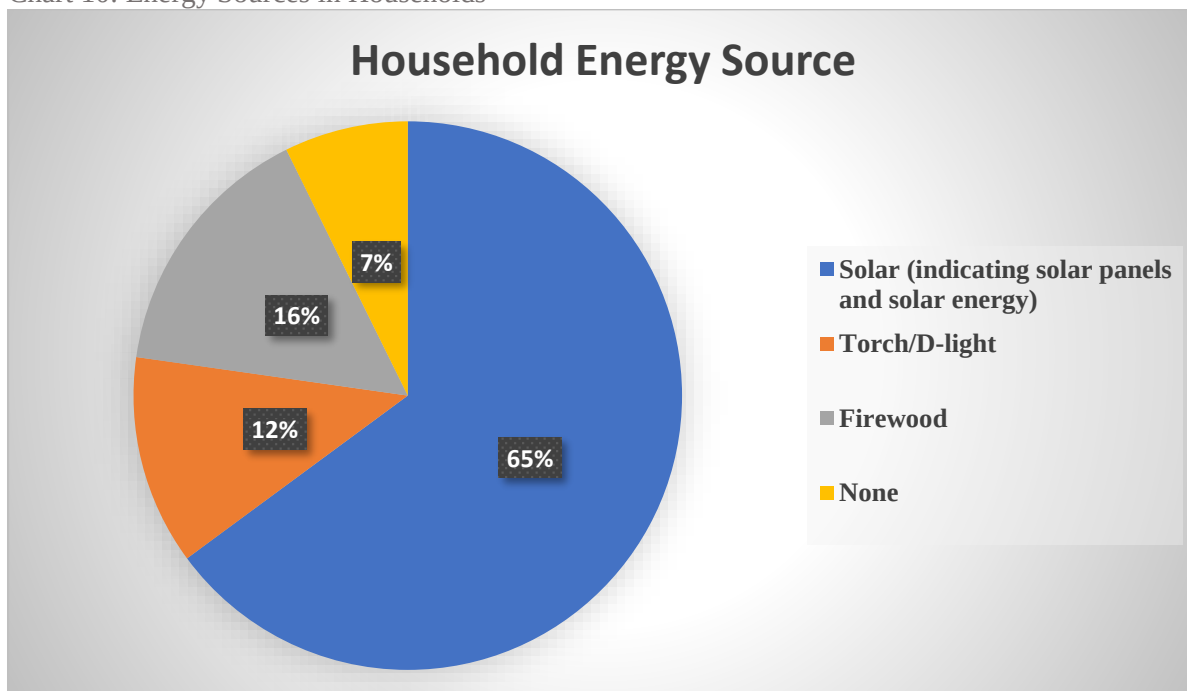


Table 5 Primary Energy Sources

Energy Source	Households	Percentage (%)
Solar	231	64.9
Torch/D-light	44	12.4
Firewood	55	15.4
None	26	7.3
Total	356	100

Chart 10: Energy Sources in Households



Source: Laikipia County Government, 2026



3.4.3.1. Emerging Issues and Planning Implications

- Promote and expand solar energy access to support wider adoption of solar energy and renewable-energy solutions.
- Reduce dependence on firewood to reduce vegetation loss, environmental degradation, and increased household workload, particularly for women and children
- Support energy-efficient livelihoods. Improved access to electricity could stimulate small-scale enterprises and income-generating activities.
- Consider affordability and sustainability. Although solar technology is widely adopted, households may face challenges relating to initial costs, battery replacement, equipment quality and maintenance. Planning should include affordable financing mechanisms, reliable supply chains and local technical support.

3.5. Demography Overview

The surveyed community is a high-growth and predominantly youthful population. The surveyed population consists of **2,457** persons and **356** households and an approximate household size of **7.0** persons. The community is characterized by a child population (**70.2%**) and a relatively small adult workforce, indicating a rapid natural increase and a heavy burden on the productive-age cohort.



Table 6 Population Size and Composition

Metric	Value	Percentage
Population	2,457	100%
Households	356	-
Average Household Size	7	-
Males	1,201	48.9%
Females	1,256	51.1%
Adults (18+)	731	29.8%
Male Adults	342	46.8% of adults
Female Adults	389	53.2% of adults
Children (Under 18)	1,726	70.2%
Male Children	740	42.9% of children
Female Children	986	57.1% of children

STRUCTURAL INDICATOR	VALUE	SIGNIFICANCE
Child Dependency Ratio	236.1%	$(1,726 \text{ children} / 731 \text{ adults}) \times 100$. Extremely high means every adult supports 3 children.
Old-Age Dependency Ratio	2.2%	Very low minimal elderly care burden.
Total Dependency Ratio	228.6%	Combined burden; >200% is considered



3.5.1. Population Projections (10-Year)

The age distribution of the population in Morupusi Community Land indicates a high fertility rate considering there is an average of **3** children per women sampled from an approximately **389** adult females. This is reflective of the overall fertility trend in pastoral and Agro-pastoral communities in most of the ASAL regions in Kenya where large family size is common and a practical solution to livestock labor requirements. However, it is also characterized by a lack of Family planning (FP) services and also the risk of child mortality

3.5.2. Ten-Year Growth Projection

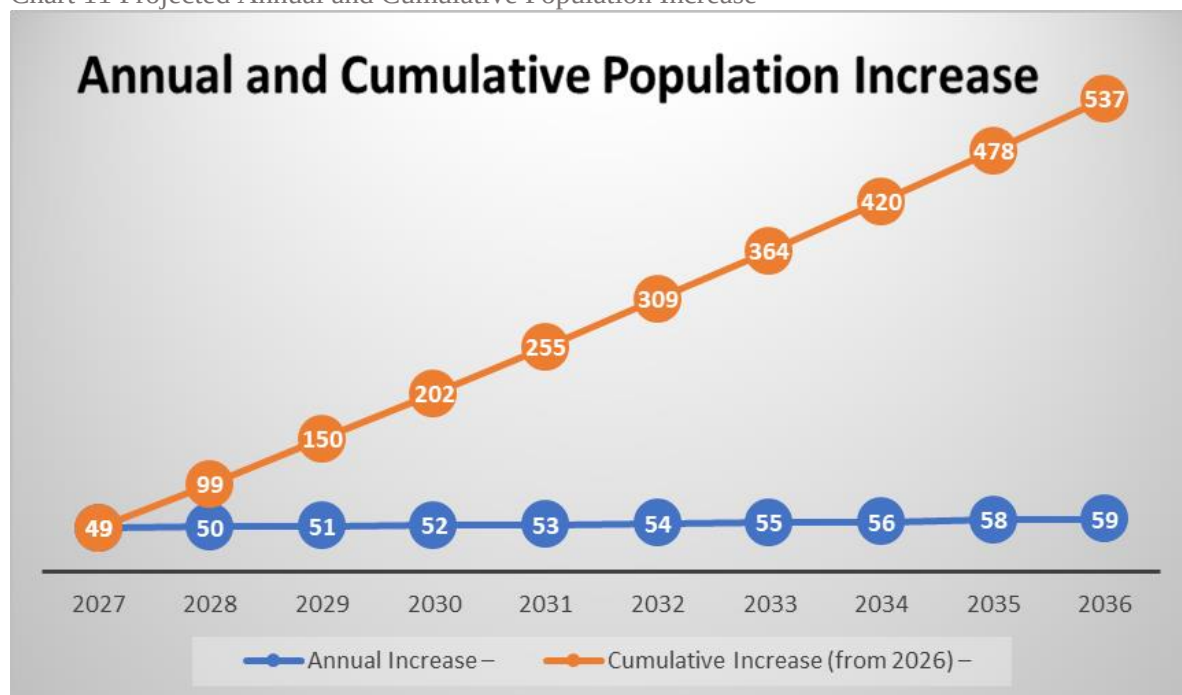
Assuming a conservative growth rate of about **2.0** per cent annually as is typical for rural and pastoral Kenyan populations, and the age distribution of the population surveyed, then the community's population will rise from **2,457** in 2026 to approximately **2,994** in 2036, an increase of **537**, or about **21.9%** over the **10**-year period.

Table 7 Population Growth Projection

Year	Annual Increase	Cumulative Increase (from 2026)	Projected Population
2026	—	—	2,457
2027	+49	+49	2,506
2028	+50	+99	2,556
2029	+51	+150	2,607
2030	+52	+202	2,659
2031	+53	+255	2,712
2032	+54	+309	2,766
2033	+55	+364	2,821
2034	+56	+420	2,877
2035	+58	+478	2,935
2036	+59	+537	2,994

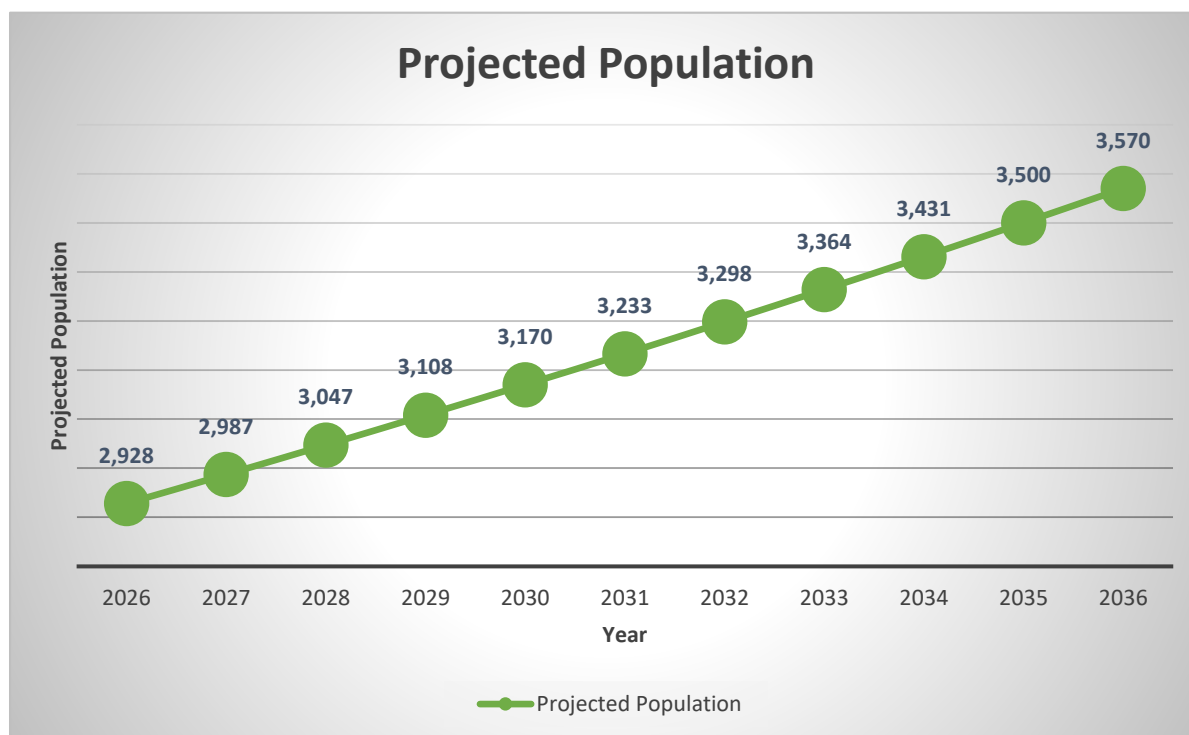


Chart 11 Projected Annual and Cumulative Population Increase



Source: Laikipia County Government, 2026

Chart 12 Projected Population Increase



Source: Laikipia County Government, 2026

3.5.3. Population Growth and Land-Use Implications

The population projections should be used as a basis for determining the future capacity of public facilities. Planning should not simply provide for the projected population but should



also account for the geographical distribution of households, the pastoral lifestyle and the fact that some facilities serve populations outside Morupusi Community Land.

The following planning priorities are recommended:

Table 8 Population and Land-Use Implications

Sector	Population-related planning response
Education	Expand existing schools and reserve land for additional ECDE, primary and secondary facilities.
Health	Upgrade Kurum Dispensary with a maternity wing and provide additional dispensaries.
Water	Increase water production, storage and distribution capacity and improve water quality.
Housing	Designate suitable settlement areas and manage settlement expansion.
Roads	Improve access roads linking villages, schools, markets, health facilities and water points.
Livestock	Protect grazing areas, livestock routes, watering points and veterinary facilities.
Conservation	Protect wildlife corridors and establish development-control measures around sensitive areas.
Commerce	Establish a livestock market and suitable commercial centers.
Energy	Expand electricity and solar-energy infrastructure to emerging settlements and public facilities.
Sanitation	Provide adequate sanitation and solid-waste management facilities alongside settlement growth.
Recreation	Reserve land for community recreation, cultural facilities, tourism and public open spaces.
Administration	Secure land tenure for existing and future public facilities.



3.5.4. Emerging Issues and Planning Implications

Based on the population data, the following critical emerging issues demand immediate policy attention

Educational Infrastructure

With 1,726 children, the community needs extra educational facilities. There is a need for schools' expansion to cater for the increasing children's population. Further, it is imperative to create community awareness on the need for education to increase literacy levels. The initiative will improve school enrollment and transition from primary to secondary school.

Water and Sanitation Strain.

The expected population growth will have significant strain on current water supply and sanitation infrastructure with an average household size of 7.0 persons per household. There will be an increase in demand for water resources. The risk of water borne diseases like cholera and diarrhea diseases may be higher when water and sanitation facilities are inadequate. The plan should then focus on the installation of extra water points, better storage facilities, a more reliable water supply, water management, solid-waste management and good quality sanitation facilities.

Primary Healthcare Shift

New healthcare services will be needed to accommodate the changing population structure, as health care needs of children and adults must be provided separately. Children will also need crucial services like immunization, growth monitoring, nutrition screening and treatment of common childhood illnesses. Meanwhile, the adult population will drive up demand for maternal and reproductive health, chronic disease management, mental health services, and other primary healthcare services. Those of the 389 adult females should be given special attention, such as antenatal, postnatal and reproductive health services, and the overall capacity of the local health facility strengthened to meet the needs of the increasing population.



3.6. Social Infrastructure

3.6.1. Solid Waste Management

The community lacks a system for solid waste management, with no designated waste collection points, transfer facilities and disposal sites, in the community. As a result, domestic and commercial waste is littered in open fields, open pits and other unmarked areas. This practice can have consequences for the use of the land, the quality of the environment, public health and the visual appearance of the settlement. The non- controlled dumping may lead to land degradation, surface and rainwater pollution, spread of disease and higher risks of communicable diseases.

Plate 7: Waste Management Points



a) Dumpsite

b) Burn site

3.6.2. Emerging Issues and Planning Implications

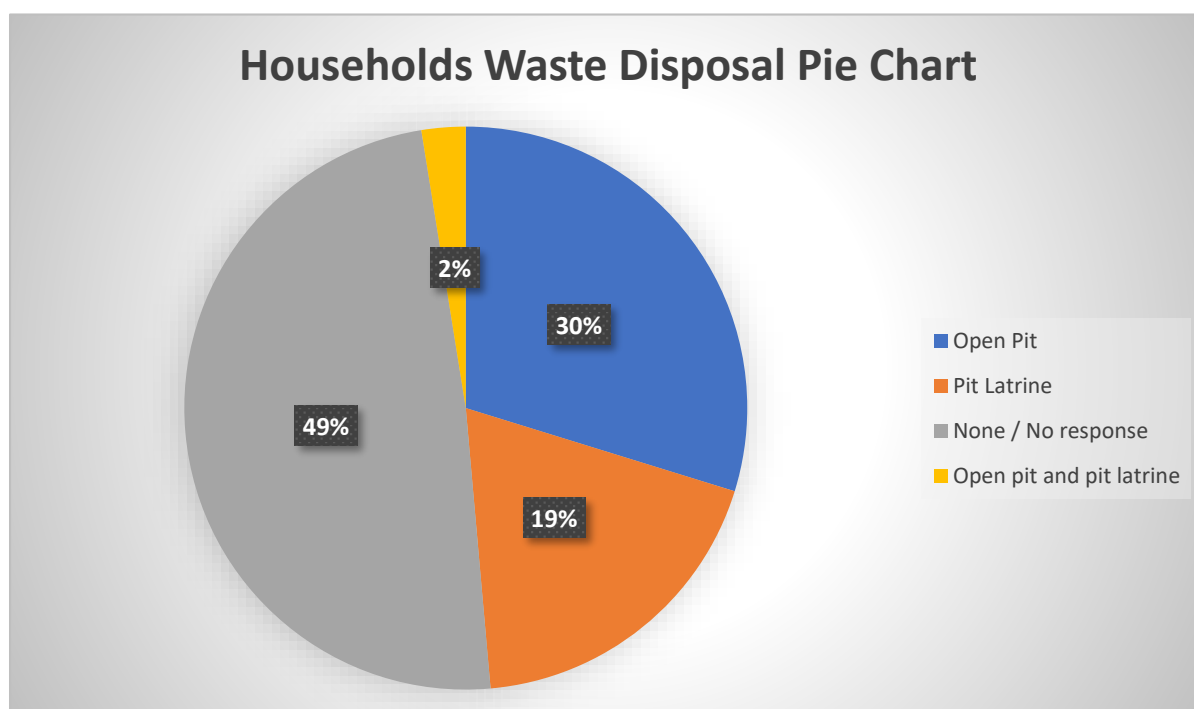
- There are no specific facilities for solid waste management which have led to random disposal.
- Problems associated with open dumping include land degradation, pollution, and public health issues.
- Kurum Centre should be prioritized as a centre for waste collection and transfer because of high concentration of activities.
- Proposals for future development need to include sufficient space and facilities for solid waste collection and storage.



3.6.3. Liquid Waste and Sanitation Management

There is a lack of planned sanitation and liquid waste management systems in the community. Most of the households do not have proper sanitation facilities within their homesteads as a result of which the household members dispose their wastewater and other liquid wastes in the open fields and other unspecified places. Human waste, is also inadequately managed in areas where households lack appropriate sanitation facilities, increasing the risk of environmental contamination and sanitation-related diseases. This is a land use, environmental and public health issue especially in areas of settlement near water sources, roads and other environmentally sensitive areas. Discharge of liquid waste can lead to contamination of surface water and groundwater; environmental pollution and diseases related to sanitation.

Chart 13 Liquid Waste Management Practices



Source: Laikipia County Government, 2026

3.6.4. Emerging Issues and Planning Implications

- Poor home sanitation facilities have, along with this, led to random discharge of the liquid waste.
- Wastewater discharge is a risk for surface and groundwater pollution, and environmental degradation if it is not managed.
- The design of sanitation infrastructure should be aligned with the development plans for settlements.



- Kurum Centre should be given attention in providing public sanitation facilities and adequate wastewater management infrastructure.
- There should be sufficient arrangements for sanitation and liquid waste management for new developments to be considered under development control.
- Efforts to raise awareness about sanitation, hygiene and the proper disposal of wastewater should go hand in hand with physical infrastructure measures.

3.6.5. Water Infrastructure

3.6.5.1. Human Water Accessibility Analysis

The map below shows that access to water for human use in Morupusi Community Land varies from one area to another. Most water sources, such as boreholes, wells, springs, dams, water pans, and water tanks, are concentrated in the central and southern parts of the community. These areas generally have better access because they fall within the 500 m and 1 km service areas around the water points.

3.6.5.2. Planning Implications

- Provide more water points in areas where people have to walk long distances to access water.
- Improve existing water facilities such as boreholes, wells, dams, and water tanks to make them more reliable.
- Protect existing water sources from pollution and damage to ensure they remain useful for the community.
- Consider future population growth when planning new water infrastructure so that water supply can meet future needs.



