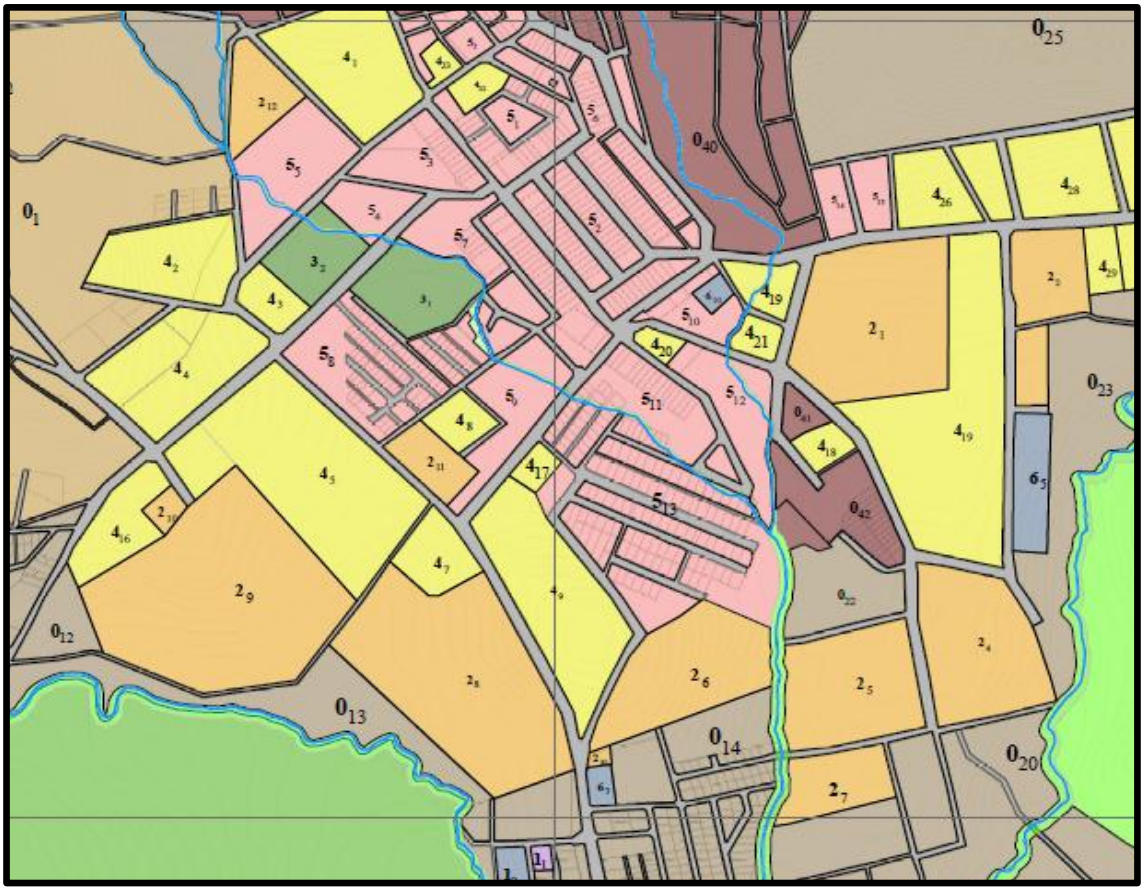
SAMBURU COUNTY GOVERNMENT

MINISTRY OF LANDS, HOUSING AND URBAN DEVELOPMENT

MARALAL TOWN INTEGRATED STRATEGIC URBAN DEVELOPMENT PLAN (2015-2030)



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LIST OF ACRONYMS AND ABBREVIATIONS

ACK	Anglican Church of Kenya
AIDAL	Associates in Integrated Development Africa Ltd
CBD	Central Business District
CBO	Community Based Organization
CDF	Constituency Development Fund
CEO	Chief Executive Officer
DAO	District Agricultural Officer
DDO	District Development Officer
DO	District Officer
DPPO	District Physical Planning Officer
DWO	District Water Officer
FGD	Focus group discussion
GPS	Global Positioning System
HIV/AIDS	Human Immune Virus/Acquired Immunodeficiency Syndrome
SAWASCO	Maralal Water Services Company
MD	Managing Director
MOLG	Ministry of Local Government
NGO	Non-governmental organization
NWSB	Northern Water Services Board
ODPM	Office of the Deputy Prime Minister
TCM	Town Council of Maralal
TNA	Training needs assessment
TOR	Terms of Reference
UPS	Uninterruptable Power Supply
UTM	Universal Transverse Mercator

FOREWORD

The Maralal Town Integrated Strategic Urban Development Plan (ISUDP) has been prepared with broad stakeholder participation and will guide the growth and development of our county headquarters up to the year 2030. Despite its locational significance, fragile ecosystems and vast resources, Maralal Town did not have an approved development plan that was comprehensive, up to date and strategic enough to sustainably guide development, while uplifting the local renowned culture and economy. This has been one of the major obstacles to progressive and co-ordinated development within the entire town. Inadequate planning and poor agricultural practices have exposed the town to natural elements and calamities. These include drought and flash floods, which is magnified by lack of adequate facilities for disaster prevention, response and management.

It is, therefore, with gratitude that I pay special tribute to the National Ministry of Land, Housing and Urban Development for providing the funds for the preparation of this Plan. Samburu County Government appreciates the facilitative role played by the ministry in the planning process. This includes funding of the project as well as the appointment of the team of consultants. In addition the council would like to thank Associates in Integrated Development (Africa) Limited (AIDAL) team for the hard work and continuous consultation during the planning process. I want to significantly commend the people of Maralal town for their active participation and envisioning a bright future for Maralal town and their willingness to foster the implementation of the Plan towards the achievement of their vision.

I note that the Maralal town ISUDP well captures the existing situation in the town and makes proposals which if implemented, will make Maralal town to be a significant hub of economic growth for the entire county and its neighbouring region. In addition, the plan recognizes that Maralal Sanctuary and other neighbouring tourism facilities as the jewel of Kenyan tourism and thus maximizes the town's locational advantage as the significant commercial stop for tourists. The Plan further advocates for the preservation of the local Samburu culture and heritage for posterity and ensures that the local community gets to

benefit from the marketing and selling of their cultural experience as well as its items and curios.

Through value addition of local produce, the plan proposes, inter alia, setting up of agro-based industries and modern abattoirs and expansion of markets to create jobs and improve livelihoods as well as regularization of land tenure. This will not only boost the proper utilisation of resources but also promote commercial agriculture enabling farmers to create wealth. The plan gives practical and long lasting solutions to the perennial flooding menace in Maralal Town as well as providing for provision of facilities to enhance disaster prevention, response and management. It also advocates for enhanced education standards in the County especially at tertiary level.

Some of the quick wins that will arise from the ISUDP include: providing a basis for enforcing land use planning and development control, preparation of a GIS based valuation roll for local property taxation and revenue generation, preparation of annual plans and budgets, as well as providing an integrated framework for sectoral project identification, programming and coordination.

In light of the above benefits, the County Government of Samburu will spearhead the full implementation of this plan and make efforts to prepare integrated urban plans for other urban centres within the county as well as a spatial plans for the entire county. In order to ensure full stakeholder participation during plan implementation, my County Government, will strengthen and support the Maralal Town ISUDP stakeholder forum as advocated for in the Plan.

Thank you.

Irene Senei

CEC,

Lands, Physical Planning, Housing and Urban Development

ACKNOWLEDGEMENT

The planning consultants appreciate the facilitative role played by the Ministry of Local Government in the planning process. This includes funding of the project as well as the appointment of the team of consultants.

AIDAL Consultants would like to acknowledge the support bequeathed to the planning team during the plan formulation exercise by individuals and groups who either directly or indirectly contributed towards to the formulation of this plan. We acknowledge the technical and logistical support rendered by the then Ministry of Local Government (MoLG) through the project team Special thanks to the to the former His Worship the chairman of Maralal Town Council, the Chair and Members of Committees, Councillors, the Town Clerk and Departmental Heads for the support they gave members of the consultants team for providing guidance during the study period

AIDAL also appreciate the active participation and contributions of various stakeholders including government departments, Parastatals, NGOs, councilors and county government officials, businessmen, land owners and the general public. Many consultative sessions were held during the process and valuable inputs from the stakeholders obtained. We look forward to similar involvement in the implementation process.

EXECUTIVE SUMMARY

This report presents the Integrated Strategic Urban Development Plan (ISUDP) 2011 -2030 for Maralal town. The plan is a product of a process undertaken by the then Ministry of Local Government and the former Town Council of Maralal. The main purpose of the strategic urban development plan is to formulate a framework to guide the development of Maralal Town up to 2030. The plan has been prepared in line with the government's development blue print outlined in the Vision 2030, which aims at transforming Kenya into a newly industrializing, middle income country providing a high quality of life to all its citizens in a clean and secure environment. This is Kenya's current development blue print that seeks to transform Kenya to a middle income country providing a high quality life to all its citizens by the year 2030. The preparation of the plan also plays a role in achieving the Vision of Maralal Town's residents in provision of quality and effective services.

Maralal town is a fast growing urban centre in the northern region of Kenya. One of the main impediments to the development of Maralal Town is the lack of a physical development plan. This is manifested in the increasing land use conflicts, narrow roads, poor drainage, inadequate public amenities, overcrowding, depreciation of investments, environmental degradation, loss of aesthetics and the general lack of spatial order. It is on the background of these challenges that the planning of Maralal Town was given priority and indeed selected as one of the five towns whose planning was to be undertaken.

Preparation of the plan has been participatory and involved a series of meetings and consultative workshops with the stakeholders. The strategic planning process involved an assessment of the development constraints, potentials and an envisioning process. Following this process, it was established that planning for the development of Maralal town must focus on its opportunities and competitiveness.

The preparation of the plan focused on the structure plan which indicates the broad land use classification integrating urban transportation and main public utility and public purpose provisions. the structure plan builds on the on the broad land uses the structure plan also indicates in more detail specific land use zones, for the core urban growth area including a transportation spine and action areas.

Other components of the plan are the preparation of various planning strategies focusing on transportation, housing, environment, economic investment and municipal financing. The transportation Strategy formulates an efficient communication system. A road transport network consisting of an efficient hierarchy is identified. The hierarchy consists a network with establishment of new roads and upgrading of the existing ones. Strategies for improvement of road, air, water and other forms of transport are recommended. The Economic Investment Strategy focuses on formulation of proposals that should stimulate

and sustain economic growth. Proposal focused on agriculture, commerce, tourism and other industrial activities. Areas for the promotion of various economic activities have been identified and proposals suggested to realize sustainable economic growth. The Environmental Strategy focuses on environmental concerns of the planning area. Maralal Town has environmentally fragile areas, the strategy provides proposals that would seek to protect and improve the environment.

The plan spells out the implementation strategy enumerating measures and actions to be taken to ensure that the plan is implemented as well as the phasing of the projects and capital investment requirements. It is believed that the plan proposals address most of the major planning and development challenges of Maralal town. Its implementation is expected to provide solutions to most of the concerns that have become critical to development in Maralal and its environs. It is therefore, expected that the plan proposals will be a significant step towards achieving the development vision of Maralal. It is hoped that the plan will be given appropriate support by the various actors**.**

If the proposed plan is implemented, it will serve to make Maralal town vibrant and economically competitive town according to the aspirations of the local people. It will also make the town and its environs environmentally sustainable and inhabitable for all residents.

PART I: INTRODUCTION, PLANNING CONTEXT AND SITUATIONAL ANALYSIS

CHAPTER 1: INTRODUCTION

1.1 Overview

In 2010, Kenya adopted a new constitution. It provided for the structure of government at two levels: national and county governments. Schedule 4 of the constitution specifies planning functions assigned to the National Government and to the County Governments. Among the plans specified are the county spatial plan and municipal and town plan for urban areas in the county. This ISUDP adopts a more dynamic, continuous and consensual vision building and policy-making process. The plan presents a set of interrelated strategies for the town aimed at enabling all public and private initiatives to promote economic growth, provide basic infrastructure services and enhance the quality of the environment. The Integrated Strategic Urban Development Plan for Maralal town identifies and gives priority interventions that can make the town a competitive urban place with quality living and working environment that can attract investments for sustainable development.

1.2 Background

This plan provides policies and development proposals to guide and influence development of Maralal Town for a period of 20 years. A participatory approach was used in preparing the plan taking into consideration inspirations of stakeholders and the ground realities (potential and challenges). Further, this approach took cognizance of economic, social and environmental aspects of urban development. Maralal town has grown without a proper spatial framework to guide development. This has resulted in a situation characterized by: incompatible land uses, urban decay, environmental degradation, encroachment, inadequate services and infrastructure, inaccessible properties, lack of a proper urban form and structure as well as urban sprawl. The Integrated Strategic Urban Development Plan for Maralal town therefore identifies measures that can make Maralal town a quality urban place to live, work and play.

1.3 Vision

The planning proposals were premised on a development vision formulated in light of various considerations. A vibrant county administrative service center that:

- Provides quality infrastructure and services to the residence and the people of Samburu County
- Is a centre of commerce, finance, business and industry
- Provides high class tourist facilities
- A clean and liveable environment
- Provides diverse and choice housing
- Offers a Unique civic centre

1.4 Goal and Purpose

The goal and purpose for the Integrated Strategic Urban Development Plan for Maralal Town, is to guide and direct the growth of the town and its environs for a period of 20 years to advance sustainable urbanization. The plan:

a) Integrates regional physical development policies in terms appropriate to the local areas;
b) Articulates the aims of the national government and county government for the areas together with strategies, policies and general proposals which are intended to achieve those aims;
c) Provides a framework for detailed development policies and proposals for subsequent short-term plans for the area;
d) Indicates action areas for immediate development or re-development;
e) Provides a coordinated basis upon which various implementing agencies can develop their individual programmes of work for which they have executive responsibility, for example, housing, transportation, water supply, electricity supply or even sewerage development.

1.5 Objectives

The objectives of the plan are to:

a) Enhance and promote integrated socio-economic development in the town and its environs;
b) Allocate sufficient space for all land-uses to ensure efficient operation and comfort of users and accommodate future growth;
c) Ensure compactness of urban forms and design of transport and communication network to enhance interaction while minimizing loss of open land, agricultural land, forest, wildlife (land and riverside), and water catchment areas;
d) Avoid juxtaposition of incongruous uses and bringing together specially harmonious uses, or those whose combination will enhance benefits (compatibility of land uses);
e) Preserve and protect existing good features and fragile ecosystem, which may often require removal of unsatisfactory features;
f) Create a specific town character by different uses of topography and other natural features and by specific grouping of uses and densities;
g) Provide a policy framework for socio-economic investments, economic use of space, infrastructure services and community facilities;
h) Provide a framework of plan implementation, organization and administration structure requirement, and resources needed to implement the plan.

1.6 Scope

The planning area covers the entire former Town Council of Maralal of 176 Sq. Kilometers, consisting of the former six electoral wards namely Biashara, Shabaa, Ngaari, Elkuroto, Milimani and Elpartuk Wards. The strategic development themes of focus for this plan are:

Transportation, Economy, Land and Housing, Physical and social infrastructure, Recreation and Open spaces, Environment and Governance The plan will guide development of the town and its environs for a period of 20 years (2015-2030).

1.7 Outputs of the Plan

The main output of the plan is an Integrated Strategic Urban Development Plan that provides both long term and short term framework for guiding development of the town and its environs. The long term framework offers the desirable spatial structure and indicates broad land use proposals. The short term framework specifies the appropriate actions and their location within the planning area. These include the following:

i. Area Action Plans.
ii. Transportation Strategy
iii. Environmental Protection and Conservation Strategy
iv. Economic (Investment) strategy
v. Housing Strategy.
vi. Implementation Strategy

1.8 Terms of Reference

The plan was prepared in response to the following terms of reference:

1. Carry out a physical and natural ecological features study of town and its outlying region with view to preparing a strategy for their efficient use, conservation and spur economic development.
2. Undertake a land-use and socio-economic studies with a view to proposing a policy/ strategy for mixed land uses, minimum standards applicable in urban areas; and minimum agricultural economic units.
3. Identify and document all existing slums in and around the CBD and land belonging to the council including existing markets with a view to re-planning and the improvement of the existing infrastructure and neighbourhoods.
4. where necessary, mapping and digitisation of topographical cadastral features and natural resources of the town.
5. Identify the existing land malpractices and settlements and propose strategies for improved land Management, administration, development approval, control and regularisation.
6. Undertake an assessment of transport, infrastructure and utility needs, housing and community services and propose new strategies.
7. Prepare analysis reports and present proposals for future spatial, demographic, social and economic growth.
8. Prepare a long term 20-30 years Integrated Strategic Development Plan for town, together with detailed plans in the identified areas.
9. Prepare attendant transport infrastructure services and community development facility plans.
10. Undertake a detailed study of the CBD structure with view to upgrading.

11. Identify suitable land for both public purpose and utilities
12. Prepare plan implementation schedule, planning and development policy guidelines and attendant resource and institutional requirements.

1.9 Methodology

The plan preparation process was divided into the following six phases:

1.9.1 Preparatory Phase

The preparatory phase involved:

- Preparation of a preliminary base map which entailed acquisition of satellite imagery, acquisition and digitization of PIDs and RIMs and the preparation of a map showing the existing situation.
- Transect survey to appreciate the planning area, ground truthing and preparation of final base maps.
- Stakeholder identification and analysis to identify the right stakeholders that would be engaged and develop a strategy for communication during the planning process.
- Data needs assessment to identify the correct information that would be required and develop a data acquisition, storage and analysis strategy.

1.9.2 Sensitization Phase

During this phase, identified stakeholders were engaged to provide information on the preparation of the plan, and receive their feedback on the same. The stakeholders also provided additional information required for planning. Stakeholder engagement was undertaken through workshops, targeted consultative meetings and other public fora as was found appropriate. The stakeholder workshops would be divided into three for; presentation of visioning and objective setting, validation of data collected about the area and validation of draft plan.

1.9.3 Investigative Phase

In this phase investigation was undertaken to enhance understanding of the area's social, economic and environmental dynamics through desk and field studies. The outcome of the investigation as well as the stakeholder engagement formed a basis for the formulation of intervention measures of the plan.

Among the studies that were undertaken include;

- Land use and land suitability analysis,
- Infrastructure gap analysis,
- Human settlement trends and patterns analysis,
- Demographic analysis,
- Needs analysis,
- Environmental profiling, etc.

1.9.4 Plan Formulation Phase

Based on stakeholder concerns, feedback on concept plan and findings from investigation, a regional physical development plan (comprehensive spatial development framework) was formulated.

1.9.5 Plan Approval Phase

After the stakeholder validation process that entailed presentation workshop for discussion of the draft plan, notice of completion of the plan in newspapers and Kenya gazette, circulation of plan to stakeholders, the plan was amended accordingly to capture stakeholder concerns. The amended draft was submitted to the minister through the Director of Physical Planning for approval.

PART TWO: PLANNING CONTEXT AND SITUATIONAL ANALYSIS

CHAPTER 2: PLANNING CONTEXT

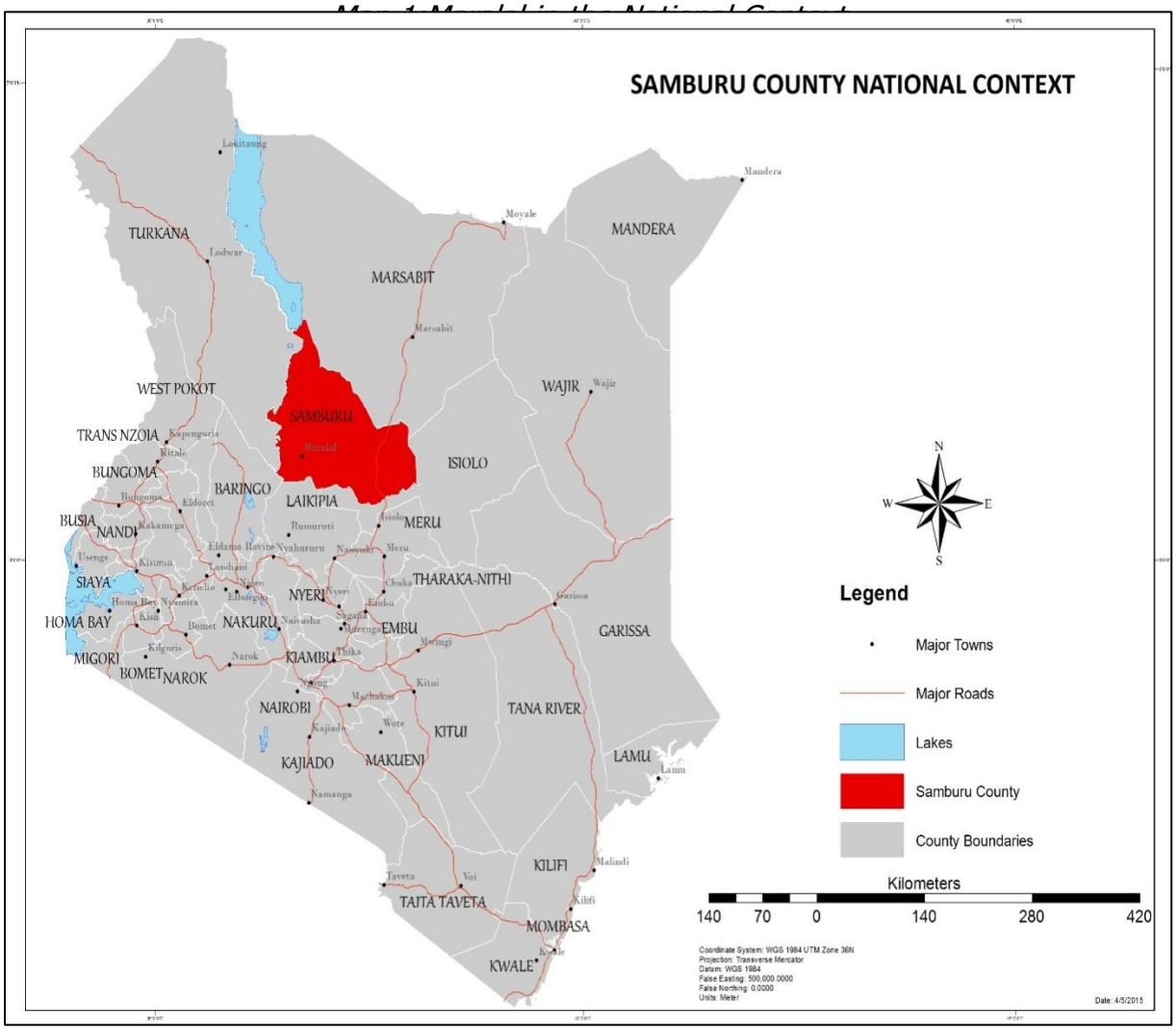
2.1 Introduction

This section articulates the location of Maralal town and the legal provisions that guided the preparation of the Integrated Strategic Urban Development Plan.

2.2 Location and Position

2.2.1 National Context

Maralal Town is a medium sized town in Samburu County, in northern Kenya. Maralal Town is located in the northern-central part of Kenya, 350 Km North of Nairobi, 240 km from Meru town and 160km from Nyahururu town.The region consists of several highlands, plateaus and lowlands including the famous Suguta Valley. Fault escarpments bound its sides while red clays, boulders and gravel fans cover the floor. The valley is characterized by beach terraces which give evidence that it was once part of Lake Turkana. High-level plateaus built by repeated floods of lava from the Rift Valley dominate the eastern part of the valley.

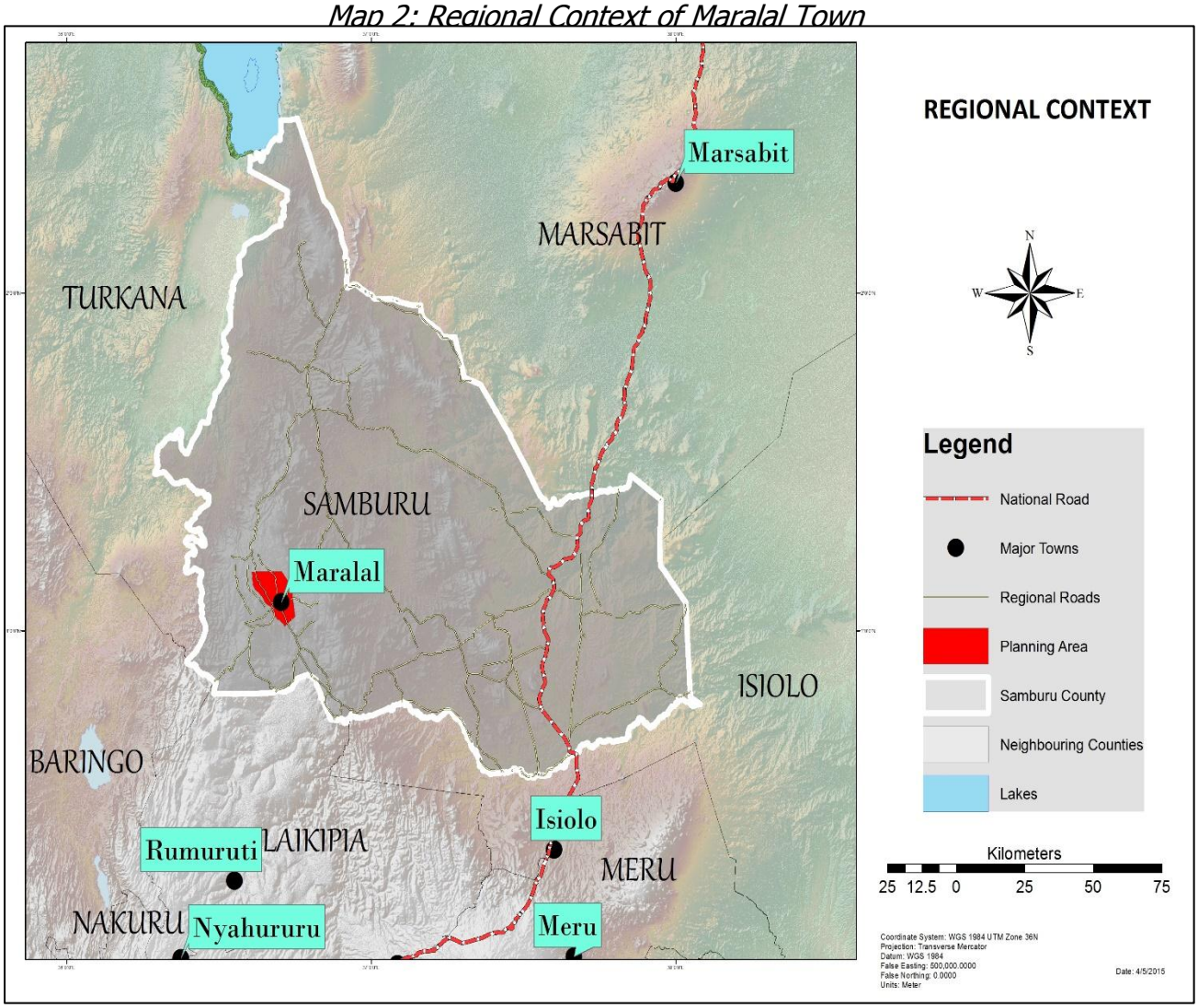


Source: AIDAL Consultants, 2015

2.2.2 Regional Context

Maralal town is situated in Samburu County. Samburu County boarders Baringo County to the west, Laikipia County to the south, Isiolo County to the East and Turkana County to the Northwest and Marsabit County to the north. The region's hinterland is characterized by ranches, national parks, game reserves and wildlife conservancies of international repute. The County is sparsely populated with a population of approximately 223,947 people and a population density of approximately11 people per Km^2.The spatial extent of Samburu County is approximately 21,022 Km^2. Samburu County is Semi-arid in nature and notable for its immense potential and contribution to the national livestock industry. Its varied landscape and abundance of wildlife makes the region a premium region for tourism. The County lies within the northern tourist circuit and has a vast potential for exploitation. Other major towns within the county include: Baragoi, Archers Post and Maralal. Samburu County is administratively divided into three sub-counties: Samburu Central, East and North.

Map 2: Regional Context of Maralal Town



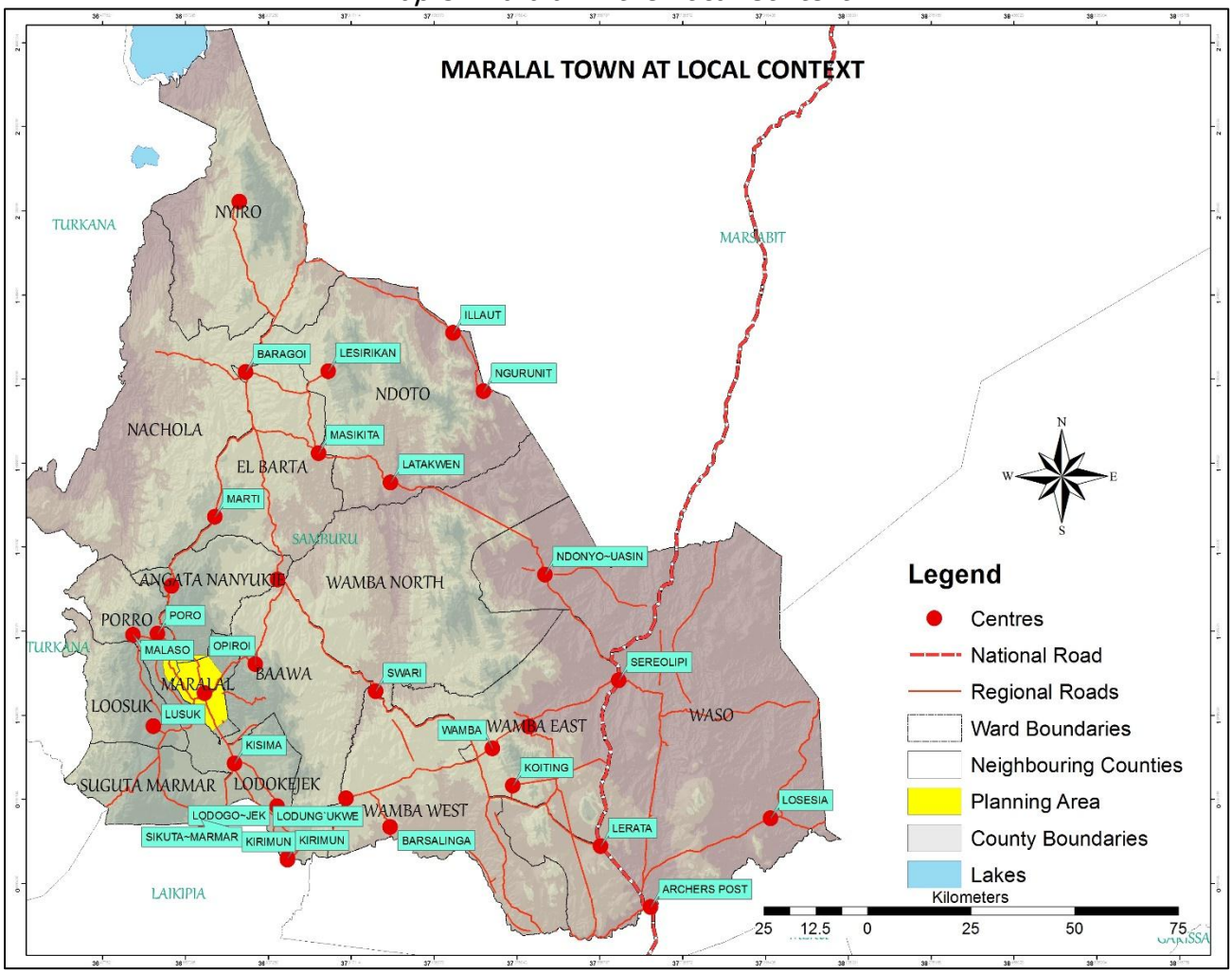
Source: AIDAL Consultants, 2015

2.2.3 Local Context

Maralal town is the main urban centre and serves as the headquarters/capital of the Samburu County. Maralal town is situated in Samburu County, Samburu Central District. The town lies between latitude 0° 40' North and 20° 50' North of the Equator and longitudes 36° 20' East and 38° 10' East of the Prime Meridian and at an altitude of approximately 1966 meters above sea level. Maralal Town covers a total area of 176 Km^2. It is located in Kirisia division of Samburu Central District, Samburu Central Sub County. Maralal town is a cultural rich centre for the Samburu people. It is the last frontier town for tourists looking to explore northern Kenya. The town is becoming a popular international attraction thanks to the Maralal Camel Derby - an annual camel race held mid-year near the town that attracts many locals and international camel racing enthusiasts. Out of the total area, only 16sq. km is trust land controlled by the former Town Council with the rest being game sanctuaries, forest land and group ranches. The Town is famous for the Kenyatta home, the location where Jomo Kenyatta was detained prior to his release. The

town also serves as a base to tourist activities such as bush walking. It is surrounded by the Maralal Game Sanctuary.

Map 3: Maralal in the Local Context



Source: AIDAL Consultants, 2015

2.3 Historical Context

The Town Council of Maralal was established by the Local Government Act (Cap 265) Laws of Kenya, to provide services to the residents in the area of jurisdiction of Maralal Town Council. The council started in 1979 as an Urban Council from the expansive Samburu County Council. In the year 1988 it was upgraded to the Town Council status. In 2000, a Commission was gazetted to look into the elevation of the Council into a municipality. The town covers a total area of 176 Km^2 and is under the management of the County Government of Samburu.Maralal town acts as a service, administrative and economic hub for a large part of the North Rift Region. Most development in the town tends to take place towards Shabaa and Milimani areas. The town currently uses an outdated and unapproved Physical Development plan prepared in 1991.Some of the proposals in the plan have been implemented while others have taken place without reflection in the plan. Maralal town is endowed with vast tourist attraction sites like the

game sanctuaries, Suguta valley, the rich Samburu culture, beautiful landscapes and eco tourism promoted by the county and locals. The town acts as a service, administrative and commercial centre for the region.

2.4 Functions of Maralal Township

2.4.1 Administrative function

Maralal Township serves as an administrative centre for Samburu County being the Sub-County's headquarter. There are various National and County Government, Non-Governmental Organization (NGOs) offices within the towns. Various organizations like Red Cross, World Vision ACTED, among others have also established their offices within the township.

2.4.2 Commercial function

The township is a home for various forms of formal and informal business activities. Retail and general shops dominate the township serving the population within Maralal town and its neighbourhood.

2.4.3 Health function

The township has two major health facilities, Maralal County Referral Hospital and Catholic hospital. These health facilities provide health services to the whole population within the county and the surrounding areas.

2.4.4 Residential function

Maralal Township has various residential neighbourhoods such as Loresho, Loikas Sun Rise Shabaa Milimani, among others

2.4.5 Transport function

Maralal serves as a transit centre to northern Kenya. The township has an informal bus terminus adjacent to the petrol station. It also has an airstrip which can be used to connect it with other parts of the country. However, the airstrip is not well maintained and there are noticeable encroachments on the periphery of the airstrip.

