



REPUBLIC OF KENYA  
MINISTRY OF LAND, HOUSING AND URBAN DEVELOPMENT

## NAROK TOWN INTEGRATED STRATEGIC URBAN DEVELOPMENT PLAN (2011-2030)



October, 2014

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(2011-2030)**

October, 2014

### Cover Photos

Aerial view of Narok Town

Maasai morans dancing

Wildebeest migration

### Report Prepared for:



Ministry of Land, Housing and Urban Development



County Government of Narok  
People of Narok town

# APPROVAL

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## LIST OF ACRONYMS AND ABBREVIATIONS

<b>AC</b>	Africa Commission
<b>AIC</b>	African Inland Church
<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>ALGAK</b>	Association of Local Government Authorities of Kenya
<b>CBD</b>	Central Business District
<b>CBO</b>	Community Based Organization
<b>CDF</b>	Constituency Development Fund
<b>CEDAW</b>	Convention on Elimination of Discrimination against Women
<b>CGN</b>	County Government of Narok
<b>CILOR</b>	Contributions in Lieu of Rates
<b>CRA</b>	Commission on Revenue Allocation
<b>CRA</b>	Commission on Revenue Allocation
<b>CRC</b>	Convention on the Right to Child
<b>CSOs</b>	Civil Societies Organizations
<b>DDC</b>	District Development Committee
<b>DPP</b>	Department of Physical Planning
<b>EA</b>	Environmental Audit
<b>ECD</b>	Early Childhood Development
<b>EIA</b>	Environmental Impact Assessment
<b>EMCA</b>	Environmental Management and Coordination Act
<b>ENSDA</b>	Ewaso Ngiro South Development Authority
<b>ERS</b>	Economic Recovery Strategy
<b>FGD</b>	Focused Group Discussions
<b>GDP</b>	Gross Domestic Product
<b>GIS</b>	Geographic Information System
<b>GoK</b>	Government of Kenya
<b>HIV</b>	Human Immunodeficiency Virus
<b>ICESR</b>	International Convention on Economic and Social Rights
<b>ICT</b>	Information and Communication Technology
<b>ISRIC</b>	International Soil Reference and Information Centre
<b>ISUDP</b>	Integrated Strategic Urban Development Plan
<b>KENAO</b>	Kenya National Audit Office
<b>KENSUP</b>	Kenya Slum Upgrading Programme
<b>KES</b>	Kenya Shillings
<b>KFS</b>	Kenya Forestry Services
<b>KIHBS</b>	Kenya Integrated Household Budget Survey
<b>KLGRP</b>	Kenya Local Government Reform Programme
<b>KNCCI</b>	Kenya National Chamber of Commerce and Industry
<b>KPLC</b>	Kenya Power and Lighting Company
<b>KRB</b>	Kenya Roads Board
<b>KURBA</b>	Kenya Urban Roads Board Authority
<b>KUTIP</b>	Kenya Urban Transport Infrastructure Project
<b>LA(s)</b>	Local Authority (ies)
<b>LADP</b>	Local Authority Development Programme
<b>LAIFORMS</b>	Local Authority Integrated Financial Operational and Management System
<b>LASDAP</b>	Local Authority Service Delivery Action Plan

<b>LATF</b>	Local Authority Transfer Fund
<b>LG</b>	Low Grade
<b>LGA</b>	Local Government Authorities
<b>LPG</b>	Liquefied Petroleum Gas
<b>MDG</b>	Millennium Development Goals
<b>MEMR</b>	Ministry of Environment and Mineral Resources
<b>MoF</b>	Ministry of Finance
<b>MoL</b>	Ministry of Lands
<b>MoLG</b>	Ministry of Local Government
<b>MW</b>	Ministry of Water
<b>NEMA</b>	National Environmental Management Authority
<b>NESC</b>	National Economic and Social Council of Kenya
<b>NGOs</b>	Non-Governmental Organization(s)
<b>NHC</b>	National Housing Corporation
<b>NIMES</b>	National Integrated Monitoring and Evaluation System
<b>NUDP</b>	National Urban Development Policy
<b>NISUDP</b>	Narok Town Integrated Strategic Urban Development Plan
<b>PHE</b>	Public Health Environment
<b>PPOA</b>	Public Procurement Oversight Authority
<b>PPP</b>	Public Private Partnership
<b>PRSP</b>	Poverty Reduction Strategy Paper
<b>PS</b>	Permanent Secretary
<b>REP</b>	Revenue Enhancement Plan
<b>RMLF</b>	Roads Maintenance Levy Fund
<b>SEA</b>	Strategic Environmental Assessment
<b>SME</b>	Small and Medium Enterprises
<b>TCN</b>	(former) Town Council of Narok
<b>The Act</b>	Local Government Act, Cap 265
<b>UDD</b>	Urban Development Department
<b>UDHR</b>	Universal Declaration of Human Rights
<b>UNGC</b>	United Nation Governing Council
<b>UN</b>	United Nations
<b>UNDP</b>	United Nations Development Program
<b>UNEP</b>	United Nations Environmental Programme
<b>UN-HABITAT</b>	United Nations Human Settlements Programme
<b>UNIDO</b>	United Nations Industrial Development Organization
<b>UPVC</b>	Unplasticised Polyvinyl Chloride
<b>VIP</b>	Ventilation Improved Pit Latrines
<b>VR</b>	Valuation Roll
<b>WRMA</b>	Water Resource Management Authority

# ACKNOWLEDGMENT

Matrix Development Consultants is grateful for the support provided by the Ministry of Lands, Housing and Urban Development, the commitment of the then Town Council of Narok, support and ownership by the County Government of Narok as well as the enthusiasm and resourcefulness of all Narok stakeholders during the entire planning process.

The multi-disciplinary team from Matrix that worked on the assignment is as follows:

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# FOREWORD

**T**he Narok 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, Narok Town, did not have an approved plan that was comprehensive, up to date and strategic enough to sustainably guide exploitation of its resources, 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 boundary, measuring a total of 692 Km<sup>2</sup>.

Inadequate planning and poor agricultural practices have exposed the town to natural elements and calamities. These include drought and flooding, which is magnified by lack of adequate facilities for disaster prevention, response and management. Furthermore, significant service centers like Ewuaso Ng'iro, Rrotian, Nkareta, and Naisoya which lie within the town boundary remained largely unplanned and the potential of the town's vast and rich agricultural hinterland marginally utilised.

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, Matrix Development Consultants for providing the technical guidance and all the stakeholders who participated and contributed in the plan preparation process. I want to significantly commend the people of Narok for envisioning a bright future for Narok town and their willingness to foster the implementation of the Plan towards the achievement of their vision.

I note that the Narok town ISUDP well captures the existing situation in Narok town and makes proposals which if implemented, will make Narok town to be a significant hub of economic growth for the entire county and its neighbouring region.

The Plan recognizes that Maasai Mara is the jewel of Kenyan tourism and thus maximizes the town's locational advantage as the final significant commercial stop on the way to the Mara. It proposes infrastructural development aimed at enhancing access to the Mara and diversifying tourists' experience as well creating the Mara experience within the town thus marketing it both locally and internationally. The Plan further advocates for the preservation of the Maasai 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 Narok 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. The digital

maps created as part of the planning process, will also be useful for detailed designs of all types of future infrastructural investments.

In light of the above benefits, the County Government of Narok will spearhead the full implementation of this plan and make efforts to prepare integrated urban plans for other urban centers within the county such as Kilgoris 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 Narok Town ISUDP stakeholder forum as advocated for in the Plan.

Thank you.

**H.E. Samuel Kuntai Ole Tunai**  
**Governor**  
**County Government of Narok**

# EXECUTIVE SUMMARY

## BACKGROUND

This document presents the Integrated Strategic Development Plan (ISUDP) for Narok Town covering the years 2012-2030. Narok town is the headquarters of Narok County and covers an area of 692 Km<sup>2</sup> (one of the largest in the country), with a population of 67,723 as at 2009.

The Plan was prepared with the assistance of Matrix Development Consultants (Matrix) under a contract agreement with the Government of Kenya (GOK) through the national Ministry of Land, Housing and Urban Development. The consultants were supervised by the Urban Development Department (UDD) and the Department of Physical Planning (DPP). In undertaking the assignment, Matrix worked very closely with the then Town Council of Narok (TCN), the County Government of Narok (CGN) and ensured full participation of all the key stakeholders.

The purpose of this Plan is to:

- (i) Define a vision for future growth and development of Narok Town over the next 10 to 20 years;
- (ii) Provide an overall climate resilient integrated physical framework for urban growth of Narok town; and
- (iii) Provide a basis for coordinated programming of projects and budget, thereby serving as a downstream management tool.

## MANDATE

This Plan was prepared within the context of the Constitution of Kenya, 2010, Kenya's Vision 2030 national development blue print, various sectoral policy frameworks, relevant legislative provisions significantly the Physical Planning Act, Cap 286, the County Governments Act, 2012, the Urban Areas and Cities Act, 2011, and key stakeholder concerns.

The Plan has also embraced the assignment's terms of reference which had the following requirements:-

- The Plan should provide for measures to promote Local Economic Development and provide a system for coordination of activities to create synergy and spur Economic Development of the town;
- The Plan should carry out an inventory of environmental assets, resources and challenges. It should provide for improved quality of life and sustainable use of resources. The Plan should map the location of the resources;
- The Plan should have a Land Use Chapter dealing with current allocation of space and projections for future requirements to the end of the plan period. The Plan should provide for a system of circulation and interactions;
- That the Plan should develop strategies to set urban growth limits and design measures to absorb growth within the already developed part of town through urban renewal;
- The Plan should zone the town while promoting inclusivity and identify present conflicts and potential future conflicts;
- The Plan should have an environment chapter that isolates the unique features in the town that give it identity;
- The Plan should have an urban design chapter that uses different elements in planning e.g.

- physical features, neighborhoods;
- The Plan should have an investment chapter stipulating the policy statements and spatial framework and incorporate the private, public partnership (PPP); and,
- The Plan should propose an organization structure to implement and oversee the investments.

## **METHODOLOGY**

In undertaking the assignment, the Planning Team adopted a participatory approach to yield an efficient, effective and implementable plan.

## **STAKEHOLDER CONSULTATIVE PROCESS**

The plan making process entailed undertaking stakeholder workshops designed and executed in a consultative/participatory approach. The processes took into account the key principles of inclusivity and representative participation of residents, communities, Civil Society Organizations, Faith Based Organizations, and key representatives from the town administration, government agencies and departments, private sector, sector specialists and other resource persons. Numerous meetings were held with the newly established County Government of Narok leadership aimed at bringing them on board and ensuring that their vision for the town was reflected in the Plan. Six key stakeholder consultation fora were held with Narok town residents and other stakeholders.

A number of issues and perspectives emerged from these consultative processes in terms of past and current problems and opportunities and the stakeholders' aspirations for Narok town. Key issues raised during the various consultations are as follows:

- The concept of developing Narok as a SMART CITY
- Need to plan for anticipated demand for housing for county officials and investors including county offices.
- Narok University is and will continue to play a central role in creating demand for housing, hostels etc. in the town.
- Inadequacy of a structured framework for people to engage with the local government.
- In-effective development control and planning guidance, leading to urban sprawl.
- It is important to promote alternative income for the charcoal dealers many of whom are involved in the business because of poverty.
- The menace of commercial sex workers in town which is linked to the growing number of street children.
- Inadequate political will to deal with pressing issues facing Narok such as drainage and flooding.
- Need for a planning forum that will represent and engage all stakeholders.
- Lack of adequate sanitation facilities, especially solid waste management facilities and sewerage treatment facilities and infrastructure
- Insufficient and unqualified staff within the urban local authority.
- Need for preservation of the Maa heritage, culture and traditions even as the town modernizes
- Environmental conservation along the river basins is very important for Narok Town.
- Empower the local community to control the economy of the Town.
- Need to develop industries to facilitate job creation

- Curb encroachment into the riparian reserves and way leaves
- Development plans should be approved in time and implemented accordingly.
- Need for qualified and experienced planners.

## ORGANIZATION OF THE PLAN

The Plan consists of four parts:-

- **Part I** gives the introduction and planning context,
- **Part II** details the current situation in Narok highlighting the sectoral and thematic constraints that inhibit the development of a vibrant and environmentally sustainable Town;
- **Part III** discusses the spatial development models; while,
- **Part IV** presents strategies, measures, actions plans and implementation framework as well as a Capital Investment Plan (CIP).

## VISION OF THE PLAN

An environmentally, economically, culturally conscious and well governed City that sustainably uses its resources to economically, socially and culturally empower its residents.

## MISSION OF THE PLAN

Marshall adequate resources for an inclusive, harmonious and sustainable growth and development of Narok town

## DEVELOPMENT SCENARIOS

The viability of the formulated vision was further reviewed through the analysis of the existing spatial structure, institutional framework and detailed examination of the key sectoral aspects in order to come up with alternative development scenarios which will best suit Narok town. The alternative development scenarios that emerged were:

- (a) Narok Town as a Smart City** with improved and modern mobility for both the residents and through traffic complementing a smart economy, smart environment, smart people, smart governance.
- (b) Narok Town as an Eco-Resort City** through development Maasai Cultural Villages and Theatre, Museums, International Airport, conference facilities, development of medium sized tourist hotels and a nature trail in the Maasai Mau forest.
- (c) Narok Town as a Vibrant Agro-Industrial Hub** with value addition on the agricultural produce as well as setting up of new industries at Ewuaso Ng'iro, Rrotian and Lemanet.
- (d) Narok Town as a University City** which will bring about increased demand for accommodation, services and facilities for students, university workers and lecturers as well as being the main economic thrust of development in the town while allowing the other sectors to grow.

In the final Stakeholder Workshop held in Narok Town on Thursday, 5<sup>th</sup> December, 2013, the preferred scenario made by the people of Narok was a blend of all the four alternatives.



## STRUCTURE PLAN PROPOSALS

During the conceptual framework analysis it was agreed by the stakeholders during the 'strategies workshop' that the centres of Ewuaso Ng'iro, Rrotian and Nkareta should be allowed to grow just as the Narok Town Central Business District (CBD) grows. Secondly, the stakeholders felt that any future expansion of the CBD should take place at Lemanet which is not far from the CBD as there was available land.

This implied that strategic growth triggers will have to be proposed for Ewuaso Ng'iro, Rrotian and Nkareta in order to boost their growth. Secondly, the existing CBD cannot be wished away by just shifting to Lemanet. Re-planning and rezoning of the bigger part of Majengo and its environs will have to be undertaken particularly in as far as the disaster management proposals are concerned. All measures put in place encourage climate resilient urban growth.

The Plan has proposed development of several key link roads and two significant by-passes roads to aid in connectivity, efficiency, safety and mobility within Narok. The by-pass roads are:-

- **The Northern By-Pass** starting at the B3 crossing at Siyabei River following the road to Mulwa centre then loops to Rrotian centre then pass through Oloroito to Nkareta and rejoins the B3 highway at Olulung'a.
- **The Southern By-Pass** on the other hand also starts at B3 road at Empopongi, through Lemanet and Morijo to join the B3 road at Katakala.

Furthermore, the Plan recommends more infrastructural proposals including development of an overpass along B3 road, expansion of the Ewuaso Ng'iro airstrip into an International Airport, development of nine Bridges, development of seven high dams and a lower dam and widening of drainage channels and setting up of new storm water drains to curb flooding. It sets sites for development of Sewer treatment plants, sanitary landfills and even cemeteries. The Plan has proposed removal of all encroachment, structures and quarrying activities within the riparian reserves upto fifteen metres either side of the river banks.

The Plan makes policy proposals advocating for conducting of a Strategic Environmental Assessment 'SEA' on the Plan as well as the Environmental Impact Assessment (E.I.A) of the by-passes, Dams and the Industrial zones. It strongly proposes for capacity building in the Planning Department as well as the Building Inspectorate sections within the County Government of Narok.

## PLAN IMPLEMENTATION

Narok Town will be administered through a Town Committee, appointed by the County Governor as per Urban Areas and Cities Act 2011, which shall be expected to champion and ensure full implementation of the Plan. This Committee will take over responsibilities previously undertaken by the former Town Council of Narok. However, the Plan advocates for close working relationship with other ongoing development projects such as the proposed World Bank Capital Project, Ewaso Nyiro South Development Authority's (ENSDA) Flooding Initiative, JICA water projects and Nile Equatorial Lakes Subsidiary Action Plan Programme (NELSAP) Mara River Basin Conservation projects.

The Plan proposes the setting up of a "Narok Town Steering Committee for the Integrated Strategic Urban Development Plan 2012-2030"; which is a local inclusive committee that will provide oversight role during the implementation of the Plan and provide a framework for stakeholder participation. It is expected that in undertaking its mandate the committee will constitute other thematic sub-committees as a channel for harnessing views and inputs of local community on sectoral issues. The committee working in tandem with the Town Committee will provide the much needed avenue for citizen engagement in decision making process.

Furthermore, the steering committee aims to build on the Plan by guiding and monitoring how its implementation will evolve over the next several years.

## **CAPITAL INVESTMENT PLAN (CIP)**

The participatory planning process led to the preparation of a three year rolling Capital Investment Plan (CIP). The CIP, which is financially viable, reflects stakeholder steered local priorities for investment in public infrastructural services and utilities. It includes estimated costs and assigns responsibilities for implementation of agreed investments as well as costs for availing land for public use.

## **KEY QUICK-WIN PROJECTS**

- Set-up a Town Planning Department of the town with at least 3 qualified planners.
- Develop a GIS capability especially in land-related data update, storage and retrieval
- Develop the Northern by-pass road (Siyiapei -Mulwa-Rrotian- Oloroito-Nkareta-Olulung'a)
- Develop the Southern by pass road (Empopongi -Lemanet –Ewaso Ng'iro Airstrip –Katakala)
- Develop Infrastructure to establish Lemanet as a new commercial hub
- Construct/upgrade Link roads (a) to proposed by-passes (b) within CBD, Majengo and Block 11 (c) within key centers of Rrotian, Ewaso-Ng'iro and Nkareta.
- Develop a Modern Maa Cultural Centre in Morijo, Narok Town
- Designate the Central Integrated Transport Terminal
- Storm water drainage in Narok Town
- Develop a Modern Abattoir at Lemanet
- Expansion of the water supply system(JICA)
- Acquisition of 20Ha of land for Sewerage treatment works and Sanitary Landfill at Kambi MauMau
- Infrastructure to establish Rrotian as a centre for Agro processing for Agricultural products
- Set Fire station plant and equipment at Narok town, Lemanet and at key centres
- Electricity grid expansion to cover Nkareta
- Afforestation of Mau forest & upper catchment areas of Narok Town
- Planting trees/beautify the Koonyo grounds and put up park seats
- Covering storm drains & backfilling quarries
- Eco Tourism collaboration with International Travel and Hotel Chains
- Retail sheds to be constructed around Narok town's bus stop and key centres
- Construct a Milling Plant at Rrotian
- Value-addition of livestock products
- Provide Cold storage facilities in Rrotian and Nkareta

## **IMPLEMENTATION MATRIX**

In conclusion, the Plan gives implementation matrices which highlight individual programmes of action aimed at achieving the proposals which have been put forward in the Plan. The time-phased and area specific programmes indicate the actors to spearhead the implementation process. The matrix also gives indicative costing for each proposed program.





**PART I:**  
**INTRODUCTION AND PLANNING CONTEXT**



# Chapter 1

## INTRODUCTION

### 1.1 BACKGROUND

This document presents the Narok Integrated Strategic Urban Development Plan (ISUDP), 2012-2030. According to the 2009 Kenya Population Census, Narok town is the headquarters of Narok County and covers an area of 692 Km<sup>2</sup> (one of the largest in the country), with a population of 67,723.

The plan was prepared with the assistance of Matrix Development Consultants under a contract agreement with the Government of Kenya (GOK) through the then Ministry of Local Government (MoLG). The consultants were supervised by the Urban Development Department (UDD) and the Department of Physical Planning (DPP). In undertaking the assignment, Matrix worked very closely with the then Town Council of Narok (TCN), the County Government of Narok (CGN) and ensured full participation of all the key stakeholders.

The purpose of the Plan is to:

- (i) Define a vision for future growth and development of the area over the next 10 to 20 years;
- (ii) Provide an overall integrated physical framework for urban growth of Narok town; and,
- (iii) Provide a basis for coordinated programming of projects and budget, thereby serving as a downstream management tool.

### 1.2 PLANNING CHALLENGES

The planning challenges facing Narok Town as at the time of preparing this Plan include, but are not limited to, the following:

- Lack of an up-to-date plan to guide overall development. There is no Zoning Plan. The Town only has a Development Plan (DP) that was prepared by the Department of Physical Planning (DPP) which, in any case, only covers part of the Central Business District (CBD);
- Inadequate survey and planning data for the entire town;
- Un-coordinated sub-divisions of land in areas such as Olopito, Ilmashariani and Oleleshwa;
- Increasing land use conflicts, haphazardly planned estates, problem of accessibility in the estates and the existence of unplanned settlements as well as loss of aesthetics;
- Inadequate capacity of the staff to plan and undertake development control;
- Low level stakeholders' participation in planning and urban management;
- Uncontrolled and unplanned urban growth leading to urban sprawl especially along the Narok-Mulot Road;
- Inadequate provision of infrastructure and in particular roads, storm water drainage, water supply, sewerage, waste disposal, non-motorised transport, electricity etc.. Storm water drainage is of particular concern, as it has in the past led to flash floods on the lower parts of the town leading to deaths of some of the residents;

- Inadequate community facilities and services e.g. hospitals, schools, green parks;
- Poor environmental conditions arising from lack of an environmental strategy;
- Inadequate employment opportunities, urban poverty, influx and immigration;
- Lack of innovations;
- Regulations that inhibit the growth of informal businesses;
- Depreciation of the assets owned by the former Town Council;
- Poor revenue base owing to poor collection of land rates and the fact that much of the land is not rated; and,
- Poor land information system and development control.

Among the greatest preoccupations during the planning process was to see how the above-mentioned challenges could be turned into opportunities.

### 1.3 OBJECTIVES OF THE PLAN

The main objective of the plan is to provide an Integrated Strategic Urban Development framework and a Capital Investments Plan (CIP) for Narok Town.

The specific objectives of the assignment entail the following key activities:

- To produce accurate up-to-date digital topographic maps;
- To prepare digital cadastral layers in the same system as the digital topo maps;
- To conduct participatory planning exercises in the municipality for the purpose of identifying citizens' priorities;
- To prepare a strategic structure plan, depicting current and proposed land uses and infrastructure (such as transport, water, drainage, power, etc.), housing settlements and environmental assets catering for between 10 and 20 years;
- To prepare short, medium and long term plans to guide urban development, including action area plans, subject plans, advisory or zoning plans and regulations as well as other reference materials,
- To provide hands-on training to staff of the planning department on plan preparation and implementation; and,
- To prepare a monitoring and evaluation strategy to assist the planning department in reviewing and updating the plan in line with the ever-changing trends of the town.

### 1.4 VISION OF THE PLAN

The Vision Statement guiding this plan is:

**An environmentally, economically, culturally conscious and well governed City that sustainably uses its resources to economically, socially and culturally empower its residents.**

### 1.5 MISSION

The Mission of this plan is to:

**Marshall adequate resources for an inclusive, harmonious and sustainable growth and development of Narok town.**

## 1.6 SCOPE OF THE PLAN

This Plan covers a detailed analysis of sectoral and spatial structure of Narok town. It discusses the current situation highlighting the sectoral and thematic constraints that inhibit the development of a vibrant and environmentally sustainable town. It also covers the key planning and development challenges in the town and proposes sectoral programmes and investments to address the identified constraints.

The document provides the Spatial Development Strategy for Narok town, and, among other issues, it proposes measures to enhance the revenue base for the town. Various development scenarios for Narok town are generated out of which the one preferred for adoption by the residents is used to guide the preparation of a detailed Structure Plan of the town.

A Strategy for ensuring effective communication amongst various stakeholders during the implementation of the Narok Town's ISUDP is proposed in the document. To operationalise the strategy, the document avails the institutional as well as Monitoring and Evaluation (M&E) framework for implementing proposed activities and investments as well as the Plan Implementation Matrix.

## 1.7 EXPECTED OUTPUTS

The expected outputs of the planning exercise include:

- A situational analysis of the current socio-economic, physical, environmental and cultural characteristics of Narok town;
- A widely accepted vision for the town's development;
- A detailed structure plan depicting specific land use and zoning regulations;
- Sector strategies including transportation, investment/economic, settlement/housing environmental management, disaster management and cultural heritage preservation plan;
- An Implementation Matrix with associated realistic costs and responsibilities for implementation of agreed sector-based prioritized programmes; and,
- A Capital Investment Plan.

## 1.8 METHODOLOGY

In undertaking the assignment, the Planning Team adopted a participatory approach to yield an efficient, effective and implementable plan. A mixed method approach was utilized as part of the process. The methodologies are briefly discussed below.

### 1.8.1 Profiling

This entailed compiling detailed background information on Narok town and its environs. Secondary data was collected and used to analyze the challenges and opportunities of the town.

### 1.8.2 Transect Survey

A reconnaissance survey, and subsequent transect surveys of the town and its environs were undertaken between September and December, 2012. The transect surveys were meant to:

- Confirm the profiling issues;
- Appreciate the town;



- Acquire data to consolidate the base map; and,
- Acquire data for project design.

### **1.8.3 Rapid Assessment of Socio-Economic Situation**

The rapid assessment of Socio-economic situation of Narok Town focused on the assessment of the economic activities, housing, community facilities, social infrastructure and the preferences of the residents. This also covered the informal settlements and focused on both ordinary citizens through focus group discussions and key informants who were mainly representatives of the business community and professionals.

The objectives of the rapid social economic survey were to gather people's views and visions in regard to the town's future and contribute towards a better appreciation of the socio-economic issues and hence to influence the overall strategic planning for Narok town and its environs.

A participatory approach to the rapid assessment was adopted and entailed the following:

- Discussions with key Informants who included staff of the former Town council of Narok, Councilors, prominent business people and professionals;
- Direct observations through several visits to different parts of the town; and,
- Focus Group Discussions (FGD) employing a range of participatory tools.

