

Kamuthe Community Land

GARISSA COUNTY



LAND USE PLAN 2024-2034
Plan Approval Page

The Community Land Management Committee of Kamuthe Community Land has approved the implementation of this land use plan on behalf of the community

	Chairperson	Secretary	Treasurer
Name			
Signature			
Date			

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Common Acronyms in the Plan

AEZ	Agroecological Zone
ASAL	Arid and Semi-arid Lands
CBD	Convention on Biological Diversity
CEC-ENRT&WM	County Executive Committee Member- Environment, Natural Resources, Tourism and Wildlife Management
CIDP	County Integrated Development Plan
CLMC	Community Land Management Committee
CWCCC	County Wildlife Conservation and Compensation Committee
CSDP	County Spatial Development Plan
EU	European Union
GCG	Garissa County Government
GIS	Geographic Information Systems
GOK	Government of Kenya
FAO	Food and Agricultural Organisation
GPS	Global Positioning System
KALRO	Kenya Agricultural and Livestock Research Organisation
KEFRI	Kenya Forestry Research Institute
KFS	Kenya Forest Service
GIDA	Garissa Investment Development Authority
KWCA	Kenya Wildlife Conservancies Association
KWS	Kenya Wildlife Service
LAPSSET	Lamu Port South – Sudan Ethiopia Transport
MoAL&F	Ministry of Agriculture, Livestock and Fisheries
MoT&W	Ministry of Tourism and Wildlife
NMK	National Museums of Kenya
NRT	Northern Rangeland Trust
SDG	Sustainable Development Goals
TARDA	Tana and Athi River Development Authority
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific Cultural Organization
USAID	United States of America International Aid

Acknowledgments

The Land Use Plan was prepared by the Kamuthe Community through a participatory planning process. The community and the Community Land Management Committee are grateful to the following institutions and individuals for supporting the development of this plan.



Garissa County Government supported and participated in the planning meetings and gave relevant information on future development strategies and programmes in the county.

CLMC

Kamuthe Community Land and Management Committee organized the public participation meetings and mobilized participants in the 9 different villages.



The Kenya Wildlife Conservancies Association (KWCA) mobilized resources from its partners which facilitated the planning process. They also coordinated the planning meetings, development and publishing of this plan.



Provided funding support for the planning process through the KWCA.

Executive Summary

Kamuthe Community Land is in Garissa County and the land was previously registered as a trust land. The community, through the Community Land Management Committee (CMLC), applied to the Community Lands Registrar for community land registration under the Community Lands Act 2016. The registration came into effect on the 14th of March 2023, making Kamuthe Community Land the first trust land to be registered under the Community Land Act 2016.

This provided a model for community land management in Kenya and paved the way for various potential benefits such as:



Sense of Ownership and Security - The community members felt a stronger sense of ownership and security over their land and conferred the power to make autonomous decisions regarding land management.



Social Equity - The registration process ensured the inclusion of women and youth in decision-making and management, laying a foundation for social equity in the community.



Conflict Reduction - Formal land registration eliminates ambiguity in land tenure with the attendant conflicts, hence fostering stability.



Economic Development - Secure land tenure encourages investments in agriculture, housing, and other economic activities. This can potentially spur economic development within the community.



Environmental Management - With clear ownership, the community is better positioned to implement sustainable land management practices, which can lead to improved environmental conservation and resilience.



Legal Protection - Registered land is protected under the law, reducing the risk of illegal encroachments and expropriations and providing a stable framework for dispute resolutions.

Notwithstanding the registration milestone, Kamuthe community continued to experience a host of environmental and economic challenges which include:

- Recurrent droughts and floods
- Land degradation and the spread of invasive “Mathenge” shrub
- Poor infrastructure and social services
- Suboptimal livestock and crop production

These problems prompted the community and stakeholders to seek assistance from development partners to develop a land use plan to bring about sustainable land use management and contribute to the improvement of community livelihoods.

This was in line with section 19 of CLA which states that:

“A registered community may, on its own motion or at the request of the county government, submit to the county government a plan for the development, management, and use of the community land.”

This land use plan is a product of the above initiative. It was prepared by the Kamuthe Community Land community through a participatory planning process involving the Community Land Management Committee, County and national government officials, local development stakeholders, and technical specialists. The planning process was facilitated and coordinated by the Kenya Wildlife Conservancies Association.



Plan Vision

During public participation meetings, the people of Kamuthe gave the future desired state of the community land. The expressions of future desired state were analyzed and clustered under respective sectors as follows:

> Conservation of natural resources

- Stable wildlife numbers and economic benefits from wildlife
- Sustainable human-wildlife co-existence
- Implementation of rangeland restoration and rehabilitation measures leading to better range condition

> Cultivation

- Reduced flooding from the Tana River and Masinga Dams
- Reliable water supply to support agriculture throughout the season including the arable areas away from the river
- Better financial returns from agriculture due to value addition activities

> Livestock Grazing

- Stable and sustainable grazing pastures with locally managed grazing plans and habitat restoration measures
- Modern livestock breeds commercial livestock production for better income and value for the community

> Settlement

- Sustainable exploitation of natural resources such as sand, and other mineral deposits to boost local income
- Well-developed social services and infrastructures to enhance the overall standards of the community.
- Establishment of viable enterprise projects generating income and creating employment for the local people



Problems and Solutions

The Kamuthe community members identified the following as the most acute challenges that needs programmatic address by the land use plan:

- Frequent Floods
- Water shortage
- Spread of Mathenge Shrub
- Sub-optimal Agriculture
- Climate Change and Drought
- Lack of Basic Social Services and Vital Infrastructure
- Land degradation

These problems are discussed in detail in Chapter 3 of the land use plan. The section also gives a comprehensive analysis of the possible mitigations to the above problems and the opportunities therein. In Chapter 4, the land use plan then discusses in detail the 5 land use zones and their prescriptions.

Plan Implementation

The land use plan will be owned by the Community Land Management Committee, which will also be responsible for plan implementation. Hence, the officials will sign the plan approval page on behalf of the community.

However, to ensure successful implementation of the plan, the committee will work closely with key stakeholders in the area including the County Government of Garissa, National Government agencies such as Kenya Wildlife Service, Kenya Police Service, and County Commissioners Office among others. They will always closely liaise with local, national, and international development partners to mobilise resources to catalyse various development projects as envisioned in the land use plan. This implementation process is discussed in Chapter 5.

The mission of the land use plan will be pursued through implementation of specific activities for each objective in the respective land use zones. These action plans are summarized in Chapter 6 and provide for:

- Proposed objectives and corresponding activities for each zone
- The primary responsibility for each activity and the potential partners who could support its implementation
- The recommended timeframe and priority ranking for each activity

To ensure success of the land use management plan, the CLMC has been tasked to:

- Identify long term partners for collaboration
- Seek support for capacity building programmes for their members to enable them undertake fund raising and community mobilization
- Prioritise small scale interventions and/or enterprises that do not require huge capital or lengthy regulatory bureaucracy to initiate Such activities are likely to have an immediate positive impact on the Kamuthe Community that is urgently desirous of jobs and income.

CHAPTER 1

Introduction

1.1 Kamuthe Community Land

Kamuthe Community Land is in Garissa County, an expansive area of about 43,259 km². It is one of the four former districts forming Kenya's North Eastern Province. The County lies between latitude 00 58 and 00 2'S and longitude 380 34'E and borders Wajir County to the North, Ijara to the South, Tana River and Isiolo to the West, and the Republic of Somalia to the East.



Kamuthe community land is situated about **40 kilometers** southeast of Garissa town, along Garissa – Lamu Road. It has an area of about **16,325 square kilometers** spanning both Garissa and Tana River Counties. The Garissa portion of the land, which is officially registered, is about **153,494.59 ha** while there is an unregistered **7,200 ha** within Tana River County.

Kamuthe Community is an organized demographic and cultural group comprising mainly pastoralists and farmers residing in Kamuthe location, Nanighi Ward, Fafi Constituency. Kamuthe Community Land is inhabited by the Somali, the larger Ogaden, tolomoge and the sub clans of Awadaq and Abdalla communities.

The land was previously registered as a trust land. The group members, through their elected Community Land Management Committee (CMLC), applied to the Community Lands Registrar – Garissa for community land registration under the Community Lands Act 2016. They were issued with a certificate of registration on the 14th of March 2023.

The registration process was facilitated by the state Department of Lands and Physical Planning in the Ministry of Lands, Public Works, Housing and Urban Development, the County Government of Garissa, and Frontier Counties Development Council (FCDC).

The land comprises four community title deeds, reserved for different land uses. The titles are shown in Annex 1.

FIGURE 1.
Regional setting of Kamuthe Community Land

LOCATION OF KAMUTHE COMMUNITY LAND

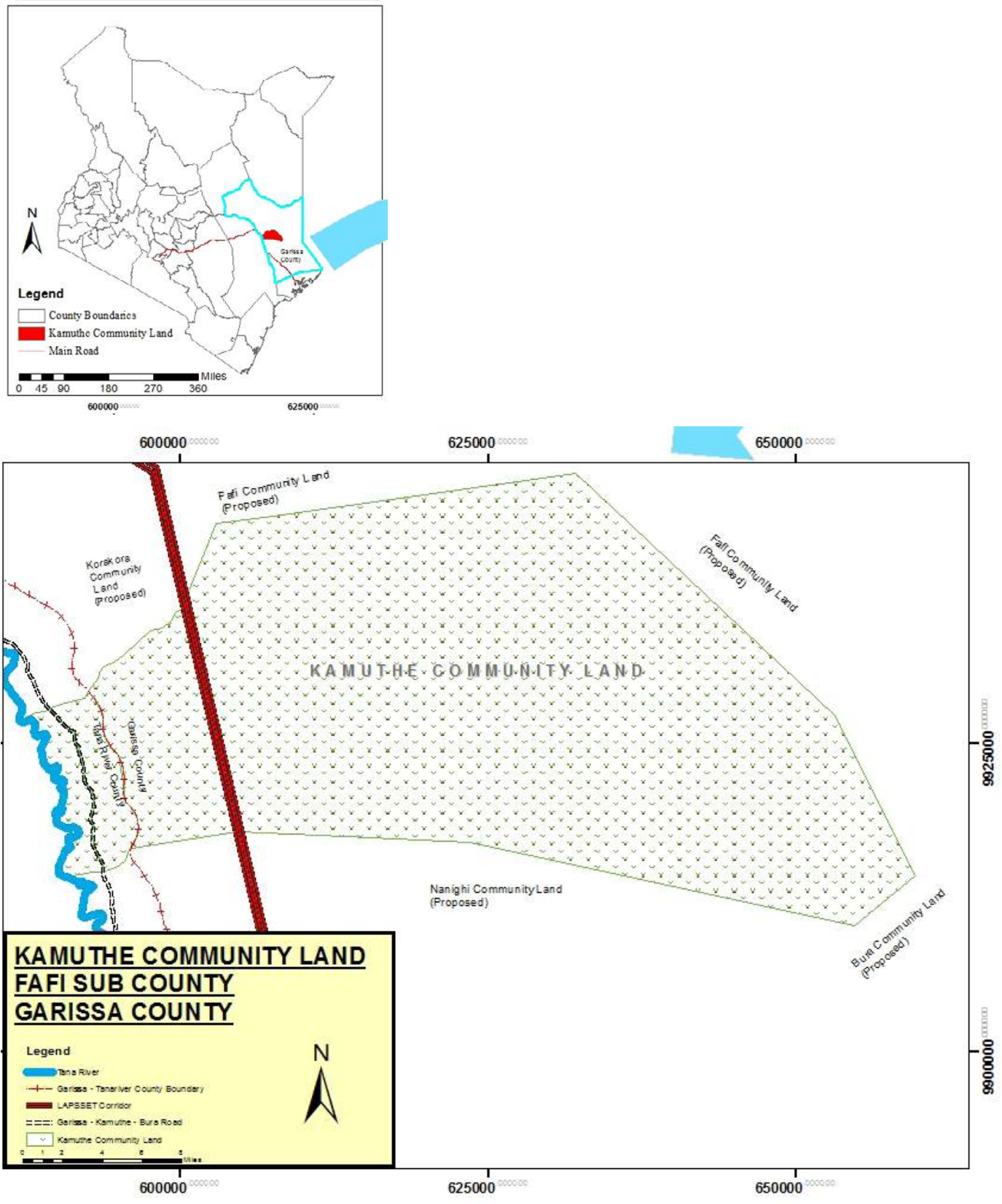
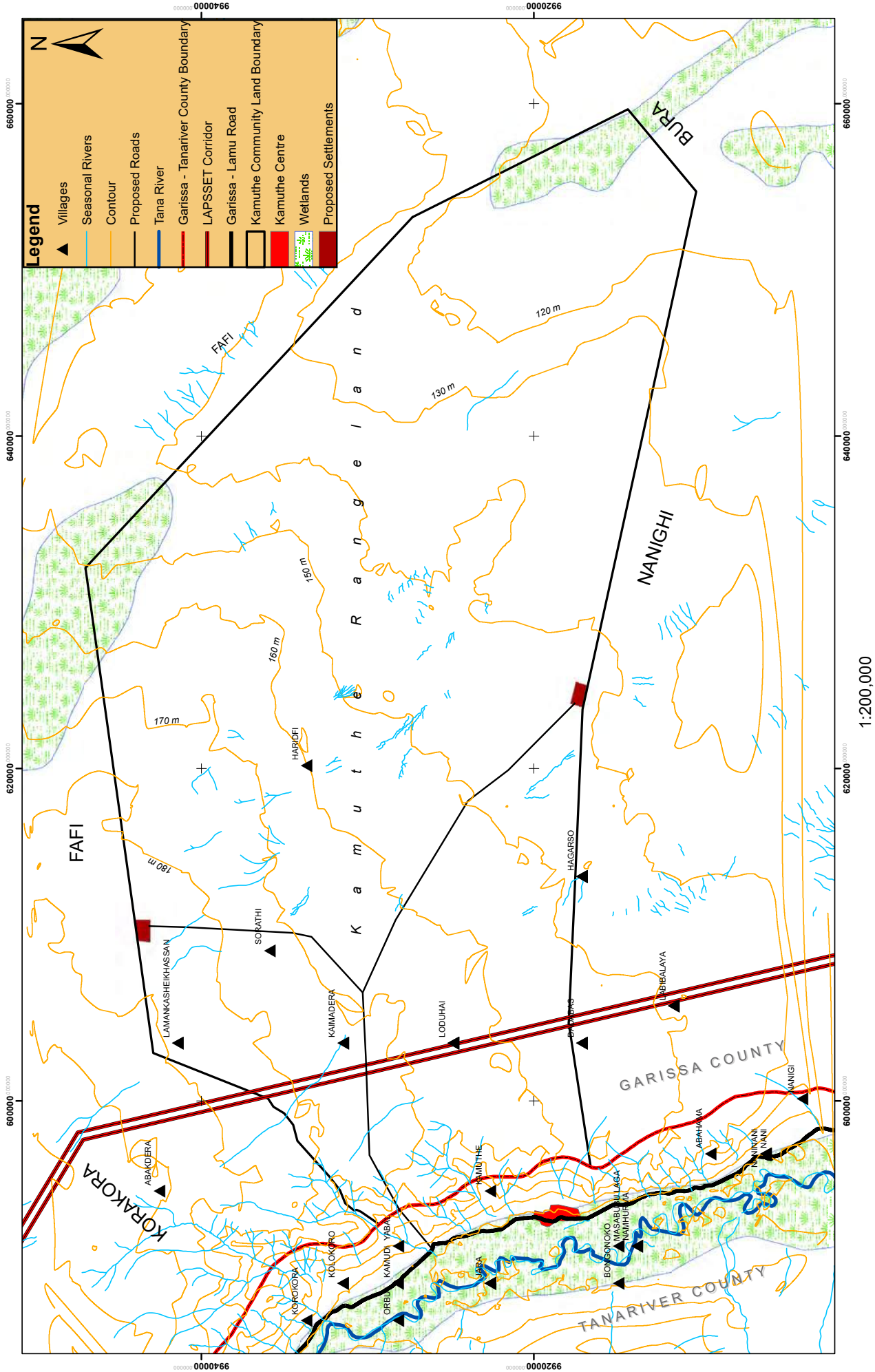


FIGURE 2.
Kamuthe Topography Map

KAMUTHE TOPOGRAPHIC MAP



1.2 The Planning Process

The Land Use Plan was prepared by the Kamuthe Community Land community through a participatory planning process involving the Community Land Management Committee, County and national government officials, local development stakeholders, and technical specialists. The planning process was facilitated and coordinated by the Kenya Wildlife Conservancies Association.