2.4.6 Religious function

Maralal is a religious centre as its history suggests. The first institutions in the township were the ACK and Catholic churches. Other churches in the township include; Kenya Assemblies of God (KAG), Full Gospel and Anglican Church of Kenya.

2.5 Planning Issues

Some of the key planning issues identified:

- The town/urban area is rapidly growing into private land where development control by the town is difficult posing a high risk of development of uncoordinated settlements.

- There is uncoordinated sub division of land within the group ranches surrounding the trustland. This is done without consultation with the county government. There are obvious conflicts between the council and the group ranch owners over control of the sub divisions and development control in these areas.
- Developments are taking place in the fragile ecosystems like the wild life corridors, along riparian reserves, hilltop areas like Ngari and Shabaa and on or along laggers.
- With most of the soils in these areas being unstable, it is important to discourage settlement on them.
- Haphazard human settlement that take place without a framework to guide development. This has led to development of unplanned settlements leading to dire need to re-plan areas like Mutaro, Lepolos, and St. Paul among others. Most of the developments within the town take place without approval from the relevant authorities.
- The town is not zoned resulting in mixed development in most parts of the town.
- Encroachment into public lands including road reserves and service lanes, public cemetery in Lepolos, the stadium among others do exist.
- Poor location of facilities is a major problem in the town. Facilities like the dumpsite are located along the main road into the town with the wind blowing from it into the town.
- Poor solid and liquid waste management is a key problem in the town with plastic bags being notorious for the same. The town also lacks sewer infrastructure, most households use pit latrines and septic tanks. There is only one council exhauster serving the whole town. The exhauster disposes of its waste in open grounds at the solid disposal site. There is no designated sludge discharging beds for sewage disposal.
- The status of the existing roads within the town is poor as the whole town lacks tarmac roads. Most roads are impassable during the rainy season as they develop deep galleys and are water logged due to lack of drainage systems.
- There is need for a strong political will and sensitization of the local community for the success of any planning initiative to be realized.
- There is no recent survey data covering the Town. The only survey data available are old topographical sheets at a scale of 1:50,000.

2.6 Policy and Legal Framework

The Integrated Strategic Urban Development Plan for Maralal Town has been prepared in fulfilment and in accordance to various policies, administrative and statutory requirements.

2.6.1 Policy Framework

2.6.1.1 Kenya Vision 2030

The Kenya Vision 2030 is the new long-term development blueprint for the country. The aim of Kenya Vision 2030 is to realize ***"a globally competitive and prosperous country with a high quality of life by 2030."*** It aims at transforming Kenya into ***"a***

newly industrializing, middle income country providing a high quality of life to all its citizens in a clean and secure environment". The plan articulates aspects of the economic, social and political pillar. In line with the social pillar, it facilitates the provision of social infrastructure including schools, health facilities, water and sanitation. Under the economic pillar: the plan facilitates promotion of wholesale and retail, value addition, SMEs, BPOs. The plan facilitates provision of an ICT park, SEZs, heavy and medium industrial zone, tourist facilities and dual carriage roads as the main flagship projects. Under political pillar; it promotes good governance, gender issues, participation, safety and security. The plan has achieved this by providing land for development of wholesale and retail markets, providing zones for SEZs, strategies and measures to improve and access quality education, strategies and measures on developing new and upgrading existing hospitals for adequate and accessible health care, and zoning ecologically fragile areas with appropriate measures to conserve them. **Flagship Projects** under the Vision that will have great impact on the study area include the ***Development of a new transport corridor to Southern Sudan and Ethiopia****:* This corridor will link Lamu, Kenya's North Eastern province, Ethiopia and Southern Sudan: The project involves the development of a new transport corridor from the new port at Lamu through Garissa, Isiolo, near Maralal, Lodwar, and Lokichoggio to branch at Isiolo to Ethiopia and Southern Sudan.

2.6.1.2 Sustainable Development Goals

The Sustainability Development Goals were formulated to build upon and replace the Millennium Development Goals whose time lapsed in 2015 since they were adopted in 2000. Sustainable Development Goals are universal and are to be applied in both developed and developing countries. However, different countries have different ambitions and goals depending on different challenges different countries face coupled with the different priorities different countries have. The goals provide a framework for ending poverty, eradicating hunger, curbing inequality of all forms be it gender based or within and among countries. Availing reliable and sustainable energy, building resilient and sustainable infrastructure as well as ensuring sustainable management of water and sanitation form the basis for the sustainable development goals. The goals also aim to achieve healthy lives, promote inclusive and quality education, a sustained economic growth and finally protect, restore and promote sustainable use of terrestrial ecosystems by managing forests, combating desertification and reversing land degradation.

2.6.1.3 Poverty Reduction Strategy Paper (PRSP)

The PRSP outlines priorities and the necessary measures for poverty reduction and economic growth. It identifies measures geared towards improved economic performance and priority actions that will be implemented to reduce the incidences of poverty among Kenyans. The strategy gives measures to alleviate poverty as one of the outputs is an Economic recovery strategy. This plan will thus guide in poverty alleviation and steer economic performance.

2.6.1.4 National Land Policy, 2009

The plan articulates the provisions of the policy which include: provides for better coordination and strengthening of development control, informal settlement upgrading, peri-urban planning, sustainable and equitable use of land, efficiency and access to land management system and uphold principles of land policy set out in Article 60 of the Constitution. National Land Commission manages public land on behalf of the National and County Government among other county governments.

2.6.1.5 National Housing Policy for Kenya, 2004

The plan articulates the objectives of the housing policy including:

- Facilitate progressive realization of the right to adequate housing by all Maralal town residents,
- Promote functional, healthy, aesthetically pleasant and environmentally friendly housing development
- Earmark and set aside land for public housing development in urban areas and redevelopment of the dilapidated houses
- Facilitate housing delivery and improvement, access to land and security of tenure for all socio-economic groups especially in areas like Nomotio.

The plan provides strategies and measures to facilitate greater access to funds and promote innovative ways of mobilizing funds to easily achieve quality housing delivery for all.

2.6.1.6 The Integrated National Transport Policy of 2003

The policy calls for optimal planning for development and maintenance of transport infrastructure. The plan provides for local regional and international transport connectivity of Maralal town to attain the vision of global competitiveness. The plan articulates the objective of the policy which aims at developing an integrated, balanced and environmentally sound urban transport system in which all modes efficiently play their roles.

2.6.1.7 Draft National Urban Development Policy

This draft policy recognizes that a major challenge with Kenya's urban centres is their spontaneous and haphazard growth which has taken place outside of the purview of conscious urban planning intervention. With Africa being the fastest urbanizing continent, it is imperative that local authorities and other concerned government agencies put in place measures to ensure sustainable growth of their towns. Secondary towns in Kenya, Maralal being one, continue to absorb the bigger number of rural-urban migrants. This means that the Maralal Town Integrated Strategic Urban Development Plan should cater for a population greater than what is expected from natural growth. This will further foster urban-urban-and urban rural linkages and improve the lives and livelihoods of millions of the poor and marginalized in the county.

2.6.2 Legal Framework

This section discusses some of the relevant laws in the formulation of Maralal Town ISUDP. Various legislations exist that provide guidelines for the preparation and implementation of physical development plans. The legislations are aimed at improving uniformity in planning and development control tasks as they act as a reference points in the preparation of urban spatial plans, county spatial plans, strategic urban and regional Physical Development plans; guidance of the use and developments of land and administration procedures involved.

2.6.2.1 The Constitution of Kenya, 2010

The Constitution of Kenya, 2010has raised the bar as far as management of national affairs is concerned. Equally, it has raised expectations of the Kenyan people. Consequently, it has placed higher demands on development planning as a means of delivering on the Constitutional pledges. The Constitution is the supreme rule of law in Kenya. It guarantees fundamental rights and freedoms for the citizens. This right among others includes Chapter five of the constitution provides for use and management of land in a manner that is equitable, efficient, productive and sustainable. The plan shall promote the realization of the constitution particularly respect to the following articles;

i. Article 43 (1) pertaining to economic and social rights which include the right to clean and healthy environment, adequate and decent housing and to reasonable standards of sanitation, right to education.
ii. Article 60**.** (1) Land in Kenya shall be held, used and managed in a manner that is equitable, efficient, productive and sustainable, and in accordance with the land policy principles.
iii. Article 66 provides for regulation of the use of any land, or any interest in or right over any land for purposes of land use planning, public order, public morality, public health and public safety in Kenya.
iv. Article 69 provides for the management and protection of the environment.

In addition the constitution provides that any planning undertaking should therefore take cognizance and incorporate the rights approach to development. *Citizen participation* in social and economic development decision making is a theme that runs through the whole Constitution. Consequently, effective citizen participation must be engrained in the new planning legislation. Thus, the Integrated Strategic Urban Development Plan for Maralal Town (2011-2030) will be fully anchored within the confines of the Constitution.

2.6.2.2 County Governments Act No. 17 of 2012

The act provides for county governments' powers, functions and responsibilities to deliver services and for connected purposes. The act also provides for public participation in county planning, articulates Principles of public services delivery in the county, responsibilities and powers of the governor among others. The objectives of county planning shall among others be to ensure harmony between national, county and sub-county spatial planning requirements. To guide, harmonize and facilitate development

within each county the following type of plans shall be prepared: county integrated development plan (CIDP), county sectoral plans, county spatial plan, and cities and urban areas plans as provided for under the Urban Areas and Cities Act. Maralal Town Integrated Strategic Urban Development Plan has been prepared on the basis of section 107(1) (d) of this act.

2.6.2.3 The National Land Commission Act, 2012

An act of Parliament that provides for the management and administration of land in accordance with the principles of land policy set out in Article 60 of the Constitution and the national land policy and formation of the National Land Commission. The functions of the commission is to among others, manage public land on behalf of the national and county governments and to monitor, alienate public land and have oversight responsibilities over land use planning throughout the country.

2.6.2.4 The Land Act No 6 of 2012

The land Act has revised, consolidated and rationalized previous land laws so as to provide for the sustainable administration and management of land and land-based resources and other connected purposes. Prior to the enactment of this legislation, the country's substantive land laws were contained in several statutes making it incomprehensible to most users. The upshot is that the Land Act helped to bring all substantive laws under one statute. With the operationalisation of this Act, the following laws stand repealed: The way leaves Act, Cap 292 and The Land acquisition Act Cap 295. The Land Act shall apply to all category of land as provided under section 3 of the Act. The Act recognizes four categories of tenure namely: freehold, leasehold, customary land rights and Partial interest defined in the Act or any other law.

2.6.2.5 The Land Registration Act No.3 of 2012

The Land Registration Act revises, consolidate and rationalize the registration of Title to land, give effect to the principles and objects of devolved Government in land registration and related purposes. It replaces the previous registration provisions contained in several statutes and create an informed system of land registration in the country. Kenya will also henceforth maintain one uniform set of land registries under this statute. With the operationalisation of this Act, the following laws stand repealed: The Indian Transfer of Property Act of 1882; The Government Land Act (Chapter 280 of Laws of Kenya); The Registration of Title Act, (Chapter 281 of Laws of Kenya); The Land Title Act, (Chapter 282 of Laws of Kenya) and The Registered Land Act, (Chapter 300 of Laws of Kenya).

2.6.2.6 The Physical Planning Act (Cap 286)

This Act makes provision for the preparation of a physical development plan. Section 29of the Act states that subject to the provisions of this Act, each local authority shall have power: to prohibit or control the use and development of land and buildings in the

interests of proper and orderly development of its area and to consider and approve all development applications and grant all development permissions.

2.6.2.7 Draft Physical Planning Bill, 2015

Article 15 of the bill gives the County Executive responsible for physical planning, powers to approval local and county physical development plans and coordinate planning authorities within the county. Article 16 of the bill establishes the office of the County Director of Physical Planning and gives the director the responsibility of advising the County Government on physical planning matters in the County. The bill also provides for the preparation of Local Physical Development Plans (LPDPs) by a city or a municipal director of physical planning. The LPDPs will be in respect of a city, municipality, town or market centre and shall be consistent with an Integrated City or Urban Development Plan as contemplated under Part V of the Urban Areas and Cities Act, 2011. The contents of the LPDP are outlined in article 52 of the bill as a survey report and GIS – based maps and descriptions. The process for the preparation the Local Physical Development Plan for Maralal Township will be guided by the advice from the County Director of Physical Planning. Once completed, the plan will be subjected for approval by the County Executive for Physical Planning.

2.6.2.8 The Urban Areas and Cities Act of 2011

The Urban Areas and Cities Act gives effect to Article 184 of the Constitution; to provide for the, classification, governance and management of urban areas and cities; to provide for the criteria of establishing urban areas, to provide for the principle of governance and participation of residents and for connected purposes. The Act provides that every city and municipality established under this Act shall operate within the framework of integrated development planning.

2.6.2.9 Environmental Management and Coordination Act, EMCA (1999)

The Act aims at promoting a safe, clean and healthy environment. *Section 58* of this Act requires that every development project likely to have impacts on the environment to undergo an environmental impact assessment before commencement of any works. According to the Act's second schedule, preparation of local physical development plans fall under the projects required to undergo environmental impact assessment. *Section 44* provides for protection of hilltops hillsides and mountain areas and forests. *Section 45* as well, provides for protection of the environment and significant areas with any area of natural beauty or species of indigenous wildlife or the preservation of biodiversity as part of environmentally sensitive areas.

2.6.2.10 The Survey Act (Cap 299)

The survey act (cap 299) makes provision in relation to surveys, land subdivisions, conversions, geographical names and the licensing of land surveyors, and for connected purposes.

2.6.2.11 Public Health Act (Cap 242) of 1967

The act provides for enforcement of the plan, habitable buildings, proper sanitation through provision of high quality of water and proper solid and liquid waste management.

2.6.2.12 The Antiquities And Monuments Act, Cap 215

Maral town has s sites of historical significance such as Ngei House and Kenyatta House whose protection will be provided for in the planning process.

2.7 Key Institutions

2.7.1 The County Government of Samburu

The planning area lies under the jurisdiction of the County Government of Samburu. According to the County Government Act of 2012, the County Government of Samburu has been mandated to plan for the county, thus the County Government will be a key actor in the plan preparation process. The County Government will provide members for the technical supervisory team, project steering committee to guide in the plan preparation process, provide logistical support and administrative services needed by the project team and consultants. It will also supply the required existing documents, data on development applications and approval procedures, development control procedures, reports and support resources required by the planning team.

2.7.2 Ministry of Land, Housing and Urban Development (Department of Physical Planning)

The Department of Physical Planning, under the Ministry of Land, Housing and Urban Development, is responsible for physical planning matters in the country under the Physical Planning Act, Cap 286 of the Laws of Kenya. The Ministry of lands will provide overall policy framework that will guide the plan preparation process.

2.7.3 The National Land Commission (NLC)

The National Land Commission is a major player in the planning process. The functions of the NLC as set out in the Constitution of Kenya includes management of public land; advising the National and County Governments on land matters; recommending a national land policy; conducting research on land and natural resources; monitoring and oversight responsibilities over land use planning among others.

CHAPTER 3: PHYSIOGRAPHY ANALYSIS

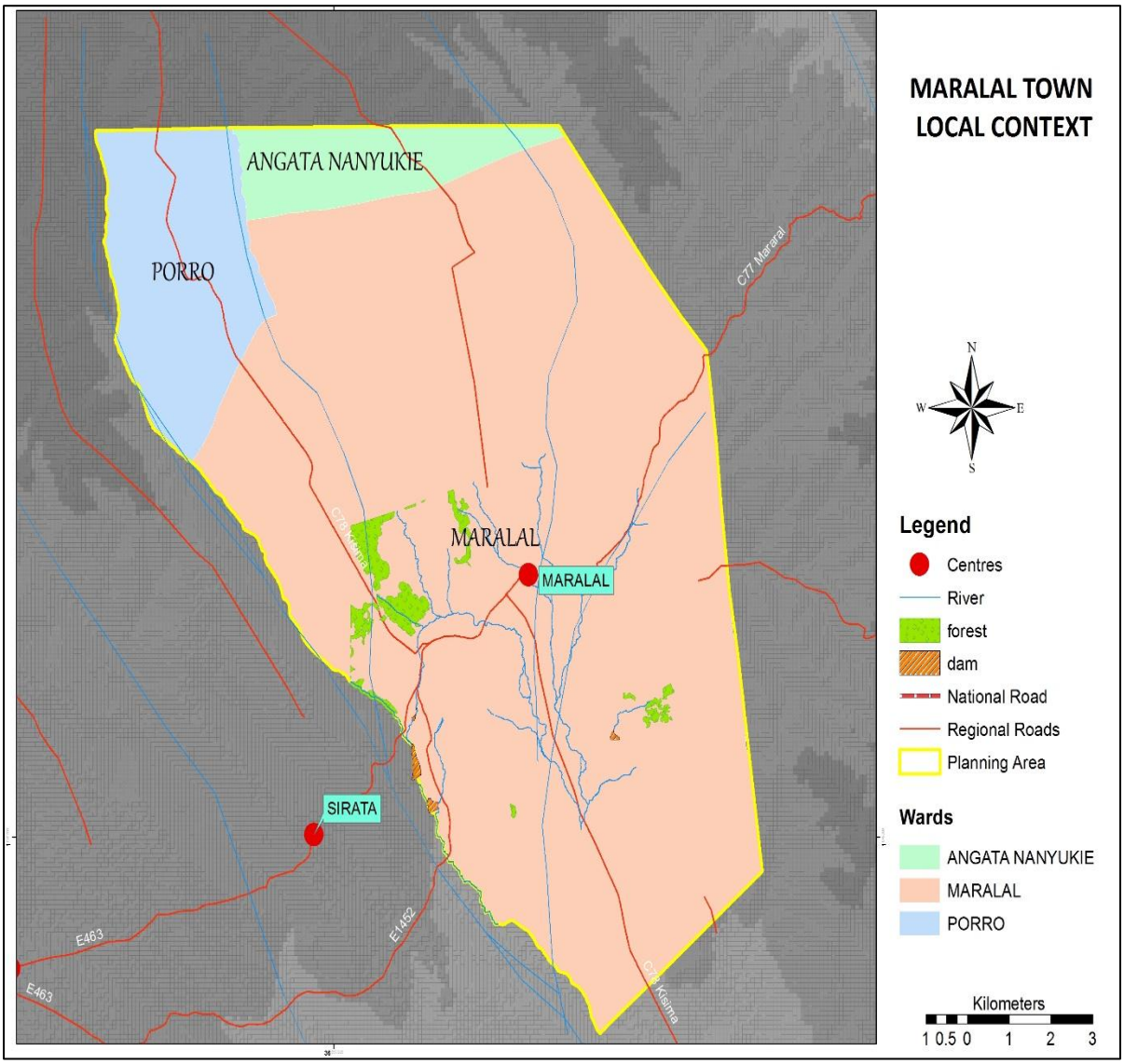
3.1 Introduction

This section examines the existing natural resource base and climatic conditions within Maralal town and its environs. It also looks to support development and challenges. It is noted that several factors are responsible for the regional growth but the natural resource endowments and utilization rank highest. Therefore, it is through appropriate utilization of these resources and enhancement of the potentials of others that sustainable regional development can be realized. It is further noted that the utilization of the devolved fund to spur growth will also largely rely on this.

3.2 Town Planning Area

The planning area covers the entire former town council of Maralal boundary within Samburu county measuring approximately 176Km^2.

Map 4: Maralal Town Planning Area



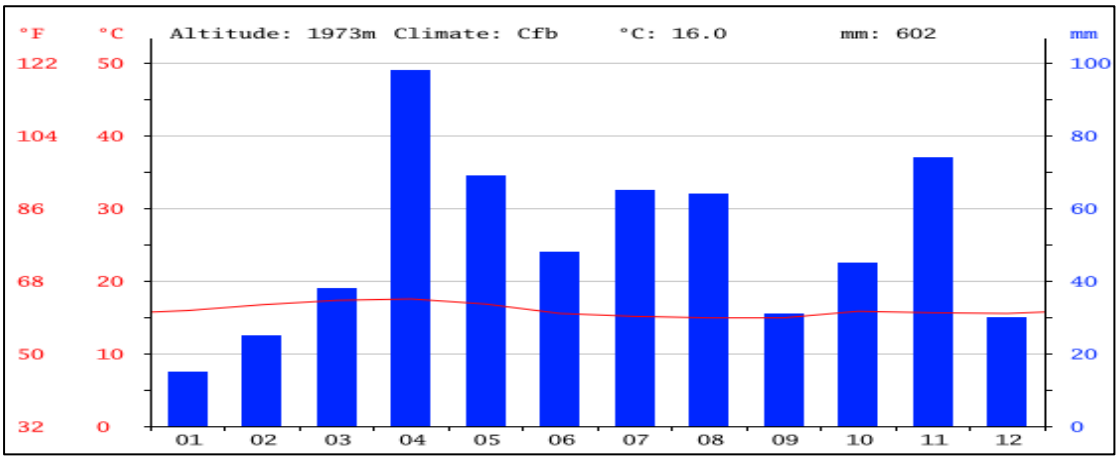
Source: AIDAL Consultants, 2015

3.3 Climate

3.3.1 Rainfall

The climate is warm and temperate in Maralal. Rainfall in the County follows a fairly erratic pattern varying significantly both in temporal and spatial scale. The County experiences both short and long rains. The driest months are January and February. The long rainy season falls in the months of March, April and May. The rainfall in Maralal is significant, with precipitation even during the driest month. The average annual rainfall is 602 mm.In areas where dry land agriculture is practiced the persistent and severe droughts/famine causes crop failure as well as livestock deaths further compounding the problem. Rainfall cannot adequately support agriculture hence need to diversify to other economic to support the town's economy.

Figure 1: Annual Rainfall in mm



3.3.2 Temperature

Maralal town is in Samburu county which is one of the driest counties in Kenya with temperatures ranging between 25°C during the coldest months (June and July) and 35°C during the hottest months (January to March). Being semi-arid, Maralal town receives reliable sunshine throughout the year. Maralal experiences an annual mean of approximately 10 hours of sunshine per day. The intensity is high resulting in high evapo-transpiration rates.

Figure 2: Annual mean temperature

month	1	2	3	4	5	6	7	8	9	10	11	12
mm	15	25	38	98	69	48	65	64	31	45	74	30
°C	15.9	16.7	17.3	17.5	16.8	15.5	15.1	14.9	14.9	15.8	15.6	15.5
°C (min)	7.0	7.4	8.9	10.3	9.6	8.1	8.6	8.4	7.3	7.9	8.1	7.9
°C (max)	24.9	26.0	25.7	24.7	24.1	23.0	21.7	21.4	22.6	23.8	23.2	23.2
°F	60.6	62.1	63.1	63.5	62.2	59.9	59.2	58.8	58.8	60.4	60.1	59.9
°F (min)	44.6	45.3	48.0	50.5	49.3	46.6	47.5	47.1	45.1	46.2	46.6	46.2
°F (max)	76.8	78.8	78.3	76.5	75.4	73.4	71.1	70.5	72.7	74.8	73.8	73.8

3.3.3 Wind

Maralal Township receives a mountain breeze mostly in the evening and is characterized by high wind speeds.

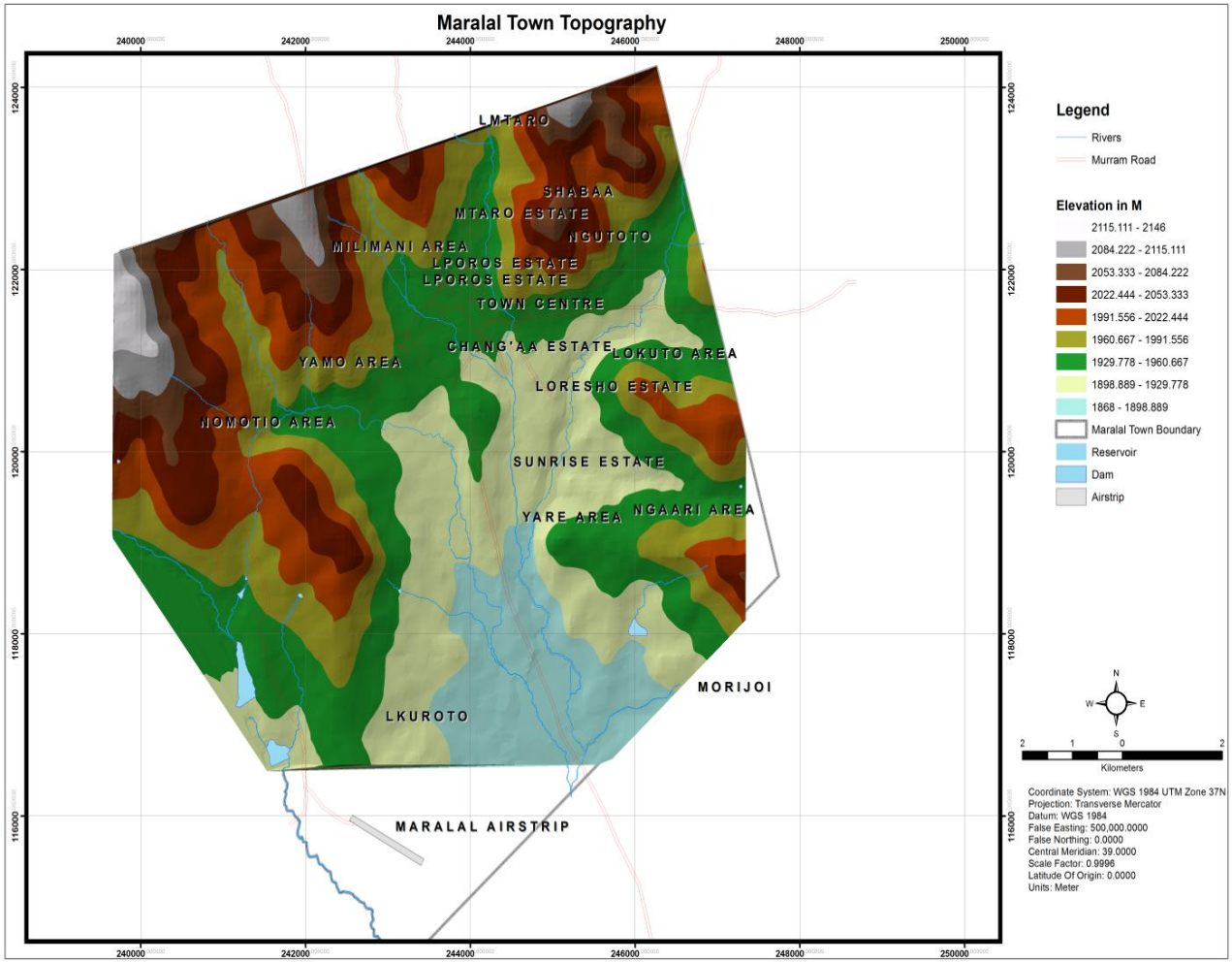
3.3.4 Sunshine

Being semi-arid, Maralal town receives reliable sunshine throughout the year. Maralal experiences an annual mean of approximately 10 hours of sunshine per day. The moderate temperatures and high solar hours present an opportunity for enhancing solar power exploitation.Samburu is the only place with the highest sun intensity in terms of energy production and has the highest potential for wind power and geothermal production. The only challenge we have is accessibility.

3.4 Topography

Maralal Town is located on the northern interface between highlands and lowlands. Suguta valley is positioned on the extreme west of the district. The valley is characterized by beach terraces which give evidence that it was once part of Lake Turkana. High-level plateaus built by repeated floods of lava from the Rift Valley dominate the eastern part of the valley. Kirisia, rising to 2,000m above sea level, forms the highest point in the plateau.

Map 5: Maralal Town Topographic Analysis



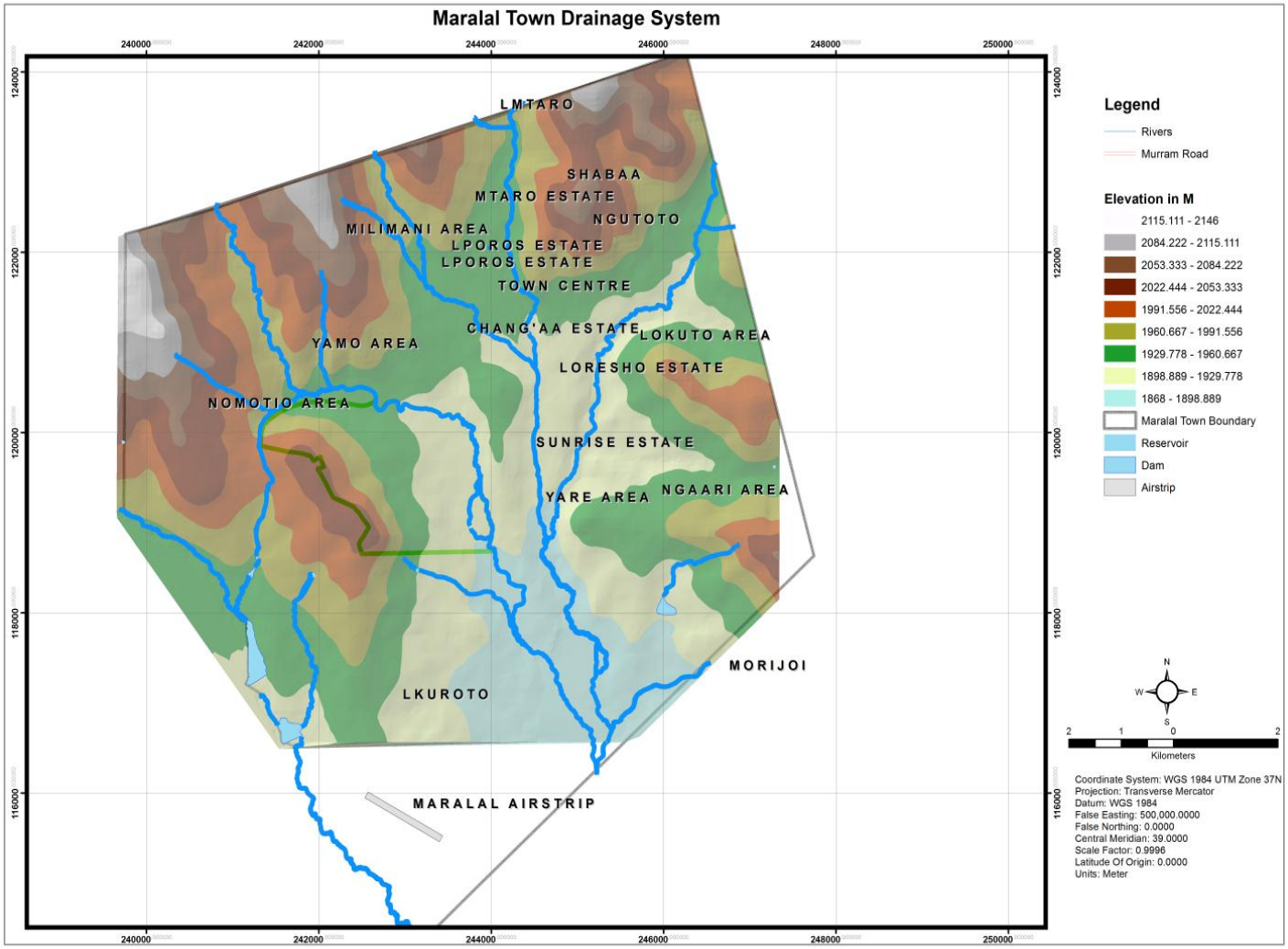
3.5 Geology and Soils Characteristics

Geological and soil characteristics greatly determine the form a town takes. The major concern being the earth`s tectonic forces. Location of urban centres in areas with weak geological structure can be hazardous hence the prudent option will be to avoid development in such areas. The distribution and development is influenced by topography, rock types and vegetation cover among other factors. The volcanic hills on Lorroki plateau are covered by shallow dark to dark brown rocky and stony soils especially to the north. Maralal town is predominantly covered by sandy loam and sandy clay soils, mostly lithosol (shall stoney soils) and cambisols. In the areas covered by lithosols water run-off is common and erosion quite prevalent.

3.6 Drainage

Drainage in the area is from North to the south. The Northern part of the area is drained by the Lolguchani and to the East and North East by the Loidong'o tributaries of the Loikas River. Drainage within the town area is controlled by the Nandoto and the Loikas rivers. These rivers form a confluence a few kilometers south of Maralal town. The Yamo River drains areas just south of Maralal town.

Map 6: Maralal Town Drainage and Hydrology



3.7 Agro-Ecological Zones

Lower Highlands (LH2-LH4) , lower highlands zone V(LH5,upper midland (UM4-UM6) ,lower midlands zone V-VI (LM5-LM6), lower midland zone VII (LM7) , intermediate lowlands (IL7) and indistinct zones/transitional zones.which constitute low potential areas for agricultural production. Pastoralism, the main means of livelihood in these areas, experiences severe difficulties under these conditions.

3.8 Vegetation

Evergreen forests, evergreen bush land, evergreen to semi-deciduous bush land/thicket, evergreen shrub land, semi-deciduous grassland, deciduous bush land, deciduous bush grassland, deciduous shrub land, deciduous shrub grassland, deciduous shrub annual grasslands, dwarf shrub grassland and grassland.

Plate 1:Urban vegetation in maralal town core urban area and its environs



Source: Field Survey, 2011

3.8.1 Forest

Leroghi /Kirisia forest is a gazzetted forest covering 93000 hectares and stretches from the south near the Sera Orion Market centre and moves on the northern direction for a distance of about 80 km. The Maralal town is located very close to the forest and its rapid expansion has been a threat to the very existence of forest. Some of the threats identified are;

- Forest encroachment by urban dwellers as the town expands;
- Uncontrolled tree cutting for production of cedar posts and poles which are used for fencing and building;
- Illegal logging to produce timber for furniture and construction;

Most of the local building materials and wood fuel needs for inhabitants of this town and its surrounding are met from the forest. Cedar is used for production of posts, poles, props and timber for roofing and furniture. Other species like Acacia and Olea are targeted for firewood and charcoal.