### **1.8.4 Data Analysis and Interpretation**

#### **1.8.4.1 Socio-economic data**

Data collected through the structured interviews was coded and analyzed using **SPSS**. Frequency tables were generated to analyse means and variances of the variables. Further analysis was conducted to obtain various additional insights into the socio-economic attributes of the respondents. The results were compared with both published socio-economic data on Narok Town and its hinterland as well as information obtained from key informants and during the field visits.

#### **1.8.4.2 Development of Spatial Data**

By the time of initiating the planning exercise, Narok Town lacked a base map, and therefore a new one had to be generated. **This was done through compilation of the existing maps and using the aerial photographs.**

The analysis of socio-economic and spatial data was done with a view to generating information that enabled the Planning Team to prepare a detailed situational analysis report that depicts the existing situation, issues and problems on the following sectors:

- Physical and natural resources;
- Economic base;
- Social, Cultural and Demographic profile;
- Infrastructure;
- Land use analysis;
- Transport;

- Environmental protection; Heritage conservation;
- Economic (investment);
- Housing and Settlement upgrading; and,
- Governance.

This was then followed by the preparation of a sector-based strategies report covering the outlined sectors. The whole process involved projecting/ forecasting, modeling the future conditions and scenario building for the future Narok Town.

### **1.8.5 Plan Preparation**

The findings and conclusions arising from the situational analysis and strategies reports were modeled and presented in a spatial context resulting in a town-wide and individual Area Action Plans. Desired outcomes, alternatives models, strategies and programmes were also outlined.

### **1.8.6 Training**

An intensive, interactive working methodology was incorporated in the planning process to facilitate the transfer of technology and expertise to the employees of the Narok Town Council who were trained on the planning process as well as in the use of GIS in planning. The staff have been closely involved and trained in all the plan preparation processes and activities.

### **1.8.7 Stakeholders Consultative Meetings**

From the word go, the role and participation of the residents of Narok town was identified as critical to the planning of the town. Consequently, a stakeholder analysis was done and a number of stakeholder consultative meetings held during the various stages of planning. The aim of the meetings included the following:

- Sensitizing the residents on the need for planning;
- Mobilizing the community to participate in the preparation of the Plan;
- Building consensus;
- Providing planning data; and,
- Validating the findings made by the study team.

### **1.8.8 Consultative Workshops**

#### **1.8.8.1 Visioning Workshop**

The Visioning Workshop was the first in a series of consultative workshops during the process of preparing the Plan. Reports on the Workshops have been produced and shared with key stakeholders.

Held on October 9, 2012 at the Seasons Hotel in Narok Town the workshop had the following key objectives:

- To create awareness amongst key stakeholders on the importance of Urban Strategic Planning for Narok;
- To promote County and town-wide ownership of the planning process;

- To analyze the strategic growth and direction of the Town in the period leading to the year 2030; and,
- To identify Narok's strength and strategic importance to the outlying region and to the country in general.

Participants were drawn from the then Town Council of Narok (Officers and former Councilors), government ministries and parastatal officials who came from Nairobi and Narok, private sector, civil society organisations including CBOs and NGOs with a presence in the area and a wide range of community representatives.

Other workshops were held to update participants and seek their consensus on the Situational Analysis, Preliminary Maps Validation and Draft Sectoral Strategies workshops as outlined below.

#### **1.8.8.2 Situational Analysis and Preliminary Maps Validation Workshop**

The Workshop was held on December 11, 2012 at the same hotel. Its objectives were:

- To update stakeholders on the current status of the mapping and planning exercise for Narok town;
- To present and validate the findings of the situation analysis and especially on the vision, current status on thematic areas, key issues, problems, challenges, demand and supply analysis as well as opportunities; and,
- To jointly chart the way forward.

#### **1.8.8.3 Draft Proposals and Strategies Workshop**

The draft proposals and strategies Workshop was held at the same venue on February 15, 2013 with the following objectives:

- To update stakeholders on the status of the mapping and planning exercise;
- To share the draft strategies, seek reactions from stakeholders and obtain concrete feedback on key issues, emerging strategies and proposals; and,
- To jointly chart the way forward.

#### **1.8.8.4 Special Ad hoc Briefing Workshop for New Narok County Administration**

The Preparation of the Plan took cognizance that the exercise was being undertaken during a transition period from the old Government structures to the devolved governance system. After the formation of the County Government of Narok (CGN), the team arranged a series of briefing meetings and workshops with objectives of providing a platform for the new County leadership to be properly briefed on the process and to incorporate their visions and aspirations into the Plan. A Meeting was therefore held in Narok on May 28, 2013 to brief the new county government on the status of the assignment and the findings to date.

#### **1.8.8.5 The Final Structure Plan CIP workshop**

The draft proposals and strategies Workshop was held at the Seasons Hotel in Narok Town on Thursday, December 5, 2013 to present the final strategic structure plan for comments, validation and endorsement.

The objectives of the workshop were:

- To update stakeholders on the status of the planning exercise;
- To present, discuss and validate the Narok Town Strategic Structure Plan, Area Action Plans and Zoning Plan; and,
- To jointly chart the Way Forward.

## 1.9 ORGANIZATION OF THE PLAN

After the Introductory and Planning Context, the rest of the Report is organized as follows:

- **Part II** details the current situation in Narok highlighting the sectoral and thematic constraints that inhibit the development of a vibrant and environmentally sustainable Town;
- **Part III** discusses the spatial development models; while,
- **Part IV** presents strategies, measures, actions plans and implementation framework as well as a capital investment plan (CIP).



# Chapter 2

## PLANNING CONTEXT

### 2.1 Overview

This plan was prepared within the context of the Constitution of Kenya, Kenya's Vision 2030 national development blue print, various sectoral policy frameworks and, relevant legislative provisions. It has also embraced the terms of reference and stakeholder concerns as discussed below.

### 2.2 The constitution

The Kenya 2010 Constitution has raised the bar as far as the 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 has opened up new avenues which have expanded the horizons of planning, thus necessitating change in planning paradigm in order to capture its letter and spirit.

Article 66(1) gives the state powers to regulate the use of any land, or any interest in or right over any land, in the interest of, inter alia, land use planning.

The supreme law has established two levels of government and divided the planning function between these levels i.e. national and county levels. The Fourth Schedule of the Constitution presents the distribution of functions between the National and County governments. Both these levels require human settlement strategies in order to create synergy and spur balanced growth and development throughout the country.

Further, the constitution provides a package of economic and social rights which need to be delivered through the contribution of all sectors of the national economy.

Article 43(1) outlines these rights as:

- (a) attainment of the highest standard of health which include the right to health care services and reproductive health care;
- (b) access to adequate housing and to reasonable standards of sanitation;
- (c) freedom from hunger and access to adequate food of acceptable quality;
- (d) access to clean and safe water in adequate quantities;
- (e) access to social security; and,
- (f) access to education.

Citizen rights as outlined in the Constitution are mandatory and not optional. State organs are compelled to plan and deliver on them. Any planning intervention 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 entire Constitution. Consequently, effective citizen participation must be engrained in the new planning legislation.

As far as the marginalized areas are concerned, the constitution, under article 56, states that the state shall put in place affirmative action programmes designed to ensure that minorities and marginalized groups:

- (a) Participate and are represented in governance and other spheres of life;
- (b) Are provided special opportunities in educational and economic fields;
- (c) Are provided special opportunities for access to employment;
- (d) Develop their cultural values, languages and practices; and,
- (e) Have reasonable access to water, health services and infrastructure

The Plan preparation process took into consideration these provisions.

## **2.3 LAND POLICY**

The Kenya Land Policy provides the overall framework and defines the key measures required to address among others, the critical issues of land administration, access to land, land use planning, restitution of historical injustices, environmental degradation, conflicts and unplanned proliferation of informal urban settlements. The Policy, further outlines the Government's commitment to ensure that all land is put into productive use on a sustainable basis by facilitating the implementation of key principles on land use, productivity targets and guidelines as well as conservation. The Policy also addresses constitutional issues, such as compulsory acquisition and development control. It also recognizes the need for security of tenure for all Kenyans.

The policy is meant to encourage a multi-sectoral approach to land use by not only providing social and economic incentives but also establishing an enabling environment for investment, agriculture, livestock development and the exploitation of natural resources.

The policy envisions that planning principles and guidelines at all levels will be formulated and implemented in a transparent, accountable, sustainable, comprehensive and participatory manner. Furthermore, the Policy notes that dealings in land ought to be guided by conservation and sustainable utilisation principles so as to ensure sound and sustainable environmental management of land based resources.

## **2.4 Vision 2030**

Kenya's Vision 2030 is the current long-term development blueprint for the country. The aim of 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 Vision is anchored on three key pillars: economic; social; and political Governance. The economic pillar aims to achieve an economic growth rate of 10 per cent per annum and sustain the same until 2030 in order to generate more resources to address the Millennium Development Goals (MDGs). The vision has identified a number of flagship projects in every sector to be implemented over the identified period to facilitate the desired growth that can support the implementation of the MDGs on a sustainable basis. In addition, the Vision 2030 has flagged out projects addressing the MDGs directly in key sectors such as agriculture, education, health, water and environment.

The social pillar seeks to create just, cohesive and equitable social development in a clean and secure environment. The political pillar aims to realize an issue-based, people-centered, result-oriented and accountable democratic system. Any planning initiative should therefore be guided and informed by the national aspirations and goals as outlined in Vision 2030.

(a) Some of the critical aspects of the Vision 2030 that have a direct bearing on the Narok Town ISUDP include the following:

- **Infrastructure:** The 2030 Vision aspires for a country firmly interconnected through a network of roads, railways, ports, airports, water ways and telecommunications. This also entails the provision of water and modern sanitation facilities to the people. By 2030, it will become impossible to refer to any region of our country as “remote”. To ensure that the main projects under the economic pillar are implemented, investment in the nation’s infrastructure is given the highest priority.
- **Energy:** Development projects recommended under Vision 2030 and overall economic growth will increase demand on Kenya’s energy supply. Currently, the cost of energy in Kenya is higher than what is charged by her competitors. Kenya must therefore, generate more energy and increase efficiency in energy consumption. The National Government is committed to continued institutional reforms in the energy sector, including a strong regulatory framework, encouraging private generators of power, and separating generation from distribution. New sources of energy will be found through exploitation of geothermal power, coal, renewable energy sources, and connecting Kenya to energy-surplus countries in the region.
- **Security:** The overall ambition for the security sector under Vision 2030 is “a society free from danger and fear”. The National Government, together with other key stakeholders including County Governments, is determined to improve security in order to attract investment, lower the cost of doing business and to provide Kenyans and all residents in the country with a more secure living and working environment.

(b) The sectors identified to deliver the 10 per cent economic growth rate per annum as envisaged under the economic pillar include tourism, agriculture, manufacturing, wholesale and retail trade, business process outsourcing (BPO) and financial services.

**Tourism:** Kenya aims to be one of the top ten long-haul tourist destinations in the world, offering a high-end, diverse, and distinctive visitor experience. Specific strategies for realizing this include: (i) aggressively developing Kenya’s coast by establishing resort cities in two key locations; (ii) achieving higher tourist revenue yield by increasing the quality of service and charges in country’s premium safari parks, and by improving facilities in all under-utilized parks; (iii) creating new high value niche products (e.g. cultural, eco-sports and water-based tourism); (iv) attracting high-end international hotel chains; and (v) investing in new conference facilities to boost business tourism.

**Agriculture:** Kenya aims to promote an innovative, commercially-oriented, and modern agricultural sector. This will be accomplished through: (i) transforming key institutions in agriculture and livestock to promote agricultural growth; (ii) increasing productivity of crops and livestock; (iii) introducing land use policies for better utilization of high and medium potential lands; (iv) developing more irrigable areas in arid and semi-arid lands for both crops and livestock; and (v) improving market access for smallholders through better supply chain management. Vision 2030 aims at adding value to farm and livestock products before they reach local and international markets.

**Wholesale and Retail Trade:** As far as wholesale and retail trade is concerned, the blueprint seeks to raise earnings by giving large informal sector opportunities to transform itself into a part of a formal sector that is efficient, multi-tiered, diversified in product range and



innovative. This will be realized through: (i) training and credit (ii) improving efficiency by reducing the number of players between the producer and the consumer; (iii) creating formal market outlets for small-scale operators who will then graduate from the informal sector; (iv) encouraging more investment in retail trade; (iv) developing an outreach programme to expand retail trade; and (v) developing training programmes to improve retail skills.

- (a) **Manufacturing:** Kenya aims to have a robust, diversified, and competitive manufacturing sector. This will be achieved through the implementation of the following strategies: (i) restructuring key industries that use local raw materials but are currently uncompetitive (e.g. sugar and paper manufacturing); (ii) exploiting opportunities in value addition to local agricultural produce; (iii) adding value to intermediate imports and capturing the “last step” of value addition (e.g. in metals and plastics).
- (a) **Financial Services:** The plan here is to create a vibrant and globally competitive financial sector in Kenya that will create jobs and also promote high levels of savings to finance Kenya’s overall investment needs. As part of Kenya’s macro-economic goals, savings rates are expected to rise from 17% to 30% of GDP in about a decade. This will be achieved through measures that include increasing bank deposits from 44% to 80% of GDP and by a declining cost of borrowed capital i.e. interest rates. The country will also decrease the share of population without access to finance from 85% to below 70% and increase stock market capitalisation from 50% to 90% of GDP.
- (a) **Business Process Outsourcing:** This is a new but promising sector for Kenya and especially for the country’s young people. It involves providing business services via the Internet to companies and organisations. The vision for business process outsourcing is for Kenya to “quickly become the top BPO destinations in Africa”. The goal for 2012 is to create at least 7,500 direct BPO jobs with an additional GDP contribution of KES10 billion. This will be done through attracting at least 5 major leading IT suppliers, at least 10 large multinational corporation companies and global BPO players to Kenya. This will create an estimated additional 5,000 jobs. At least 5 large local players will be identified to become local champions through stand-alone operations or joint ventures.

## 2.5 National Urban Development Policy

According to the draft National Urban Development Policy (NUDP), “the statutes that provide the legal framework for urban planning and development, the Local Government Act (cap 265) and the Physical Planning Act (cap 286) have not adequately addressed the current urban development realities. As a result, urban areas face numerous challenges which are a threat to sustainable urbanization and urban planning: unbalanced urbanization and haphazard designation of urban centres, uneven and skewed distribution of infrastructure, urban sprawl and decay, high costs of provision of infrastructure and services, degradation of the environment and heritage sites, non-compliance with approved plans and mushrooming of informal settlements, and insecurity” (GoK, 2011 C: 4). The NUDP covers the following areas: urban economy, urban finance, urban governance and management, national and county urban planning;; land, environment and climate change. Others are social development including infrastructure and services, physical infrastructure and services, urban housing, safety and disaster risk management as well as dealing with needs of vulnerable and marginalised groups.

Whilst the importance of sustainable urban planning and development has been captured in the Urban Areas and Cities Act No 3 of 2011, the national and county governments face a complex and varied planning agenda.

As clearly articulated above, there is a need to recognise urban planning as an integrated process that seeks to address the numerous challenges facing Kenya's urban areas.

## **2.6 Legal Framework**

### **2.6.1 Physical Planning Act, Cap 286**

The Physical Planning Act (PPA) vests in the Director of Physical Planning the responsibility for preparing urban and regional physical development plans. The same law also provides in the counties the responsibility for preparing regional physical development plans for areas falling in their jurisdiction. In practice, the Director of Physical Planning is required to formally delegate planning authority to the Towns where they can carry out this responsibility while only providing policy and professional guidance to the Towns. This Act is under review to conform to the current constitution and other emerging enabling legislation.

### **2.6.2 Local Government Act, Cap 265**

The law stands as repealed, however Local Authorities (LA's) in Kenya had for a longtime operated under the Local Government Act regime of Cap 265. This was an elaborate system of public administration, which empowered the local authorities through legislation. Operating under the direct supervision of the Ministry of Local Government (MoLG), the functions and responsibilities of the local authorities were defined only in terms of 'permission' rather than being mandated.

### **2.6.3 County Governments Act, 2012**

The County Government Act seeks to give effect to Chapter 11 of the Constitution and in particular provide for the powers, functions and responsibilities of county governments to deliver services and to provide for other connected purposes.

### **2.6.4 Urban Areas and Cities Act 2011**

This Act has been formulated in pursuit of Article 184 of the Constitution that calls for a National legislation to provide for classification, governance and management of urban areas and cities (UA&C). The Act became operational after the first elections held under the Constitution. It covers among others the classification and establishment of UA&C, Governance and management of UA&C, Delivery of Services, Integrated Development Planning, Financial Provisions, Miscellaneous and Transitional Provisions. There are also important provisions within the schedules including, Classification of cities and Towns by services, Rights of, and participation by residents in affairs of their city or urban area and Preparation of an Integrated Plan

There are other laws that govern physical planning. Some of these legislations include but not limited to:

- (1) National Land Commission Act No.5 of 2012,
- (2) Land Act No.6 of 2012,
- (3) Land Registration Act No.3 of 2012,
- (4) Physical Planners Registration Act, 1996,
- (5) Environmental Management and Co-ordination Act, 1999,

- (6) Water Act, 2002,
- (7) Public Health Act (Cap 242),
- (8) Agriculture Act (Cap 318), Rev.1986,
- (9) Land Control Act (Cap 302),
- (10) Registered Lands Act (Cap 300),
- (11) Survey Act (Cap 299),
- (12) The Building By-Laws (Grade I &II), 1968,
- (13) Housing Act (Cap 117),
- (14) Land Adjudication Act (Cap 284),
- (15) Land Consolidation Act (Cap 283), and
- (16) Trust Land Act (Cap 288).

## 2.7 Historical Background

The history of Narok town goes back to the early part of the last century when European settlers arrived in the area. They were shown by Maasai elders an area which was not suitable for grazing, i.e. the current CBD which is in a geographical basin. It initially grew up as an administrative centre, but later acquired commercial and residential functions. The town gets its name from the Maa word "Narok" which means "black water".

In terms of development planning, the first development plan for Narok town was prepared in 1958 and was a circular Plan. A second development plan was made in 1966, however it was not approved leading to the preparation of a third Development Plan in 1969. This plan was approved and got the approval number Plan 12-1969. The fourth and fifth Development Plans was attempted in 1970 and 1975, respectively, but were not approved.

The Sixth Narok town Development Plan done in 1981 is the most recently approved plan for the town bearing the approved plan number 23-1985. In addition, a zoning plan was prepared in 2005 and revised in 2009 but is yet to be approved.

However, all the above-named plans did not cover the entire 692Km<sup>2</sup> area of Narok Town; they merely concentrated on the town's CBD.

## 2.8 Terms of Reference (TOR)

This report aims to achieve the following aspects as required in the Terms of Reference

- The plans should provide for measures to promote Local Economic Development and provide a system for coordination of activities to create synergy and spur Economic Development of the town;
- The Plan should carry out an inventory of environmental assets, resources and challenges. It should provide for improved quality of life and sustainable use of resources. The Plan should map the location of the resources;
- The Plan should have a Land Use Chapter dealing with current allocation of space and projections for future requirements to the end of the plan period. The Plan should provide for

- a system of circulation and interactions;
- That the Plan should develop strategies to set urban growth limits and design measures to absorb growth within the already developed part of town through urban renewal;
- The Plan should zone the town while promoting inclusivity and identify present conflicts and potential future conflicts;
- The plan should have an environment chapter that isolates the unique features in the town that give it identity;
- The plan should have an urban design chapter that uses different elements in planning e.g. physical features, neighborhoods;
- The Plan should have an investment chapter stipulating the policy statements and spatial framework and incorporate the private, public partnership (PPP); and,
- The Plan should propose an organization structure to implement and oversee the investments.

## 2.9 Stakeholders Concerns and Expectations

### 2.9.1 Stakeholder Engagement

During the inception phase, the key stakeholders that were to be involved in the digital mapping and planning of Narok were identified. They included representatives from MoLG, UDD, MoL, PPD, Consultant, TCN, project planning team, local professionals, private sector, Narok town residents, community groups, NGOs, and other agencies.

A communication framework was designed and operationalized to ensure that all the stakeholders were inspired and well informed to enable them play their respective roles in engaging and monitoring the Plan preparation and implementation processes. To achieve this, stakeholders were effectively engaged during workshops held as part of the requirements under the contract agreement between the Government of Kenya and Matrix Development Consultants.

In this section, we discuss some of the key stakeholder concerns and expectations raised in these forums and that informed the planning process.

### 2.9.2 Consultations and Validation Workshop

While preparing the ISUDP, a number of consultation forums were held with the residents and other stakeholders.

*Table 2.1: Dates to Key Stakeholder Consultation Fora*

Consultation/Workshop	Venue	Date
Visioning Workshop	Narok	Tuesday, 9 <sup>th</sup> October, 2012
Field Visit Consultations	Narok	June, 2014; September, 2013; June, 2013; January, 2013; December, 2012; November, 2012; and May, 2012.
Situational Analysis and Preliminary Maps Validation Workshop	Narok	Tuesday, 11 <sup>th</sup> December, 2012.
Draft strategies and proposals workshop	Narok	Friday, 15 <sup>th</sup> February, 2013
Draft Structure Plan and Zoning Plans Workshop	Narok	Thursday, 5 <sup>th</sup> December, 2013
Community Leaders Sensitisation Seminar	Narok	Wednesday, 15 <sup>th</sup> January, 2014

The various workshops were designed and executed in a consultative/participatory approach. The processes took into account the key principles of inclusive and representative consultation and/or participation of all residents, communities, Civil Society Organizations, Faith Based Organizations, and key representatives from the town administration, government agencies

and departments, private sector, sector specialists and other resource persons. A number of issues emerged from this consultative processes. The consulting team took time to reflect on the perspectives of Narok residents in terms of past and current problems and opportunities and their aspirations for Narok town. Key issues raised during the various consultations are as follows:

THEME	POLICY ISSUE/ PROBLEMS	POLICY RECOMMENDATIONS
	<ul style="list-style-type: none"> <li>• It was felt that the status of Narok as a “town council” was stifling development.</li> <li>• Narok town is the headquarters for Narok County and hence the need to plan for the Governor’s residence and offices.</li> <li>• There is lack of a structured framework for people to engage with the then TCN with regard to Narok affairs. There is also a breakdown in communication with leaders. The fact that the business community had refused to pay rates and instead taken TCN to court, is indicative of lack of platform for stakeholder engagement</li> <li>• Civil servants are not free to make major decisions or carry out their respective duties due to political interference.</li> <li>• Insufficient and unqualified staff within the local authority</li> <li>• <b>Weak and ad hoc</b> participation of private sector and CSOs</li> <li>• <b>Inadequate</b> participation of citizens in decision making</li> <li>• <b>Un</b>-informed residents</li> <li>• <b>Poor</b> public relations by Town staff</li> <li>• <b>Inadequate</b> and ineffective communication and information mechanisms.</li> <li>• <b>Inadequate</b> technical backstopping from national government.</li> <li>• <b>Lack</b> of accountability and transparency</li> </ul>	<ul style="list-style-type: none"> <li>• The hierarchy of a urban area determines its ability to enter into negotiations with government and private agencies. Concept of developing Narok as a SMART CITY was mooted.</li> <li>• Proposed locating of key housing and offices for Country officials needed to be established early.</li> <li>• <b>Encourage</b> periodic consultations with all citizenry</li> <li>• <b>Develop</b> a PP framework</li> <li>• <b>Formulate</b> a Communication Strategy for the Plan</li> <li>• <b>Ensure</b> better and effective provision of services through internal checks</li> <li>• <b>Recruitment</b> of qualified technical staff –planners, engineers, surveyors etc.</li> <li>• <b>Develop</b> Crime Prevention Strategy for the Town</li> <li>• <b>Mainstreaming</b> safety and security in housing settlement development and design</li> <li>• <b>Establish</b> framework for joint coordination and collaboration-joint programming , joint feedback sessions,</li> <li>• <b>Develop</b> and popularize <i>Citizen Score Cards, Service Score Cards, Performance Contracts</i>, automating processes such as approvals, ticketing etc.</li> <li>• <b>Review</b>, re-energize and ensure full operationalization of Service Charters;</li> <li>• <b>Strengthen</b> internal Town capacities through hiring additional professional staff</li> <li>• That the language and spirit of the plan outputs must be live to new county governance structure</li> <li>• <b>Addressing</b> issues related to urban development that has a direct impact on enhancement of urban safety and security</li> <li>• <b>Setting up</b> patrol bases for police and enhancing policing in crime prone areas</li> </ul>
Housing	<ul style="list-style-type: none"> <li>• On housing- it was noted that even the high income area of Lenana- people were building on other people’s land due to poor guidance by planning department in Narok.</li> <li>• Slums emerging due to lack of sustainable livelihoods, low incomes and poor planning of the town.</li> <li>• No housing schemes have been started or initiated by government</li> <li>• Population is higher than the housing supply</li> <li>• Construction of houses is all landlord driven, the poor are unable to Participate</li> <li>• Land tenure and ownership in large parts of the Town is trust, and and communal, hence it does not attract investors. Land ownership system was later re-defined in the Constitution</li> <li>• There is need to plan for anticipated demand for housing for county officials and investors including Governor’s residence and offices.</li> </ul>	<ul style="list-style-type: none"> <li>• Re-planning of parts of the town</li> <li>• Popularize appropriate building technologies.</li> <li>• Encourage public -private partnerships in housing</li> <li>• Review of existing regulatory framework to provide an enabling working environment and support sufficient growth of the housing subsector;</li> <li>• Introduce innovations in housing finance (e.g. incentives)</li> <li>• Formation and popularization of housing cooperatives</li> <li>• Encourage land banking by municipality and County government to forestall increases in land costs</li> <li>• Titling of land</li> </ul>