Figure 2 Morupusi Shallow well



Figure 3 Leruk borehole



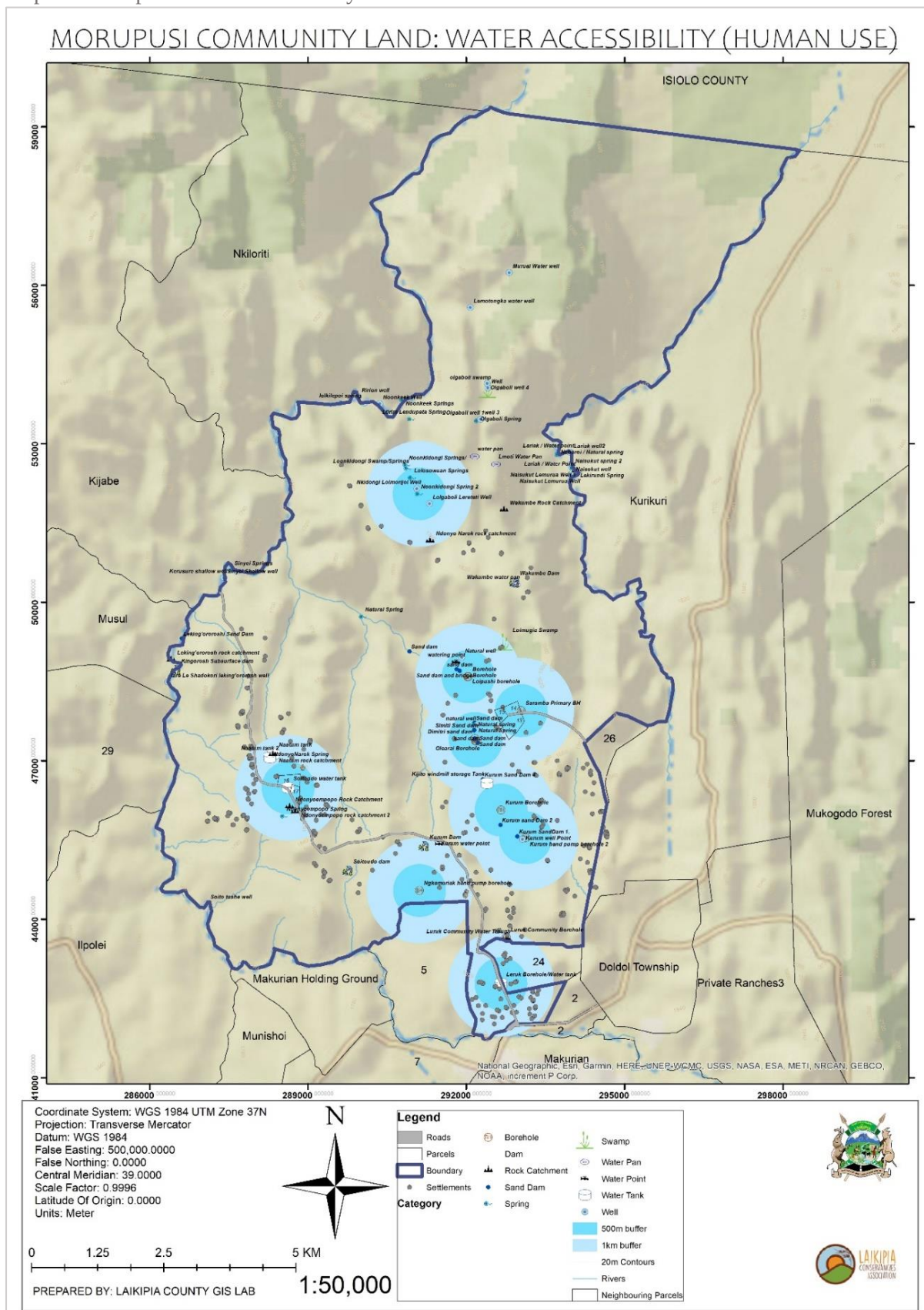
Figure 4 Soit oudo water tank



Figure 5 Lorubae Shallow Well



Map 16: Morupusi Water Accessibility Index



Source: Laikipia County GIS Lab, 2026



3.6.6. Livestock Water Accessibility

The map below illustrates the spatial distribution and accessibility of water for livestock consumption. The map shows that livestock water sources are unevenly distributed across Morupusi Community Land. Water sources include dams, wells, springs, water pans, and rock catchments. Most of the water sources are concentrated in the central and southern parts of the community. The 500 m and 1 km buffers show areas where livestock can access water more easily. Some northern and peripheral areas have fewer water points, which may require livestock to travel longer distances for water.

3.6.6.1. Planning Implications

- **Provide additional water points** in areas where livestock have to travel long distances to access water.
- **Improve and maintain existing dams, boreholes, wells, and water pans** to ensure reliable water for livestock.
- **Protect water sources** from pollution and overuse so they remain available during dry periods.
- **Plan for dry seasons and droughts** by increasing water storage capacity in areas that experience water shortages.
- **Consider livestock movement and grazing patterns** when deciding where to establish new water points.

3.7. Public Facilities

3.7.1. Health Facilities

The map below indicates that Morupusi Community Land is served by a single health facility strategically located at Kurum near the main road leading to Nanyuki. The facility is situated within the principal settlement cluster, making it relatively accessible to a significant proportion of the resident population.

The health center benefits from direct access to the primary road network, which enhances mobility for patients, healthcare workers, and emergency services. However, given the expansive nature of the community land and the dispersed settlement pattern, some residents are required to travel considerable distances to access healthcare services.

The map further shows that the community is traversed by several seasonal drainage channels and varying topographic conditions, which may affect accessibility to the health facility during



periods of heavy rainfall. Settlements located in the eastern and northern extremities of the community land are particularly vulnerable to challenges associated with distance and transport limitations.

Plate 8: Kurum Dispensary



Source: Field Survey, 2026

3.7.1.1. Spatial Distribution and Accessibility

The concentration of healthcare services at a single location result in unequal spatial coverage across the community land. While households located along the main road corridor enjoy relatively convenient access, residents in remote areas rely on secondary roads and footpaths to reach the facility. This may lead to delays in accessing medical care, particularly for vulnerable groups such as children, expectant mothers, the elderly, and persons with disabilities. The current distribution therefore indicates a need for improved healthcare outreach and enhanced transportation linkages to ensure equitable access to health services throughout the community land.

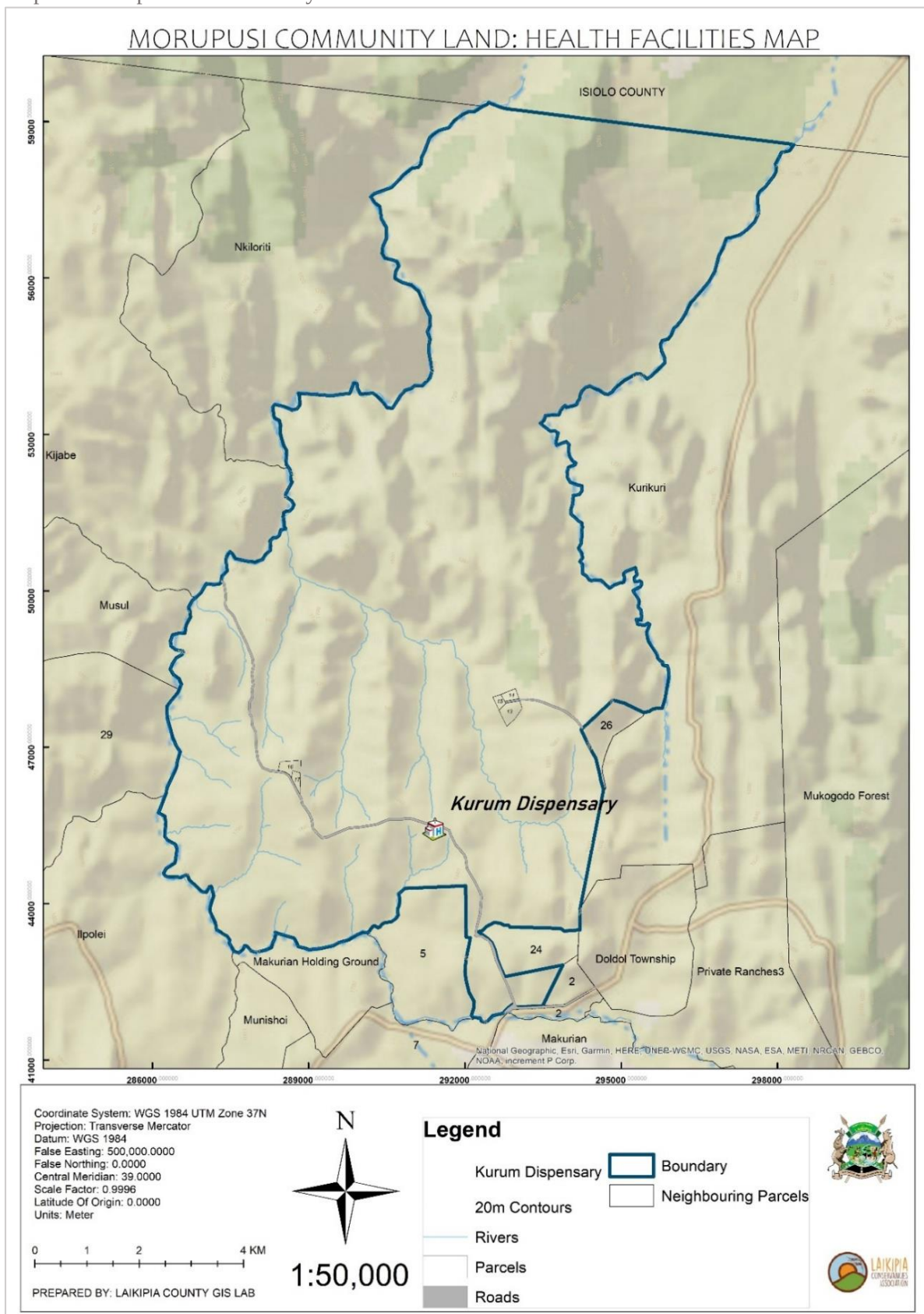
3.7.1.2. Emerging Issues and Planning Implications

To improve healthcare accessibility and service delivery, the following interventions should be considered:

- Expansion and upgrading of the existing health facility to improve service capacity.
- Provision of additional health outreach centers or dispensaries in underserved.
- Improvement of road networks connecting settlements to the health facility.
- Enhancement of emergency response and referral systems.
- Provision of adequate water supply, sanitation, electricity, and medical equipment to support quality healthcare delivery.



Map 17: Morupusi Health Facility



Source: Laikipia GIS Lab, 2026



3.7.1.3. Accessibility to Health Centers

Health facility accessibility was assessed by analyzing travel distance and network connectivity to existing health centers. Areas beyond the recommended service radius were identified as priority zones for future health infrastructure development, ensuring equitable access to essential healthcare services. Access to health care services is a vital consideration in spatial planning and service delivery.

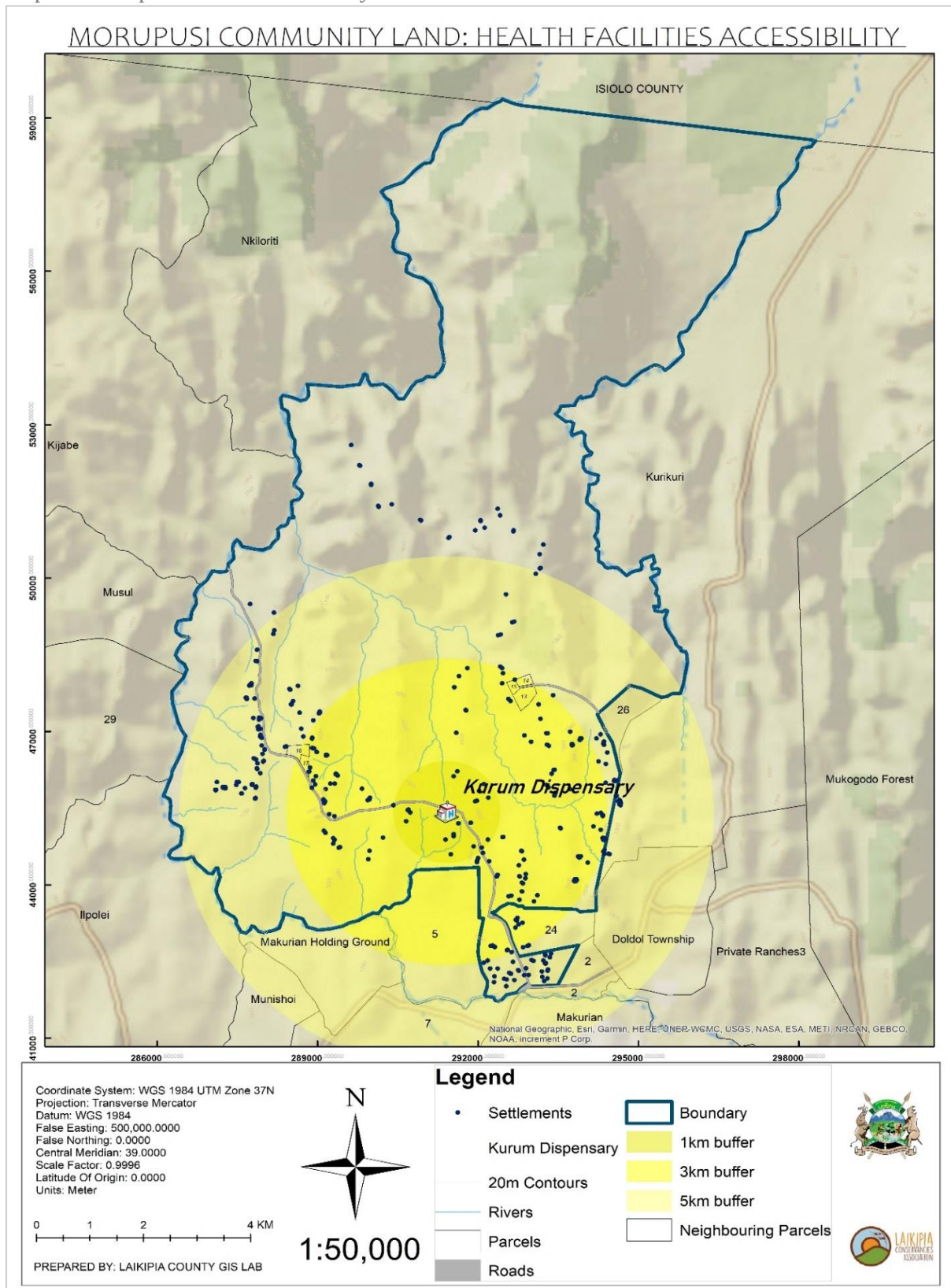
The goal of this analysis is to evaluate how far different areas are from the health center and to identify zones that are well-served versus those that are underserved or in need of improved health infrastructure.

The health accessibility map shows the distribution of settlements in relation to **Kurum Dispensary**, the main health facility identified within Morupusi Community Land. The map uses **1 km, 3 km, and 5 km buffer zones** to show different levels of accessibility to the dispensary. Most settlements in the central and southern parts of the community land fall within the 1–5 km service areas, indicating relatively better access to health services. However, a significant number of settlements in the northern and northeastern parts of Morupusi Community Land lie outside the 5 km buffer, meaning that residents in these areas may have to travel considerably longer distances to access healthcare.

The presence of rivers, hilly terrain, and the limited road network may further increase the actual travel time, even where settlements appear relatively close to the dispensary. Overall, the map indicates that health services are concentrated around the central and southern parts of the community, while the northern areas remain relatively underserved.



Map 18: Morupusi Health Accessibility Index



Source: Laikipia GIS Lab, 2026



3.7.1.4. Health Accessibility Buffer Zones

Three buffer zones were used to assess accessibility to Kurum Dispensary:

- **0–1 km Buffer Zone:**

Areas within 1 kilometer of Kurum Dispensary have **high accessibility** to health services. Residents within this zone can reach the facility relatively easily, making it particularly important for households requiring regular healthcare, maternal and child health services, and emergency attention.

- **1–3 km Buffer Zone:**

Areas between 1 and 3 kilometers from the dispensary have **moderate accessibility**. Most residents can still reach the facility, but the distance may become challenging for elderly people, young children, pregnant women, and patients requiring urgent attention. Good roads and reliable transport are therefore important for households within this zone.

- **3–5 km Buffer Zone:**

Areas between 3 and 5 kilometers from the dispensary have **lower accessibility** compared with the inner buffer zones. Residents may require more time and transport to reach healthcare services. The challenge may be greater during the rainy season or where roads and paths are in poor condition.

3.7.1.5. Planning Implications

- **Improve access roads** to Kurum Dispensary to reduce travel time and make healthcare more accessible.
 - **Prioritize underserved areas:** Settlements located beyond the 5 km buffer, particularly towards Kipsing, should be given priority when planning additional health facilities.
 - **Address physical barriers:** Rivers, drainage channels, and rugged terrain should be considered when planning access routes, as they may make travelling to the dispensary more difficult during the rainy season.
 - **Strengthen the existing dispensary:** Kurum Dispensary should be adequately equipped and supported with staff, medicines, water, sanitation, and other essential facilities to serve the growing population.
-



- **Integrate health facilities with settlement planning:** Future settlement expansion should consider proximity to healthcare services so that new households are not established in areas with very limited access to essential health facilities.

3.7.2. Education Facilities

The school facilities map shows that Morupusi Community Land has several educational facilities serving children across the area. These include Saramba Primary School, Kurum Primary School, Kurum Secondary School, Lorubae Nursery School, Morupusi Nursery School, Leruk Nursery School, and several Early Childhood Development (ECD) centers, including Ndupata, Wakumbe, Kurum, Kiganjo, and Njurum ECD centers. Most of these facilities are concentrated in the central and southern parts of the community land, while the northern and eastern areas have fewer education facilities.

The location of the schools is generally influenced by existing settlements and the road network, making them relatively accessible to nearby households. Some schools are situated close to the main roads, while others can be reached through local access roads and paths. However, the rivers and drainage channels shown on the map may make movement difficult in some areas, particularly during the rainy season.

The existing education facilities play an important role in serving the Morupusi community. However, learners living in the more remote northern and eastern areas may have to travel longer distances to access schools. There is therefore a need to consider improved access routes and, where necessary, additional or expanded education facilities as the community continues to grow.

Map 19: Educational Facilities in Morupusi





Source: Field Survey, 2026

3.7.2.1. Emerging Issues/ Planning Implications

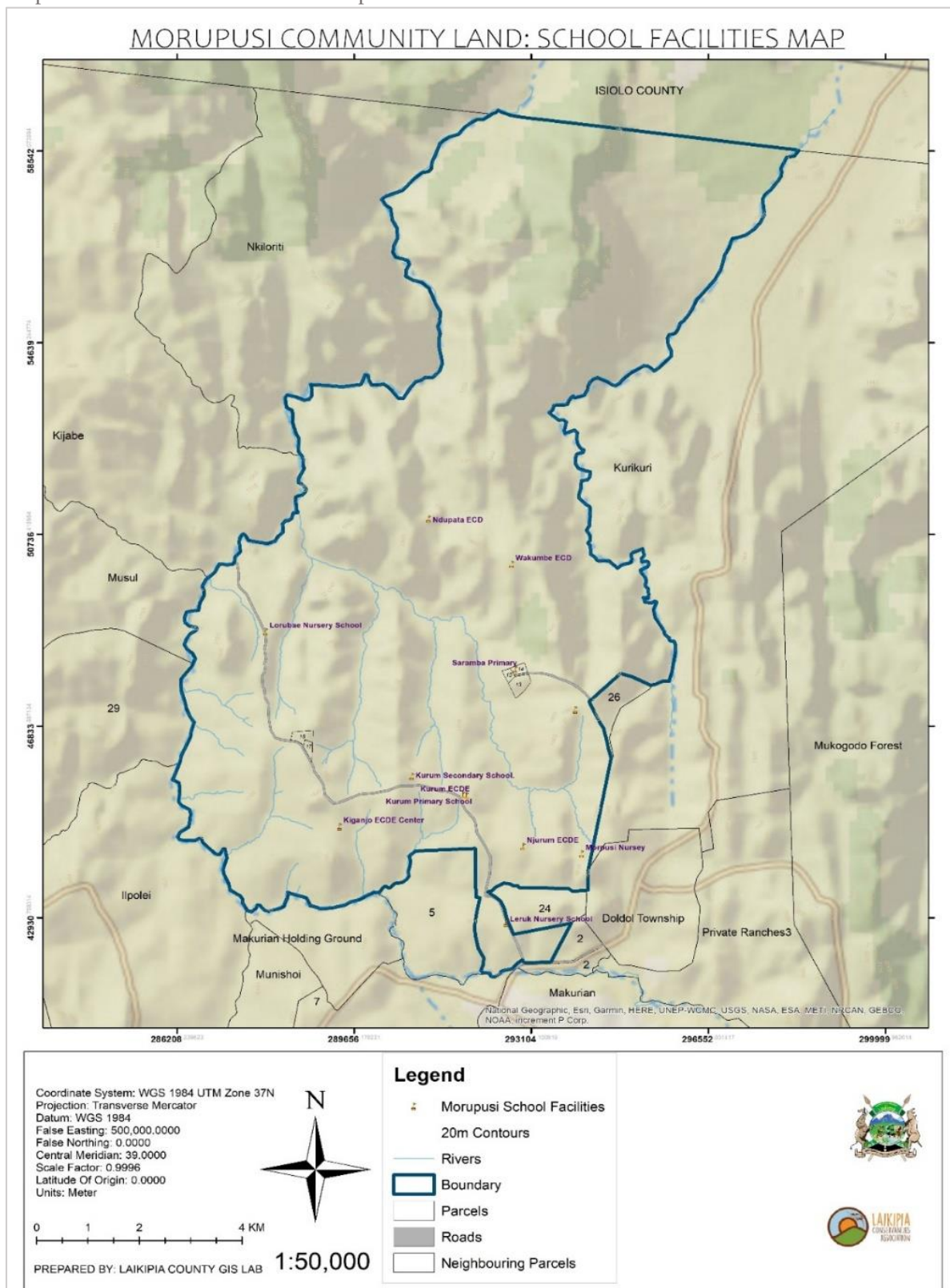
The current distribution of educational facilities indicates basic access to education within the community, although the facilities are fewer in Kipsing area.