3.9 Wildlife

Maralal town is situated in an in in the hinterland which is endowed with wildlife, distributed in Samburu County wildlife corridors/ecosystems. The five major species are the lion, leopard, elephant, buffalo and the rhinoceros though other smaller wildlife species are also abundant particularly the African Wild Dog and gazelles. This makes the town a tourist destination**.**

Plate 2: Wildlife Species in Maralala Town and its Hinterland



Source: Field Survey, 2011

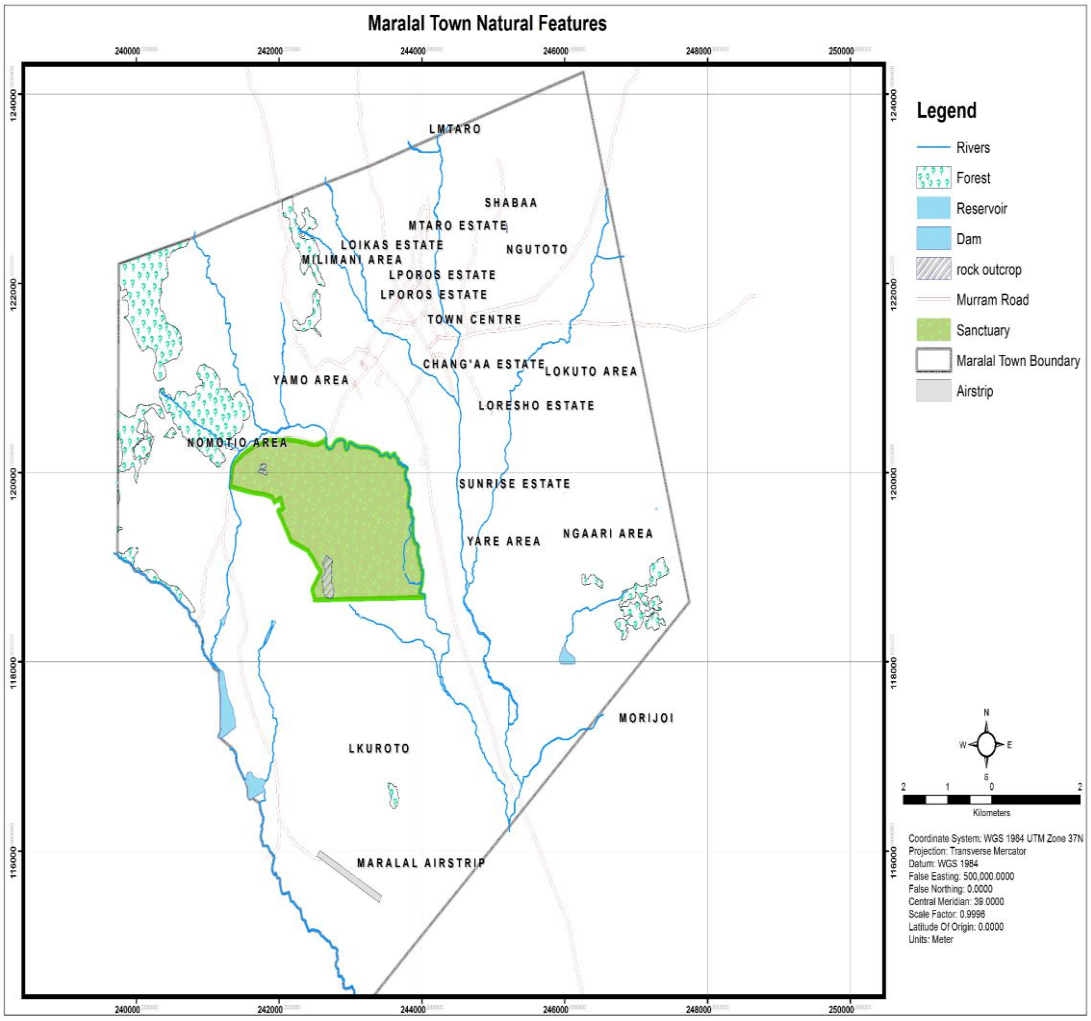
3.10 Environmental Fragile Areas

The main cause of environmental degradation in the planning area is soil erosion and changing weather patterns that affect soil cover and vegetation among others. Some of the environmental fragile areas include Maralal River and Gullies. The soils within the area are very loose and are easily washed away during heavy rain falls. The steep slopes of Matthew Ranges experience severe soil erosion. Soil erosion is also evident within Maralal River. The plate below show massive gulley erosions:

3.11 Conclusion

Maralal experiences harsh climatic conditions and has long dry spells. There are also high levels of soil erosion due to the loose sand soils common in the area. The establishment of structures on wildlife migratory routes has resulted into human wildlife conflicts.

map 7: Maralal Town Natural Features



CHAPTER 4: POPULATION AND DEMOGRAPHY ANALYSIS

4.1 Introduction

Appreciation of the population size, composition, trends, socio-economic profile and spatial distribution of people are important aspects in the preparation of Maralal Town Integrated Strategic Urban Development Plan. Population dynamic is an important aspect in determining provision of essential services, allocation of social amenities in an area, provision of labour force and the degree of resource exploitation. As such, an understanding of the demographic dynamics is central to achieving planning objectives. To this end, this chapter highlights various aspects of demography, society andculture and their implications on the Integrated Strategic Urban Development Plan for MaralalTown.

4.2 Population Size

According to the National Population and Housing Census, 2009, Maralal Town had a population of 36,755. The population for the planning area in 1999 and 2009 is as shown in the table below.

Table 1: Population Size and Distribution by Location

Localities	Population					
	2009					
	Male	Female	Total	H/H	Sq km	Density
1. Township	6175	6256	12431	3311	17.5	710
2. Elpartuk	1667	1785	3452	674	22.9	151
3. Shabaa	2973	3175	6148	1279	78.6	78
4. Ng'aari	2526	2501	5027	1036	25.5	197
5. Ledero	828	994	1822	406	26.6	68
6. Milimani	2211	2257	4468	979	28.6	156
7. Lkuroto	1707	1700	3407	695	21.9	156

Source: National Population Census, 2009

4.3 Population Distribution: Rural -Urban Population

Kenya's population is mainly rural at an average of 78.1% while the rest is urban. According to the National Population and Housing Census, 2009, Maralal township population is majorly urban with a small percentage constituting peri-urban and rural population.

4.4 Population Distribution

According to the 2009 Population and Housing Census, the population of Samburu County was 223,947. Given a population growth rate of 4.45 percent per annum, as opposed to the national growth rate of 3 percent, the county population is expected to have risen to 255,931 persons in 2012 comprising of 128,004 females and 127, 927 males. The population is projected to increase to 292,484 in 2015 and 319,708 in 2017. These changes represent a 24.9 percent population rise between 2012 and 2017.This increase is significant and calls for commensurate expansion of basic amenities in the county. Kenya has a Population density of 68.1 persons per Km^2 whilst that of Maralal planning area is 76

persons per km^2. CBD leads with a population density 710 followed by Ng'aari with 197 and followed by Milimani with the density of 156 and Elkuroto respectively.

4.5 Population Composition and Structure

In the planning area, population of men is almost equal to that of women according to Kenya Population Census, 2009. This is substantiated with various demographic characteristics including increased life expectancy which has females outliving males. Maralal Population Profile/Interest Groups

Table 2: Population Distribution by Cohorts

Age Group	Male	Female	Total
1-4	1409	1430	2839
5-9	1255	1316	2571
10-14	1172	1195	2367
15-19	1041	1099	2140
20-24	904	1099	2003
25-29	852	915	1767
30-34	712	605	1317
35-39	513	456	969
40-44	311	260	571
45-49	277	208	485
50-54	182	150	332
55-59	106	77	183
60-64	96	110	206
65-69	48	58	106
70-74	53	67	120
75-79	21	34	55
80+	47	70	117

Source: National Population Census, 2009

4.5.1 Under 5 Age Group

Approximately 0-5 of the population in Maralal falls under this age bracket. In order to adequately serve the interest of this age cohort, there is need to make early childhood development centers (ECDs) especially in the rural areas available.

4.5.2 Age Group 6-13 Primary School Age Cohort

There is an increasing population in these age cohort. Nearly 18% of the total population falls under this cohort. This calls for increased investment and expansion of primary education facilities and to develop vocational training facilities to absorb drop outs.

4.5.3 Age Group 14-17 comprises Secondary School Age Cohort

Approximately 8 % of the population falls in this cohort. The increasing population of this age cohort implies the need of expanding of the existing secondary schools and training institutions as well as more employment opportunities to absorb them.

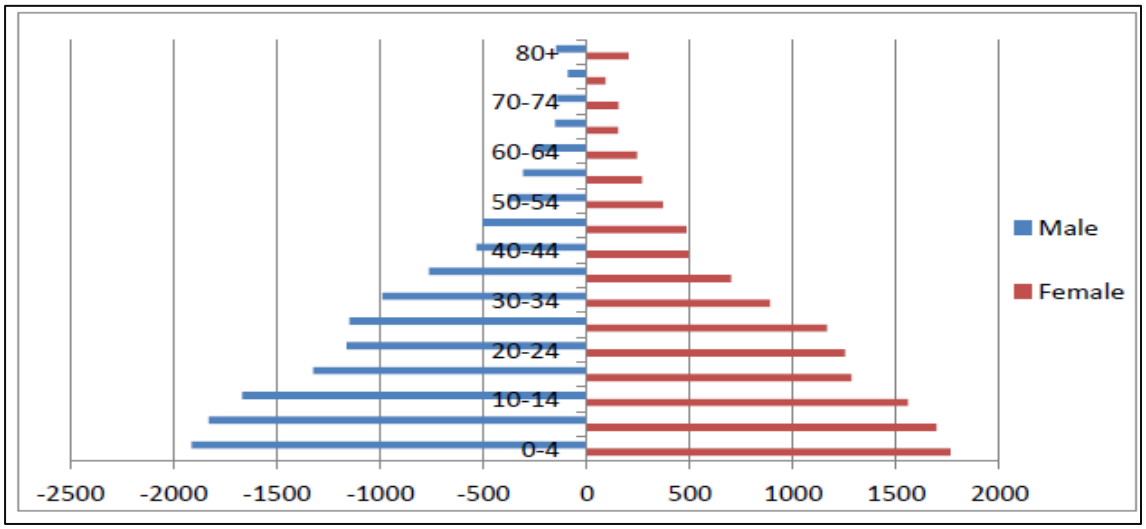
4.5.4 Age Group 18-64

The above age cohort represents those who are actively engaged labor force. This age cohort is represented by approximately 50% of the total population. Most of these labor forces are mainly unskilled with least proportion of the population being engaged in formal employment.

4.5.5 Aged Population (65+)

This age bracket between age group 1- 15 and 65+ are considered to be economically dependent. Currently a good percentage of this population is made up of this age bracket. Any increase in number of people in this age cohort has a direct bearing on the disposable income that could be utilized for investment purpose thus being diverted to consumption.

Figure 3: Population Pyramid



4.6 Households

Maralal Township has a total of 5,044 households and will have 14,689 households in the year 2035 using an average household size of 4.

4.7 Population Growth, Trends and Projections

Maralal town's future population growth will continue to be dominated by natural increase i.e. excess of births over deaths.Based on the County's population growth rate of 2.46%, the area's population is projected to be 61,229 by the year 2030. The table below indicates the area's population projection up to the year 2030

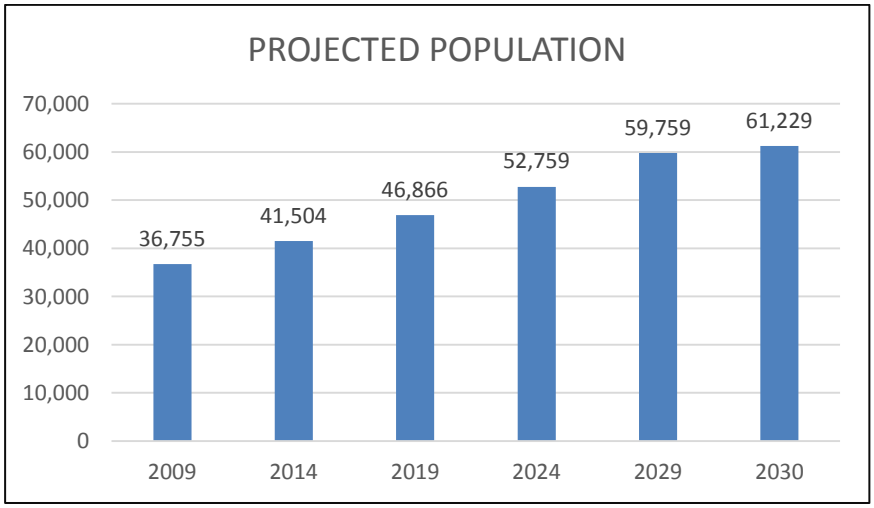
Table 3: Population Trends and Projections

Location	PROJECTED POPULATION AT 2.465 GROWTH RATE					
	2009	**2014**	**2019**	**2024**	**2029**	**2030**
Township	12,431	14,037	15,851	17,899	20,211	20,708
Lpartuk	3,452	3,898	4,402	4,970	5,613	5,751
Shabaa	6,148	6,942	7,839	8,852	9,996	10,242
Ngari	5,027	5,677	6,410	7,238	8,173	8,374
Ladero	1,822	2,057	2,323	2,623	2,962	3,035
Milimani	4,468	5,045	5,697	6,433	7,264	7,443
Lkuruto	3,407	3,847	4,344	4,906	5,539	5,676
TOTAL	36,755	41,504	46,866	52,921	59,921	61,229

Source: Compiled from National Population Census, 2009

Population for Maralal town reveals that the population of Maralal is young with those less than 20 years of age. This has important implications for future planning for the Town in terms of basic social services particularly educational and medical facilities as well as infrastructural services and economic enhancement.

Figure 4: Population Trends and Projections



Source: Compiled from National Population Census, 2009

4.8 Fertility, Birth and Mortality Rates

Maralal Town has a total fertility rate of 6.7 percent. This implies that the reproductive age group has the potential to contribute to rapid population growth. The crude birth rate stands at 52 per 1000. The under-five mortality is 60 per 1000 compared to the national one of 58 per 1000. The infant mortality is 49 per 1000 compared to the national rate of 47 per 1000. The crude death rate is 30 per 1000, a rate similar to the national rate. However, the crude birth rate is 52 per 1000 while the national rate stands at 55 per 1000 (1).

4.9 Socio-Cultural Dynamics

Maralal town is predominantly inhabited by Samburu people even though it is cosmopolitan in nature. The Samburu are part of the Maa speaking people as are the Maasai. About 95% of the words of both languages are the same. The name 'Samburu' is also of Maasai origin and is derived from the word 'Samburr' which is a leather bag used by the Samburu to carry a variety of things. It is unclear when Samburu became a distinct ethnic identity.

Plate 3: Samburu People and Their Diverse Culture





Source: Field Survey, 2011

The Samburu are a gerontocracy. The power of elders is linked to the belief in their curse, Traditionally the Samburu economy was purely pastoral, striving to survive off the products of their herds of cows, goats, and for some, camels. Each woman has her own house, which she builds with the help of other women out of local materials, such as sticks, mud and cow dung. Settlements tend towards housing two or three families, with perhaps 5-6 houses built in a rough circle with an open space in the centre. The circle of houses is surrounded by an acacia thorn bush fence and the centre of the village has the animal pens away from predators. The Samburu believe that God (*Nkai*) is the source of all protection from the hazards of their existence. In recent decades missionaries have had success in converting more Samburu to predominantly Catholic, but also Protestant forms of Christianity. Nevertheless, the majority of Samburu continue to observe most traditional ritual practices. Kikuyu, Meru, Borana, Turkana, Kalenjin, and Somali among others also live in Maralal town giving the district a diverse population. Most of the land is owned by a small population of old Kenyan settler families, and increasingly naturalized Kenyan wealthy landowners and international organizations.

4.10 Conclusion

Population growth rate has to keep pace with the provision of facilities and services. Therefore, there is need of facilitating sustainable development in the area through: provision of facilities like education centres, housing facilities, health centres, recreational facilities and job creation opportunities for the growing population; construction of better road networks that will link Maralal town and other centres in the county.

CHAPTER 5: ECONOMIC ANALYSIS

5.1 Introduction

Economic base of the town comprises the flow of economic activities for supporting needs of the people and fixed asset wealth. Agriculture is the backbone of the economy in Samburu County. Agriculture and rural development account for 59.5% of the county economy. Pastoralism is the major agricultural activity within the county though crop farming is practiced in some parts of the county. Other drivers of the county economy include commercial activities (both formal and informal), bee keeping, forestry and tourism. Maralal Township is one of the rapidly urbanizing centres in Samburu County. Its economy is predominantly driven by livestock production, bee keeping and commercial activities. The most dominant form of business for the township's economy is the retail/general shops that account for approximately 57% of the total business entities in the township.

5.2 Employment

Employment in Maralal is mainly in several key sectors of tourism, livestock trade, agriculture, commerce and the building industry. A lot of the employment is informal. The agricultural sector has been outpaced by other fast growing sectors such as tourism and commerce. The commercial sector of Maralal is also experiencing significant expansion. The sector is dominated by wholesale and retail establishments, Banks, various traders and a growing informal sector. These sectors also offer sources of employment to the people of Maralal. The service industry is also emerging as a key player in employment creation. This includes transport industry such the Matatus and other transportation vehicles like "boda-boda".

5.3 Trade and Commerce

Maralal town has an agglomeration of economic activities. As a major regional centre in the region of Kenya, the town is strategically positioned to be a key commercial centre for the surrounding counties and urban centres. Commerce is a vibrant economic activity in Maralal. Wholesale and retail trade and the hotel and restaurant industries are leading activities. The community that is engaged in this sector comprises those that have settled in the town from elsewhere in the country and have decided to do business. Others are those who have run away from conflict zones only to start some business as a means of livelihood. They have developed professionalism in trade and commerce and generate income and channel the surplus funds to the local development. This group includes business people from Meru, Central province and Somalis from North Eastern province.The most dominant forms of business in the area's economy include: general shops, retail, M-pesa shops, tailoring shops and kiosks.

Plate 4: A section of Mitumba market in Maralal town



Source: Field Survey, 2011

5.4 Livestock Farming

The County is semi-arid with a large population dependent on livestock farming from individuals or from group ranches. The hinterland is rated among the leading producer of quality beef in the country under intensive, ranching and smallholder systems and has a well-developed livestock market. Animal production is the dominant economic activity in Samburu County. Pastoralism is commonly practiced in the county due to the large tracts of un-arable land of approximately 19,622 Km2. This accounts for 93.34% of the total land size in the county. Livestock contributes 66% to household income in the county with the sector employing about 70% of the total population in the county. The main livestock breeds include cows, goats, sheep, poultry and Carmel. Bee keeping is also practiced in the county with a total number of 31,547 bee hives in the County. Goats are the most dominant livestock type in the county because of their ability to withstand the arid conditions in the county. There are about 403,000 goats in the sub county which accounts for 62.18% of the total livestock. Sheep and cows make up about 23.14% and 11.57% respectively of the livestock. Maralal division is rich in livestock production with a total of 477,000 livestock. This contributes to 73.60% of the total livestock in Samburu East Sub-County. Milk and meat are the main livestock products in the county. Wool is also produced in low quantity. Persistent drought has remained a challenge to livestock keeping. Interventions such as livestock off -take by the Government in collaboration with development partners has assisted in mitigating the effects of these adverse climatic conditions.Increase production, processing and value addition of livestock products mainly milk, hides, skins and meat.

5.5 Industrial Development

Maralal town has no major manufacturing industries despite the existence of potentialopportunities in various economics areas such as livestock, minerals.The town has

no manufacturing industries, except a single honey processing factory. However, there are a number of cottage industries involved in value addition.

5.5.1 Industrial Potential

Kenya Vision 2030aims to transform Kenya into a newly industrializing *"middle-income country providing a high quality life to all its citizens by the year 2030".* The objective of vision 2030 can be localized in the Maralal by enhancing industrial development. Despite the current low level of industrial development, Maralal town has potential for *a* number of industries due to availability of raw materials in its hinterland, a big market and basic infrastructure availability.Through assessment of the current industrial development, challenges and opportunities of Maralal town and its hinterland have has great potential for the following industries:

- Meat industry
- Milk processing industry
- Tannery processing

5.6 Tourism

Nationally tourism is a leading source of foreign exchange earnings. According to 2011 economic survey report, the country earned Ksh73.7 billion from tourism in 2010. Samburu County, where Maralal town is located, is endowed with diverse sceneries and wildlife which remain under-tapped for tourism attraction.

5.6.1 Main Tourist Attractions

The County is endowed with a variety of natural sceneries like the plateaus, escarpments, valleys and wildlife which could be tapped to promote tourism in the county. The locals have indigenous knowledge and cultural artifacts that can be tapped to promote cultural tourism. For example, the annual Carmel derby tourist promotion event attracts both local and international tourists leading to generation of income in the county. Maralal Cultural Centre located within Maralal Township is a tourist attraction centre that generates income.Among the wildlife found here include elephants, lions, zebras, leopards, gazelles, civil jackals, spotted hyenas, buffaloes and many species of birds. Maralal town hinterland has potential for tourism that has not been adequately tapped e.g. panorama views, social cultural assets, wildlife and development of camping sites and lodges within the nearby forests/ranches. In addition the town can be developed and promoted as a high end niche eco-tourism centre with a tourism resort. Also the town has potential for development of conference, hospitality tourism and sport tourism. The biggest challenge here is the encroachment to the wildlife migratory corridors and this causes serious wildlife and human conflict within the corridors. The following are the challenges in tourism:

- Road Network
- Bandit attacks in Game reserves
- Lack of good Hotels with higher capacity
- Trained personnel in Hotel Industry

- Lack of Tour Guides

5.6.2 Tourism potentials

5.6.2.1 Maralal Camel Derby

The Maralal Camel Derby is an annual event, held midyear just outside of Maralal town. This is Kenya's best known and most prestigious camel race, attracting both local and international competitors. The event is a major draw for spectators as well as racers, and the competition is fierce. Many local professional camel racers come to compete each year. Some of the finest racing camels are seen in town during the race period. The race is a great social event, and the major event on the Maralal Calendar. Both competitors and visitors to Maralal join in the festivities in and around town.

Plate 5: Participants during the Maralal Camel Derby



Source: Field Survey, 2011

As the amateurs head off in whichever direction their camel chooses, the professionals break free and head for the course at breakneck speed. Cheering supporters line the route, and the final stretch is always alive with excited spectators as the winners cross the line. The Maralal Camel derby is more than just a race. It is an entertaining festival of fun and local competition that brings this small desert town to life.

5.6.2.2 Racing

A cycling race is also now held concurrently with the derby, with mountain bikes racing over a demanding course. The cycle race also attracts its share of dedicated professionals on world class bikes, as well as local amateurs on bikes that in some cases never see the end of the race.

5.6.2.3 Kenyatta House

Maralal town is home to Kenyatta House, the location where Jomo Kenyatta was detained prior to his release. Upon conviction and sentencing at Kapenguria on April 8, 1953, Kenyatta remained in prison in Lokitaung until 1959. He was then detained in Lodwar under house arrest for two years. On April 11, 1961, he was moved to Maralal with his

daughter Margaret where he met world press for the first time in eight years. On August 14, 1961, he was released and brought to his Gatundu home. Kenyatta house in Maralal is a testimony to the endurance and workmanship of British colonial architecture. The house is functional with no elaborate décor, it has a tiny veranda with all colonial designs, and square edges without a curve in sight. The house has three rooms, with three photos of Kenyatta in and around Maralal town in the sitting room, low-hung.

Plate 6: Historical Kenyatta House in Maralal town



Source: Field Survey, 2011

The house, which immortalises the suffering of the people who fought for Kenya's independence including the first president of the Republic of Kenya, was gazetted on January 14, 1977.

5.7 Financial Services

Financial services play a very important role in the economic life of a town. Banks through lending and related activities facilitate the process of production, distribution, exchange and consumption of wealth. The town has Equity and KCB bank branches operating in the town. There are a few micro finance institutions like KWFT and Faulu Kenya that could be helpful for entrepreneurship and development of people. There is Kenya Commercial Bank and Equity Bank operating in Maralal town. There are also a number of mobile money transfer agents like M-Pesa, Airtel Money, and Yu Cash services.

5.8 Informal Business Activities

Informal activities have become an increasingly common feature in the Maralal Township and the market centres. Small-scale business and hawking activities are concentrated at the reserves of busy internal roads, fronting the formal businesses housed on permanent structures. These informal businesses include: fruit and vegetable vending, shoes and clothes selling, charcoal selling and Miraa stalls among others. In addition, Jua kali artisans operate in the township supplying the people with various products.

5.9 Strategic Position

Maralal town is in a strategic position and will therefore benefit from the following:

- Maralal town being the headquarters of Samburu County.
- The LAPSSET project which will have the road to Lamu Port passing through Kisima from Isiolo.
- Drought mitigation measures (development of dams, boreholes and a forestation).
- Improvement of security in the region,
- Construction of the road from Rumuruti to Maralal
- Development of tourism and cultural activities
- Laikipia University satellite campus, and others which may open campuses in Maralal.

5.10 Strengths, Weaknesses, Opportunities, Threats (SWOT) Analysis

Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis for Maralal town is discussed below on the financial strength of the town.

Table 4: SWOT with respect to Financial Institutions

Strengths	**Opportunities**
Consistent income from defined revenue sources Cordial working relations between the Councilors and the employees of the county Preparation of Strategic Integrated plan to facilitate and create conducive investment environment	Strategic location for commercial and cultural activities Maralal Town is the Samburu County headquarters Improved Infrastructure due to LAPSSET and construction of Rumuruti to Maralal road networks
Weaknesses	**Threats**
Manual accounting systems & weak internal controls Lack of operation information and statistics Limited revenue base Lack of qualified staff	Insecurity within the region Persistent drought within the region Low levels of literacy in community

Source: AIDAL, 2011

5.11 Emerging Economic Challenges

- Prolonged droughts
- High cost of farm inputs
- Poor road network resulting in high transport costs
- Lack of land demarcation/Title deeds
- Culture of handouts on relief food / dependency syndrome.
- Lack of proper storage facilities.

- Insufficient land for extensive agriculture.
- Insufficient farm inputs (machinery and equipment) like tractors.
- Encroachment on agricultural land.
- Land subdivision into uneconomic units.
- Communal ownership.
- Low, erratic or unreliable rainfall.
- Low and declining soil fertility.
- Pests and diseases of crops and livestock.
- Low adoption of modern technologies.
- Lack of modern farming methods.
- Insufficient agriculture extension services.
- Lack of transport for extension officers.

5.11 Conclusion

Maralal town has a relatively high potential for agro-based industries mainly because of the availability of the raw materials.

CHAPTER 6: LAND AND HOUSING ANALYSIS

6.1 Introduction

Land tenure refers to the manner in which individuals or groups of people within community or society enjoy rights of access to land at a broader level, this would include the conditions under which such land is enjoyed. Land tenure systems in Kenya recognize private, communal and public (government) land. Housing development is strategically an important social-economic investment to a country and its people. Adequate availability of quality and affordable shelter also reduces proliferation of slums and informal settlements. However, urban areas in Kenya Maralal town being one of them are characterized by severe shortage of basic services like potable water, well laid out drainage system, sewerage network, sanitation facilities, electricity, roads and appropriate solid waste disposal.

6.2 Land Analysis

6.2.1 Land Tenure

Most of the land in Samburu is owned communally or by group ranches. These systems do not guarantee individual rights. Absence of clear land rights is a major disincentive for communities to embrace best land use practices. This situation has contributed greatly to the unsustainable land use practises in the county. In addition, lack of title deeds is a constraining factor in the promotion of small scale agriculture since farmers are unable to access credit facilities due to lack of collateral.

6.2.1.1 Freehold

This is the type of land ownership where there is absolute ownership of land. In Maralal town, this type of tenure is found in Milimani, Elpartuk, Elkuroto and Ng'aari. This land under freehold was demarcated and allocated to the area residents as individual Group Ranches although pieces of land in Milimani were found to be very small, hence the difficulties in issuing of freehold titles. Freehold land is usually registered without attached conditions of use leading to the misconceived view that such land is not within an area of controlled development. There is therefore need for education and awareness to correct a false belief that has significantly hindered effective regulation of development on private land.

6.2.1.2 Leasehold

This is the type of land ownership where land is held over a defined period of time under a lease agreement. Most of land in Maralal is under this type of land ownership. This land currently falls under three categories: Leasehold, free hold, communal land (owned by the

County Government). Leasehold land has clearly defined terms of usage and period of leasehold time.

6.2.1.3 Public Land

There is public land in Maralal Town which includes the land designated for the public utility. Such lands have faced encroachment and at times illegal acquisition. Other public land parcels in Maralal include those held by institutions and public amenities e.g. Schools, Hospitals, Health Centres, Dispensaries, Government Offices and trading Centers etc.

6.2.2 Existing Land Use

An analysis of the current organization of land use in Maralal town depicts generally mixed development. This arises largely from lack of a well-defined zoning policy. This has led to mixed developments in the entire area. Proper land use Planning and land use zoning plays a major role in creation of cohesive neighborhoods. There are presently four major existing Land uses in Maralal namely: Agricultural, Residential, Industrial and Commercial. Generally, all land use types are found in Maralal although there are some discernible patterns that emerge depending on the various land use types.

6.2.2.1 Residential Land Use

Residential land use in Maralal is concentrated mostly on the periphery of the town. Most of the residential land uses are on lease hold tenure system. The areas are not planned and therefore they are not well serviced with all infrastructure services and amenities. These plots cannot be easily accessed and therefore there is no proper reticulation system. Most of the developments have taken form without proper planning regulation and standards.

6.2.2.2 Commercial Land Use

The commercial activities are located mostly along the roads and especially along the Kenyatta Bazaar Street. The development of hotels is a key activity due to tourism. Tourists, mostly foreigners, influence the development of commercial centres and complexes. This is evident with the existence hotels, bars, lodges and guest houses within and without the CBD. Informal business activities are also common in the Maralal area with evidence of water vending, hawking, Curios, Mitumba and Miraa market.

6.2.2.3 Industrial Land Use

There is no industrial land use in Maralal except the Honey processing plant and the local tannery. There is still room for the expansion of industries in Maralal, due to the fact that the area is strategically situated to attract market from the tourists who come to view game and the annual event of the Camel Derby.

6.2.2.4 Educational Amenities

Educational facilities are generally spread in the planning area and are mixed with other developments. The educational facilities found include pre-primary, primary, secondary

and post-secondary training facilities. Maralal town and its environs has currently 74 primary schools. Maralal has several public secondary schools and a few private. Among them are Kisima Girls which is a national school, Maralal High School, AIC Moi Girls and Kirisia Boys. Maralal has more public schools than private schools. The town also hosts Samburu Teachers Training College and Laikipia University College. There are a number of other private commercial training institutions that offer diverse courses such as driving, accountancy, business, computer and other skills. The main developmental challenges facing the sector include encroachment don educational facilities land especially Maralal DEP Primary School, inadequate classrooms, Insufficient land (Land for playgrounds especially in private schools),

6.2.2.5 Public Purposes

There are various public purpose plots in the planning area. These include land occupied by various public agencies such as chiefs offices, the DO Offices, the District Hospital, county government offices, the Police station, and other Government HODs.

6.2.2.6 Public Utilities

Maralal lacks land under the traditional public utilities such as waste disposal and cemetery plots. This is also partly explained by the absence of public land.

6.2.2.7 Recreational Areas

There is limited land for recreational facilities in Maralal. This is partly explained by lack of public land since most of Maralal is developed on private land. The major recreational area is the stadium. There are Foot Ball Grounds in both secondary and primary schools. Most of the other recreational areas are informal and consists of children playing grounds that exist on private plots.

6.2.2.8 Transportation

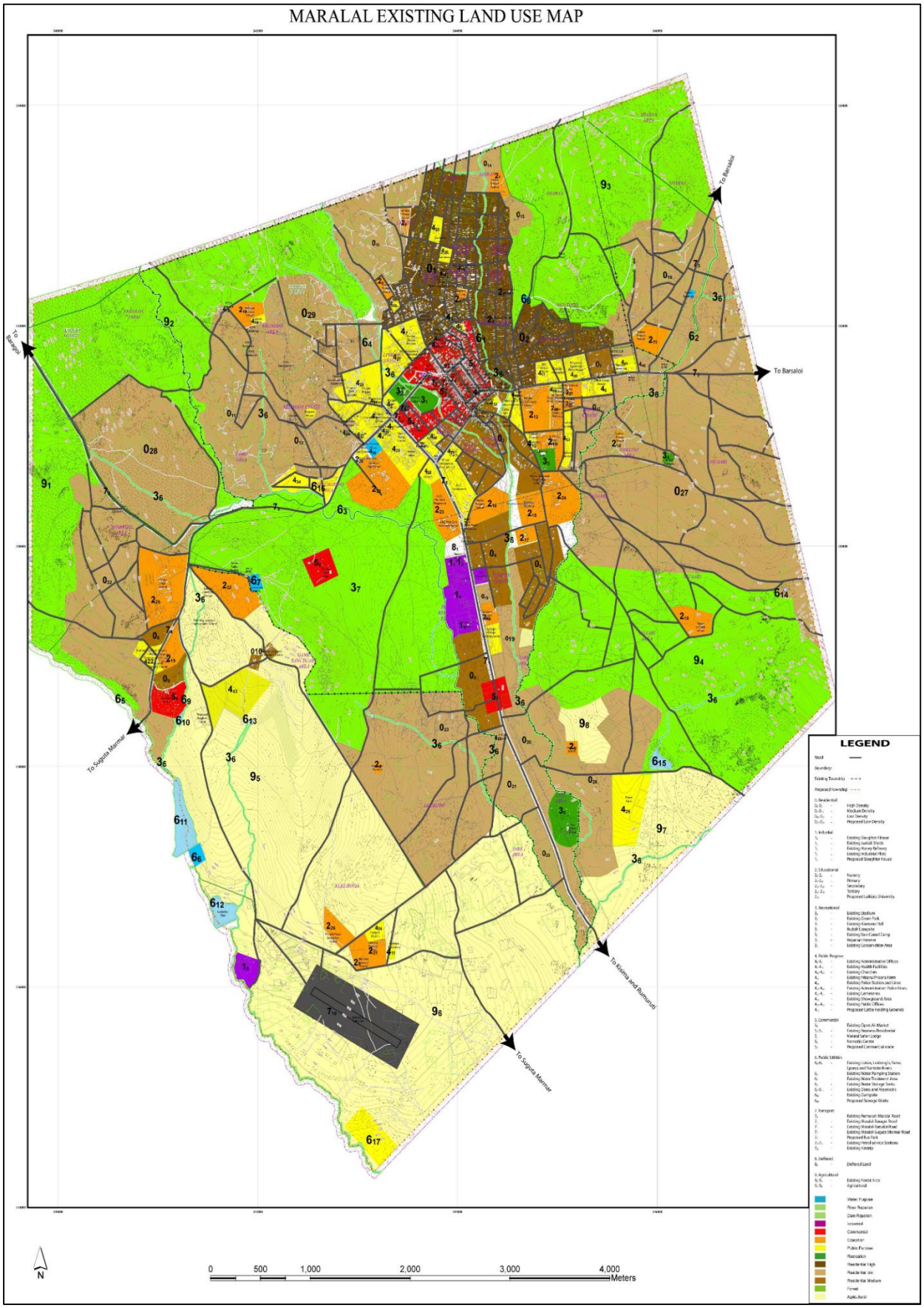
Land under transportation land use mainly includes that occupied by roads. Most of the internal roads are not well designed and many of them are inadequate. There is need to formulate a comprehensive transportation policy for the town that will seek to avail more land for an efficient transportation network.