THEME	POLICY ISSUE/ PROBLEMS	POLICY RECOMMENDATIONS
Social issues	<ul style="list-style-type: none"> <li>• That 90% of charcoal sellers are Maasai women who start their business as early as 3 am. It is important to promote alternative income for charcoal dealers particularly the women. The main cause of this practice is poverty among the community.</li> <li>• The issue of commercial sex workers in town should be addressed as it is also linked to the growing number of street children.</li> <li>• Unemployment particularly among the youth,</li> <li>• Corruption among security officers,</li> <li>• Gender based violence is also an area of concern in the area</li> </ul>	<ul style="list-style-type: none"> <li>• Social issues that lead to environmental degradation must be looked into.</li> <li>• From the proposed and expanded water dams' project, green house farming ought to be carried out to provide employment for women and the youth. This will be an alternative economic activity to replace the charcoal burning business.</li> </ul>
Planning and Infrastructure	<ul style="list-style-type: none"> <li>• There is no political will to deal with pressing issues facing Narok such as drainage and flooding.</li> <li>• Lack of implementation of zoning regulations in Narok town by the Town and D.P.P.O. in addition, there is an absence of goodwill in the application of zoning regulations.</li> <li>• Whereas the planning situation in the Town is a mess, the objective of the current exercise is to improve upon it.</li> <li>• Narok town still experiences flooding while the county is faces occasional droughts. Dams should be built upstream to arrest flood water which should be used for irrigation and water supply.</li> <li>• Poor coordination and poor planning of some parts of the town. Due to lack effective development control and planning guidance, people develop their plots beyond their boundaries. This is common in high income area of Lenana. Inadequate capacity for plan preparation and implementation</li> <li>• Residents are looking for "big" and comprehensive programmes to deal with the flooding menace in Narok.</li> </ul>	<ul style="list-style-type: none"> <li>• There is need to form a Planning Forum where all stakeholders will be represented and engaged.</li> <li>• Town officials should be more disciplined in enforcing zoning laws</li> <li>• Development plans should be approved in time and implemented accordingly. This should be complemented by qualified and experienced planners.</li> <li>• The Matrix Engineer was requested to ascertain whether the current specifications for the culverts are right and advise appropriately.</li> <li>• <b>Review and rationalize development control regulations</b></li> </ul>
Cultural heritage	<ul style="list-style-type: none"> <li>• The relevant Ministry has problems preserving particular sites and buildings in Narok as the Local Council is not supportive. Some of the sites and buildings identified for preservation include:-</li> <li>• First shop,</li> <li>• Asian school,</li> <li>• Colonial prison,</li> <li>• Mukuru Valley,</li> <li>• Narok old bridge, and</li> <li>• Proposed site for the museum.</li> </ul>	<ul style="list-style-type: none"> <li>• Sensitize the residents of Narok to appreciate the importance of the Museums.</li> </ul>
Education	<ul style="list-style-type: none"> <li>• There are also limited special schools</li> <li>• Maasai Mara University is and will continue to play a central role in creating demand for housing, hostels etc. in Narok.</li> <li>• Need to re-think the impact of the new status of the University in Narok (Maasai Mara University)</li> <li>• Universities have also grown without inadequate planning for student accommodation</li> </ul>	<ul style="list-style-type: none"> <li>• Construction of special schools</li> <li>• Developing hostels for student accommodation, including zoning areas for such use.</li> <li>• Encouraging public - private partnership in provision of such facilities and services</li> </ul>
Environment	<ul style="list-style-type: none"> <li>• Environmental conservation along the 6 river basins is very important for Narok Town.</li> <li>• Lack of a sewer line is the main challenge to the growth of the town.</li> <li>• There is encroachment of the riparian and way leaves by developers.</li> <li>• Stakeholder expressed fear that one day Narok town will sink due to flooding.</li> <li>• Stakeholders were concerned on where the big hotels dispose their waste.</li> </ul>	<ul style="list-style-type: none"> <li>• Dams should be constructed and trees planted upstream to avoid flooding.</li> </ul>

THEME	POLICY ISSUE/ PROBLEMS	POLICY RECOMMENDATIONS
Economy and Finance	<ul style="list-style-type: none"> <li>The Town does not have funds to finance developments</li> <li>Tax registers are not linked to and up-dated simultaneously with digitized geo-referenced data</li> <li>Whereas foreigners were welcome, residents felt that they should not control the economy of the Town.</li> <li>Kenya National Chamber of Commerce and Industry (KNCCI), Narok chapter, must be involved in the flood control projects to ensure that it is done properly.</li> <li>Job creation will be possible only through development of industries. But land for industrial development is unavailable,</li> <li>Lack of detailed and up to date data bases on properties, businesses and residents</li> <li>The Town is not fully computerized. Installation of the Local Authority Integrated Financial Operational and Management System (LAIFOMS) is in progress</li> </ul>	<ul style="list-style-type: none"> <li>Borrow required funds from individuals, banks, capital markets and other lending institutions</li> <li>Install a computerized accounting programme that links and up-dates tax and ensure the data is captured in survey and physical planning records</li> <li>Avail land for construction of industries. Purchasing of more land required, as each trading centre should have industrial plots.</li> <li>Ensure implementation of all accounting modules of the programme.</li> </ul>
Facilities	<ul style="list-style-type: none"> <li>Location of the cemetery between a deep gouge and a road at Majengo area is NOT desirable. The cemetery should be relocated.</li> <li>Limited scope of service delivery coupled with dissatisfaction among the residents with level and quality of the services.</li> <li>That the issues related to health such as accidents, mortuary and cemetery need some more attention</li> <li>Recreational spaces and facilities are inadequate in Narok town.</li> <li>There was lively debate on hard issues such as "relocation of main urban functions" a way from current "basin location". This encourages radical and bold proposals.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure full recovery of the cost of providing Town services and facilities from the users of such services and facilities</li> </ul>
Other	<ul style="list-style-type: none"> <li>Contrary to rumors, the Headquarters of Ewaso Ngiro South Development Authority had not been moved and shall remain in Narok.</li> <li>Maasai Mara and Eldoret Universities are carrying out studies to build 3 dams on the high level areas. The KenGen Company also plans to construct a hydro dam for power generation.</li> </ul>	

- It was felt that the status of Narok as a “town council” was stifling development. The hierarchy of a urban area determines its ability to enter into negotiations with government and private agencies. The concept of developing Narok as a SMART CITY was mooted.
- Narok town is the county headquarters for Narok County. There is need to plan for anticipated demand for housing for county officials and investors including a governor’s residence and offices. The Proposed locating of key housing and Offices for Country officials need to be decided upon early.
- Maasai Mara University is and will continue to play a central role in creating demand for housing, hostels etc. in the town.
- There is lack of a structured framework for people to engage with the then TCN with regard to issues in the town. There is also a breakdown in communication with leaders. The fact that the business community had refused to pay rates and instead taken TCN to court, was indicative of mistrust and lack of a platform for stakeholder engagement
- Due to lack of effective development control and planning guidance, people develop their plots beyond their boundaries. This was common in high income area of Lenana.
- That 90% of charcoal sellers are Maasai women who start their business as early as 3 am. It is important to promote alternative income for the charcoal dealers many of whom are involved in the business because of poverty. In addition, the social issues that lead to environmental degradation must be looked into.

- The issue of commercial sex workers in town should be addressed because it is linked to the growing number of street children.
- There is no political will to deal with pressing issues facing Narok such as drainage and flooding. This calls for the formation of a planning forum that will represent and engage all stakeholders.
- Lack of implementation of zoning regulations in Narok town by the town council and D.P.O.. Those mandated to do so need to be more disciplined in enforcing zoning laws and approving building plans.
- Civil servants are not free to make major decisions or carry out their respective duties due to political interference.
- Lack of a sewer line is the main challenge to the growth of the town.
- Insufficient and unqualified staff within the local authority.
- There is need for the residents of Narok to appreciate the importance of the Museums. At the same time, the relevant Ministry has been experiencing challenges of preserving particular sites and buildings in Narok as the local authority was not supportive. Some of the sites and buildings identified for preservation include:-
  - First shop;
  - Asian school;
  - Colonial prison;
  - Mukuru valley;
  - Narok old bridge, and,
  - Proposed site for the museum.
- Whereas the planning of the town is a mess, the objective of the current exercise is to improve upon it. The Matrix Engineer was requested to ascertain whether the current specifications for the culverts are right and advise the Council accordingly
- Environmental conservation along the six river basins is very important for Narok Town.
- Whereas foreigners were welcome, there were feelings among the locals that they should not control the economy of the Town.
- Kenya National Chamber of Commerce and Industry (KNCCI), Narok Chapter, must be involved in the flood control projects to ensure it is done properly.
- Job creation will be possible only through the development of industries. There is need to avail land for construction of industries as no industrial plots are available. The purchase of more land is required to enable each trading centre to have industrial plots.
- Although Narok is no. 1 and no. 2 in the World Bank rating, the town still experiences flooding while the county is prone to droughts. Dams should be built upstream to arrest flood water which should be used for irrigation, and water supply. It was also recommended that trees be planted upstream to avoid flooding.
- There is encroachment of the riparian and way leaves by developers.
- Development plans should be approved in time and implemented accordingly. The town requires qualified and experienced planners.
- Contrary to rumors circulating, the headquarters of Ewaso Ngiro South Development Authority was not moved from Narok.
- Location of the cemetery between a deep gouge and a road at Majengo area is NOT desirable. The cemetery should be relocated.



- There is encroachment of the riparian and way leaves by developers.
- Is still be practiced 50 years down the line. This was attributed to past colonial legacy where the practice was rampant. (*this is not clear*)
- Stakeholders expressed fear that Narok town might end up will sink due to flooding. It was encouraged that dams should be constructed and trees planted upstream to avoid flooding.
- Stakeholders were concerned on where big hotels dispose their waste.
- The consultants were commended for a job well done and for eloquently capturing the situation as it is. Resident with more issues to raise or pieces of advice were encouraged to do so by Email to Matrix or by Letter through the Town Planner.



**PART II:  
SITUATIONAL ANALYSIS**



# Chapter 3

## THE PLANNING AREA

### 3.1 Location and Size

Narok Town is located in Narok County at latitude 1° 5' 0" South and longitude 35° 52' 0" East. The town is 150 Kilometers West of Kenya's capital city of Nairobi and 120 Kilometers South of Nakuru town. It lies at an altitude of 1,828m above the sea level and covers an area of 692 km<sup>2</sup> -one of the largest in the country. However, only a very small percentage (less than 10%) of this area is built up; the rest is either under livestock, large scale wheat and barley farming or the Mau forest.

#### 3.1.1 National Context

Narok town is the headquarters of the rich and nationally significant Narok County and provides a gateway to the world-renowned Maasai Mara Game Reserve. Its unique location is well suited to play an important role in the realization of the objectives of Vision 2030. The Maasai Mara is a major tourist attraction in the country and Narok town could potentially develop as a tourist resort with eco-tourism activities supplementing wildlife tourism.

*(Map 3.1 overleaf below shows the location of Narok town and the Maasai Mara in the national context)*

#### 3.1.2 Regional Context

Narok town supports Kenya's economy along the Great Rift Valley. Local people refer to it as *Enkare Narok* (meaning 'black water' or 'dark water') as it is named after the main river flowing through the town. It is the center for services, business, and finance and provides a stop-over for public service transport vehicles from Nairobi to South Nyanza and for tourists visiting Maasai Mara National Reserve.

There are major tourist hotels found in the area. In most cases commercial activities are mainly concentrated along the two highways; Bomet-Narok-Maai Mahiu (B3 road) and Narok-Mau-Nakuru (C57) road, which transverse the town.

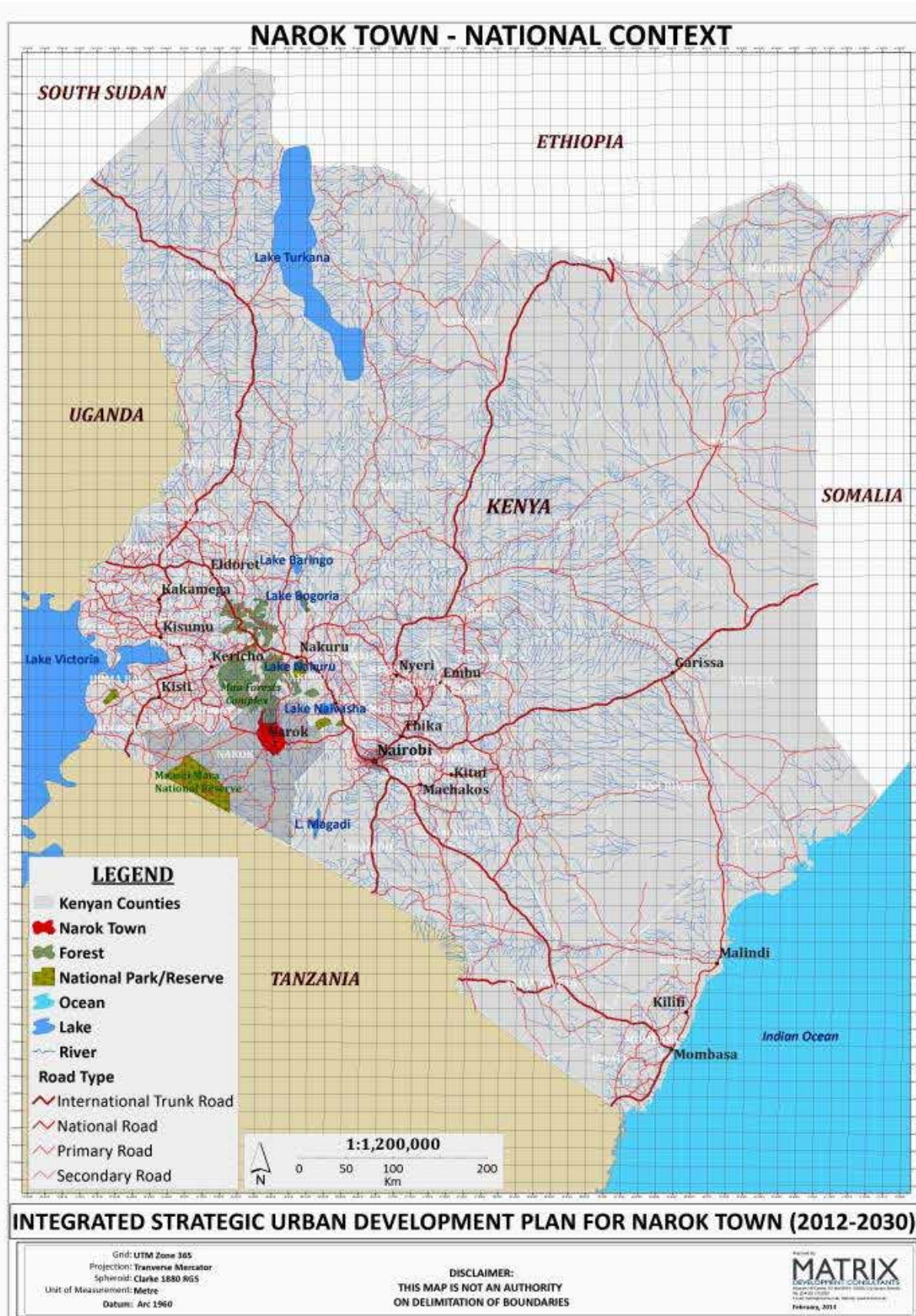
*(Map 3.2 overleaf below shows the location of Narok town in its regional context)*

#### 3.1.3 County Context

Narok is the designated headquarters of the Narok County and is located within the large Narok North constituency. It was declared a town council on January 31, 1991 with an area of 692 km<sup>2</sup>. Formerly, it had 10 civic wards but under the new devolved system, it currently has two Country Assembly wards namely, Narok Town ward and Nkareta ward.

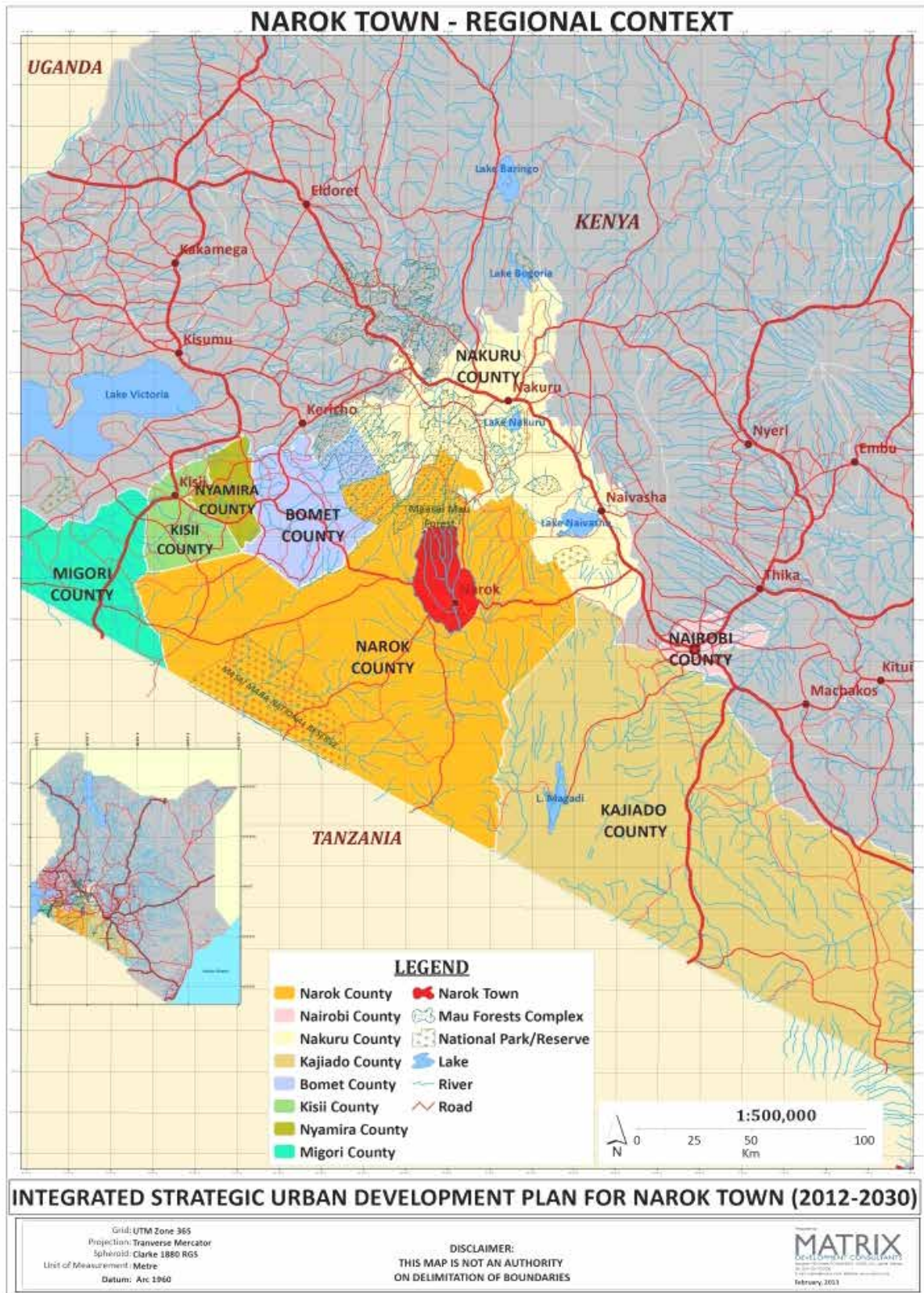
*(Map 3.3 shows the location of Narok town within the Narok County context)*

Map 3.1: Narok Town in its National Context



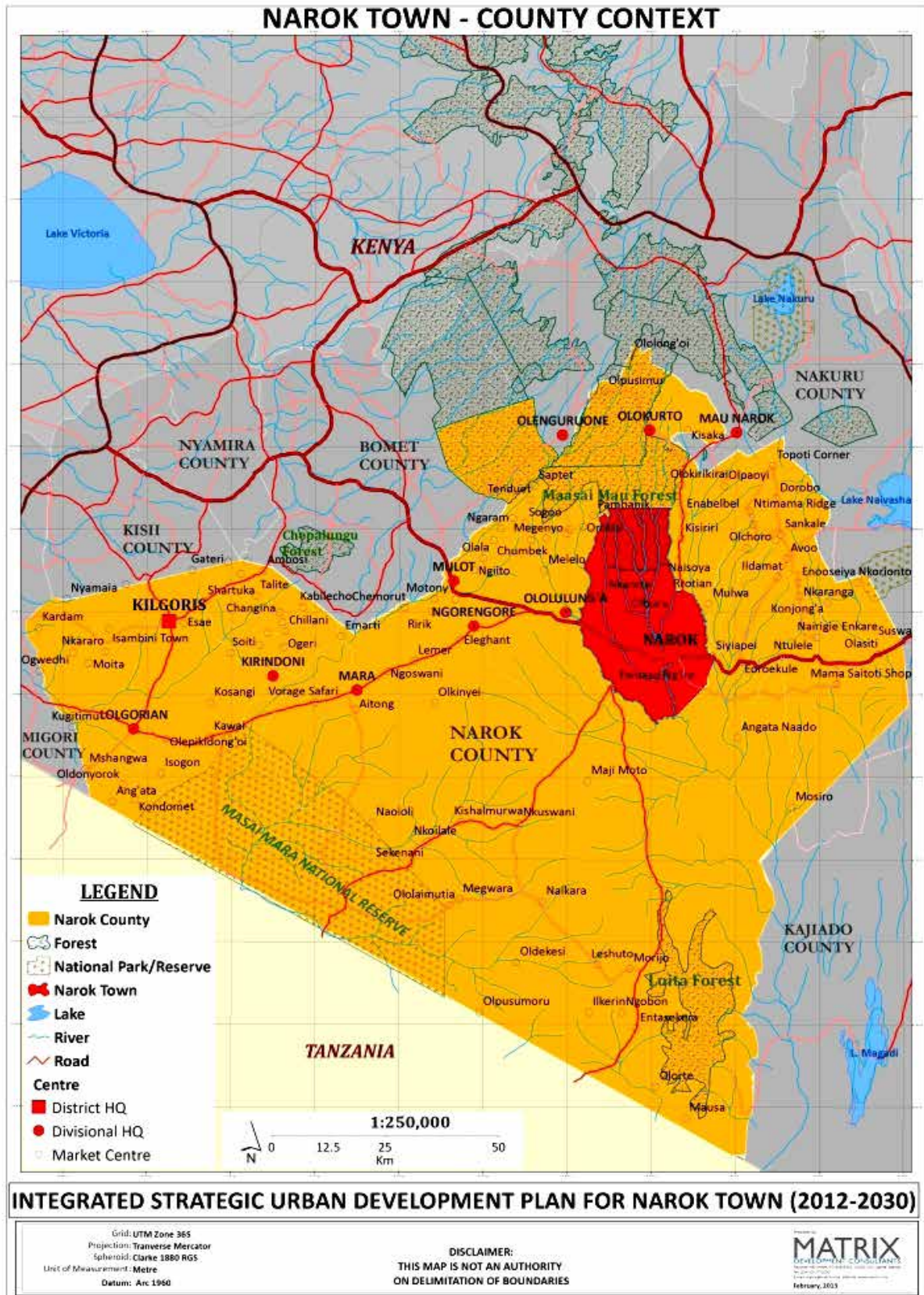
Source: Matrix Development Consultants, 2014

Map 3.2: Narok Town in its Regional Context



Source: Matrix Development Consultants, 2014

Map 3.3: Narok Town in its County Context



Source: Matrix Development Consultants, 2014

## 3.2 Site Analysis

### 3.2.1 The Local Centres

The three prominent Local Centres outside the CBD are Ewuaso Ng'iro, Rrotian and Nkareta centres. Although all the three are of the level of Local Centres, they play important roles to their immediate hinterland, providing important urban functions.

All the centres have developed spontaneously and provide various types of services to the local community. The strategy will be to spur their growth which would, in essence, re-direct it from the Town's CBD and hence enable higher levels of urban services to spread to the hinter land.

### 3.2.2 Structuring Elements

#### 3.2.2.1 The Flood Plain and the Valleys

In the past, the upper parts of the town, particularly the areas towards the Maasai Mau Forest, were heavily forested but deforestation has taken place over the last two decades. The area needs to be conserved so that only appropriate development uses are allowed. This area is not conducive for urban development.

#### 3.2.2.2 The Central Business District

The Location of the Central Business district has impacted greatly on the town's urban form and growth to the North and West of the present location. The CBD is historically sited in a sunken basin that is prone to severe flooding during heavy rains. This has contributed to loss of life and property.

#### 3.2.2.3 The Rich Agricultural Hinterland

This area covers over 80% of the former Town Council Area (*see Map 3.4 overleaf*). Among the important crops grown here are wheat, barley, horticultural produce as well as rearing of beef and dairy cattle. Agricultural activities have become the main stay of many households in Narok district taking over from the traditional pastoralism which has been the main source of livelihood for the Maasai community. The challenge here is that land clearing, cultivation by either the land owners and or the lessees has destroyed massive tracts of the vegetation. This indiscriminate land clearing has exposed the soil to water, wind, animal and water erosion.

The Olmukonko and Rrotian area, where the main catchment of Kafia Valley is, provide examples where cultivation on most of the farms is done vertically on the slopes with no terracing provided. This is largely due to lack of awareness among the local community. Clearing of the land has left the land bare hence run off is left unchecked which is one of the causes of the floods that sweep Narok town from time to time whenever it rains. It is important to note that during rainy season, it is not just soil that is swept away; fertilizers and other agricultural chemicals are also carried downstream to Narok River which happens to be the source of water for communities living downstream.

#### 3.2.2.4 The Enkare-Narok River

The drainage system in Narok Town consists of one permanent river, Enkare-Narok which draws its waters from Mau Forest and runs across the town where it is joined



by two seasonal streams namely; Esamburbur and Kikia. The seasonal streams run through the main shopping centre and act as storm drain channels for the town before emptying their water into Narok River. The Narok River covers a linear dimension of 56 Kilometres within the Narok Township Boundary.

### **3.2.2.5 Impacts of the Roads B3, C12, C57**

Bisecting the town into two, the B3 Road runs from South East to the West of the Township boundary, whereas the C12 road runs off the B3 road to Ewaso Ng'iro and Maasai Mara. The B3 road runs linearly for 34 Kilometres; the C57 road runs for 18 Kilometres and C12 runs for 11 kilometres within the jurisdiction of the former town council.