The lists of participants at the planning workshops and public participation meetings are provided in Annex 2.

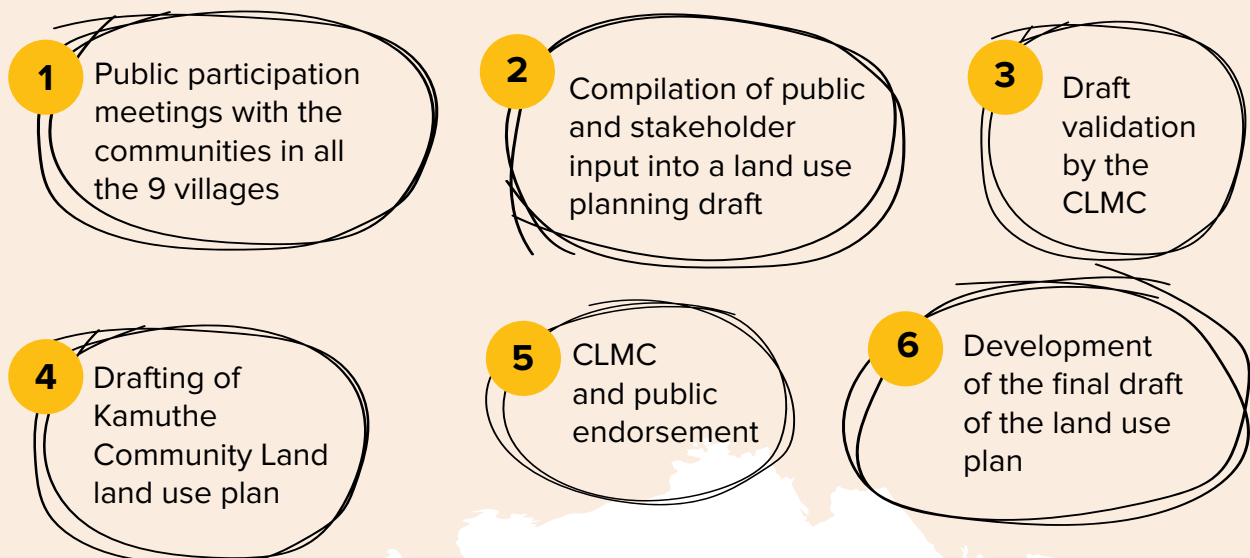
The Kamuthe Community Land use plan was developed with consideration of the Garissa County Integrated Development Plan (CIDP) 2023-2027, which in turn is developed in line with the County Spatial Development Plan (CSDP) 2018. As such, the land use plan does not propose any type of land use that is not envisaged in the CIDP and CSDP.

The plan captures the interests of the community concerning each land use zone. These interests have been grouped into objectives from which actions for implementation have been derived. These actions, if well implemented, will lead to the future desired state that the community aims to attain in the landscape.

Hence, the land use plan embodies the communities' long-term aspirations and how these can be realized.

> The planning process has followed the following steps:

Inception meeting with all stakeholders



1.3 Land Use Planning Context

The land use planning process was a follow-up to the registration of Kamuthe Community Land under the Community Land Act. Upon registration of the land, several land use zones were created to cater to community aspirations based on historical, geographical, and administrative factors. These zones are grazing, settlement, conservation, cultivation, and Lapsset development.



The area falls under a semi-arid **agroecological zone** with an **annual rainfall** of about **300mm**. In a 2009 survey, the **poverty index** was **68%** while **food security** was at **65%** and **illiteracy levels** at **92%** (GOK 2009; KACCAL, 2009).

The above factors pose a myriad of environmental and economic challenges which include:

- Recurrent droughts and floods
- Land degradation and the dominant spread of “Mathenge” shrub
- Poor infrastructure and social services
- Suboptimal livestock and crop production

These problems prompted the community and stakeholders to seek assistance from development partners to develop a land use plan for the landscape. The plan is meant to bring about sustainable land use management and contribute to the improvement of community livelihoods.

1.4 The Plan Vision

The following themes came out from the desired future conditions of Kamuthe Community Land:

- Shortage of water for domestic, livestock, and agricultural use
- Harmony within the communities and between the people and environment
- Economic opportunities and prosperity
- Grazing management to curb overgrazing and conflicts
- Environmental degradation and the spread of *Prosopis juliflora* (Mathenge) shrub
- Social infrastructures and access to government services, especially health and education

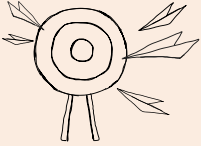
These themes laid the foundation of this vision statement for Kamuthe Community land use plan:



The **vision** of this land use plan is to ensure that

“The Natural and cultural resources of Kamuthe Community Land are sustainably conserved and managed. And the entire community land is properly planned and equipped with basic services and infrastructures to advance collective welfare and prosperity for the current and future generations”

The above vision statement is the cornerstone of this land use plan. All goals, objectives, and activities spelled out in all subsequent sections are geared toward fulfillment of this vision.



1.5 Plan Goals

From the community visioning exercise, the goals of the land use plan are:

- To deliver assured ownership of the land for posterity
- To preserve the ecological integrity of Kamuthe Conservancy and promote human-wildlife coexistence in collaboration with the County Government and wider stakeholders
- To develop Kamuthe Landscape into a model community land where there is security, peaceful coexistence, and prosperity
- To improve the range condition of the grazing area to support profitable livestock production
- To increase economic returns from cultivated agriculture through flood control, capacity building, and value addition
- To improve community livelihoods by harnessing the potential of natural resources such as minerals, medicinal plants, reptiles, etc
- Establish social services and basic infrastructures that advance community well-being. The most urgent being the provision of water, health, and education.
- To establish strong institutions and governance mechanisms that facilitate the achievement of community aspirations
- Industrial development based on the following:
 - Minerals
 - Livestock value chain/addition
 - Agriculture industries
 - Irrigation
- Proper zonation of social services as follows:
 - Government services- police stations, courts, survey and planning
 - Communal services -cemetery, mosques, social halls, sewerage, water
 - Recreation and allied amenities – stadiums, library

1.6 The Guiding Principles

In the development and implementation of this Land Use Plan, the community will be guided by the following principles:



Efficiency. The community will strive to ensure that the land is used in the best possible way as embodied by the zonation scheme. For instance, areas best suited for the conservation of wildlife because of habitat and other factors will be reserved for conservation. While those best suited for livestock grazing will be devoted to that.



Sustainability. The land resources will be used in a manner that optimizes its potential without undermining its future productivity. Regard for future generations will inform all-natural resource exploitation programs.



Equity. The plan will work for all community members irrespective of gender and age or an individual's social status in the community. Equitable access to benefits arising from the management of natural resources is enshrined in the national constitution and CIDP.



Good Governance. The community, through CLMC, will establish governance mechanisms that are transparent and accountable.



Ecosystem Approach. Efforts will be made to manage the landscape based on an ecosystem approach.



Conservation Benefits. Ways shall be explored to ensure the local communities derive direct and indirect benefits from wildlife and their natural habitats

1.7 Plan Structure

The plan is divided into five chapters and annexes as follows:

Chapter 1: Introduction

Chapter 2: Policy and Legal Framework

Chapter 3: Description of the plan area

Chapter 4: The Kamuthe Community Land Land Use Plan

Chapter 5: The Plan Implementation

Chapter 6: The Community Action Plans

Chapter 7: Monitoring and Evaluation

Annexes



CHAPTER 2

Policy and Legal Framework

The Kamuthe Community Land land use plan is anchored on the national statutes and policies that guide and support planning for community land and sustainable use and management of natural resources. These are discussed under the legal and institutional frameworks below.



Legal Framework

2.1 National Laws

The Constitution of Kenya 2010 - The constitution of Kenya is the basis for the process of devolution in Kenya, and it places integrated county planning as a key aspect of the development process. The role guides proper planning and it ensures that counties use limited resources prudently to address the unlimited needs of the citizens.

Article 66 of the Constitution states: *“the State may regulate the use of any land, or any interest in or right over any land, in the interest of defense, public safety, public order, public morality, public health, or land use.”*

The Constitution further upholds the following values:

- Gender Equality,
- Social justice, economic equity and inclusiveness,
- Cultural and religious diversity,
- Non-discrimination and Protection of the marginalized,
- Participation of the people,

All these values are the cornerstone of the land use plan.

2.1.1 Other Relevant Laws

There are several articles of the law supporting land use planning for community land. These are listed below:

Community Land Act 2016 – Provides the provisions for community land ownership, registration of community, the position of conservancies/reserves as community land, and provision of development on community land in tandem with the county government. This is the primary Act governing the development of land use plans for community land.

Wildlife Conservation and Management Act (No. 47 of 2013) - This Act of Parliament provides for the protection, conservation, sustainable use, and management of wildlife in Kenya. The implementation of this Act shall be guided by the following principles:

- i. Wildlife conservation and management shall be devolved, wherever possible and appropriate to those owners and managers of land where wildlife occurs;
- ii. Conservation and management of wildlife shall entail effective public participation;
- iii. Wildlife conservation and management shall be encouraged and recognized as a form of land use on public, community, and private land;

- iv. Benefits of wildlife conservation shall be derived by the land user to offset costs and to ensure the value and management of wildlife do not decline;
- v. Wildlife conservation and management shall be exercised per the principles of sustainable utilization to meet the benefits of present and future generations;

The Physical and Land Use Planning Act, 2019 - This Act provides for the preparation and implementation of physical development plans and establishes the responsibility for the physical planning at various levels of Government to remove uncertainty regarding the responsibility for regional planning. It gives development control guidelines regulating the carrying out of any works on land and ensuring that such operations conform to spatial development plans as well as policy guidelines.

This legislation is relevant to the implementation of the land use plan, especially planning for activities proposed in the settlement zone

The Water Act, 2016 - Provide guidelines on plan proposals touching on management, conservation, use, and control of water resources, water supply, and sewerage services. Water in Kenya is owned by the Government, subject to any right of the user, legally acquired. The control and right to use water are exercised by the government ministry administering the Act, and such use can only be acquired under the provisions of the Act. The Cabinet Secretary is also vested with the duty to promote investigations, conserve and properly use water throughout Kenya, including issuing of water permits.

Kenya National Commission on Human Rights Act, 2011- Is mandated, under article 59 of the constitution, to investigate and provide redress for human rights violations, to research and monitor the compliance of human rights norms and standards, human rights education and training and campaigns, advocate, and collaborate with other stakeholders in Kenya.

In Kamuthe Community Land as highlighted in some sections of this land use plan, this section is relevant especially in the Lapsset zone where people and livestock are exposed to safety hazards due to unfenced and neglected excavations. Other concerns pertain to unpredictable floods from Masing Dam under circumstances that reek of neglect by TARDA.

Intergovernmental Relations Act, 2012 - An Act of Parliament that establishes a framework for consultation and cooperation between the national and county governments and amongst county governments; to establish mechanisms for the resolution of intergovernmental disputes pursuant to Articles 6 and 189 of the Constitution, and for connected purposes.

This section is highly relevant with respect to the unregistered part of the Kamuthe land falling with Tana River County and the promotion of trade and investments with and outside Garissa County for the benefit of local communities in Kamuthe



Institutional Framework

2.2 National Government Ministries

Ministry of Agriculture and Livestock Development- Works to develop productivity in agriculture, enhance food security, improve access to market and trade, and strengthen institutional capacity. Many members of Kamuthe Community Land carry out agricultural activities that depend on the ministry's guidelines on various aspects such as farming modern farming technology, management of pests and diseases, harvesting and storage, etc.

Ministry of Environment and Forestry - Facilitates good governance in the protection, restoration, conservation, development, and management of the environment and especially forestry resources. This vision informs the work of this land use plan for Kamuthe which proposes restoration of degraded areas and management of the invasive "Mathenge" tree.

Ministry of Lands, Public Works, Housing, and Urban Development - Works to facilitate improvement of the livelihood of Kenyans through efficient land administration, equitable access, secure tenure and sustainable management of land resources. The urban department has the specific mandate to facilitate access to adequate and decent housing and prepare urban plans for sustainable development.

This land use plan has specific proposals for activities to be carried in the settlement zone under the Physical Planning Act which is adjudicated under the ministry.

Ministry of Public Service, Gender and Affirmative Action - Coordinates gender mainstreaming in national development planning and promote equitable political and socio-economic development for women, men, girls and boys. The land use plan for Kamuthe Community Land has specific proposals for strengthening gender programme especially advancement of women and girls education and economic empowerment. These proposals are anchored on the objectives of the ministry

Ministry of Trade, Investments and Industry - Works to facilitate trade and investment by championing an enabling environment for domestic and export trade to thrive. It has several objectives, the most relevant to this land use plan being:

- To promote Enterprise and entrepreneurship development
- To improve business environment and promote attractive investment climate
- To broaden and deepen export base and markets

This land use plan calls for County and National Government support with expansion of trade and investments in Kamuthe to create opportunities for the local population. It further calls for exploration of external markets for products such as meat, milk, leather and agricultural crops in line with the objectives of the ministry.

Ministry of Tourism, Wildlife and Heritage - Has the vision to create a vibrant and innovative tourism industry supported by sustainable wildlife resources by facilitating good governance structures for sustainable development, management, and marketing of tourism and wildlife.

The ministry approaches its mandate through two distinct departments:

- **Tourism** - provides strategic leadership and policy intervention in the development and management of tourism under the **Tourism Act, 2011**
- **Wildlife** - Spearheads and oversees the implementation of the Wildlife Act 2013



Ministry of Water and Sanitation - Promotes and supports integrated water resource management to enhance water availability and accessibility.

The specific objectives relevant to this land use plan include:

- Improving the sustainable management of water resources;
- Improving the provision of water and sewerage services;
- Improving utilization of land through irrigation and land reclamation;
- Improving the management and access to water resources information

Water scarcity is the foremost challenge facing Kamuthe community and this plan has specific proposals for measures to be taken to provide water and sanitation in the settlement zone and also support irrigated agriculture in the cultivation zone.

Ministry of Mining, Blue Economy, and Maritime Affairs - Has the mission of promoting sustainable development of the extractive sector. In particular, the mining function is charged under section 17(1)(a) of the Mining Act, 2016, to among others promote the effective and efficient management and the development of mineral resources and the mining sector; and exercising regulatory administration over mining and prospecting operations.

The communities and stakeholders of Kamuthe Community Land have identified mining as a key activity with potential to unlock economic opportunities through commercial harvesting of murrum, gypsum, limestone and other products.

Ministry of Youth Affairs, Sports and The Arts - Charged with providing leadership, coordination and an enabling environment for the development of Kenyan youth through participatory engagements that serve their needs and aspirations for global competitiveness. The ministry has five operational objectives all of which directly touch on this land use plan. These are:

- Youth Empowerment;
- Mainstreaming Youth in National Development;
- Harnessing and Developing Youth Talents for National Development;
- Managing and promoting Engagement with Youth for National Development;
- Collaborating and overseeing stakeholders engaged in Youth promoting Activities.