6.2.2.9 Agricultural Land

Large areas within the planning area are still under agriculture. Large areas are under farming activities although there is threat from urban expansion. Some areas grow wheat and barley i.e. about 800 acres of land is suitable for these two crops. There is a conflict between the residents of East Pokot and the locals due to its potential for agricultural production and good pastures. Areas like Kirisia Division and the upper part of Maralal are good for agriculture. Although the area has about 140, 000 acres of arable land, it cannot be fully utilized due to cattle rustling. The major source of livelihood is pastoralism (livestock) and the residents strongly feel that the long-term plan strategies must include

the meat canning facility and the earlier proposal of stocking and destocking during wet seasons and droughts respectively.

map 8: Maralal Town Existing Land Use



6.2.3 Land Use Trends

The development trend within the planning area is disorderly as structures are haphazardly built without any order. The pastoralism way of life of the area residents have led to massive encroachments into fragile ecosystems and rural areas. The encroachment led to the clearing of the section of the forest within the Township. There have also been rapid haphazard linear developments along the road -C78 Rumuruti-Maralal Road where most urban activities take place. This has resulted into the development of unsustainable urban form.

6.3 Housing Analysis

Housing development is strategically an important social-economic investment to a country and its people. Comfortable housing is necessary for good living and this constitutes well planned and designed housing and infrastructure of acceptable standards and affordable cost which when combined with essential services affords dignity, security and privacy to the individual, family and community at large. Adequate availability of quality and affordable shelter also reduces proliferation of slums and informal settlements. However, urban areas in Kenya Maralal town being one of them are characterized by severe shortage of basic services like potable water, well laid out drainage system, sewerage network, sanitation facilities, electricity, roads and appropriate solid waste disposal. This chapter looks at the formal and informal housing, housing conditions (quality), housing typologies, demand and supply gaps, location vis-a-vis other activities, housing support infrastructure, housing delivery systems e.t.c for Maralal Town.

6.3.1 Core Urban Housing Typology

Generally, the town is characterized by permanent housing and consists of bungalows and in some cases Maisonetes etc. some of which are owner occupied houses and others rented. There are some semi-permanent and temporary structures with very few permanent structures found mainly in informal settlements. These structures are largely occupied by the tenant-at-will type of ownership and there is no long term securities for development.Materials used for construction as well as the designs for the houses include iron sheets and mud walls.

6.3.2 Peri-Urban and Rural Housing Typology

House typologies in the peri urban areas are predominantly manyattas. A Samburu settlement is known as nkang (Maa) or Manyata (Kiswahili). It may consist of only one family, composed of a man and his wife/wives. Each woman has her own house, which she builds with the help of other women out of local materials, such as sticks, mud and cow dung. Large ritual settlements, known as lorora may consist of 20 or more families.

Plate 7: Housing Typologies in Rural and Peri Urban Areas of Maralal Town.



Source: Field Survey, 2011

6.4 Conclusion

Urban sprawl along the class C78 is a common feature in Maralal town. This has resulted to linear developments along the road. Agricultural land use covers the largest land size. The road infrastructure within the neighbourhoods is wanting. This affects transportation of goods and services to and from these areas especially during the rainy season. There is therefore need to improve the road conditions in the area. Moreover, the building structures within the township are a mixture of permanent, semi-permanent and temporary structures. This makes the centre appear confused and without order, thus the need to develop policies for standardizing the structures.

CHAPTER 7: PHYSICAL INFRASTRUCTURE

7.1 Overview

Infrastructure improvements contribute to economic development. Inadequate infrastructure limits a town's ability to utilize its natural resources, distribute food and other finished goods, and to integrate the manufacturing and agricultural sectors and supply education and medical services. This chapter highlights the town's physical infrastructure as is essential because of the town's position within central-east region of Kenya.

7.2 Transportation

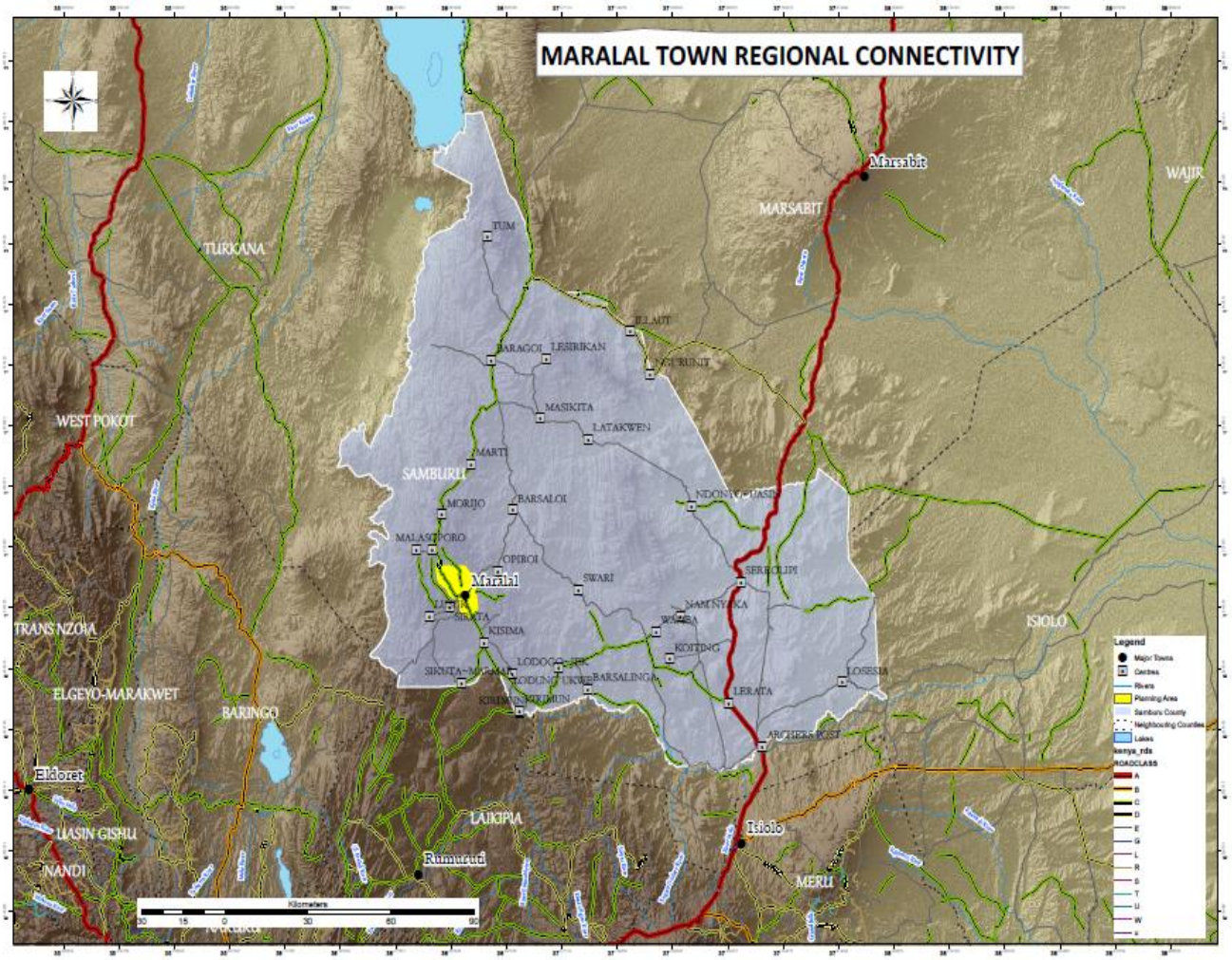
All sectors link one to another through transportation networks. For the economy of any region to be improved and properly managed, the movement of people and goods must be conducted efficiently and sustainably. With rapid socio-economic development as envisaged in Kenya Vision 2030, the intensity of movements is bound to accelerate and increase by three to four times in a short period of two decades. Connectivity, network, hierarchy, classification, mode, means, challenges (internal, external). Road transport is the main mode of transport within the planning area. Maralal Town planning area is well linked to the national, regional and local transportation system. This section provides an analysis of the existing transport system to provide the basis for the improvement so as to enhance accessibility and mobility in Maralal town and its link with the rest of Kenya.

7.2.1 Road Transport

7.2.1.1 Regional connectivity and Accessibility

Samburu County has a total road length of 1,449 kilometres most of which are rural access roads whose management falls under the Kenya Rural Roads Authority. The road C77, Rumuruti-Maralal-Baragoi is considered the gateway to the County. Maralal Township is poorly linked to the International, National and Regional transportation systems. Trans-African Highway (A2) that links Nairobi to Ethiopia via Isiolo, Marsabit and Moyale passes a few kilometres from the township. The township is connected to its region/hinterland through the class C78 (Maralal- Kisima Road) and C79 (Maralal – Lareta Road) roads. Maralal town can be accessed at a distance of 120 km from Rumuruti, 185 km from Isiolo, 160 km from Baringo, 316km from Nanyuki, 150 km from Nyahururu. Maralal town is served by three major trunk roads. The roads are: Rumuruti –Maralal Road, Class C77; – Maralal- Isiolo Road, Class C78; – Baragoi Road, Class C 77; Maralal town is fairly accessed from a number of towns within its regional context due to its centrality. This centrality gives Maralal town prominence and therefore can act as a good economic hub for the North Rift Valley region. All Roads connecting Maralal are all untarmaked. Some of the roads are still yet to be opened as indicated by the many missing links.

Map 9: Regional Road Connectivity and Accessibility



7.2.1.2 Road Classification

An efficient road network across the town consists of roads of different hierarchies. Based on its location and connectivity characteristics, each road acts as a Principle Road, an Arterial (Primary), Collector (Secondary) or an Access Street/street. All the classes of roads are essential components of the town level road network, providing access to the residential quarters and to the commercial nodes. The proposed roads are as a result of careful measurement of distances (length and width), analyses of traffic flows, current and expected use, of all existing roads in the planning area. This was done to ascertain the need for various proposed roads and for costing for the purposes of gravelling, murraming or tarmacking the respective roads.

i. Principal Roads

Maralal town is served by three roads that connect it to national and regionally. The roads are:

- Rumuruti –Maralal Road, Class C77
- Isiolo – Maralal road, Class C78
- Baragoi– Maralal Road, Class C 77

It is proposed that the proposed the principle roads have a width of 36M- 40M.

ii. Primary Roads

Thirteen Primary arteries were identified. The primary roads with varying widths of between 20 and 25 meters offer direct link to the principle roads. They act as alternatives to reducing traffic on principle roads. The primary arteries carry traffic to the main artery.

iii. Secondary Roads

These roads carry traffic to primary arteries. Secondary roads link smaller regions to primary and principle road. The proposed secondary roads in the planning area measure 15 -10metres. Densely populated areas are served by roads measuring 8 and 6 meters. With existing 9 and 12 meter road widths some of the primary and secondary arteries are narrow, earth roads and cannot adequately serve the intended traffic functions. It is therefore proposed that in the short term all the roads be widened and improved to murram standards with plans to upgrade to bitumen standards in the long term.

iv. Access roads

In addition to the principle, the primary and secondary roads, the minor access roads formed lowest rank of the road hierarchy. These are the roads that mainly provide access to individual properties. The minor access roads have road widths ranging from 6 to 12. The 6 m roads are exclusively forum in the informal settlements where developments have already taken place with minor roads provided. It is expected that the number of minor access roads will continue to increase considerably with the

expected increase in subdivisions of land into smaller sizes. Large tracts of land once subdivided into smaller units will yield more access roads. It is recommended that the road and street naming should be completed to provide a more efficient reference and identification of the roads.

7.2.1.3 Intra-Connectivity within Maralal Town

Connectivity within the CBD is fairly elaborate with most of the roads being untarmaked. The field study revealed that, all of the roads are all untarmaked and are regularly maintained .This result to uneven road surface and stagnation of water. In addition, most of the roads in the CBD don't have adequate road reserves for alternative means of transport especially non-motorized as a result of encroachment hence congestion and accident risks. Roads connecting the town with the residential estates are mostly earth/ gravel surface. Most of the roads are often impassable during the heavy rains.

Plate 8: Road Conditions in Maralal Town



Source: Field Survey, 2011

7.2.2 Air Transport

Kenya has a well-developed air transport network with five airports in Nairobi, Wajir, Mombasa Kisumu and Eldoret operating on international and national. Maralal town is served by air transport. Air transport is available through Maralal airstrip situated approximately 15km southeast of Maralal town although it is currently underutilized. The airstrip presents an opportunity that can be tapped.

7.2.3 Modes and Means of Transport in Maralal Town

The ground survey revealed that majority of the residents use public mode.

7.2.3.1 Means of transport

i. Public Transport in Maralal Town

Public transport has been dominated by the *Matatu* industry and of late the motorcycles operating as bodabodas. The field survey revealed motorcycles as the most dominant and preferred means of public transport due to their affordability and convenience. The population increase has led to increased social and economic activities in Maralal town particularly trade. This has in turn led to increased demand for public transport in Maralal town. Public means of transport in Maralal therefore lacks enough facilities (no parking, narrow roads) to enhance smooth operation unorganized movements especially in the CBD.

ii. Matatu Transport

More than half of the population in Maralal use matatus for mobility. Matatus and taxis are facing stiff competition from motorcycle in movement of goods and people within Maralal town planning area. Buses and matatus have resorted to being parked along the streets due to lack of Bus Park causing congestion and accidents within the town. The resulting scenario is buses and matatus picking and dropping passengers at non-designated areas especially along the major roads and in front of buildings.

iii. Motor Cycles (Bodaboda)

The country is witnessing an upsurge of motorcycles. This is also reflected in Maralal town. Motor cycles are the second most popular mode of transport in Maralal.

7.2.3.2 Travel Demand

Travel demand assists in revealing the type of service sought in a given locality hence need to provide these services at the lowest level. The Maralal town attracts passengers from all over Rift Valley since it is the headquarters of the Samburu County. Most government offices are located in Maralal town and this still attracts population. from the neighbouring areas. A great significant of Maralal population especially those in rural areas travel to the town centre daily for various reasons. From the field survey, 50% of the residents accounted for work and business as their main reasons of travel, shopping, services, Recreation and leisure (E.g. Famous Carmel derby) and education accounted for 25%, 10%, 5% and 4% respectively.

7.2.3.3 Terminal Facilities

i. Proposed Town Bus Park

Currently there is no specific area for Bus parks in Maralal. The proposed site next to the DCs office will be a problem to the nearby offices. There is however another proposed site at the Miraa/Khat market area which is better placed as it is almost centrally placed within Maralal CBD.

Plate 9: Proposed Bus Park Site At The Miraa/Khat Stalls



Source: Field Survey, 2011

ii. Bus Stops

Bus stops are designated places where buses/matatus stop for passengers to board or alight. These are normally positioned along passenger routes and are distinct from off-highway facilities such as bus stations/parks. The provision of bus stops tends to reflect the level of usage of the specific route. In Maralal town and its environs, there are no designated bus stops.

7.2.3.4 Non-motorized Transport (NMT)

Walking is a key element of a balanced urban transportation system. It is an integral element in the majority of trips made by other modes. In Maralal, it is the predominant mode of travel. With the affordability levels still very low, walking has become the means of mobility for a large number of people. NMT in Maralal town constitutes of bicycles, handcarts and pedestrians. Despite the presence of heavy pedestrians, there is inadequate provision of infrastructure. Segregation of vehicular and non-vehicular traffic does not exist. This has resulted in a situation where vehicular and non-vehicular modes share the same carriageway further not only compromising safety of pedestrians but also increasing disorder within the town. Pedestrian sections hardly exist and where available they are narrow, poorly designed and maintained. A footpath and/or a cycle lane of at least 1.5m wide should be provided along the road. Open veranda space

fronting business premises should also be left clear for free movement of pedestrian traffic. At the moment, this space has been encroached upon by informal sector activities. Some of the areas identified experiencing high pedestrian traffic includes areas around the CBD, Municipal Market and Mitumba markets. Along main roads, surface drains are left open thus posing serious risks to pedestrians. Security for pedestrians and cyclists is poor as street lighting is not provided at all in all routes. In addition, foot bridges across streams are of poor makeshift timber log construction and are often washed away during the rains.

Plate 10: Existing Foot Bridge at Changaa area



Source: Field Survey, 2011

7.2.3.5 Street Lighting

Street lighting forms an important component of streetscape as well as improving the street fabric. Street-lighting infrastructure in Maralal Town is not yet done. This is a major cause of insecurity in addition to affecting business activity hours negatively. The study observes that, lighting up the town can be used as one of the strategies to improve security.

7.2.3.6 Traffic Signs and Road Signage

Traffic signs and road markings are required for areas with heavy traffic especially in the built up areas of the central business district in order to enhance security of the road users and curb incidences of accidents. Traffic signs and road markings have not yet been done in Maralal town.

7.2.4 Storm Water Drainage

Maralal town has storm water drainage facilities mostly which are open. Storm water drainage facilities in the town are poor and inadequate. The primary storm drainage system consists of natural streams and built up drains. Storm water drainage is a

critical problem on the usability of roads. Maintenance of the drainage system seems to be a problem compromising the efficiency of the functionality of the roads during rains. This also leads to erosion and quick deterioration of the roads and streets.

7.3 Water Supply and sanitation

Access to safe water and sanitation is a universal need and a basic human right. An insufficient access to water is not only bad for health, but also contributes to a poor food security and a lagging social development.The county has been classified as water deficit area. The main sources include water pans, dams and shallow wells. The average distance to the nearest watering point for is approximately five kilometres in rural areas but it becomes much shorter in most urban and market centres to about0.5 kmMaralal town is situated within arid class of climate. The key water sources in Maralal include the piped water system, rain water harvesting, wells and boreholes. The area has also a number of water vendors operating within the town.

7.3.1 Piped Water System

The Samburu Water and Sanitation Company (SAWASCO) is charged with the responsibility for water provision in Maralal. This is in accordance to guidelines set in the Water Act 2002. The Water Act 2002 established an autonomous Water Resources Management Authority, mandated to manage and protect Kenya's water resources. It also shaped an institutional framework that gave responsibility for providing decentralized services to 8 regional Water Services Boards (WSB). SAWASCO is under the Northern Water Services Board. Maralal town experiences acute water shortages because of frequent prolonged droughts. The residents rely mainly on water pans, dams, boreholes, and shallow wells as their sources of water. Due to the rapid increase in population of Maralal town over the years, the existing water supply is inadequate in meeting the town's demand. The water coverage is estimated at about 14.4% since the average water produced is 663m^3/day against a water demand of about 4,595m^3/day and is concentrated in 6km^2 within the town area of about 150km^2. This situation is expected to worsen with time if no immediate action is taken to address the shortage.

Water is drawn from Nomotio dam which was constructed in early 1980s and depends entirely on Nomotio River and the surface run off or flash flood within the town. The dam is close to the Nomotio slum which makes contamination a real possibility and dangerous to the lives of the town dwellers. Water is pumped to storage tanks where it flows by gravity to town.

Plate 11: Nomotio Dam and Water Storage Tank



Source: Field Survey, 2011

7.3.2 Boreholes

Water bore holes exist, some of which were sunk by World Vision and others by private individuals. There are 11 boreholes in Maralal Town with an extraction capacity as follows:

	BOREHOLE NAME	YIELD	STATUS
1	Lpartuk	54m³	Operational
2	NkejuEmuny	10m³	Operational
3	Shabaa	3m³	Operational
4	Tamiyoi	1.8m³	Operational
5	Loikas Springs	6m³	Not equipped
6	Lkuroto	2m³	Not operational
7	Nundoto	5m³	Not operational
8	Maralal town	1m³	Operational
9	Maralal District Hospital	2m³	Operational
10	Kirisia Secondary School	3m³	Operational
11	Maralal catholic Mission	2m³	Operational
12	Maralal Catholic Mission	2m³	Operational

Table 5: Maralal Boreholes and Yields

i. Nundoto Borehole

This is the only borehole that is part of Maralal water supply. It is equipped with two inch GI drawdown pipes. The production is about $4m^3$/hr. No revenue is earned from it. This borehole serves community at Elkuroto whose population is about 400 people. There is one pump house of size 4m by 6m currently in use. The water is pumped to a $25m^3$ masonry tank before boosting to a $25m^3$ storage tanks in Elkuroto. There exists an operator's house which houses three staffs.

ii. Buena Dam

The Ministry of Northern Kenya has provided Kshs.100 million for establishment of an alternative source which is 6kms away from the town but the project is incomplete. Buena dam, which was created in 1978, is now silted. Capacity of the storage tank is 840 cubic meters and piping is obsolete. Maralal town faces a big challenge of sanitation and waste management. Dumping by roadsides is the order of the day and is done anywhere including the middle of the roads as can be seen from the pictures taken at various places.

7.3.3 Wells

Boreholes and wells are a common source of water in Maralal. Boreholes are dug privately to supplement the water supply from SAWASCO. Water from boreholes is generally of good quality and is used for domestic and other purposes. There are public water points provided by private individuals and NGOs for selling water to the public.

7.3.4 Vendors

Water vendors in Maralal obtain water from private individuals supplied with water from the SAWASCO. They supply water using hand carts (*Mkokoteni*) and trucks. Water is sold at an average of Kshs 10 for a 20 litre jerry can. There is also a water truck that supplies water in the town.

7.3.5 Challenges

- Water shortage- caused by inadequate water supply from SAWASCO.
- Ground water pollution - Caused by septic tanks and soak pits in the planning area.
- Inadequate coverage of the planning area by water works.
- High water demand.
- Inadequate supply from the source.
- Rapid growth of Maralal due to vast unplanned settlements.
- Unplanned settlement pattern that does not allow water piping to be done easily.
- High cost of water especially water bought from vendors.

7.4 Sanitation

Ensuring adequate sanitation facilities is one of the Millennium Development Goals (MDGs) goals. In the face of rapid urban growth, towns face great difficulties in providing sustainable infrastructure to their citizens. The character of urban growth is often informal and takes place predominantly in peri-urban areas or at city fringes. These results in a high number of people exposed to severe health and environmental risks because they are not served by the sanitation systems.The county population with access to improved sanitation is 21.6%, which translates to 10,200 households. 0.8% of the population use sewer/septic tanks/cesspool, 20.7% uses VIP/uncovered latrines, 5%-uncovered latrines, while 73.4% use bushes. The area does not have a convectional sewerage system. The main methods of liquid waste disposal are pit latrines, VIP latrines and flush toilets. Majority of the households use pit latrines to dispose their liquid waste. Septic tanks are commonly used by public institutions such as the Maralal Mission Complex.The town lacks a sewage system as well as a developed waste disposal site. All people use septic tanks apart from utilizing the bush. 70% of households lack toilets, thus posing health challenges. The intended plan will map all the present and future needs of water supply and sanitation for Maralal Town. Maralal Town has no Waterborne Sanitation treatment works. The mode of waste disposal is

largely by onsite sanitation, that 70% of the residents go to the bush, 25% use pit latrines. The Government offices and senior officers' residents and a few business people use septic tanks that totals to only about 5% of the population.

7.5 Solid Waste Management

The area lacks a proper waste management system as there is no designated area for waste management or waste disposal site. Most of the solid waste is disposed anywhere within the Township. The scattering of waste all over the township is a clear indication that there is no proper coordination for waste management. This poses a health risks to the people.

7.6 Energy Sources

Energy is the driving force for economic growth of towns. Energy industry is the totality of all of the industries involved in the production and sale of energy. Modern towns consume large amounts of fuel, and the energy industry is a crucial part of the infrastructure and maintenance of society in almost cities. Use of Green energy such solar and wind geothermal that has less negative impact to the environment is minimal. The main sources of power supply in Maralal include the national electricity grid system, solar power and power generators. Other energy sources include petroleum based fuels, firewood and charcoal.

7.6.1 Electricity

It is within Government Policy to provide electricity to all areas within the country. Nationally power is exclusively provided by the Kenya Power Company. Maralal is linked to the National Grid System.

7.6.2 Solar Power

Solar power involves harnessing the radiant light and heat of the sun to produce energy. Maralal has a high potential for solar energy due to availability of overhead sun. Solar power is used in private residences, institutions like schools and hotels.

7.6.3 Power generators

Generators are a source of electricity within the planning area. They are used in homes and businesses as an emergency measure when there are power outages. They are also used in areas not supplied with electricity.

7.6.4 Other Energy Sources

Other energy sources in use within the planning area include petroleum based fuels and charcoal. Kerosene is the most commonly used petroleum based fuel in the area. It is used for lighting and cooking in areas not served with electricity. There are 4 petrol stations in the planning area. Charcoal is also used in the many rural homes in the peripheral agricultural areas especially for cooking and lighting.

7.7 Telecommunications

Information Technology is globally becoming a household concept. For a long time now telephone infrastructure in form of overhead cables and underground wires has been the norm. Additionally for the past few years, mobile telephone technology has grown widely and increasingly, more people are using mobile technology for voice and data communication. Telecommunication has been for a long time the preserve of Telkom Kenya (now Orange) until the advent of mobile providers Safaricom and Airtel. Mobile telephone services have increased to include Yu. The mobile telephone service providers continue to grow in terms of their customer base. It is estimated that over 50 % of the population do use mobile technology for voice communication, but there are no fixed telephone line services in Maralal. Safaricom, Airtel, Yu and Orange wireless are the 4 mobile telephone service providers that continue to offer valuable services to Maralal residents as they can conveniently get in touch with the outside world anytime and anywhere. They all have established dealers in the area.

7.8 Postal Services

According to the Economic Survey 2009, the number of post offices has been on the decline. The Physical Planning Handbook provides that full postal facilities should be provided in any designated centre, which serves a resident population of about 2,000 – 10,000 and rural population of 40,000 people. Minimum land required for a post office is 0.04 hectares. Postal Corporation of Kenya has a Post Office at Maralal Town serving the area.

7.9 Courier Services

The dominance of Postal Corporation of Kenya in mail and parcel delivery is facing stiff competition from the private sector hence diminishing in use of postal services. Private Courier Services G4S, KK etc are fully established and operating in Maralal town. Also Matatu SACCOs are actively involved in courier services and their dominance is being felt in Maralal town.

7.10 Cemetery

It is the duty of every county government to ensure that it has an area that is adequate and suitable for the burial or cremation of the dead. Presence of a cemetery is vital for a rapidly growing town such as Maralal town. There is a private catholic cemetery. The public cemetery at Loikas has been encroached by residential developments. It is proposed that the cemetery is reclaimed and the households relocated. The Muslim cemetery is adequate and has not been encroached.

7.11 Conclusion

The physical infrastructure in the entire town is in poor state, a phenomenon that is evident in Maralal Township. All the roads within the township are unpaved with no drainage channels. This state of the roads renders them impassable during the rainy seasons and lack of drainage channels has led to massive soil erosions. The availability

of other infrastructural facilities like water, sewer, energy and waste management facilities is limited.

CHAPTER 8: SOCIAL INFRASTRUCTURE

8.1 Overview

Social Infrastructure is the network of social facilities that support social and economic processes in a region. Infrastructure facilitates efficient and effective resource utilization and distribution of goods and services produced in rural and urban areas in and outside a region. The levels and quality of social infrastructure directly affects growth and development of the various sectors of a regional economy. This chapter analyses existing social infrastructure and other service networks in Maralal town, focusing on coverage, and distribution, impact and future requirements for regional development.

8.2 Health Services

Good health is an important development outcome in its own right. Illness brings suffering, and healthier lives are likely to be longer and more fulfilling. Better health is central to human happiness and well-being. It also makes an important contribution to economic progress, as healthy populations live longer, are more productive, and save more. Many factors influence health status and a country's ability to provide quality health services for its people.

8.2.1 Diseases Prevalence

The most common diseases in the county include malaria, respiratory tract infections, diarrhea and stomach ache. Malaria prevalence remains high at 42 percent. The use of treated nets has helped to significantly reduce infection and transmission of Malaria and more effort is needed to ensure its continued use. There is also need for closer monitoring of HIV/AIDS infection due to its socioeconomic impact on households and communities. Females are more vulnerable to sickness than males in the county.

8.2.2 Distribution, Location and Land Requirements

Health services are deployed by the central government and central government. Church missions, private institutions and individuals also provide a variety of health services. However, these have tended to concentrate in a few urban centres with appropriate infrastructural base. Their development has rendered health services to be geographically, socially and economically accessible to the rich. The preferred location for health services should be easily accessible by an ambulance and be provided with basic infrastructural services. Dependent on the level of health service, it is necessary to reserve adequate land for future expansion and for public cemeteries. The latter

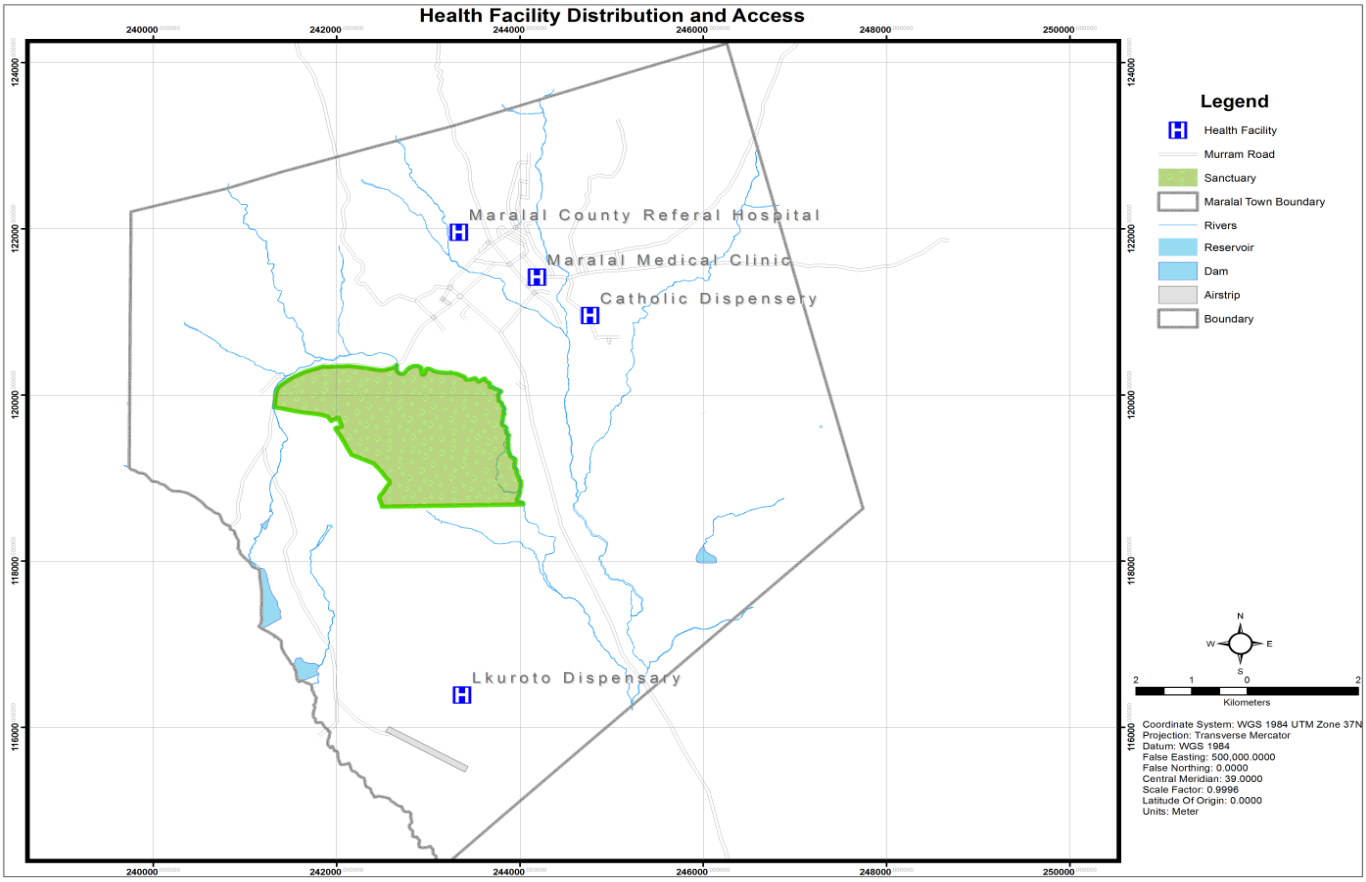
should be conveniently located relative to the health facility, major open spaces and other compatible public utilities. It is recommended that applications for health facilities should be accompanied with details of site requirements to facilitate reservation of adequate land. However a minimum of the land requirements derived from empirical observations are made as follows:

- Count referral hospital 8 hectares
- District hospital 8 hectares
- Sub county hospital 6 hectares
- Health center 3 hectares
- Sub-health centres 2 hectares
- Nursing Homes 0.4 hectares
- Veterinary clinics 0.1 hectares

8.2.3 Distribution of Health Facilities

Health services in the county remain inaccessible both in terms of personnel as well as physical distance. Maralal town has the County Referral Hospital, Nkuroto, Lpartuk, GK Prison and the Catholic [Catholic Church] dispensaries.

Map 10: Health Facility Distribution and Analysis



8.2.4 Distance to the Nearest Health Facility

The distance patients must travel in order to obtain treatment has long been recognized as a primary determinant of the utilization of health care facilities. Proper distribution of health facilities helps in reducing the distance travelled to access the health facilities. Nearly 53 % of the respondents travel less than a kilometre to access health facility. This is the population mostly in urban areas. Approximately 17% of the residents travel for more than 5 Km and this is mostly in rural areas of the planning area.

8.2.5 Health Challenges

- The health services within the county remain inaccessible to a larger population.
- The health services are characterised by inadequate health personnel, with a doctor to patient ratio
- There is inadequate health facilities to deal with the growing population.
- The high average distance to the nearest health facility
- There is need to heavily invest on health facilities, health personnel and drugs to ensure quality health services in the county

8.3 Education

The location, access and existence of functional education infrastructure are crucial in any given human settlement. Under Kenya Vision 2030, the vision for education is to provide globally competitive quality education, training and research to her citizens for development and enhanced individual well-being. Other goals include the integration of all special needs education into learning and training institutions, achieving an 80% adult literacy rate, increasing the school enrolment rate to 95%. The County illiteracy level is estimated at 60 percent. Due to high illiteracy levels, most communities have retrogressive cultural practices such as early marriages, FGM and cattle rustling, Low literacy rates are due to various factors such as nomadic lifestyles, negative cultural practices, inaccessibility and inadequate education facilities hence affecting development efforts in the town and the County at large. The investment levels are low as investors feel their investments are not secure. High illiteracy levels have also impacted on the uptake of programmes in education because the benefits are not clear. Concerted efforts to address the root causes of low literacy are therefore needed. Areas of focus include: provision of adequate education facilities, addressing negative cultural practices namely; FGM, early marriages and cattle rustling and changing nomadic lifestyle of the community to permanent settlement through provision of water and pastures for animals and development of more adult education centres.