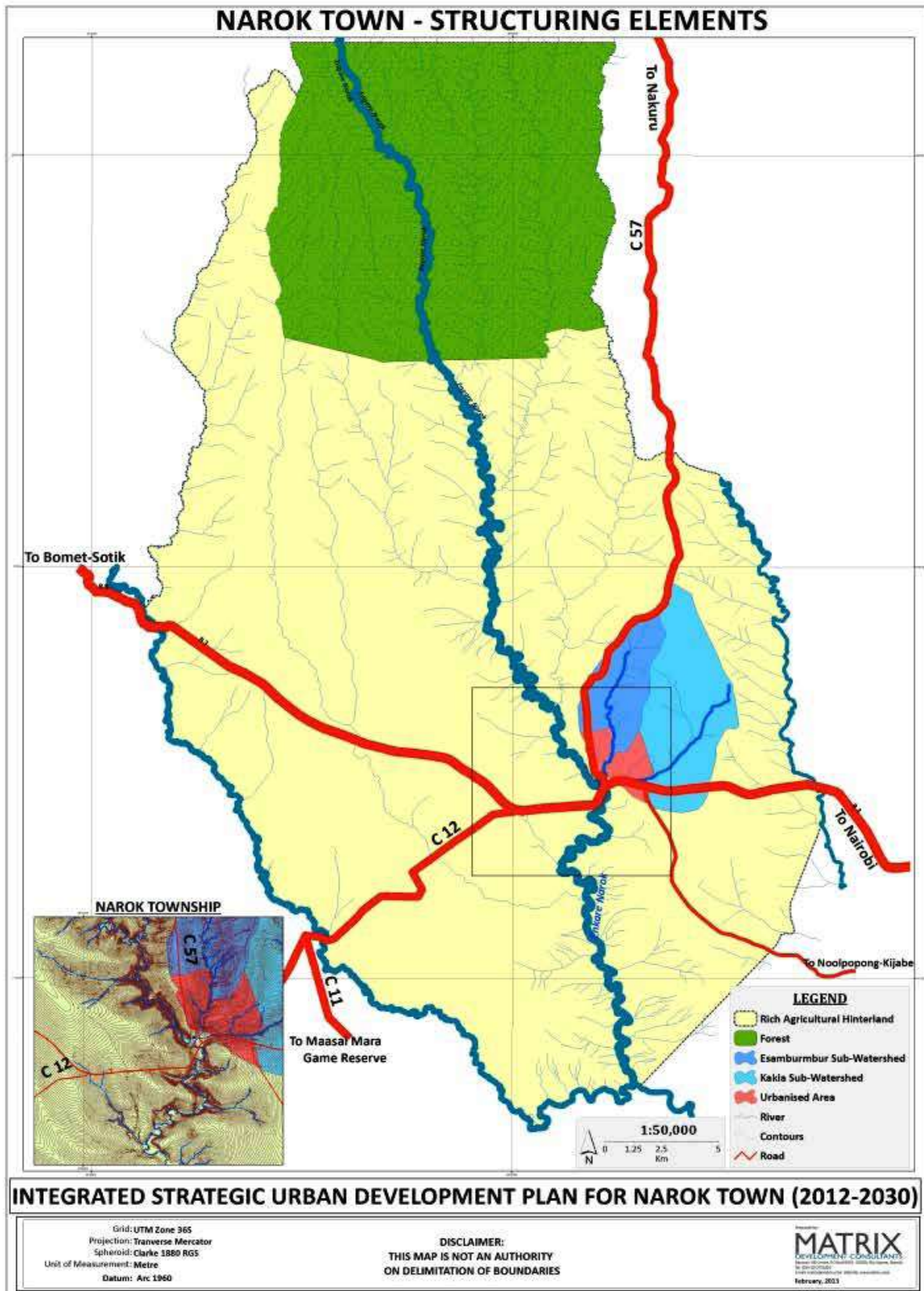
The roads affect the town in the following ways:

- They dictate the nature and direction of urban development;
- They facilitate the flow of vehicular traffic and goods; and,
- Promote a linear development of the town thus preventing a compact and efficient concentration of key urban function

### **3.2.2.6 The Mau Forest**

The whole of Naisoya adjudication section and part of the Nkareta group ranch -which are within the boundary of the former Town Council- are actually a part of the Mau Forest Complex. The strategy would be to let the forest remain, and where it has been cleared, it should be reinstated. However, it should be noted that the Mau Forest Restoration Interim Co-coordinating Secretariat has been set up to look into such recovery.

Map 3.4: Narok Town's Structuring Elements



Source: Matrix Development Consultants, 2014



# Chapter 4

## SOCIAL AND DEMOGRAPHIC DYNAMICS

### 4.1 POPULATION STRUCTURE

#### 4.1.1 Population Size

Under the new devolved system, which took effect from March 2013, Narok County covers an area of 17,931 km<sup>2</sup>, which, according to the 2009 Population Census, had a total population of 850,920 persons living in 169,220 households (see Table 4.1 below). This translates to a density of 61 persons per km<sup>2</sup> (*Government of Kenya, 2009*).

Table 4.1: Narok County Population Age Cohorts

Age bracket	Male	Female	Total
0-4	85,158	82,412	167,570
5- 9	74,001	71,034	145,035
10 -14	59,117	56,668	115,785
15-19	44,507	42,327	86,834
20-24	36,682	42,949	79,631
25-29	31,700	32,036	63,736
30-34	24,096	23,121	47,217
35-39	19,866	19,234	39,100
40-44	13,660	13,084	26,744
45-49	11,408	11,263	22,671
50-54	7,920	7,295	15,215
55-59	5,729	4,850	10,579
60-64	4,746	4,555	9,301
65-69	3,023	2,900	5,923
70-74	2,590	2,679	5,269
75-79	1,498	1,470	2,968
80+	2,943	3,778	6,721
Age not stated	381	240	628
<b>Total</b>	<b>429,025</b>	<b>421,895</b>	<b>850,920</b>

Source: Republic of Kenya, 2009

The county's population structure is comprised of 61% children (i.e. 0-19 years of age) while the economically active age bracket (i.e. 20-64 years of age) is only 37% of the population. This has important ramifications for future planning of the town in terms of basic social services physical facilities as well as infrastructural services. The rapid population growth and high dependency ratios suggest that there is lot of pressure on the use of existing services

such as education, and health. In addition, this also suggests that most family incomes are used to support dependents, thereby reducing the disposable income that can be invested in productive ventures.

#### 4.1.2 Projected Population

Assuming that all other factors i.e. mortality rate, fertility rate and migration holds constant, the following population estimates are projected.

**Table 4.2: Projection Population in Narok County**

Years	1999	2009	2019	2029
Male	301,494	429,025	610,503	868,745
Female	296,482	421,895	600,355	854,305
<b>Total</b>	<b>597,976</b>	<b>850,920</b>	<b>1,210,858</b>	<b>1,723,050</b>

Source: Republic of Kenya, 2009

#### 4.1.3 Urban Population Size and Structure

According to the new County Assembly system, which took effect from March 2013, the former 10 wards covering the urban area were consolidated to just two County Assembly wards; Narok Town and Nkareta wards. The county ward boundaries have been tabulated for 1999 and 2009 censuses and shown in *Table 4.3* below.

*Table 4.3: Narok Town Populations by County Assembly Wards (1999-2009)*

County Assembly	1999 Population			2009 Population			Inter-Censual Growth Rate
	Sub-location	Male	Total	Male	Female	Total	
Narok Town	Narok Town	11,586	22,315	21,998	20,507	42,505	0.09048
	Oleleshwa	1,381	2,758	2,486	2,526	5,012	0.08173
Nkareta	Nkareta	2,066	4,180	3,444	3,412	6,856	0.06402
	Naisoya	2,443	4,751	2,452	2,388	4,840	0.00187
	Olopito	1,480	2,866	4,452	4,058	8,510	0.08368
<b>Total</b>		<b>18,956</b>	36,870	<b>34,832</b>	<b>32,891</b>	<b>67,723</b>	<b>0.08368</b>

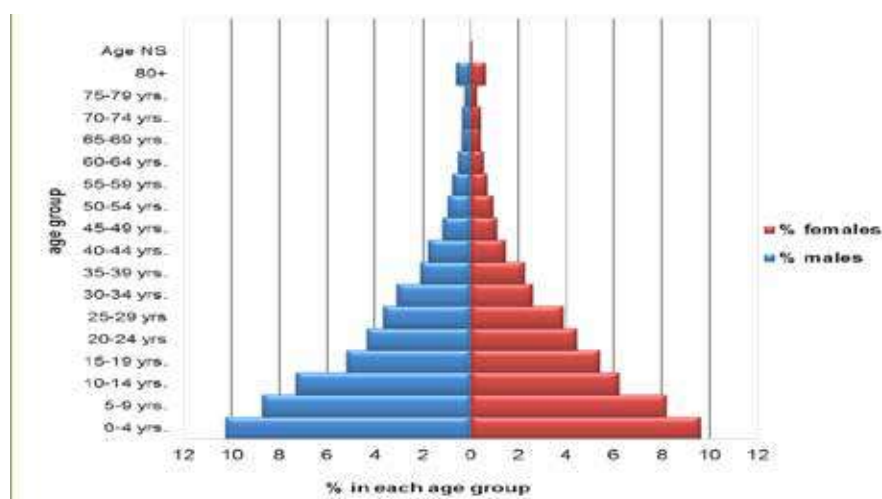
Source: Republic of Kenya, 1999, 2009, IEBC, 2012

#### 4.1.4 Urban Population by Age Structure

*Table 4.4* below shows the age structure of the population for Narok according to the 2009 Census. Whereas the population of the town was 36,870 in 1969, the 2009 census placed it at 67,000. The sex ratio is almost the same at 51:49 with males being more than females. *Figure 4.1* depicts the Narok town percentage age-sex population pyramid.

The Town's population is very young with those under 20 years of age comprising 61 % of the population as in 2009. This has important ramifications for future planning for the town in terms of basic social services physical facilities as well as infrastructural services.

Figure 4.1: Narok Town Population Pyramid, 2009



Source: Republic of Kenya, 2009

Table 4.4: Narok Town Population Age Structure

Age	Male	Female	Total
0-4 yrs.	6,942	6,496	13,438
5-9 yrs.	5,909	5,543	11,452
10-14 yrs.	4,950	4,195	9,145
15-19 yrs.	3,534	3,630	7,164
20-24 yrs.	2,944	2,994	5,938
25-29 yrs.	2,481	2,593	5,074
30-34 yrs.	2,092	1,748	3,840
35-39 yrs.	1,427	1,504	2,931
40-44 yrs.	1,181	964	2,145
45-49 yrs.	805	731	1,536
50-54 yrs.	633	619	1,251
55-59 yrs.	505	446	951
60-64 yrs.	352	347	699
65-69 yrs.	259	256	515
70-74 yrs.	240	258	498
75-79 yrs.	177	152	329
80+	397	405	801
Age NS	3	11	14
Total	34,832	32,891	67,723

Source: Republic of Kenya, 2009

As shown in Table 4.5 below, the population of Narok Town was 36,870 comprising 18,956 males -according to the 1999 Census- compared to the 2009 Census figures which placed the number of men at 36,870 thus indicating that the sex ratio was in both years 1.06:1 in favour of males. Of the two County wards, Town Ward has the biggest number of inhabitants. In terms of inter-censal growth, the different wards of Narok Town have exhibited very high growth rates with an average annual growth of 8.4% though Olopito exhibited a very high annual growth of 19.7%. By 2018, the population in Narok Town is projected to be 137,292 and 364,423 by 2030.

Table 4.5: Narok Town Projected Populations by County Wards (1999-2030)

County Assembly Ward	Sub-Location	1999 Population			2009 Population			In-Cen-sal Growth Rate	Projected Population					
		Male	Female	Total	Male	Female	Total		2010	2013	2018	2023	2028	2030
Narok Town	Narok Town	11,586	10,729	22,315	21,998	20,507	42,505	0.09048	46,351	60,104	92,681	142,913	220,372	262,053
	Oleleshwa	1,381	1,377	2,758	2,486	2,526	5,012	0.08173	5,422	6,862	10,164	15,054	22,297	26,090
Nkareta	Nkareta	2,066	2,114	4,180	3,444	3,412	6,856	0.06402	7,295	8,788	11,984	16,344	22,290	25,235
	Naisoya	2,443	2,308	4,751	2,452	2,388	4,840	0.00187	4,849	4,876	4,922	4,968	5,015	5,034
	Olopito	1,480	1,386	2,866	4,452	4,058	8,510	0.08368	9,222	11,736	17,540	26,215	39,179	46,010
<b>Total</b>		<b>18,956</b>	<b>17,914</b>	<b>36,870</b>	<b>34,832</b>	<b>32,891</b>	<b>67,723</b>	<b>0.08368</b>	<b>73,138</b>	<b>92,367</b>	<b>137,292</b>	<b>205,495</b>	<b>309,152</b>	<b>364,423</b>

Source: Projected from Republic of Kenya, 1999, 2009, IEBC, 2012

## 4.2 HOUSEHOLD SIZE

The average household size in Narok Town is five although the rural areas like Nkareta, have slightly higher members per household as shown in Table 4.6 below.

Table 4.6: Narok Town Household Size by County Wards 2009

County Assembly	2009 Population			
	Sub location	Total	No. of Households	Average HH Sold Size
Narok Town	Narok Town	42,505	11,776	4
	Oleleshwa	5,012	961	5
Nkareta	Nkareta	6,856	1,194	6
	Naisoya	4,840	927	5
	Olopito	8,510	1,824	5
<b>Total</b>		<b>67,723</b>	<b>16,682</b>	<b>5</b>

Source: Republic of Kenya, 2009

## 4.3 MAA CULTURE

### 4.3.1 Introduction

Culture refers to a people's way of life or the material and immaterial expression of the human intellectual achievement. It is part of the fabric of our everyday lives and has a strong influence on our quality of life and wellbeing. The word culture has a multi-faceted perspective as shown below:

- Shared experience and values;
- Imagination and creativity;
- Shared memories and identity;
- Historic roots and religion; and,
- Things we want to hand on to future generations.

Culture can have both positive and negative impact on development. Sometimes, cultural beliefs can lead people to refuse to adhere to what is indispensable for their survival. This is a situation that often plunges us into a dilemma because on one hand, we are eager to keep

our culture and are proud of it, but on the other hand, we are compelled to adhere to the tenets sustainable development.

The Maasai are the southernmost group of the Nilotic-speaking peoples of Kenya, and are linguistically and as well as physically related to the Samburu, Turkana and Kalenjin among other groups. They occupy the Narok and Kajiado counties of Kenya, and share the Olmaa language from which their name derives within Kenya and Tanzania.

### **4.3.2 The Origins and History of Maasai Culture**

The Maasai people came from the south eastern Sudan probably during the first half of the first millennium A.D. and moved southward following a route between the Dodos escarpment in the west and Lake Turkana in the east which brought them to the plains between the Nyandarua range and Mount Kilimanjaro (Ehret 1971). Their passage through the Southern Sudan is evident because of Maa place names such as the Sobat (the river of holiness) River that flows into the Nile at Malakal, and Torrit (the place of dust) on the plains below the Imatong Mountains which is the rangeland of the Lotuko people whose language is more than 40% cognate with Maasai spoken today.

By the middle of the first millennium A.D., the Maasai had established themselves in the plains around Lake Turkana stretching from Samburu county in the east, to Karamojong plains in eastern Uganda. From Kieru (their name for their northern plains homeland), they migrated and established themselves, for some time, along the northern parts of the Kenya Highlands where they came across the Kalenjin and other people in the highland particularly the Sirikwa who are said to have been pastoralists practicing little agriculture. By the first half of the eighteenth century, the Maasai were already firmly established in large areas of the Rift Valley, the Trans-Nzoia and the Uas Nkishu plateau. However, they did not form a regular territorial state since they were nomadic pastoralists who wandered all over the Rift Valley in search of pasture.

At the height of their power in the middle of the 19th century, the Maasai occupied a stretch of country which covered some 500 miles from north to south and at its widest, 150 miles from east to west. The northern limit was approximately Lake Sukuta (now mud flats), 20 miles south of Lake Turkana; the southern, Lenjoge, near Kiteto, some 50 miles south of Kibaya in Tanganyika. The most northerly Maasai were (and still are) the Samburu, who in 1888 extended more than 120 miles northwards towards Lake Stefanie. This vast country, with an area amounting to some 80,000 square miles, now reduced to one-half its original size, has great varieties of altitude, climate, rainfall, wildlife and vegetation.

The Maasai from an early period were divided into the primarily semi pastoral people, the Iloikop (or Kuavi) and the "purely" pastoral groups, the Ilmaasai (or Maasai "proper"), both who are further sub-divided into sections that may be potentially autonomous tribes. While Maasai have no clear answer as to when this separation took place, it is thought in their traditions that the division occurred sometimes after they had entered the Kenya Highlands. The Ilmaasai are today represented by the Ilpurko, the Iloitai, the Ildamat and Ilmoitanik of Narok County; the Ilkaputiei, the Iloodo-Kelani and the Ilmatapato of Kajiado County, as well as those pastoral Maasai who are today split between Kenya and Tanzania, including the Ilkisonko who live around Kilimanjaro, and the IIsikirai.



### 4.3.3 Unique Characteristic of Maasai Culture

#### 4.3.3.1 Leadership and Organisation

Maasai society is strongly patriarchal in nature, with older men, sometimes joined by retired elders, deciding most major matters for each group. The ‘council of elders’ makes decisions as to which clan will graze where and when, to avoid over-grazing and the destruction of the land. The laibon or spiritual leader, acts as the liaison between the Maasai and God, named *Enkai* or *Engai*, as well as the source of Maasai herb, *lore*.

The community adopts a mostly monotheistic religious outlook. But with the influence of missionaries, many have become Christians. The society has a hierarchical way of organization with the elder men at the top of the hierarchy, then elder women, morans and finally the girls. Maasai are distinguished by age sets demarcated by the ritual of circumcision which for them denotes a rebirth to manhood that follows the death of childhood. The biological and ritual parents of Maasai initiates ask that “God bless this mark, the mark by which you know our children”. Passage from one age set from a moran to a young adult is marked by slaughtering a cow as an offering to God.

Photo 4.1: Maasai Elders holding a Meeting



Sources: Matrix Development Consultants

#### 4.3.3.2 Cultural Attire

*Shukas* are sheets traditionally wrapped around the body, one over each shoulder, then a third over the top of them. They are typically red, though with some other colours (e.g. blue) and patterns (e.g. plaid) pink, even with flowers, is not shunned by warriors.

Many Maasai in Kenya wear simple sandals, sometimes soled with pieces of tyres. Both men and women wear wooden bracelets. The women regularly weave and bead jewels. This bead work plays an essential part in the ornamentation of their body. The Maasai are admired for maintaining their culture since time immemorial.

### 4.3.3.3 Beadwork and the Red Colour

Usually, beadwork is the preserve of women and has a long history among the Maasai, who articulate their identity and position in society through body ornaments and body painting. Beads were produced mostly from local raw materials such as clay, shells, ivory, bone, charcoal, seeds, clay, horn, woods, gourds. Today, bead workers have replaced the older beads with the new materials e.g. iron, copper, plastic and brass and use more elaborate colour schemes.

The beading worn by the Maasai is highly symbolic. There are around 40 varieties of beadwork. Common colours used are red, blue and green.

*Photo 4.2: Maasai Women Donned in Colourful Traditional Beaded Jewelry*



Sources: Gerald D. Tang; flickr photos

Red is a favoured colour among the Maasai. It symbolizes danger, bravery, strength, representing the challenges the Maasai people face in everyday life. For example, the Maasai *shukas* are most red in colour while red ochre is used for dyeing the hair. The colour red also dominates the beads used by the community.

*Photo 4.3: Maasai Morans in their Colourful Red Attire*



#### 4.3.3.4 Diet

The traditional diet of the community consists of five basic foods: meat, blood, milk, fat, and tree bark. Wild game (except the eland), chicken, fish, and salt were forbidden. Both fresh and curdled milk is drunk, and animal blood taken on special occasions—after giving birth, after circumcision, or while recovering from an accident. It may be tapped warm from the throat of a cow, or drunk in a coagulated form. It can also be mixed with fresh or soured milk, or drunk with therapeutic bark soups (*motori*). More recently, the Maasai have grown dependent on food produced in other areas such as maize meal, rice, potatoes and vegetables.

#### 4.3.3.5 Cultural Heritage

The Maasai have a rich collection of oral literature that includes myths, legends, folktales, riddles, and proverbs. These are passed down through the generations. They also compose many songs. Women are seldom at a loss for melodies and words when some heroic action by a warrior inspires praise. They also improvise teasing songs, work songs for milking and for [plastering](#) roofs, and others with which they ask their traditional God (Enkai) for rain and other needs.

#### 4.3.3.6 Architecture

The Maasai live in small settlements (*manyatta*) of 8-15 huts arranged in a circular fashion in each village. The homes are built in a large circle that serves to protect an inner kraal, where the cattle and goats lay for the night. The kraal (i.e. a traditional house or hut) is surrounded by a thorn bush fence mostly acacia thorns, which acts like barbed wire, protecting the community and animals against enemies. It is a man's responsibility to fence the kraal. The *Inkajjik* (i.e. Maa word for a house) are loaf-shaped huts traditionally constructed by women using branches and twigs woven together with grass and with walls cemented using a mixture of cow dung and urine. The inside of the hut is made of animal skins and cushions of dry grasses are used for comfort.

Photo 4.4: Maasai Women Constructing a Kraal



Source: Jerzy Strzelecki, 1996

#### **4.3.3.7 Art work**

The collection of artwork includes a full Maasai bridal costume, elders' traditional objects, and a warrior's outfit. The art pieces include jewelry, a shield, a warrior's spear, ceremonial headdress and clothing made up of leather, tribal game board, among many other art pieces.



# Chapter 5

## LAND ANALYSIS

### 5.1 LAND SUITABILITY

#### 5.1.1 Terrain

Narok town lies on lower midland zones with altitude ranging from 1,850m to 2,125m above the sea level. Generally, the area is fairly flat to undulating with average slopes of 3.3%.

#### 5.1.2 Drainage

The town is located in the middle reaches of the Narok River. The drainage system consists of one permanent river, Enkare Narok, which draws its waters from the Mau Forest and runs across the town where it is joined by two seasonal streams namely: Esamburbur and Kafia. The two streams run right through the main shopping centre and act as storm drain channels for the town before emptying their waters into Narok River. (*Map 5.1 overleaf depicts the drainage of Narok town*)

#### 5.1.3 Soil Structure

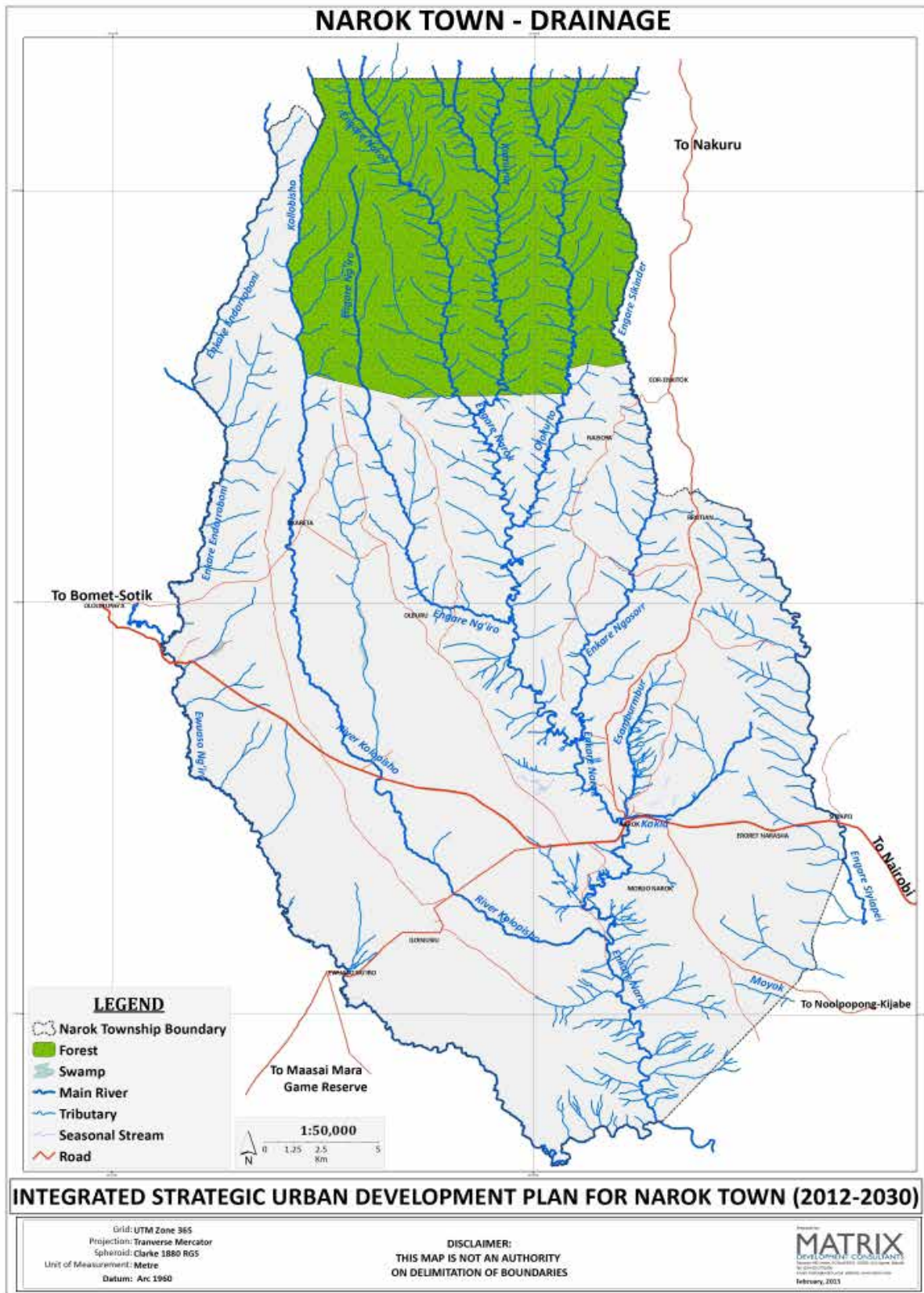
To a large extent, Narok town has Andosols and Phaezems class of soils (See Map 5.2). These are diverse soils ranging from mountainous soils to those on plains and seasonal swamps and have high concentration of plant nutrients such as calcium and magnesium.

Andosols are typically very fertile because they are generally quite young. Usually, they support intensive cropping of fruit, maize, tea, coffee or tobacco. In the Pacific Northwest USA, Andosols support very productive forests (ISRIC, 2013). The good aggregate stability of andosols and their high permeability to water make these soils relatively resistant to water erosion. Exceptions to this rule are the highly hydrated types of andosols found in deforested areas.