The land use plan has called for special interventions to empower the youth through the development of a vocational college and a recreation center.

2.3 County Spatial and Development Plan

The Garissa County CIDP is anchored on four pillars:



Create wealth and employment for sustainable economic prosperity. This land use plan supports the development of economic opportunities in Kamuthe Community Land and proposes several activities geared towards harnessing this potential.



Access to social amenities and improved standard of living for the community. There are proposals in the settlement zone for the development of amenities and infrastructures for advancing the quality of life of the community.



Improve social protection and equity through community empowerment. The County government would support community initiatives that deliver this pillar through various programs and activities as proposed in the action plan of this land use plan.



Be a frontier on institutional development and improve public engagement in matters of governance. The community land is adjudicated by a democratically elected CLMC that coordinates stakeholders and the county government's engagement with the people to ensure fairness on land and development policies.

The CIDP 2023-2027 identifies several strategies to promote the development of the county such as:

- Livestock production, value addition, and trade
- Development of cultivated agriculture and value addition
- Exploration and promotion of tourism attraction sites
- Promotion of mining and tapping of renewable energy
- Wildlife, forests, and landscape conservation
- Rehabilitation of degraded land
- Reduction of invasive plant species

2.4 County Legislations

The County Government of Garissa has passed several bills and policy papers that support various proposals in this land use plan. The key ones are:

- Youth policy was formulated and adopted in 2020 and 2021. It creates several affirmative actions and coordinating structures to promote mainstreaming of youth issues in the county
- The gender policy was formulated and adopted in 2020 and 2021.
- Garissa County Climate Change Fund Act 2018 which obligated the County Government to set aside 2% of the County annual development fund to locally lead climate actions to manage the damage caused by climate change
- Enactment of Garissa County Investment Development Authority Act 2018.
- Establishment of Garissa Investment Development Authority (GIDA).
- Formulation of Garissa market Policy
- Formulation of Garissa County trade policy

2.5 International Policies

Sustainable Development Goals, SDG's - The SDG's 2030, adopted by the United Nations in 2015 advance a universal call to end poverty, protect the planet, and ensure that all people will enjoy peace and prosperity. The goals work together in an integrated approach to achieve greater outcomes of a balanced social, economic, and environmental sustainability. The key goals in this review are:



GOAL 1
Ending poverty, especially in poor nations



GOAL 3
Good health and well-being of the people



GOAL 8
Strive to deliver decent work and economic growth



GOAL 10
Reduced inequalities in incomes and standards of living



GOAL 13
Development aligned with mitigation of climate changes



GOAL 16
Peace, justice and strong institutions



GOAL 17
Partnerships for the goals among institutions, sectors and nations

The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (2014) - is an international agreement that aims at sharing the benefits arising from the utilization of genetic resources fairly and equitably.

UN declaration on indigenous people (2007) - Recognizes that respect for indigenous knowledge, cultures and traditional practice contributes to sustainable and equitable development and proper management of the environment.

Also, that indigenous people have the right to own, use, develop and control the lands, territories, and resources that they possess because of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired.

Convention on Biological Diversity- CBD (1993) - Promotes environmentally sound and sustainable development in the areas adjacent to protected areas and support local populations to develop and implement remedial action in degraded areas where biological diversity has been reduced.



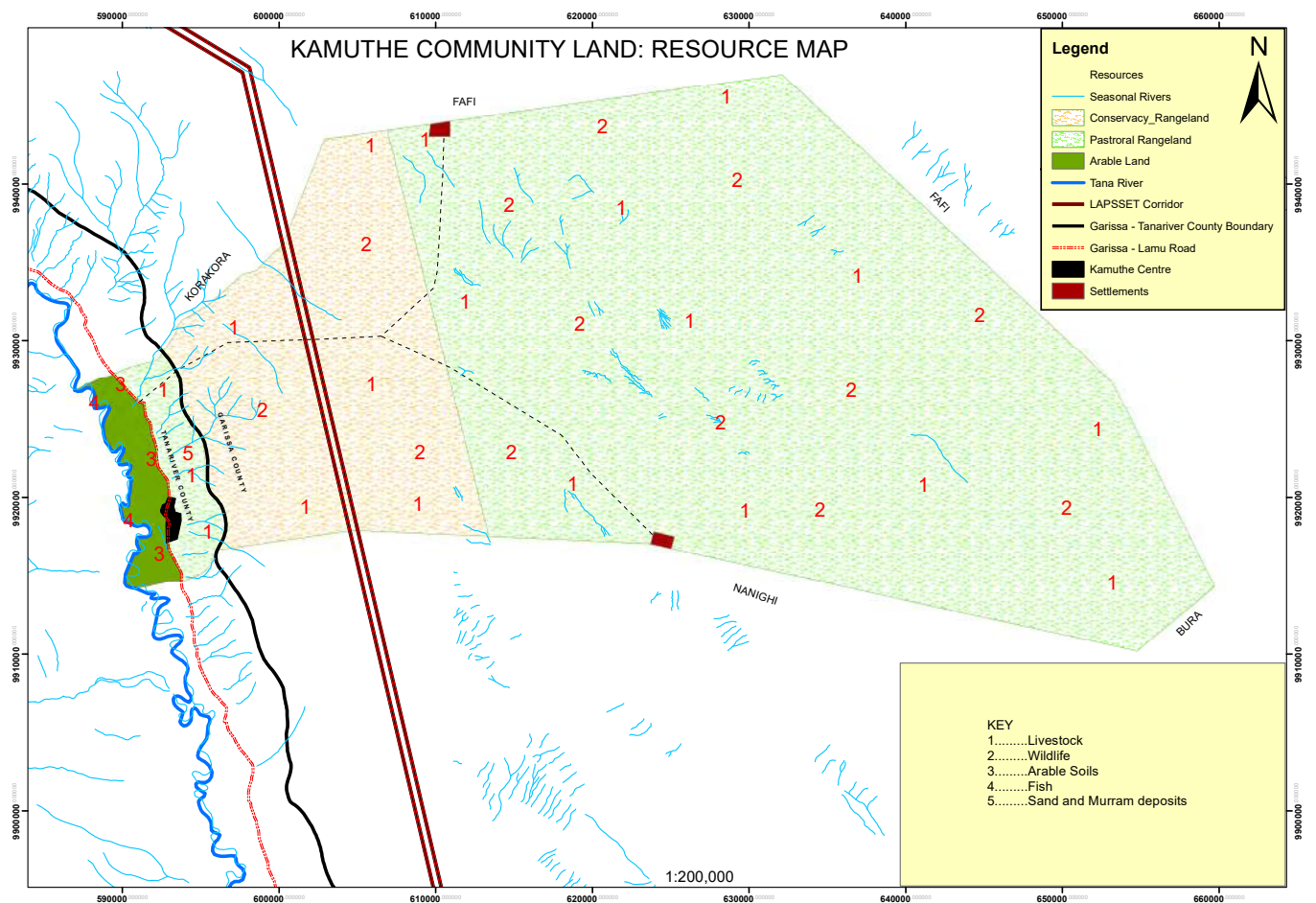
CHAPTER 3

Description of the Planning Area

3.1 Key Resources in Kamuthe Community Land

The Kamuthe Community Land resources can be grouped into three broad categories: Biodiversity, Natural resources, and Socio-economic.

FIGURE 3.
Kamuthe Community Land: Resource Map





Biodiversity resources

The rich wildlife and biodiversity resources in the area inspired the setting up of Kamuthe Conservancy. The Conservancy is constituted mainly of bushland habitat with scattered woodlands. The main woody plants are *Salvadora persica*, *Acacia mellifera*, *Terminalia orbicularis*, *Debora glabra*, *Azadirachta indica*, and *Tamarindus indica*.

The scrub and woody habitats support diverse herbivore species and iconic wildlife such as the Reticulated Giraffe which is the flagship of the conservancy. Other large mammals include the endangered Grevy zebra, Beisa oryx, Gerenuk, and allied range antelopes. Carnivores include the Lion, Leopard, spotted hyena, and jackals all classified nationally as either endangered or vulnerable. The Conservancy also has a rich birdlife, including the Somali Ostrich, Helmeted Guineafowl, White-backed Duck, Blue-billed Teal, Northern Pintail, and many more.

The entire land inside and outside Kamuthe Conservancy is rich in reptiles, especially snakes and tortoises

A checklist of large mammals of Kamuthe Conservancy is attached in annex 2



Natural Resources

Land – At more than 153,494.59 Ha., land is the primary resource in Kamuthe that offers a great planning scope to deliver development of human and economic investments for the local people.

Tana River- The longest and largest river in Kenya draining from the southern and eastern slopes of Mount Kenya. The river hosts a variety of wildlife such as hippos, and crocodiles, and the banks are rich in birdlife and home to many monkeys. The flood plain is an important resource for pasture during dry seasons and serves as a refuge during drought conditions. It harbors many opportunities for profitable irrigated farming, fisheries, recreation, and tourism.

Renewable Energy – the primary ones being sunlight and wind which are naturally available at no cost to the people or government. This energy holds vast potential to power economic activities in the area as well as domestic power supply.

Natural Honey –The area has natural conditions for high-quality honey production due to high temperatures, numerous Acacia tree species, and water from the nearby river. Hoey is currently produced at subsistence level and there is potential for commercial production.

Sand and Murram deposits- There are numerous river beds and gullies with plenty of sand murram that be commercially exploited with a set framework of environmental protection

Gypsum and limestone - The areas around Bur/Har Hills are known to harbour these minerals that are used in cement production. Commercial viability has not been determined

Arable land – the area has arable land that can support vibrant agriculture, only limited by water supply and access roads. Some sections towards the river are conducive for cotton growing

Grazing land – This is conducive to livestock production because of naturally existing suitable vegetation and weather conditions. The land however needs several interventions including water provision and infrastructures to support the livestock trade



Socio-economic Resources

Livestock- There are vast grazing plans in Kamuthe land with suitable pasture and vegetation during ideal weather conditions. The community has large herds of livestock, mainly goats, cows, and camels with great economic potential if well-harnessed

Medicinal Plants – There are many species of plants with medicinal value and others with edible fruits. Examples include *lamasha*, *gaza*, *dekra*, *kamuthe*, *sholole*, *aloe vera* among others. Some species, such as *Aloe vera*, are commercially produced in other parts of the country and anecdotal data suggests viability similar potential here if other factors are ideal.

Human power – there is plenty of human resource in Kamuthe, with many members of the community living on the land, including the youth, many of who are jobless

Security – The area enjoys relatively good security that is conducive to economic growth and investments

Indigenous knowledge – the community has a rich treasure of knowledge on the environment which they rely on in their interactions with nature and wildlife. We have traditional “medicine men” in some areas whose skills and services supplement modern health care and government services

Plants with cultural value – several species of palm trees are harvested for thatching and making cultural products such as baskets, mats and mattresses

Local culture – Indigenous culture is an asset to every community. It shapes peoples’ profile and image to the external world and in most cases becomes a factor of economic growth. Culture is indeed one of the strongest factors driving tourism in many parts of Kenya such as Narok, Samburu, Kajiado, and Coastal Counties

Lapsset – The Lapsset corridor is a great resource that can spur the socio-economic development of Kamuthe through modern transport. The extent to which the Kamuthe community can harness this potential will depend on specific programmes laid to tap the opportunities

3.2 Land tenure

Kamuthe was previously a trust land which is now transferred to the community under the Community Land Act 2016. The land is adjudicated by the Community Land Management Committee elected from the community. The work of CLMC is sanctioned by the community assembly where a third of the assembly members are required to approve all major decisions regarding the land.

3.3 Land Use in Kamuthe Land

This land use plan builds on the foundation of the current zonation scheme that was developed during the demarcation and registration of Kamuthe as community land. The zones are as follows:



Livestock Grazing

The community has had informal “grazing zones” dating back many years ago. They had wet and dry season grazing areas which were designated using indigenous knowledge and administered through the traditional governing system. The bulk of this area constituted the grazing zone.

The main livestock breeds are boran for cattle, galla goats, black-headed Persian sheep, and dromedary one-humped for camel. Cattle are used for meat and milk, camel for milk and transportation, and goats are a source of meat and milk.

Notwithstanding the huge potential, livestock farming is poorly developed with low economic returns. The entire Garissa region has been identified as having a potential for export of livestock and livestock products to the Middle East, North Africa and Mauritius if the various challenges facing the sector were tackled.

The priority challenges include:

- Inadequate water and pastures due to land degradation
- Overgrazing during the dry seasons contributes to conflicts and degradation
- Animal diseases
- Low productivity
- Poor infrastructure that constraints access to the market

The government, through KALRO Garissa, has been working to improve beef productivity and commercialization, especially toward value addition of livestock products.

Conservation

The conservation area was chosen as the area with rich biodiversity and the highest concentrations of wildlife. This existed even before community land registration. Conservation land use is constituted by Kamuthe Conservancy discussed in section 2.1 above.

The following challenges face conservation:

- Water shortage, especially during drought, forces wildlife to move far in search of water in the process causing human-wildlife conflict
- Wildlife diseases attack some species of animals such as giraffes and zebras
- Poaching of animals is rife, especially during the extreme drought seasons

Settlement

Human settlements have historically been attracted by water, hence originally established along the rivers. In Kamuthe, the area along the river was settled long before the gazettement of the land where the settlement zone was set save for a few settlements in the grazing areas.

The main challenges experienced in the settlement include:

- Drought forces the people to wander far and wide in search of water. This causes conflict with wildlife and also between the communities. It also destabilizes families and distracts schooling
- Floods cause displacements and destruction of lives and property
- Lack of adequate and functional social services including schools and hospitals
- Lack of social amenities and recreation facilities
- Poor transport network

Cultivation

Farming existed even before the registration of the community land, most of which was next to the river.

Just like the rest of Garissa County, Kamuthe has two farming systems, rain-fed and irrigated. The rain-fed system is challenged by the erratic rainfall in the area, worsened by the effects of global warming which cause prolonged droughts and fierce storm waters at other times making it hard for farmers to plan their work.

Irrigation potential is much more feasible supported by the all-season River Tana that marks the western boundary. However, this farming is also heavily constrained by unpredictable and severe floods from the river which habitually destroy crops and irrigation equipment

The main crops produced are food crops such as maize sweet potatoes, tomatoes, and assorted fruits. Cash crops include sunflower and cotton

Cultivation in Kamuthe faces the following challenges:

- Poor road network hampers access to the farms and transport to the market
- Lack of capital and capacity for large-scale or commercial farming
- Lack of reliable agricultural extension services
- Lack of opportunity for value addition of crops such as fruits and vegetables
- Shortage of water in the inland areas away from the river



LAPSSET

LAPSSET stands for Lamu Port, South Sudan, Ethiopia Transport Corridor. The corridor project is said to be Eastern Africa's largest and most ambitious infrastructure project bringing together Kenya, Ethiopia, and South Sudan.

This mega project consists of seven key infrastructure projects starting with a new 32 Berth port at Lamu (Kenya); Interregional Highways from Lamu to Isiolo, Isiolo to Juba (South Sudan), Isiolo to Addis Ababa (Ethiopia), and Lamu to Garsen (Kenya), Crude Oil Pipeline from Lamu to Isiolo, Isiolo to Juba; Product Oil Pipeline from Lamu to Isiolo, Isiolo to Addis Ababa; Interregional Standard Gauge Railway lines from Lamu to Isiolo, Isiolo to Juba, Isiolo to Addis Ababa, and Nairobi to Isiolo; and The multipurpose High Grand Falls Dam along the Tana River.