8.3.1 Education Facilities

Education services in Maralal town include pre-primary, primary, secondary and tertiary education. Schooling facilities are fairly adequate but are not evenly distributed in the town. As per the 2012 statistics, Samburu County had 377 ECD centres, 135 primary

schools, 15 secondary schools and one University College (Laikipia university campus). The ECD teacher to pupil ratio stands at 1:50. The average teacher pupil ratio in Maralal Township is estimated to be 1:35 for the Primary schools and 1:19 for secondary schools. Enrolment of boys in Pre-Primary and primary school is higher than that for girls while enrolment at the secondary level is lower for boys than that of girls.

8.3.2 Pre -Primary Schools /Nursery Schools

For planning purposes, the age group for pre-primary school going pupils is 3-6 years. Public ECDs do not have problems of land sizes as they are mostly collocated within primary schools. However, most of the private ECDs in Kapenguria town centre have not attained this minimum land requirement. Most private pre-primary school centers are located mainly in the town centre.The total enrolment for the public nursery schools at the Sub-County level is 8,830. The enrolment in public nursery schools is far much high than that of private as indicated in the table below.

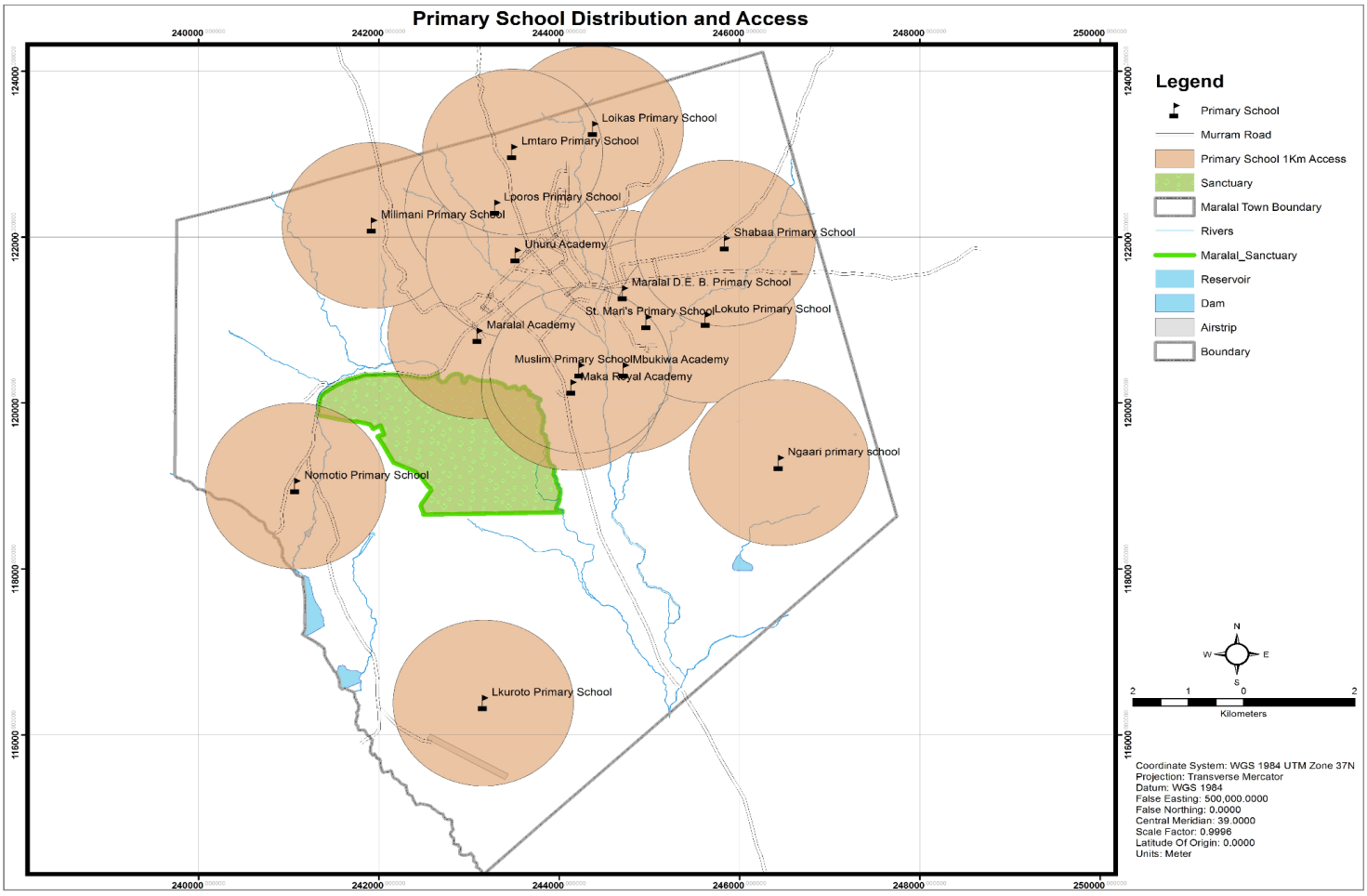
8.3.3 Primary Schools

For planning purposes, primary school going cohort is 6-13 years and according to the Population and Housing Census 2009, nearly 24% of the total population of the planning area falls under the primary school going age. Public primary schools includeMaralal DEB Primary School, Ngaari Primary, Liokas Primary School, Shabaa Primary school among others.

8.3.3.1 Spatial distribution of Primary Schools

The primary schools are unevenly distributed as most of them are concentrated within the CBD leaving the rural hinterland with a few and hardly accessible facilities. The Physical Planning handbook recommends a maximum walking distance of 2km for primary school going children. Thus, using an accessibility index of 2km, a few homesteads were found to be outside the proximity distance as shown in the accessibility map 12 below.

Map 11: Primary School Distribution and Analysis



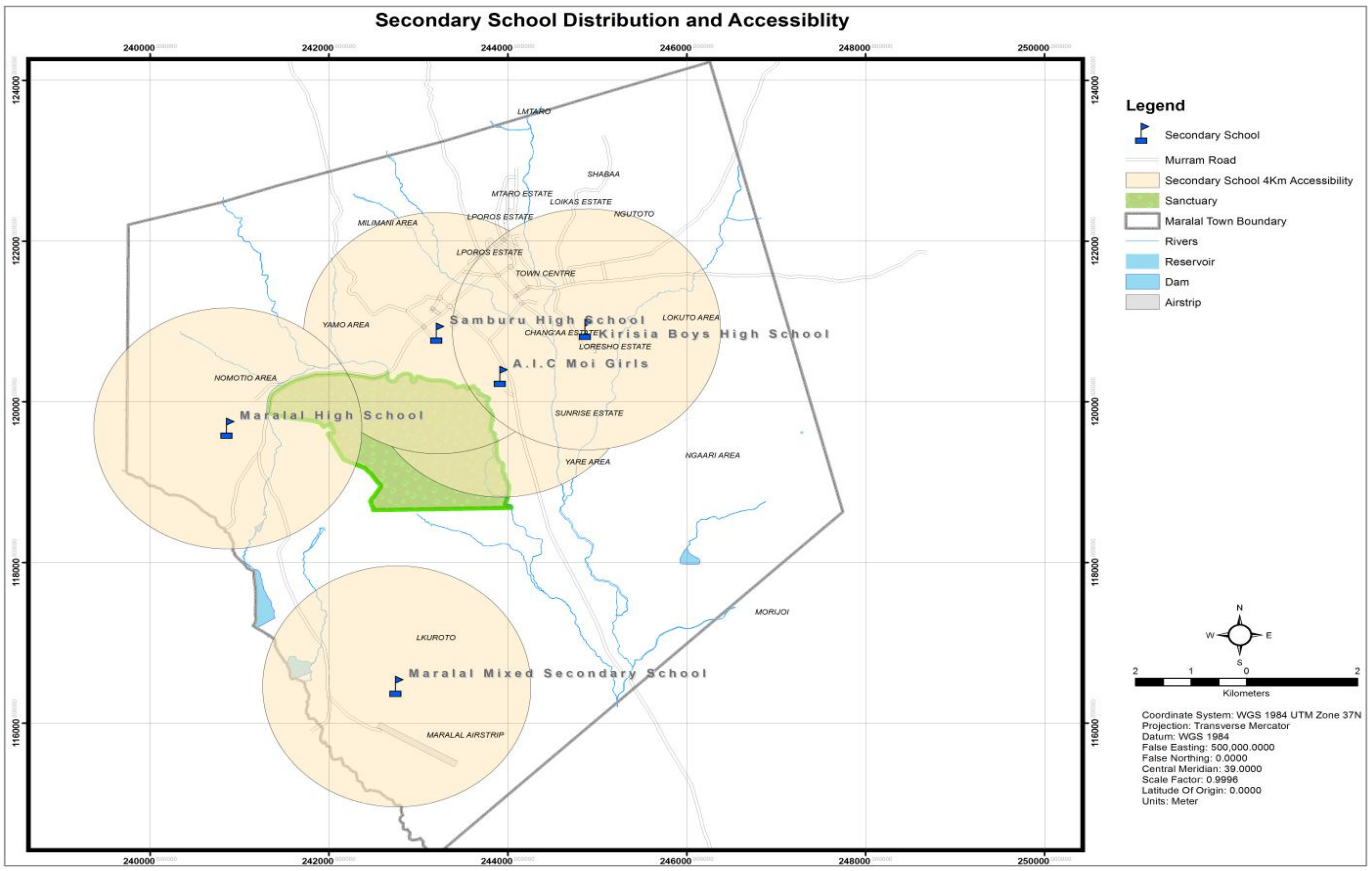
8.3.4 Secondary Schools

The secondary school going age ranges between 14-17 years and this represents approximately 12.9 % of the population within Kapenguria. The planning area has 31 public and 4 private secondary schools. Total enrolment for the year 2011 was 12,895 represented by 5,901 boys and 6,994 girls. The recommended teacher pupil ration is 1:40 (Ministry of Education) while the planning area has a teacher pupil ratio of 1:50. The ratio is high as compared to the national. Public secondary schools include Kirisia Boys High School, Samburu High School, AIC moi Girls High School among others. Completion rates in the planning area is above 75% which translates to a need for more tertiary institutions to absorb this huge percentage with proper mechanisms required to be put in place to assist those who cannot afford it as it was reported in some cases.

8.3.4.1 Spatial distribution of Secondary Schools

The secondary schools are unevenly distributed as the three of them are located within the CBD leaving the students within the rural hinterland with no option but to walk for long distances to access the facilities. The Physical Planning handbook recommends a maximum walking distance of 2km for secondary school going students. Thus, using an accessibility index of 2km, a few homesteads were found to be outside the proximity distance as shown in the accessibility map 13below:

Map 12: Secondary School Distribution and Analysis



8.3.5 Tertiary Institutions

There are two institutions of higher learning in the county. These are Laikipia University Maralal Campus, and Samburu Teachers Training College privately owned all of which are located in Maralal town. There is need to improve the investment profile of the county in order to attract more tertiary institutions in the county.

8.4 Conclusion

The area has enough educational facilities; however, these facilities are poorly distributed as most of them are concentrated within the CBD as is the case with the rest of the social facilities. There is a high potential for agro-based industries (slaughter houses, meat processing plants and tanneries) mainly because of the availability of the livestock. However, the unfavorable climatic conditions reduce the production of livestock and pose a danger to the development of agriculture and agro-based industries.

CHAPTER 9: ENVIRONMENTAL ANALYSIS

9.1 Introduction

Environmental protection and conservation are of utmost importance to many planning process including urban planning. In this planning process we focus on the effects of development to be mitigated with an ultimate aim of minimizing negative overall effects of development on human and other living things (biodiversity which man depends on for a living). In Maralal we have done an assessment of various thematic areas of environment and development for sustainability and the local context is critical as most of the effects are generated locally with external factors playing a minimum role. Major challenges are directly linked to traditional systems of resource extraction and use, basic needs like building materials, energy production and disposal of waste resources. Additional to this is the overall insecurity in the region that has driven people to search for secure settlement areas and population increase. All in all we must act as a team to create harmony and balance between nature and artificial creations using the principle of landscape architecture to achieve a desired situation that is sustainable and supports all living things (Man, flora and fauna).

Environmental problems and risks linked to urbanization in Maralal town can be classified under the following:

- Deforestation linked with the consumption of wood fuel, building and fencing materials etc.
- Unsanitary conditions caused by inadequate water supply to households and storm waters carrying both human and animal waste;
- Diffusion of untreated solid and liquid waste bringing about pollution of the water table, surface water and well waters.
- Poor disposal of liquid and solid waste (poor waste management)into natural drains,
- Unplanned settlement and development of impermeable surfaces.

Key effects linked to these manifest themselves in the form of;

- Flash floods during heavy rain seasons destroying roads and other infrastructure, property, grazing grounds, human and animal life,
- Massive soil erosion on farms, hills and other areas ,
- Degradation and disappearance of the fragile ecosystems;
- Disruption of the social well-being and business in town,
- Contamination and pollution of surface and underground waters,
- Loss of scenic beauty and biodiversity,
- Poor hygienic conditions and outbreak of both water borne and other diseases like typhoid, cholera etc,
- Increased scarcity and escalating prices of basic tree products,

- Disruption of water cycle infiltration process due to impermeable surfaces and plastic/polythene papers which are thrown all over,
- Loss of grazing lands and animal watering points,

This brings in the aspect of integrating Maralal urban planning with long-term environmental management strategies. Maralal town appears to have been planned well during the colonial time but with massive rural urban migration and increase in population, various environmental concerns and hazards have emerged.

9.2 Solid Waste Management

The management of various types of waste in Maralal town has proved to be difficult and challenging. This difficulty has manifested itself in the perennial outbreak of diseases such as cholera, dysentery and pollution of water resources, air, soil or land contamination, proliferation of pests and vermin, and the loss of aesthetic beauty. Improvements are desired in waste management covering aspects of minimization of waste generation, collection, reuse, recycling, treatment and disposal. Waste resources in town are generated at household, business premises, (like hotels, shops, wholesale, super market, petrol stations etc) hospital, office, jua kali, markets and at vehicle levels in solid and liquid forms. However there is no clear waste management program at the town council office let alone a permanent designated dumping site. Urban environmental management of solid waste should respond to the local regulatory framework that is typically articulated within the County Government Act, National Public Health Act and Environment Management and Coordination Act. Improper handling of solid waste and indiscriminate disposal in open spaces, road margins, laagers and etcetera, give rise to numerous potential risks to the environment and to human health. At the hospital, they rely on open air incinerator and hazardous liquids directed to the soak pit. For liquid waste in town from houses, hotels etc it is directed to soak pits, latrines and open drains which sometimes overflows especially during the rain seasons polluting the environment. The table below gives a summary of the current situation and below it pictorial evidence.

Table 6: Summary of Current Situation on Waste Management

Item	Current situation
Premise waste bin	Available in very few premises and it is owners initiative. The same applies to residential houses as the Council has not taken the initiative of providing either common or premise waste bins
Solid waste collection centers	There are no clearly marked or designated waste collection centers or containers. Waste is dumped haphazardly in town making the situation messy. It appears residents are the ones who have chosen the waste dumping areas.
Liquid waste	Most liquid waste is disposed of in the open and some directed into the open natural drainages posing danger

	and risks to users of water downstream/drainages as there are very few people who have constructed soak pits and septic tanks.
Designated dumping sites	There is no designated site as at now, the town council uses the former show ground as temporary dumping site which is next to Milimani residential area.
Collection vehicle	One new tractor the other is grounded, not adequate
Liquid waste exhauster	Samburu County has one which the Town Council uses when there is need.
Incinerator	An open one used at the hospital for hazardous solid waste
Environment health safety measurers	Inadequate as the collected waste is dumped in the open in town posing risks and danger especially to children and livestock. The same applies at the temporary dumping site located at the show ground.
Liquid waste discharge	Most plots and premises dot not have soak pits or septic tanks and liquid waste is directed into natural drains posing risks to people, animals, livestock and biodiversity
Land disposal/fills	There are none as the council does not have the capacity
Waste disposal hierarchy	At the disposal level (see below hierarchy diagram) still at the least favoured option.
Vegetation cover	There has been continuous loss of vegetation fron the surrounding hills and forest areas. Trees especially cedar has been cut uncontrolled for building and furniture. Opening up land for settlement and subsistence agriculture has also contributed exposing land to degradation through soil loss.
Natural water ways (laagas)	They have been encroached on and used as dumping sites while they keep on expanding in size.

Plate 12: Open Solid Waste Dumpsites in Town Next to Roads



Source: Field Survey, 2011

9.3 Settlement and Fragile Lands

The settlement pattern in Maralal town is not planned and is based on urgent need to settle immigrant people in search of secure leaving areas. This results from regional insecurity among different tribes and clans with an interest in dominating in use of certain resources and taking away livestock. Selfish interests to reap from the poor who have not secured a place to settle have also played a role in poor settlement which mostly occurs on fragile lands in the forest, steep areas, and hills and on water channels (laagers). This results into unsustainable practices, such as the exploitation of marginal lands and the encroachment on forests and ecologically fragile areas by commercial interests and landless rural populations result in environmental degradation as well as in diminishing returns for impoverished rural settlers. Settlement is so haphazard that public utility lands do not ring a bell among those being settled. Access roads and even paths are not well defined and in some areas blocked. Children have no playing grounds, development agencies, private investors and government departments including the town council find it difficult to get land for further development and town expansion at the moment. The regulation of land occupancy is the second traditional function of the urbanization documents. In order to protect the environment, it prohibits, in principle, the settlement of human establishments in "risk" and fragile zones. This is not the case in Maralal as the evidence in the photographs below shows.

Plate 13: Informal Nomotio settlement 500 meters up stream of Nomotio dam



Source: Field Survey, 2011

Some areas that were used by local as grazing ground have been allocated to individual leaving herds men with no alternative and have now extended grazing of livestock into town center posing another threat to any form of urban tree restoration and beautification efforts.

There has been rapid expansion of Maralal town and settlements in fragile areas with damages to the pre-existing natural environment which has increased the risk of natural disasters (like the one shown in the picture below), altered living conditions of the urban

population, and particularly of the poorest inhabitants and it is water cycle management that poses the most difficult challenge.

Plate 14: Gulley development at Sunrise and Yare areas from storm waters



Source: Field Survey, 2011

The challenges emanate from storm waters which causes erosion forming gulleys, damages property and infrastructures like roads (seepictures below and above).

Plate 15: Storm Water Damaged Maralal – Milimani Road.



Source: Field Survey, 2011

9.4 Air Pollution

Air pollution comes in the form smoke from burning solid waste, dust from roads and bare grounds, foul smells from latrines and rotting garbage, urinals, disposal of liquid waste in the open and in natural drains etc. The most significant is foul smell from filled up toilets, human waste on the ground and disposal of liquid waste from premises into the open.

9.5 Storm Water Pollution

In Maralal storm water pollution is one of the major environmental concerns to both the town managers and urban dwellers. It is more associated to degradation of the fragile ecosystems and forest around town. Before say about ten years ago it was not of concern as it was mild but for the past few years, it has become significant and of major concern when it comes pollution of surface and ground water. Storm water pollution occurs every time it rains heavily across the catchment area and runoff water picks up contaminants as it flows from high to low grounds where Maralal town is situated. It occurs on degraded lands (land which no longer has enough living vegetation to hold soil in place), plots, roads, construction sites, garages, farms or other agricultural sites, where the water carries away soil, animal waste, human waste, fertilizers, pesticides, oils and sediment from cropland or pastureland. Sources of the problem are two impervious cover and increased discharge of pollutants. Impervious cover such as exposed rock or hardpan soil is natural. Land development, however, greatly increases it and it comes in three varieties: rooftop imperviousness from buildings and other structures; transport imperviousness from roadways, parking lots, and other transportation-related facilities; and impaired pervious surfaces, also known as urban soils, which are natural surfaces that become compacted or otherwise altered and less pervious through human action. The second aspect of urbanization that contributes to urban storm water pollution is the increased discharge of pollutants. As human activity increases in a given area, the amount of waste material deposited on the land and in drainage systems increases.

9.6 Floods and Property Damage

The most dramatic consequence of increases in the volume and rate of storm water runoff is flooding and property damage right from the source. Undeveloped areas such as forests, grass lands and bush lands serve as sponges for excess rainwater, so when these areas are eradicated or replaced with impervious cover such as roofs, hard surfaces, open soils and exposed rocks like it has happened here, the volume of runoff waters entering seasonal streams and rivers increases. This has resulted into massive soil erosion damaging farms, roads, buildings, habitats, grazing fields, natural drain widening, human and animal life

9.7 Siltation and Sedimentation

Rapidly flushing storm water can increase erosion from all land, not just stream banks and streambeds. Storm water then transports the eroded sediment downstream into the receiving areas. Eventually, when sediment laden water is stilled, that sediment settles to the bottom of the receiving area. When sediments settle out, they cover or destroy important wildlife habitat and grazing lands.Pollutants such as phosphorus heavy metals and toxic chemicals attach to sediment particles and become suspended or dissolved in receiving waters and become toxic to both flora and fauna. Siltation in town has also affect commercial and social life

9.8 Impacts to Drinking Water Supply

In Maralal town and its environs, storm water pollution is a serious concern for Maralal Water supply Company and the residents. Storm waters sometimes brakes water supply pipes or when they come into contact with broken pipes polluted water mixes with treated water causing contamination. I some areas pipes are swept away. During rain, the company spends a lot of resources to buy chemical for treating water before supplying to people due to increased level of turbidity and contaminants. Contamination eventually becomes harmful to people as it causes diseases like typhoid. For residents who rely on surface water downstream, the effect is the same but also affects their livestock.

9.9 Aesthetic Losses

Even if storm water does not cause illness in humans from direct exposure, it can cause other annoyances or intrusions. The cigarette butts, polystyrene papers, bottles and other trash that storm sewers dump in neighborhood waters are an obvious eyesore. Sediment loads reduce the clarity of water, which not only reduces its attractiveness but can also increase the likelihood of having psychological problems to users. Excess nutrient loads can cause severe algal blooms, which coat the surface of water with an unpleasant scum, cloud the water, and add unpleasant odors and taste to water used for drinking and watering livestock.

CHAPTER 10: EMERGING PLANNING ISSUES

10.1 Overview

This chapter gives a synthesis of the existing situation, resource base, administration and management of Maralal town with a view to providing a framework for a detailed strategic urban development plan formulation, implementation and administration.

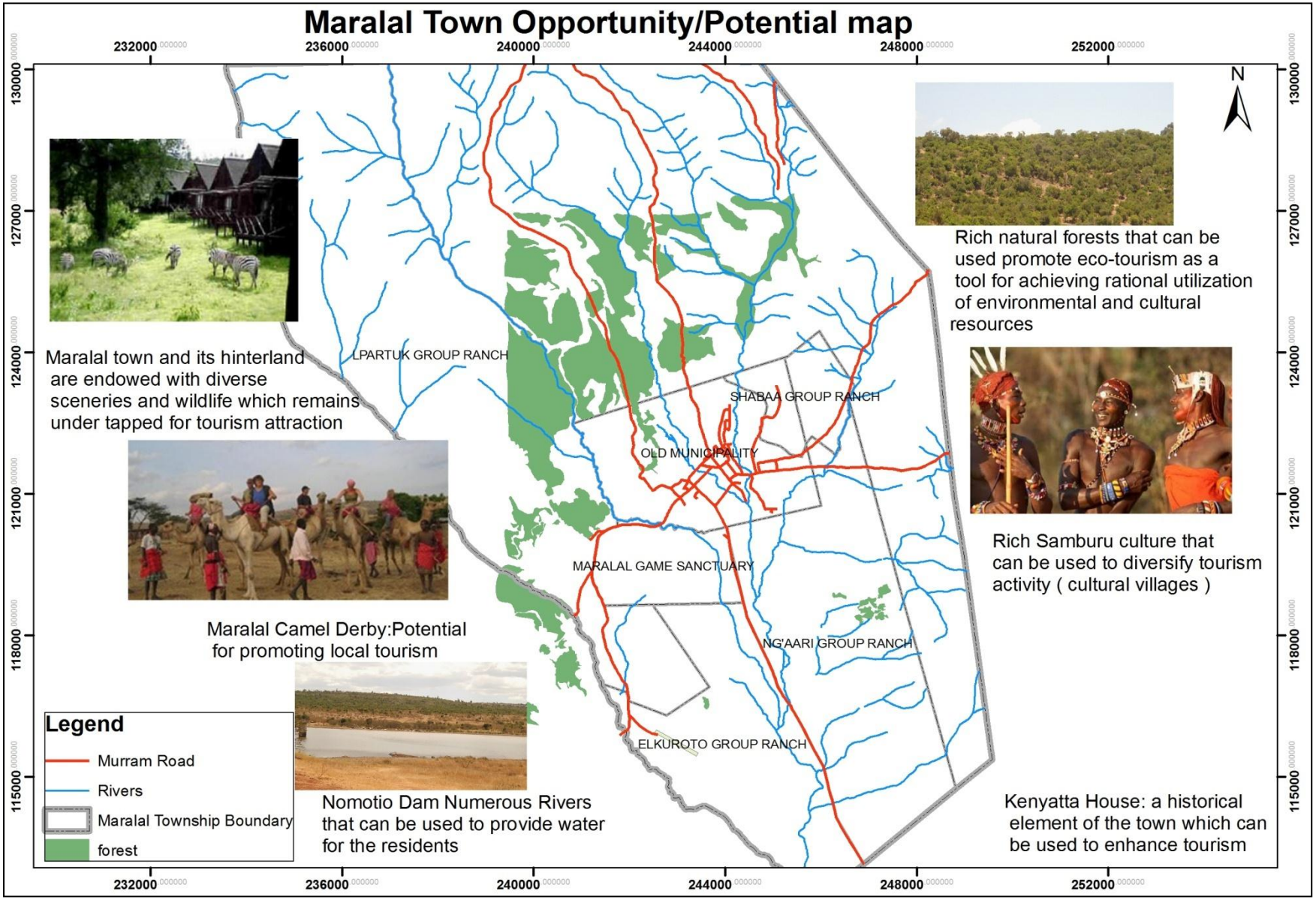
10.2 Summary of Planning/Development Issues (Emerging Issues)

Just like it's the case in many of the Kenya's urban centers, town lacks a spatial framework to guide its growth. Presently, the town is facing a number of major challenges which include:

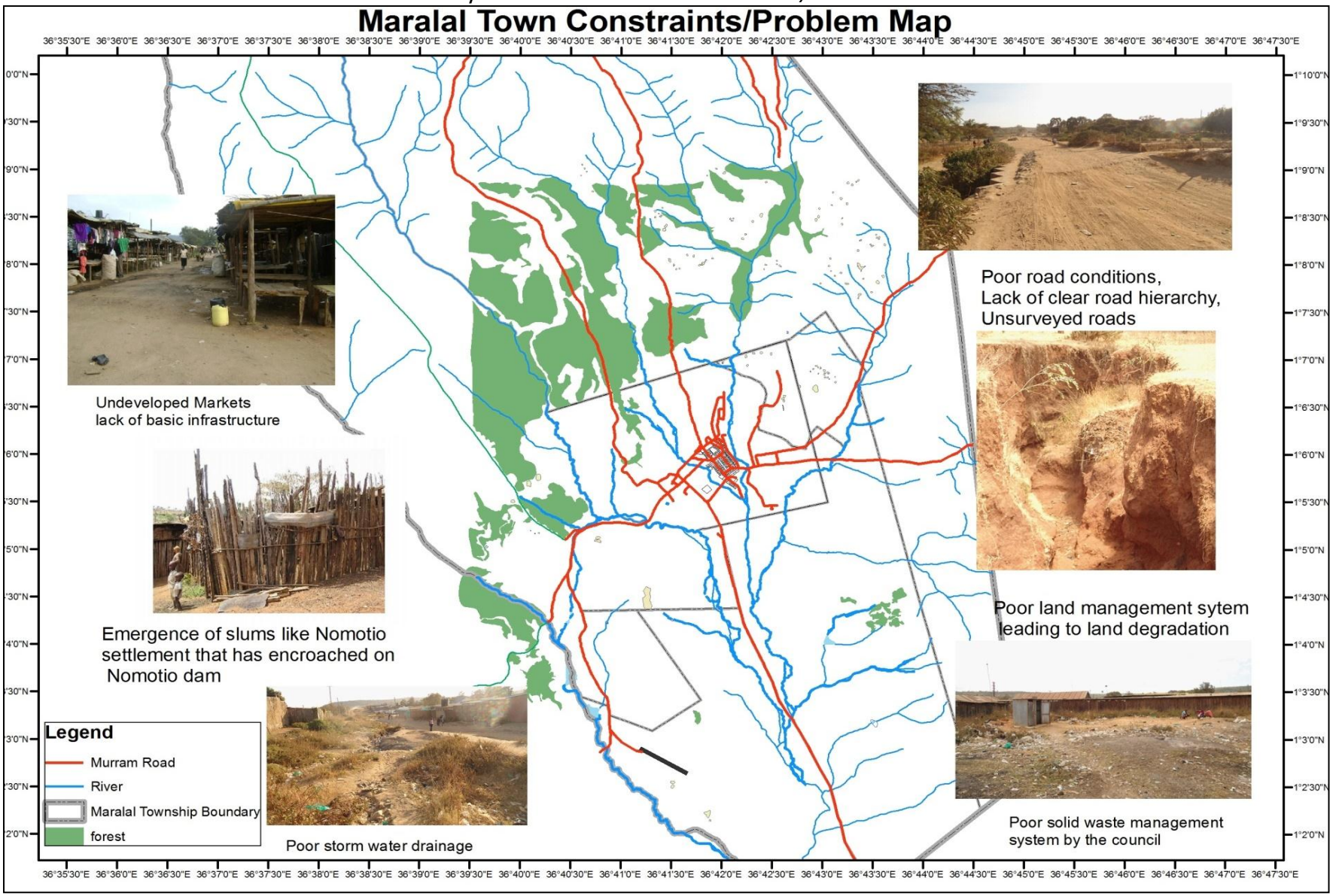
1. **High population growth:** Over the years, Maralal town has been experiencing a high population growth. This high population growth has strained the available facilities.
2. **Environmental degradation:** Environmental degradation is evident in Maralal town. This include unsanitary disposal of waste, encroachment on riparian reserve; encroachments on fragile ecosystem
3. **Informality:** Maralal town is characterized by informalities. Informal settlements are emerging within the town. Also informal commercial activities are scattered in various parts of the town
4. **Development Control:** The emerging issues include;Inadequate planning guidelines,Lack of proper development applications and approval framework, unregulated developments within the townand Weak inspection mechanism for developments within the council due to inadequate staff
5. **Unplanned expansion or urban sprawl:** The town is immensely growing without any guide thereby encroaching on agricultural land and tourism potential areas
6. **Transportation:** Poor regional connectivity and accessibility, Encroachment on road reserves,Un-surveyed roads, lack of hierarchy of roads, poor road conditions, absence of surface water drains, lack of street naming and road inventory, lack pedestrian/ non- motorised transport walk ways and lack of bus stops along the Rumuruti - Maralal Road.
7. **Public Amenities:** inadequate community facilities due to high population**,** *Inadequate land* for expansion of public facilities like Stadium, Social Hall, Fire Station, Market, and a Bus Park and Inadequate funds for development.
8. **Health facilities:** inadequate health facilities, poor quality of health services provided by health facilities**,** *low* quality and capacity of a maternity room, poor condition of Maralal District Hospital incinerator and *lack* of well serviced ambulance.

9. **Water Supply:** Water shortage to meet high demand caused by inadequate water supply from Nomotio Dam, Insufficient and contaminated Ground water, inadequate coverage of the planning area by water works, inadequate capacity at SAWASCO.
10. **Energy:** High demand for electricity owing to the high rate of growth of the town, frequent power outages and lack of access to electricity in some areas e.g. Milimani, Shabaa, Ngari, Elpartuk etc.
11. **Solid Waste Disposal:** Lack of adequate solid waste management by the council, poor capacity to manage waste, lack of designated dumping sites, poor solid waste handling, lack of facility for recycling and vandalism of waste bins
12. **Liquid Waste Disposal:** Lack of sewer system and poor handling of liquid waste water.
13. **Encroachment:** Maralal town has a high encroachment of public utilities such as cemeteries, schools (Maralal DEP primary), conservational areas such a riparian reserves and Maralal game sanctuary among others.
14. **Economy:** The town has undeveloped economic base with great untapped potentials in tourism, trade and commerce, industry, livestock, sport tourism among others. There are inadequate micro finance institutions (like KWFT and Faulu Kenya) that could be helpful for entrepreneurship development. There are a few banks operating in the area (like Kenya Commercial Bank and Equity Bank).

Map 13:Maralal Town Opportunities /Potentials



Map 14: Maralal Town Constraints/Problems



PART II: DEVELOPMENT CONCEPT, INTEGRATED STRATEGIC URBAN DEVELOPMENT PLAN, STRATEGIES AND MEASURES

CHAPTER 11: DEVELOPMENT CONCEPT

11.1 Overview

The development concept of the planning area has been developed out of an in-depth interpretation of the site using its structuring elements leading to delimitation of the site into conceptual and analytical zones.The structuring elements of the area are factors or features which play pivotal role in shaping the nature, form and direction of urban development and growth. Conceptual and analytical zones comprise of the division of the area into parts in accordance with characterization and functionality.

11.2 Structuring Elements

The elements structuring the site are categorized into two namely: the natural features mainly the two Rivers Yamo and Loidong`o; manmade features including the main roads, the game sanctuary and the group ranches.

11.2.1 Natural Features

The area is traversed by Rivers Yamo and Loidong'o. Both rivers flow in a southerly direction and have influenced the form and shape of urban development which is concentrated in between them. The shape of development constricted by the two rivers has formed a funnel like shape, wider towards the north and narrowing towards the south. The Leroghi Forest on the North-West also influences the urban form to some extent by forming urban growth limits.

11.2.2 Manmade Features

i. The **road network** especially the Rumuruti - Maralal road, Maralal – Baragoi and Maralal – Barsaloi have also influenced the form and shape of the urban area. They traverse the area. They traverse the area and form the main frame upon which development has hinged.

ii. The **Group Ranches and the Maralal Game Sanctuary** are also important structuring elements. The Group Ranches include: Shabaa, Lokuto, Elkuruto, and Nomotio. These features have influence development by forming an urban growth limit by constricting development and restricting growth within the funnel shape.

Map 15: Structuring Elements



Source: AIDAL, 2011

11.3 Delimitation of Conceptual and Analytical Zones

Using the level of development in terms of concentration of urban activities, population and level of infrastructure provision the site was divided into the following areas to facilitate analysis and formulation of proposals.