Phaeozems, on the other hand, are porous well-aerated soils with moderate to strong, very stable, crumb to blocky structures. They are characterized by a humus-rich surface layer covered in the natural state with abundant grass or deciduous forest vegetation. They are fertile soils and highly arable soils used for growing wheat, soybeans, and pasture for cattle, as well as for wood and fuel production. However, the rates of weathering and leaching are higher in Phaeozems and thus wind and water erosion are serious hazards to these soils (ISRIC, 2013).

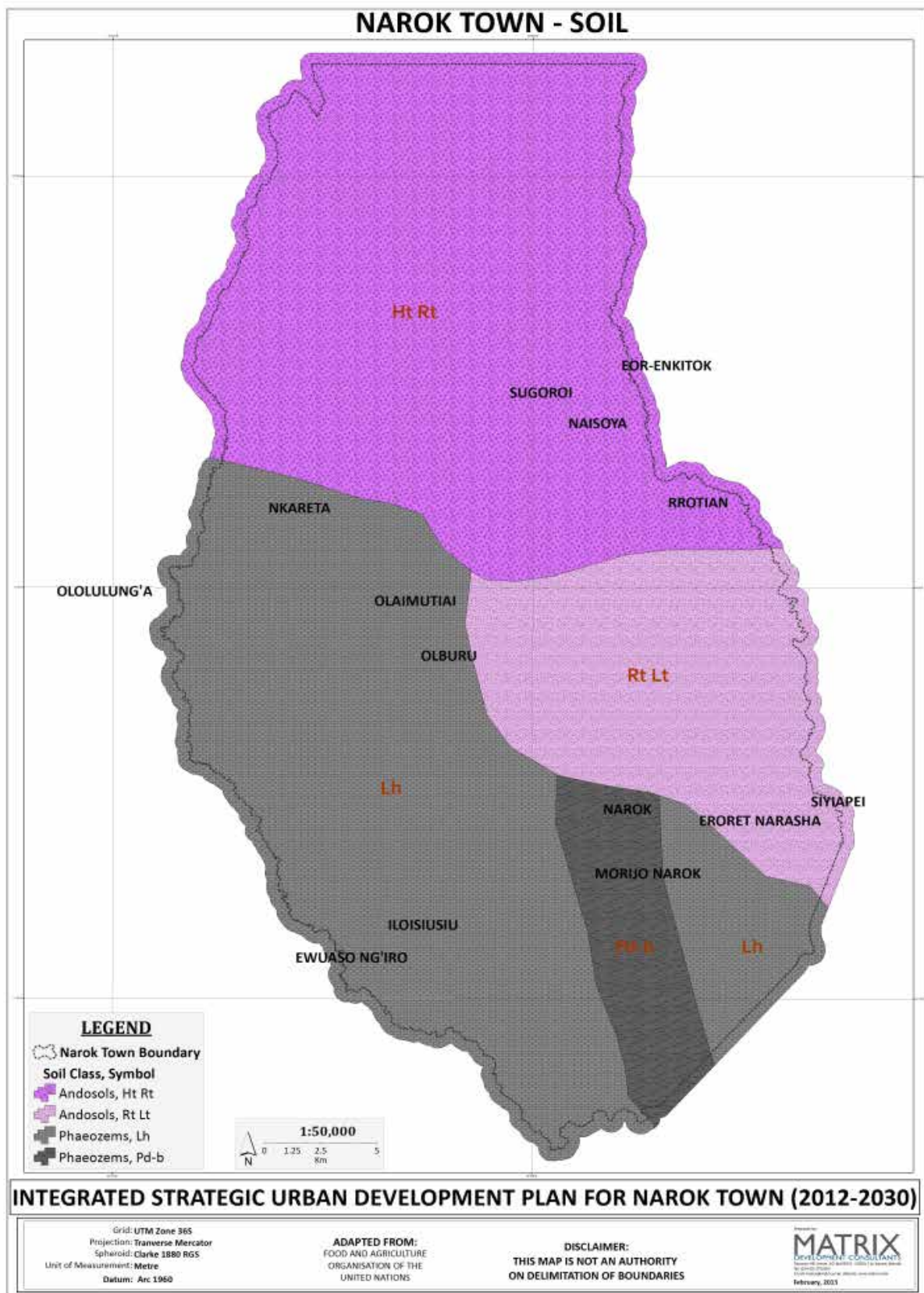
The presence of shallow soils thus gives rise to logging of water which causes seasonal flooding in the town. However, farmers have to implement certain soil management practices in order to improve its fertility for agricultural purposes. Some farmers in Narok have constructed dams in order to prevent soil erosion and conserve some of the run-off water for agricultural purposes.

Map 5.1: Drainage of Narok town



Source: Matrix Development Consultants, 2014

Map 5.2: Soils in Narok town



Source: Matrix Development Consultants, 2014



## 5.2 LAND USE

### 5.2.1 Background

The first development Plan for Narok town was prepared in 1958 which was followed by another one in 1966. However, only the third Development Plan prepared in 1969 was approved as per the Approved Plan No. 12. This was revised in 1970.

The fourth development Plan prepared in 1975 and the fifth prepared in 1981 were not approved. A zoning Plan was prepared in 2005 and further revised in 2009. However, these Plans were also not approved by the Department of Physical Planning or the Ministry in charge of Lands. Hence, the only officially recognised guide to the development of the town has remained an out dated Plan made in 1969.

All the previous Plans have concentrated in what is presently being referred to as 'Narok town' or the Central Business District. This is the 'Basin' that happens to be the lowest part of the town with various group ranches on the higher reaches surrounding all the four sides of the town. Private subdivisions into small plots in some of the group ranches such as Olopito, Ilmasharian and others, have had a big Impact on the growth of the CBD albeit under very little control. As a result, there has been clearing of much of the vegetation cover on the upper reaches and has been one of the many causes of flooding in the basin area downstream, where Narok town's CBD lies. This has occasionally led to loss of life and destruction of property.

### 5.2.2 Land Uses in Narok Town

All the previous Development and Zoning Plans prepared for Narok Town have concentrated on the 1.5 Km<sup>2</sup> of the Central Business District. However, the area of jurisdiction under the former Town Council of Narok is 692 Km<sup>2</sup>. The land use characteristic in Narok is as shown in Table 5.1 below:

Table 5.1: Selected Land Use Comparison of Narok Town and National Averages

LAND USE CODE	LAND USE	LAND USE COVERAGE AREA (Ha)	NAROK TOWN LAND USE (%)	NATIONAL AVERAGE LAND USE (%)
0	RESIDENTIAL	927.8576	0.1819	41.5
1	INDUSTRIAL	49.2544	0.0711	7.8
2	EDUCATIONAL	424.0551	0.6127	15.6
3	RECREATIONAL	19925.9529	28.7947	13.2
4	PUBLIC PURPOSE	127.2897	0.1839	15.0
5	COMMERCIAL	52.5413	0.0759	3.9
6	PUBLIC UTILITY	6.2275	0.0089	3.0

Source: Matrix Development Consultants, 2013

The National averages were worked out in 1971 and considered only the land uses from Code 0 to 6. Comparing the two, it emerges that Narok Town averages are all far below the national averages except the land under recreational use which has included a land area of 195.68 Km<sup>2</sup> of the Maasai Mau Forest falling within the former Town Council of Narok boundary. The Table 5.2 below gives the percentage land uses area (hectares) and includes all the existing land uses from codes 0 to 9. This enabled a better understanding of the anomaly than when compared with the national average.

Table 5.2: Narok Town Land Use Coverage

LAND USE CODE	LANDUSE	AREA (Hectares)	AREA%
0	RESIDENTIAL	927.8576	0.1819
1	INDUSTRIAL	49.2544	0.0711
2	EDUCATIONAL	424.0551	0.6127
3	RECREATIONAL	19925.9529	28.7947
4	PUBLIC PURPOSE	127.2897	0.1839
5	COMMERCIAL	52.5413	0.0759
6	PUBLIC UTILITY	6.2275	0.0089
7	TRANSPORTATION	56.2917	0.0813
8	DEFERRED	248.4975	0.3591
9	AGRICULTURAL	47382.03	68.4711
	<b>TOTAL</b>	<b>69200.00</b>	<b>100.00</b>

Source: Matrix Development Consultants, 2013

From Table 5.2, it can be seen that 68% of the land within Narok Town is under agricultural use whereas over 20% is under Mau forest giving a total of almost 90% of the land being non-urban. However, considering that the former Narok Town Council boundary covers 692Km<sup>2</sup>, then the land under various urban uses is still substantial. It should be noted that the land under agricultural use and/ or deferred land includes the land on steep valleys, hill tops and flood plains, riparian reserves and quarries but what should constitute fertile arable agricultural land constitutes approximately 55%. Much of this Land should be allowed to retain this arable status.

As stated earlier, Table 5.1 shows that land uses in the Narok Town -from codes 0 to 6 except code 3- are all far below the expected national averages. The reasons could be as follows:

(i) Residential use:

It can be said that Narok Town has only a few institutional housing projects. The only formal housing is in the form of Government houses meant to accommodate senior government officers within the CBD. Many of the other residents of Narok are accommodated in Majengo and its sprawling extended area; in private houses above the commercial buildings within the CBD. In private housing estates like Lenana, there is the spacious 79 Park Avenue which is a gated community. Considering that a very big area of the town is still under agriculture, it can be concluded that a large number of local residents of Narok are actually staying in their rural homes. The only other form of Institutional housing is that of 'in-house' accommodation which has been provided for the medical staff at the district hospital. Narok town is the county headquarters for Narok County and hence needs to plan for the accommodation and offices for county officials

(ii) Industrial zone:

Narok town does not have a clearly designated Industrial zone. The only Industrial activity of note is the National cereals and produce Board Complex located along B3 road near the CBD and the slaughter houses at Lemanet and Ewuaso Ng'iro centres. Most of the other Industrial activity is in the form of *Jua Kali* enterprises involving carpentry and metal fabrication scattered all over the CBD and the Majengo area. On the other hand, there are Posho Mills which can be found in all the other small centres and the Majengo area near the CBD. Other forms of industrial activities include tailoring, small bakeries and confectionaries, brick making, various types of food processing and quarrying.

(iii) Educational use:

Narok town has 40 public primary schools and 22 private schools as well as 8 secondary

schools and numerous nursery schools and youth polytechnics. In addition, the Maasai Mara University is located there.

According to our population projections, the existing number of education facilities are not adequate. New schools need to be put up in those areas with deficiency whereas additional streams need to be added in some other areas to make up for the deficit. The current population structure for Narok town shows that the school going population constitutes over 60% of the population indicating that Narok town has a very high dependency ratio.

(iv) Recreational use:

The only formal outdoor recreational areas in Narok is the Stadium and Koonyo Park next to Majengo. The other area that can be considered under this use is basically the riparian reserve along the 'Enkare Narok' river and its tributaries. The Mau forest area located within the Town's boundaries which constitutes almost 20% of the total land area is in this category. This shows a need to provide more open spaces in the CBD area to cater for the town's high day-time population who need resting places during lunch breaks and afternoons.

(v) Public purpose use:

The Government offices at the CBD, district hospital, former County Council offices and the K.W.S. offices at Ewaso Ng'iro centre forms the areas under 'Public Purpose'. The remainder of the Land is owned by various religious institutions and health centres spread out all over the town, the police station and the post office. Overall, the area under Public Purpose is very much below the National average. There is a need for a more even distribution of some of these public facilities to the other smaller centres. More importantly, the town requires a fire station as well as a referral hospital in Lemamet.

(vi) Commercial use:

Much of the Central Business District is under commercial activity. This includes the ODM and Muthurwa markets and the commercial areas at Ewaso Ng'iro, Rrotian and Nkareta centres. Others include the cattle market at Ewaso Ng'iro and the various hotels, bars and shops in the CBD as well as the other centres. It is also worth noting that the town has a high hawking problem. The strategy under this sector is to concentrate any future commercial activities in the Lemamet area, Majengo and the other smaller centres within the Town.

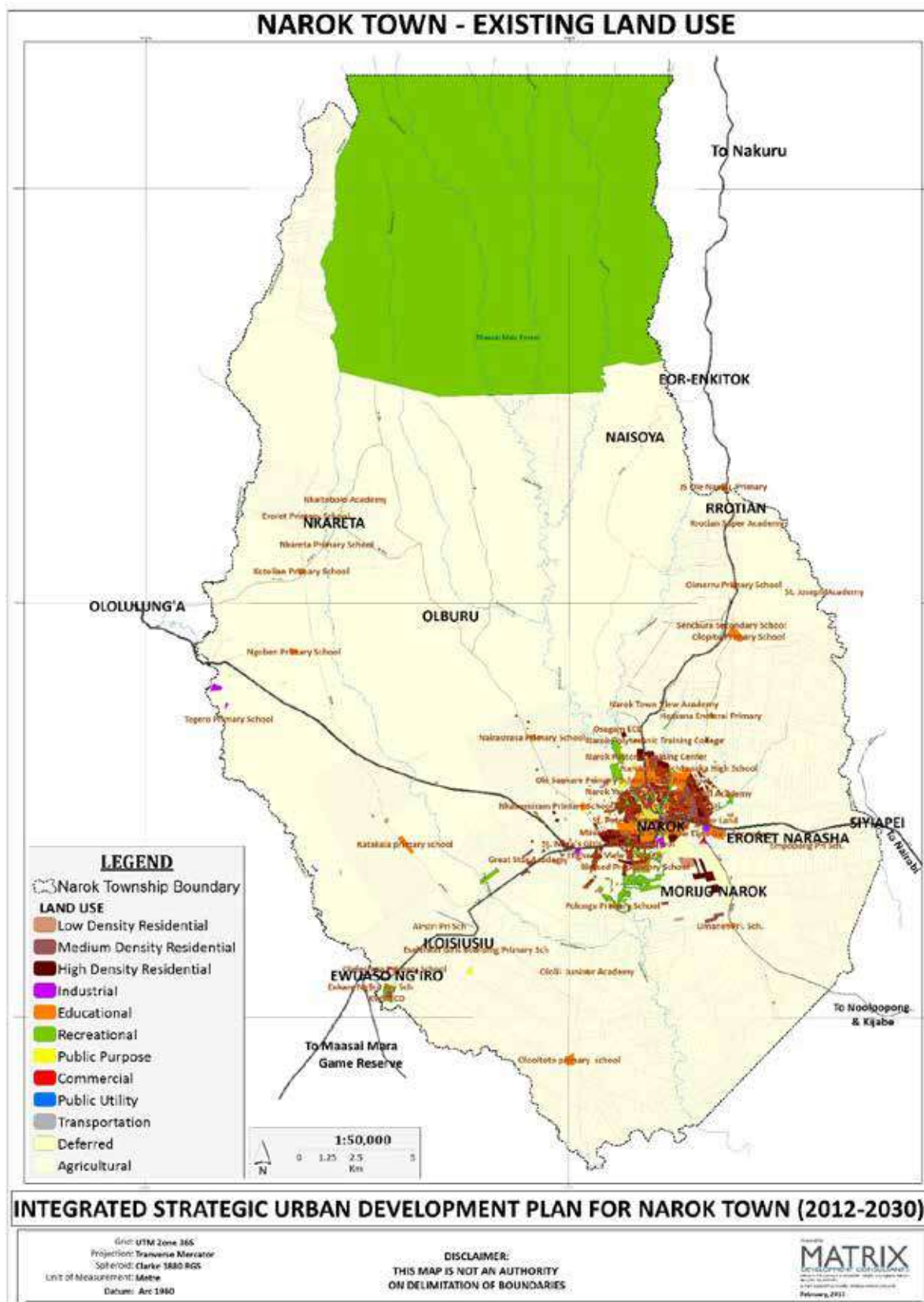
(vii) Public utility:

Within Narok Town, the only public utilities are the Christian and Muslim cemeteries. The formal water reticulation system is out dated and covers a very small area of the town. There is also no formal sewerage system in the town. Sewerage disposal takes place in the form of soak pits and septic tanks. This means that the area under public utilities is well below the National average.

It is important to note that the two existing cemeteries are already reaching their full capacity and new cemetery sites will need to be set aside. There is also a new water supply system being funded by JICA which is expected to improve water supply in the Town. The formal storm water drainage system is below the required standard and even the Esamburmbur and Kakea valleys, which help to drain the flood waters into the Enkare Narok, cannot cope with the deluge in the rainy seasons.

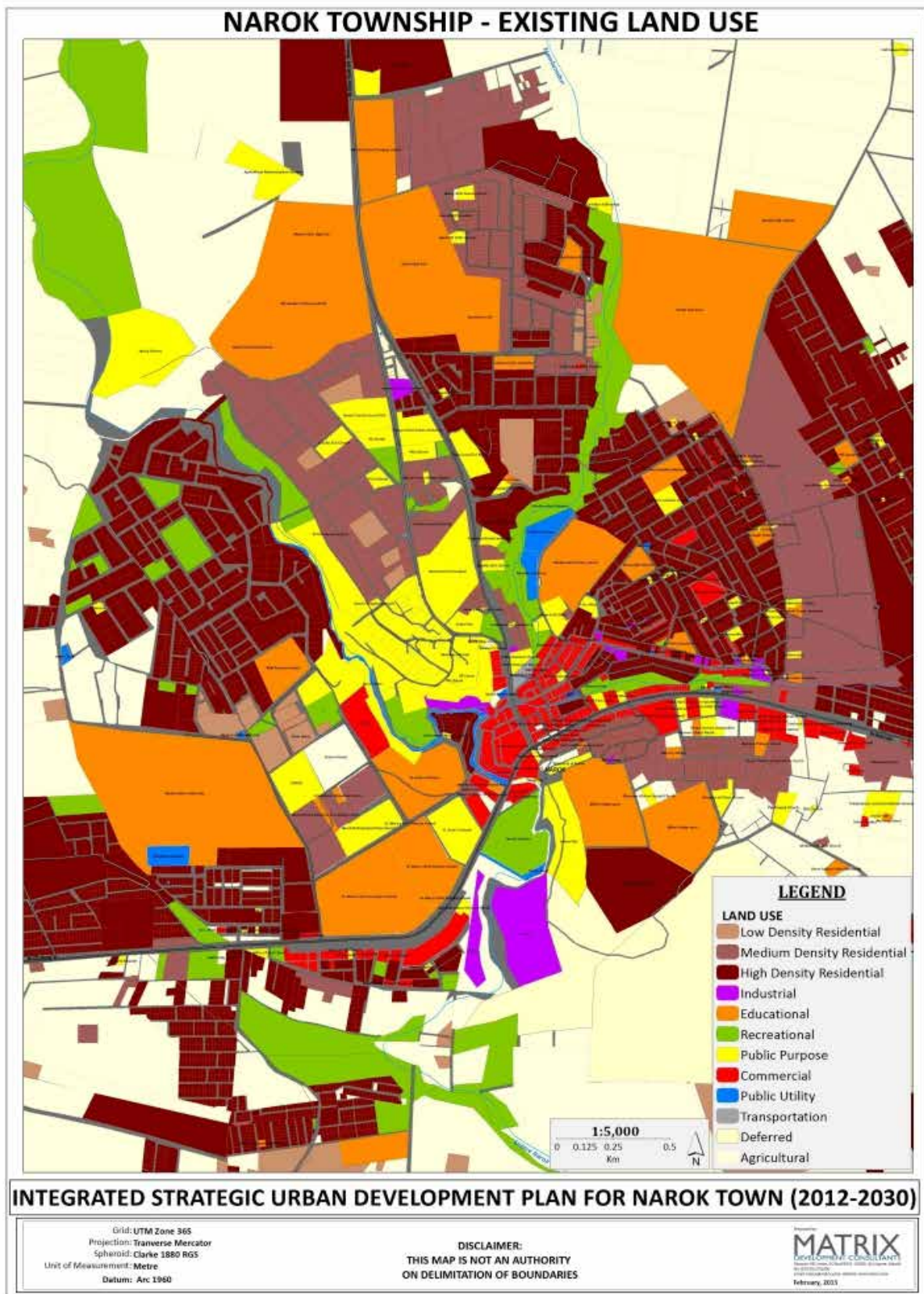
There is an urgent need of bringing Narok Town under a public sewer and putting up a modern water reticulation to cover a larger area of the Town. (*Maps 5.3 and 5.4 overleaf show the existing Land uses in the town*).

Map 5.3: Existing Land Use within Narok Township



Source: Matrix Development Consultants, 2014

Map 5.4: Existing Land Use in Narok Town's CBD



Source: Matrix Development Consultants, 2014

### 5.3 TENURE

Two main type of land tenure systems exist within Narok town; leasehold and group ranch system (which is rapidly converting to individual freehold). It has been estimated that almost 90% of the land in the town is private under freehold tenure or under leasehold tenure.

Large tracks of land are under group ranch land tenure system but they are rapidly being subdivided and converted into to freehold areas with individuals holding title deeds. In town, plot owners have either leasehold title deeds or allotment letters. In the Maasai culture, land is treated as communal property hence the communal ownership in most parts. Where subdivisions have taken place, local people were given title deeds leading to high subdivision and selling.

The Town still holds land amounting to 600 hectares at Lemanet. A small amount of land in the CBD is held by the Government and has been used to put up buildings. Narok Town is still growing and expanding but this needs to be controlled through proper planning.

During our field survey conducted in November 2012, residents interviewed identified problems related to the current land tenure systems and proposed solutions as shown in *Table 5.3* below.

*Table 5.3: Problems and solutions Related to the current land tenure system*

Problems	Solutions
Taxing of land owners Paying rates Ranch management is corrupt Subdivisions have led to land fragmentation, less productivity	Pay land rates Educate the ranches' committees to be more account able to the people

Source: Matrix Development Consultants, February, 2014

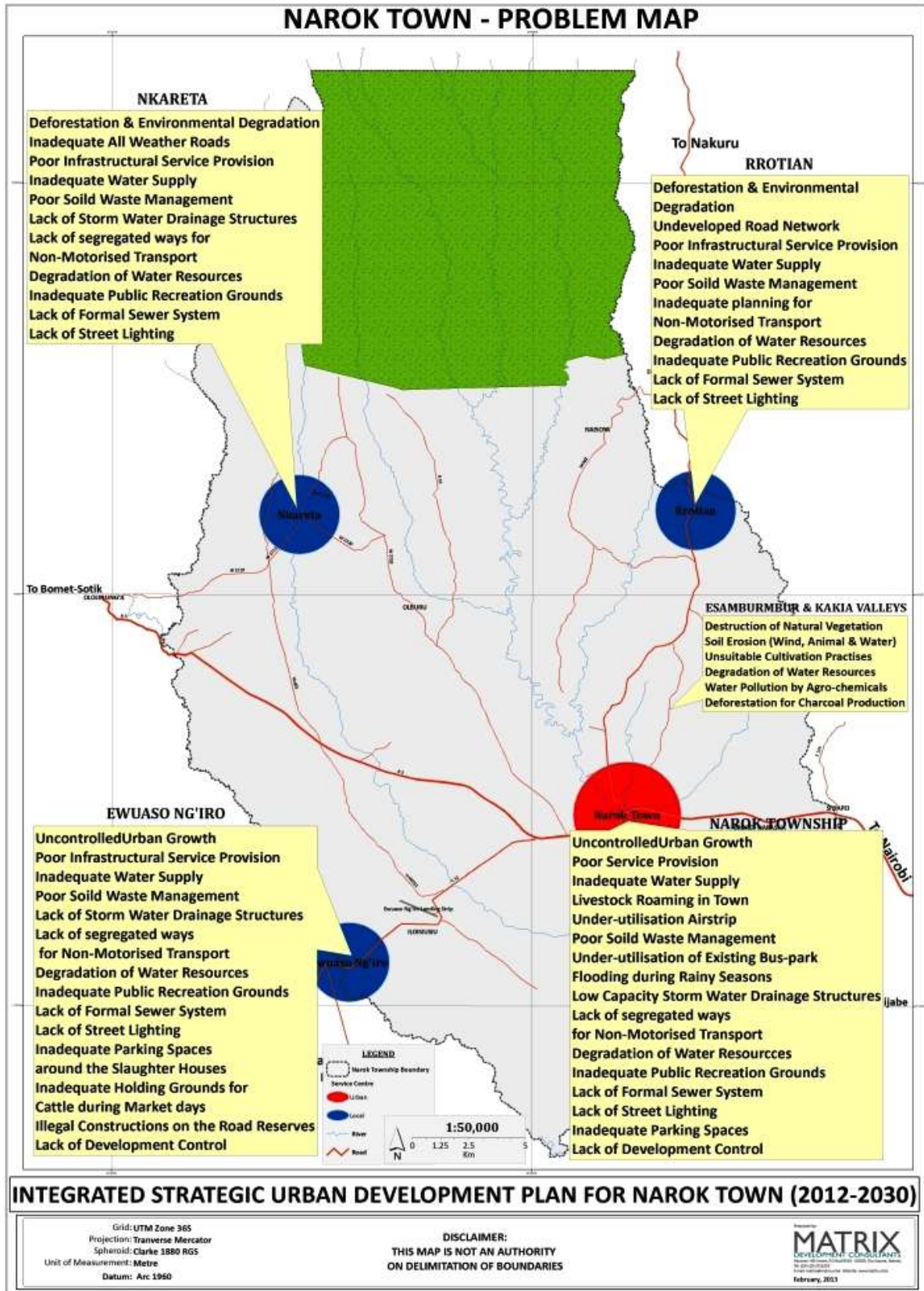
### 5.4 PLANNING ISSUES IN NAROK TOWN

The consultant had identified numerous Planning Issues and potentials in Narok including the following:

- Lack of an up-to-date plan, strategic enough to guide overall development. There is no approved zoning Plan for the town.
- Inadequate survey and planning data that covers the entire Town area.
- Un-coordinated subdivisions of land particularly at Olopito, Illmashariani, Oleleshwa and other freehold areas.
- Increasing land use conflicts, haphazardly planned estates, problems of accessibility in the estates and loss of aesthetics.
- In adequate staff capacity of the authorities to plan, engage stakeholders, monitor and undertake development control.
- Low level stakeholder participation in urban and urban management.
- Uncontrolled and unplanned urban growth.
- Poor infrastructure.
- Environmental degradation.
- Lack of a disaster management plan.