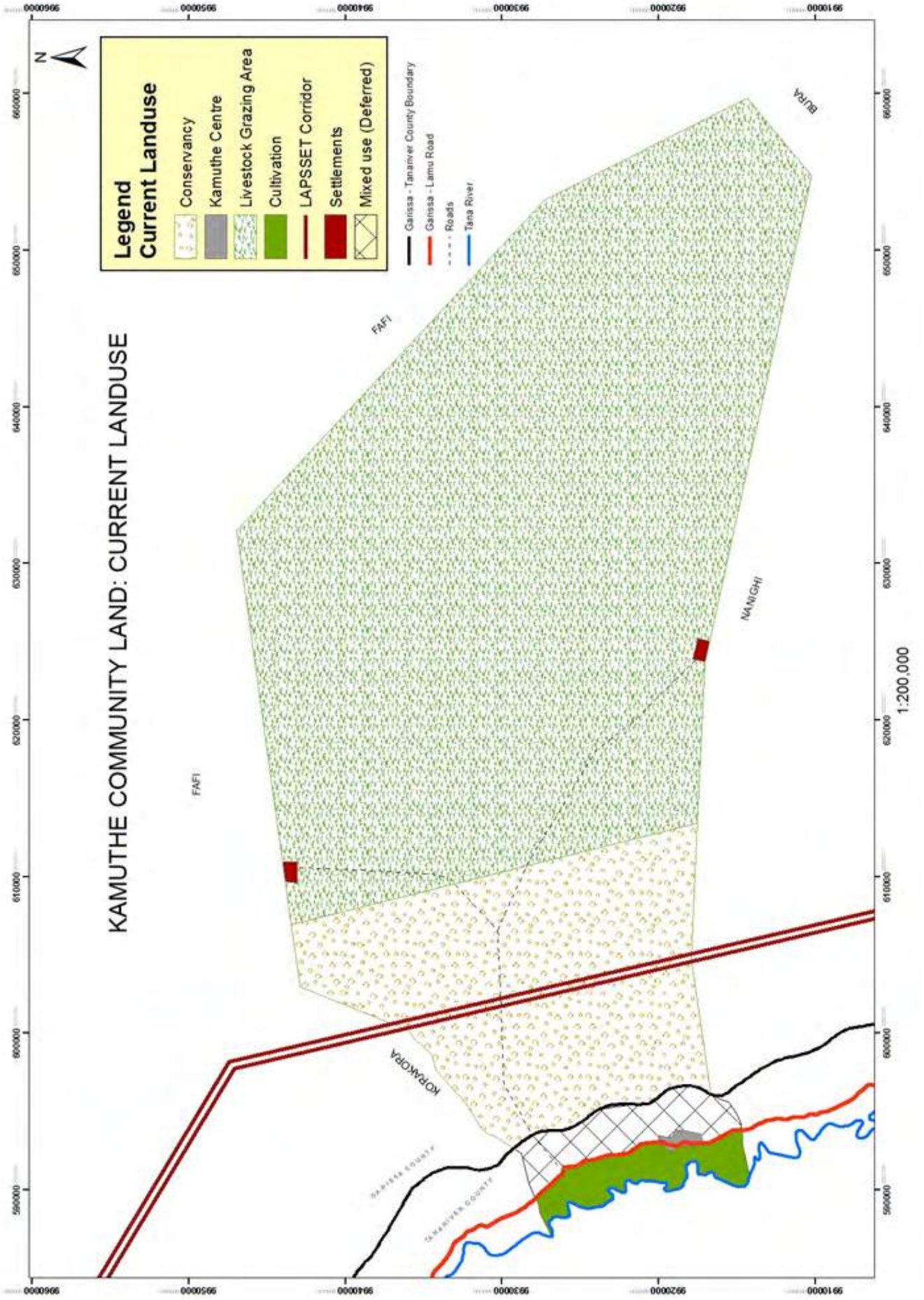
The LAPSSET project transformative potential for the historically neglected north of Kenya and for East African regional integration. A major challenge is safeguarding the environment, and the rights and livelihoods of those whose lands the project will cross (Rift Valley Institute, 2018).

The corridor bisects Kamuthe community land through the conservancy. It was set up as a land use zone because of the magnitude of operations and their potential impact on the people and environment.

The zone poses the following challenges:

- Open and neglected excavations are safety hazards for people and animals
- Land compensation has not been effected to the satisfaction of the community
- There is a lack of transparency on the side of the government regarding progress of the project

FIGURE 4.
Current Land Uses in Kamuthe Community Land



3.4 Major Problems and Opportunities

The major problems of Kamuthe Community Land were arrived at through engagements with the community members and stakeholders. The problems are briefly described below together with their proposed mitigations and opportunities.



Frequent Floods

The communities in all the villages in Kamuthe that participated in the land use plan ranked flooding as one of the most severe challenges that they face. Heavy floods have been recorded in the last two decades especially in 2006, 2010, 2020, and 2023 causing huge human and economic losses.

The main effects of floods include:

- Loss of human life and property
- Mass displacement of people and livestock
- Spread of waterborne diseases
- Destruction of crops and economic activities
- Destruction of infrastructures, including farming equipment such as pipes, pumps, etc

Solutions and Opportunities

The land use plan proposes to the County Government to mobilize funds from the national government and bilateral agencies and other development partners to:

- Construct dykes and other flood management measures
- Strengthen emergency response
- Set up or strengthen data centre for monitoring and predicting weather changes and calamities for early warning



Water shortage

Water shortage in Kamuthe is acute, notwithstanding the land sits next to the largest river in Kenya. Water shortage causes the following:

- Wildlife wanders out of the conservancy in search of water, causing conflict
- Agriculture production remains low as it is dependent on rainfall
- A lot of arable land is unexploited due to lack of water
- Mass mortality of livestock during drought
- Loss of economic productivity as people spend a lot of time fetching water

Solutions and Opportunities

- **Boreholes** - There is a need to invest in more boreholes directly targeting human settlements to save people time and labour walking long distances in search of water
- **Storage facilities** - Such as dams and water pans should be constructed to serve livestock and wildlife. This will also help curb human-wildlife conflicts



Spread of Mathenge Shrub

Like many ASAL regions of Kenya, Kamuthe is heavily choked by the invasive shrub, *Prosopis Juliflora*, commonly known as Mathenge.

Mathenge was introduced in Kenya in the 1980s from South Africa to control desertification. However, the plant has overgrown local landscapes in many parts of the country, killing any other plant beneath it. Government statistics indicate that the trees spread at the rate of 15 percent yearly and have so far colonised a million acres of land in Kenya.

The tree also causes livestock deaths when animals feed on its broad leaves that contain poisonous thorns, while the sugar in the pods causes tooth decay in livestock. Most importantly, it causes a reduction in pasture which is significant for pastoral communities.

Further research has suggested the plant is highly attractive to the malaria-transmitting anopheles' mosquitoes because the plant provides them with sugar that is critical to their survival. Hence it is suspected to aid in the spread of malaria. It is due to these devastating effects on the environment and people's livelihoods, the plant was been declared a threat to national security by the Kenya government in 2014.

The main challenges of Mathenge are:

- Reduced pasture for livestock
- Reduces soil fertility making the land unsuitable for other plants
- Reduces biodiversity because of its invasive nature
- Directly hazardous to livestock
- Spreads fast due to lack of competition

Solutions and Opportunities

Frustrations from the effects of Mathenge plant have compelled many communities and governments to contemplate mechanical removal. However, experience elsewhere shows it is neither cost-effective nor technically feasible to undertake mechanical removal.

The best option is to adapt land use to its management and use (Abdi, 2011). This plan proposes:

Economic Uses - Such as the production of animal feeds using the seed pods from the tree. This has been tried at a commercial scale in Baringo and it is important to explore its potential in Kamuthe. The plant has also been shown to harbor potential as a source of medicine and high-quality wood carvings which can get a niche in the high-end curio and wood products business.

Charcoal production – The County government to review charcoal regulations to support Mathenge charcoal production to provide a source of income while controlling the spread of the shrub and restoring indigenous tree cover.

Research – There is a need to support more research on viable economic uses of the plant



Sub-optimal Agriculture

Farming is an important land use in Kamuthe. It is a source of food and income for many families but is beset by pressing challenges that limit its development and potential benefits to the community. The area produces vegetable crops that are in very high demand such as tomatoes, capsicum, sweet potatoes, watermelons.

The main challenges affecting farming are:

- Farming is dependent on rain because there are not enough facilities to tap water from the river
- The area has poor access roads which limit movement for effective farming and transport of farm produce to the market
- Floods destroy farms and crops through waterlogging. They also destroy the few facilities available such as water pumps which is very demoralizing to the farmers

Solutions and Opportunities

Water - There is a need to invest in secure water pumps and piping systems to ensure that water reaches farms all year round

Storage – facilities such as coolers for perishable crops (such as potatoes and vegetables) to curb post-harvest losses

Value addition - of crops has a big potential to transform farming and the economic fortunes of the community



Climate Change and Drought

Climate change is depicted by frequently changing weather patterns which have made rainfall very unreliable causing frequent droughts and famine. This climatic variability limits rangeland regeneration and reduces grazing land. On the other hand, heavy and unpredictable rainfall causes serious flooding which has had negative effects on economic activities.

Kamuthe, as is the case with most of Garissa County, is prone to frequent and severe droughts. These droughts lead to:

- Loss of crops and livestock impacting community livelihoods
- Forced migrations as people search for pasture and water for livestock
- Poor school attendance as learners vacate schools due to a lack of food and water
- Worsening poverty and vulnerability to diseases

Solutions and Opportunities

- The County Government should encourage and lay infrastructures to enable irrigated farming where this is allowed in the zonation plan.
- County Government to set up or strengthen environmental data centre to monitor weather patterns and be able to predict extreme events such as floods, droughts, and heavy rains and mobilize the communities to prepare accordingly. For instance, moving away from floods, and selling livestock at the onset of droughts to forestall huge losses.
- Seek funds to engage the local youth in afforestation activities as a way to restore the integrity of the environment and give economic opportunities.
- Pursue the opportunity of payment for ecosystem services such as carbon credit and develop a mechanism for equitable benefit sharing.



Lack of Basic Social Services and Vital Infrastructure

In every part of Kamuthe Community Land covered during the planning process, the people are in dire need of basic social services. The most pressing needs are:

- Lack of functional hospital and maternity. The local hospital at Warable Village lacks equipment and has no qualified staff. The entire village also lacks a maternity hospital or dispensary causing expectant mothers to travel long distances. Many are forced to deliver in their homes causing high mortality of infants and mothers.

- Poor access roads and designated markets hamper socioeconomic life in Kamuthe. For instance, the nearest livestock market is 40km away in Garissa town. Those who want to sell the livestock have to walk them for such a long distance that they arrive in poor body condition that cannot fetch fair prices
- The area lacks a vocational center to train the youth in employable skills or enable them to venture into business
- The area has a large population of young people who have no places and facilities for recreation.

Solutions and Opportunities

Health Facility – the existing hospital needs to be upgraded and staffed to make it functional. A maternity hospital is required separately or as a wing of the existing hospital

Vocational Training Centre – to absorb many youths leaving school and equip them with skills for self-employment

Adult Education Services – to boost literary levels of the population for better socio-economic development

Gender Centre – to offer women and girls-focused training program to create and increase learning and empowerment opportunities for women

Community Centre - that can facilitate healthy recreation in the community such as volleyball, tennis, drama



Land degradation

The majority of the communities in the entire County rely on livestock and small-scale agriculture for their livelihood. The sustainability of these activities is constrained by the degraded landscapes manifested in the form of soil erosion, overgrazing, and habitat destruction.

The key factors causing land degradation and habitat loss in the planning area:

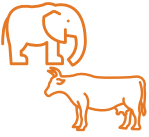
- Soil erosion due to exposure of topsoil by destruction of tree cover leaving the soil exposed to water storms and wind erosion
- Livestock overgrazing. As witnessed in many areas with similar cultural setups, communal livestock grazing requires strong pasture management plans and grazing controls. In its absence, there is the likelihood of overgrazing in the common landscape in general.
- Uncontrolled charcoal burning leads to gradual clearance of dryland-adapted trees that are preferred for charcoal making and woody shrubs some of which are of medicinal value. Clearing trees and shrubs for charcoal production is also a contributing factor to soil erosion in the area.

Solutions and Opportunities

Grazing management systems - that introduce rotational grazing ensuring that grazed pastures have time to recover. Grazing plans also control stocking levels and restrict cattle invasion by cattle from outside the community

Land restoration programmes – that restore the environment while also engaging the local youth in productive activities

Charcoal regulations - to stem unregulated tree cutting for charcoal production. The regulations can be used to target control of the invasive Mathenge tree.



Human-wildlife Conflict

Human-wildlife conflict is mainly manifested in the form of livestock predation and crop raiding. The problem animals responsible for livestock predation include leopards and hyenas while those responsible for crop raiding include zebras and the primates.

The main factor contributing to human-wildlife conflict is the lack of water which causes wildlife to move way outside conservation areas where they cause conflicts.

The challenges with human-wildlife conflict include:

- Causes economic losses when livestock is killed and crops are destroyed by animals
- In some unfortunate cases it causes human injuries and death
- It makes people resent wildlife and conservation
- It endangers wildlife when people resort to retaliatory attacks

Solutions and Opportunities

Work with KWS - Kamuthe Conservancy and local leaders should work with KWS to empower the conservancy rangers to control problem animals and respond to crises.

Compensation- from death and injuries should be processed faster to manage loss and bitterness toward the government and wildlife

Provision of water - in the conservation zone to minimize cases of animals moving far into the settlement and grazing areas in search of water

Predator-proof bomas – have successfully been deployed in some areas and protected livestock from predators



Livestock Production Challenges

Livestock in Kamuthe is a core land use activity with strong cultural roots and a great potential for economic empowerment. Livestock production is however constrained by:

- Droughts due to changing weather patterns and lack of water storage facilities such as dams and pans
- Livestock diseases such as foot and mouth disease, contagious Bovine Pleuro-pneumonia, Contagious Caprine Pleuropneumonia, East Coast Fever, etc, which cause huge livestock losses.
- Lack of capacity for value addition
- Lack of access roads and infrastructures to support livestock trade

Solutions and Opportunities

- **Cattle dips** - to control livestock pests such as ticks.
- **Veterinary services** - to periodically vaccinate livestock against diseases and also carry out routine extension services
- **Value-addition** - trade in raw products such as milk and meat limit the economic potential of livestock
- **Pasture production** - by grass seeding and hay production
- **Grazing plans** - to curb conflicts and overgrazing and introduce traditional pasture management control mechanisms and dispute resolution



TABLE 1.