To improve access to education, the following interventions should be considered:

- Improve access to schools: There is need to upgrade and maintain roads and access routes connecting settlements to existing schools.
- Provide schools in underserved areas, especially around Kipsing area.
- Ensure schools have adequate classrooms, sanitation facilities, potable water, and other essential learning infrastructure.
- Suitable land should be identified and protected for the development and expansion of educational facilities.
- Strengthen ECD services: Support existing ECD centres and consider additional centres in areas where young children have limited access to early learning services.



Map 20: Education Facilities in Morupusi



Source: Laikipia County GIS Lab, 2026



3.7.1.2. Accessibility to Educational Facilities

The school accessibility map shows that most households in Morupusi Community Land are within 1 km to 2 km of an existing school, especially around parts of Saramba, Soit Oudo and Leruk. It implies that many learners can reach schools such as Saramba Primary, Lorubae Nursery, Kurum Primary, Kurum Secondary, and Leruk Nursery. However, some settlements Kipsing area are located beyond the 2 km buffer, making access to education challenging for children living in these areas. The actual time taken to reach school may also be affected by road conditions. The map shows that school access is better in some parts of Morupusi than others, highlighting the need to improve access roads and consider additional education facilities in areas where learners have to travel long distances.

Two buffer zones were created to represent varying levels of school accessibility as follows:

- **0.5–1 km Buffer Zone**

. These are areas with moderate accessibility. While still within walking distance, the increased distance may pose some difficulties for children, especially in hilly or rugged terrain to access schools.

- **1–2 km Buffer Zone**

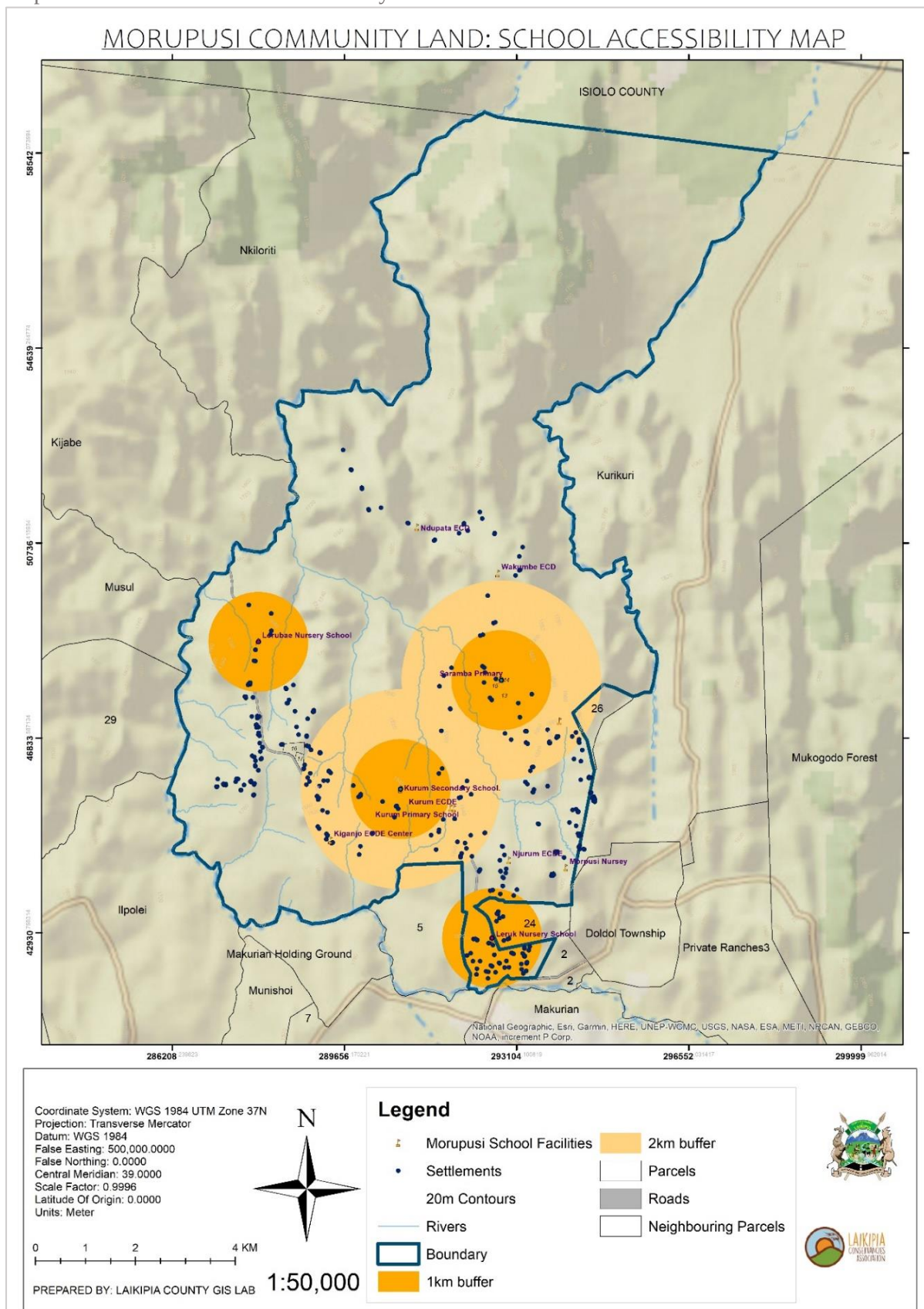
Areas within this range are considered to have low accessibility to educational facilities. The distance may discourage regular attendance, especially for younger students, and raises concerns around safety, walking time, and physical fatigue. These regions should be prioritized for the construction of new schools or restoration of Picha Primary School which is currently non- functional, provision of transport services to ensure equitable access to education.

3.7.2.3. Emerging Issues and Planning Implications

Proximity to schools is a critical indicator of educational access. The analysis reveals spatial disparities in school accessibility, guiding planners on where to direct future educational infrastructure. Areas beyond 1 km from existing schools should be considered high-priority zones for new school development. Additionally, settlements in the 0.5–1 km zone could benefit from pedestrian-friendly pathways or support services to enhance school attendance.



Map 21: Education Facilities Accessibility Index



Source: Laikipia County GIS Lab, 2026



3.8. Community Facilities

3.8.1. Social Hall

The social hall is a common meeting point for the community where most of the community issues are addressed. Through this type of facility, the area community is able to address the emerging issues that affect the community in a positive or a negative way, making it easy for the community to solve its issues.

Plate 9: Nashami Women Group Social Hall



Source: Field Survey, 2026



3.8.2. Churches

The community has several churches like the Kurum Church which serves as a religious meeting point for the community. This brings unity and social interaction among community members.

Plate 10: Churches in Morupusi



Source: Field Survey, 2026

3.8.3. Governance

The community has a well-structured chief's camp where the chief resides and is able to serve the community. The camp is conveniently located majorly for administrative purposes within the community. This also provides security in the area making sure that there are no social disputes within the community. Through the survey the presence of the chief's camp was felt as there were no social disputes within the community.



Plate 11: Kurum Chief's Camp



Source: Field Survey, 2026

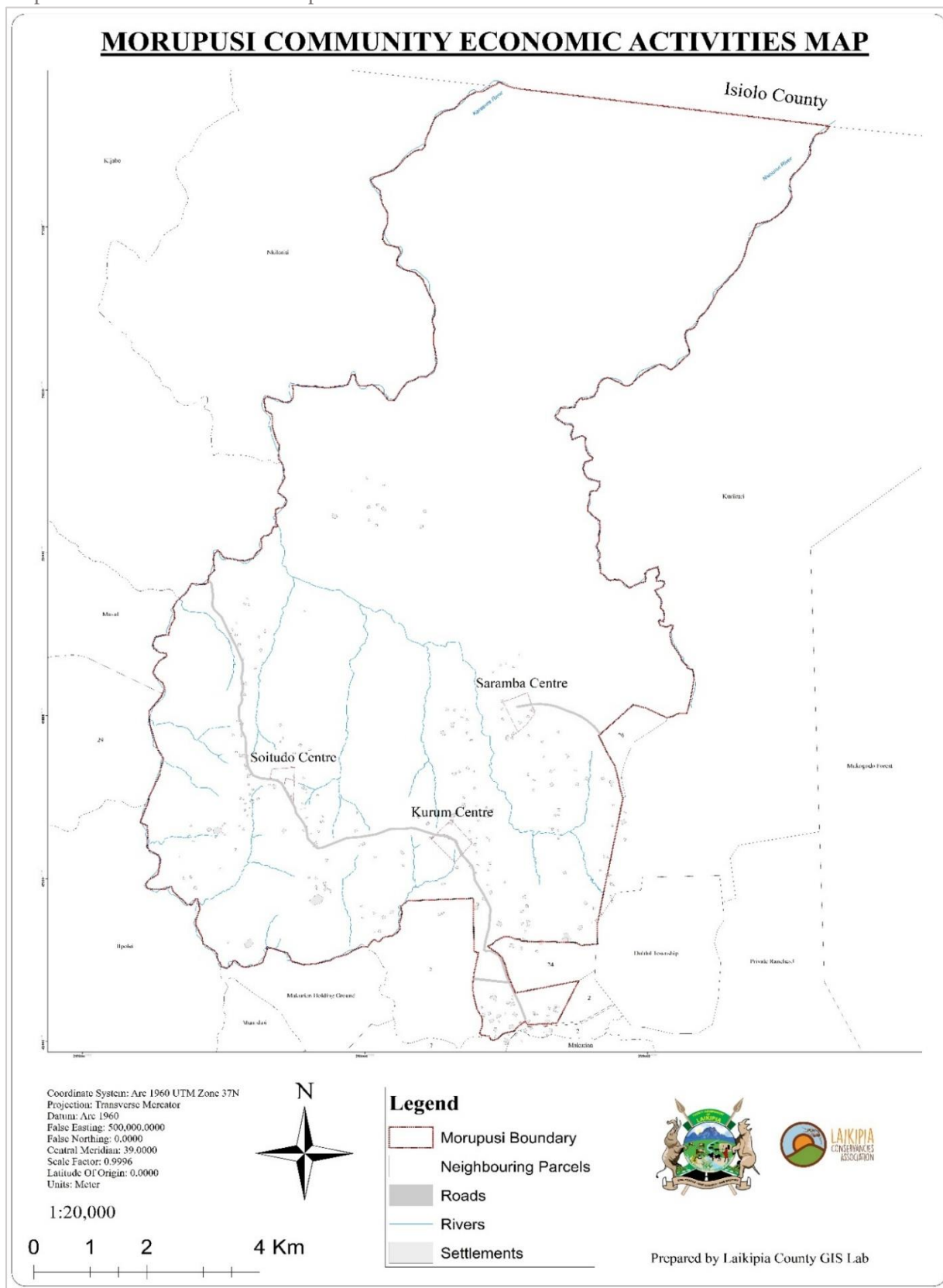
3.9. Economic Activities

The primary economic activity in Morupusi Community Land is mainly related to livestock keeping, beekeeping and casual labor. Livestock keeping is the main activity and most households keep sheep, goats, cattle or all three. Some households also derive their livelihood from the beekeeping and camel. Other residents rely on informal jobs and employment of necessity to support themselves and their families.

Other community activities include cultural manyatta, boda-boda riding, sand harvesting and eco-tourism among others. Cultural manyattas offer to preserve the local culture and also draw the tourists while the boda-boda riding offers employment and transport services. The harvesting of sand is a source of income for sand harvesting households, but it needs to be managed well to lessen environmental degradation. The establishment of eco-lodges like Wakumbe is a source of employment to Morupusi residents and enhances the tourism in Morupusi Land, thus providing a good opportunity to diversify livelihoods.



Map 22: Economic Activities Map



Source: Laikipia County GIS Lab, 2026



3.9.1. Livestock Ownership

An analysis of livestock ownership in Morupusi indicates that goats are the dominant livestock species, accounting for **8,100 animals (49.9%)** of the total livestock population. Sheep constitute the second largest livestock group with **4,332 animals (26.7%)**, followed by cattle with **1,831 animals (11.3%)**. Poultry contributes **1,500 birds (9.2%)**, while donkeys (**239; 1.5%**) and camels (**237; 1.5%**) represent a relatively small proportion of the livestock population.

The findings demonstrate that small stock (goats and sheep) comprise over three-quarters (76.6%) of all livestock in Morupusi, highlighting the community's reliance on drought-resilient. The dominance of goats and sheep can be attributed to inadequate pasture under drought and overgrazing. Browsing small stock that feeds on shrubs and leaves is more resilient to drought than grazing cattle. The herd composition is itself a record of the community adapting to a degrading rangeland a sensible short-term strategy that, unmanaged, can accelerate the very degradation it responds to.

3.9.1.1. Emerging Issues and Planning Implications

- Promote sustainable rangeland management to support the dominant goat and sheep populations.
- Improve veterinary and animal health services to reduce livestock disease spread.
- Increase investment in livestock water infrastructure and strategic pasture development to enhance livestock productivity.
- Strengthen livestock markets and value addition to improve household incomes from pastoralism.
- Encourage breed improvement and diversification, particularly for drought-resilient livestock such as goats and camels.
- Enhance livestock extension services focusing on pasture conservation, fodder production, and climate-smart pastoralism.

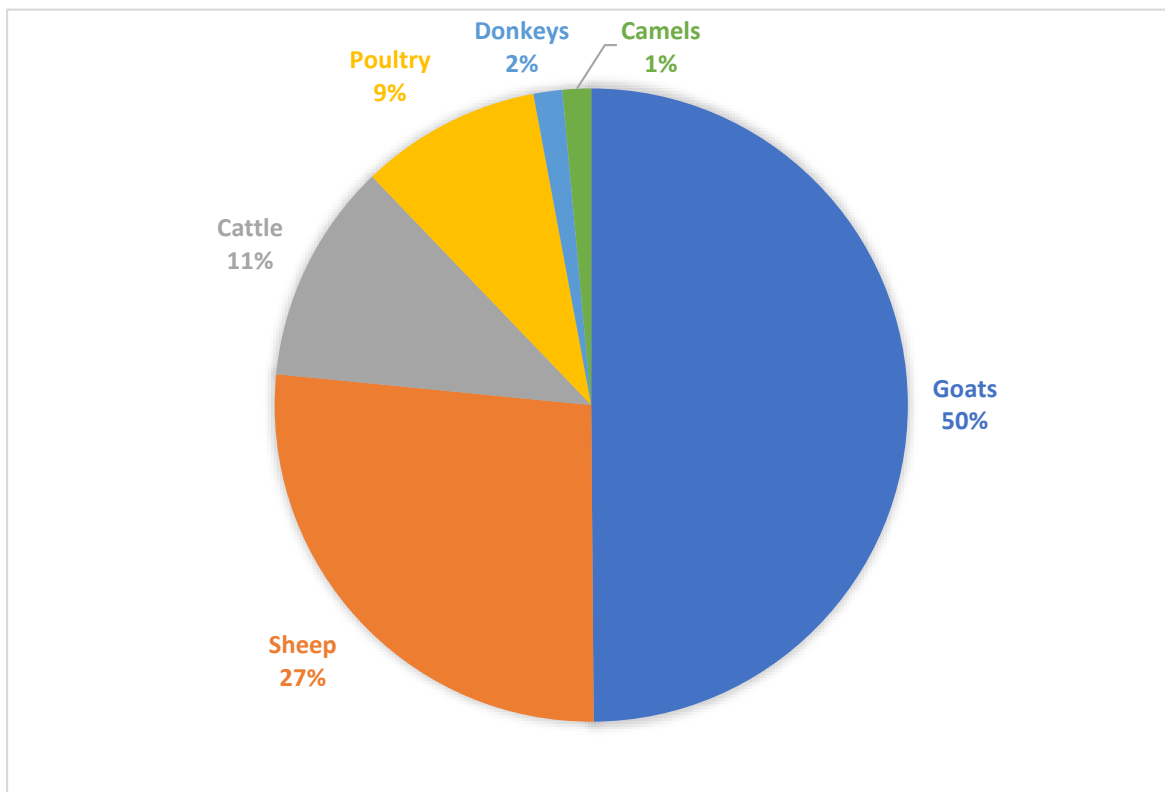
Table 9 Total livestock holdings by species.

Livestock Type	Total Number	Percentage of Total Livestock
Goats	8,100	49.9%
Sheep	4,332	26.7%
Cattle	1,831	11.3%
Poultry	1,500	9.1%



Livestock Type	Total Number	Percentage of Total Livestock
Donkeys	239	1.5%
Camels	237	1.5%

Chart 14 Livestock Ownership Chart



Source: Laikipia County Government, 2026



Chart 15: Livestock Count in Morupusi

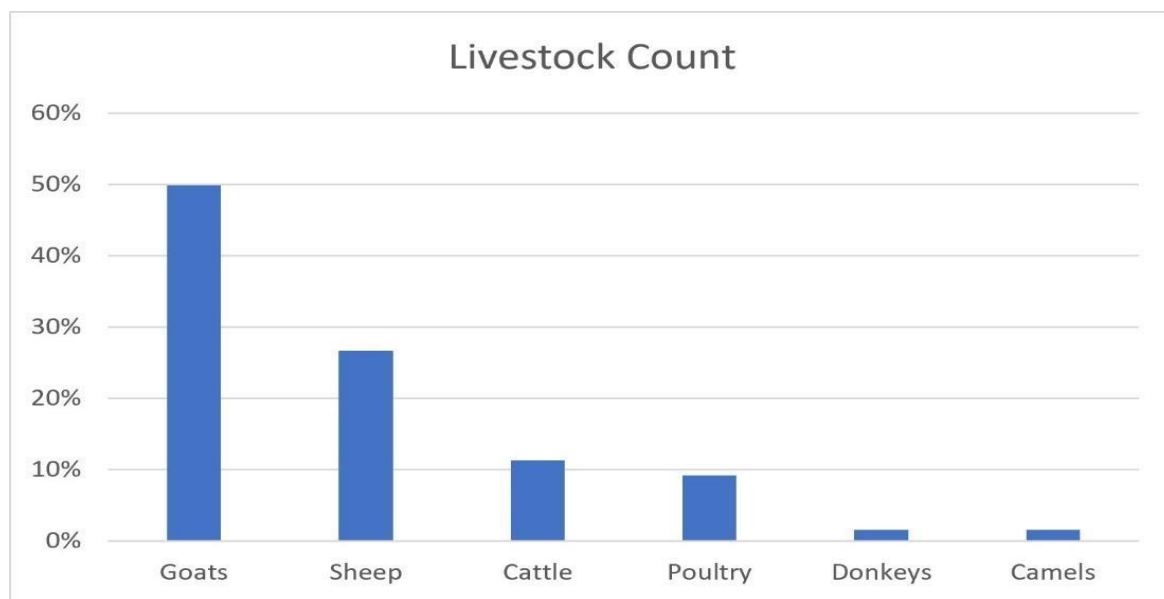


Plate 12: Livestock in Morupusi



3.10. Human–Wildlife Conflict

Human–wildlife conflict is one of the major socio-economic challenges affecting the community. In Morupusi Community, livelihoods are predominantly pastoral and depend heavily on livestock production and access to communal grazing and water resources. The close interaction between people, livestock and wildlife creates conditions in which



competition for pasture and water, livestock predation, and other wildlife-related conflicts can occur.