11.3.1 The Core Area

This consists of the area delimited by the Yamo River to the West and the Loidong'o River to the Eastern side but excluding the Shabaa Group Ranch. The developments within this area hinge on the Maralal-Rumuruti Road, Maralal Barsaloi Road and Maralal Baragoi Road. It is abutted on the immediate South-West by Maralal Game Sanctuary and the East by Lokuto Ranch and Leroghi Forest to the North-West. The area is funnel shaped widening to the North and narrowing to the south dictated by the two rivers. The area slopes gently in a southerly direction. The North-Eastern portion and the North- Western portions area hilly grounds, while the central portion where most developments are concentrated is on lowlands relative to the rest of the area. In terms of development the area is comprised of various residential neighborhoods outlying and nucleating around the commercial and civic districts.

11.3.2 The Urban Growth Area

This comprise of areas which are immediately to the west of River Yamo and River Loidong'o including the five group ranches namely: Shabaa, Lokuto, Nomotio, Elkuruto and Ngaari. This area being proximate to the developed area is already and will continue to attract activities of an urban nature and concentration of population evidenced by development around Nomotio, Laikipia University College, Maralal Mixed Secondary School, Milimani Primary School, Kenya Wild Life Services Offices, Yare Primary and Secondary Schools and Rudolf Camp Site. In terms of physical characteristics the area presents a gently undulating topography accommodative of urban development and reasonable provision of transport network which maybe improved to support development. Located within this area are some strategic infrastructural provisions namely: Maralal Airstrip, Loikurkur Dam which is the main source of water supply for Maralal Town; Maralal Lodge within the Maralal Game Sanctuary and the Prisons Farm.

11.3.3 The Urban Fringe

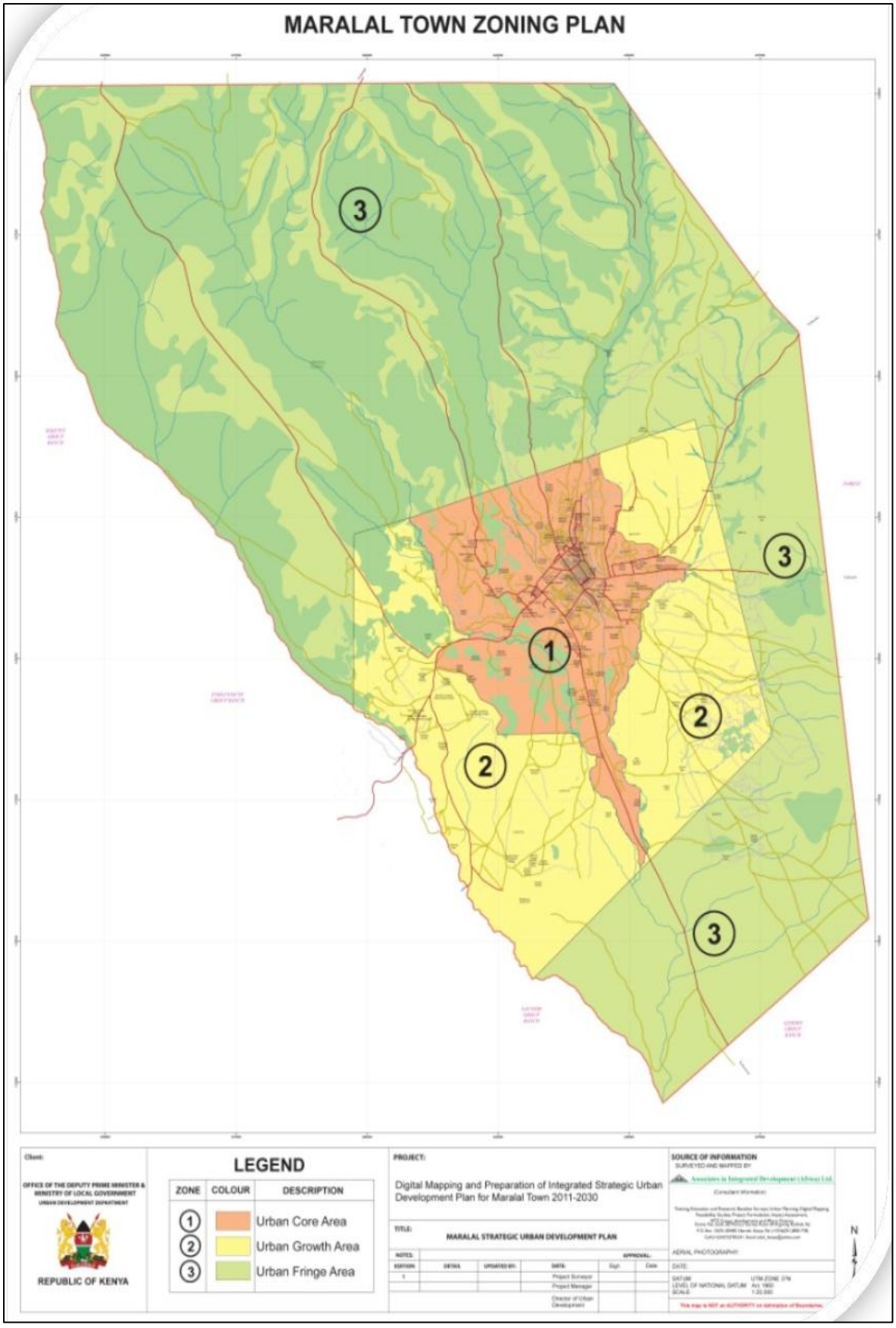
This area lies outside the old town boundary generally and within the extended boundary. It is largely rural in character with spars population, limited infrastructure facilities and services and comprises mainly of group ranches. The area has potential for enhancing livestock production and tourism arising from its expansiveness and scenic areas and wildlife.

11.4 Spatial Development Framework

The development framework that is derived from the Conceptual and Analytical Zones here above as described below:

- ***Core Area*** for promotion of urban ***redevelopment and densification***
- ***Urban Growth Area*** to be prepared for ***future urban expansion*** to accommodate ***future planned and quality urban development*** and location of ***large urban land users*** as well as ***protection and enhancement of strategic environmental assets***.
- ***Urban Fringe*** to be ***protected from urbanization*** to support livestock production and to be ***conserved to promote tourism development***.

Map 16: Maralal Town Development Zones



Source: AIDAL, 2011

CHAPTER 12: THE INTEGRATED STRATEGIC URBAN DEVELOPMENT PLAN

12.1 Overview

The plan presents the long term development framework for Maralal town by indicating broad land uses transportation corridors in relation to land uses, location of utilities and services. The ISUDP shows the form, shape, urban development limits, trends and pattern in developments that Maralal town will take.The Integrated Strategic Urban Development Plan consists of the following products:

- A Structure Plan which indicates the broad land use classification integrating urban transportation and main public utility and public purpose provisions.
- Building on the broad land uses the structure plan also indicates in more detail specific land use zones, for the core urban growth area including a transportation spine and action areas.
- The second aspect of the Integrated Urban Development Plan outlines Action Area Development Plans which defines and detail out proposals and projects in respect of these areas.
- The third aspect of the Integrated Urban Development Plan outlines strategic development policies along thematic areas of housing, Local Economic Development, Governance, Environment, Transportation and Infrastructure.
- The fourth aspect of the plan spells out the implementation strategy enumerating measures and actions to be taken to ensure that the plan is implemented as well as the phasing of the projects and capital investment requirements.

12.2 Land Use Proposals

All the proposals which have been made under the various land uses have been put forward on the land most suitable for urban use. This was worked out taking into consideration of the structuring elements, analysis of the existing physical characteristics, infrastructural provisions as well as the logical directions of urban growth in Maralal Town.

12.2.1 Residential

The objective of the residential land uses is to provide a living environment which conforms to the economic ability of the developer without compromising the environmental standards.

12.2.1.1 High Density Residential(HDR)

Areas earmarked for high density housing include: Loikas,Lporos, Rangau, Mutaroand Allamano areas. This will consist of mainly multiple residential developments. It is zoned high density residential area with1/8 an acre as the minimum lot and permitted plot coverage of 30%. Residential development type is multi storey dwelling units with ground plus three vertical. These are the areas

already densely populated and are expected to house the bulk of the population. Population densities in the areas are expected to be 70 dwelling per hectare.

12.2.1.2 Medium Density Residential(MDR)

Areas proposed for high density housing include Loikas parts of Sun Rise Estate, Shabaa Yare, Loresho, Ngaari, St. Irene Estate. Being at confluence of the two rivers the area is zoned medium density residential area with ¼ an acre minimum lot and promoting multi dwelling units ground plus 2.These areas are projected to have a combination of single and multiple dwelling units but with the latter being more dominant. Population densities in the areas are expected to range from 32-60 dwellings per hectare. The total area earmarked for medium density residential neighborhoods is 1910.7Ha.

12.2.1.3 Low Density Residential(LDR)

Proposed low density residential areas include Milimani and Yamo areas. The delineation of parts of these areas into low housing areas was significantly influenced by the current low population levels. It's a transitional zone form a conservation zone and having a rugged topography. The minimum permitted plot size is ½ an acre. Permitted development is massionettes and bungalows single dwelling units or semidetached with a plot coverage of 30%. Permitted user other than residential is recreation, education, controlled religious users and commercial development.Urban agriculture is expected to take place given the large plot sizes. Population densities in the areas are expected to range from 10-20 dwellings per hectare.

12.2.1.4 Future Residential Mixed Use (FRM)

The areas designated as future residential mixed use and which fall within the urban growth area form land banks for future residential development. These areas have to be prepared during the life time of this plan for formal housing development by the county government, private developers, and institutional developers or by public partnership of all the three actors. To facilitate the realization of this objective, the town managers should:

- Strictly regulate the subdivision of land in conformity with the prescribed standards and guidelines in the zoning ordinance.
- Ensure the surrender of all land set aside for public use and its safe custody in the county land bank.
- Provide requisite infrastructure to accompany development taking place in the area.

12.2.2 Industrial

The plan seeks to promote industrial development of Maralal town by harnessing its industrial potential for a number of industries due to availability of raw materials in its hinterland, a big market and basic infrastructure availability.A light and heavy

industrial zone has been proposed at yare area. In addition a slaughter house and a tannery has been proposed at Nomotio. Land has been set aside in this zone to promote industrial activities and warehousing. It is anticipated that industrial activities will locate in this area given the potentiality of Maralal Town and its hinterland as well as tapping on the opportunities arising from the LAPSSET corridor. Some of the activities that may locate in this area include:

- Hides and skins warehousing
- Hides and skins processing
- Cow and Camel milk processing
- Meat processing
- Honey processing
- Warehousing
- General maintenance and repair works
- Plumbing and mental works

The plan earmarks approximately 180.1Ha for industrial development. To actualize the above objective, infrastructure in the form of energy, roads, sheds; sanitation and solid waste disposal shall be provided. Addition, the zone shall be organized to cluster compatible user and to separate incompatible ones. The proposed minimum land size is 0.05Ha. The plan proposes the following road hierarchy for industrial zones.The following road reserves are therefore recommended:

(a) Spine road (major roads) ……25M
(b) Collector roads ……18M
(c) Access streets ……15M
(d) Service lanes ……6M

12.2.3 Educational

With a projected population of approximately 135,905 people by the year 2030, approximately 55 pre-primary schools, 20 primary schools 13 secondary and 1 university will be required in Maralal town and its environs. The plan proposes a university at Nomotio. The plan proposes upgrading of existing schools and recommends multi story development in order to leave more spaces. Proposed schools will be located in close proximity to residential areas. It is proposed that Maralal polytechnic be upgraded to a national polytechnic. Approximately 197.3 Ha of land is earmarked for educational development. It sis recommended that all the existing schools should be surveyed to enable them acquire titles and discourage encroachment.

12.2.3.1 Knowledge Park (KP)

Proposed at Nomotio livestock improvement centre. The proposal builds on the existing educational and research facilities: Laikipia University Campus, Maralal High School, Nomotio Primary School, Nomotio Livestock Improvement Center, the area is

zoned as a Knowledge Park (KP). The knowledge shall be a center of activity or interest or a focal point for the exchange of knowledge, support, development and ideas. The activities that may be located in this area would include university, research institutions, county level tertiary institutions, and library and county centers of excellence in primary and secondary education. Existing institutions in this area shall be upgraded to high status to play the role of driving the knowledge economy of Maralal.

12.2.4 Recreational

The existing Kenyatta Stadium and Public Park are to be gradually upgraded. Other recreational areas like open spaces and neighbourhood parks will be integrated within specific planning zones and especially within residential neighbourhoods.

12.2.5 Public Purposes

The central government and the county government has not been economical in use of its land which is evident at the current County Commissioner offices and the county government office where various office are scattered. The plan proposes development of a multi-storey capital complex at the current DC and municipal offices to house all central government and county functions. The development of other public purposes such as religious facilities is generally expected to be intertwined within the residential and commercial developments. As result no broad zones for public purposes are expected. Existing special public purpose land primarily military land is to be retained.

In this zone, public administration. The area shall be promoted as the nerve centre for the town with high quality infrastructural development transportation network that includes pedestrian walk ways, high quality esthetic and environmental development that includes street furniture parks and gardens, tree lane streets, modern storm water drains, solid and liquid waste treatment and management and renewable energy solutions. The maximum allowable plot coverage shall not exceed 85%. Mixed use development shall be encouraged combining commercial, office space and residential uses to reduce on movement of traffic and to promote a twenty four hour economy.

The civic area which will be seat of both the national and county government shall be developed to promote character, identity and uniqueness of Maralal town as well as deliberately improving the image of the civic area as the seat of government. In addition to this and in order to further improve esthetics of the town, the civic area be designed in away to and in a manner to allow for development of gardens planting of appropriate urban trees and placement of urban furniture. Overall, the civic area acess area shall be through walking along pedestrian path ways provided to remove motorized traffic, enhance safety, promote walk-ability and reducing pollution.

12.2.6 Commercial

The existing Maralal town CBD is proposed to be extended to include parts of Lporos parts of Changaa Estate. Also a commercial node is proposed at Nomotio.The commercial node will provide access to commercial facilities within neighborhoods in order to facilitate the provision of goods and services and at the same time provide employment opportunities. The plan proposes that the maximum number of floors in the CBD to be 8. In this zone, the main user shall be commercial and office functions. The area shall be promoted as the nerve centre for the town with high quality infrastructural development transportation network that includes pedestrian walk ways, high quality esthetic and environmental development that includes street furniture parks and gardens, tree lane streets, modern storm water drains, solid and liquid waste treatment and management and renewable energy solutions. Developers in this zone shall be encouraged to construct high quality well designed and attractive buildings. The developers will be required to enhance the skyline of city, optimize use of land and to promote compact city development. To realize this objective the minimum allowable floors shall be ground plus three. Any development exceeding this minimum shall be required to install an elevator. The minimum size for a commercial plot is proposed to be 0.025 hectares. The maximum allowable plot coverage shall not exceed 85%. Mixed use development shall be encouraged combining commercial, office space and residential uses to reduce on movement of traffic and to promote a twenty four hour economy.

12.2.7 PublicUtilities

Public utility land uses include water intake points, cemetery, and waste treatment site. The plan proposes relocation of the encroachments on Loikas Cemetery. The households will be resettled in an earmarked area near the water tanks. A fire station is proposed in Maralal town. The County government to acquire land outside the town for a sanitary landfill. In addition, dams have been proposed to be built as a measure on the flood control and the following measures will have to be taken into account:

- Each of the Dams will have to be at least 4 hectares subject to design.
- Protection of the dams by planting of trees all along its periphery.
- To create watering corridors and Pans for the animals.
- To use the water for Irrigation.

Relocation of the informal settlement at Nomotio dam as a measure of protecting the dam from degradation. In addition, storm water drainsare proposed in Maralal town to enhance storm water drainage.

12.2.8 Transportation

Cities and town areas depend on efficient channels and flows if economic and sustainability goals are to be achieved. The efficiency of the urban system is directly related to the efficiency of the transport and movement system. The plan proposes

establishment of a modern bus park through public private participation. The planproposes a minimum of 9M access a roads. This due to the fact that in most instances, the road has to accommodate multiple functions that have to be independently provided in design. Way leaves for trunk services such as water and sewerage, underground telephone cables and high voltage power lines, when provided along road reserves require additional provision.The plan establishes an integrated transportation network which will promote efficient and reliable movement of goods and traffic. Because of the above reasons, the following urban road reserve widths have been recommended:

Table 7: Proposed Road Hierarchy

	Type	Proposed Road Reserve
1.	**Primary Distributors**	Major communication routes**36m-60m**
2.	**Distributors**	Spine roads 25m-36m
3.	**Local distributor roads**	With no direct vehicular access to Individual plots. 15M-**18M**
4.	**Local Distributors**	Major access road exceeding 150m in length 12M-**15m**
	Access Roads	Cul-de-Sacs **9m**- **12m** Service lanes 6m Cyclist lanes **3m** Footpaths **2m**

In order to accommodate the various development scenarios put forward and particularly that of Maralal town as s an Eco-Tourism centre it will be necessary to acquire more land around the existing Maralal Airstrip in order to qualify its upgrading and development into an International Airport. This will have a multiplier effect in the growth and development of Maralal Town as well as the County of Samburu.

12.2.9 Conservation

As highlighted above two key potentials of Maralal Town is the fact that it is at the gateway to the world renowned game parks,reserves and sanctuaries as well as its unique 'Samburu' Culture' and community resourcefulness which needs to be conserved sustainably. These two aspects have contributed to a booming tourism industry in the County, but mainly geared towards the Wildlife tourism which the hinterland provides where all the big five animals are the major attraction. For Maralal town to play a positive role in the Tourism sector, eco-tourism activities will need to be embedded in the economy to enable tourists diversify their activities to include cultural heritage and sports tourism. There is also a need for improvement s as well as putting up more tourist class hotels as well as improved mobility and services.

On sports tourism, the Plan has proposed the acquisition of some 200 acres of land for putting up a nine-hole golf course and Golf club. It is suggested the incorporation of some decent residential accommodation at the club for the visiting golfers. This activity can be carried out through Public-Private Partnership arrangement. Nature trails on foot or bicycles have also been proposed which will call for improvement of infrastructural facilities at the centre including the setting up of some middle class hotels for the tourists. On Cultural heritage conservation the Plan has proposed the setting up of a Samburu Theme Park. It has proposed the acquisition of Land to set up an Eco-Tourism centre. Within the eco-centre it is proposed to set up a living Samburu cultural village, a Taxidermy zoo, and a Samburu artefact Museum and Theatre. Within the Samburu Theme Park area it is proposed to set up a Samburu artefacts manufacturing as well as marketing centre. It is proposed to encourage formation of small cooperatives or SACCOS in the manufacturing as well as marketing which essentially should include leather products, beadwork, dress outfits and artwork.

12.2.9.1 Riparian Reserve Preservation

Promoting riverine conservation and appropriate riverine development. It is defined as land on each side of water course as defined. Has a minimum of 3m, or equal to the full width of the river as measured between the banks of the river course up to a maximum of 30m. (Seasonal and perennial rivers). The plan propose a riparianreserve ranging from 12m-30M depending on the river profile. In addition the plan proposes to;

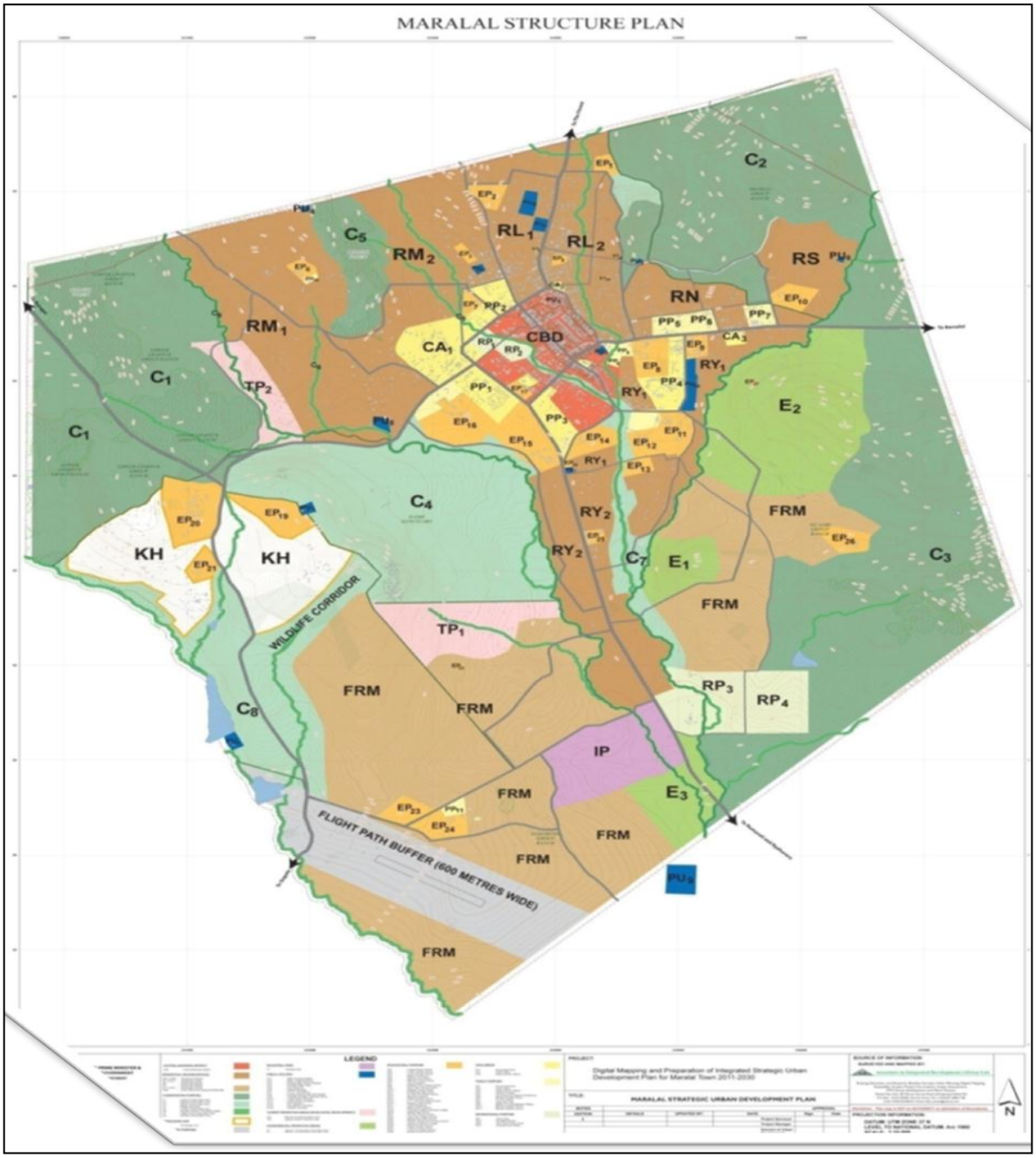
- plan and design the landscape, the soil erosion at river area and built up area
- maximize natural resource and conserve the environment in designing the park
- preserve the ecological values of rivers and the surrounding
- minimize the natural environment threat
- control sewage and waste disposal
- provide access and services road to the river reserves
- The Plan has proposed removal of all encroachment, structures and quarrying activities within the riparian reserves,

12.2.9.2 Tourism Promotion

The three zones have been set aside for tourism promotion. This builds on the strength of its proximity to the Maralal Game Sanctuary where development of additional tourist hotels is debarred. The opportunity to construct such tourist facilities is allowed at TP_1 to augment the facility at the game century. The existing Camel Derby site that attracts local and international tourists annually during the camel derby festival and competition. Building on this strength, the area is zoned as a tourism promotion zone to reinforce its current use. In addition to this the zone

shall host a stadium relocated from its current site and amusement parks to provide residents and visitors with a variety of entertainment options.

Map 17: Maralal Town Structure Plan



Source: AIDAL, 2011

12.3 Zoning Regulation

Table 8: Standards for Land Requirements for the Various User Sites

NO	FACILITY	CATCHMENT POPULATION		MIN' ACRAGE IN HA.		
1	Fire station	50,000 to 100,000		0.4		
2	Library	15,000		0.4		
3	Juvenile homes	-		2		
4	Health centre	-		3		
5	Nursing homes	-		0.4		
6	Veterinary clinic	-		0.1		
7	Educational	Rural areas	Urban areas	Single stream	Double stream	Triple stream
	Nursery school	3500	4000	0.25		
	Primary school	3500	4000	3.9		
	Secondary school	8000		3.4	3.5	4.5
	College			10.2		
	University			50		
8	**Parking Area**			**Recommended Spaces**		
	Low income	15000		10 to 12		
	High income	35000-50000		45-46		

Source: AIDAL, 2011

12.4 Planning Standards and Permitted Developments

The following table details the various land use zones described above. The land use zones have been numbered systematically and the area in which they apply identified. The existing developments on the proposed zones have also been pointed out then the proposed type of development together with the regulations and standards for the particular zone.

Table 9: Planning Standards And Permitted Development

Tourism promotion (Hospitality)								
Zone	**Permitted User**	**Mini. Plot Size (Ha.)**	**SET BACKS**			**No. of Floors (Max)**	**Plot Coverage (Max)**	**Building Typologies/ Type of Devpt**
			F	**S**	**R**			
TP_1 High end hospitality	Hospitality	2ha	12	3	5	(GF + 3)	33% for live-in Facilities Without Restaurants. 50% for facilities With restaurants	Holiday Villas, Lodges, & Hotels
TP_3 Low- end Hospitality	Hospitality	0.4ha	12	-	3	(GF +3)	-	Medium size hotels and Lodges, disco halls, entertainment and recreation centres and shops
Residential								
RM_1Malimani	Low impact Residential, Education Recreation and Controlled religious	0.2ha	12	3	5	GF	30%	Bungalows, Maisonettes Single dwelling units or Semi detached
RM_2Eleporos	Residential, Education, Controlled religious	0.1ha	6	3	4,5	GF+1	30%	Bungalows, Maisonettes Single dwelling units or Semi detached
RL Loikas	Residential, Education Controlled religious	0.045 ha	3	2.5	3	GF + 3	65%	Multi-dwelling units (Flats & Row houses) Mixed use
RN	Residential	0.045 ha	6	3	4.5	GF + 3	35%	multi-dwelling units, flats & Apartments.
RS	Residential	0.045 ha	6	3	4.5	GF + 3	35%	multi-dwelling units, flats & Apartments.
RY_1Yamo	Residential	0.045ha	3	2.5	3	GF + 3	65%	Multi-dwelling units (Flats & Row houses)

RY_2	Residential, And Recreational	0.1ha	6	3	4.4	GF + 2	30%	Multi-dwelling units (Flats & Row houses)
FRM	Residential, Commercial and Recreational	0.045 ha	6	3	4.5	GF + 3	35%	Mixed development
Central Business District (CBD) & CIVIC AREA (CA)								
CBD	Commercial Residential, Commercial and Recreational,	0.045ha	1.5	-	2	GF + 3	75% Without Underground Parking 90% with Underground parking	Shops, restaurants, Curios, Galleries, Supermarkets, Banks, Offices, Boutiques Shopping malls, medium size hotels and accommodation, Cyber cafes, Residential
CA Admini. Area	County & Urban Administration		6	3	4.5	GF + 3	10%	Administration offices and local legislative buildings
Light Industry								
IP		0.05 ha	-	-	-	-	75%	Garages, bakeries, Furniture, Welding, crafts, Jua kali metal works, Warehousing, Hides & Skin Milk processing, Meat Processing. General Maintenance. Timber work Honey processing. Maize & Wheat milling, baking, Plumbing and mental work
Conservation/Recreation								
C_1	Conservation with controlled residential & tourist facilities	2ha	-	-	-	Ground Floor	30%	bungalows, villas and tou hotels
C_2	Conservation with controlled recreation No subdivisions			-	-	-	-	Nature trails, recreational Parks/sites, picnic sites, Green zones, Farm houses Urban forest

C_3	Conservation with controlled recreation No subdivisions			-	-	-	-	Nature trails, recreational Parks/sites, picnic sites, Green zones, community tourism
C_4	No urban development	-	-	-	-	-	-	Forest regeneration
C_5	No subdivisions No urban development	-	-	-	-	-	-	Urban forest
C_6	Riverine Conservation &	-	-	-	-	-	-	Riverine developments
C_7	Conservation of forest	-	-	-	-	-	-	Urban forest
$E_{1,}$ E_3	No urban Dev.							Urban parks, ornamental Gardens, nature trails
E_2	Low density High end Hospitality Urban forest	2 ha	12	3	5	GF	15%	Camp sites, cottages, hotels Nature trails, picnic sites,

CHAPTER 12: STRATEGIES AND MEASURES

12.5 Overview

The purpose of this chapter is to provide for strategies and their specific measures/actions creating a framework for bridging the future.This chapter synthesizes the insights variously discussed above into specific measures/actions and strategies that have been identified. It is the belief of the study team that if these strategies are implemented, then the activities will accelerate the realization of the goals and vision of developing Maralal town into a modern vibrant city.

12.6 Transportation Strategy

The objective of the transportation strategy is to create an effective and efficient transport system in Maralal town as an important prerequisite in facilitating internal circulation, between the Maralal town and its immediate and wider hinterland thus promoting trade, economic growth, enhance connectivity and accessibility.

Strategy 1: Upgrade Maralal Airstrip to boost regional and national connectivity

Measures to support strategy

- Fencing the entire airstrip land.
- Road Improvement leading to the airstrip to tarmac status.
- Rehabilitation of the of existing runway
- Runway Expansion from current 0.98Km to around 1.5km
- Terminal Building Construction with associated amenities
- Developments to be proposed around the airstrip must be in line and compatible to the future development of the airport environment.
- Private public partnership be encouraged in the development of the airport.

Strategy 2: Develop a Road Hierarchy to enhance intra-urban and inter regional connectivity

An efficient road network across the town consists of roads of different hierarchies. Based on its location and connectivity characteristics, each road acts as a Principle Road, an Arterial (Primary), Collector (Secondary) or an Access Street/street. All the classes of roads are essential components of the town level road network, providing access to the residential quarters and to the commercial nodes. The proposed roads are as a result of careful measurement of distances (length and width), analyses of traffic flows, current and expected use, of all existing roads in the planning area. This was done to ascertain the need for various proposed roads and for costing for the purposes of gravelling, murraming or tarmacking the respective roads.

Measures to Support Strategy

Principal Roads

Maralal town is served by three roads that connect it to national and regionally. The roads are:

- Rumuruti –Maralal Road, Class C77
- Isiolo – Maralal road, Class C78
- Baragoi– Maralal Road, Class C 77

It is proposed that the proposed the principle roads have a width of 36M- 40M.

Primary Roads

Thirteen Primary arteries were identified. The primary roads with varying widths of between 20 and 25 meters offer direct link to the principle roads. The primary arteries carry traffic to the main artery.

Secondary Roads

Secondary roads carry traffic to primary arteries. They link smaller regions to primary and principle road. The proposed secondary roads in the planning area measure 15 -10metres. Densely populated areas are served by roads measuring 8 and 6 meters.

Proposed hierarchy:

- Connection to LAPSSET by pass road with a right of way of 40 meters
- Major roads with right of way of 30.0M
- Primary distributors with right of way of 20 M-25 M
- Local distributors with right of way 12-15M.

The plan proposes a system of segregation of footpaths which interconnects portions of the neighborhoods, individual facilities and provides access to adjoining plots.

Strategy 3: Road Widening

Roads existing in planning area have a width of 9 and 12 meter road which are narrow, earth roads and cannot adequately serve the intended traffic functions. Thus the short term proposal is that all the roads be widened and improved to murram standards with plans to upgrade to bitumen standards in the long term. The existing surveyed roads are narrow and are not able to cope with the increased demand arising from the increasing transformation from a rural area to a modern urban area. Road widening proposals have thus been recommended. The increasing population of human and vehicular traffic requires wider roads. The road widening proposals usually equally affect both sides of the existing road reserves except at junctions where design considerations could lead to a significant shift of the additional road reserves to one side of the existing road reserve.

Measures to support Strategy

Access roads

Access roads mainly provide access to Private properties, with a road width ranging from 6 to 12m. Subdivisions of land into smaller sizes will increase minor access

roads. Large tracts of land once subdivided into smaller units will yield more access roads. It is thus recommended that the road and street naming should be done to provide reference and identification of the roads.

By-Passes Proposals

One by-pass has been proposed as;

- Current LAPSSET Corridor 20KM from Maralal Town

Secure Adequate Way Leave for Roads

This is identifying all roads that do not have adequate way leave and secure/acquire them. The Municipality should now engage the affected plot owners along each road and work out a way leave acquisition plan (WLAP), which involves:

- Removal of those who have encroached on road reserves
- Acquisition of land for widening.
- Public awareness creation campaign on the need to respect road reserves by the developers.

Strategy 4: Traffic Management in Maralal Town

Generally in Maralal Town, traffic congestion is observed around bus parks. Traffic flow is fine in Maralal Town but due to the growing population, Traffic management has to be in place to enable smooth flow of traffic in future. In conjunction with the Traffic Police, stakeholders and the Council should develop and enforce traffic management by-laws.

Measures to Support the Strategy

Bus parks

Currently there is no specific area for Bus parks in Maralal. The proposed site is next to the DCs office which will be a problem to the offices nearby. There is however another proposed site at the "Miraa" market area which is almost centrally placed within Maralal CBD.