Summary of problems, solutions and opportunities identified by stakeholders

Problems	Viable Mitigations	Opportunities
GRAZING ZONE		
<ul style="list-style-type: none"> Occasional conflicts over pasture (especially during drought) Land degradation due to overgrazing, deforestation, and bushfires Frequent and prolonged droughts due to climate change Lack of adequate water causing livestock/human-wildlife conflicts Poor road network hampering trade Livestock diseases and inadequate veterinary care 	<ul style="list-style-type: none"> Develop a holistic grazing plan to curb overgrazing Form a management committee to enforce the grazing plan Undertake land and grass restoration Strengthen the water harvesting and storage capacity of the community by drilling boreholes and dams Adopt traditional dispute resolution mechanisms to manage conflicts 	<ul style="list-style-type: none"> Value addition in milk, meat, and skins can boost income from livestock Livestock breed upgrade can lead to better yields Bee farming has the potential to supplement income from livestock Carbon credit incomes from the grazing zone can supplement community incomes Mining and mineral exploitation under controlled guidelines
	<ul style="list-style-type: none"> Upgrade and maintain the access roads Strengthen compensation for wildlife damage Curb the use of fire and develop fire breaks Strengthen veterinary services Carry out afforestation 	<ul style="list-style-type: none"> Facilities to enhance livestock production such as milk coolers and abattoirs
SETTLEMENT ZONE		
<ul style="list-style-type: none"> Lack of basic social amenities and infrastructure (especially health and education) contributes to social misery Unplanned settlements are a potential source of conflicts Climate change effects worsen environmental degradation, economic challenges, and fuel conflicts Limited employment and economic opportunities worsen poverty challenges 	<ul style="list-style-type: none"> Invest in social amenities and develop and upgrade infrastructures to enhance community welfare Develop a settlement regulation plan and form a committee under CLMC to enforce it Initiate climate change mitigation measures such as land restoration and sensitize communities on coping measures 	<ul style="list-style-type: none"> Processing, packaging, and marketing of milk, leather, honey, etc can unlock economic huge potential for the people Kitchen farms and poultry farming can boost food and nutrition security in households Youth vocational training institutes fight unemployment and lack of capacity for enterprise development. Sand / Hardcore/limestone harvesting holds significant economic potential. Should be under NEMA guidelines Market for sales for handcraft products can be enhanced to generate more revenue

CONSERVATION		
<ul style="list-style-type: none"> • Frequent droughts and inadequate water for wildlife cause conflicts with people and livestock • Outbreak of wildlife diseases a threat to wildlife • Human encroachment fuels habitat degradation and deforestation • Poaching is a threat to some wildlife species • Low community sensitization on the importance of conservation and wildlife • Lack of adequate personnel for conservancy operations and management e.g. rangers • Poor marketing and bio-diversity profiling 	<ul style="list-style-type: none"> • Drill boreholes and strengthen water conservation measures • Work with KWS and the Veterinary Department to monitor and control wildlife diseases • Undertake afforestation and related range restoration activities • Strengthen conservancy anti-poaching capacity • Fence strategic areas to control wildlife movement and ward off encroachment • Undertake continuous community education on the virtues and ways of coexistence with wildlife • Support continuous research in the conservancy and update records of wildlife, plants, and habitats. • Market the conservancy to nature enthusiasts and lay the foundation for profitable tourism 	<ul style="list-style-type: none"> • Ecotourism business based on activities such as camping, nature walks, wildlife viewing, cycling, cultural shows etc • A research station for local and international researchers and students can generate income and help in marketing the conservancy • Carbon credit holds prime potential for community income
LAPSSET ZONE		
<ul style="list-style-type: none"> • Open excavations that pose danger to people and animals • Blockage of movement corridors for animals • Lack of information and community education on the progress and impacts of the project • Environmental pollution and degradation 	<ul style="list-style-type: none"> • Rehabilitate open ditches to ensure safety and security • Develop underpass/overpasses to allow animal movement • Carry out community education and sensitization on the project • Compensate communities for loss of land or economic or cultural opportunities • Carry out land reclamation and restoration 	<ul style="list-style-type: none"> • Enhanced connectivity can transform the community socioeconomically due to accelerated commercial and industrial activity • Capital gains accrued due to government compensation will help in poverty alleviation • Employment opportunities in the construction industry will ameliorate the unemployment crisis
CULTIVATION ZONE		
<ul style="list-style-type: none"> • Recurrent floods occasion huge losses • Lack of capacity to procure farm inputs including seeds, fertilizer, and modern equipment • Poor road network hinders market access and favourable prices for produce • Invasion by 'Mathenge' shrub, <i>Prosopis juliflora</i>, lowers soil fertility and reduces the availability of arable land 	<ul style="list-style-type: none"> • Seek a lasting solution to the floods menace • Support farmers with affordable credit (shariah compliant) to buy farm inputs • Conduct agriculture extension services to improve community skills and performance in agriculture • Help the community explore commercial exploitation of Mathenge tree 	<ul style="list-style-type: none"> • There is huge economic potential in modern irrigation to enable communities to utilize expansive arable land • The area is renowned for quality mangoes and other fruits. Value addition would lead to better economic outcomes • Commercial beekeeping and honey processing can supplement income from cultivation

- Lack of water reservoirs renders cultivation rain-dependent hindering its potential
- Lack of value addition for agricultural produce limits economic returns from crops such as vegetables and fruits
- Crop raiding by wildlife, especially the monkeys
- Hire a lawyer for the community to seek compensation for damages occasioned by the overflow from Masinga Dam
- Invest in water storage and pumping to cushion farmers from weather adversity
- Incentivize investments in agriculture value-addition industries in the area
- Makuti (palm reeds) harvesting can be commercialized for better revenue generation



CHAPTER 4

The Kamuthe Community Land Use Plan

4.1 Planning Approach and Methodology

The planning process was guided by the FAO Guidelines for land-use planning to formulate the *Land Use Plan for Kamuthe Community Land*. The guidelines prescribe a bottom-up participatory planning approach in the formulation of a rural land use plan. Consequently, the land use planning process was participatory involving key stakeholders in the planning area. Stakeholder participation in the planning process ensures that the plan is owned by the community which will be responsible for implementing it.

The following steps and methods were used in this land use planning process:

- Field reconnaissance tours with local representatives
- Review, compilation and analysis of background information on the planning area
- Stakeholder planning workshop and inception meeting
- Interviews with representative sections of different stakeholders including national and county government
- Public participation meetings and open workshops with the community in different villages
- Onsite visits to different parts of the community land to witness firsthand the existing facilities, settlement areas, environmental challenges, and natural resources
- Expert discussion and compilation of a draft land use plan
- Draft presentation to CLMC
- Revision of the draft plan and the 10-year action plan
- Planning and plan validation workshops

4.2 Resource Mapping

Resource mapping was done by members of the community during the public participation workshops in all 9 villages.

During the meetings, each group was tasked to identify all the key resources in their village. These resources were categorized as either biodiversity (plants and animals), natural (eg minerals and geographical features), or sociocultural resources such as livestock. The groups were also asked to name the infrastructures and facilities in their local areas such as schools, health centres, or cattle dips, and provide the local place name of each resource of interest (See Annex 3).

To facilitate the resource mapping, a person was selected from the groups who know the area well and was facilitated to record the geographic coordinates of each resource that was identified.

Using the predefined resource lists, the mapping team drove, rode a motorbike, or walked to each of the listed resources and recorded its geographic coordinates using a GPS. The mapping teams also used high-resolution and freely available satellite images from Google Maps to identify features on the ground and orientate. Each resource that was georeferenced was also photographed.

After the fieldwork, the GPS information was downloaded from a computer and analyzed using the Arc GIS Geographic Information Systems (GIS) software to generate a draft resource map. The above activities led to the development of infrastructure and resource map of Kamuthe Community Land.

4.3 Land Use Zone Prescriptions

This section identifies the different land uses in the landscape and their impacts on each other in terms of them being acceptable, complementary, or conflicting. The aim is to provide a framework for facilitating the co-existence of different land uses with minimal conflicts.

During the planning meetings with the communities, the people were asked at the village level to explain the restrictions they wished to uphold in the land use plan for each zone.

The information collected helped to develop a matrix of land uses to illustrate degrees of acceptability, conflict, or complementarity (Table 3).

TABLE 2.
Land use conflict matrix

	Conservation	Cultivation	Livestock Grazing	Settlement	Lapsset
Conservation	NC	XX	X	XX	XX
Cultivation	XX	NC	X	√	X
Livestock Grazing	X	X	NC	√	X
Settlement	XX	√	√	NC	XX
Lapsset	XX	X	X	XX	NC

KEY

NC	No conflict
X	Conflict but can be managed
XX	Conflict and difficult to manage together
√	Land uses that complement one another

Besides the distinct land use zones, there are many economic and sociocultural activities that the people of Kamuthe Community Land carry out, and wanted to have them captured in the land use plan so that they are managed.

This land use plan has compiled a list of these activities and analyzed them for compatibility with existing land use zones. The report recommends that those activities that are partially compatible to be practiced together with conflict management while those that are incompatible should be separated.

TABLE 3.

Activities that cannot be practiced together, and those that can be managed or practiced together

Land use compatibility	Action needed
Incompatible <ul style="list-style-type: none"> • Conservation and cultivation; • Conservation and mining, • Conservation and settlement • Mining and settlement • Charcoal burning and conservation • Vegetation harvesting and conservation 	Avoid practicing these land uses together
Partially compatible <ul style="list-style-type: none"> • Conservation and livestock grazing • Cultivation and livestock grazing • Tourism and livestock grazing • Livestock grazing and mining • Beekeeping and mining • Vegetation harvesting and cultivation 	Manage these land uses together
Compatible <ul style="list-style-type: none"> • Conservation and tourism • Conservation and controlled honey harvesting • Cultivation and beekeeping • Cultivation and settlement • Livestock grazing and bee-keeping • Livestock grazing and regulated settlement • Beekeeping and settlement 	Promote practicing of these land uses together

TABLE 4.

Kamuthe Community Land Use Zones and Restrictions

Zone Description	Challenges	Activities Allowed	Activities NOT allowed
CULTIVATION ZONE			
Zone Objective: To support sustainable and profitable cultivation to realize food security and generate income			
<ul style="list-style-type: none"> • Located mainly along the Tana River riparian, covering approximately 3,370 Ha of arable land. 	<ul style="list-style-type: none"> • Frequent floods • Limited infrastructure 	<ul style="list-style-type: none"> • All beneficial agriculture • Limited residence 	<ul style="list-style-type: none"> • Wildlife and livestock herding • Cultivation of drugs/illegal crops
<ul style="list-style-type: none"> • There is further availability of select arable areas within the grazing and settlement zone. 	<ul style="list-style-type: none"> • Lack of value addition • Low capacity and poor extension services • Extensive spread of Mathenge - <i>Prosopis juliflora</i> • Farmer–Herder conflicts 	<ul style="list-style-type: none"> • Reed harvesting • Beekeeping and honey harvesting 	<ul style="list-style-type: none"> • Unauthorized fires • No closing of water corridors • Destruction/farming of fragile habitats

Zone Description	Challenges	Activities Allowed	Activities NOT allowed
LIVESTOCK GRAZING ZONE			
Zone Objective: <i>To provide an area for extensive livestock grazing</i>			
<p>Constitutes the bulk of community land; measuring approximately 119605.50 ha</p>	<ul style="list-style-type: none"> • Livestock diseases and poor veterinary extension • Water shortage and prolonged drought • Overgrazing and associated conflicts • Inter-clan competition for grazing rights and pastoral wells • Lack of value addition and poor access to the markets 	<ul style="list-style-type: none"> • Controlled settlement • Controlled agriculture • Beekeeping • Mining in designated areas under NEMA guidelines • Afforestation • Grass seeding and hay harvesting • Controlled wildlife 	<ul style="list-style-type: none"> • No new settlements • No overgrazing • No unauthorized deforestation • Extensive crop farming • Uncontrolled charcoal burning • Bush fires • Unauthorized/unsupervised grazing by immigrant communities
CONSERVATION ZONE			
Zone Objective: <i>To conserve Kamuthe's unique wildlife species, their habitats, and overall biodiversity</i>			
<ul style="list-style-type: none"> • The area is sandwiched between the Kamuthe Settlement area and the grazing zone. • It measures about 32674.28 ha 	<ul style="list-style-type: none"> • Water shortage, drought, and climate change effects • Wildlife diseases • Poaching and encroachment by settlement • Habitat destruction and land degradation • Inadequate personnel to manage the conservancy • Inadequate physical infrastructure for operations and management • Human-Wildlife conflicts 	<ul style="list-style-type: none"> • In-situ conservation • Nature-based tourism and recreation • Controlled harvesting of medicinal plants • Controlled honey harvesting • Research and education • Controlled livestock grazing 	<ul style="list-style-type: none"> • Cultivation • Human and livestock encroachment. • Mining unless authorized and supervised • Unauthorised deforestation
SETTLEMENT ZONE			
Zone Objective: <i>To provide an area where nucleated settlement can be promoted and enhancement of social services</i>			
<ul style="list-style-type: none"> • Comprises of Kamuthe administrative centre, Nadhir, and Warable villages which are entirely in Tana River County and nucleated along Garissa – Ijara Road. 	<ul style="list-style-type: none"> • Lack of basic social infrastructure • Lack of adequate water supply • Mass unemployment, poverty, and few opportunities for economic growth • Poor transport connectivity and communication 	<ul style="list-style-type: none"> • Human settlement • Light industries in designated areas • Legal commerce and trade • Social services – education, health, recreation, worship, administration • Kitchen farms 	<ul style="list-style-type: none"> • Heavy industries • Drug abuse • Pollution of environment

Zone Description	Challenges	Activities Allowed	Activities NOT allowed
<ul style="list-style-type: none"> The expansive zone measures approximately 4,150 ha and is currently under mixed-use. Other notable satellite settlements include Daad bulle and Sheikh Hassan villages, measuring about 100 ha each. 			
LAPSSET ZONE			
Zone Objective: To open northern Kenya and provide a reliable transport corridor for Kenya, Ethiopia, and Sudan (Source: Visio030)			
<ul style="list-style-type: none"> East Africa's most ambitious transport corridor; connecting Lamu port with road, rail, and pipeline infrastructure, to South Sudan and Ethiopia. The Lapsset corridor cuts across Kamuthe Conservancy, occupying about 1015.81 ha 	<ul style="list-style-type: none"> Limited community engagement and awareness Delayed compensation arising from compulsory land acquisition Derelict and unsafe excavation pits Barricaded wildlife migratory routes by road embankments 	<ul style="list-style-type: none"> Transportation As permitted by the state Buffer zones can be used for activities such as hotel business, grazing subject to consultations 	<ul style="list-style-type: none"> Guidelines to be developed in consultation with Lapsset Authority and GCG



CHAPTER 5

Plan Implementation

5.1 Legal Principles

The implementation of this land use plan will be guided by the following legal principles as per Physical and Land Use Planning Act 2019:

- Physical and land use planning shall promote sustainable use of land and liveable communities that integrate human needs in any locality
- development activities shall be planned in a manner that integrates the economic, social, and environmental needs of the present and future generations
- Physical and land use planning shall be comprehensive, sustainable, and integrated at all levels of government, taking into consideration the interest of all parties concerned
- Physical and land use planning shall take into consideration long-term optimum utilization of land and conservation of scarce land resources including preservation of land with important function
- Physical land use planning shall be inclusive and must take into consideration the culture and heritage of the people concerned
- Physical and land use planning shall take into account new approaches such as transits-oriented development, mixed land -uses, and planning for public transport and non-motorized transport and non-motorized transport among others to achieve sustainable development and more efficient use of resources

5.2 The Strengths to Harness

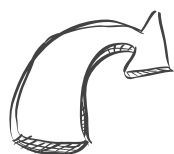
The survey revealed that Kamuthe Community Land is resource-rich and that the communities are aware their area is endowed with great potential which can be harnessed for socio-economic empowerment and development. The main strengths include:

- **Geographical features** – the area is endowed with diverse geographical features that can support many economic activities and industries, especially in leisure, tourism, and mining. The main natural feature is the Tana River which is one the largest rivers in Africa offering immense possibilities in agriculture and tourism.
- **Rich and unique biodiversity** – Kamuthe shares the same ecological zone of northern Kenya with highly restricted species of wildlife such as Reticulated giraffe, Grevy Zebra and Beisa Oryx. The larger Garissa County is the only home of the hirola antelope in the whole world. These are attributes that can be capitalized on to make Garissa and Kamuthe a leading destination for research and conservation tourism. The community land, especially the conservation zone has a rich community of indigenous vegetation that makes the area suitable for high-quality honey and mutton production.
- **Indigenous culture** – The local people still retain their indigenous culture. This is important in retaining cultural integrity as a basis of economic production and tourism. The local culture, the knowledge and dynamics should be tapped and enabled to become an ingredient of this land us plan

- **County Government Goodwill** – The County government of Garissa has stated in its policy paper that it is dedicated to supporting the socioeconomic development of the people of Garissa by taking a frontline role in championing sustainable use and management of natural resources.