*(Map 5.5 overleaf displays the problem map for Narok town indicating problems manifested in various areas of Narok Town)*

Map 5.5: Narok Town's Problem Map



Source: Matrix Development Consultants, 2014

## 5.5 POTENTIALS IN NAROK TOWN

Narok Town covers an area of 692 Km<sup>2</sup> with a Population of 67,723 people according to 2009 population census. The town processes numerous potentials which when tapped will enhance its growth and be able to provide employment to its population provided these resources are used sustainably. These potentials include:

- The Town being the headquarters of the new Narok County gives high potential for development in almost every sector of the economy.
- The Town is the gateway to the renowned Maasai Mara Game Reserve and hence has potential in diversification of the Tourism Sector by incorporating other eco-tourism activities within the Town to supplement the Game reserve
- It is at a strategic location along the Nairobi-Sotik road B3 road which gives it access to the whole of the South Rift region and by extension upto the Tanzanian border.
- The Town has a very rich agricultural hinterland (livestock ranching and large scale farming) giving it a high potential for the growth of Agro Industries and hides and skins.
- The unique Maa culture and community resourcefulness which is renowned worldwide.
- Affordable and accessible building materials in the form of building stones.
- The students and teacher population of Maasai Mara University and two new universities which will soon start in the Town will greatly contribute to the demand for goods and services in the town and hence play a role to its growth.

## 5.6 URBAN SUITABILITY

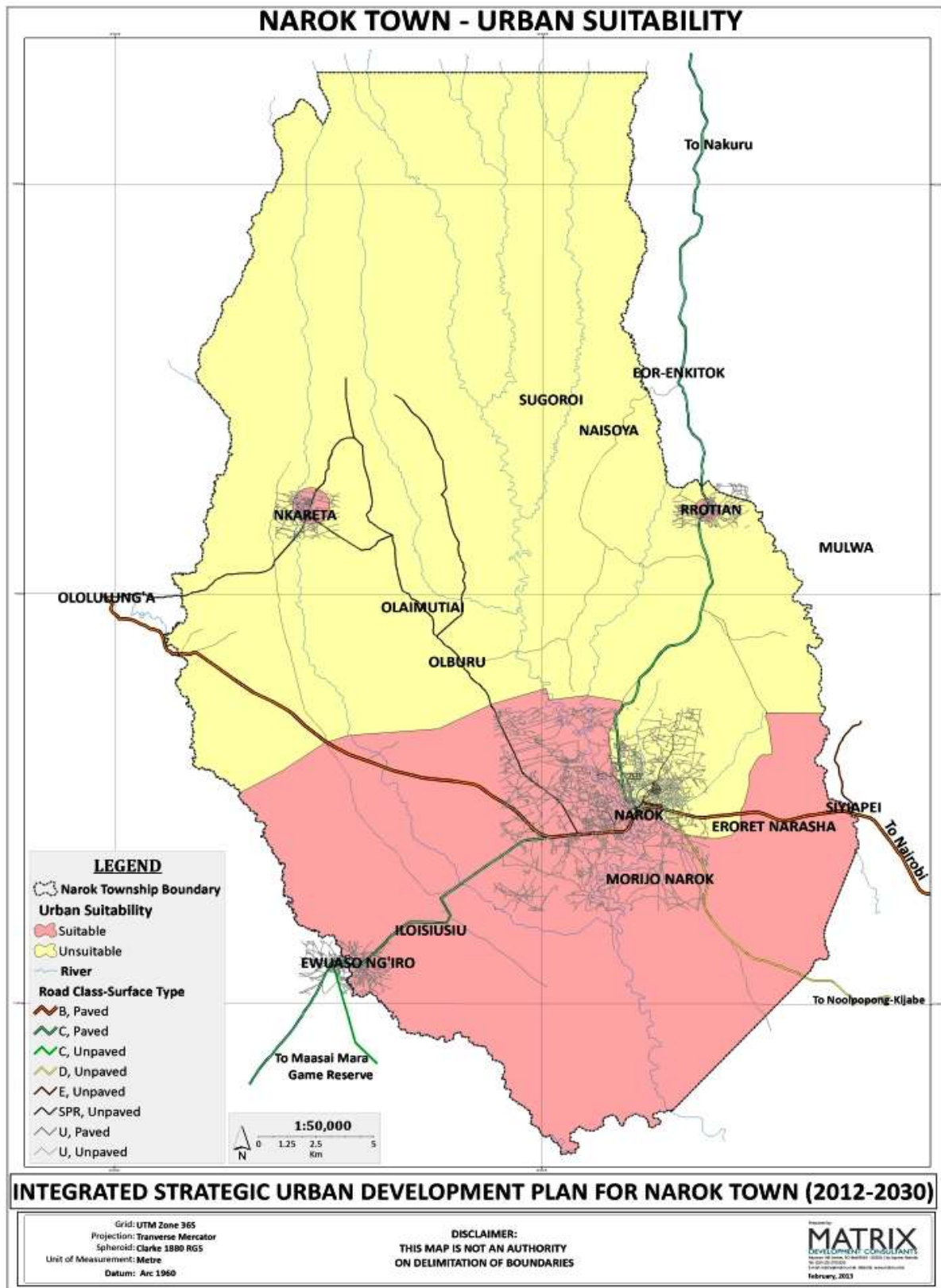
This section seeks to outline key factors that will determine and/or influence viability and sustainability of future urban developments in Narok. Key factors considered in determining suitability include:

- **Environmental factors** -terrain and geomorphological features.
- **Natural resource base:** Ecological factors such as rainfall, river density, riparian reserves and other land uses.
- **Socio-economic background:** transport infrastructure, population index etc.
- **Physiographic determinant** which emphasizes that development should respond to natural processes.

The analysis of the above (or urban suitability analysis) enabled the team to come up with suitable area for future development in Narok town as shown on the Map 5.6 overleaf. As can be seen, three-quarters of the land under the former town council is not suitable for urban development either because it is on steep slopes and valley, waterways, the basin areas at the CBD or the rich agricultural hinterland and the Mau Forest. The analysis of the problem and the urban suitability maps will generate various strategies which will need to be put forward in the planning of Narok.



Map 5.6: Urban Suitability



Source: Matrix Development Consultants, 2014

## 5.7 LAND MANAGEMENT

### 5.7.1 Cadastral Mapping and Property Boundaries

Cadastral mapping provides the pattern of land ownership in a planning area. This is an important factor that planners take into account while making land use proposals. For Narok, cadastral mapping was undertaken as part of the planning base mapping process, which consisted of digital topographical mapping and preparation of a cadastral layer.

- The digital topographical mapping involved digital colour aerial photography, a ground control survey, photogrammetric restitution of the photography and digital mapping of features such as roads, rivers, forests, buildings, contours, etc. Eventually, 56 sheets of topographic mapping were produced for the planning area which covered built up areas of Narok Town, Ewuaso Ng'iro, Nkareta and Rrotian centres.
- For the cadastral layer, existing Registry Index Maps (RIMs) and cadastral plans were sourced from Survey of Kenya offices in Nakuru and Nairobi. They were subsequently scanned and digitized, then integrated with the topographical mapping to complete the base mapping.
- It was not possible to have a complete cadastral layer due to missing data for the Naisoya and Nkareta registration sections and the Narok Central Business District (CBD). The data for Naisoya and Nkareta had apparently been withdrawn from Government survey records due to disputes related to encroachments onto the Mau forest and subsequent litigation and / or government investigations by the Mau Forests Restoration Secretariat. For the CBD, it was found that most of the plot layouts were based on unauthenticated survey plans which had never been submitted for authentication because the part Development Plan (PDP) that they were based on, was not approved. For planning purposes therefore, these draft survey plans, which were sourced from the Narok Town offices, were used, except for the CBD Block 11 (in the Maasai Mara University area) where no such plans existed. For Block 11, property boundaries were adopted from an older, approved PDP. It must therefore be cautioned that property boundaries as they appear on the planning base maps are for planning guidance only and should not be taken as the position of any legal boundary.
- It must be further cautioned that the extensive lack of authenticated survey data for the CBD means that most property owners there lack title to their land. This is bound to work against planning objectives, since lack of secure boundaries will discourage long-term investment and related infrastructure development. There is therefore an urgent need to set up a proper and official Narok CBD cadastre.

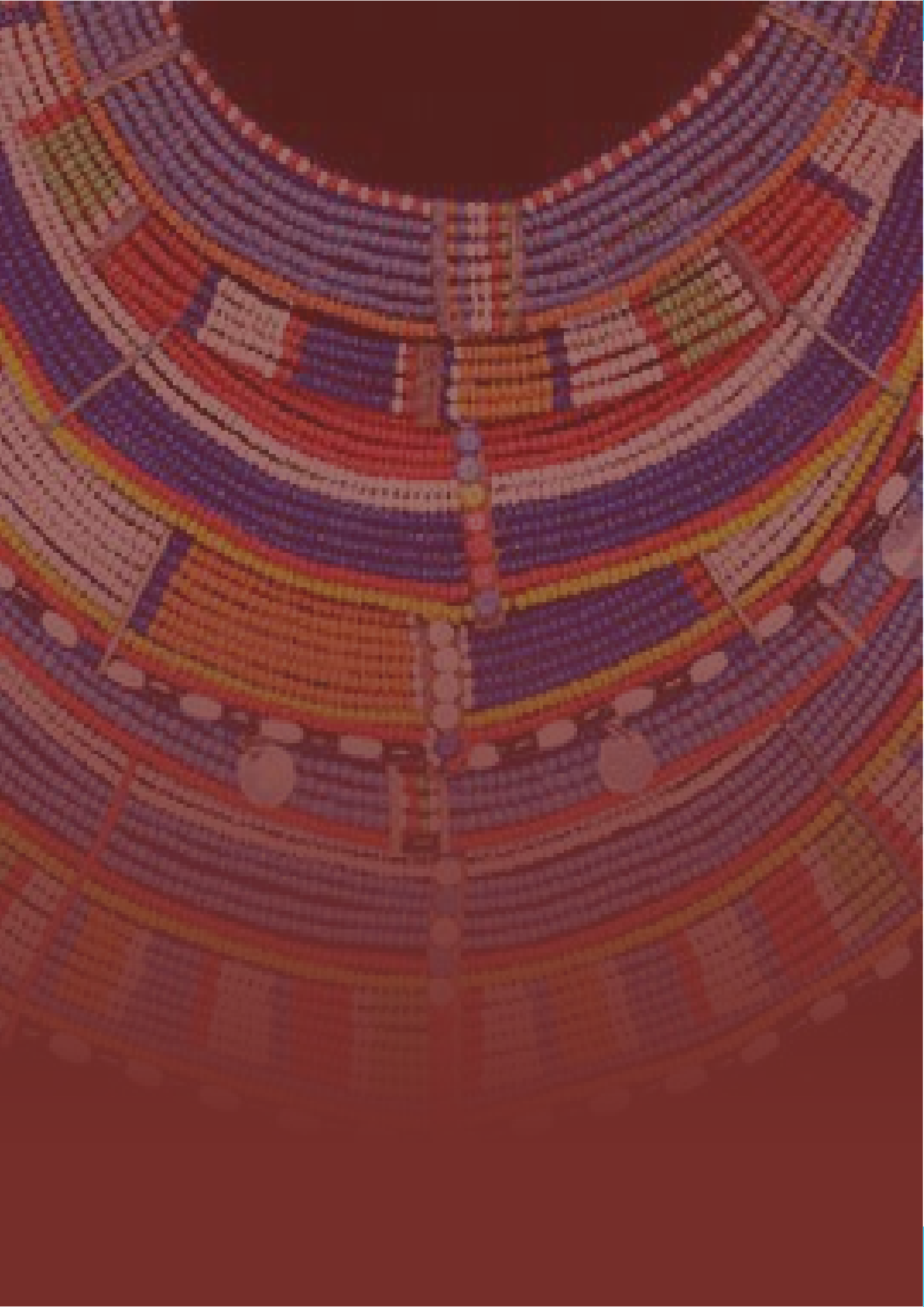
### 5.7.2 Institutional Framework for Land Management

The former Town Council of Narok had relied on the services of the then District Physical Planning Officer and the District Surveyor but with the coming of devolution these functions were transferred to the County Government. Since then the two Planners have already left the county for other postings elsewhere. Hence as an urgent measure it will be very important for the county Government to employ one Senior Planner and two Assistant Planners to oversee the implementation of this Plan on day to day basis. Hence capacity building should be made a priority, which should also include employment of a Land Surveyor and two cartographers. This will enable issues of development control to be given its due importance. Secondly, it will enable the subdivision of land to be done according to the law taking into consideration the respective area zoning Plans. This will enable upto date recording of these activities and the true picture of the land data will be maintained.

Secondly, there is need also to set up an inspectorate department which will work closely with the planning department in enforcing development control issues.

As part of the planning package for this town a training of county officers to facilitate the transfer of technology to the County Government of Narok (CGN). A few of the employees will be identified to be trained on the planning process as well as the use of GIS in the planning process. This can also incorporate identification of properties for rating purposes and revenue collection enhancement.





# Chapter 6

## ECONOMY

### 6.1 INCOMES AND SOURCES OF LIVELIHOOD

The sources of livelihood for the residents of Narok town are categorized in Table 6.1 below;

*Table 6.1: Sources of Livelihood*

SOURCE	PRODUCTS
Farming :	Wheat, maize, barley, potatoes, french beans, tomatoes
Livestock keeping and trading:	Selling cows, goats, sheep, beef, hides and skin
Small-scale businesses:	Selling vegetables, potatoes, tomatoes, cereals (wheat and maize), transport business (boda boda, taxi, driving tractors)
Casual labourers:	Picking French beans

Source: Matrix Development Consultants, 2012

A recent survey by Ewaso Ng'iro South Development Authority showed that there is a buoyant business mix in Narok Town comprising many types of businesses (see table 6.2 below). It is clear that businesses which support the livestock sector and tourism are booming.

*Table 6.2: Business Types and Average Revenues*

Business Type	No. of Units Sampled	Daily Revenues
Taxi	218	1,500
Motor bike	313	800
Petrol Station	2	70,000
Mpesa Agent	66	1,000
Fruits+ veg vendor	20	700
Pharmacy	32	6,000
Agrovet	20	13,000
Auto spare Shop	52	30,000
Workshop	40	10,000
Hotel	60	10,000
Clothes Boutique	11	4,000
Hardware	27	25,000
Retail Shop	13	12,000
Posho Mill	12	4,000
Butcherries	29	2,500
Kiosk	238	500

Source: Adapted from Ewaso Nyiro, 2012

## 6.2 SUB-SECTORAL LIVELIHOOD ANALYSIS

### 6.2.1 Agriculture

Agriculture and livestock keeping are the major economic activities in the County, with about 75% of the population depending directly or indirectly on farming for their livelihoods. Barley, tea, sugarcane and wheat are grown as the major cash crops. The increase in the area under cultivation, both rain fed and irrigated, has been facilitated by changes in land tenure policy, both official and customary. Sub division of land has led to a mixture of farming and herding. Over the last 2 years, rainfed agriculture has been taking root and irrigated horticulture has become popular in parts of the County.

Pricing of produce, particularly barley and wheat, is often wrought with issues between farmers and the millers. For example, whereas in 2012, the government imposed duty on imported wheat at 20 per cent levy, this move favoured local production. Producer prices went up by KES500, selling at KES3,400 per bag. Wheat farmers in Narok benefited from the tax changes as harvesting got under way with prices rising by 17 per cent. This came in the background of shortages in the international market with local production meeting only a third of national requirements. In the international markets, the commodity was selling at US\$340 (about KES28,560) per tonne, but a devastating drought in key growing geographical zones like North America and extreme temperatures in the wheat belt of Russia, pushed prices beyond the US\$ 350 per metric tonne. The Kenya price was above the international price, owing to lower logistical costs. By 2013, Narok Farmers Association was demanding KES3500/90kg bag compared to KES3,100 that was offered by millers.

In early October 2013, the East African Breweries Ltd announced a 17 % increase in the price with which it was buying a 90kg bag of barley making the price rise to KES3,285 up from KES2,800 that farmers got in 2012. The company acquires close to 70 per cent of its barley from Narok County. East Africans Malting Ltd (EAML), a subsidiary of EABL, announced the introduction of new barley varieties called Cocktail, Quench and HKBL-5 in a bid to improve yields. The company is targeting to get 45,000 tonnes of barley during the 2013-14 financial year.

### 6.2.2 Livestock

Majority of households in Narok town depend on livestock for their livelihood. This has an impact of the general economy of the town. Livestock keeping is also practiced on both large and small scale basis. There are a number of ranches that keep goats, cows, and sheep for their meat as well as milk production. In addition, poultry and bee keeping are emerging as important economic activities following the encouraged by the government.

Table 6.3: Table 6.3: Narok County, Animal Population ('000)

Animal type	2003	2004	2005	2006	2012 (Estimated)
Cattle					
Dairy	101	99.6	101.7	108.3	115.3
Beef	764.4	864.2	876.8	778	990.3
Sheep					
Wool	211.6	213.9	225.3	241.6	259.1
Hair	731.8	814.2	761.6	563.2	416.5
Goats					

Animal type	2003	2004	2005	2006	2012 (Estimated)
Milk	0.8	1.3	0.8	1.1	1.5
Meat	638.5	682.9	688.7	655.3	623.5
Pigs	0.1	0.1	0.2	0.2	0.2
Rabbits	3.4	5.1	4.3	4.6	4.9
Poultry					
Broiler	3.8	0.4	0	0.3	1.5
Layers	1.5	5	2.4	5.6	13.1
Indigenous	319.6	495	464.6	491.7	520.4
Other	0.7	5	43.1	5.9	12.8
Donkey		110.4	10.5	114.6	1250.8
Camel	-	0.1	-	0.1	0.2
Total	2,777	3,297	3,180	2,971	4,208

Source: Adapted from Ewuaso Nyiro, 2012

### 6.2.3 Forestry and Forest Products

In the wider county, there are an estimated 724 km<sup>2</sup> of gazetted forest, 930m<sup>2</sup> of non-gazetted forest and 480 Km<sup>2</sup> of county trust forest representing 11.9 per cent of the total surface area there. The Maasai Mara National Reserve covers approximately 1,510km<sup>2</sup> of which 1,000km<sup>2</sup> is in Narok South Sub-county while 510km<sup>2</sup> is in Trans Mara West Sub-county – this is the famous Mara Triangle. The main forest products from the county include timber, poles, posts and wood fuel. The non-wood forest products are honey, gum, herbs and wild fruits which generate revenue for the government and income to saw millers and households. Annual production of timber is estimated to be 35,126 tons.

### 6.2.4 Mining

Narok County has several minerals including gold deposits in Lolgorian division in Transmara West sub-county with processing activities in the Kilimapesa Hill by the Kilimapesa Gold Ltd. The reserves are estimated to be in excess of 650,000 oz.

### 6.2.5 Tourism and Hospitality

The most important economic pillar for the Narok County is its wildlife heritage that drives the tourism sector with Maasai Mara Game Reserve being a most famous attraction within the county. The annual wildebeest migration from the Serengeti National Park in Tanzania into the Maasai Mara National Reserve across the crocodile-invested Mara River in July and departing in November has been named Seventh Wonder of the World.

Other than the migration spectacle, there are about 95 species of mammals, amphibians and reptiles and over 420 birds species recorded in the reserve. The main wild animals in the park are the big five (buffalo, elephant, leopard, lion, and rhino). Other game include wildebeests, hippopotamus, cheetah, impala, topi, coke's hartebeest, giraffe, roan antelope, zebras, spotted hyenas, waterbucks, Thompson's and grants gazelles. The main species of birds include the vulture, marabou stork, secretary bird, hornbill, crowned crane, ostrich, long-crested eagle, and pygmy falcon.

The hospitality industry has two five-star hotels, 4 four-star, 8 three-star, 10 two-star and



15 one-star all with a bed capacity of less than 3000. These hotels are mostly within Maasai Mara and a few in Narok towns. Some of the challenges hampering the full realization of the County’s tourism potential include the escalation in the poaching of wild animals (especially elephants and rhinos), fluctuating visitation by tourists, human-wildlife conflicts and lack of diversification in the sectors.

**6.2.6 Manufacturing**

There are no major industries within the town except small ones that mainly process cereals, small informal “dairies” that are actually outlets for selling raw milk, two small bakeries and confectioneries, metal fabrications, garages and motor car repairers, tailoring and carpentry. It is unfortunate that there are no major industries found in and around Narok to process the abundant maize, wheat, and meat produced in the area.

There is therefore need to come up with documents detailing Narok’s comparative advantage and use them to seek and interest local and foreign investors (e.g. major brewers) to consider investing in the county.

**6.2.7 Informal Sector**

There is a vibrant informal (*Jua Kali*) sector in Narok Town and its environs characterised by general retail, tailoring, workshops, charcoal dealing, and hawking. The sector is a popular source of income given that it requires low capital outlays and markets are readily available. There is a noticeable presence of hawkers owing to the high cost of renting business premises.

**6.2.8 Financial Services**

The town is well served with six Commercial banks -including Cooperative bank, Equity bank, KCB, Post bank-, and eight (8) Micro-Finance Institutions which include Kenya Women Finance Trust, Faulu Kenya among others.

**6.2.9 Growth Trends of the Economic Sectors**

The sectors showing positive growth are wheat farming, housing, livestock trade, while the businesses that are on a decline include taxis, retail shops, tomato growing and timber production as indicated in *Table 6.4* below.

Table 6.4: Economic activities on growth or decline trends

Growth sectors	Declining sectors
<ul style="list-style-type: none"> <li>• Livestock trade due to proximity to Nairobi and other major centres of meat demand</li> <li>• Housing sector because of increased customers</li> <li>• Bars owing to more income</li> <li>• Wheat farming due commercial farming by the wealthy class</li> <li>• Quarrying due to expansion in construction industry</li> <li>• Irrigated agriculture due decreasing water levels in most rivers and hazardous flooding of farms during wet seasons</li> </ul>	<ul style="list-style-type: none"> <li>• Rangeland animal production due to vulgarities of the weather.</li> <li>• Tourism due poor access to Maasai Mara National Reserve and other facilities, as well as increase in human-wildlife conflicts</li> <li>• Taxis, boda bodas because of increased number of operators, high fuel prices</li> <li>• Retail shops because of the emerging supermarkets</li> <li>• Tomatoes owing to poor markets</li> <li>• Timber industry due to lack of timber following heavy deforestation and strict regulations</li> </ul>

Source: Matrix Development Consultants, 2012

The declining sectors require revamping by the line ministries and private sector service providers (i.e. shop owners can remodel to shopping malls style of trade). Motor bike, *boda boda* business is most popular and seems more lucrative as many youth (men) are involved. There is need for stakeholders to tailor their efforts in streamlining this so as to attract more jobs for the many youths who are currently unemployed.

## 6.3 INCOME AND EXPENDITURE

### 6.3.1 Sources of Income

The sources of income in Narok town are mainly based on livestock and agriculture as listed below:

*Table 6.5: Major Sources of Income*

Farming - wheat, barley, maize
Selling farm produce
Livestock - selling livestock and livestock products
Small scale businesses e.g. Selling vegetables, boda boda, hawking, taxi
Trading in the various market centres
Casual work - working on the farms, and herding

Source: Situation Analysis, Narok Town Council 2012

### 6.3.2 Levels of income

The level income from various sources is varied. Households can get up to KES100,000. Men have higher monthly incomes from livestock trade than women. However, women indicated that households get more from wheat farming (maximum of KES100,000) than the estimates made by men of **KES10,000** maximum per month as shown in *Table 6.6* below.

*Table 6.6: Levels of Income from Each Source*

Women	Wheat farming	Sh.17,000 – 100,000
	Cows	Sh.10,000 – 25,000 per cow
	Maize	Sh.50,000 per ha per annum
	Trading	Sh.2,000 – 20,000
	Farming	Sh.3,000 – 7,000
	Livestock	Sh.50,000
	Casual labour	Sh.200 per day Sh.5,000 per month
Men/Youth	Livestock trade	Sh.80,000
	Boda boda	Sh.6,000
	Horticulture	Sh. 10,000
	Wheat farming	Sh.8,000 – 10,000
	Maize	Sh.25,000
	Barley	Sh.2,000-10,000

Source: Situation Analysis, Narok Town Council 2012

### 6.3.3 Household Monthly Expenditure

Households spend much of their incomes on food (KES20,000) and education with the upper limit being KES40,000. Sanitation was shown as a free service in all cases as shown in the *Table 6.7* overleaf.

*Table 6.7: Household monthly expenditure*

Item	Amount
Food	Sh.2,000 -20,000
Health	Sh.1,000 - 30,000
Rent/mortgage	Sh.1,000 -5,000
Education	Sh.200– 4,000 Sh.30,000 – 40,000
Clothes	Sh.1,000 -2,000
Water	Free Sh.10 per 20l jerry can Sh.500 Sh.3,000
Sanitation	Free

Source: Situation Analysis, Narok Town Council 2012

### 6.3.4 Payment for Services

When participants were asked to state how much they could afford to pay for various basic services, the responses showed that for services like water, sanitation and education, they would expect them to be free. However, there was a category of respondents who indicated that they were willing to pay, though minimally for the same services as shown in *Table 6.8*;

*Table 6.8: Table 6.8: Payment of services*

Item	Amount
Water	Free Sh.5 per 25 litre jerry can Sh.30 per 20 litre jerry can Sh.300 -1,000 per month
Sanitation	Free Sh.100 -500 per month
Electricity	Sh.200-1,500
House rent	Sh.1,000 – 5,000
Education	Free Sh.1000 per month Sh.3,000 per term Sh.10,000 secondary

Source: Situation Analysis, Narok Town Council 2012

## 6.4 CURRENT MUNICIPAL FINANCIAL STRUCTURE

### 6.4.1 Mandate of Narok Sub-County

Narok Town is currently a sub-county of Narok County

The town offers an important local level democratic forum for communities residing there to deliberate and agree on matters affecting them and on the nature and quality of services or facilities provided by the County Government of Narok (CGN) in the town. Currently, the town provides the following services to its residents:-

- Control and regulation of businesses (licensing.)
- Provision of markets for dry agricultural produce and livestock
- Control and provision of motor vehicles parking

- Social services (registration of women & youth groups, burial of the destitute, organization of national celebrations, sports, public play-grounds, social halls, recreational facilities, etc).
- Survey, land use planning and development control with technical assistance from the Departments of Survey and Physical Planning
- Enforces compliance with basic public health requirements through provision of conservancy, emptying of cess pits and slaughterhouse services with technical assistance from the Ministries of Livestock Development and Public Health and Sanitation.
- Opening and maintenance of access roads within the town with technical assistance from Ministries of Roads and Public Works

#### 6.4.2 Principal Sources of Revenue

The Town requires money to finance the provision of services to the residents. It requires money to finance the purchase, development, maintain its stock of capital assets and to pay for its day-to-day operations. Its main sources of revenue include inter-governmental grants, land rents and rates, single business permit (SBP), market fees, user fees and charges, and a variety of cesses and royalties levied on movement of agricultural and mineral produce from or through the town area.