Non-Motorized Transport (NMT)

- Create pedestrian streets
- Include non-motorised travel in transportation surveys and models;
- Educate all transportation professionals in non-motorised transportation planning principles;
    - Fund non-motorised transport planning at a comparable rate as other travel modes;
    - Integrate non-motorised planning into all transport and land use planning activities;
    - Ensure that all roads are suitable for walking and cycling unless these modes are specifically prohibited. In these cases make suitable alternatives available;

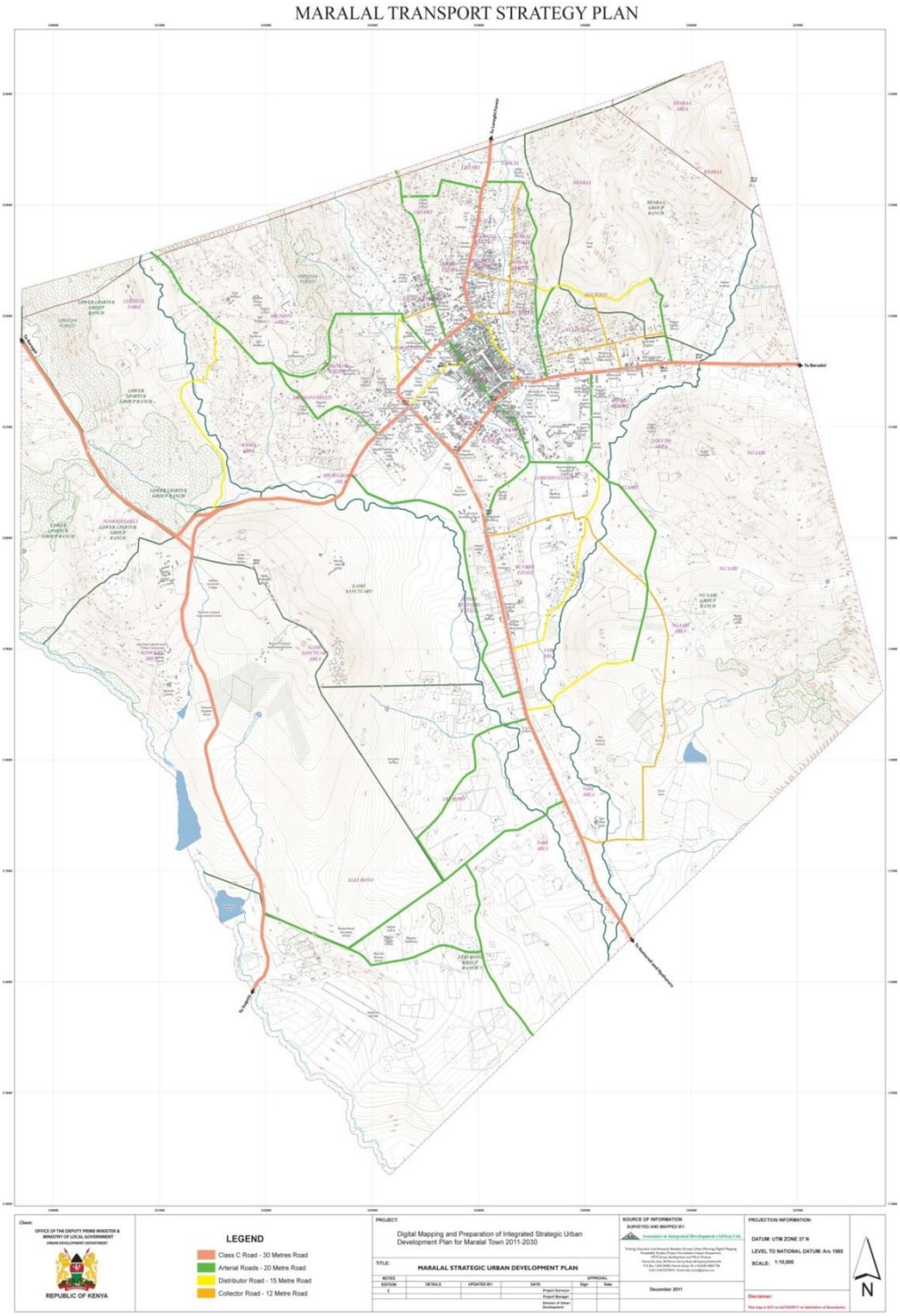
- Making street environments safer and more pleasant for non-motorised transport by using traffic calming and other traffic control measures

Pedestrian Crossings Facilities

This includes the use of road signs or pedestrian signals. Guidelines for Facility design include:

- Pedestrian crossing signage should not be provided where vehicle or pedestrian traffic signals are in place.
- At yield-control crossings, block pedestrian crossing RTM4 should be provided to demarcate the crossing point in conjunction with the appropriate signage. Zigzag lines may also be used.
- Solid pedestrian crossing lines can only be used in conjunction with STOP-lines and with traffic signals.
- A pedestrian crossing can be used by overhead signs, streetlights, flashing lighting for illumination, push-buttons.
- At signal-controlled crossings, pedestrian crossing lines RTM3, should be used.
- Road signs.

Map 18: Maralal Transport Strategy Plan



Source: AIDAL, 2011

12.7 Environment Protection Strategy

The strategy aims to minimize impacts of human and natural activities on the environment, improve the aesthetic value of urban places, create a variety of

recreation spaces, conserve hill tops, wetlands, and riverines, and restrict human activities on disaster prone areas and climate change mitigation. The objective is to establish and maintain a clean and healthy urban environment in Maralal town.

Strategy 6: Solid Waste Management

Measures to Support the Strategy

Collection of solid waste

- Organize collection of waste at household/premises level by using method such as door to door, house to house or community bin service.
- Collection must be on a regular pre-informed or by acoustic announcement (without exceeding permissible noise levels)
- Give special consideration to devising waste collection in slums and squatter areas, as well as to commercial areas such as hotels, restaurants, offices, bars and others.
- Segregate at the source all recyclable waste as well as bio-medical waste to prevent special waste from being mixed with ordinary waste.
- Collect separate construction or demolition waste/debris and dispose of it following proper norms. Similarly waste generated in livestock stall feeding sites should be disposed of and regulated in accordance with council bylaws or use it for agricultural purposes.
- Prohibit burning of waste especially bio degradable that can be recycled or composed into manure for use on urban beautification.
- Do not permit stray livestock and animals at waste disposal sites.

Secondary storage of waste

- Make available sufficient storage facility in accordance to the qualification of waste generated
- Provide covered storage facility so that waste is not exposed to open atmosphere.
- Ensure that storage facilities or bin are of an appropriate design for ease in handling, transfer and transport.
- Ensure that manual handling and multiple handling of waste are avoided or are done with proper safety and care.

Transportation of waste

- Ensure that vehicles used for transport of waste are covered.
- Ensure that waste is not visible to public or exposed to the open environment, thus preventing the scattering of waste.
- Attend to storage facilities daily or appropriately for clearing of waste.
- Empty bins or containers before they start overflowing.

- Ensure that transport vehicles are designed so that multiple handling of waste is avoided before final disposal.

Waste disposal

- Organize for land filling as opposed to open disposal.
- Restrict land filling to non-degradable and non-recyclable waste.
- Ensure that land filling meets the specifications required.

Waste treatment

- Ensure that biodegradable waste is processed by composting, vermin composting or any other appropriate biological process for stabilizing waste and meet the standard required.
- Ensure that mixed waste containing recoverable resources follow the route of recycling.
- Incineration with or without energy recovery may be used in special care like waste from hospital, dispensaries and others.

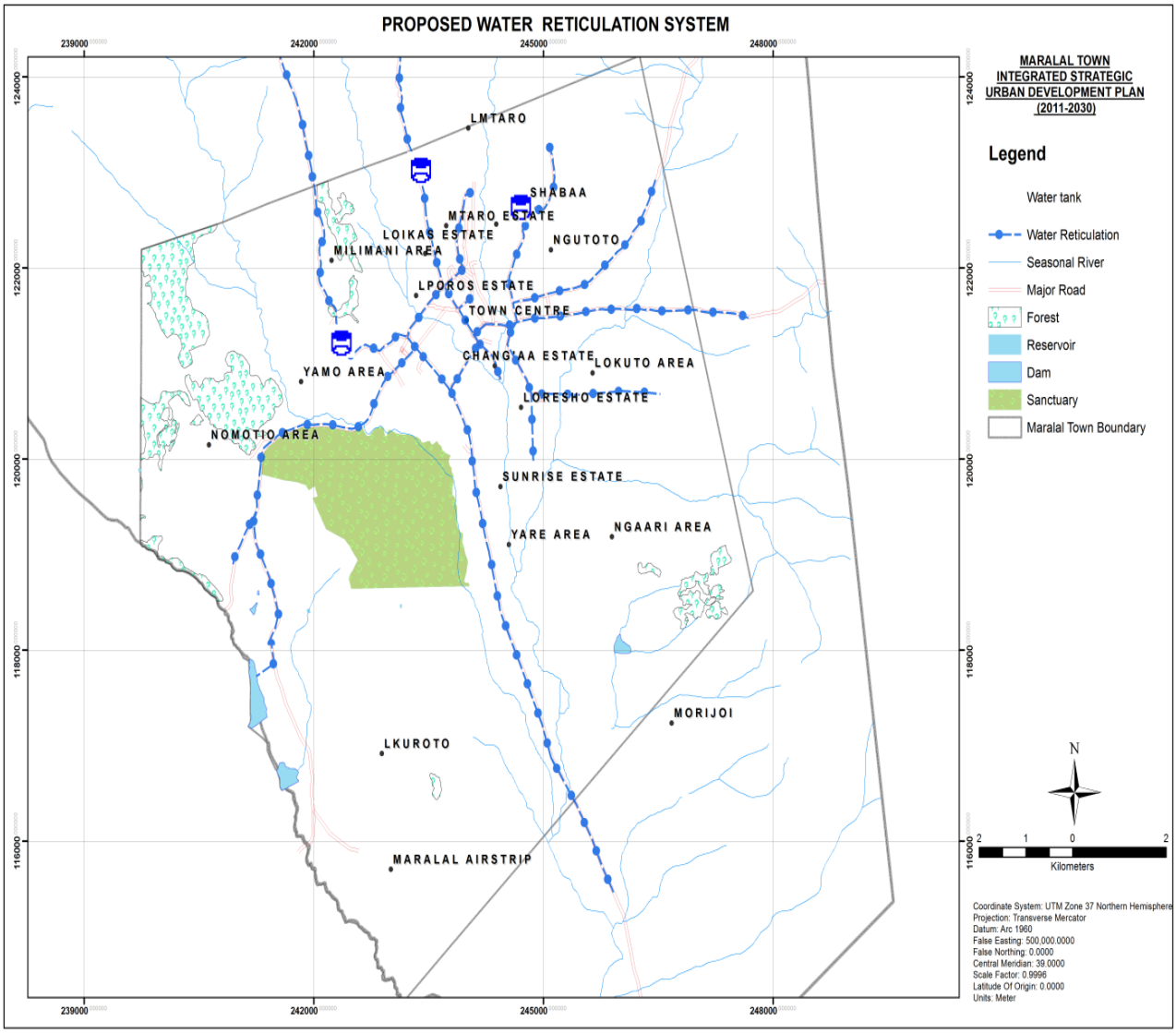
Increase access in water provision

Access to safe water and sanitation is a universal need and a basic human right. An insufficient access to water is not only bad for health, but also contributes to a poor food security and a lagging social development. Maralal town is situated within arid-semi-arid class of climate.

Measures to support the strategy

- SAWASCO to extend piped water supply to cover the whole town.
- Construction of new water dams and water intake plants.
- Drilling of boreholes in high ground water potential areas.
- Encourage rainwater harvesting.

Map 19: Maralal Town Proposed Water Reticulati



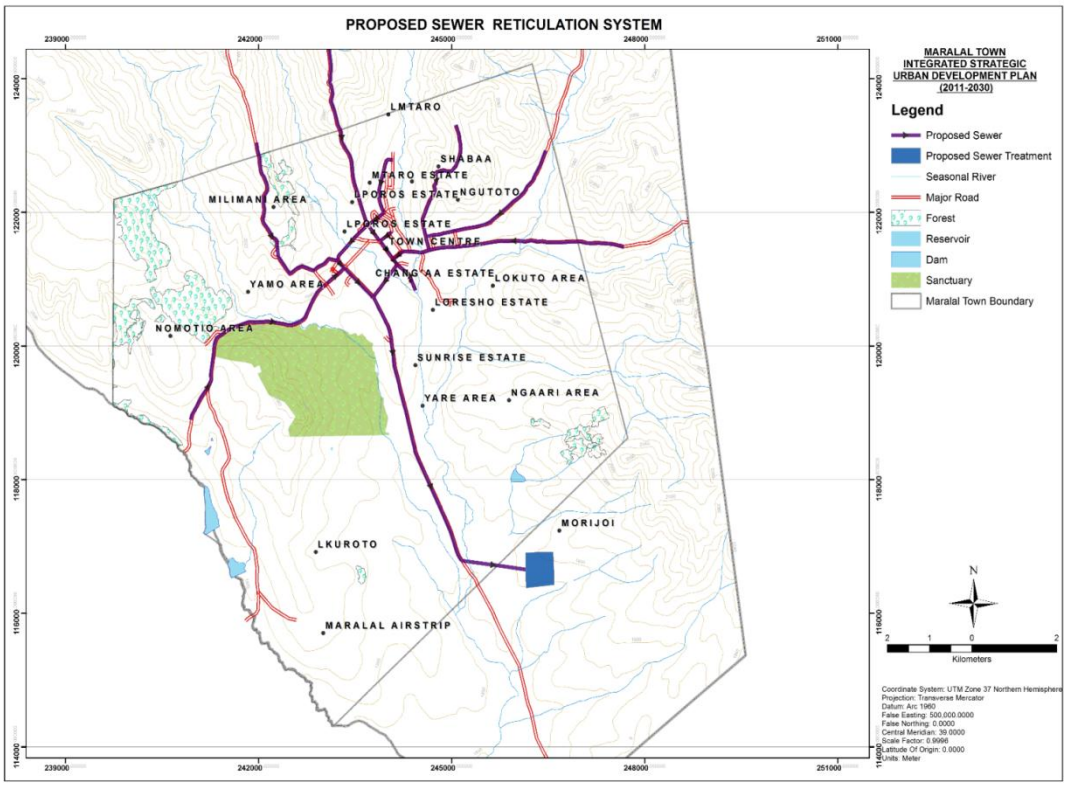
Improve and ModernizeWaste Water Disposal

Ensuring adequate sanitation facilities is one of the Millennium Development Goals (MDGs) goals. In the face of rapid urban growth, towns face great difficulties in providing sustainable infrastructure to their citizens. The character of urban growth is often informal and takes place predominantly in peri-urban areas or at city fringes. These results in a high number of people exposed to severe health and environmental risks because they are not served by the sanitation systems. According to the field survey, Maralal town has no conventional sewer.Samburu County Government through SAWASCO should install a sewer system in the town

Actions to actualize the strategy

- County government undertakes a master plan for development and maintenance of sewer system in the town.
- Provide sewer in the following areas Loresho, Milimani, Loikas, Changaa, St. Irene, Ngutoto, Lporos among others
- Proper maintenance of existing sewer reticulation.
- Allocate land at are for a waste water treatment site

Map 20: Maralal Town Proposed Sewer Reticulation



Strategy 7: Promote Private Public Partnership in Waste Management

Private sector participation

Waste management is a mandatory duty of the countyand takes a significant portion of that budget yet there are still issues that need to be addressed regarding disposal and treatment. Attempts have been made to revamp the waste management department in order to improve the reliability and efficiency of services but have shown limited or no significant effect. The situation is pathetic and that makes it necessary for the council to seriously consider available solution "outside the box" aimed at improving waste management services. Involvement of the private sector/partners in improving services in one of the options, with the council moving from being a service provider to being a regulator and service facilitator. This has worked well in some urban centers in Kenya like Nakuru, Kisumu etc though not perfect. However it has its own challenges and opportunities that calls for a carefully thought out plan to involve the private sectors.

Strategy 8: Storm Water Management

Measures to Support the Strategy

- Develop conventional storm water management system or

- Adopt the Low Impact Development (LID) and that is what we recommend for Maralal.

Strategy 9: Protection of Fragile Areas

Measures to Support the Strategy

- Stop irregular land allocation on fragile sites
- Acquire land for resettlement of those displaced from fragile areas.
- Undertake inventory of those who have been settled on fragile site
- Development of a resettlement plan for implementation

Strategy 10: Regulation of Residential Neighbourhoods

Measures to Support Strategy

- Regularize the settlements
- Identify the squatters
- Regulate land sub division

Strategy 11: Mitigate Water Pollution

Measures to support strategy

- Ensure that every structure and premises have adequate on site sewerage management system
- Control erosion on farms and fragile sites and
- Construct appropriate storm water management system.
- Monitor action by the Council and enforce the laws strictly to the letter.

Strategy 12: Control Soil Erosion

Measures to Support Strategy

- Restoration of the forest and degraded lands.
- tree planting, rehabilitation/repair of highly degraded sites,
- Soil and water conservation structure development to reduce storm waters.
- To institute control measures at all levels
- To reduce soil erosion by increasing vegetation cover on hills, plots, farms roadside and all utility lands through tree/vegetation planting. Use roadside engineering soil control techniques, terracing sloppy areas, pave dusty roads etc
- To institute laws that govern dumping from construction and on any site after demolition
- To apply soil erosion preventive techniques
- To terrace all lands in sloppy areas
- To provide urban storm drainage system
- To fill open galleys, abandoned wells, disused pit latrines and other open areas
- To control land pollution sources

- To ensure material from construction/demolition site is dumped in the council official dumpsite.
- To control vegetation clearing and tree cutting in the catchment areas

Strategy 13: Restore and Protect Nomotio Dam Buffer Zone

Measures to Support the Strategy

- survey the dam area and mark it with permanent bacons,
- relocate the site for slaughter house,
- restore the area with appropriate vegetation using both artificial and natural regeneration
- Draw a management plan for the farms around it which must include the dos and don'ts followed by public awareness.

Strategy 14: Control Air Pollution

Measures to Support the Strategy

- Identify all sources of air pollution
- Public awareness and education.
- safe dispose or reuse rotting organic matter
- Improve hygiene standards in pit latrines/waterborne toilets and urinals.
- Promote use of cleaner domestic energies such as electricity.

Strategy 15: Enhance the aesthetics of the town

Measures to support the Strategy

- control outdoor advertisement boards, erection of sign posts, bill boards
- Clearing of rudimentary material and vegetation removal.
- Remove all poorly sited illegal structures applying legal procedures.

Strategy 16: Control Noise Pollution

Measures to support the strategy

- Identify all sources of noise pollution and
- institute lawful measures starting
- Public awareness and education.
- Implementation of EMCA rules to control all noise.

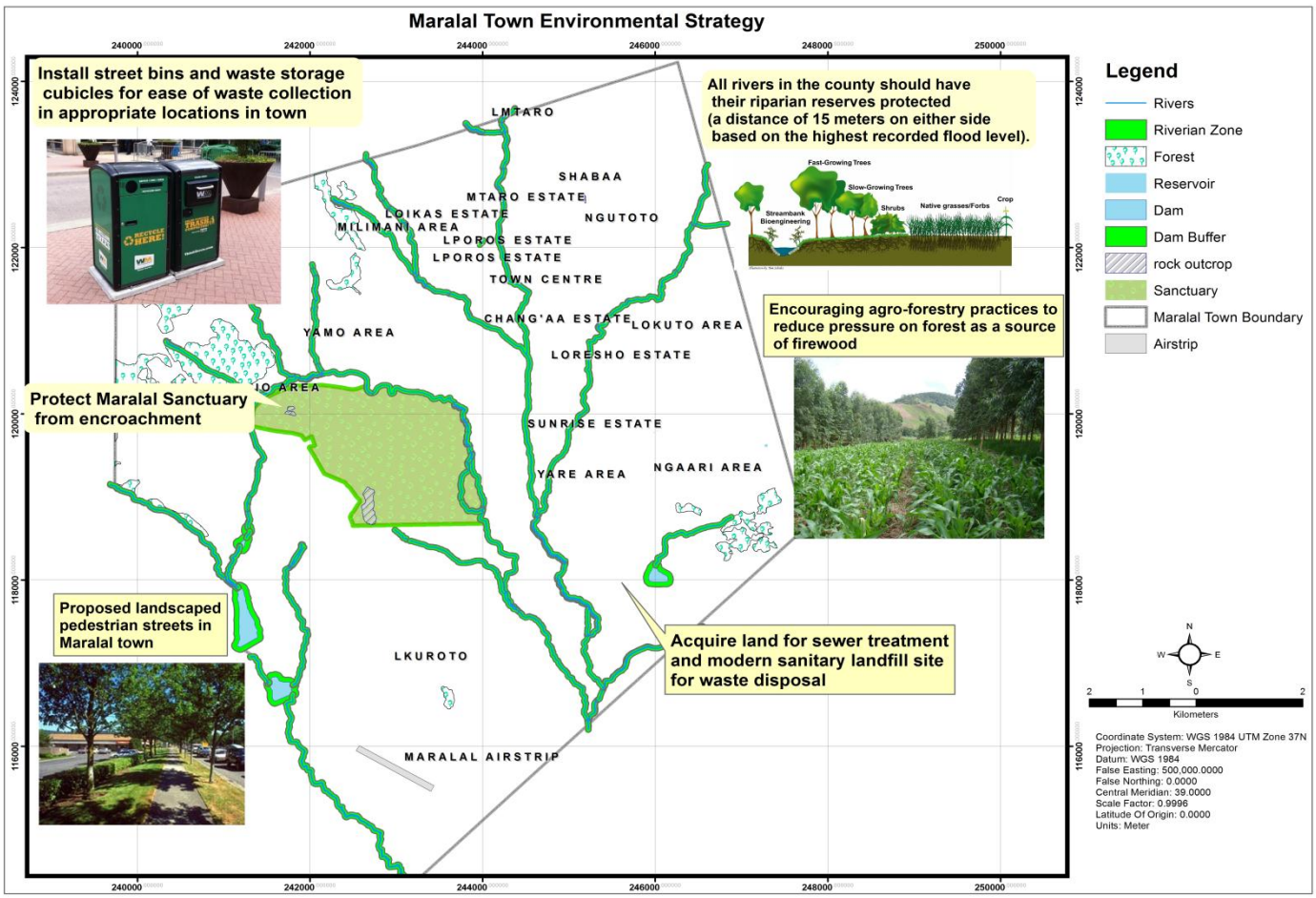
Strategy 17: Proper Management of Natural Resource Use

Measures to support the strategy

- Identify all sand harvesters register them
- Identification of sand harvesting areas, designate and allocate them to sand harvesters with clear harvesting code.
- Collect sand harvesting fee and use monies obtained on environment management issues.
- design/develop an appropriate method of house construction,
- Enact bylaws and enforce it using the bylaws.

- Enforce the Forest Act 2005and county environment bylaws to stem continuous degradation of the forests and other fragile sites.
- In green energy and development of energy saving devices for residents.

Map 21: Environmental Protection and Conservation Strategy



12.8 Economic and Investment Strategy

The objective of the local economic development policy for Maralal town is to unlock and support a dynamic, sustainable local economy that is in tandem with the economic pillar of Kenya vision 2030. This economic development strategy provides a framework for a collaborative partnership approach, which will to improve the town's regional competitiveness and the acceleration of economic growth, job creation and poverty reduction.

Strategy 18: Provide facilitative Business infrastructure

Measures to Support Strategy

- improvement of feeder roads to improve transportation of goods
- construction of stalls and sheds for businesses in town,
- expand electricity coverage, promote cottage and light industries,
- improve conditions of business and living conditions,
- improvement of all existing markets and market centers;
- Improve link roads to markets for products in the neighboring counties.

Strategy 19: Promote Agri-business

Measures to support the strategy

- Develop livestock processing enterprises close to urban areas to support livelihoods for both urban and peri-urban population;
- Initiate specific programmes granting support to small-and medium-sized enterprises and livestock keepers in urban areas to be funded by the national and Maralal county governments; and
- Sustain the focus on the establishment of infrastructure linking urban and rural markets to enable both urban and rural residents to access both markets and services.

Strategy 20: Promote Tourism

Measures to Support the Strategy

- Allocate land for the expansion of tourism facilities including upgrading the expansion of the existing ones in order to increase bed capacities.
- Introduce mountain ecotourism activities.
- Discourage human settlements on wildlife migratory corridors.
- Streamline revenue collection and at tourism facilities.
- Empower of the local communities through education and skill enhancements to enable them participate more meaningfully in tourism enterprises.

Strategy 21: Improve Market Competitiveness of small holders

There is an urgent need to improve market competitiveness of smallholder and livestock farmers in Maralal through dissemination of information of marketing, skills

using the most efficient and available communication tools so as to achieve quality, safety and meet customer demands.

Measures to Support the Strategy

- Use the waters sources sustainably for domestic, livestock and small scale irrigation.
- Start light industries for animal feeds.
- Introduce better breeds.
- Provide market sale through cooperatives.

Strategy22: Promote Cooperative Development

Measures to support Strategy

- Capacity building to enhance leadership in cooperatives
- Form more cooperatives to augment the services of the county by investing in infrastructure development to enhance agriculture productivity,
- support from the county government and the community in ensuring transparency and accountability,
- Private sector – large businesses, development associations will need to facilitate and lobby for improvement of the town, increase investment and form association to promote urban development.
- Non-state actors to participate in key investments of the council, and County Administration in order to facilitate public–private partnerships for the growth of the town.
- Funding by financial institutions, businesses private sector, develop cooperatives to participate in investments for the growth of the town, work with Council to improve the livelihood of the community members through support of various businesses, and ensure provision of key amenities and services that support the growth of their business.
- Support the formation of housing cooperatives and organized groups, etc.

Strategy 23: Promote Industrial Development

Measures to support strategy

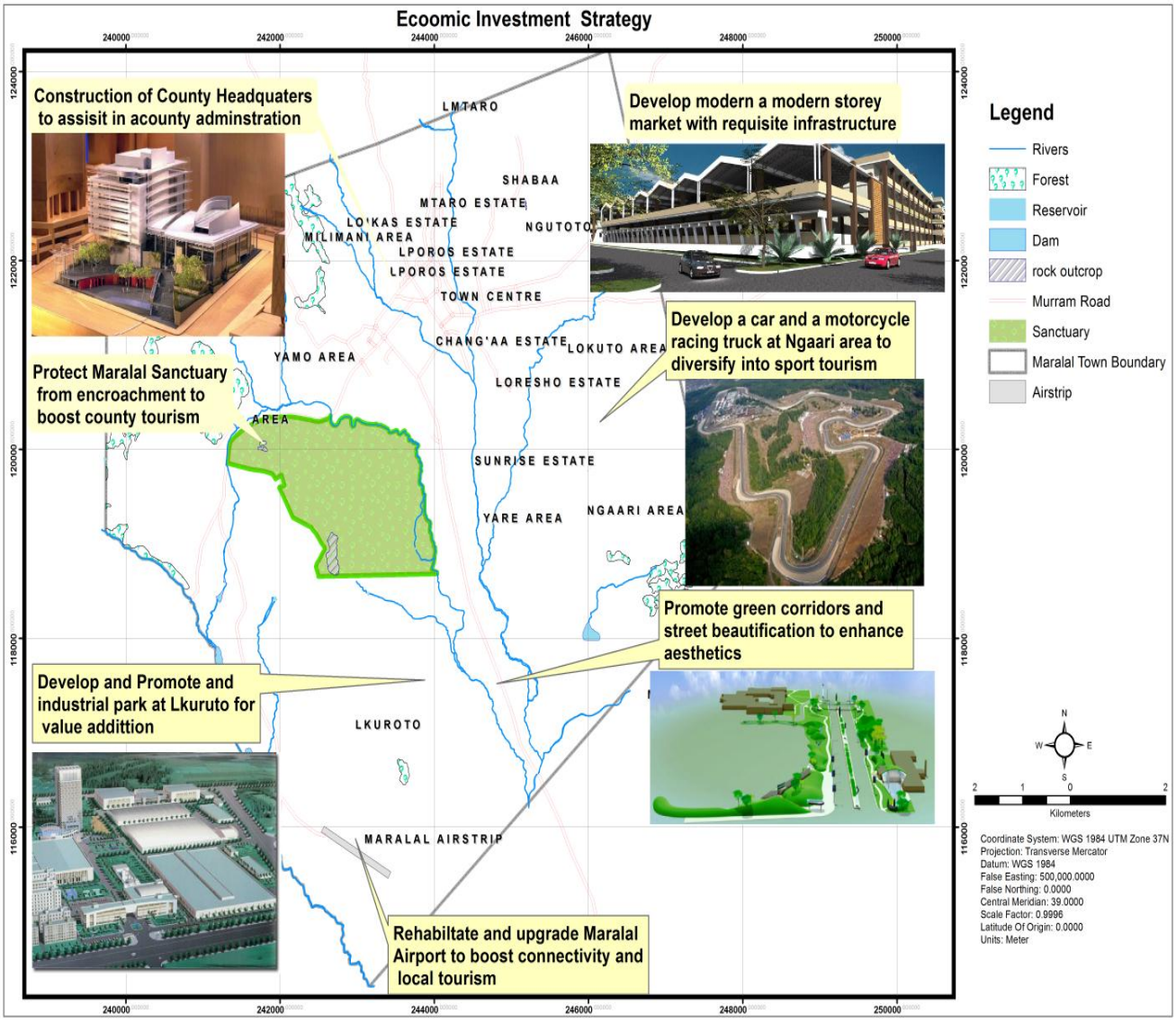
- Provide land for Industrial purposes for instance the owners could be allowed to enter into direct deals with private entrepreneurs for purposes of putting up light Industries with the Town having an oversight role as well as involved in the infrastructure provision. Their local contributions will be in the form of land and a profit sharing could work out by the two bodies or alternatively be leased out.
- Enhance honey processing through extension services and improvement of bee-keeping technology.
- Expand "jua- kali" sheds.

Strategy 24: Augment employment creation

Measures to support strategy

- Promoting youth development initiatives to reduce youth unemployment and addressing other needs of the youth in urban planning and development i.e. the need to have recreational facilities and jua kali sheds
- Revamp the dairy industry to generate and create more employment opportunities for the youths and women
- Light Industries in off Farm and other farm related enterprises
- develop "jua-kali" sheds to facilitate job creation for the youths,
- provide essential facilities for the youths and Promoting youth development initiatives to reduce youth unemployment and
- Improvement of skills through tertiary institutions such as polytechnics and vocational training, skills development for youths reduction of unemployment.

Map 22: Capital Economic Investment Strategy



12.9 Housing Strategy

The proposed local housing strategies are a critical part of the new framework for development of Maralal Town, particularly in terms of their influence on housing land supply in development plans and their role in influencing future housing investment. Areas covered by the local housing strategy include:

- A Description of the extent and type of housing need and demand;
- The local authority's strategic vision for the future of housing across all tenures, taking account of national priorities;
- How the standard of housing will be improved;
- A clear strategic direction for housing investment;
- The outcomes required to achieve this vision; and
- Specific commitments made by the local authority and key partners to enable the delivery of outcomes as shared priorities.

Vision

It is envisioned that Maralal achieves housing that supports the needs and aspirations of its community; that enables choice and accessibility by providing quality, affordable and sustainable homes. The expected outcomes are:

- Increase housing supply and improve access to appropriate housing including affordable housing;
- Improve the condition and energy efficiency, and where appropriate the management, of existing housing stock;
- Fewer people become homeless;
- People with particular needs are able to access and sustain their choice of housing including independent living, where appropriate; and

Strategy 25: Housing Need and Demand Assessments

Measures to support Strategy

- Undertake housing needs and demand assessments
- Align local housing strategies and development plans to achieve more effectively the aim of delivering new homes in the right places. Taking account of the scale and nature of the identified housing requirements and opportunities to create sustainable mixed communities
- Allocate a generous supply of land for housing on a range of sites within each housing market area.
- Set housing supply targets covering all tenures and allocate sufficient available land through development plans to meet these targets. Housing supply targets are to include new housing supply, replacement housing, empty properties to be brought back into use and conversions.
- The housing need and demand assessment, local housing strategy and development plan should be reviewed in conjunction, every five years.

Strategy 26: Augment the Housing Stock

The quality of housing generally, ranges from fairly poor to average condition. A significant potential for increased residential development exists within many of the area's larger lots. These are concentrated around Milimani area and Ngaari area.

Measures to support strategy

- Densification of development in existing housing neighborhoods by adopting new standards and guidelines in housing development
- Public sector involvement through development contribution policies
- Provision and or improvement of infrastructure and services in the housing neighborhood
- Supply adequate suitable land for residential
- Rehabilitate Council and Government housing
- Promote public private sector partnership in infrastructure and services provision and housing development

Strategy 27: Enhance Supply of Affordable Housing

Measures to Support the Strategy

- Efficient Service provision such as water and sanitation, electricity, storm-water drainage, wastewater disposal and solid waste disposal.
- Develop sustainable neighborhoods with commercial, recreational, and educational facilities
- Develop and enforce distinctly cited building standards for the minimum allowable land, construction materials, and plot coverage and plot ratios especially with regard to local climate.
- Increase government housing projects.
- Outlining action area plans with necessary guidelines for development in the plan.
- Utilization of locally available building materials such as thatch and limestone.
- Utilization of new inventions on building materials for construction of affordable & adequate low-income housing.
- Setting aside land for private housing developers with the aim of meeting the housing demand within the township.

Strategy 28: comprehensive Settlement Upgrading

The overall objective of the Maralal town development plan for settlements is to improve the livelihood, as well as social, and environmental conditions of town residents.

Measures to Support the Strategy

- Planning for New Settlements to prevent Slum proliferation-Need to anticipate and facilitate the development of adequate housing
- Densification and Decongestion-Densification on public housing (Council and government)
- Upgrading existing informal settlements

- Enhancing ownership rights through settlement upgrading -give ownership of the plots and subsidies in form of small loans especially
- Protection of the poor's property rights -civic education, legalizing and regularizing the properties
- Provide efficient transportation networks –provide access and feeder roads in the informal settlements
- Install physical and social infrastructure in unplanned areas -Re-planning, enforcement of the plans
- Adopting Acceptable, Negotiated and Participatory Relocation Mechanisms –this will make the whole process to be widely owned and supported on sustainable basis
- Public Private Partnership on Human Settlement Upgrading

PART III: ACTION AREA PLANS AND PLAN IMPLEMENTATION FRAMEWORK

CHAPTER 13: ACTION AREA PLANS

13.1 Overview

The general purpose for Action Area Plans is to ensure that development is undertaken in a sustainable and integrated manner. The action area plans set down the framework for the sustainable, phased and managed development of specific areas. These plans provide specific planning policy and guidance for an area where significant regeneration or investment needs to be managed. They address the specific challenges of an area and to specify the required land uses in particular locations and identify key strategic interventions.

13.2 Action Area 1: Central Business District and Civic Area

13.2.1 Challenges

- The central business district is presenting characteristic of decay with old buildings, some of temporary (semi-permanent nature).
- Despite clear provision of adequate framework and road network system; there has been very little, if any improvement on the road in terms of paving; street lighting, street furniture, pedestrian ways; parking, drainage and greening.
- The CBD is extremely uneconomically low density; low skyline does not justify property value. It is underdeveloped, its unsophisticated and does not present the characteristics of a modern central business district with the ability to play the important role of a commercial hub.
- It is prone to environmental hazards such as flooding, faulting; dust during the day season; humidity and high temperature and solid and liquid waste disposal.

13.2.2 Objectives

- Bring the CBD up to the functional level to play the role of an administrative, commercial towns and hub.
- Introduce in the CBD a comprehensive transportation strategy; to help modernize it. Make it efficient and give it form.
- Enhance environmental and quality.
- Densify the CBD to optimize use of land.
- Improve the provision of quality of infrastructure to modernize the CBD and prepare it to play the central role in development of Maralal Town and Samburu County.
- Create green spaces within the CBD to attract investment in recreation and entertainment capital required.

13.2.3 Measures

- Converting the current stadium into a central park.
- Remodel the existing park around the civic area.

Figure 5: Artist impression of the proposed development on existing park



Source: AIDAL, 2011

- Locate the county headquarters within the civic area.
- Remodel the civic area into a modern city of the county headquarters integrating all the administrating activities/functions.
- Redesign and paving of road network at CBD promoting now motorized as preferred mode of transport.
- Provide for modern markets

Figure 6: Proposed Redevelopment of Market





Source: AIDAL, 2011

- To undertake landscaping and urban design.
- Create buffer for fault line and undertake landscaping and greening around the fault corridor.
- Regulate flow of water upstream by dam. Canalize the river flow especially in fragile and built up areas.
- Enhance minimum height for CBD area to ground phase 3.