5.3 Recommendations for Success

A major objective of this land use plan was to identify areas, opportunities, and the best approaches to resource management to ensure better life outcomes for the local people. To achieve this, there is a need to lay down specific programs that will make it possible to initiate the activities listed in the land use action plan. Some of the strategies include:



Identify Suitable Institutions for Long-term Collaboration

Community development is multifaceted and so are the actors and collaborators. There are issues of environment and wildlife conservation, human welfare and infrastructures, natural resources, and crop and livestock farming. These issues are all complex and require close collaboration with development agencies that are committed to supporting community and development initiatives.

The Kamuthe CLMC and County Government should deliberately and actively engage potential development partners that are active in the region for working collaboration.

Many others could be working in other parts of the country and want to set up programs in the county and the local area if they find a conducive environment to advance their work, whether in research or community support undertakings such as education, water, and health.



Research Suitable Economic Uses of Mathenge

The Mathenge shrub, *Prosopis juliflora*, is highly widespread and a big liability to the people of Kamuthe. During the public participation meetings, they expressed great frustration and helplessness at how the shrub has become an environmental disaster.

Several attempts have been made in other parts of the country to turn the shrub into a blessing rather than the curse it is now. The most common use is charcoal which has been tried with varying degrees of success. In some parts of northern Kenya, a project is ongoing to tap other values of the shrub by producing unique wood products as the plant has been shown to be a potential source of medicine and high-quality wood carvings.

The CLMC and the County Government should work with interested partners to explore commercial utilization of the shrub and tame its spread.



Lobby for Gazettement of Wildlife Utilization Laws

The laws regulating the conservation and specifically consumptive use of wildlife and wildlife products urgently call for review to make it easy for communities the enormous potential of plant and animal species.

Garissa County and the Kamuthe Land hosts a variety of reptiles which are among the most economically useful animals, exploited in many parts of the world for food, medicine, scales and skins, pets, and recreation. However, reptiles in many parts of Kenya, especially crocodiles and snakes are more of a human menace than economic resources.

The government has developed laws and protocols to support commercial production and utilization of wildlife products but the laws are not gazette.

Opportunities include:

- **Crocodile farming** –Especially around River Tana. Crocodiles are rich sources of protein and their skin is used in the making of many products like shoes, belts, handbags, etc.
- **Aloe vera** – which does very well in the range conditions such as those obtained in Garissa. It is valued for medicinal value and its various products are used for beauty and food supplements.
- **Snake and Tortoise farming** – These exist naturally in Kamuthe. They are in high demand internationally for medicine and as pets.
- **Butterfly Farming** - Butterfly farming is the breeding of butterfly pupae for sale to butterfly houses, exhibitors and natural museums (Omenge, 2002). It has taken root in some parts of Kenya which neighbour natural forests and said to be a source of tangible income supporting communities with food security, primary health care and education

These are just examples of the potential there is in the economic utilization of wildlife. The County Government should lobby for the operationalization of these laws as it has a direct stake in them on behalf of the entire county.

Form a Cooperative to Fund Business and Farming

Credit access remains a major hindrance to the establishment of viable and profitable investments. Many community members in the planning process indicated that they have products and markets but cannot process, brand, and market them due lack of financial ability. Such products include honey, milk, aloe vera, etc.

The same problems constrain crop farming due to a lack of seeds, fertilizers, and other essential farm inputs. Many people said they have arable land with fertile soils but have no ability to water the land or purchase farm inputs.

A good approach to aggregate people's efforts and resources is to form a community Sacco or cooperative union. The seed capital for such an entity can be sourced from the County Government or bilateral agencies.

It can help with the following:

- Purchase farm inputs in bulk and access them to the farmers affordably
- Give farm inputs to the needy farmers, who pay back after harvesting
- Identify markets for products such as honey, fruits and vegetables and purchase from farmers
- Guarantee loans for residents who seek financial support from lenders

Resolve Land Tenure Uncertainty

Secure land tenure is a critical part of socio-economic development. One of the primary goals of the land use plan identified by the members of Kamuthe Community Land is to guarantee security

There is apprehension regarding the portion of land that is not registered and the dispute about its home county

5.4 Quick Wins - Initiate Simple Projects

The Kamuthe Community Land Use Plan has many aspirations that can deliver socio-economic advancement to the people. Some may require a lot of planning, consultations and heavy investments. Although these big projects are good, they take time and require a lot of patience.

However, the economic transformation of Kamuthe Community can start with simple enterprises, especially based on local natural resources. Many of these can be started with only little capital and local unskilled personnel.

For this to be effective, there is a need to support the people with resource mobilization and capacity building and development of business proposals.

A few examples of business initiatives that can start with little capital and protracted bureaucracy but can have a huge social impact are listed on table 5.

TABLE 5.

Examples of simple enterprises that require little capital

Land Use Zone	Potential Enterprises that require little capital	Value to the Community
Conservation	<ul style="list-style-type: none"> • Guest house • Camping • Bird watching • Picnics and nature trails 	<ul style="list-style-type: none"> • Increase income • Create employment
Settlement	<ul style="list-style-type: none"> • Bee-keeping and honey branding and marketing • Kitchen gardens • Tree nurseries by women groups • Cultural tourism (cultural centre) • Marketing of cultural artifacts • Wildlife farming – reptiles and butterflies 	<ul style="list-style-type: none"> • Increase income • Create employment • Environmental conservation • Food and nutrition security
Cultivation	<ul style="list-style-type: none"> • Marketing of fruits and vegetables • Micro irrigation • Commercial fish harvesting 	<ul style="list-style-type: none"> • Increase income • Create employment • Boost food security
Grazing	<ul style="list-style-type: none"> • Branding and marketing camel and goat milk • Carbon credit • Milk preservation for sale to large dairies 	<ul style="list-style-type: none"> • Increase income

5.5 Governance Structure

5.5.1 Community Land Management Committee

A community-oriented organization that coordinates the implementation of the land use plan is needed to realize the success of this land use plan, especially the proposed activities. This mandate best falls under the CLMC because:

- It is set up by the law to oversee the administration of community land
- The members are elected by, hence representative of, the community
- It has established channels of communication and collaboration with the County Government

5.5.2 County Physical Planning Department

The land use plan has many recommendations and proposed activities that touch on the physical planning docket of the county government. Such activities include the design and development of public-purpose utilities such as health, education, recreation, and many others.

The implementation of the land use plan will be the responsibility of CECM in charge of planning in consultation with CLMC

5.6 Plan Implementation Structure

The success of the Plan hinges on stakeholders' commitment to follow through with plan implementation. It is for this reason that a land Use Plan Implementation Committee will need to be established to coordinate and advise on implementation progress.

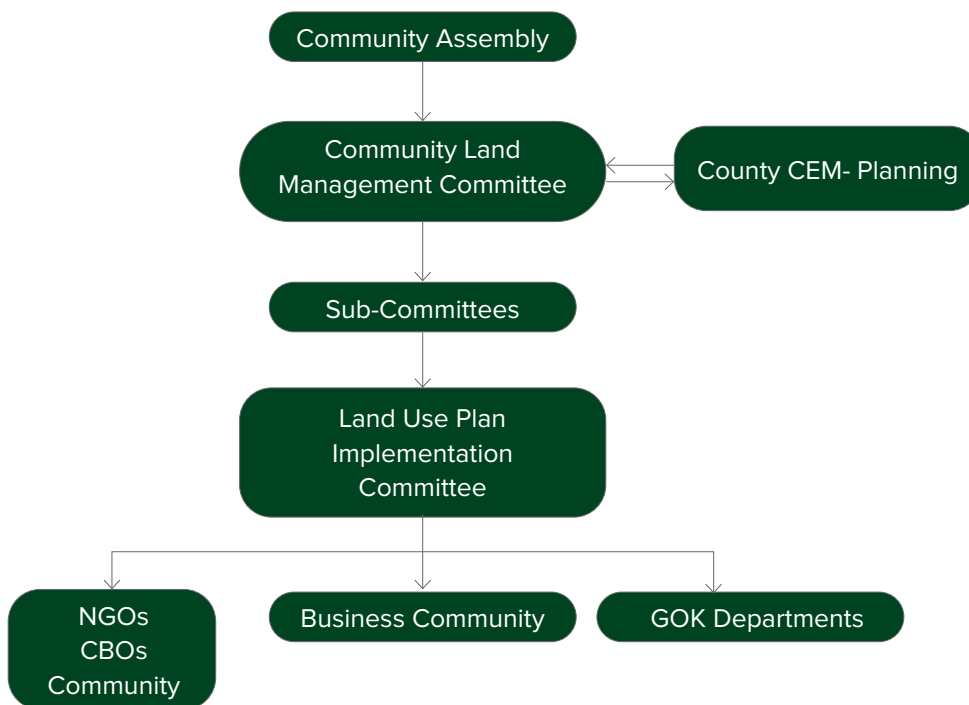
The committee will be an organ of CLMC and will be responsible of evaluating the progress of implementation. It will meet regularly and communicate with CLMC and other relevant stakeholders with enough frequency to ensure that the Plan remains a living document

The Land Use Plan Implementation Committee will:

- Carry out annual evaluations of the land use plan indicators
- Co-ordinate the implementation of the Plan between CLMC and GCG;
- Identify constraints in plan implementation;
- Produce progress reports on plan implementation

FIGURE 5.

Proposed Land Use Plan Implementation Structure





CHAPTER 6

Community Action Plans

The land use plan has developed 10-year community action plans that, if implemented, will ensure that the biting challenges in the Kamuthe Community Land are adequately addressed and the idle potential is harnessed for the socio-economic advancement of the people (Table 6).

The action plans provide for:

- Proposed objectives and corresponding activities for each zone
- The primary responsibility for each activity and the potential partners who could support its implementation
- The recommended timeframe and priority ranking for each activity



FIGURE 6.
Kamuthe Community Land: Activity Map

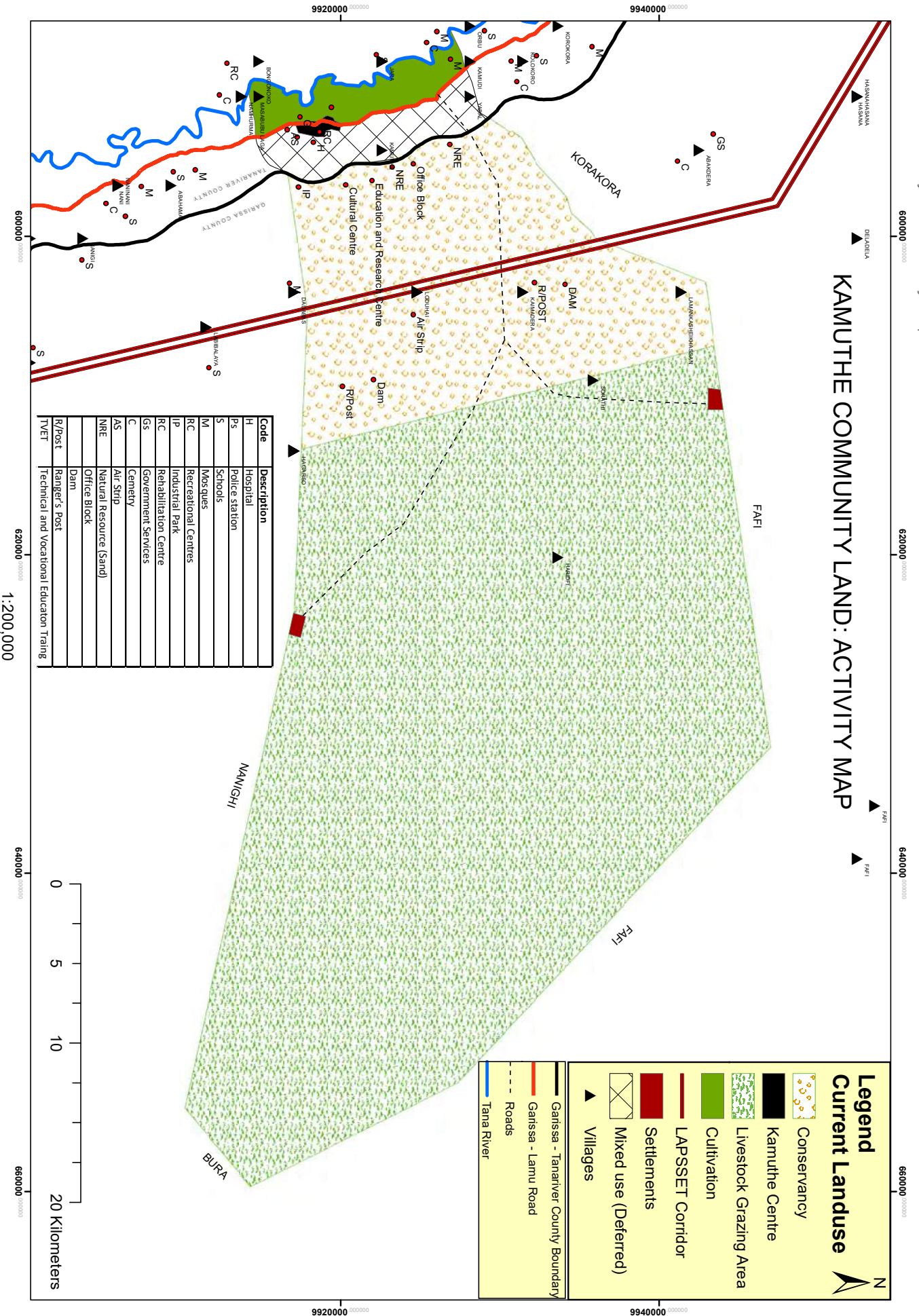


TABLE 6.
10-year Community Action Plan

LAND USE ZONES, OBJECTIVES AND ACTIONS		TIMING	PRIORITY	RESPONSIBILITY	
				Primary Actor	Secondary Actors and Partners
CONSERVATION ZONE					
Objective 1: Conservancy operations and management enhanced					
Activity 1	Develop Kamuthe Conservancy management plan	2024	H	Chair Conservancy Board, KWS	FAO, GCG
Activity 2	Employment of more personnel and training	2025	C	Conservancy Manager	"
Activity 3	Fund raise for construction of offices, ranger posts	2024	C	Manager, CLMC	GCG, USAID
Activity 4	Develop and implement guidelines for honey harvesting and extraction of medicines and similar products	2024	H	Chair Conservancy Board	GCG, KWCA
Objective 2: Habitat and Wildlife management improved					
Activity 1	Develop and implement a community-led approach to the management of human-wildlife conflict	2025	H	Chair Conservancy Board	KWS, GCG, NECA,
Activity 2	Protect key wildlife corridors and dispersal areas in the zone	2024	C	Conservancy manager, CLMC, Community	KWS, GCG
Activity 3	Control wildlife poaching	2024	C	Conservancy Manager	KWS, GCG, Local Administration
Activity 4	Control invasive species, especially Mathenge, Prosopis julliflora	2024	C	Manager. CLMC	GCG, KFS, KEFRI, KARLO
Activity 5	Rehabilitate degraded areas	2026	L	Manager	Mercy Corps, USAID
Activity 6	Protect key habitats including breeding areas for wildlife	2024	M	Manager	CLMC, KWS
Activity 7	Develop a species management plan for the flagship species in Kamuthe such as the Giraffe, Grevy Zebra, Oryx	2025	L	Chair Conservancy Board	NECA, KWS, USAID, KWCA
Objective 3: Research and monitoring in the conservancy is enhanced					
Activity 1	Carry out an inventory of large mammals, birds, and plants and promote scientific research	2026	L	Conservancy Manager and Board	KWS/WRTI, NECA, USAID, Birdlife
Activity 2	Implement a monitoring system using community scouts	2025	H	Manager	KWS, GCG, WRTI, NECA
Objective 4: Conservation education in schools and the wider community is promoted					
Activity 1	Set up an education centre at the conservancy	2026	L	Conservancy Board	KWS, KWCA, WWF, TNC