The socio-economic survey undertaken in Morupusi Community Land demonstrated that wildlife is an important component of the local ecosystem through tourism activities but also poses significant risks to pastoral livelihoods. Wildlife attacks and predation were identified as one of the causes of declining livestock holdings, alongside drought, livestock diseases, livestock sales, and theft.

Wildlife conflict through livestock predation is particularly important because livestock keeping is the main source of income for approximately **89% of households**. Consequently, any loss of livestock through wildlife predation directly affects household income, food security, education, healthcare affordability, and overall resilience.

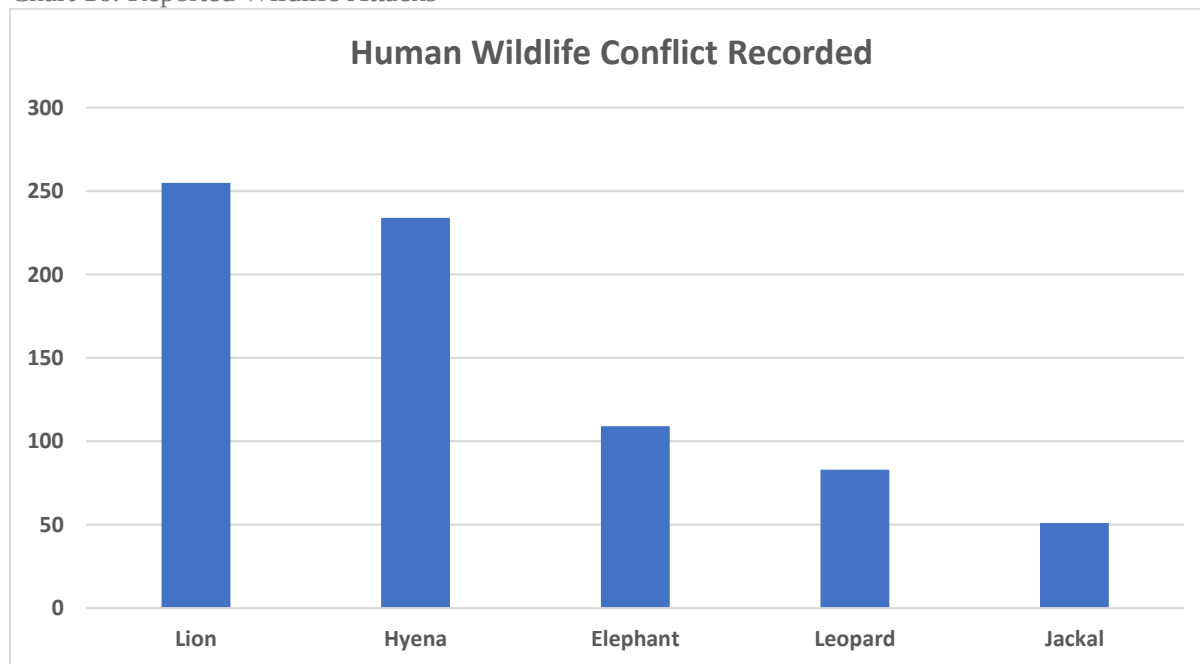
The survey findings indicate that human–wildlife conflict is widespread across Morupusi Community Land. Several wildlife species were identified by households as causing problems, with large carnivores accounting for the majority of reported incidents.

Table 10 Wildlife Species Households Reporting Conflict

Wildlife Species	Reported Cases
Lion	255
Hyena	234
Elephant	109
Leopard	83
Jackal	51



Chart 16: Reported Wildlife Attacks



Lions were the most frequently reported problem animal, with **255** households identifying them as a source of conflict. Hyenas followed closely, with **234** households reporting conflict. Elephants were reported by **109** households, while leopards and jackals were reported by 83 and 51 households, respectively.

These figures demonstrate that conflict is not limited to a single wildlife species. Rather, the community experiences different forms of interaction depending on location, season, and livestock type and wildlife movement patterns.

The predominance of lions and hyenas is particularly significant because these predators can cause substantial livestock losses and high value animals like cattle and camels. Goats and sheep account for approximately 76.6% of the total livestock population recorded during the survey. These small-stock animals are particularly vulnerable to predation because they are often grazed in groups, may range over considerable distances in search of pasture, and can be difficult to protect where livestock enclosures are weak.

3.10.1. Major Drivers of Human–Wildlife Conflict

- Competition for Grazing Resources
- Competition for Water
- Drought and Climate Variability
- Settlement and Land-Use Pressure
- Predation

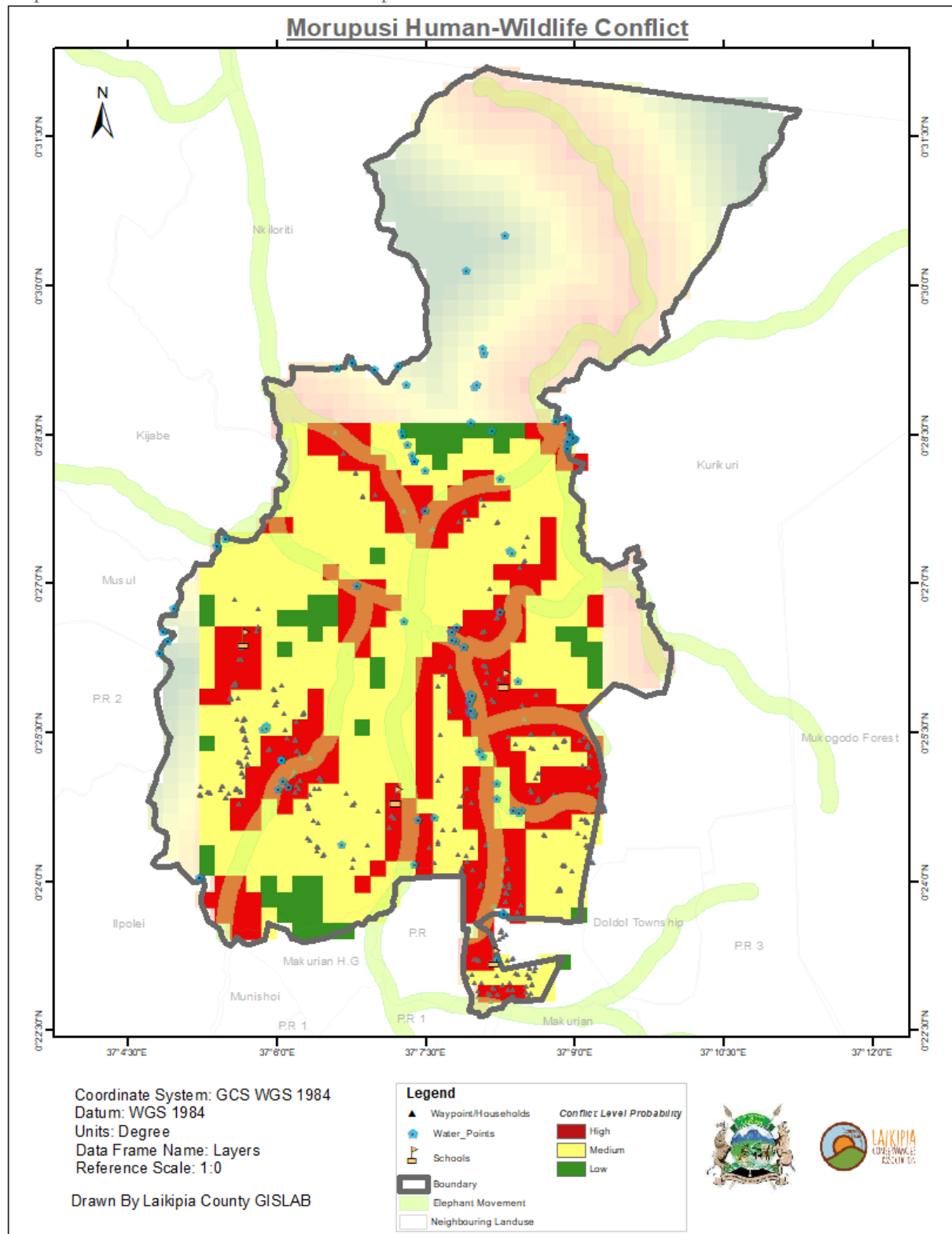


Plate 13: Wildlife Predation on Livestock





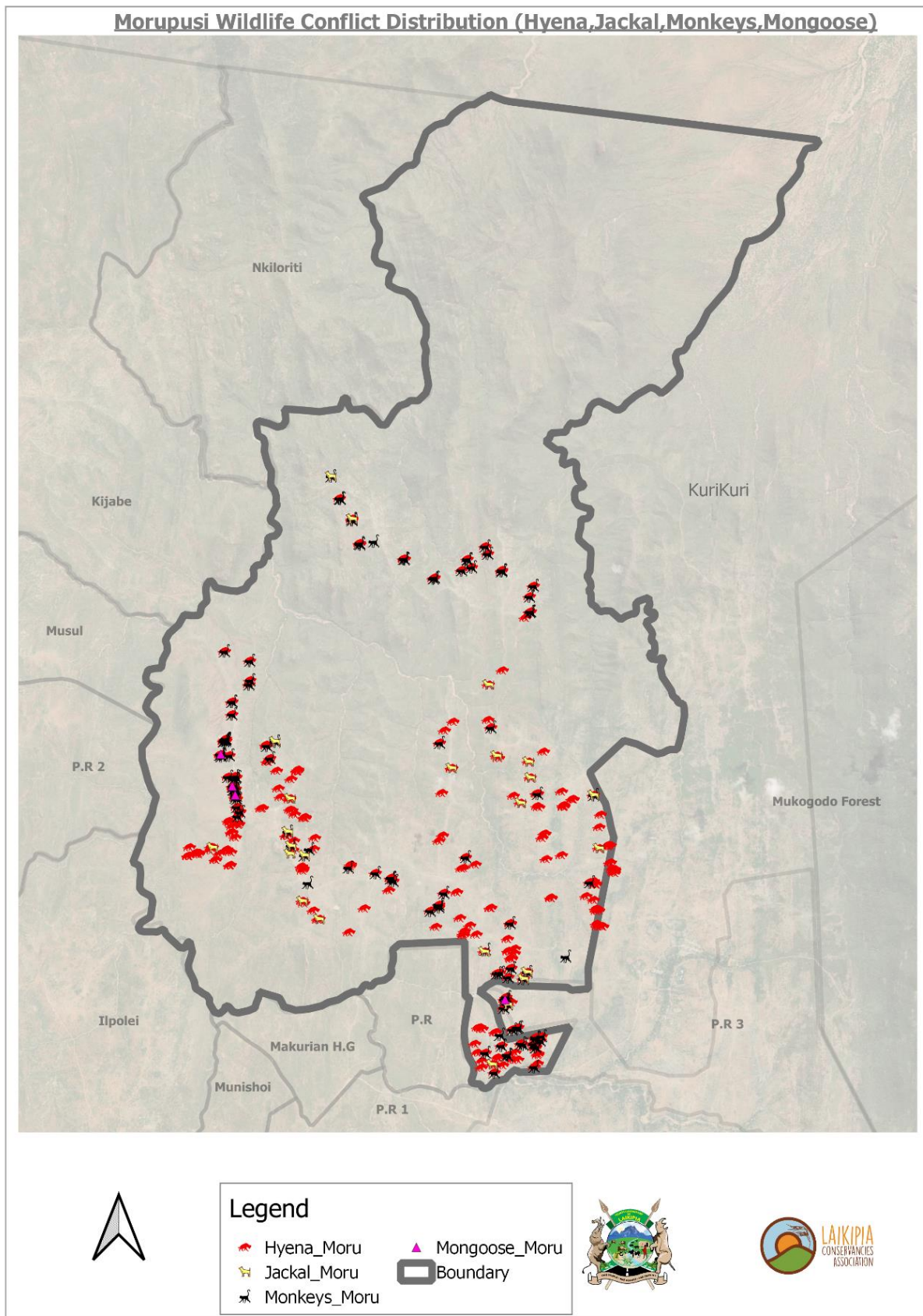
Map 23: Human - Wildlife Conflict Hotspots



Source: Laikipia County GIS Lab, 2026



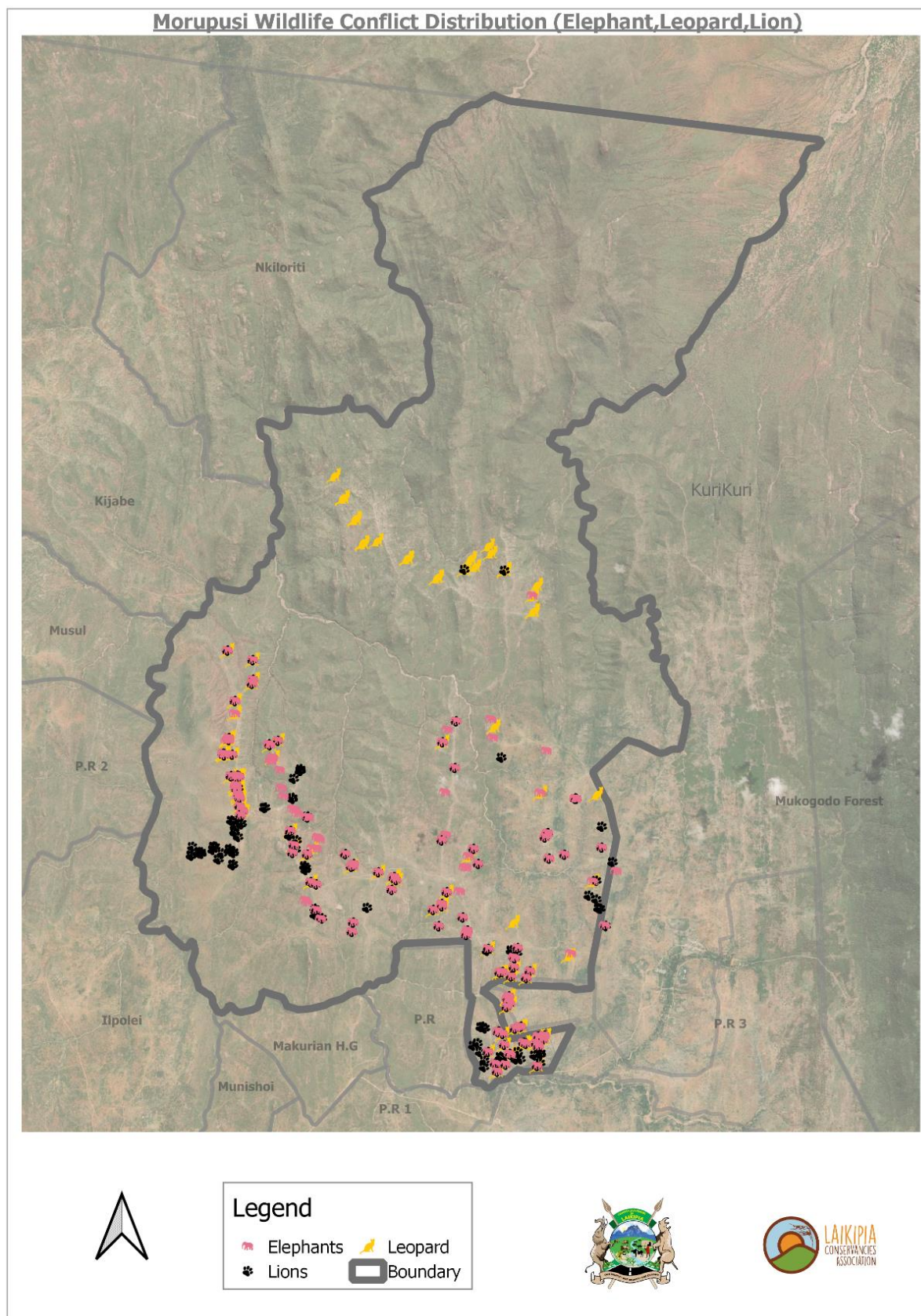
Map 24: Wildlife Citing Sites



Source: Laikipia County GIS Lab, 2026



Map 25: Wildlife Citing; Elephant, Leopard, Lion



Source: Laikipia County GIS Lab, 2026



3.10.1.1. Emerging Issues and Planning Implications

Economic Impacts- Livestock losses represent a direct financial loss to households. It's imperative to address this issue because approximately **89%** of households depend primarily on livestock as a source of livelihood.

Food and Livelihood Security- In a community already affected by drought and declining livestock numbers, additional wildlife-related losses can significantly weaken household resilience.

Social Impacts- Fear of wildlife can affect people's freedom of movement, particularly at night and in areas where predators are common. Women and children may be particularly vulnerable when collecting water, firewood or travelling between settlements and schools.

Conservation Implications- Persistent conflict can reduce community tolerance towards wildlife. If households repeatedly experience livestock losses without effective prevention, response or compensation mechanisms, wildlife may increasingly be viewed primarily as a threat to livelihoods.

3.11. Visioning and SWOT Analysis

This process was done as part of public participation aimed at identification and development of a set of vision statements that best articulate and represent the desires and perspective of the residents of Morupusi Community Land and a bottom-up approach analysis that best describes the site.

The engagement of the community in the planning process has been envisioned firmly in the Constitution of Kenya (2010) and other legal frameworks such as The Physical and Land Use Planning Act No 13 of 2019, The Community Land Act of 2016 and The County Government Act of 2012.

The objectives of this process are similar to those of public participation. They are as follows;

1. **Provides a clear direction for development:** The vision statement captures the community's shared aspirations and desired future, guiding the preparation of the local physical and land use development plan.
 2. **Promotes community ownership and participation:** Developing the vision and conducting the SWOT analysis through stakeholder engagement ensures that local people actively contribute to decisions affecting their land and development.
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3. **Identifies strengths, weaknesses, opportunities and threats:** SWOT analysis helps the community understand existing conditions, available resources, development challenges and potential opportunities that should inform planning decisions.
4. **Helps set realistic priorities and strategies:** The findings enable planners and the community to identify priority development needs, allocate land appropriately and develop practical strategies that respond to local circumstances.
5. **Build consensus and supports sustainable development:** Stakeholder discussions create a common understanding among community members and other stakeholders, reducing conflicts and ensuring that the plan reflects local needs while promoting sustainable and balanced land use.
6. **Helps to develop a more effective and implementable LPLUDP:** Stakeholder driven statements and proposals represent realistic issues and implementable proposals and projects.

3.11.1. Approach and Methodology

The visioning and SWOT Analysis exercise was conducted through meetings with the community and CLMCs at Chui Mama Cultural Center Meeting Hall. The exercise was done in one meeting starting with Visioning the SWOT Analysis. *(See attached Photos and attendance Lists).*

3.11.2. Visioning

The visioning exercise was a public participation technique used to support stakeholders in establishing a shared vision for the future development of Morupusi Community Land.

Where are we from?