Table 6.9 below outlines the trends of annual yields from the main sources of revenue for the town over the three years; 2009/10 to 2011/12, and their percent (%) contributions to total revenue in 2011/12.

Table 6.9: Table 6.9: (Former) Narok Town Council Principal Sources of Revenue

OPERATING REVENUE	2009/10	2010/11	2011/12	2011/12
	KES	KES	KES	% of Total Revenue
<b>Own Revenue Source</b>				
Single Business Permit Revenue	10,005,182	8,891,130	14,088,830	13%
Market Cess Revenue	7,477,495	13,130,527	12,501,247	12%
Plot Rent/Land Rates Revenue	6,029,939	9,257,262	11,830,000	11%
Vehicle Parking Revenue	7,346,320	9,227,610	8,722,780	8%
Conservancy/ revenue	2,707,540	2,152,930	2,891,080	3%
Game & Natural Reserve Revenue	1,492,775	1,834,664	2,031,495	2%
Slaughter House Revenue	1,871,885	2,104,980	1,910,740	2%
Exhauster Charges Revenue	1,103,160	2,050,087	561,370	1%
House and Stall Rent Revenue	1,015,300	1,059,900	850,000	1%
Miscellaneous Fees & Charges	2,517,500	1,981,682	1,002,520	1%
Total own sources revenue	41,567,096	51,690,772	56,390,062	54%
Grants and other Revenue	-	-	-	-
LATF	27,175,757	32,169,222	46,448,882	45%
RMLF	3,906,623	-	-	-
KKV/Floods Disaster/tree planting Fund	30,000,000	-	2,300,000	1%
Total central government revenue	61,082,380	32,169,222	48,748,882	46%
<b>TOTAL OPERATING REVENUE</b>	<b>102,649,476</b>	<b>83,859,994</b>	<b>105,138,944</b>	<b>100%</b>

Source: From Interviews by Matrix by Development Consultants, 2012

### 6.4.2.1 Inter-Governmental Grants Revenue

The Town receives from the National Government, a general purpose Local Authorities Transfer Fund (LATF) grant to finance its approved budget. Another grant, the Roads Maintenance Levy Fund (RMLF) that was for the maintenance of township roads, ceased in 2010/11 following the decision by the National Government to pay the RMLF grant to the Kenya Urban Roads Authority (KURA) instead of the County Government of Narok (CGN).

The town can also access development grants from devolved public funds and representatives of donor agencies based in the area. Such funds include the Education Bursary Fund which facilitates access to education for bright children from poor backgrounds, the National Aids Control Council which supports advocacy against the spread of HIV-AIDS, the Economic Stimulus Program which develops / installs projects in strategic positions to spur specific economic activities, the Youth Enterprise Development Fund and the Women Enterprise development Fund.

Annual intergovernmental grants account for over 50% of the total revenue of the town but its significance dropped to about 45% since 2010/11.

### 6.4.2.2 Single Business Permit (SBP)

Section 148(a) of the Local Government Act empowers the town to control by levying fees on licenses and permits it issues to businesses, trades and occupations whose conduct, location and operation it is allowed by the law to control. Such fees form the third most important source of revenue for the town, raising KES14Million (13% of total) revenue in 2011/12.

The town has a schedule of licenses fees which was last revised and approved by the Minister in 2010. It however lacks a credible basis for identifying businesses it has licensed and those that operate illegally and for assessing the potential revenue yield from this source. The evasion of payment of license fees due is common.

### 6.4.2.3 Land Rates and Plots Rent Revenue

Plot allotment fees and rents are the fourth most important source of revenue for Narok Town. This category of revenue includes plot application fees, plot allotment fees, annual plot rents, approval of plot transfer fees, location of beacons fees, plot sub-division fees, approval of building plans fees and land rates, a form of property tax levied on registered owners of parcels of land within the town.

The 2008 Draft Public and Private Valuation roll became effective for rating purposes in 2010. All properties which existed in Narok Town in 2008 are listed in the Valuation Roll but valuations are indicated for private properties only.

*Table 6.10: Narok Town 2008 Valuation Roll Summary*

	Valuation KES (Million)
Private lands	2,545
Public lands	251
Total	2,796
Rates revenue potential at 1.5% p.a.	42

Only KES6Million of this potential was collected in 2009/10, KES9Million in 2010/11 and close to KES12Million (11% of total revenue) in 2011/12. While the rates are collected from owners of private lands, the former town council never demanded from the national government annual rates estimated at KES3.7 million annually in respect of lands reserved for public use.

Owners of private land have been unwilling to pay rates and have filed court cases questioning the basis of the town's decision to levy rates on private lands.

#### **6.4.2.4 Markets Revenues**

Market fees constitute the third most important source of revenue for the town. In 2011/12 the cess collected at open air markets and market stall rents amounted to KES13 million (or 13% of total revenue).

The town has only one built-up / enclosed market; the Old Narok (ODM) Market, whose stalls have since been re-developed by the allottees into fully closed stores serving as wholesale outlets for wares peddled by hawkers. Traders occupying the stalls pay monthly rents in addition to the annual single business permit fees.

Furthermore, the town has not set aside land for use as an open air market. Informal open air markets have developed and operate daily, mostly in the evenings in open spaces and along road sides -Muthurwa, Soko ya mawe, Stage, Olepolos, Soko mjinga, Ewuaso Ng'iro and Nkareta,

Ewuaso Ng'iro is the largest livestock market in the town while Nkareta market is an important outlet for large quantities of forest, livestock and commercial agricultural produce in the North. All the market places are dusty, not fenced, congested and not supplied with adequate water or electricity. They have no or few latrines while their roads and drainage are in poor state.

The town is also home of many hawkers, mostly the youth, who roam the town in search of customers. Hawkers operate on the basis of their annual single business permits subscriptions.

#### **6.4.2.5 Motor Vehicles Parking Charges**

In 2011/12, the town raised KES8.7 Million (8% of total revenue) from motor vehicles' parking charges. The town collects parking fees from public service vehicles including buses, matatus, lorries and *boda-boda* taxis which stop pick and deliver people or goods all over the town. Most parking charges are collected from vehicles as they enter or leave the bus park and also at collection points erected along the Kisii-Nairobi Road. Cess charged by the town for transportation of controlled commodities (e.g. hides and skins, building stones and sand, livestock and marketable agricultural fresh produce) into or out of the town is also collected at these points.

The town has a bus park which is located off the busy Kisii-Nairobi Road and therefore rarely used by buses and other public service vehicles which ply the busy road. It is used mostly by small and medium-sized passenger vehicles (i.e. *matatus*) that ferry people from the rural and predominantly agricultural hinterland of the town. The bus park is congested and its roads and pavements are in poor state. It requires renovation and expansion.

There are no designated areas for parking trucks which load and unload in the stadium grounds, outside go downs, posho mills and markets. Equally lacking in the town are

parking facilities for taxis and *boda-boda* motorcycles and bicycles. Major problems encountered in collection of parking fees and transportation cesses include:-

- (a) Lack of enforcement personnel;
- (a) Lack of supervision; and,
- (a) There are no designated parking places for buses, *matatus*, *Bodabodas* and the long distant travelling trucks which park in the town overnight.

The town needs to develop an adequate and secure parking for buses, lorries, taxis, motorcycles, and bicycles in all its trading centers especially within the busy Nkareta and Ewaso Ng'iro market centers,

#### **6.4.2.6 Revenues from Investment Assets**

##### **i) Slaughter-house Charges**

There are two big slaughterhouses in Narok town, -one owned by the town and the other owned by the private sector. Both have the capacity to slaughter up to 60 large animals each day and much of the meat and other products are transported to markets in Naivasha, Nakuru, Kisumu and Nairobi. The town charges a fee ranging from KES30 to KES200 per animal slaughtered at its slaughterhouse while charges at the private slaughterhouse range from KES75 to KES350 depending on the size of the animal. The town does not charge the private slaughterhouse any fee other than the annual single business license fee. Both the town and private slaughter houses are not served with piped water while their operations are still manual as they are yet to adopt automation.

##### **ii) Conservancy Fees**

The town is responsible for weekly collection and disposal of all solid waste in the town. Residents pay KES200 per month or KES20 per request for collection and disposal of solid waste. However, it has not handled this service to the satisfaction of most residents of the town.

##### **iii) Rental House Rents**

The town has 11 Public Rental Housing Units, four two-bedroom units going for KES2,700 per month and seven single-roomed units going for KES1,700 per month. All the units are let mostly to the town's own staff.

The town's former offices comprising one hall and five rooms have been let to Narok Water and Sewerage Company Ltd. However, because the latter is a subsidiary of the town, it has not been pursued rigorously for payment of rent due.

Five three-bedroom units, each with its own detached servant quarters, were erected on the town's land as part of the cost of Narok - Nakuru via Mau Road. When the road project was completed, the Ministry of Roads declined to hand over the houses to the town.

Development of more public rental housing is a priority, especially now that it is the headquarters of Nark County Government.

#### iv) Services Cost Recovery

The town is empowered by law to regulate and control the location and operation of certain persons, matters, premises, trades and occupations. The purpose of the SBP fees it collects for the permits it issues is to facilitate regulation and control. It is desirable to ensure that fees charged fully cover the cost of providing the service or regulating businesses.

### 6.4.3 Major Classes of Former Council Town Expenditure

Table 6.11 below outlines the amounts and trends of major classes of the town's expenditure over the three years between 2009/10 and 2011/12 and their average size in relation to total revenue.

Table 6.11: Major Classes of Costs, Annual Expenditure Levels and Trends

	2009 / 2010	2010 / 2011	2011 / 2012	2011 / 2012
	KES	KES	KES	% of Total
OPERATING REVENUE				
TOTAL OPERATING REVENUE	102,649,476	83,859,994	105,138,944	100%
OPERATING EXPENSES				
Employee costs	21,979,707	45,578,875	55,331,312	53%
Operating costs	51,295,003	46,080,714	35,194,645	33%
Capital Payments (expensed)	8,822,716	5,480,444	20,158,510	19%
Repairs and Maintenance costs	5,087,402	5,126,028	12,675,623	12%
Depreciation charge for the year 2010/2011	3,561,023	3,705,202	-	-
Debt Repayment	1,785,294	-	-	-
Total Operating Expenses	92,531,145	105,971,263	123,360,090	117%
Surplus/(Deficit) to General Rate Reserve	10,118,331	(22,111,269)	(18,221,146)	-17%

Source: From Interviews by Matrix by Development Consultants, 2012

Expenditure is classified as follows:-

- Employee or personnel costs comprising of salaries, wages, allowances and other employment or service benefits paid to political leaders and staff.
- Operational costs comprising expenditure on activities that contribute directly to the town's performance of its statutory mandate, namely satisfying the public services needs of its residents. Personnel costs of staff posted at the market, slaughter-house, stadium, cemetery, conservancy, roads and works sections are considered for the purposes of the analyses in this report.
- Maintenance (or repair) costs comprise expenditure incurred to sustain the condition and productive capacity of capital assets which the town owns and uses for the purposes, and in the course, of providing services required by its residents. This category of expenditure ensures sustained level and quality of services rendered. The town applied for Kazi Kwa Vijana (KKV) Floods Disaster grant and the KKV Tree planting grant to facilitate the repair and maintenance of drains, roads and bridges.
- Capital expenditure includes the cost of developing or buying new capital assets to replace those that are worn out or to expand their productive capacity.
- Debt Resolution is the value of payments made towards reduction of indebtedness to suppliers on account of outstanding bills for goods and services received.



About 53% of revenue in any year is spent on employee costs leaving 43% to finance services provision (33%), for maintenance (12%) of capital assets, for investment (19%) in new capital assets and none for debt servicing as the town is not substantially in debt. An expenditure of about KES20Million on assets acquisition in 2011/12 financial year was to ensure compliance with a condition requiring that part of LATF grant be used for purchase of new capital assets, and towards reduction of debts owing, in order to qualify for the grant in subsequent years.

#### 6.4.4 Capital Expenditure and Investments

The Local Authority Services Delivery Action Planning (LASDAP) process is a local level three-year consultative planning process that mobilizes town residents to participate in annual meetings that are meant to identify and prioritize the activities and projects that need to be undertaken to resolve local service's needs. The meetings are also meant to contribute towards the realization of some overriding national policy considerations such as poverty reduction and the needs of special interest groups.

The LATF grant proceeds plus revenue from own local sources net of expenditure on debt resolution, civic allowances, staff costs and on maintenance determines the 'Resource Envelope' or net operating revenue available to finance projects and activities planned through the LASDAP process.

Table 6.12 below summarizes projects identified and prioritised by the LASDAP process and financed by the town's Resource Envelopes over the period 2009/10 to 2011/12

Table 6.12: LASDSP Projects Implemented over the years 2009.10 to 2011/12

PROJECT	2009/10	2010/11	2011/12
	KES (Million)	KES (Million)	KES (Million)
Education projects	4.7	2.80	3.50
Exhauster truck	7.70	6.00	-
Nkareta maternity ward	-	1.40	-
Market repairs	0.20	0.70	-
Water projects	1.40	0.70	-
Feeder roads and foot bridges.	0.70	1.40	6.00
<b>Total</b>	<b>14.70</b>	<b>13.00</b>	<b>9.50</b>

Source: From Interviews by Matrix by Development Consultants, 2012

The town has not been able to invest sufficiently in equipment and other capital assets it requires to operate. Its current stock of capital assets include slaughterhouse/slabs, ODM market, Narok Water & Sewerage Company, thirteen rental houses, two exhauster trucks, one tractor and one lorry. Insufficient investment in capital assets limits the capacity of the town to provide services at the scale expected by its residents, and does not also enable the town to generate a significant volume of user charge business to raise revenue to finance and sustain service provision.

#### 6.4.5 Financial Records, Reports and Computerization

The town lacks critical professional expertise it requires to maintain its accounting records. Except for the positions of Town Treasurer, Internal Auditor, and Accountant, all the other approved positions in finance department are for clerical and other support staff.

Narok Town has a comprehensive set of financial rules and regulations whose primary intention is to ensure accountability and proper use of the public funds entrusted with it. It maintains:

- (a) A record of all its financial transactions including receipts and payments
- (b) Vote control books to direct use of available resource to budgeted purposes only
- (c) Cash flow statement and schedules of creditors and of debtors annually as supporting schedules to budgets, Revenue Enhancement Plans and to annual financial statements.

These records provide information and data that is useful for the preparation and presentation of statutory financial reports and for evaluating the town's financial performance, liquidity, solvency and accountability to the public.

The town has consistently complied with the condition that it must prepare and publish its annual financial reports of the preceding year to qualify for allocation of LATF Grant in the ensuing year. For this reason, it has had all its annual abstracts of accounts prepared and audited within the set deadlines. However, the quality of the reports has been wanting as they have always attracted a qualified audit opinion for lack of credible valuations for its assets and liabilities.

The town's accounting, reporting and other financial management operations are not fully computerized. But it is installing a computerized accounting and financial reporting program through adoption of the Local Authority Integrated Financial Operational and Management System (LAIFOMS), accounting software being developed by the KLGRP to address the unique accounting and other information needs of local authorities in Kenya.

The town's accounts section keeps valuation rolls and plot rates and rents' registers. These data bases are not up to date, especially regarding capture of changes arising from ownership, subdivision, registered use, and contact or physical address of owners of properties and are not digitally linked to facilitate simultaneously up-dating and to assist in assessment and invoicing of property taxes due.

#### **6.4.6 Public Private Partnerships**

Provision of some public services and resolution of some public issues through Public-Private Partnership arrangements has never been recognized and formally applied by the town. A few NGOs and parents-teachers associations are involved in provision of education in the town while the town (through Narok Water & Sewerage Company) competes with the private sector for provision of exhauster services without any form collaboration between them.

Where the town is not in a position to provide a service, it may assign it to contracted private sector providers with such conditions as will ensure sustained availability of the service at an affordable cost to all who need it. Services that can be privatized include water supply, solid waste management, slaughter houses, rental housing, nursery schools, markets, hotels, lodges and restaurants.

#### **6.4.7 Summary of Key Areas of Concern**

- (1) Public private partnership has never been applied for development and provision of public services and facilities.
- (2) Central Government grants accounts for about 45% of the town's total revenues with

the town's own sources raising the remaining 55%.

- (3) Invariably, the town's operations have been affected by revenue deficits
- (4) About 53% of the town's annual revenue is used to meet staff costs leaving a proportionately small amount to finance service provision, assets acquisition and maintenance.
- (5) The town's capital asset base is insufficient to enable it to maintain a meaningful level and quality of public services and generate sufficient revenue to sustain provision of services to the satisfaction of its residents.
- (6) The town is yet to anchor its resources base on the vibrant livestock and commercial farming in the area.
- (7) Lack of detailed and up-to-date databases on properties situated and businesses operating in the town make assessment, billing and collection of rates, land rents, Single Business Permits (SBPs) and other fees difficult
- (8) Evasion of payment of licenses fees is rampant.
- (9) The town does not have suitably qualified staff to follow-up the collection of land rates and plot rent arrears through courts.
- (10) The town's market and other user charges and fees are generally low and cannot guarantee related cost recovery.
- (11) There are no sufficient and secure parking places for public service vehicles in the town.
- (12) The town has never demanded from Government contribution in lieu of rates due on lands reserved for public use.
- (13) Collection of markets and other user charge revenue is constrained by:-
  - Evasion of payment;
  - Inadequate enforcement officers; and,
  - User charges levied are generally low and cannot guarantee related cost recovery.





# Chapter 7

## HOUSING AND SOCIAL INFRASTRUCTURE

### 7.1 OVERVIEW

Vision 2030 regards housing as a crucial pillar in realizing Kenya's long term development goals. As far as housing and urbanization are concerned, the Vision calls for "an adequately and decently-housed nation in a sustainable environment." This will be attained through; better development of, and access to affordable and adequate housing; enhanced access to adequate finance for developers and buyers; pursuit of targeted key reforms to unlock the potential of the housing sector, and the initiation of a nationwide urban planning and development campaign, starting with Kenya's major cities and towns.

These elements are quite relevant even as we embark on re-defining strategies and programmes for the housing sector in Narok. Besides this, provision of adequate housing is a human right recognized and enshrined in the Constitution of Kenya 2010. *Article 43 (b)* proffers the right to accessible and adequate housing while *Article 21* further says that "the State shall take legislative, policy and other measures including setting standards to achieve progressive realization of the rights guaranteed under Article 43". The Narok Housing Strategy will take into account the principles and provisions of these instruments, among others.

### 7.2 HOUSING INFRASTRUCTURE

#### 7.2.1 Synopsis of Housing and Human Settlement Issues

The housing sector at national and local level is confronted by numerous challenges. The demand for housing still far outstrips supply. High rate of urbanization, increasing poverty and escalation of housing costs and prices have made the provision of housing, infrastructure and community facilities one of the daunting challenges in the development of the country and Narok is not spared. Other challenges include the proliferation of slums, overstretched and deteriorating infrastructure and services and an acute shortage of affordable housing, limited range of low cost building materials and construction techniques, stringent planning and building regulations and high infrastructural standards which have been an impediment in the housing delivery system.

It is estimated that out of the 200,000 housing units required annually in urban areas, only 40,000–50,000 are produced. The shortage of housing for low-income households is particularly acute in urban areas, with only about 6,000 units, or 20 percent of all houses produced, catering for this group. Low-income households represent about 48 percent of the total demand for new houses in Kenya. However, more than 80 percent of new houses are for high-income and upper-middle-income earners. Considering that more than 60 percent of the Kenyan population is younger than 25 years, the demand for housing will rise steadily as this group reaches adulthood.

These challenges apply in Narok Town, which is equally suffering from challenges of unguided urban growth. Indeed, there is hardly more than 180 houses constructed in Narok each year. Inventory of housing stock in Narok is limited but generally the following 5 categories of suppliers/providers are available as presented in *Table 7.1* below:

Table 7.1: Categories of Housing

Category of housing providers	Approximate contribution
Government staff residential housing	2%
County Council of Narok staff housing	1%
Town Council Staff housing	1%
National Housing Corporation tenant purchase scheme	1%
Private providers for rental and owner occupier	90%
Others	5%

### 7.2.2 Formal and Informal Housing (Unplanned and Slum Settlements)

Like many other urban centers in the country, Narok suffers from the inability to provide adequate and affordable urban housing for its residents. Kenya has a low level of urban home ownership (16%) and this pattern is repeated at Narok. There is a limited supply of rental housing in the town despite its rapid growth. Real estate developers have built hotels that offer accommodation to visitors who regularly tour the town on their way to Maasai Mara game reserve. There has been no new public housing development in Narok since 2000 to accommodate civil servants. The recent establishment of educational institutions in the area particularly the university is creating even more demand for housing that the market is not adequately providing.

Photo 7.1: Informal Housing in Narok



Source: Field Survey, November 2013

#### 7.2.2.1 Problems Associated with Housing

Some of the main problems associated with housing in Narok town include:

- Poor housing structures;
- Lack of piped water network;
- Deficiency of electricity;
- High rents for the available limited houses;
- Poorly located houses some along hazardous areas, others incompatible with other uses; and,
- Limited supply of formal housing.

#### 7.2.2.2 Informal Settlements Situations

The lack of adequate and affordable housing in Narok has largely resulted in the rapid increase of informal settlements such as slums. Besides, the lack of sustainable

livelihoods, low incomes and poor planning of the town and lack of enforcement of zoning regulations has also contributed to this phenomenon.

Like in many other parts of the county, the slum households have numerous challenges which include the following:

- Houses which are not permanent in nature and cannot withstand extreme climate conditions;
- Lack of sufficient living space which means more than three people sharing the same room;
- Lack of access to safe water in sufficient quantity and quality and at affordable prices.
- Inadequate sanitation meaning public toilets shared by a large number of people;
- Insecurity of tenure; and,
- Structures located in extremely fragile and dangerous locations.

Some areas in the town exhibiting informality include:

- Lower Majengo is one of the worst slums in Narok that lacks water, waste disposal system. Pit latrines are common. Walls are made of mud while roofs are made with corrugated iron sheets. It is also den for brewing of illicit liquors and especially *changaa*, while pick pocketing, mugging and drug peddling are common in the area
- Bobong slums
- Squatter settlements that form the southern end of Block V- the area surrounding the Administration Police Camp
- A Part Development Plan of the surrounding neighbourhood has been prepared prescribing medium density residential developments to up-grade the existing slums. One of the suggestion is that the steep cliff slope facing the town center be conserved and two parcels at the tip of this cliff planned for open eco-friendly hotel to take advantage of the scenic town view. These should be fast tracked.

### 7.2.3 Housing Typologies

Housing typologies refer to the varied urban house forms and the corresponding neighbourhood configurations that cater for the different social groupings in Narok. Housing is realized through construction of various typologies of houses and ancillary facilities in compliance with the Building Code and Planning regulations.

Some of the questions that the section tries to address include:

- (1) Do the various housing typologies exclude the poor?
- (2) Do they adhere to building and planning standards and norms?
- (3) Are they in harmony with the local climate and culture of the people living in the area?
- (4) How are they located vis-avis the river and drainage?
- (5) Could they be contributing to flooding phenomena in Narok?



Like in many other towns in the country, many of the houses comprise single-roomed dwellings mostly built of temporary materials, with poor sanitation and infrastructure facilities.

Despite the fact that the town is located in an area dominated by the Maa culture, there was no evidence that the culture has influenced the form and content of housing in the town. Given that the town is located with the Mara tourism circuit, local architecture and design can add value to the built environment. The spread of the settlements in the entire town is also characterized by sprawl (such as the area surrounding the group ranches) and poor utilization of both land and the available infrastructure. Plots have been created basically through private subdivision leading to mixed density developments.

*Photo 7.2: Housing Typologies in Majengo in Narok*



*Source: Field Survey, November 2013*

### **7.2.3.1 Low Income-High Density**

This include Majengo, a high and middle density residential area where the former town council did not insist on any standards and hence building standards are hardly observed. Another high density area that depicts similar characteristics is Olopito.

### **7.2.3.2 Middle Income Housing –Medium Density**

This includes much of the area around Maasai Mara University, which is part of Oleleshwa group ranch. The owners have freehold titles without any conditions attached to them. The area is opened for development and there is need for development control to be instituted.

One of such areas is London which is outside the planned area and characterized by informal subdivisions resulting in tiny plots, with narrow 6 metre roads and heavy reliance on pit latrines. Others include the area behind Roadstar depot and Kenol area.

### 7.2.3.3 High Income-Low Density

Photo 7.3: One of high Income Housing in Lenana Area



Source: Field Survey, November 2013

### 7.2.3.4 Public Housing

Most of the public housing is of low grade (LG) mainly single roomed. The table 7.2 summarizes the public housing stock in Narok and the average rent payable. The rents were established through a survey conducted in 2000.

Table 7.2: Public Housing stock by Grade and Payable Rent

Housing Grade	Quantity	Rent payable in KES	Remarks
High Grade	10	5,000-6,500	3-bedroomed with a servant quarters.
Middle grade	62	2500-4000	- 2-bedroomed house. - About 15 houses have been converted into offices
Low Grade	217	600 -1500	Bedsitters and 1- bed roomed houses
Total	289		
Actual available housing stock	274		The balance of 15 houses have been converted into office accommodation

Table 7.3: Rental comparison between Public Vs Private Housing in Narok

Housing Category/grade	Rents		Area
	Public	Private	
High Grade		15-30000	Lenana area <sup>1</sup>
Middle grade		7-12,000	Upper Majengo, Maasai Mara University area <sup>2</sup>
Low Grade	600-1500	3000-3500	Lower majengo <sup>3</sup> , Bobong slums- opposite posta

### 7.2.4 Housing Conditions (Quality)

In Kenya, the quality and quantity of low-income housing is generally better in rural areas than in urban areas. This is factual in Narok, which is largely rural in nature and where the housing is of poor quality and lacks basic infrastructural services. It is estimated that more than 300,000 housing units need some improvements every year. Further, the quality of housing in rural areas is largely dictated by cultural and environmental factors and this is exemplified in a number of aspects such as types of building materials used, the form and design, who builds; their location vis-a-vis other land uses etc.