LAND USE ZONES, OBJECTIVES AND ACTIONS		TIMING	PRIORITY	RESPONSIBILITY	
				Primary Actor	Secondary Actors and Partners
Activity 2	Procure a bus dedicated to conservation-related trips in the conservancy and nearby conservation areas	2017	L	Conservancy Board	“
Objective 5: Alternative income sources on conservation land and biodiversity are exploited					
Activity 1	Pursue the opportunities for payment for ecosystem services such as carbon credit	2025	M	Conservancy Board	KWCA
Activity 2	Explore the potential of commercial game farms for species permitted under wildlife laws and regulations such as snakes and tortoises	2026	M	Conservancy Board, GCG	KWS, KWCA
LIVESTOCK GRAZING ZONE					
Objective 1: Livestock management is improved					
Activity 1	Conduct training on livestock pasture production	2025	M	Chair CLMC	Local Administration
Activity 2	Develop holistic grazing management plans in conjunction with communities	2025	M	CLMC Chair	Local administration
Activity 3	Conduct range restoration in degraded areas	2025	M	CLMC Chair	Local Administration
Activity 4	Establish grazing committees and strengthen their capacity to curb overgrazing	2025	H	Chair CLMC	Local Administration
Objective 2: Livestock husbandry is upgraded					
Activity 1	Work with communities, County Government, and partners to upgrade livestock breeds	2026	H	CLMC Chair	GCG, KARLO
Activity 2	Control livestock pests and diseases	2025	H	Chair CLMC	GCG, KARLO
Objective 3: Commercial production of livestock is enhanced to realize better incomes					
Activity 1	Develop and upgrade infrastructure for livestock trading such as roads and holding pens	2027	H	CLMC	GCG
Activity 2	Research aggressively on external markets in Kenya and abroad and develop a blueprint	2027	H	CLMC	GCG
Activity 3	Invest in light industries for livestock value addition in meat, milk, and hides	2025	L	CLMC	GCG
CULTIVATION ZONE					
Objective 1: Flooding from River Tana is Contained					
Activity 1	Work with WARMA and other agencies to dike Tana River	2024	H	Community, GCG, WARMA	Nema, FAO, NIB

LAND USE ZONES, OBJECTIVES AND ACTIONS		TIMING	PRIORITY	RESPONSIBILITY	
				Primary Actor	Secondary Actors and Partners
Activity 2	Engage a community lawyer regarding the flooding of Masinga Dam and possible compensation	2025	H	CLMC, Community	GCG, Kituo cha Sheria
Objective 2: The quality and quantity of crop farming is improved					
Activity 1	Promote high-returns crop Agriculture by working with research agencies such as KALRO	2024	C	Community, GCG	KARLO, FAO
Activity 2	Initiate capacity-building programmes and support farmers with seeds and farm inputs	2024	C	CLMC, GCG	KARLO, FAO, Islamic Relief
Activity 3	Support with water pumping technology (irrigation) to facilitate farming in arable areas away from the river	2025	H	CLMC, GCG	NIB, FAO, Islamic Relief
Activity 4	Adopt soil conservation measures to curb erosion and retain soil fertility	2025	C	Chair CLMC, Community	GCG, NDMA
Activity 5	Develop infrastructures to support farming and marketing of produce	2024	H	GCG	GOK
Activity 6	Curb crop destruction by wildlife, especially monkeys	2024	C	CLMC, Conservancy management	KWS
Objective 3: Value addition improved to increase the economic value of farming					
Activity 1	County government to try incentives to attract investments in value addition for crops such as tomatoes and fruits	2026	M	GCG	GOK
Activity 2	Set up preservation facilities such as coolers to store perishable crops such as potatoes to curb post-harvest losses	2026	H	GCG	GOK, NDMA, FAO
Activity 3	Conduct a business survey and explore external markets for local crops	2025	H	GCG, CLMC	GOK, Universities, Islamic Relief
Objective 4: Land registration is completed to safeguard the security of tenure					
Activity 1	Initiate land adjudication under cap 284 laws of Kenya, to safeguard and separate private(agricultural) and public interests from communal land tenure	2025	H	TRCG, CLMC, CLASO – Tana River	GOK, TRCG, GCG
Activity 2	Initiate land adjudication of the remnant communal (ie unregistered) land under the Community Land Act 2016	2027	H	CLMC, TRCG	GOK
SETTLEMENT ZONE					
Objective 1: Human infrastructure improved					
Activity 1	Upgrade the road network between Kamuthe and Garissa to ease transport	2024	H	KENHA, KERRA, GCG	MP
Activity 2	Set up a police station with an anti-terrorism unit	2025	H	GOK, GCG	

LAND USE ZONES, OBJECTIVES AND ACTIONS		TIMING	PRIORITY	RESPONSIBILITY	
				Primary Actor	Secondary Actors and Partners
Activity 3	Undertake zonation of services as follows: Government services- police stations, courts, survey and planning Communal services -cemetery, mosques, social halls, sewerage, water Recreation – stadiums, volleyball pitch	2025	C	CLMC, GCG	GOK
Activity 4	Explore setting up an airstrip to attract tourism and improve trade	2027	M	GCG, KAA	CLMC
Objective 2: Economic empowerment projects initiated					
Activity 1	Support the community to set up kitchen gardens to boost food and nutrition security as well as a source of household income	2024	H	CLMC, GCG	Mercy Corps, USAID
Activity 2	Conduct capacity building for nature-based enterprises such as beekeeping and commercial farming of aloe vera	2025	C	CLMC, GCG	USAID, WWF
Activity 3	Conduct research on indigenous crops with potential for commercial extraction of products such as food additives and cosmetics	2027	C	GCG, CLMC	Interested Partners
Activity 4	Incentivize investments around the exploitation of natural resources such as sand and minerals following NEMA guidelines	2025	C	CLMC, NEMA, GCG	Interested Partners
Activity 5	Conduct a feasibility study on how best to harness renewable energy (solar and wind) to power the community needs	2026	M	GCG, CLMC	Interested Partners
Activity 6	Develop an investment prospectus to showcase investment opportunities and share with local and national business communities	2026	M	CLMC, GCG	KEPSA. KNCCI
Objective 3: Social services in the community are improved to advance community welfare					
Activity 1	Upgrade, equip, and staff the local hospital and upgrade the dispensary at Warable	2024	H	GCG	GOK
Activity 2	Set up a maternity hospital or a wing in the local hospital	2024	H	GCG	GOK
Activity 3	Set up a vocational training college in the area to equip the youth with self-help and business skills	2025	H	CLMC, GCG	GOK
Activity 4	Set up recreation centres such as volleyball pitches to advance social and community health	2025	H	GCG	CLMC

LAND USE ZONES, OBJECTIVES AND ACTIONS		TIMING	PRIORITY	RESPONSIBILITY	
				Primary Actor	Secondary Actors and Partners
Objective 4: Women's economic and leadership empowerment is promoted and protected					
Activity 1	Carry out regular gender sensitization campaigns to ensure women are mainstreamed in economic and political activities	2025	C	GCG, Kamuthe Women Network	Women Kind, Action Aid
Activity 2	Set up a training and rehabilitation centre for girls and women	2025	H	CLMC, GCG	Interested Partners
Activity 3	Contact local and international partners with capacity-building programmes tailored specifically to advance the education of girls	2025	H	GCG Social Services	Interested Partners
LAPSSET ZONE					
Objective 1: The safety and security of people and animals is safeguarded					
Activity 1	Fence off or fill all the open excavations				
Activity 2	Plan for animal movements across the corridor through underpasses or overpasses				
Activity 3	Design of buildings and installations to be sensitive and reflective of the conservation zone the corridor passes				
Objective 2: Community liaison and communication is strengthened to manage uncertainty					
Activity 1	Develop guidelines on admissible uses in the buffer zone				
Activity 2	Carry out routine appraisals on the progress of the project and upcoming developments and their implications				
Activity 3	Update the community of compensation scheme for the land taken up by the corridor				
Activity 4	Establish good relationship between the security camp and the communities				

Key:

H=High-An action that is urgent and very important

M=Medium-An action that is urgent and important

L=Low-An action that is not urgent but important

C = Continuous – An action that requires regular interventions



CHAPTER 7

Monitoring and Evaluation

Monitoring refers to routine collection and analysis of information to check compliance with the planned process, and targets and outcomes. A good monitoring system helps a land use plan:

- To identify useful trends or patterns – economic, environmental or demographic
- Make wise decisions in resource allocation
- Come up with better strategies and approaches in implementation of the plan

Evaluation refers to assessment of performance, efficiency and impact on the intended beneficiaries.

Monitoring and Evaluation is an important component of a land use plan as it aids in tracking progress towards the expected results and spotting limitations in the implementation process.

The M&E framework in table 7 lists:

- Indicators of the land use plan and their current status
- Desired targets and milestones in the course of the plan period
- How the indicators are measured, when and by who

TABLE 7:
Monitoring and Evaluation Framework

Land Use Plan Indicator	Measurable Attribute	Current Status	Target and Desired Milestones	Indicators of Progress	Evaluation Frequency	Responsibility	Reporting Forum
SETTLEMENT ZONE							
Objective 1: Economic infrastructure improved							
Transport (Road and air)	Infrastructure	Kamuthe-Garissa Road not all weather No airstrip	<ul style="list-style-type: none"> Upgrade the road between Kamuthe and Garissa to all weather bitumen 1 airstrip in place 	<ul style="list-style-type: none"> Development reports Road designs and tenders Length in km upgraded Airstrip 	Annual		County Assembly and CLMC meetings
Security	Police station	None existent	1 functional police station with anti-terror capacity	Project designs Physical structures	Annual		
Objective 2: Economic empowerment projects initiated							
Food security	Kitchen gardens	lacking	5 per year	Household survey	annual		
Enterprise development	Capacity for starting and managing businesses	Low capacity	Capacity-building workshops and business proposals	<ul style="list-style-type: none"> Workshop reports Business proposals 	annual		CLMC
Economic growth	Indigenous natural resources exploitation	No knowledge on feasibility	Research on feasibility of commercial extraction of medicines and cosmetics from indigenous trees	Research recommendations Action plans	annual		CLMC, GCG, Funding/research partner/s
Economic growth	Information on investment opportunities	none	Investment prospectus to attract investments	<ul style="list-style-type: none"> Prospectus in circulation Applications for investment projects 	annual		Devolution conferences, Trade fairs
Energy costs	Exploitation of renewable energy (sun and wind)	none	One feasibility study within 3 years	<ul style="list-style-type: none"> Feasibility study with proposals and action plan Projects to tap renewable energy 	annual		CLMC, County Assembly
Objective 3: Social services in the community are improved to advance community welfare							
Health	Public hospital	The hospital is available but lacks equipment and staff	<ul style="list-style-type: none"> Improved equipment within year 1 Deployment of more staff by year 2 	<ul style="list-style-type: none"> Better services More hospital staff Better health outcomes 			

Land Use Plan Indicator	Measurable Attribute	Current Status	Target and Desired Milestones	Indicators of Progress	Evaluation Frequency	Responsibility	Reporting Forum
Maternal health	Maternity hospital or wing	none	Maternity services within 3 years	<ul style="list-style-type: none"> County development plan/ designs Presence of maternity hospital and services 	annual		CLMC, County Assembly
Vocational skills	Vocational training college	none	One vocational college within 10 years	<ul style="list-style-type: none"> More skilled and self reliant people Small scale enterprises 	“		“
Public recreation	Recreation facilities	none	<ul style="list-style-type: none"> 1 volley ball pitch 1 library within 10 years 1 stadium with 5 years 	More social recreation	“		“
Objective 4: Women's economic and leadership empowerment is promoted and protected							
Gender equality	Women integration in leadership and management	Low integration	<ul style="list-style-type: none"> Regular workshops on gender mainstreaming More women in leadership 	<ul style="list-style-type: none"> Workshop reports Number of women in leadership 	Annual		CLMC, Kamuthe Women Network
Gender empowerment And rehabilitation	Presence of a rehabilitation centre for girls and women	none	Rehabilitation centre within 5 years	<ul style="list-style-type: none"> Project proposals The physical presence of the rehabilitation centre More women and girls benefiting from rehabilitation 	Annual		CLMC, Kamuthe Women Network, County Assembly
Girls' education	Bursary or fund to advance girls' education	none	Functional fund within 3 years	<ul style="list-style-type: none"> Official launch Number of beneficiaries 	Annual		CLMC, Kamuthe Women Network
CULTIVATION ZONE							
Objective 1: Flooding from River Tana is Contained							
Flooding menace	Development of dykes	none	Dykes designed and erected within 3 years	<ul style="list-style-type: none"> County development plans and designs Actual dykes Flooding incidents reported 	Annual		Relevant GOK office, GCG office, CLMC
Legal representation	Engagement of community lawyer over flooding from Masing Dam	none	Lawyer/legal aid engaged within one year	<ul style="list-style-type: none"> Contract between community and counsel Flooding incidents reported 	Annual		CLMC

Land Use Plan Indicator	Measurable Attribute	Current Status	Target and Desired Milestones	Indicators of Progress	Evaluation Frequency	Responsibility	Reporting Forum
Objective 2: The quality and quantity of crop farming is improved							
Crops quality	High yielding varieties	Low-yield varieties	Growing of high yielding varieties	Better yields	Annual		CLMC
Farming capacity	Capacity to procure seeds and farm equipment	Low capacity	Mechanized farming and more acreage under cultivation	<ul style="list-style-type: none"> • More harvest • More income 	Annual		CLMC
Water availability	Reliable water in all seasons	Cultivation rain dependent	Reliable water supply throughout the season	<ul style="list-style-type: none"> • More land under cultivation • Cultivation in all seasons • More income 	Annual		CLMC
Soil fertility	Soil conservation	Soil erosion rampant	Less erosion	<ul style="list-style-type: none"> • More fertility • Better yields 	Annual		CLMC
Market access	Access roads	Poor access	Better access roads within 3 years	<ul style="list-style-type: none"> • County development plans • Road designs • Upgraded roads 	Annual		CLMC
Wildlife damage	Curb crop destruction	Crop raiding is rife	Drastic reduction in crop-raiding incidents	<ul style="list-style-type: none"> • Reported incidents • Crop yield/harvest 	Annual		KWS OB, CLMC
Objective 3: Value addition improved to increase the economic value of farming							
Crop production	Value addition activities	Trade in row crops	At least one value addition unit within 5 years	<ul style="list-style-type: none"> • Value addition industry • Valued added products such as canned beans/tomato sauce/fruit juice • More income 	annual		CLMC
Post-harvest loss	Preservation of perishable crops to tame wastage	No preservation facilities	One cooler by year 3	<ul style="list-style-type: none"> • Existing preservation facility • Less post-harvest losses • More income 	Annual		CLMC
Market	Market and supply connections	Limited to consumers in Garissa	Market opportunities explored and established by year 5	<ul style="list-style-type: none"> • Supply tenders • Volume of sales • More income 	Annual		CLMC
Objective 4: Land registration is completed to safeguard the security of tenure							
Land tenure	Separation of agricultural land from communal land	Not separate	Adjudication under cap 284 within 3 years	Separate title	Annual		CLMC