The community has not fully embraced environmental conservation and their activities contribute to environmental degradation. There has been continuous overgrazing without allowing for vegetation regeneration. Human-wildlife conflicts are a major threat to household livelihoods.

Current Situation

There is growing need for land use planning to incorporate community needs from their own perspective and technical expertise. These will ensure there is improvement in the community's quality of life by ensuring the current residents can utilize their resources without compromising the ability of future generations to utilize the same resources.



Future Prospects

Pastoralism is a major economic activity for Morupusi Community Land. Therefore, there is a need to incorporate it into land use planning. However, there should be concerted efforts to conserve the environment and protect the available resources.

3.11.3. Overall, Vision Statement for Morupusi Community Land

“To build a thriving, resilient and united Morupusi community where land rights are secure, natural resources are sustainably managed, cultural heritage is safeguarded, biodiversity and wildlife flourish, degraded habitats are restored, and inclusive, community-led governance creates sustainable livelihoods and a prosperous future for present and generations to come,”

3.11.4. SWOT Analysis

STRENGTHS	
Tradition, Culture and People	<ul style="list-style-type: none">• Rich cultural heritage and local traditions foster strong community identity.• Welcoming, friendly and resilient people with strong social cohesion.• Strong community participation and willingness to engage in development initiatives.• Indigenous knowledge and traditional practices that can support local development and conservation.
Livestock and Bee keeping	<ul style="list-style-type: none">• Abundant grazing areas supporting livestock rearing, including cattle, goats, sheep and poultry.• Strong potential for beekeeping due to availability of flowering plants and natural habitats.• Existing local knowledge and traditional practices in animal husbandry and apiculture.• Potential for value addition through honey, beeswax, hides, milk and other livestock products.
Natural Resources	<ul style="list-style-type: none">• Sand resources are available for construction and local development.• Land is suitable for carbon-credit projects, conservation and ecosystem restoration.• Natural springs provide potential sources of fresh water.• Rock catchments and rocky outcrops are suitable for harvesting water.



	<ul style="list-style-type: none">• Natural landscapes have potential for sustainable resource-based enterprises.
Vegetation & Trees	<ul style="list-style-type: none">• Indigenous vegetation supporting biodiversity and ecosystem balance.• Availability of useful trees and plants such as Aloe Vera, Opuntia, Olive Trees and Fig Trees.• Potential for reforestation, agroforestry and land restoration.• Potential for production of herbal, medicinal and other plant-based products.• Vegetation provides opportunities for beekeeping, livestock fodder and environmental conservation.
Social Infrastructure	<ul style="list-style-type: none">• Presence of churches and faith-based organizations promoting social cohesion and community values.• Strong community networks and local groups that support mutual assistance and cooperation.
Public Facilities	<ul style="list-style-type: none">• Availability of schools supporting education and youth empowerment.• Health centers provide basic healthcare services to the community.• Existing public facilities provide a foundation for further community development.• Other public institutions have been support awareness, training and community-based programmes.
Transport Infrastructure	<ul style="list-style-type: none">• Existing airstrip with potential to improve regional connectivity and support emergency services.• Road network connecting communities and facilitating movement of people and goods.• Transport infrastructure supports tourism, trade, agriculture and access to public services.
Tourism Facilities	<ul style="list-style-type: none">• Conservation areas with rich wildlife and natural biodiversity.• Diverse wildlife species with potential to attract nature-based and eco-tourism.• Scenic viewpoints and beautiful landscapes suitable for tourism and recreational activities.



WEAKNESS

Poor management	<ul style="list-style-type: none">• Weak coordination and management of available community resources and development initiatives.• Lack of skilled labour to propose and implement projects• Inadequate maintenance and management of existing public infrastructure and facilities.
Drought and Famine	<ul style="list-style-type: none">• Frequent and prolonged droughts affect water availability, livestock and food production.• Heavy dependence on rain-fed livelihoods, increasing vulnerability to climate variability.• Limited water-storage facilities and drought-resilience infrastructure.• Reduced livestock productivity and household income during prolonged dry periods.• Limited food reserves and alternative livelihood opportunities during periods of drought.
Livestock disease	<ul style="list-style-type: none">• Frequent occurrence of livestock diseases affecting productivity.• Limited access to veterinary services, medicines and animal-health professionals.• Inadequate vaccination and disease-prevention programmes.• Long distances to veterinary facilities and livestock markets.• Limited knowledge of improved livestock management and disease control.
Insecurity and Banditry	<ul style="list-style-type: none">• Insecurity discourages investment and limits tourism and economic activities.• Loss of livestock and property contributes to household economic vulnerability.• Loss of managed pasture in conservation and grazing areas that was set aside for dry periods.• Fear and insecurity are restricting access to schools, health facilities and markets during raids• Limited security infrastructure and response capacity.



Soil Erosion	<ul style="list-style-type: none">• Erosion of sand dams and formation of gullies during heavy rainfall• Inadequate soil and water conservation measures.• Increased sedimentation of sand dams and drainage channels.• Poor vegetation cover in some areas increases vulnerability to erosion.
Land Degradation	<ul style="list-style-type: none">• Overgrazing and overstocking contribute to deterioration of grazing land.• Reduction of vegetation cover.• Unsustainable land-use practices accelerate environmental degradation.• Limited implementation of land-restoration and range-land-management measures.• Increasing pressure on available grazing land.
Invasive Species	<ul style="list-style-type: none">• Spread of invasive plant species that compete with indigenous vegetation.• Invasive species reduce grazing resources and affect ecosystem health.• Limited capacity and resources for invasive-species control.• Potential loss of biodiversity and degradation of natural habitats.
Sand Harvesting	<ul style="list-style-type: none">• Unregulated sand harvesting can degrade riverbeds and surrounding landscapes.• Lack of compliance with NEMA Audit requests• Unsustainable extraction may increase erosion and damage water infrastructure.
Water Pollution	<ul style="list-style-type: none">• Water scarcity and reduced water quality affect households, livestock and livelihoods.• Poor waste-management practices can contaminate water sources.• Overextraction of sand near sand dams have resulted to over alkalization of water.• Limited access to water-treatment facilities and safe drinking water.
Charcoal Burning	<ul style="list-style-type: none">• Unsustainable charcoal production contributes to loss of trees and vegetation.• Deforestation increases soil erosion and land degradation.



	<ul style="list-style-type: none">• Charcoal burning reduces biodiversity and ecosystem services.• Charcoal Burning is a result of limited access to alternative energy sources and sustainable livelihoods.
Lack of proper marketing	<ul style="list-style-type: none">• Limited access to reliable markets for livestock, and natural-resource products.• Lack of adequate visitors/tourists to exhibition centers i.e. Manyattas to support these business models• Limited value addition and processing of locally produced goods.• Limited branding and promotion of local cultural and tourism products.
Lack of funds	<ul style="list-style-type: none">• Lack of proper reinvestment schedules of income raised through different streams in the community.• Overreliance on external investments
Lack of fences on public infrastructure	<ul style="list-style-type: none">• Lack of fences around public infrastructure exposes facilities to encroachment and damage.• Public facilities may be vulnerable to uncontrolled livestock movement.• Inadequate site security affects the protection and maintenance of public investments.• Insufficient investment in fencing limits effective management of public facilities
Human Wildlife conflict	<ul style="list-style-type: none">• Wildlife interactions with community members have resulted to loss of life, destruction of property and loss of livestock.• Competition for water and grazing resources have increased contact between people and wildlife.• Human-wildlife conflicts have discouraged some conservation efforts such as tree planting
Lack of a reliable Energy source	<ul style="list-style-type: none">• Limited access to reliable electricity constrains household and economic activities.• Inadequate electricity affects schools, health centers, businesses and public institutions.



	<ul style="list-style-type: none">• Lack of reliable power limits digital connectivity and access to information.• Limited energy infrastructure constrains investment, processing and value-addition activities.
Lack of a proper land use plan	<ul style="list-style-type: none">• Unplanned development has led to inefficient use of available land.• Too many churches may reduce land available for other community use. e.g. in Kurum• Lack of clear zoning has increased conflicts between residential, , conservation and commercial activities.• Uncoordinated development may result in encroachment on animal corridors.• Limited land-use planning makes it difficult to protect strategic public facilities and future development sites.
Poor road conditions	<ul style="list-style-type: none">• Poor road conditions have affected movement of people, goods and essential services.• Eroded areas, no culverts, damaged bridges and poor grading reduce accessibility.• Poor roads increase transport costs and travel time to markets and public facilities.• During rainy seasons, some routes may become difficult or impossible to use.• Poor connectivity limits tourism, trade, healthcare access and economic development
Lack of resources in the health centers	<ul style="list-style-type: none">• Lack of adequate medicines, medical equipment and healthcare personnel.• Limited availability of qualified and specialized healthcare services.• Long distances to better-equipped health facilities increase the cost of accessing healthcare.• Inadequate facilities and equipment reduce the quality and range of services available.



	<ul style="list-style-type: none">• Limited staffing can result in long waiting times and reduced service coverage.
Lack of resources in the education facilities	<ul style="list-style-type: none">• Shortage of teachers affects the quality and availability of education.• Inadequate learning materials and teaching equipment limit effective learning.• Limited access to electricity affects digital learning and school operations.• Inadequate sanitation facilities can negatively affect attendance and student welfare.• Limited classroom infrastructure can contribute to overcrowding.• Insufficient educational resources constrain skills development and youth opportunities.
Poor health conditions	<ul style="list-style-type: none">• Poor health conditions are associated with limited access to quality health services.• Poor nutrition contributes to vulnerability among children and other community members respiratory diseases• Limited health awareness and preventive healthcare services increase disease risks.• Inadequate sanitation and access to clean water can contribute to public-health challenges.• Limited healthcare resources reduce the community's ability to respond effectively to health emergencies.
Migration	<ul style="list-style-type: none">• Frequent movement can disrupt continuity of education and access to healthcare.• Migration may reduce the availability of a stable local workforce.• Seasonal movement can complicate delivery of public services and infrastructure.• Lack of boarding-school opportunities may affect the education of children from mobile households.• Migration can contribute to reduced literacy and continuity of learning in some communities.



OPPORTUNITIES

Land	<ul style="list-style-type: none">• Availability of land provides opportunities for planned settlement and future development.• Potential for livestock production and sustainable rangeland management.• Land can support conservation, carbon-credit projects and biodiversity initiatives.• Opportunities for establishing tourism facilities, community infrastructure and economic activity centers.• Proper land-use planning can improve land productivity and reduce conflicts between competing uses.
Culture & People	<ul style="list-style-type: none">• Rich cultural heritage provides opportunities for cultural tourism and community-based enterprises.• Traditional knowledge and skills can be preserved and developed into income-generating activities.• Strong community identity can support collective development and conservation initiatives.• Opportunities to promote traditional arts, crafts, music, dance, food and cultural experiences.• Youth and women can be integrated into cultural enterprises and local economic activities.
Markets	<ul style="list-style-type: none">• Development of organized commodities and livestock markets can improve incomes for pastoralist households.• Improved market linkages can connect producers with regional and national markets.• Opportunities for livestock aggregation, grading and value addition.• Development of livestock-related facilities such as holding grounds, auction yards and watering points.• Improved veterinary services and animal-health certification can increase market access.• Opportunities for processing milk, meat, hides, skins and other livestock products.



Better management of income	<ul style="list-style-type: none">• Revenue from sand harvesting can be managed through projects such as land rehabilitation• Proper revenue management can support education, healthcare, water infrastructure and other community priorities.
Marketing opportunities	<ul style="list-style-type: none">• Potential to market traditional beadwork and woodwork products to local, regional and international markets.• Development of cooperatives can improve bargaining power and access to markets.• Digital platforms and social media can expand the market for locally produced crafts.• Opportunities for product branding based on local culture and identity.• Tourism markets can provide additional demand for locally produced handicrafts and souvenirs.
Tourism	<ul style="list-style-type: none">• Development of campsites and eco-lodges can increase tourism-related income.• Wildlife and conservation areas provide opportunities for eco-tourism and nature-based tourism.• Cultural tourism can be developed around Manyattas, traditional lifestyles and local heritage.• Scenic landscapes and viewpoints can support photography, hiking and recreational activities.• Tourism can create employment and business opportunities for local communities.• Community-based tourism can ensure that local residents benefit directly from tourism revenues.
Potential exploration of invasive species	<ul style="list-style-type: none">• Opuntia can potentially be explored for fodder production• Research can identify safe opportunities for converting invasive species into useful products such as juices and fabrics.• Controlled utilization can potentially generate alternative livelihoods while supporting invasive-species management.



	<ul style="list-style-type: none">• Processing of invasive species could create opportunities for local enterprises and value addition.
Cultural Manyattas as a production Hub	<ul style="list-style-type: none">• Manyattas can serve as centers for production and marketing of traditional products.• Opportunities for soap-making using locally available oils and natural ingredients.• Honey production and processing can support household income and local enterprise development.• Olive-based products can provide opportunities for value addition.• Traditional artefacts, beadwork and handicrafts can be produced and marketed through cultural centers.• Manyattas can become centers for cultural tourism, training, skills development and community enterprise.• Establishment of organized production hubs can improve quality control, packaging, branding and market access.
THREATS	
Human Wildlife Conflict	<ul style="list-style-type: none">• Wildlife can damage property, livestock and community infrastructure.• Competition for water and grazing resources can increase encounters between people and wildlife.• Wildlife attacks can threaten human safety and household livelihoods.• Human-wildlife conflict may create negative attitudes towards conservation.• Limited compensation and conflict-mitigation mechanisms may increase community vulnerability.
Drought	<ul style="list-style-type: none">• Prolonged drought can affect people, livestock and wildlife.• Reduced water availability can increase competition between communities, livestock and wildlife.• Drought can cause livestock losses, reduced productivity and loss of household income.• Declining pasture and water resources can increase migration and resource-related conflicts.



	<ul style="list-style-type: none">• Recurrent droughts can increase food insecurity and dependence on external assistance.• Drought can weaken vegetation cover and accelerate land degradation.
Insecurity	<ul style="list-style-type: none">• Banditry and insecurity can threaten communities, livestock and economic activities.• Invasion of conserved areas by armed or unauthorized grazers can undermine conservation efforts.• Insecurity can discourage investment and tourism development.• Loss of livestock and property can increase household poverty and vulnerability.• Insecurity may delay implementation and maintenance of development projects.
Lack of finance	<ul style="list-style-type: none">• Insufficient funding can delay or prevent implementation of priority development projects.• Limited financial resources can affect maintenance of existing infrastructure.• Inadequate funding may reduce the ability to attract and implement externally supported projects.• Limited funding can affect conservation, tourism, education, health and water-development initiatives.• Dependence on external funding may make development programmes vulnerable to changing donor priorities.
Poor leadership management	<ul style="list-style-type: none">• Weak leadership and poor accountability can undermine public confidence.• Poor coordination between institutions can delay implementation of development programmes.• Mismanagement of public offices and resources can reduce service delivery.• Lack of transparency can create conflicts and discourage community participation.



	<ul style="list-style-type: none">• Weak institutional capacity can limit effective planning, monitoring and maintenance of projects.
Uncontrolled Sand harvesting	<ul style="list-style-type: none">• Unregulated sand harvesting can result in degradation of riverbanks and river ecosystems.• Excessive extraction can increase soil erosion and formation of gullies.• Sand harvesting may damage water infrastructure and reduce the effectiveness of water-storage systems such as sand dams.• Unsustainable extraction can reduce the environmental quality of rivers and surrounding areas.
Lack of pasture	<ul style="list-style-type: none">• Overgrazing can reduce pasture availability and carrying capacity of grazing areas.• Declining pasture can result in livestock malnutrition and reduced productivity.• Pasture shortages can increase seasonal migration and pressure on neighboring grazing areas.• Continuous grazing can prevent regeneration of vegetation and accelerate land degradation.• Reduced pasture availability can increase livestock mortality during prolonged droughts.
Climate change	<ul style="list-style-type: none">• Unpredictable weather conditions can disrupt pastoralism, and other livelihoods.• Increasing frequency and intensity of heat waves can affect people, livestock and wildlife.• Changes in rainfall patterns can reduce water availability and pasture production.• Extreme weather events can increase soil erosion, flooding and land degradation.• Climate variability can increase food insecurity and household economic vulnerability.• Changing climatic conditions may reduce the reliability of traditional livelihood systems.



Invasive species	<ul style="list-style-type: none">• Invasive species can outcompete indigenous vegetation and reduce biodiversity.• Invasive plants can reduce the availability and quality of grazing resources.• Rapid spread of invasive species can degrade rangelands and natural habitats.• Control and eradication can require significant financial and technical resources.• Uncontrolled invasive species may reduce the ecological and economic value of conservation areas.
Lack of adequate water	<ul style="list-style-type: none">• Inadequate water availability threatens both livestock and wildlife.• Competition for limited water resources can increase human-wildlife and community conflicts.• Water shortages can reduce livestock productivity and increase animal mortality.• Limited water infrastructure can restrict settlement, agricultural and economic development.• Long distances to reliable water sources increase the burden on households and livestock keepers.• Declining water resources during drought can intensify pressure on rivers, springs and water points.
Land degradation and soil erosion	<ul style="list-style-type: none">• Continued land degradation can reduce the productivity and carrying capacity of rangelands.• Soil erosion can result in loss of fertile topsoil and formation of gullies.• Overgrazing and vegetation loss can accelerate erosion and desertification.• Degraded land can reduce pasture availability and affect livestock productivity.• Severe degradation can reduce biodiversity and undermine long-term livelihood opportunities.



Livestock and wildlife diseases	<ul style="list-style-type: none">• Outbreaks of livestock diseases can cause significant losses to pastoralist households.• Wildlife can act as reservoirs or carriers of diseases affecting domestic animals.• Disease transmission can increase where livestock and wildlife share water and grazing areas.• Limited veterinary services and disease surveillance can delay detection and response.• Livestock diseases can reduce productivity and restrict access to livestock markets.• Wildlife disease outbreaks can also affect conservation efforts and tourism activities.
Charcoal Burning	<ul style="list-style-type: none">• Unsustainable charcoal burning can accelerate deforestation and loss of vegetation.• Removal of trees increases soil erosion and land degradation.• Charcoal production can reduce habitats available for wildlife and biodiversity.• Continued tree cutting can reduce ecosystem services such as shade, soil protection and carbon storage.• Dependence on charcoal as a livelihood may increase pressure on remaining natural vegetation.• Deforestation can reduce the long-term resilience of the community to climate change.
Poor road conditions	<ul style="list-style-type: none">• Poor roads can limit access to markets, schools, health centers and other public facilities.• Erosion, lack of culverts, damaged bridges and inadequate grading can reduce accessibility.• Roads may become impassable during heavy rains, isolating communities.• Poor road conditions increase transport costs for livestock, goods and essential services.



- Limited connectivity can discourage investment and restrict tourism development.
 - Poor accessibility can delay emergency response, healthcare services and delivery of essential supplies.
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CHAPTER FOUR: PLANNING PROPOSALS GUIDELINES AND STANDARDS

4.0. Overview

The proposed plan focuses on three interconnected pillars: Human, Livestock, and Wildlife. These pillars are closely linked, and the success of one contributes to the well-being and sustainability of others. These pillars are the basic foundation. Through addressing problems and proposals within this sector, sustainable development will eventually be realized.

The proposals under this plan are therefore designed to address these three pillars in an integrated manner. Improving human livelihoods, strengthening livestock management, and conserving wildlife and their habitats are mutually reinforcing objectives. For example, improved livelihood opportunities can reduce dependence on natural resources and increase community support for conservation, while better livestock management can reduce pressure on grazing areas, water resources, and wildlife habitats.

Careful management of land and its resources is essential for achieving these outcomes. Sustainable activities and new income-generating opportunities can improve livelihoods, reduce poverty, and strengthen communities' capacity to participate in conservation. At the same time, improved livestock management can reduce competition for grazing and water and help minimize Human-Wildlife Conflict.

As communities experience improved livelihoods and greater benefits from conservation, awareness, participation, and tolerance toward wildlife are likely to increase. This can support the protection of wildlife corridors, grazing areas, and water points, creating a more balanced relationship between people, livestock, and wildlife.