Encourage pedestrian orientation: pedestrian-friendly downtowns make them a more desirable destination for visitors and encourage residents to walk and take advantage of the resources and amenities available downtown.

Figure 7: Proposed landscaped pedestrian streets in Maralal town

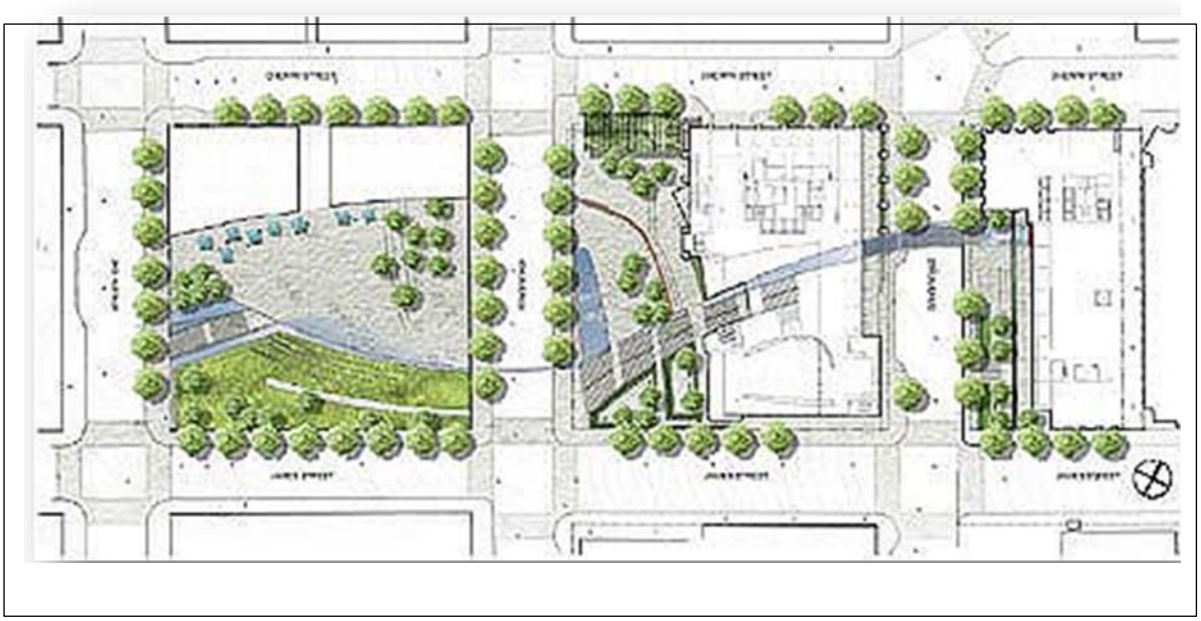


Planting strips to provide: Room for street furniture; Place for landscaping and shade trees; A better environment for wheel chair users, Better absorption of runoff water, decreasing overall drainage requirements.

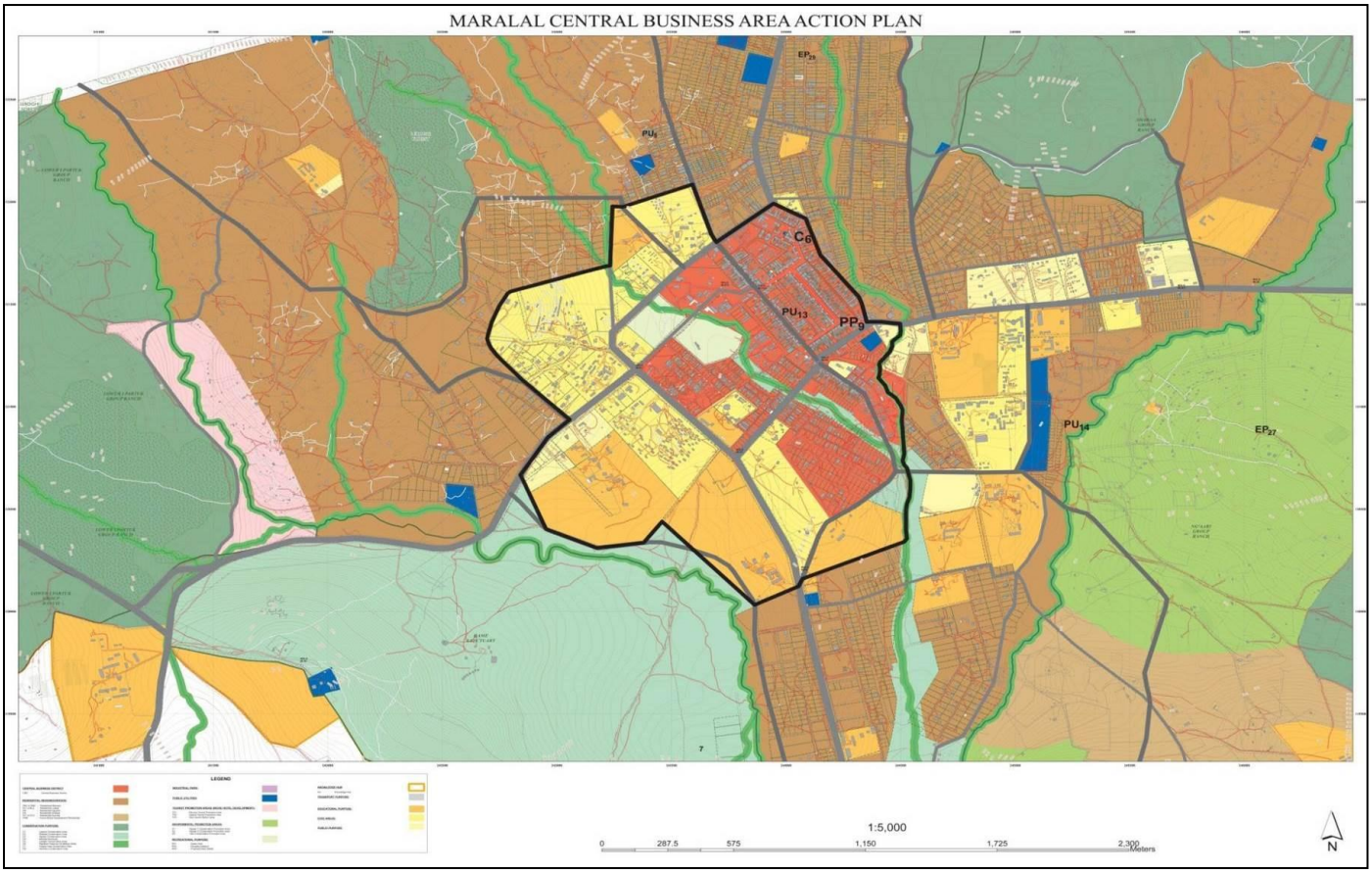
Figure 8: Model of future Maralal County Assembly



Figure 9: County Assembly Open Space Site Plan



Map 23: Maralal Central Business Area Action



13.3 Action Area 2: Loikas Area

13.3.1 Challenges

- Area lacks order and is presenting characteristics indicating that it is likely to develop into a slum settlement yet it is very close to the CBD and yet the land is of high value.
- The area despite having the advantage of proximity to CBD is devoid of essential services to support residential development and urbanization in general.
- The types of shelter are made of temporary material which make the place unsightly and impact negatively on the aesthetic value of Maralal town.
- It also present serious environmental problems such as liquid and solid waste which is wept by storm water into the central business district of the town and also pose a health hazard.
- There is no clear definition of public streets and other public facilities such as schools, recreation and open spaces.
- Given its proximity the area currently carries a very small population.

13.3.2 Objectives

- Create a compact and mixed residential neighborhood to provide quality and affordable housing to showcase and spur similar development in other residential neighborhood.
- Provide orderly development to improve the character of the area
- To provide a framework for provision of infrastructure and services such public streets; public spaces; public services and much infrastructure.
- To provide guidelines and standards for housing development to improve quality of shelter provided.
- To set measure improve quality of empowerment and sanitation such greening; pedestrian ways; solid and liquid waste management and storm water drainage.
- Increase the capacity of site to accommodate more people in the quest to mitigate urban sprawl and create a compact city.

13.3.3 Measures

- Pairing of roads in the neighborhood with provision of pedestrian walkways to the CBD
- Planting of appropriate trees along the roads/streets and within the individual costs
- 10% of each plot should be for tree cover.
- Construct and extend sewage trunk line to the neighborhood in the 1st phase of development sewage development.
- Construct solid waste collection points in appropriate locations.
- Extend water reticulation to the neighborhood.

- Organize neighborhood stakeholders into housing cooperative to spearhead appropriate housing development.
- Formulate housing development by law targeting this neighborhood.

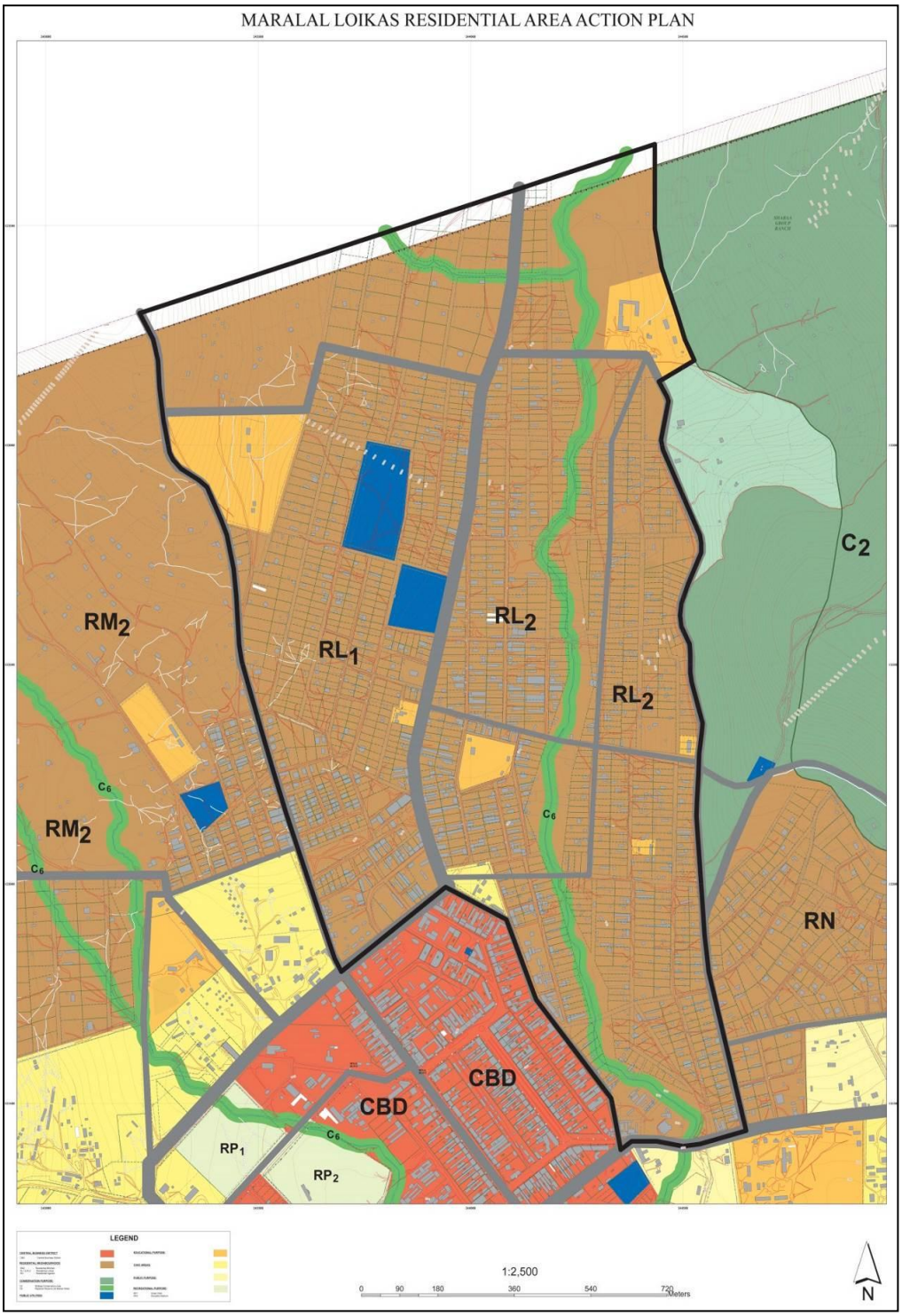
Figure 10: Proposed housing developments with emphasis on landscaping



Providing neighborhood friendly streets and trails:

- sidewalks, trees and a grassy area between the street
- Trails to parks and open space promote their use.

Map 24: Maralal Loikas Residential Area Action



13.4 Action Area 3: Riverine Environment

13.4.1 Challenges

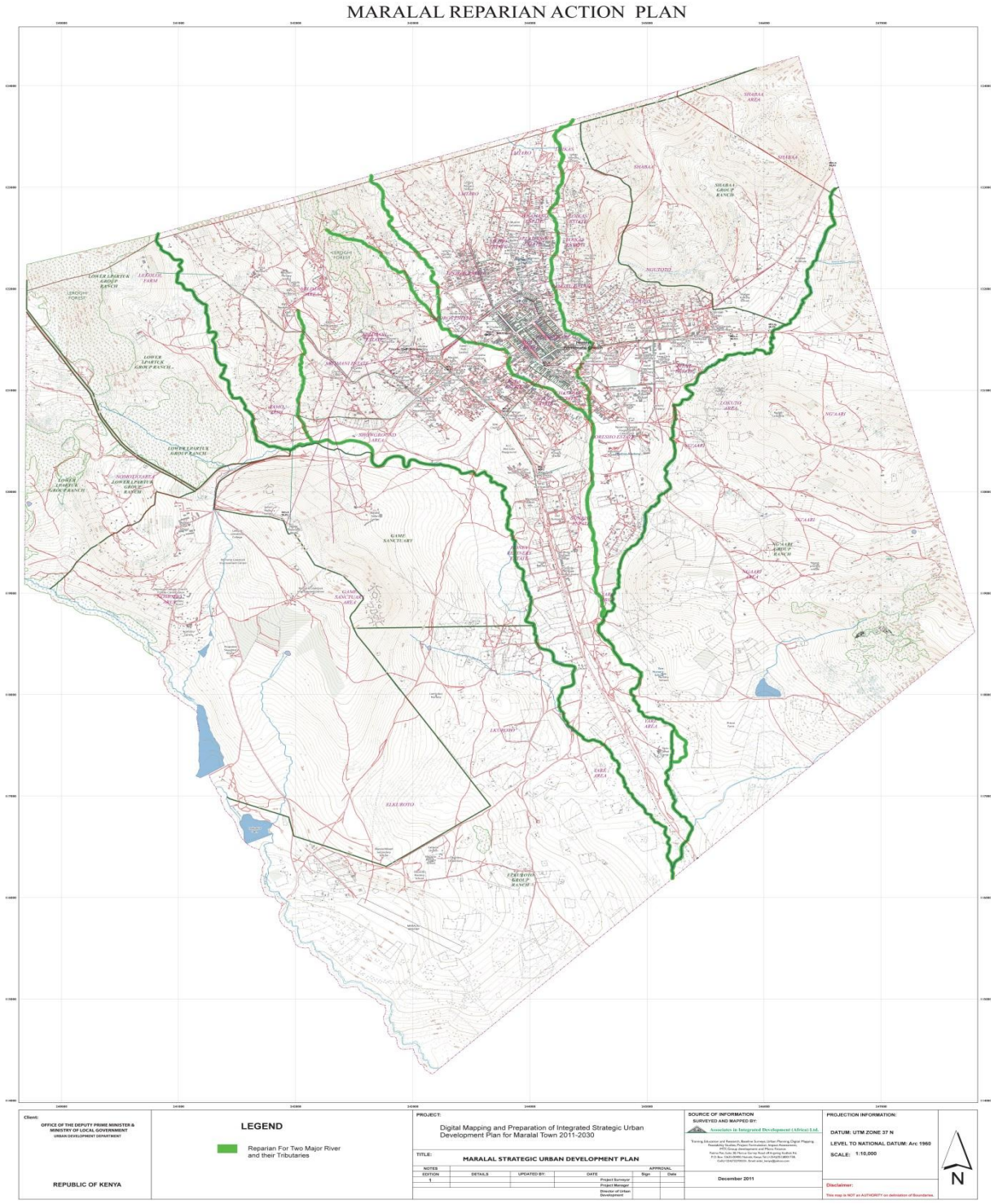
- River pollution from developments up-stream of the two rivers.
- Encroachment into the river reserve.
- Flooding of the lower section particularly at the confluence of the two rivers.

13.4.2 Objectives

- To protect the riverine environment particularly in the built up area and utilize it sustainably on an environment asset.
- Regulate flow of the river.
- Mitigate flooding
- Prevent land encroachment or river reserve.
- Promote riverine environment for recreation and enhancement of aesthetic of the town.

13.4.3 Measures

- Canalize river in heavily built up area.
- Landscaping of riverine and creating entertainment amusement parks and nature trails along the riverine environments.
- Providing of river in appropriate location.
- Establish pedestrian crossing in appropriate places in the river to connect CBD with residential neighborhood.
- Establish an appropriate cleaning regime for the riverine environment.



Map 25: Maralal Riparian Action Plan

CHAPTER 14: PLAN IMPLEMENTATION FRAMEWORK

14.1 Overview

The plan implementation Strategy is the translation of the identified strategies into specific and deliberate actions so as to achieve the planning strategic goals and objectives. It is also about the manner in which responsible agencies shall develop, utilize, and amalgamate organizational structure, to follow strategies that lead to delivery of the envisioned Maralal by 2030. The plan implementation framework is therefore a combination of interrelated activities undertaken according to standards and schedule and which are coordinated in advance. This is the final and most important stage, following the identification of goals and outlining of measures and activities to achieve them. This chapter therefore indicates: the strategic projects, the quick wins, short term, medium term and long term projects that need to be implemented sequentially in order to bring about meaningful and sustainable development of Maralal Town in the next 20 years. Further options for coordinating and financing of development are suggested.

14.2 Strategic Projects

Critical projects are transformative, have higher multiply effects (forward and backward linkages) and have the highest potential to kick-start the economy of Maralal town. These projects are categorized into facilitative, productive and perceptive. ***Facilitative*** are those projects/programmes which enable the productive sector to operate effectively and efficiently. ***Productive*** projects are those which produce goods and services directly and lead to generation of employment and income. ***Image enhancing*** projects are those that improve the image and beauty of the town, have the potential to attract investors and give the town unique identity.

14.2.1 Facilitative Projects

Water

- SAWASCO to expand sewer and water infrastructure to serve the whole of the planning area. Partner with funding institutions to improve a dam at Buena Dam.

Transport

- Ministry of Transport, KURA and the county government to acquire and develop public transport routes and bus stops within the town.

Energy

- Kenya power in the region to improve the Main Ring Circuit around Maralal Town to increase electricity reliability, upgrade primary stations from 7.5MVA- 33MVA, and transmission substation from 23MVA-46MVA.

14.2.2 Productive Projects

Industry

- Develop an industrial park to promote industrial activities and warehousing for value addition of livestock product at Yare.

Tourism

- Develop a Samburu Cultural Centre museum and redevelop Kenyatta House facility.
- Development tourist class hotels and facilities

Knowledge

- Development of a knowledge Park in Lomorio Area

14.2.3 Image Enhancing Projects

Design and Redevelopment

- Redesign and redevelop the land around the former Town council offices, County Government Offices and DC offices to a multi storey county headquarters to accommodate all administrative functions to create a civic centre and place of high aesthetic value.

Green Spaces

- Initiate river rejuvenation along Yamo River with nature trail.
- Greening programme the major streets
- Development of recreational parks in the CBD and residential neighborhoods

City Gates

- Development of thematic and historic monuments at the entry points to the Maralal Town.
- Defining the entry points and provision of indicative signature
- Naming of streets

14.3 Quick Wins

Projects enumerated below as quick wins are those projects that will be achieved immediately preferably within a period of 100 days. These projects have high visibility and serve the purpose of rallying support for subsequent planning activities. They also require low funding:

- Formation of neighbourhood fora to enhance participation in plan implementation, monitor and evaluation
- Waste sorting, and recycling
- Youth, CBOs and NGOs to participate in tree nurseries programmes and activities on riverine areas
- Establish a system of scrutinizing development applications for approval, supervision and enforcement of development

14.4 Capacity Building

These are projects to be undertaken immediately and continuously for purposes of enhancing the ability to implement projects during the planning period. They include:

- Training of staff in the use of the plan for decision making,
- Establishment of urban planning directorate,
- Equipping of service departments
- Periodic public education, sensitization and awareness creation.

14.5 Short Term Projects

Projects enumerated here below are short term actions achievable within a period of 1– 5 years. These projects also serve the immediate needs of the community, less costly, does not involve many actors and form a basis for medium and long term projects:

a) Public Utility

- Development of public toilets at strategic points within the CBD through public private partnership
- Acquire land and develop a solid disposal sanitary landfill

b) Safety and Security

- Street lighting on all identified roads. The measure to be undertaken by the county government in conjunction with private partners

c) Transport

- Roads and street naming in the CBD in partnership with the private developers
- Develop Bus Park to modern standards.
- Reconstruction and paving of main streets

d) Social Infrastructure

- Develop the stadium to international standards
- Creation of a central park
- Developing recreation in residential neighbourhoods.

e) Public Purpose

- County government to redevelop the land around the Municipal council offices, County Council Offices and DC offices to a multi storey county headquarters to accommodate all administrative functions and release land for greening.

f) Recreation

- Greening of the CBD and redevelop the open spaces into recreational parks

g) Economy

- Development of industrial park at Yare

- Redevelopment of the open air market

h) Energy

- Kenya Power Maralal region to improve the Main Ring Circuit around Maralal Town to increase electricity reliability.
- Kenya Power Maralal region to upgrade primary stations from 7.5MVA- 15MVA, and transmission substation from 23MVA-46MVA.

14.6 Medium Term Projects

Projects enumerated here below are medium term actions achievable within a period of 5-10 years, require more collaborators than short term, require more inquiry before commencement, acquisition of land and need wider consultations among all the involved partners:

a) Environment

- Conservation of riparian reserves, hilltops and wetlands by NEMA, green town committees

b) Housing

- Redevelop and give security of tenure to all informal settlements through public private partnership and neighbourhood associations
- NHC and Samburu County Government to redevelop all public and government to modern houses

c) Economy

- Develop the Knowledge Park at Nomotio
- National Museums of Kenya to redevelop a modern museum around the Kenyatta House

14.7 Long Term Projects

Projects enumerated here below are long term (above 10 years) actions expected to have been achieved by the end of the planning period, require phasing, feasibility studies, major capital investments, donor funding, and wider consultation

a) Transport

- Kenya National Highway Authority (KeNHA) to reconstruct and expand Maralal-Rumuruti trunk road to tarmac
- Kenya Urban Roads Authority to reconstruct and expand Maralal-Baragoi to tarmac standards
- Kenya Urban Roads Authority to reconstruct and expand Maralal-Baragoi
- Internal roads i.e. within the CBD and other action areas
- Expand the programme of road paving to the residential neighbourhoods
- Develop the Maralal Airstrip to modern standards

- Development parking facilities and street furniture

b) Economy
- Upgrade the industrial park into a special economic zone

c) Social infrastructure
- upgrade Maralal hospital to level 6 hospital
- Enhance the knowledge park to regional knowledge hub

d) Trunk infrastructure
- SAWASCO to expand sewer and water infrastructure to serve the whole of the planning area. Partner with funding institutions to expand water supply to accommodate the anticipated population increase.

e) Recreation
- Expand tourist facilities to the urban fringe area
- Develop nature trails, viewpoints, camp sites and adventure mountain climbing in the urban fringe

14.8 Coordination Framework

At policy and institutional levels the coordination focuses on facilitating:
- The understanding and implementation of strategies and measures by the government and non-government institutions;
- Dialogue between all partners and the government to create conditions that favour the adoption of the plan.

At an operational level coordination is mainly concerned with improving efficiency of actions through:
- Information exchange;
- Facilitating administrative procedures as much as possible;
- Ensuring the financing of critical activities, directing resources to priority areas and avoiding overlapping activities.

To enhance good coordination, it is recommended that:
- People in the planning area to begin reinforcing the immediate and personal initiatives of this plan
- The quick wins and immediate interventions be cleared to pave way for the short term and medium term strategies that will ultimately prepare a way for the long term objectives

14.9 Financing Framework

The implementation of Maralal town ISUDP requires the best elements of organization and management. The capability of authorities to implement the plan

greatly inclines on their financial stability. This provides the fundamental basis for having a well-organized and coordinated departmental structures and organizations.

Public Finance

Central Government Funds

- County Fund
- Equalization Fund
- Constituency Development Fund (CDF),
- The Women Enterprise Development Fund,
- The Youth Enterprise Development Fund,
- The Constituency Bursary Fund

Samburu County Government Finance

Source of finance: National revenue allocation and Revenue Funds, Bus and vehicles parking fees, Land based taxes, Market and slaughterhouse fees, Single Business Permit, Fees and Charges, public private partnership

Grants and Donor Fund

- International funding mechanisms such as the World Bank and African Development Bank to finance capital projects such as upgrade of Maralal Hospital to Level 5, construction of an Knowledge park, Rumuruti-Maralal Road etc

Public Private Partnership Funding

Projects include:

- Funding of small and medium enterprises by the Micro finance institutions
- Service provision including street lighting, water supply, solid and liquid waste management,
- Redevelop Existing Markets and bus-park
- Slaughter house development and maintenance,
- Housing provision and redevelopment of informal houses
- Redevelopment of the hotels, lodges and restaurants development.
- Conservation of riparian reserves, hilltops and wetlands through youth programmes
- Maintenance of bus-parks including main bus park.

14.10 Community Participation Framework

The main aim is to improve the effectiveness and validity of implementation processes and to increase the acceptability of plan proposals and decisions. This will fully involve the community in investment choices and management decisions.

- Formation of neighbourhood based environmental management committees
- Active NGOs World vision whilst some of the active CBOs including Green Town Environmental Initiative, among others to participate on environmental governance.

- The donor community through registered NGOs and CBOs to develop riverine and riparian reserves as nature trails
- Public to continuously monitor developments in Maralal town and within their neighborhoods
- Residents to comment on public notices informing them of proposed developments within their neighborhoods and cooperate appropriately.

14.11 The Plan Implementation Matrix

The Plan Implementation Matrices (PIM) below highlight the individual programmes of action which need to be implemented towards achieving the proposals which have been put forward in the Plan. The area specific programmes or actions have been phased accordingly and have indicated the actors to spearhead the implementation process. The matrix also gives indicative costing for each proposed program or action. It may not have been possible to capture each and every programme of action in the implementation Matrices but details of these programmes and activities are available in the detailed sectoral plans.

Planning Issue	*Strategies*	*Actions*	*Area*	*Actor*	*Cost(Ksh.)*	*Time Frame*
Underutilized CBD	• Achieve maximum utilization of the CBD by providing basic infrastructure	• By laws created to regulate building heights Rejuvenate the existing central park and acquire land for another park	CBD	County Government KURA, KERRA, KENHA	1.2B	Short term Long term Short term
Inadequate housing and slum emergence	• Promote adequate, affordable and efficient housing to Maralal residents	• Rezoning of residential areas • Encourage formation of cooperative societies to invest more in real estate • Identify suitable alternative areas within the town and its hinterland for comprehensive housing development • Adopt Integrated Neighborhood Planning approach where services are within reach of residents • Provision of piped water, sewer connection, storm drainage	LporosLoikas Town wide	County Government, NHC, SAWASCO	5.5B	Short term Short term Medium term Long term Long term
Lack security of tenure	• Provide security of tenure	• Provide land holding documents(leases and titles) • Approve the development plan • Use of modern GIS systems in land registry	Entire Town and hinterland	County Government Director of survey	150M	Short term Short term
Environmental degradation	• Promote environmental conservation and management	• Enforcement of NEMA laws to curb land degradation • By laws requiring all town residents to have waste bins • Promote waste recycling • Construction of closed storm water drainage system • Control and regulation of quarrying	Town wide Town wide Town wide Town wide	County Government, NEMA, Community	170M	Short term Short term Long term Short term

		activities • Inconsistent waste collection				
Low industrial potential	• Promote Maralal town as an industrial town	• Compulsory acquisition of encroached land • Reopening of collapsed industries and establishment of new manufacturing industries • Efforts to legitimize roadside establishments such as 'jua kali' industry	Industrial zoning	County Government National Government	1.5B	Medium term Short term Long term
Inadequate recreational facilities and social amenities	• Rehabilitation of the existing public recreation ground and provision of more facilities	• Land acquisition for provision of recreational spaces • Encourage sharing of private recreational grounds with the general public	Residential areas Town centre	County Government Schools, Hotels	250M	Short term Short term
Inadequate infrastructure standards	• Provide adequate infrastructure for economic growth	• Improve national and regional road connectivity • Promote land use and transport integration • Carry out sewer reticulation • Identify and address road safety constraints • Street lighting initiatives	CBD Maralal town	County Government, KURA, KENHA SAWASCO KURA,KERRA	20B	Long term Short term Long term Short term
Weak economic base growth	• Unlock local economy to create jobs, reduce poverty and boost economic growth	• Boost sports tourism such as golfing • Construction of markets and improvement of existing ones • Use of greenhouses in horticulture • Designated areas for jua kali industries • Enhance access to to provide credit facilities to SMEs	Maralal Town CBD, Industrial zone Town wide	County Government, banks, cooperative societies	6B	Short term Medium term Short term Medium term

		• Tap tourism potential				
Inadequate institutional capacity and poor development control	• Provide adequate institutional capacity to guide development control	• Strengthen structures for stakeholders' participation • Strengthen public private partnerships • Enhance community participation	Town wide	County Government, Community	350M	Short term Short term Short term
Inadequate disaster management facilities	• Promote disaster preparedness awareness and management	• Formulate disaster preparedness by laws • Zoning to ensure separation of conflicting land uses • Acquire land for firefighting facilities • Make and enforce laws that all buildings must have complete firefighting equipment	Town wide	County Government	400M	Short term Short term Short term Short term

Table 10: Plan Implementation Matrix

14.12 Project Costing

The table below shows the approximate cost of the proposed project costs.

Table 11: Proposed Project Cost

Sector	*Project*	*Cost (KSh.)*
	QUICK WINS	
Governance	• Formation of Community forum to implement and monitor the Plan.	10M
Environment	• Provide skips/waste bins within town.	20M
	• Encourage waste sorting, reuse and recycling at source	5M
	• Enforcement of development control.	5M
	• Facilitate Youth, CBOs and NGOs to participate in tree nurseries programmes and planting of in the town.	5M
Governance	• Establish spatial planning directorate.	8M
	• Establish a GIS Based plot register.	25M
	• Facilitate issuance of land titles.	50M
	• Undertake training of staff	5M
	SHORT TERM	
Public Utilities	• Acquire land for fire station	10
	• Provide for fire substation.	80
	• Acquire land and develop a sanitary landfill.	150M
	• Street lighting in the entire residential neighbourhoods	150M
Environment	• Clear riparian encroachments and redevelop riparian reserve	20M
	• Provide nature trails along sections of the river in the town.	20M
	• Encourage tree plant at the household level	8M
	• Undertake beautification of Central Park and amenities.	20M
	• Undertake beautification activities for the entire town.	100M
Roads	• Upgrade all the roads within the CBD to bitumen standards. • Roads and street naming in the CBD in partnership with the private developers	4B
Social Services	• Upgrade Maralal a County Referral Hospital to Level 5 status	500M
	• Expansion and upgrading of the Maralal Polytechnic.	200M
Recreational	• Acquire land for an open spaces at neighbourhoods	10M
	• Establish Samburu Theme Park	180M
	MEDIUM-TERM	
Economic	• Development of business within the town and develop the Kenya Industrial Estates which have plans of putting up *jua-kali* sheds.	200M
	• Develop the multi-story markets to accommodate more traders.	300M
	• Develop *jua Kali* shed for informal industries	100M
Environment	• Rehabilitation of the riparian reserves	20M

	• Greening of the CBD and redevelop the open spaces into recreational parks	40M
Housing	• Redevelop and undertake settlement upgrading through public private partnership and neighbourhood associations.	600M
	• NHC and the county government to undertake renewal /redevelopment of all public and government houses.	500M
Tourism	• Acquire land and develop a museum	200M
Recreational	• Redevelop Kenyatta Stadium to international standards	300M
Transportation	• Roads and street naming in the town in partnership with the private developers	30M
	• Develop Bus Park to modern standards and requisite infrastructure	150M
Public Purpose	• Redevelop the Civic area to a multi storey county headquarters to accommodate all administrative functions and release land for greening.	1B
	LONG-TERM	
Transportation	• Upgrade Maralal-Rumuruti trunk road to tarmac • Upgrade Maralal-Baragoi to tarmac standards • Upgrade Maralal-Barsaloi to tarmac standards • Upgrade internal within the CBD and other action areas • Develop the Maralal Airstrip to modern standards	4B 5B 6B 3B 1B
	• Pave all internal roads within the CBD, residential and industrial areas	50B
	• Acquire land and expand and redevelop Maralal Airstrip to international airport status	1B
Economy	• Acquire and develop an ICT park at Nomotio • Expand tourist facilities to the urban fringe area • Develop nature trails, viewpoints, camp sites and adventure mountain climbing in the urban fringe	1B 200M 100M
Education	• Develop a knowledge park at Nomotio	4B
Utilities	• Storm water into the central business district of the town • Undertake sewer and water infrastructure reticulation in the town	200M 8B

14.13 Monitoring and Evaluation

Monitoring and evaluation processes help in effective and efficient implementation of the plan. Maralal Town Integrated Spatial Urban Development Plan recognizes the need to strengthen use of Monitoring and Evaluation by focusing on: Efficiency, Effectiveness and Impact aspects. During the plan period, more attention will be given to the critical programs and projects that form the vital path to achieving the town's vision. For a proper implementation of an effective monitoring and evaluation system, there will be an effective institutional setup for coordination and implementation, adequate involvement of the various stakeholders and adequate resources allocated for monitoring and evaluation activities.

To effectively monitor implementation of programmes, projects and activities within the plan period, participatory monitoring and evaluation approaches will be applied. These include provision of a feedback system on progress, awareness of impacts, transparency and accountability. The feedback mechanism will provide information on whether existing or new approaches that have been developed are working effectively. It is expected that this will allow strengths to be built upon and any deficiencies to be rectified. Participatory monitoring and evaluation will be adopted at all levels of planning including the community level as a means of promoting teamwork and stakeholders' involvement in implementation. This will be used as a continuous feedback system, on-going throughout the plan period and involves overseeing or periodic review of each activity, at every level of implementation.

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