Land Use Plan Indicator	Measurable Attribute	Current Status	Target and Desired Milestones	Indicators of Progress	Evaluation Frequency	Responsibility	Reporting Forum
Land registration	Registration of remnant communal land	Not registered	Adjudication under the Community Land Act 2016 within 3 years	Separate title	Annual		CLMC
CONSERVATION ZONE							
Objective 1: Conservancy management and operations strengthened							
Management policies	Documents and policy papers produced	No management or annual work plans	Management plan within year 1	<ul style="list-style-type: none"> Management plan document Implementation of activities in the management plan 	Annual		Conservancy board, CLMC
Management capacity	Infrastructure such as offices and ranger posts	No office or ranger posts	At least one office and 2 ranger posts by year 3	<ul style="list-style-type: none"> Project proposals and design Existing physical structures Enhanced operations 	Annual		Conservancy board, CLMC
Personnel	Number employed in different sectors			<ul style="list-style-type: none"> Employment contracts Enhanced conservancy operations 	Annual		Conservancy board, CLMC
Objective 2: Habitat and Wildlife management improved							
Corridors and dispersal area	Protection	Threatened by closure		<ul style="list-style-type: none"> Wildlife movement Less human-wildlife conflict 	Annual		Conservancy board, CLMC
Human-wildlife conflict	Incidents recorded	Many incidents during the dry season	No or minimal incidents by year 3	Wildlife-people harmony	Annual		KWS OB, CLMC
Poaching	Incidents recorded	Rampant	No or minimal poaching incidents by year 3	Less threat to wildlife	Annual		Conservancy board, CLMC
Invasive species (Mathenge)	Spread	Extensive	<ul style="list-style-type: none"> More pasture for wildlife Thriving wildlife populations 	Wildlife census	Annual		Conservancy board, CLMC
Honey and medicine harvesting	guidelines	No guidelines	Guidelines in place by year 2	<ul style="list-style-type: none"> Published guidelines Supervised harvesting 	Annual		Conservancy board, CLMC
Flagship species	Management plans	None exists	Management plan/s by year 5	<ul style="list-style-type: none"> Proposal for the management plan Management plan in place Collaboration activities for conservation 	Annual		Conservancy board, CLMC

Land Use Plan Indicator	Measurable Attribute	Current Status	Target and Desired Milestones	Indicators of Progress	Evaluation Frequency	Responsibility	Reporting Forum
Ecological integrity	Degraded area	No rehabilitation of degraded areas activities	The rehabilitation program started in year 2	<ul style="list-style-type: none"> Seedlings planted Area under rehabilitation Acreege of degraded area 	Annual		Conservancy board, CLMC
Objective 3: Research and monitoring in the conservancy is enhanced							
Wildlife species data	Inventory carried out	No inventory	Inventory of large mammals within year 1	Inventory report	Annual		Conservancy board, CLMC
Ecological monitoring	Monitoring programme developed	No monitoring programme	Programme of ecological monitoring in place by year 3	<ul style="list-style-type: none"> Ecological monitoring proposal Monitoring report 	Annual		Conservancy board, CLMC
Objective 4: Conservation education in schools and the wider community is promoted							
Conservation education	Development of infrastructure	No education centre	<ul style="list-style-type: none"> Library and murals by year 3 An education auditorium by year 5 	<ul style="list-style-type: none"> Education centre proposals and design Physical education centre facilities 	Annual		Conservancy board, CLMC
Conservation education	Education trips	none	<ul style="list-style-type: none"> Conservation bus by year 2 Start of education trips by year 3 	<ul style="list-style-type: none"> Conservation bus Better community appreciation of conservation and wildlife 	Annual		Conservancy board, CLMC
Objective 5: Alternative income sources on conservation land and biodiversity are exploited							
Carbon Credit Service	Payment	none	Contract with an investor/s by year 2	<ul style="list-style-type: none"> Signed contract Annual payout to communities More income 	Annual		Conservancy board, CLMC
Commercial wildlife farming	Feasibility study	none	Completed feasibility study by year 4	<ul style="list-style-type: none"> Feasibility study proposals Study report 	Annual		Conservancy board, CLMC
LIVESTOCK GRAZING ZONE							
Objective 1: Livestock management is improved							
Pasture production	Training	Pasture production minimal	Pasture production to supplement natural pasture by year 2	<ul style="list-style-type: none"> More livestock pasture Less susceptibility to drought More livestock production 	Annual		Conservancy board, CLMC

Land Use Plan Indicator	Measurable Attribute	Current Status	Target and Desired Milestones	Indicators of Progress	Evaluation Frequency	Responsibility	Reporting Forum
Range condition	Restoration of degraded areas	No restoration programmes	Restoration activities started within year 1	<ul style="list-style-type: none"> Restoration proposals and budget Less degraded areas More pasture for livestock 	Annual		Conservancy board, CLMC
Grazing management	Establishment of grazing committees	No or weak committees	Functional grazing committee with by-laws by year 2	<ul style="list-style-type: none"> Grazing committee officials Reduced overgrazing Reduced conflicts 	Annual		Conservancy board, CLMC
Objective 2: Livestock husbandry is upgraded							
Livestock breeds	Breed improvement	Boran breeds	Introduction of modern breeds such as Sahiwal from year 3	New livestock breeds Improved livestock production	Annual		Conservancy board, CLMC
Livestock pests and diseases	Control of pests and diseases	Rampant	Vet extension services from year 2	<ul style="list-style-type: none"> Less disease outbreaks More livestock production More income 	Annual		Conservancy board, CLMC
Objective 3: Commercial production of livestock is enhanced to realize better incomes							
Livestock markets	Market survey and feasibility study	Confined to local (county) market	Feasibility study for national and international markets by year 3	<ul style="list-style-type: none"> Feasibility study report Expanded Livestock markets Better incomes 	Annual		Conservancy board, CLMC
Livestock trade	Trading infrastructures	No supporting infrastructures	Access roads, holding pens and livestock market in Kamuthe by year 3	<ul style="list-style-type: none"> Enhanced trade Better prices and value More income 	Annual		Conservancy board, CLMC
Livestock products	Value addition	Limited value addition	<ul style="list-style-type: none"> Milk cooling plant by year 2 Yoghurt processing and packaging plant by year 4 	<ul style="list-style-type: none"> Value addition facilities Value addition products and trade More income 	Annual		Conservancy board, CLMC
LAPSSET CORRIDOR							
Objective 1: The safety and security of people and animals is safeguarded							
Open excavations	Rehabilitation	Open excavations exist	All excavations are to be rehabilitated by end of year 2	<ul style="list-style-type: none"> No open excavations Enhanced safety of people and animals 	Annual		Conservancy board, CLMC
Animal movement	Access	Movement blocked	Development of underpasses/overpasses	<ul style="list-style-type: none"> Free movement of animals Fewer accidents 	Annual		Conservancy board, CLMC

Land Use Plan Indicator	Measurable Attribute	Current Status	Target and Desired Milestones	Indicators of Progress	Evaluation Frequency	Responsibility	Reporting Forum
Infrastructure through conservancy	Design			The external design of all structures			
Objective 2: Community liaison and communication is strengthened to manage uncertainty							
Buffer zone use	Guidelines for use	No guidelines	Guidelines to be released by year 3	<ul style="list-style-type: none"> Better knowledge Less anxiety 			CLMC
Project status	Appraisal on progress	No communication	Annual bulletin from Lapsset Authority	<ul style="list-style-type: none"> Update newsletters Better knowledge Less anxiety 			CLMC
Compensation	Status update	No update	Update from Lapsset Authority	<ul style="list-style-type: none"> Better knowledge Less anxiety 			CLMC

Annexes

Annex 1: Stakeholder Identification and Categorization

Beneficiaries	Implementers	Partners	Policymakers	Opponents
<ul style="list-style-type: none"> • Community • County Government of Garissa • KWS • GOK 	<ul style="list-style-type: none"> • CLMC • Physical Planning dept - GCG 	<ul style="list-style-type: none"> • NECA • KWCA • FAO • KWS • USAID • GGB • KFS • Research Institutions • ICRAF • KARLO • KEFRI • GEF • NEMA • WRUAs • World Vision • WRA • NDMA 	<ul style="list-style-type: none"> • GCG • KWS • NEMA • Ministry of Agriculture, livestock and Fisheries • Ministry of Tourism and Wildlife 	<ul style="list-style-type: none"> • Poachers • Land grabbers

Annex 2: Kamuthe Community Land Resource Mapping

Resources	Name	Location
Villages	Sheikh Hassan	Sheikh Hassan
	Wemarer	Wemarer
	Dadbulle Village	Dadbulle
	Sambir Village	Sambir
	Nadir	Nadir
	Dadabass	Dadabass
	Kamuthe	Kamuthe
	Gora	Gora
	Warable	Warable
Dams	Dam 1	Sheikh Hassan
	Dam 2	Sheikh Hassan
	Dadbulle Dam	Dadbulle
	Muqdeere water trough	Kamuthe
	Shimbir Dam	Shimbir
Water tank	Sheikh Hassan water tank	Sheikh Hassan
	Duwaay Water Tank	Duwaay
Unique vegetation	Gurow plant trees	Duwaay
	Ohiya and Kurow trees	Duwaay
	Durte plant	Dadbulle
	Hagar trees	Sambir
	Algae plants	Sheikh Hassan
	Kamuthe Makuti	Kamuthe
Borehole	Kamuthe borehole	Kamuthe
	Muqdeere Borehole	Kamuthe
	Bulla Gora Water Point	
	New Water Point	Warable
Lake	Hinta Lake	Nadir
	Warable Lake	Warable
Hills and cliffs	Hinta Hills	Nadir
	Hila Yarow Hills	Nadir
Mineral deposits	Luta farms	Nadir
	Kamuthe murrans valley	Kamuthe
	Gypsum deposits	Nadir
	Murrans and hard-core plains	Nadir
Wildlife grazing area	China Site	Sheikh Hassan
	Bullo Giraffe Corridor	Warable
Institutions	Kamuthe save house and resource centre	Kamuthe
	Kamuthe youth office	Kamuthe

Road network	Galbet Farm Road	Kamuthe
	Kamuthe Farmers Road	Kamuthe
	Kamuthe-Dadbulle Road	Kamuthe
	Lapsset Road	Kamuthe
	Nadhir Farm Road	Nadhir
	Deyla Qalat Road	Shimbir
Schools	Kamuthe Primary School	Kamuthe
	Bulla Gora ECD School	Gora
	Dadbulle Primary School	Dadbulle
	Warable Primary school	Warable
	Nadhir Primary school	Nadhir
Mosques	Dadbulle Mosque	Dadbulle
	Duwaay Mosque	Duwaay
	Dad-Abass Mosque	Dadbulle
	Kamuthe Mosque	Kamuthe
	Nadhir Mosque	Nadir
Police station	Kamuthe Police Post	Kamuthe
Hospitals/clinics	Kamuthe Health Centre	Kamuthe
	Warable health centre	Warable
Urban centres	Kamuthe town	Kamuthe

Annex 3: Priority Requirements Per Village

Sheikh Hassan

- Health centre
- Cattle deep
- ECD
- Solar power
- Borehole

Lodubai

- School – ECD
- Health centre
- Road
- Borehole

Dad Abass

- ECD
- Washrooms
- Roads
- Borehole
- Dam

SanBir

- Police station
- Cattle deep
- Borehole

Dad Bule

- Primary school
- Livestock market
- Borehole
- School playground
- Solar pumps

- Livestock market
- Access road
- Dispensary
- Water harvesting
- Gabions to control surface run off

Nadir

- Borehole
- Solar Pump
- Health Centre
- Market
- Water pans

Warable

- Hospital equipment
- Borehole
- Road to Sheikh Hassan

Kamuthe

- Secondary school
- Access roads o farms
- Borehole
- VTC
- Processing factory

Gora

- Borehole
- Primary school
- Access road to the farms
- Washrooms
- Health centre

Annex 4: Kamuthe Conservancy Checklist of Mammals

Common name	Scientific name	Remark
Greater kudu	<i>Tragelaphus strepsiceros</i>	Threatened
Cape buffalo	<i>Syncerus caffer</i>	Rarely seen
Impala	<i>Aepyceros melampusrendilis</i>	Common
Grants gazelle	<i>Gazella granti</i>	Common
Dikdik	<i>Rhynchotragus kirki</i>	Common
Klipspringer	<i>Oreotragus oreotragus</i>	Rare
Blue duiker	<i>Cephalophus caeruleus</i>	Rare
Yellow – backedduiker	<i>Cephalophus silvicultor</i>	Rare
Anubis baboon	<i>Papio anubis</i>	Common
Leopard	<i>Panthera pardus</i>	Very rare
Serval cat	<i>Felis (Leptailurus) serval</i>	Very rare
Wildcat	<i>Felis (Sylvestris) libyca</i>	Very rare
Common waterbuck	<i>Kobus ellipsiprymnus</i>	Rare
Wart hog	<i>Phacochoerus aethiopicus</i>	Common
Bush pig	<i>Potamochoerus porcus</i>	Common
Common jackal	<i>Canis aureus</i>	Common
Spotted hyena	<i>Crocuta crocuta</i>	Rare
Stripped hyena	<i>Hyaena hyaena</i>	Rare
Bat-eared fox	<i>Otocyon megalotis</i>	Rare
Burchell's zebra	<i>Equus (Hippotigris)burchelli</i>	Common
Patas monkey	<i>Erythrocebus patas</i>	Rare
Vervet monkey	<i>Cercopithecus pygerythrus</i>	Common
Cheetah	<i>Acinonyx jubatus</i>	Rare
Aardvark	<i>Orycteropus afer</i>	Rare

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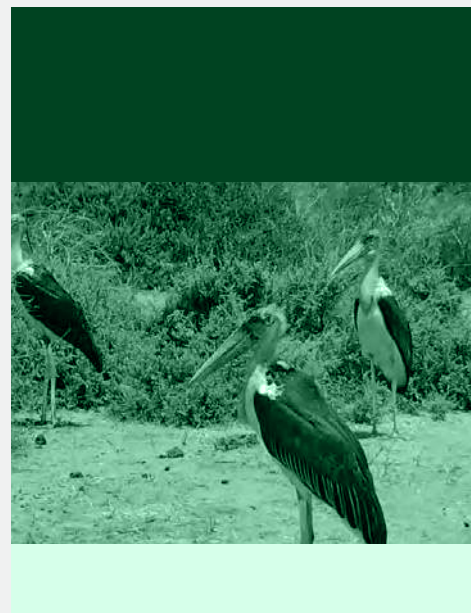
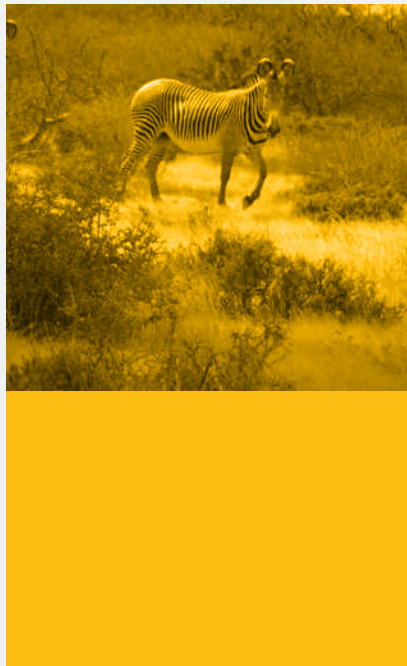
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KAMUTHE COMMUNITY LAND