Ultimately, the proposals are interconnected: they aim to improve human well-being, support sustainable livestock production, and conserve wildlife and natural resources as parts of an integrated landscape system.



4.1. Human Settlement Strategy

The Proposed Local Physical and Land Use Development Plan for Morupusi Community Land provides a spatial framework for organizing human settlements and allocating land for residential, educational, health, public-purpose, recreational, and transportation uses. The proposals are informed by the land-use budget and situational analysis, with the overall objective of improving access to essential services, promoting safe and adequate housing, and guiding orderly settlement growth. The plan also seeks to minimize scattered development and prevent encroachment into designated conservation areas, wildlife corridors, and livestock grazing zones.

Residential Areas: A proposed residential zone covering approximately 3,244.07 hectares is designated in the southern and central parts of Morupusi Community Land, where existing settlements, roads, and services are concentrated. Residential development should be guided by a low-density settlement model, with a minimum plot size of 0.5 acres and the maximum land allocation determined by household and herd size, in accordance with the approved planning guidelines. Building heights should generally be limited to ground floor plus one upper floor (G+1). New homesteads should be located within designated residential areas, with adequate access to roads, water, and essential services, while maintaining appropriate separation from conservation areas, wildlife corridors, and grazing land.

Housing Improvement and Settlement Upgrading: The situational analysis indicates that 57.8% of households live in temporary structures, while only 18.7% occupy permanent houses. This highlights the need to improve housing quality, safety, and resilience without imposing unaffordable development requirements on pastoral households. The plan promotes the use of locally available and affordable building materials, appropriate building technologies, and incremental housing improvements that enable households to upgrade their homes over time. Housing support initiatives should be complemented by community awareness on safe construction, sanitation, ventilation, and the importance of locating homesteads in areas with suitable access to services and lower exposure to environmental and wildlife-related risks.

Educational Facilities: Existing educational facilities, including Saramba Primary School, Kurum Primary School (3.41 hectares), Kurum Secondary School (1.92 hectares), and Soit Oudo (11 hectares), should be retained and protected from encroachment. Adequate space



should be safeguarded for future expansion where required. The situational analysis identifies settlements around Kipsing as being beyond the recommended 2-kilometre school-access buffer, indicating a gap in educational service provision. The plan therefore proposes the establishment of an additional school or rehabilitation and reopening of the currently non-functional Picha Primary School, subject to assessment of demand, site suitability, infrastructure requirements, and community consultation. These interventions would improve access to education and reduce the distance children travel to school.

Health Facilities and Public-Purpose Uses: Kurum Dispensary is currently the only identified health facility serving the community land. To improve access to primary healthcare, the plan provides for a proposed dispensary occupying approximately 1.8 hectares, strategically located to serve underserved settlements. Site planning should provide adequate access, safe pedestrian movement, water supply, sanitation, and space for future expansion. The C.P.K Church, occupying approximately 3.35 hectares, is retained as a public-purpose use. Existing public-purpose facilities should be protected from incompatible development, with provision for additional community facilities considered in response to population growth and emerging service needs.

Recreational and Tourism Facilities: The Saramba Camping Site (2.04 hectares) and Wakumbe Campsite (6.97 hectares) are retained as designated recreational and tourism-related uses. These facilities provide opportunities for recreation, tourism, and livelihood diversification while contributing to the value of the wider landscape. Their development and operation should be guided by appropriate environmental management, safe access, controlled development intensity, and adequate waste disposal and sanitation facilities. Fencing may be provided where necessary for safety and site management, provided it does not obstruct designated wildlife corridors or interfere with essential wildlife movement. Tourism and recreational activities should be compatible with the surrounding residential, grazing, and conservation land uses.

Transportation and Road Infrastructure: Roads occupy approximately 95.83 hectares of the planned land-use area and are essential for connecting settlements to schools, health facilities, livestock infrastructure, markets, and other services. Main arterial roads should have road reserves of at least 30 metres, while local distributor roads should generally have reserves of 12–15 metres, subject to the applicable road classification and approval requirements.



Permanent structures and other incompatible developments should not be permitted within designated road reserves. Existing road reserves should be protected, and priority should be given to improving access to underserved settlements and essential community facilities. Saramba Airstrip, occupying approximately 7.63 hectares, should be safeguarded from high-rise buildings and other incompatible developments that could compromise aviation safety or operational requirements.

Waste Management and Sanitation: Kurum Centre is prioritized for the provision of waste collection and public sanitation facilities due to its concentration of settlement and community activities. The plan proposes establishing suitable waste collection points, public sanitation facilities, and appropriate arrangements for the safe handling and disposal of solid and liquid waste. Residential areas, schools, health facilities, recreational sites, and commercial activity areas should incorporate adequate sanitation and waste-management provisions. Community awareness and coordinated waste collection will be important in preventing environmental pollution, protecting water sources, and maintaining a clean and healthy settlement environment.

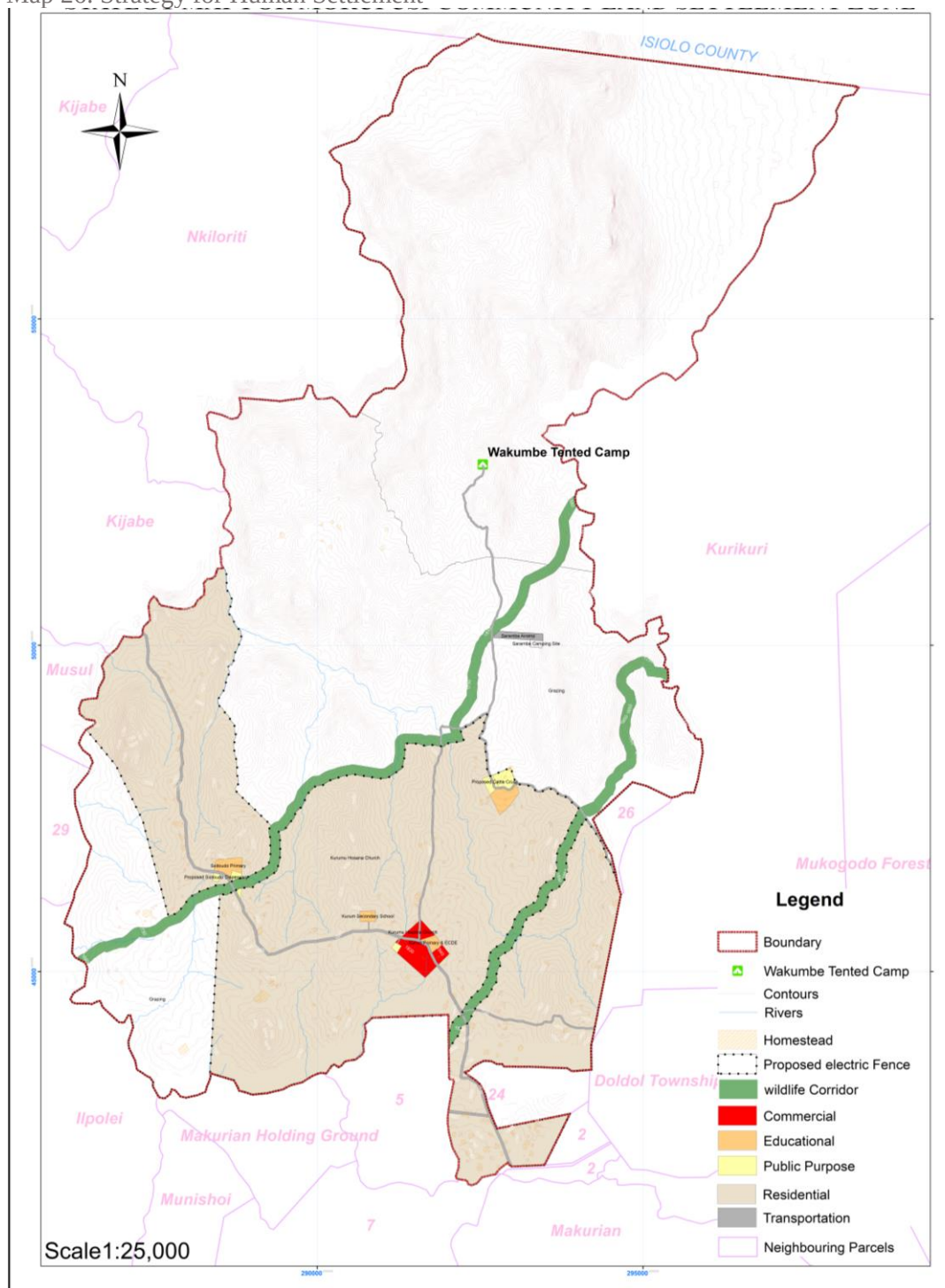
Integrated Settlement Planning and Environmental Protection: The proposed settlement arrangement promotes orderly, accessible, and appropriately serviced residential development, with priority given to areas close to existing roads, water sources, schools, and health facilities. Concentrating new settlement within designated residential zones will help reduce scattered homesteads, improve service delivery, and lower the cost of providing infrastructure. Settlement boundaries should be clearly defined and enforced to prevent encroachment into the northern conservation area, designated wildlife corridors, and livestock grazing zones. Where settlements occur near wildlife movement routes, appropriate buffers, safe livestock enclosures, and other conflict-reduction measures should be considered in consultation with affected households and relevant conservation authorities.

The proposed human settlement and community facilities framework seeks to improve housing conditions, expand access to education and healthcare, strengthen road connectivity, and provide adequate recreational and public-purpose facilities. Its implementation should be guided by community participation, secure and orderly land allocation, protection of public land and infrastructure reserves, and compliance with applicable planning and environmental requirements. By coordinating settlement growth with livestock production, wildlife



conservation, and environmental management, the plan provides a basis for improving community livelihoods while safeguarding Morupusi's natural resources over the 2026–2036 planning period.

Map 26: Strategy for Human Settlement



Source: Laikipia County GIS Lab, 2026



4.2. Wildlife and Conservation Strategy

The proposed Wildlife and Conservation Strategy for Morupusi Community Land seeks to safeguard critical wildlife habitats, maintain ecological connectivity, reduce human–wildlife conflict, and promote harmonious coexistence between wildlife, livestock, and human settlements. The strategy integrates conservation zoning, protection of wildlife corridors, strategic fencing, sustainable settlement planning, and environmental restoration. It recognizes the importance of wildlife to ecosystem health and tourism while acknowledging that wildlife-related losses can undermine pastoral livelihoods, household food security, and community support for conservation.

The strategy therefore proposes a spatial arrangement that clearly defines conservation areas, wildlife movement routes, settlement zones, and grazing areas. These land uses should be managed in a coordinated manner to minimize competition for land and water, prevent settlement encroachment into sensitive habitats, and maintain access to essential resources for both people and wildlife.

4.2.1. Conservation Area

A conservation area covering approximately 3,401.45 hectares is designated in the northern part of Morupusi Community Land, bordering Isiolo County. The area is intended to protect wildlife habitats, conserve biodiversity, maintain ecosystem functions, and support the long-term sustainability of the wider landscape. New human settlements and incompatible developments should not be permitted within the designated conservation area. Existing community rights and any established lawful uses should be addressed through participatory management arrangements consistent with the approved land-use plan and applicable law.

Low-impact ecotourism may be permitted under a community- or conservancy-based management agreement, subject to environmental assessment, agreed development controls, and community approval where required. Activities such as reforestation, reseeding with appropriate indigenous vegetation, erosion control, and rehabilitation of degraded habitats should be promoted as ongoing conservation measures. These interventions will improve habitat quality, restore vegetation cover, and strengthen the ecological resilience of the community land.



4.2.2. Protection of Wildlife Corridors

Wildlife corridors covering approximately 292.71 hectares traverse Morupusi Community Land and provide essential routes for wildlife movement between habitats, grazing landscapes, and water sources. The plan proposes maintaining a minimum buffer of 250 metres along designated corridors to support animal movement and reduce disturbance from incompatible land uses.

The corridors should be spatially planned to avoid passing directly through densely settled areas and, where feasible, to minimize overlap with intensively used livestock grazing zones. Development of permanent structures, expansion of homesteads, and other activities that obstruct wildlife movement should be restricted within designated corridor areas, subject to the approved plan and applicable legal requirements.

Where corridors intersect existing grazing areas or community access routes, management arrangements should be developed through consultation with affected households. These arrangements should maintain essential community access while protecting wildlife movement. Regular monitoring and enforcement of agreed zoning provisions will be necessary to prevent gradual encroachment and fragmentation of the corridors.

4.2.3. Human Settlement Planning and Wildlife Separation

Human settlement planning is a central component of wildlife conservation and conflict prevention in Morupusi Community Land. Unplanned settlement expansion into conservation areas, wildlife corridors, and other ecologically sensitive locations can obstruct wildlife movement, increase encounters between people and animals, and expose households and livestock to avoidable risks.

The plan therefore proposes directing new settlement and settlement expansion towards designated residential areas outside conservation zones and critical wildlife corridors. Homesteads should be located with consideration for access to water, grazing resources, security, and other essential services while maintaining appropriate separation from wildlife movement routes and known conflict hotspots.

Settlement planning should also discourage the establishment of new homesteads and sensitive community facilities in locations with a high risk of wildlife incursions. Where existing



settlements are located near wildlife corridors or conservation areas, appropriate mitigation measures should be developed in consultation with affected households rather than relying solely on relocation or restrictive measures. These may include clearly defined settlement boundaries, community awareness programmes, improved livestock enclosures, and coordinated wildlife monitoring.

The objective is to achieve a practical balance between community settlement needs, secure access to land and resources, and the protection of wildlife habitats. This approach should be implemented through community participation and consistent enforcement of agreed land-use guidelines.

4.2.4. Proposed Wildlife Fencing

The plan proposes approximately 53.32 kilometers of wildlife fencing, strategically located at selected interfaces between wildlife corridors, settlements, and livestock-use areas to reduce human–wildlife conflict. The proposed fencing is intended to protect homesteads, livestock, and other vulnerable areas from wildlife incursions while helping to guide movement away from high-risk settlement zones.

Fence alignment should be informed by ecological assessments, wildlife movement patterns, settlement distribution, and community consultation. Fencing should not unnecessarily obstruct essential wildlife corridors or sever connections between habitats and water sources. Appropriate wildlife passage points and other mitigation measures should be incorporated where necessary to maintain ecological connectivity.

The community should establish clear arrangements for fence installation, maintenance, monitoring, and repair in collaboration with relevant wildlife authorities and conservation partners. The design and location of fencing should also consider the need to preserve pastoral mobility and avoid restricting livestock access to designated grazing areas and water points.

4.2.5. Human–Wildlife Conflict Management

Reported household conflicts involving wildlife include lions (255 reports), hyenas (234), elephants (109), leopards (83), and jackals (51). These reported figures indicate the importance of addressing both livestock predation and encounters involving large wildlife. With



approximately 89% of households primarily dependent on livestock, wildlife-related losses can directly affect household income, food security, and the resilience of pastoral livelihoods.

The strategy proposes an integrated approach that combines habitat protection, settlement planning, livestock management, strategic fencing, and improved incident response. Livestock owners should be encouraged to strengthen night-time enclosures, improve herding practices, and avoid leaving livestock unattended in high-risk areas. Community reporting systems and coordinated patrols should support timely communication of wildlife sightings, livestock attacks, and other conflict incidents.

Collaboration among community land governance structures, the Kenya Wildlife Service, National Police Reservists, county authorities, and conservation organizations will be important in strengthening prevention and response. The community should also be sensitized on safe conduct around wildlife, appropriate incident reporting procedures, and the available processes for reporting wildlife-related damage or seeking assistance under applicable arrangements.

The effectiveness of these measures should be assessed through regular monitoring of livestock losses, property damage, wildlife incursions, and the frequency and location of reported incidents.

4.2.6. Management of Shared Grazing Areas and Water Resources

Some designated grazing areas may intersect with wildlife corridors or areas used by wildlife to access water. Where such overlaps occur, the plan proposes coordinated access arrangements to reduce direct competition and avoid simultaneous use of particularly sensitive locations by livestock and wildlife.

Time-based access arrangements may be applied where appropriate, allowing livestock and wildlife to use shared areas or water points at different times. Such arrangements should be developed in consultation with livestock owners and conservation stakeholders, taking into account seasonal grazing patterns, water availability, wildlife movement, and the practical needs of pastoral households.



Where feasible, alternative livestock watering points should be developed outside critical wildlife movement routes to reduce pressure on shared resources. Grazing schedules should also allow vegetation to recover and prevent excessive livestock concentration around water sources. These measures will help reduce competition, minimize disturbance to wildlife, and support sustainable management of the community's rangelands.

4.2.7. Environmental Restoration and Sustainable Conservation Financing

The plan promotes environmental restoration within designated conservation areas, wildlife corridors, and other degraded parts of Morupusi Community Land. Priority interventions include reforestation where ecologically appropriate, reseeding with suitable indigenous vegetation, erosion control, and restoration of degraded rangelands. These measures will help improve habitat quality, stabilize soils, restore vegetation cover, and support the long-term resilience of the landscape.

The community may also explore carbon credits as a potential source of finance for eligible restoration and conservation activities. Projects involving vegetation restoration, improved rangeland management, or protection of qualifying ecosystems may generate measurable carbon benefits, subject to technical feasibility, applicable standards, and independent verification where required. Any proposed initiative should establish clear carbon rights, secure community consent, protect customary resource access, and provide transparent and equitable benefit-sharing arrangements.

Green bonds and other environmental financing mechanisms may also be explored to support eligible investments in conservation infrastructure, ecosystem restoration, renewable-energy systems, and community-based environmental management. Given the financial and institutional requirements of green bonds, implementation may require collaboration with the County Government of Laikipia, relevant government agencies, development finance institutions, conservation organizations, and private investors. The feasibility of a county-level or pooled financing arrangement should be assessed before selecting a financing structure.

Carbon credits and green bonds should be treated as complementary financing options rather than guaranteed sources of revenue. Carbon credits may support eligible activities that generate verified carbon benefits, while green bonds can finance larger environmental investments where appropriate repayment arrangements are available. Any financing mechanism should



include clear project priorities, environmental safeguards, transparent financial management, and measurable outcomes. Community participation and the protection of customary grazing and settlement rights should remain central to all conservation investments.

4.2.8. Community Participation, Governance, and Monitoring

Effective implementation of the Wildlife and Conservation Strategy will depend on community ownership, clear institutional responsibilities, and consistent enforcement of agreed land-use provisions. Community land governance structures should work with affected households and relevant stakeholders to protect conservation areas, maintain wildlife corridors, manage settlement expansion, and coordinate access to shared grazing and water resources.

Community participation should be maintained throughout planning, implementation, monitoring, and review. Particular attention should be given to households that may experience restrictions on access to grazing areas, changes in wildlife movement, or other effects arising from conservation interventions. Agreed management arrangements should recognize legitimate community needs while safeguarding critical wildlife habitats.

Monitoring should track the condition of conservation areas and wildlife corridors, the effectiveness of fencing, changes in settlement encroachment, and trends in wildlife-related losses. Where carbon-credit projects or green-financed investments are implemented, monitoring should also address relevant environmental indicators, financial accountability, and the distribution of community benefits. The results should inform periodic reviews and adjustments to the strategy.

The proposed Wildlife and Conservation Strategy seeks to establish a balanced land-use framework in which wildlife conservation, human settlement, livestock production, and community livelihoods can coexist. The designation of a 3,401.45-hectare conservation area, protection of 292.71 hectares of wildlife corridors, provision of 53.32 kilometres of strategically located fencing, and implementation of improved settlement and shared-resource management measures provide the foundation for reducing conflict and safeguarding ecological connectivity.

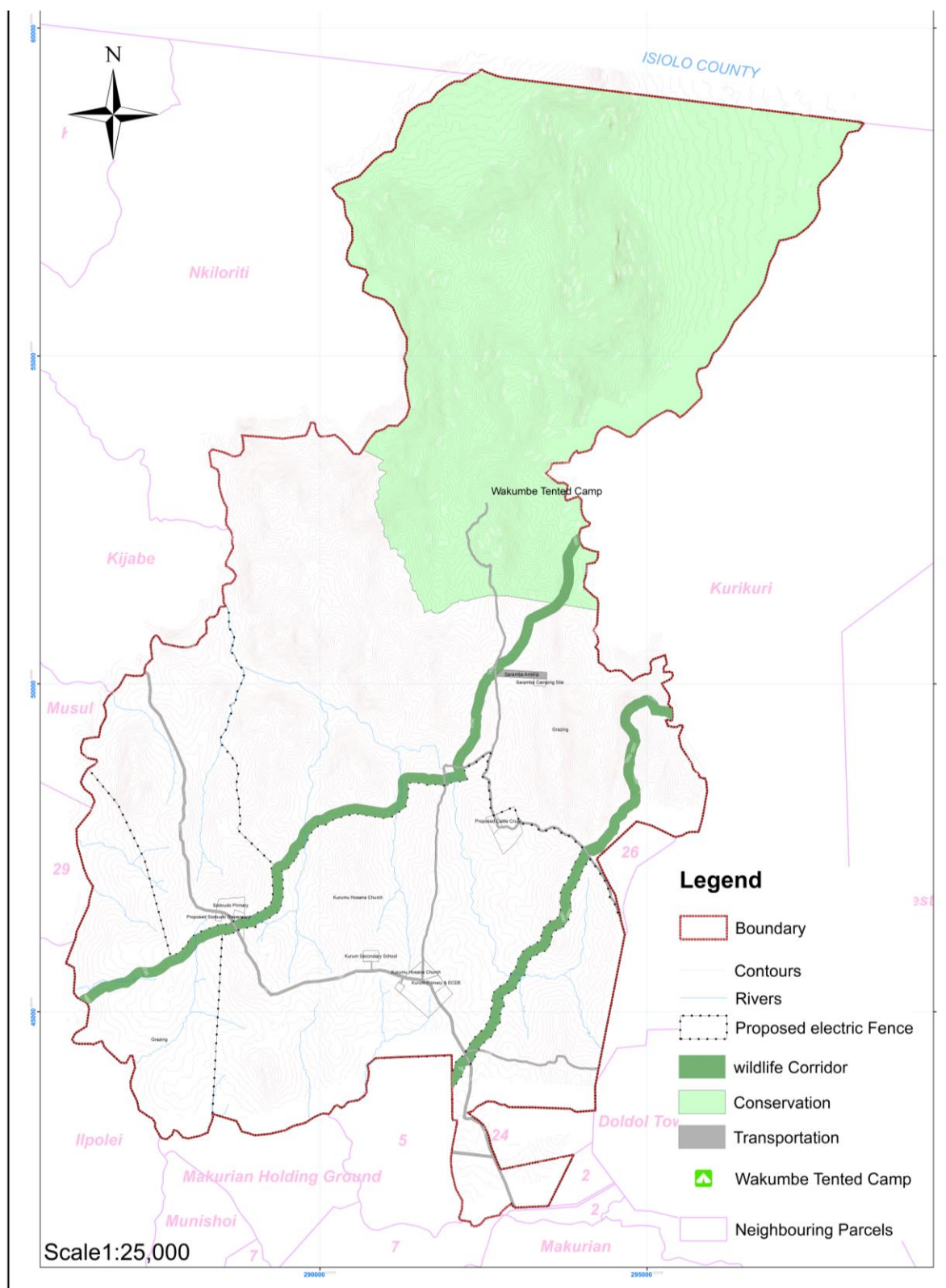
By integrating environmental restoration, community participation, and potential carbon-credit and green-financing opportunities, Morupesi Community Land can strengthen conservation



efforts while creating opportunities to support local livelihoods. The long-term success of the strategy will depend on effective community governance, appropriate settlement planning, coordinated management of grazing and water resources, sustainable financing, and continued collaboration with conservation and government institutions over the 2026–2036 planning period.



Map 27: Strategy for Wildlife Sector



Source: Laikipia County GIS Lab, 2026



4.3. Livestock Development Strategy

The proposed livestock development strategy for Morupusi Community Land seeks to secure adequate grazing land, improve access to water and veterinary infrastructure, restore degraded rangelands, and strengthen the resilience of the community's pastoral economy. The strategy recognizes the importance of livestock, particularly small stock, to local livelihoods and promotes sustainable land management practices that balance livestock production, environmental restoration, and wildlife conservation. It also proposes exploring carbon credits and green bonds as complementary financing mechanisms to support rangeland rehabilitation, climate resilience, and essential livestock infrastructure.

Grazing Areas: The proposed grazing area covers approximately 3,691.28 hectares, extending largely between the northern Conservation Area and the southern settlement zone, with additional grazing areas along the western margins. These areas are intended to provide dedicated space for livestock production while maintaining separation between grazing activities, settlements, and wildlife conservation areas. No permanent structures should be erected within designated grazing land unless expressly permitted under the approved land-use plan and applicable management guidelines. Grazing areas should be managed through community-agreed grazing schedules and controlled access to prevent overstocking and facilitate sustainable pasture utilization.

Livestock Profile and Production Priorities: Morupusi's livestock population is dominated by goats, numbering approximately 8,100 (49.9%), and sheep, numbering 4,332 (26.7%). Other livestock include 1,831 cattle, 1,500 poultry, 239 donkeys, and 237 camels. Goats and sheep therefore account for more than three-quarters of the recorded livestock population, highlighting the importance of small-stock production to household livelihoods. Livestock development interventions should prioritize improved animal health services, access to veterinary supplies, appropriate breeding practices, and sustainable grazing management. These measures should be aligned with the available carrying capacity of the rangeland and seasonal water availability.

Rangeland Restoration and Sustainable Grazing: The reported increase in bare land from 22% in 2014 to 37% in 2026, alongside a substantial decline in woodland cover, indicates increasing pressure on Morupusi's natural resource base. The plan therefore proposes



controlled and rotational grazing, reseeding of degraded areas, pasture improvement, and protection of vegetation to support rangeland recovery. Community-led restoration should prioritize degraded grazing zones and areas important for soil conservation, water infiltration, and wildlife habitat connectivity. Grazing schedules should allow sufficient time for vegetation to regenerate, with stocking levels and access arrangements reviewed in response to pasture conditions and seasonal rainfall.

Livestock Water Infrastructure: Existing livestock water sources are concentrated mainly in the central and southern sections of the community land. Additional water points are proposed in areas where livestock travel long distances to access water, with the aim of improving water availability, reducing pressure on existing facilities, and strengthening drought preparedness. New livestock watering facilities should be appropriately sited away from domestic water sources to reduce the risk of contamination and should incorporate suitable drainage and measures to prevent environmental degradation around water points. Their locations should also be coordinated with grazing areas, settlements, and wildlife movement routes to minimize competition for water and reduce human–wildlife conflict.

Cattle Crush and Veterinary Infrastructure: The proposed cattle crush, occupying approximately 3.35 hectares, should be centrally located within the grazing block it serves to improve accessibility for livestock owners and veterinary personnel. The site should have adequate vehicle access for the delivery of veterinary supplies, equipment maintenance, and livestock handling. Proper drainage, waste management, and safe handling of veterinary chemicals should be provided to prevent contamination of soils and groundwater. The facility should support vaccination, treatment, inspection, and other livestock health interventions, contributing to improved animal welfare and productivity.

Carbon Credits and Rangeland Restoration Financing: Morupusi Community Land has the potential to explore carbon-credit initiatives to help finance rangeland restoration, sustainable grazing practices, woodland conservation, and other eligible climate-related interventions. The proposed rotational grazing system, reseeding of degraded areas, pasture improvement, and protection of existing vegetation could provide a foundation for a community-led carbon project where measurable and verifiable carbon benefits can be demonstrated.



Before implementation, a technical feasibility assessment should establish baseline conditions, eligible activities, carbon rights, applicable carbon accounting requirements, and the costs of project development, monitoring, and verification. Community consent, secure land tenure, transparent governance, and an equitable benefit-sharing framework will be essential. Any carbon-credit agreement should also protect customary grazing rights and pastoral mobility and should not unnecessarily restrict community access to essential grazing resources.

Revenue from the sale of verified carbon credits could potentially support pasture reseeding, restoration of degraded rangelands, protection of woodland, maintenance of water facilities, and community-based environmental monitoring. Carbon-credit income should, however, be treated as a potential supplementary funding source rather than guaranteed revenue, with project viability confirmed before financial commitments are made.

Green Bonds and Sustainable Livestock Infrastructure Financing: The plan proposes exploring green bonds and other appropriate climate-finance mechanisms to mobilize investment for eligible environmental and climate-resilient infrastructure. Potential investments could include livestock water facilities, renewable-energy-powered water systems, rangeland rehabilitation, soil and water conservation measures, and other projects that demonstrate clear environmental benefits.

Given the financial and institutional requirements of green bonds, implementation would likely require collaboration with the County Government of Laikipia, relevant government agencies, development finance institutions, conservation organizations, and private investors. The feasibility of a county-level or pooled financing arrangement should be assessed, particularly where the proposed investments are too large to be financed independently by the community.

Any green financing arrangement should identify the projects to be funded, capital requirements, environmental outcomes, implementation responsibilities, and repayment arrangements. The community should not assume debt obligations without a clear assessment of affordability, financial risks, and the expected benefits. Green bonds should complement, rather than replace, public investment, development-partner support, and other appropriate funding sources.

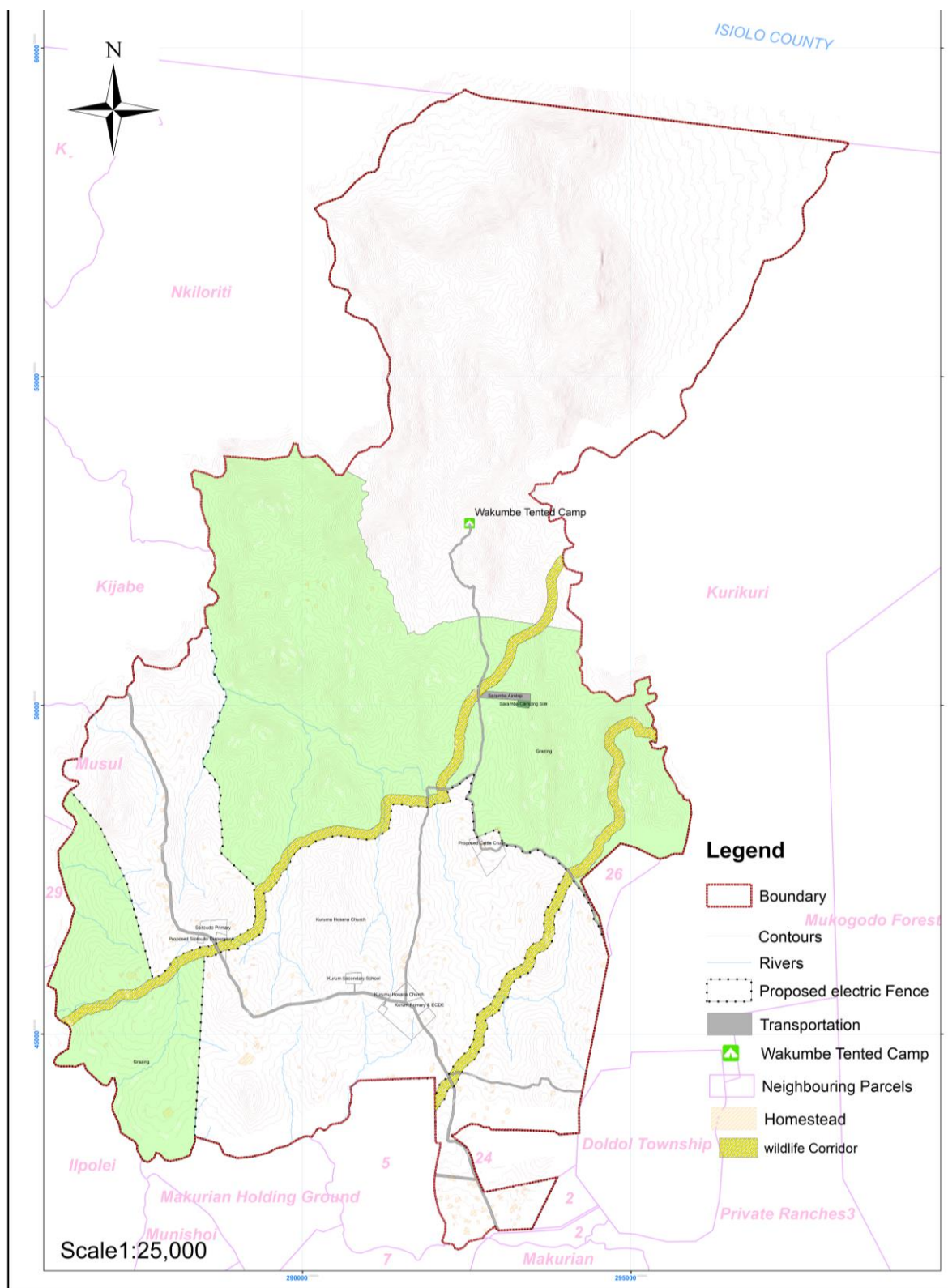


Integrated Land-Use and Resource Management: The proposed arrangement seeks to balance livestock production, rangeland restoration, wildlife movement, water provision, and settlement development. Effective implementation will require coordination between grazing zones, livestock infrastructure, conservation areas, and water points. Community participation will be essential in enforcing agreed land-use guidelines, managing grazing schedules, maintaining infrastructure, and preventing the encroachment of incompatible activities into designated grazing areas.

The integration of carbon credits and green financing would provide opportunities to mobilize additional resources for environmental restoration and climate-resilient livestock development. By combining sustainable grazing, improved livestock services, strategic water provision, and innovative financing, Morupusi Community Land can strengthen pastoral livelihoods, restore degraded rangelands, improve drought resilience, and safeguard its natural resource base over the 2026–2036 planning period.



Map 28: Strategy for Livestock Grazing

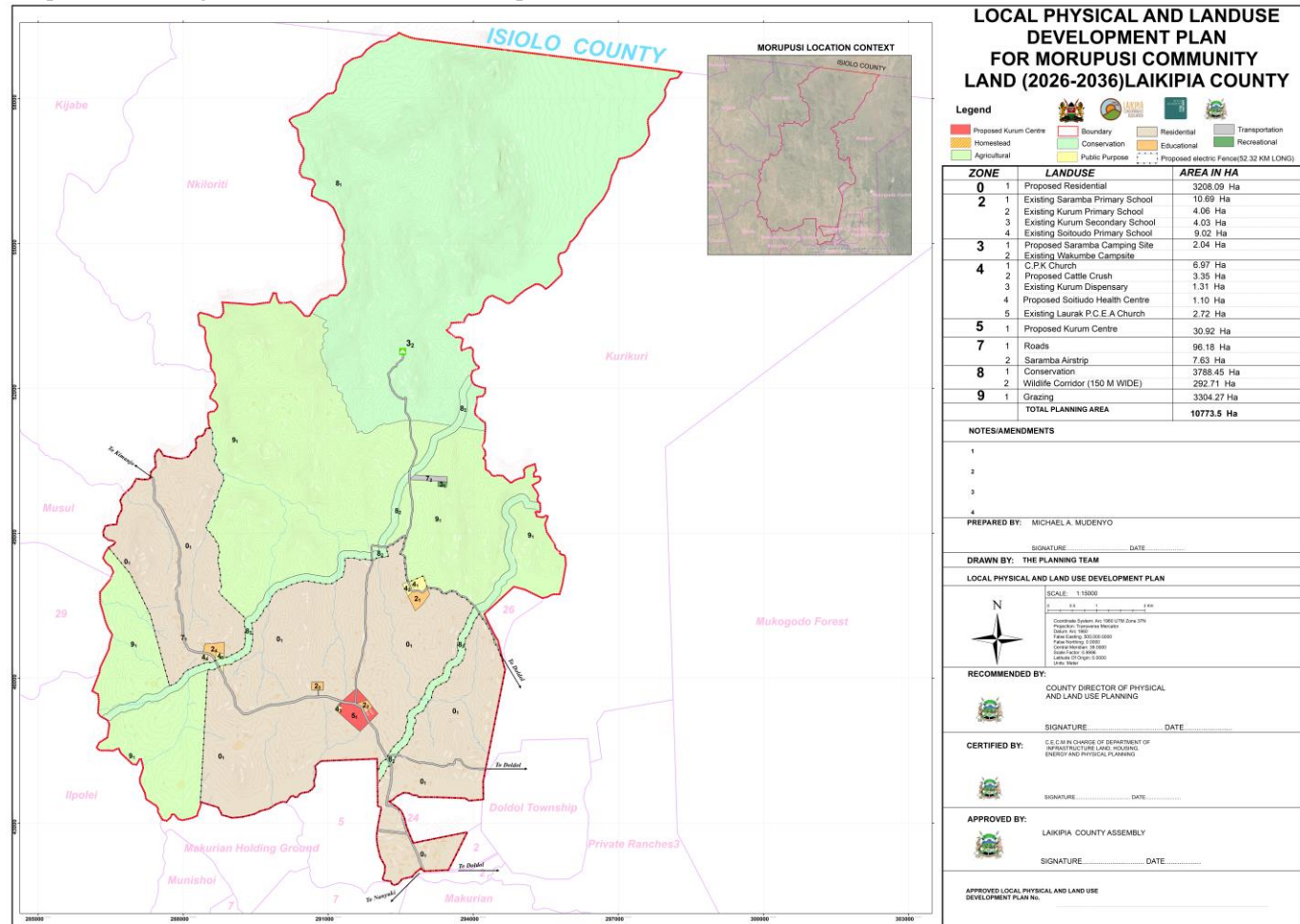


Source: Laikipia County GIS Lab, 2026



4.4. Proposed Local Physical and Land Use Development Plan

Map 29: Proposed Morupusi Local Physical and Land Use Development Plan



Source: Laikipia County GIS Lab, 2026



4.5. General and Specific Standard Guidelines

LAND USE	PROPOSED MINIMUM LAND SIZES:	GENERAL GUIDELINES	SPECIFIC GUIDELINES
Residential	Low Density Residential	Minimum of 0.5 Acres Maximum depends on herd and family size	All residential areas should be well accessible and close to critical infrastructure that supports high standards of living such as; water sources, security and other social public infrastructure.
			<ul style="list-style-type: none">• All residential developments in the rangelands are limited to ground plus one in height.• All developments shall be self-sufficient, i.e. have their own waste management facilities on site (Provide on-site sanitation and wastewater management where sewerage infrastructure is unavailable).• All permanent developments shall be required to process development approvals to the County Government of Laikipia before construction. An endorsement letter from the CLMC will be a requirement in the development application process.• Permanent structures are highly encouraged to promote development in the community land.• Avoid flood-prone areas and slopes exceeding 12%. Prevent encroachment into road reserves, grazing areas, designated conservation zones and wildlife corridors. Community endorsement does not replace statutory development permission.



LAND USE	PROPOSED MINIMUM LAND SIZES:	GENERAL GUIDELINES	SPECIFIC GUIDELINES
Educational	Existing Saramba Primary School	11 Ha	<p>Any proposed school grounds should be located in places with least climatic hazards such as floods and away from disruptive land uses such as industrial facilities, sewage or dump sites. Grounds should be levelled for ease of use especially learners' playing fields. Educational facilities should be within 2 km walking distance of households for eased of access, especially for children going through ECDE.</p> <ul style="list-style-type: none">• All educational facilities shall be fenced off to avoid conflicting land uses such as wildlife and grazing activities.• Educational facilities should be left free of encroachment• Educational facilities may be repurposed to other educational uses only. (No change of use to other land uses).• ECDEs may be established on residential areas on need bases. A radius of 2Km.• . All educational facilities should have a playing ground. It shall be provided in areas with a (<2%) gradient.• Ensure adequate drainage to carry surface water off the field.
	Existing Kurum Primary School	3.41 Ha	
	Existing Soit Oudo	11 Ha	
	Existing Kurum Secondary School	1.92 Ha	
Recreational and Tourism	Existing Saramba Camping Site	2.04 Ha	<p>In accordance with the planning standards, recreational facility and playing fields should have adequate access roads and should be well-served by</p> <ul style="list-style-type: none">• The facility shall host its own waste management facility on site.• The facility shall be fenced all round subject to survey done as per the allocated hectares.



LAND USE	PROPOSED MINIMUM LAND SIZES:	GENERAL GUIDELINES	SPECIFIC GUIDELINES
		public transport or within walking distance for local population. Further, there should be a 9 Meter road surrounding the playing field to deter encroachment.	<ul style="list-style-type: none">• All roads accessing the facility shall be at least 15 Meter road to allow for easy access to the facility.• The facility shall have multiple alternative road access.• The facility may be repurposed to other recreational uses and other limited social uses such as community meetings.
Public Purpose	Existing Cattle Crush	3.35 Ha	<ul style="list-style-type: none">• Ensure adequate access roads for the local population to access facilities.• Any additional facilities, such as education, health or community services, should be considered only where compatible with the site, supported by demonstrated need and authorized through the relevant planning and land-governance processes.
	Existing C.P.K Church	3.35 Ha	
	Proposed Dispensary	1.8 Ha	
Transport	Existing Roads	95.83 Ha	<p>The road reserve for the main artery should be a minimum of 30m while local distributor roads should be between 12m and 15m. There should be no encroachment on road to allow for installation of utilities like electricity lines and water reticulation. All land uses</p> <ul style="list-style-type: none">• Road reserve widths for the main artery to be a minimum of 30m and local access roads 12-15m.• Permanent structures are not permitted on road reserve and will be used for electricity lines and water reticulation.• Every land use must have adequate road access
	Existing Saramba Airstrip	7.63 Ha	



LAND USE	PROPOSED MINIMUM LAND SIZES:	GENERAL GUIDELINES	SPECIFIC GUIDELINES
		must have adequate access roads. The guidelines stipulate that conflicting land is used to ensure that airstrips are free of obstacles such as high-rise buildings. It is imperative to limit location of land uses that attract wildlife like dumping sites attracting birds and animal water points.	<ul style="list-style-type: none"> • Maintain the Obstacle Limitation Surfaces around airstrips no high-rise buildings. Assess proposed buildings, trees and other potential obstructions against the airstrip's approved safeguarding requirements • Keep dumpsites/landfills at least 13 km from the airstrip to reduce bird-strike risk. • Avoid locating animal watering points similar wildlife-attracting uses near the airstrip
Conservation	Conservation Area	3401.45 Ha	<ul style="list-style-type: none"> • Wildlife corridors should be routed to avoid traversing through settlement or grazing zones directly. • Use appropriate fencing at corridor–settlement/livestock interfaces to reduce conflict • Prohibit new settlement within designated conservation zones • Low-footprint eco-tourism is an accepted compatible use but should operate under a community/conservancy management agreement. • Environmental regeneration to include reforestation, reseeding, and erosion control as a standing requirement for conservation areas.
	Wildlife Corridor	292.71 Ha	
	Proposed wildlife fence	53.32 km	
		Designating wildlife corridors must aim to protect human settlement and livestock from wildlife invasion. Identified wildlife corridors have a minimum buffer of 250m to allow for animal movement to access water and migration. It is imperative to have a wildlife fence to reduce livestock invasion. There should be limited human activities such as settlements in designated conservation areas. Compatible land uses in conservation areas include eco-tourism facilities. Conservation area should include environmental regeneration activities like reforestation and reseeding.	



LAND USE	PROPOSED MINIMUM LAND SIZES:	GENERAL GUIDELINES	SPECIFIC GUIDELINES	
Agriculture	Proposed Grazing Area	3691.28 Ha	<p>The guidelines indicate that there should be no erecting of structures on grazing area. There should be sufficient access to watering point and mitigate against pollution of water infrastructure like dams. Manage areas where grazing land overlap with wildlife corridors to access watering points. Cattle crush location should be near a reliable water source for the collecting yard trough. However, there should be measures to protect the water sources from contamination by chemical runoffs. There should be treatment mechanisms and proper drainage where chemicals cannot reach ground water for domestic consumption. It should be centrally located in grazing areas.</p>	<ul style="list-style-type: none">• Avoid permanent structures that significantly reduce the available grazing area, except for approved facilities that directly support sustainable livestock management and pastoral livelihoods.• Introduce seasonal or rotational grazing arrangements where necessary, particularly where grazing areas overlap with wildlife corridors.• Locate cattle crushes in accessible positions within grazing blocks and near reliable water sources, while preventing contamination.• Provide suitable drainage and manage veterinary chemicals and other hazardous substances to prevent pollution of groundwater and domestic water sources.• Support reseeding, erosion control and restoration of degraded grazing areas.



4.6 Cross-cutting planning and development-control provisions

Planning issue		Recommended guideline
Development permission		All development should comply with the applicable statutory planning and development-control requirements. CLMC endorsement or community consent does not, by itself, constitute statutory development permission.
Site suitability		Assess site conditions, drainage, slope, access, water availability, environmental sensitivity and disaster risks before approving development.
Environmental safeguards		Undertake environmental screening and obtain any required environmental assessment, license or other authorization before implementing projects that trigger such requirements.
Boundary verification		Survey and clearly demarcate proposed public-purpose sites, road reserves, conservation areas, wildlife corridors and other designated land uses before implementation.
Community participation		Involve the community, relevant land-governance institutions and responsible sector agencies in confirming land-use boundaries, resolving overlaps and agreeing on implementation arrangements.
Monitoring and enforcement		Establish a monitoring and enforcement mechanism to prevent encroachment, incompatible development, degradation of grazing land and obstruction of wildlife corridors.



CHAPTER FIVE: IMPLEMENTATION FRAMEWORK

CATEGORY	PROPOSALS	RESPONSIBLE ACTORS	PRIORITY
Livestock & Economic Development	<p>Improve veterinary and animal-health services and livestock extension (pasture conservation, fodder production, climate-smart pastoralism) to reduce disease spread and raise productivity of the dominant goat (8,100) and sheep (4,332) herds.</p> <p>Encourage breed improvement and diversification toward drought-resilient livestock such as goats and camels; strengthen livestock markets and value addition, and support beekeeping as a complementary livelihood.</p>	County Livestock Production & Veterinary Services, KALRO, Community Livestock Management Committees, Laikipia Conservancies Association, and related Non-Governmental Organizations.	Medium (medium term)
Rangeland & Grazing Management	Secure the 3,691.28 Ha Proposed Grazing Area and prohibit the erection of structures on designated grazing land; introduce controlled/rotational grazing, pasture improvement and reseedling.	County Livestock/Veterinary Dept, Community Grazing Committees, Kenya Forest Service, NGOs such as LCA, Wyss Academy and other partners	High (short term)



CATEGORY	PROPOSALS	RESPONSIBLE ACTORS	PRIORITY
	Prioritize rehabilitation of bare land, which expanded from 22% (2014) to 37% (2026), through erosion control and soil stabilization measures.		
Vegetation Restoration & Woodland Protection	<p>Protect remaining woodland, which halved from 16% to 8% between 2014 and 2026, through tree planting, control of tree cutting and designated protection zones; protect areas with good vegetation and scale up grass reseeding.</p> <p>Reduce firewood dependence (15.4% of households) to ease pressure on woody vegetation.</p>	Kenya Forest Service, NEMA, County Environment Department, Community Conservation Committees, NGOs	High (short term)
Land Use Planning & Wildlife Corridors	Formally map and protect the 3,401.45 Ha Conservation Area and the 292.71 Ha of wildlife corridors; maintain a minimum 250 m buffer for animal movement to water and migration, and route corridors to avoid traversing settlement or grazing zones directly.	County Physical Planning Department, Kenya Wildlife Service (KWS), National Land Commission, Community Land Management Committee and other Non-Governmental Organizations	High (short term)



CATEGORY	PROPOSALS	RESPONSIBLE ACTORS	PRIORITY
	Prohibit new settlement within designated conservation areas and corridors; manage grazing–corridor overlaps through time-based access.		
Human-Wildlife Conflict Mitigation	<p>Construct the proposed 53.32 km wildlife fence at corridor–settlement and corridor–livestock interfaces to regulate wildlife movement.</p> <p>Strengthen incident response and community awareness on co-existence, targeting lions (255 households reporting conflict), hyenas (234), elephants (109), leopards (83) and jackals (51); support prevention, response and compensation mechanisms so that livestock losses do not erode community tolerance of wildlife.</p>	Kenya Wildlife Service (KWS), County Government, Community Conservancy Committees	High (short term)
Water Resources & Infrastructure	Provide additional human and livestock water points in areas where people and animals travel long	County Water Dept, Water Resources Authority (WRA), NGOs, Community Water Committees	High (short term)



CATEGORY	PROPOSALS	RESPONSIBLE ACTORS	PRIORITY
	<p>distances, as water sources are concentrated in the central and southern parts of the community land.</p> <p>Improve and maintain existing boreholes, wells, dams, water pans and tanks; protect sources from pollution and overuse; increase storage capacity for dry seasons; site livestock water points away from domestic sources.</p>		
Solid & Liquid Waste Management	<p>Designate waste collection, transfer and disposal sites, prioritizing Kurum Centre; provide public sanitation facilities and wastewater management at Kurum Centre.</p> <p>Require sanitation and liquid-waste arrangements for new developments under development control, alongside awareness on sanitation, hygiene and proper wastewater disposal.</p>	County Government (Environment/Public Health Dept.), NEMA, Community Land Management Committee	Medium (medium term)



CATEGORY	PROPOSALS	RESPONSIBLE ACTORS	PRIORITY
Primary Healthcare Capacity	<p>Expand and equip Kurum Dispensary, the only health facility in the community land, with adequate staff, medicines, water, sanitation and electricity.</p> <p>Develop the Proposed Dispensary (1.8 Ha) and outreach services for settlements beyond the 5 km buffer, particularly towards Kipsing; improve access roads and emergency referral systems.</p>	Ministry of Health, County Health Dept, Community Health Volunteers	High (short term)
Educational Infrastructure Expansion	<p>Provide new schools in underserved areas, especially around Kipsing, or restore the currently non-functional Picha Primary School; support existing ECD centres and add centres where young children lack access.</p> <p>Ensure schools have adequate classrooms, sanitation, potable water and learning infrastructure; identify and protect land for school expansion.</p>	Ministry of Education, County Education Dept, TSC, Parents/Community, Development Partners	High (short term)



CATEGORY	PROPOSALS	RESPONSIBLE ACTORS	PRIORITY
Land Tenure & Governance	Regularize land ownership for public institutions, including Kurum Dispensary, Saramba Primary, Kurum Primary, Kurum Secondary and Soit Oudo schools, the C.P.K Church, Saramba Airstrip and the Saramba camping site.	County Physical Planning Dept, National Land Commission, Community Land Management Committee	Medium (medium term)
Renewable Energy Access	Build on the existing adoption of solar (64.9% of households) through affordable financing, reliable supply chains and local technical support for battery replacement and maintenance; extend access to the 26 households with no reliable energy source.	Rural Electrification & Renewable Energy Corporation (REREC), County Energy Dept, Private solar providers, Development Partners/NGOs	Medium (medium term)
Community & Social Facilities	Improve supporting infrastructure (access roads, water, sanitation, renewable energy) at community facilities, including the Nashami Women Group Social Hall, churches and the Kurum Chief's Camp; retain and improve the Saramba Camping Site and Wakumbe Campsite.	County Government, Community Land Management Committee, Development Partners/NGOs	Low (long term)



CATEGORY	PROPOSALS	RESPONSIBLE ACTORS	PRIORITY
Roads Transportation Infrastructure	& Demarcate, survey and upgrade the road network to all-weather standard, with main artery reserves of at least 30 m and local access roads of 12–15 m; provide drainage along major roads. Improve access to Kipsing, which has fewer roads; provide clear footpaths to homesteads; protect Saramba Airstrip (7.63 Ha) from encroachment and incompatible development.	County Roads Dept, National Government, Community	High (short term)
Eco-Tourism Economic Diversification	& Develop low-footprint eco-tourism in the Conservation Area under a community/conservancy agreement; promote cultural manyattas and the Saramba and Wakumbe camping sites; develop value addition for livestock products and honey; regulate sand harvesting to limit environmental damage.	County Trade & Tourism Dept, Community Cooperatives, NGOs, Private Investors	Low (long term)



CHAPTER SIX: MONITORING AND EVALUATION

6.1. Monitoring and Evaluation Framework

Monitoring and evaluation (M&E) of the proposed interventions for Morupusi Community Land is essential to ensure effective implementation, accountability and adaptive management. Drawing on the proposals set out for Morupusi spanning livestock and rangeland management, vegetation restoration, land use planning, human-wildlife conflict, water, sanitation, health, education, land tenure, energy, social infrastructure, roads and eco-tourism the following indicators, verification methods, responsible actors and monitoring frequencies are proposed to track progress in implementing this Plan

Table 11: Monitoring and Evaluation Matrix

No.	Category	Key Monitoring Indicators	Means Of Verification	Responsible Actor(S)	Frequency
1	Livestock & Economic Development	<ul style="list-style-type: none">• Number of households diversifying into beekeeping, poultry and value-addition activities• Number of drought-resilient livestock breeds introduced• Functionality of veterinary and breeding support services	County Livestock Dept. records; CLMC activity reports; household surveys	County Livestock Production & Veterinary Services, KALRO, Community Livestock Management Committees, NGOs	Annually
2	Rangeland & Grazing Management	<ul style="list-style-type: none">• Area (Ha) under rotational/controlled grazing	Spatial degradation mapping/GIS reports;	County Livestock/Veterinary Dept.,	Bi-annually



No.	Category	Key Monitoring Indicators	Means Of Verification	Responsible Actor(S)	Frequency
		<ul style="list-style-type: none">• Number of semi-circular bunds and erosion-control structures constructed• Reduction in degradation levels in mapped high-risk zones	Grazing Committee records; field inspection	Community Grazing Committees, Kenya Forest Service, NGOs	
3	Vegetation Restoration & Woodland Protection	<ul style="list-style-type: none">• Number of trees planted and survival rate• Area (Ha) reseeded with grass• Area (Ha) of bare/degraded land rehabilitated and woodland area protected• Number of households reached through outreach on conservation activity	KFS/NEMA planting and clearance records; Community Conservation Committee reports	Kenya Forest Service, NEMA, County Environment Dept., Community Conservation Committees, NGOs	Annually
4	Land Use Planning & Wildlife Corridors	<ul style="list-style-type: none">• Wildlife corridors formally mapped and gazette	County Physical Planning Dept. maps; KWS reports; approved	County Physical Planning Dept., Kenya Wildlife Service (KWS), National	Annually



No.	Category	Key Monitoring Indicators	Means Of Verification	Responsible Actor(S)	Frequency
		<ul style="list-style-type: none">Length (Km) of corridor fencing completedCorridor protection integrated into the Community Land Use Plan	Community Land Use Plan	Land Commission, Community Land Management Committee	
5	Human-Wildlife Conflict Mitigation	<ul style="list-style-type: none">Number of community awareness sessions on co-existence conductedAI/machine-learning early-warning tools piloted and operationalResponse time and number of predator/elephant incidents managed	KWS incident reports; Conservancy Committee records; training attendance registers	Kenya Wildlife Service (KWS), County Government, Community Conservancy Committees	Quarterly
6	Water Resources & Infrastructure	<ul style="list-style-type: none">Separate human and livestock water extraction points established	Water Resources Authority (WRA) records; Community	County Water Dept., Water Resources Authority (WRA), NGOs,	Bi-annually



No.	Category	Key Monitoring Indicators	Means Of Verification	Responsible Actor(S)	Frequency
		<ul style="list-style-type: none">Number of non-functional boreholes, sand dams and rock catchments repaired	Water Committee reports; site inspection	Community Water Committees	
7	Solid & Liquid Waste Management	<ul style="list-style-type: none">Waste collection/disposal site established (Kurum Centre prioritized)Number of households practicing recycling/reuseNumber of household sanitation facilities constructed	County Environment/Public Health Dept. records; NEMA compliance reports	County Government (Environment/Public Health Dept.), NEMA, Community Land Management Committee	Annually
8	Primary Healthcare Capacity	<ul style="list-style-type: none">Staffing levels at Kurum Dispensary against required normsKurum Dispensary expanded and equipped (staff, medicines, water, sanitation, electricity)	Ministry of Health/County Health Dept. records; facility registers	Ministry of Health, County Health Dept., Community Health Volunteers	Annually



No.	Category	Key Monitoring Indicators	Means Of Verification	Responsible Actor(S)	Frequency
		<ul style="list-style-type: none">• Proposed Dispensary developed and outreach extended to settlements beyond 5 km, particularly towards Kipsing• Uptake of maternal, reproductive and child-health services			
9	Educational Infrastructure Expansion	<ul style="list-style-type: none">• Number of new education facilities established• Schools with potable water, electricity and adequate staffing• Land allocated for school expansion• School enrolment trends	Ministry of Education/County Education Dept. records; TSC staffing data; school registers	Ministry of Education, County Education Dept., TSC, Parents/Community, Development Partners	Annually
10	Land Tenure & Governance	<ul style="list-style-type: none">• Number of public institutions (Kurum Dispensary, schools, churches) with formalized titles	National Land Commission records; County Physical	County Physical Planning Dept., National Land Commission, Community	Annually



No.	Category	Key Monitoring Indicators	Means Of Verification	Responsible Actor(S)	Frequency
			Planning Dept. title registry	Land Management Committee	
11	Renewable Energy Access	<ul style="list-style-type: none">• Number of households/institutions with solar or other renewable energy installations• Level of donor/NGO funding secured to offset installation costs• Reduction in firewood dependency	Rural Electrification & Renewable Energy Corp. (REREC) records; County Energy Dept. reports; donor/NGO funding agreements	Rural Electrification & Renewable Energy Corp. (REREC), County Energy Dept., Private solar providers, Development Partners/NGOs	Annually
12	Community & Social Facilities	<ul style="list-style-type: none">• Access roads, water, sanitation, energy and digital connectivity at community centers improved• Number of men and youth participating in empowerment programmes• Saramba Camping Site, Wakumbe Campsite and Nashami Women	County Government project records; Community Land Management Committee reports	County Government, Community Land Management Committee, Development Partners/NGOs	Annually



No.	Category	Key Monitoring Indicators	Means Of Verification	Responsible Actor(S)	Frequency
		Group Social Hall improved with supporting infrastructure			
13	Roads & Transportation Infrastructure	<ul style="list-style-type: none"> • Demarcate, Survey and develop all roads • Drainage works completed along major roads • Frequency and quality of ongoing road maintenance 	County Roads Dept./National Government works records; site inspection	County Roads Dept., National Government, Community	Bi-annually
14	Eco-Tourism & Economic Diversification	<ul style="list-style-type: none"> • Value-addition infrastructure developed for livestock products and honey • Number of community cooperatives/private investors engaged 	County Trade & Tourism Dept. Records, visitor statistics	County Trade & Tourism Dept., Community Cooperatives, NGOs, Private Investors	Annually



6.1.1. M&E Implementation Notes

- The Community Land Management Committee (CLMC) should serve as the primary coordinating body for consolidating monitoring data across all categories and reporting progress to the community and partner agencies.
 - High-priority, short-term interventions (rangeland management, vegetation restoration, wildlife corridors, human-wildlife conflict, water, healthcare, education and roads) should be monitored at least bi-annually to allow for timely corrective action.
 - Medium- and long-term interventions (economic diversification, waste management, land tenure, renewable energy, social facilities and eco-tourism) can be monitored annually, aligned with county planning and budgeting cycles.
 - Baseline data should be established for each indicator at the start of implementation to allow meaningful comparison over time.
 - An annual M&E report should be compiled and shared with the community, County Government departments and development partners to inform decision-making and resource allocation for subsequent years.
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