1. In Lenana Extension, three bed roomed bungalows with private compound go for about KES 30,000/- and 50,000/- . Some University dons, executives of quasi-government bodies and senior civil servants have taken residences here, but majority are owner occupier.
2. Two bed roomed self contained facilities fetch as much as KES 15,000/- in this neighbourhood
3. A single room in the high density area of Majengo are going for between KES 3,000/- and 4,000/- depending on the size. A one bed roomed house without self contained sanitary facilities range between KES 5,000/- and 7,000/-; while self contained one bed roomed houses range above KES 8,000/-

Table 7.4 & 7.5 below provide a general overview of the quantity and quality of housing in Narok. Where possible, comparisons have been made between Narok and other areas (i.e. national and Nairobi) to provide a bird's eye view on how the town is performing in comparison with rest of the country.

Photo 7.4: Housing Quality in Narok



Source: Field Survey, November 2013

Table 7.4: Distribution by Roofing Material in Urban Areas

Urban households by main type of roofing material for the main dwelling unit at different levels								
Area	Iron Sheets	Tiles	Concrete	Asbestos	Grass	Makuti	Tin	Mud/Dung Other
Narok –North	12,339	93	99	245	5	9	72	24

Table 7.5: Urban Households by main type of Wall Materials for the main Dwelling unit and District

Levels	Stone	Brick/Block	Mud/Wood	Mud/Cement	Wood	Iron Sheets	Grass/Reeds	Tin
Kenya	1450585	1471005	675058	675058	971487	577518	2777121	26416
Nairobi	466360	137375	36809	52330	18592	264413	431	5850
Narok North	6792	918	1325	562	1020	2152	7	60

### 7.2.5 Spatial Distribution of Housing

Generally, there is a thin line between residential construction and other activities as is evident in the entire town where many of the uses are not compatible with housings. Noisy entertainment places are incongruous with the housing.

In some areas, informal housing has been established in environmentally sensitive areas. This is especially so along Enkare Narok River, Kakia River Valley and Esamburmbur River Valley. Besides emptying waste into the river, the dwellings block the natural drainage of the river and could be contributing to flooding.

The housing structures within Lower Majengo are dangerously constructed along the rocky Valley. They are made of "mabati" (iron sheets) and have wooden posts to support the housing structures (Photo 7.6). This is especially evident within Lower Majengo area just off Nyawira road (Photo 7.5).

*Photo 7.5: Structures in Lower Majengo constructed along Kakia River Valley*



*Photo 7.6: Mabati Housing Structure hanging on the valley cliff in Lower majengo*



Around Esamburmbur River Valley, there are housing units constructed close to the gorge (Photo 7.7) posing a safety hazard, especially to children who like playing near the gorge (Photo 7.8).

Photo 7.7: Esamburmbur River Valley with Housing Units Close by



Photo 7.8: Children playing near the Unfenced Esamburmbur River Valley



Additionally there are housing units within the flood prone basin located in part of Narok town centre as shown in Photo 7.9 below:

Photo 7.9: Housing Units in the Flood Prone Narok Town Centre



### 7.2.6 Housing Demand and Supply Projection

Based on household sizes, it is projected that for the country to adequately provide shelter for the projected population of 60 million by 2030, the housing demand for the country would be more than 12 million quality dwelling units by the year 2030. In the case of Narok, there is a serious deficiency of housing stock compared to the demand for the low, middle and high income housing. It is generally very difficult to find a vacant house to let for all cadres which makes it a common practice for tenants to book houses long before they are complete. The shortfall in supply has made rents proportionately very high.

The table 7.6 below shows the projected increase in housing needs for Narok Town over the plan period.

*Table 7.6: Housing projections for Narok Town from 2009-2030*

County Assembly	Sub-location	2009	Inter-censal Growth Rate	2010	2013	2018	2023	2028	2030
Narok Town	Narok Town	42,505	0.09047726	46,351	60,104	92,681	142,913	220,372	262,053
	Oleleshwa	5,012	0.08172589	5,422	6,862	10,164	15,054	22,297	26,090
Nkareta	Nkareta	6,856	0.06401914	7,295	8,788	11,984	16,344	22,290	25,235
	Naisoya	4,840	0.00187329	4,849	4,876	4,922	4,968	5,015	5,034
	Olopito	8,510	0.0836805	9,222	11,736	17,540	26,215	39,179	46,010
Total		67,723		73,138	92,367	137,292	205,495	309,152	364,423
Estimated Households (average household size = 5)		13,545		14,628	18,473	27,458	41,099	61,830	72,885
Estimated Increase of Housing needs for Narok Town				1,083	1,390	2,108	3,202	4,869	5,759

## 7.3 HOUSING SUPPORT INFRASTRUCTURE

The key to a successful development of affordable, adequate housing is the ability to provide the much needed attendant/support infrastructure. These includes on-site roads, water and sanitation facilities etc. The general infrastructure in Narok is poorly developed and this is a major setback to the housing sector. The residents rated inadequate water supply, lack of sanitation, and electricity as some of the main problems related to housing.

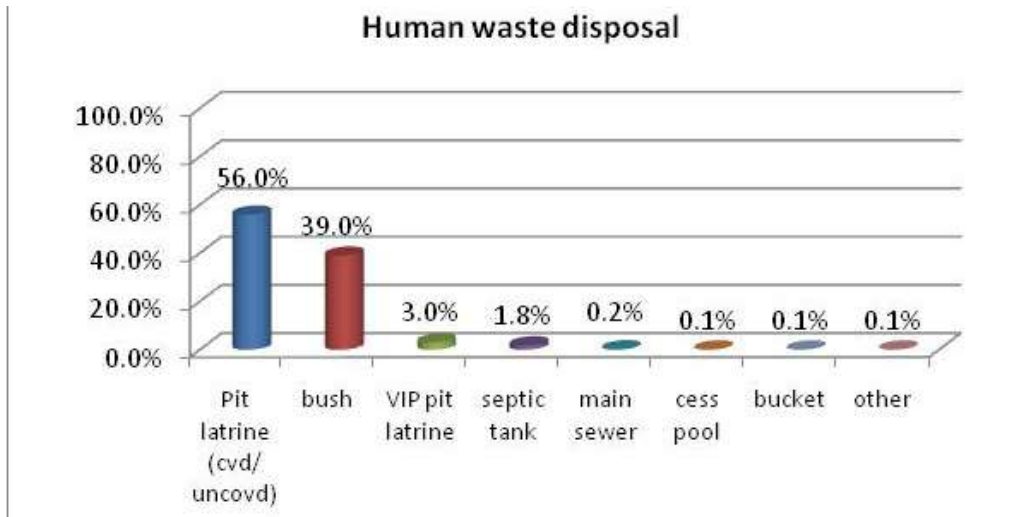
*Photo 7.10: Support Infrastructure in Narok*



### 7.3.1 Sanitation

The sanitation facilities in Narok town are septic tanks, cess pool, VIP pit latrines, pit latrines (covered or uncovered), bucket and bush. In terms of coverage, this remains below the acceptable bench mark of 80%. VIP latrines are still inadequate for the town's population.

Figure 7.1: Human waste disposal methods



Source: 2009 Kenya Population and Housing Census, Vol II, KNBS, 2010

The residents of Narok mainly use pit latrines (i.e. 56%) while 39% still use the bush as shown above. This is worrying considering that run-off flow into the rivers meaning that human waste could be part and parcel of the water consumed by unsuspecting residents.

Table 7.7: Urban, Households by Main Mode of Human Waste Disposal at Various Levels

Level	Main Sewer	Septic Tank	Cess Pool	VIPs Latrine	Pit Latrine/Uncovered	Bucket	Bush Other
Narok North	126	899	10	633	11095		134

### 7.3.2 Sewer Line and Exhauster Services

The coverage level of these two services remains low in the town. There will be need to allocate resources to low-cost onsite systems which can fill the sanitation gap in the short to medium terms. This particularly applies to high density low income areas, where public health risks are most significant. Like in many urban areas of Kenya, effluent treatment remains largely inadequate in Narok town.

Despite the rapid growth of the town, Narok lacks a sewer line and residents mainly rely on exhauster services. The exhauster services are mainly meant to serve the population that is in the urban area. This mode is proving to be unsustainable given the pace of the town's growth.

Other factors related to sanitation include:

- (1) Weak soil formation which is not suitable for the construction of pit latrines.
- (2) The need for awareness on importance of using toilets especially among the rural segments of the population.

The *Table 7.8* below profiles the major sanitation problems and suggested solution to each of the problems.

*Table 7.8: Main Sanitation Problems and Suggested Solutions by Zone*

Problems	Solutions
<ul style="list-style-type: none"> <li>Sharing toilets by a large number of people (9-20 people) few toilets at household level</li> <li>Use of open groundas and bush as toilet</li> </ul>	<ul style="list-style-type: none"> <li>Provide facilities in the plots</li> <li>Educate people on usage of toilets</li> <li>Slaughter houses to have own sewer system</li> <li>Construct a public toilets in the market</li> </ul>

### 7.3.3 Water Supply

Water supply connectivity is low due to the limited capacity of the water company to supply all the residents. Household connection is very low with most people opting to buy water from water vendors as shown in the *Table 7.9* below:

*Table 7.9: TUrban Households by Main Source of water*

Level	Pond/dam	Lake	Stream	Spring/well/borehole	Piped to dwelling	Rain harvested	Piped	Water vendor
Narok North	45	2	89	1233	841	3426	6869	53

**Photo 7.11: Water and Sanitation in Narok**



## 7.4 HOUSING DELIVERY SYSTEMS

The housing sector attracts a wide range of players that in one way or the other affects the demand and supply of housing through their interactions. Some of the actors include consumers (tenants or owners), developers, lenders, infrastructure providers, regulators, subsidy providers and intermediaries.

Some of the factors associated with shortage of housing in Narok that also applies to most other urban areas in Kenya include under-investment in low and middle-cost housing by private sectors, poor governance, an outdated legal and regulatory framework, and the high cost of housing finance, for both long-term developers (project financing) and buyers (mortgage financing) alike. Others are speculation and absence of targeted subsidies for the urban poor.



The main actors in the housing and human settlement sub-sector in Narok include the Town, credit support groups and individuals (landlords & tenants). Among the major concerns regarding housing delivery as reported by the FGDs are:

- (1) Residents operating from the Manyattas/ villages in the respective wards;
- (2) No housing schemes have been started or initiated by government in the last ten years;
- (3) Population growth is higher than the housing supply;
- (4) Construction of houses is all landlords driven, without participation of the low income earners; and,
- (5) Land tenure and ownership in large parts of Narok is either trust land or communal<sup>1</sup>

#### 7.4.1 Regulatory Framework

The regulations of the former Town provided both an inhibiting and enabling environment to the growth of the housing subsector. Currently, there are 11 procedures in the issuance of a construction permit. Similarly, the occupancy certificate takes 36 days with another 33 days needed to get utility connections. These long durations increase the cost of building besides making the process lengthy.

#### 7.4.2 Access to Affordable Finance

This remains a major challenge particularly given that most plots in Narok have no titles. From our findings, most of the developers do not rely on loans from banks and financial institutions.

#### 7.4.3 Other Key Elements of the Building Sector

- (i) High cost of Land as tabled below;

Table 7.10: Cost of land in different locations

Location	Land size	Price in KES
Lenana( Low density)	50x 100 ft	600,000-700,000
Upper Majengo	50x 100 ft	400,000
Lower Majengo	50x 100 ft	100,000-150,000

- (ii) Building stones, sand, building stones and timber are locally available while the rest are bought from Nairobi and stored by local merchants. Sand sell at about KES2,000 per ton while building stone sells for between KES11 to KES15 per piece.
- (iii) Basic building materials and skills are available except in specialist areas such as aluminum, acoustics ceilings etc which have to be brought in from outside the county
- (iv) There are a few local Maasai contractors. Indeed, only three are formally registered by the authorities.

<sup>1</sup> Constitution 2010 chapter 5, now reclassifies land into private, public and communal and hence trust land falls under communal land

## 7.5 SOCIAL INFRASTRUCTURE FACILITIES AND DEVELOPMENT

### 7.5.1 Educational Infrastructure

The location, access and existence of functional education infrastructure are crucial in any given human settlement.

#### 7.5.1.1 Primary and secondary schools

Schooling facilities are fairly adequate but are not evenly distributed in the town. Some of the primary schools in the town include Masikonde Primary School, Ole Sankale Boarding School, St. Mary's Primary School, St. Peter's Primary. Some of the secondary schools include Narok Boys' High School, Maasai Girls' High School, Ole Tipis Secondary School and St Mary's Secondary School. Maasai Mara University is the only institution of higher learning.

In Narok, School enrolment is high due to qualified personnel and partnership with NGOs and CBOs. Education institutions and infrastructure have been improved over time to accommodate the rising trend.

#### 7.5.1.2 Education facilities in the wards

The education facilities in the wards include early childhood centers, primary schools, secondary schools and tertiary institutions. Early childhood centers include Great Star Academy, Osagum ECD, Top Hill Nursery, Legacy Junior Royal Vision, KWS ECD, AIC academy etc many of which are located around Narok town. Additional facilities are required in other parts of the planning area

The primary schools in the municipality are averagely spread within a 2km radius buffer and are mainly located around Narok Town, Iloisiusiu, Nkareta and Rrotian. Some of the schools include Kotolian Ngoben, Tegero, Kotolian, Eroret and Nkaitobolo academy located around Nkareta. Within Narok town some of the schools include Nairamiram primary, Bilal, Harmon school, Masikonde, Polonga, Lenana, Hossana, Enelera among others Secondary schools include Sanchura secondary , Maasai Girls , St Mary Stephen Nkoitoi , St Mary Girls, Ole Tipis all located around Narok Town ward.

There is need to spread the coverage to other areas such as Nkareta. Tertiary institutions include Narok Polytechnic Training Centre, Narok Teachers College, Narok Technical College, Narok Youth Polytechnic, Narok Pastoral Centre, Kenya Institute of Management Emanuel Educational Centre and Narok Diocese Resource Training Centre which are all located in Narok Town.

The Maasai Mara University is expected to play a major role in shaping the growth of the Town. There is need for adequate planning and provision of needed support infrastructure such as accommodation facilities, allowing for medium density residential developments plus business-cum-residential premises to cater for the potential posed by the University community.

#### 7.5.1.3 Problems and solutions with education facilities

Some of the challenges related to education facilities are shown in the table7.11 overleaf:

*Table 7.11: Problems Associated with Education Facilities*

Crowded classrooms in public primary schools
Few teachers
Long distance to the schools
Poor state of classrooms
Early pregnancies
Low education standards
Absenteeism
High dropout rates

## 7.5.2 Health Services

### 7.5.2.1 Health

Health infrastructure is fundamental to the attainment of sustainable human settlement. A strong health infrastructure is built on the principle of affordability and accessibility. Narok Town is endowed with a district hospital and Nairasirasa community health centre. However, there is inadequacy of maternity services particularly in the interior parts. Like many public health facilities, the hospital has a chronic shortage of health staff given the coverage and population it is supposed to serve. It is important to note that Narok town, including the Oleleshwa suburb, has an area of 373.70 Km<sup>2</sup> and a population of 45,517 persons. The neighboring area of Nkareta, Naisoya and Olopito has an area of 462.90 square kilometers and a population of 20, 206 persons according to the 2009 census report. This is against current hospital staffing level which is as shown in *Table 7.12* below.

*Table 7.12: Current Staffing Situation*

Staff	Number
Consultants	7
Pharmacists	2
Pharmaceutical technicians	1
Dentist	1
Medical officers	5
Medical officer interns	8
Nurses	94
Clinical officers	12
Clinical officer inters	30
Administrator	1
Administrator	1
Secretaries	2
Accountant	1
Nutritionist	3
Supply and purchase	2
Clerical officers	4
Telephone operators	1
Support staff	9
Laboratory	8
Biomedical	3
Dental technician	2
Physiotherapist	1
Social worker	1
Driver	1

Alongside the district hospital, Narok residents have access to quality and affordable health services that are provided by the various health facilities spread out on an average of 5km radius of accessibility in Ngoben, Ewaso Ng'iro and Narok Town. Among the facilities is the Ngoben Dispensary, KWS dispensary and Ewaso Ng'iro Health Centre. There are also several reputable private hospitals in the Township which include Mwamba hospital, Lenana Hill hospital, First Light Hospital Hossana Enelera Clinic and Narok Pillar clinic.

The health-related complication afflicting Narok residents are Malaria and Pneumonia which are prevalent in the highlands and tuberculosis associated with low lying areas that have dwellings (i.e *manyattas*) that are poorly ventilated. HIV/AIDS is said to be most prevalent in Narok Town due to tourism while trachoma is a major problem in the Lower zones. Mulot area is said to have high incidences of malnutrition.

There are major constraints related to the health delivery system in Narok including the fact that the space initially planned for the construction of a medical training school has been encroached on. Other problems related to health include:

- Lack of personnel (doctors, nurses etc). The town suffers from a Chronic shortage of staff as there are only six clinical officers who specialize in theatre with two of them permanently stationed at the front office.
- Lack of drugs and equipment in the facilities
- Expensive service from the private clinics
- Not enough maternity wards
- Land grabbing.
- Individuals tampering with the sewerage system
- Lack of funds for expansion
- No utility vehicles; there are currently two old ambulances
- No Separation of wards for the various age groups.
- Water scarcity problems due to borehole collapse.
- Casualty is currently too small to serve the influx of patients.

#### **7.5.2.2 Mortuary facility**

The only mortuary available has a limited capacity of six bodies. It has only two functional fridges each with the capacity of three bodies and experiences frequent breakdowns which are very expensive to fix. Though it offers postmortem services, the mortuary's capacity is evidently way below what is ideal for the town's population, 60% of whom are immigrants. The inadequacy has necessitated the use of Tenwek hospital mortuary which is about 50 kilometers away. There are currently no plans of expanding the mortuary facilities.

#### **7.5.2.3 Public cemetery**

There exists a public Moslem and Christian cemetery adjacent to each other north of Chambai Hotel that are used mainly by immigrants who have settled in Narok. Majority of Narok residents have rural homes within Narok County or elsewhere for this purpose. Another cemetery was initially planned at the western tip of the planned area of Narok – just after the area zoned for light industries. With the coming of the University, an unprecedented rate of development was experienced in that area

(i.e. Block 11) that led to change of use of the cemetery land into medium-density residential development. The cemetery was then relocated to the other end of the Livestock Holding Ground.

### 7.5.3 Community Facilities

Community facilities form an important component of the housing subsector. Some of these facilities include recreational parks, children parks, football pitches, stadiums etc.

Recreational facilities provide the much needed mechanism for meaningful and positive engagement and socialization of the young people. These facilities should therefore be well planned for and adequately provided in urban areas and neighbourhoods.

Though the local physical development plan has reserved spaces for recreational facilities, in reality, resources for their maintenance have been inadequate as evidenced by Narok Stadium which has been deteriorating over time due to neglect.

The Narok town local physical development plan had reserved spaces for the following recreational facilities:

- The Narok stadium for all sporting events and public meetings (*barazas*) between the Narok/Bomet highway and the Narok River.
- Recreational park along the Narok River below the stadium.
- The Kakia Valley recreational park that benefited from a conservation effort by the former Town Council of Narok, NEMA, the Forest Department and Water Resources Management Authority. It is situated to the right of the highway as you enter Narok town from Nairobi.
- The Angwenyi Valley riparian reserve which is a tree planting area found below Chambai hotel.
- The National Museum of Kenya has three sites conserved for heritage and recreation. One is on the left of the highway towards Maasai Mara University where they have also built the Kenya National Library facility. The Museum has a culture and artifacts exhibition facility next to the Post Office and an old building preserved for its historical value behind Maa Towers in the CBD.
- The Maasai Mara University has a modern stadium used for all major sports events and a modern theatre where drama, arts festivals, meetings and indoor games are held.
- There are spaces earmarked for playground and open spaces within all residential zones in the planned area of the town

These spaces though articulated in the plan, need to be actualized and maintained.

### 7.5.4 Religious Purpose

Narok has religious buildings especially those owned by mainstream denominations. The Moslems have a mosque within the central business district and a five-acre compound with mosque, madrassa and ancillary facilities in Block 11 near the Maasai Mara University. The Catholics have a cathedral with a primary and secondary school complex in Majengo area. On their part, Anglicans have a church with a compound that houses a nursery school and pastor's house within Block 5, next to land hosting the Presbyterian Church – who also have some land next to the central matatu/bus stop within the C.B.D. The African Inland Church (A.I.C) has a church complex with a Bible College south of the Township near the Technical College. Numerous other churches have sprung up to interfere with land-use system by purchasing plots meant for residential or commercial use and constructing churches, some of which are not compatible to developments in the respective neighborhoods.





# Chapter 8

## TRANSPORT AND INFRASTRUCTURAL SERVICES

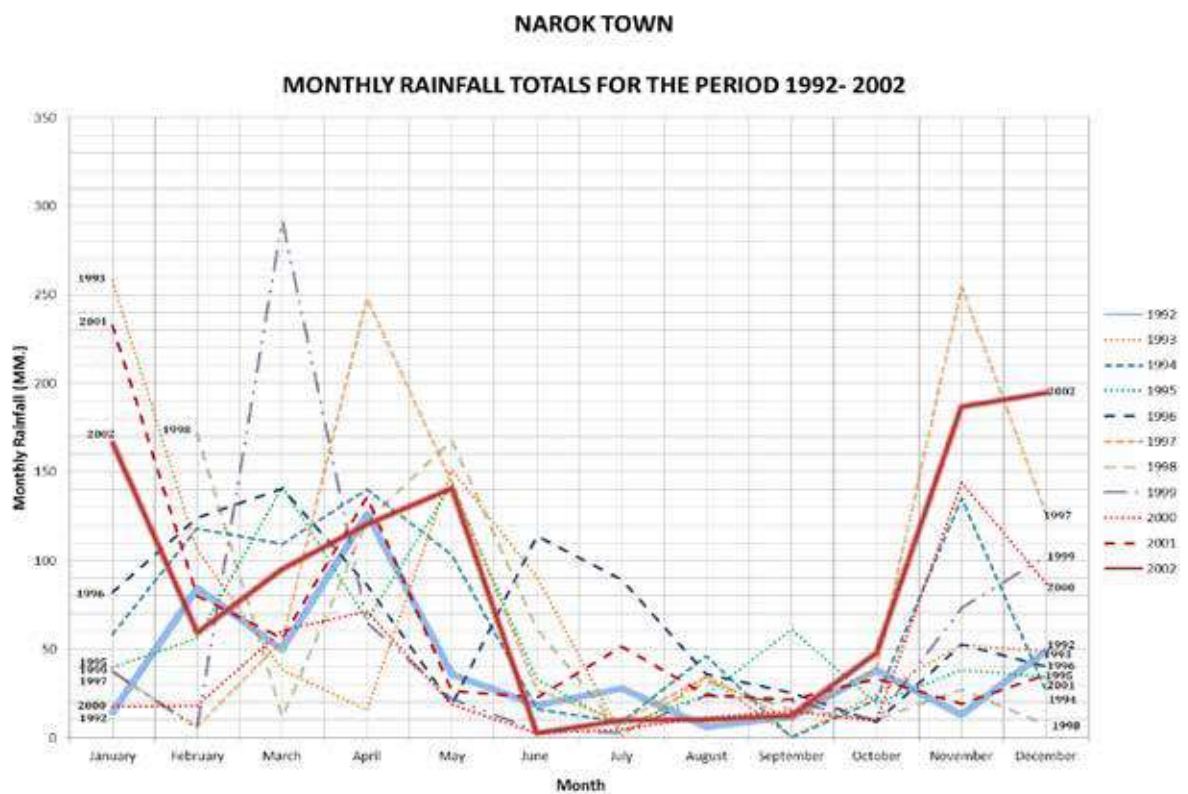
### 8.1 BACKGROUND

Narok town is situated in bowl-shaped depression at a lower area surrounded by higher ground that steadily rises at a radius of approximately 5km from the town centre. The area beyond the 5km slopes away down to river valleys.

The topography of the town makes it assume a basin-like formation, where floods drain through during the heavy rains. The main permanent river which passes through the town is Enkare Narok. However, Kakia and Esamburmbur dry valleys turn into rivers during the heavy rains. The area normally receives rainfall in two seasons in March to May and September to December (See Figure 8.1 below) which leads to flooding (particularly during the heavy rainfall seasons) mainly due to inadequate drainage structures and deforestation of the higher areas of the town.

The town has limited infrastructure such as roads, storm water drainage, water supply, sewerage system, solid waste management, power supply, telecommunication facilities and air transport. There is no existing railway line connecting the town to towns in neighbouring counties.

Figure 8.1: Monthly Rainfall in Narok town



Source: Kenya Meteorological Department, 2012



## 8.2 ROAD TRANSPORTATION

### 8.2.1 Connectivity and Accessibility

Both the national road, B3, connecting Nairobi to Bomet and Sotik and the primary road, C57, connecting Narok town to Nakuru pass through the centre of the town. The Road, B3, is in very good state and provides excellent connectivity and accessibility to Narok and neighbouring county towns. The link roads connecting Narok and the existing and proposed satellite towns are built of murrum while others are earth roads that are poorly maintained. These roads are impassable during wet seasons and have poor drainage. Ewuaso Ng'iro is connected to Narok by a tarmacked primary road, C12, Rrotian is connected to Narok by a tarmacked primary road C57 whereas Nkareta has poor road connections to the town.

The town is fairly accessible by road and air transport. There is a local air strip which is used by chartered flights.

### 8.2.2 Affordability and Modal split

The mode of transportation within town includes taxis; motor cycles, limited "matatus", donkey-carts, bicycle and walking. There are transit buses and *matatus* plying between Narok and Nairobi, Bomet, Nakuru and other towns. Although most of the people walk to work, there is no data available to show usage per mode of travel.

### 8.2.3 Road transport

The town has a network of roads among them being the Nairobi – Narok- Bomet Road (B3) which is fully tarmacked, Narok-Nakuru road (C57) is partly tarmacked particularly the section within the town. The Narok – Nakuru road beyond the town boundaries is not tarmacked and hence uncomfortable to drive on, making transportation to Nakuru very expensive. Road C12 connects Narok to Ewuaso Ng'iro centre and is tarmacked. (**Map 8.1** overleaf depicts the road network within Narok Town).

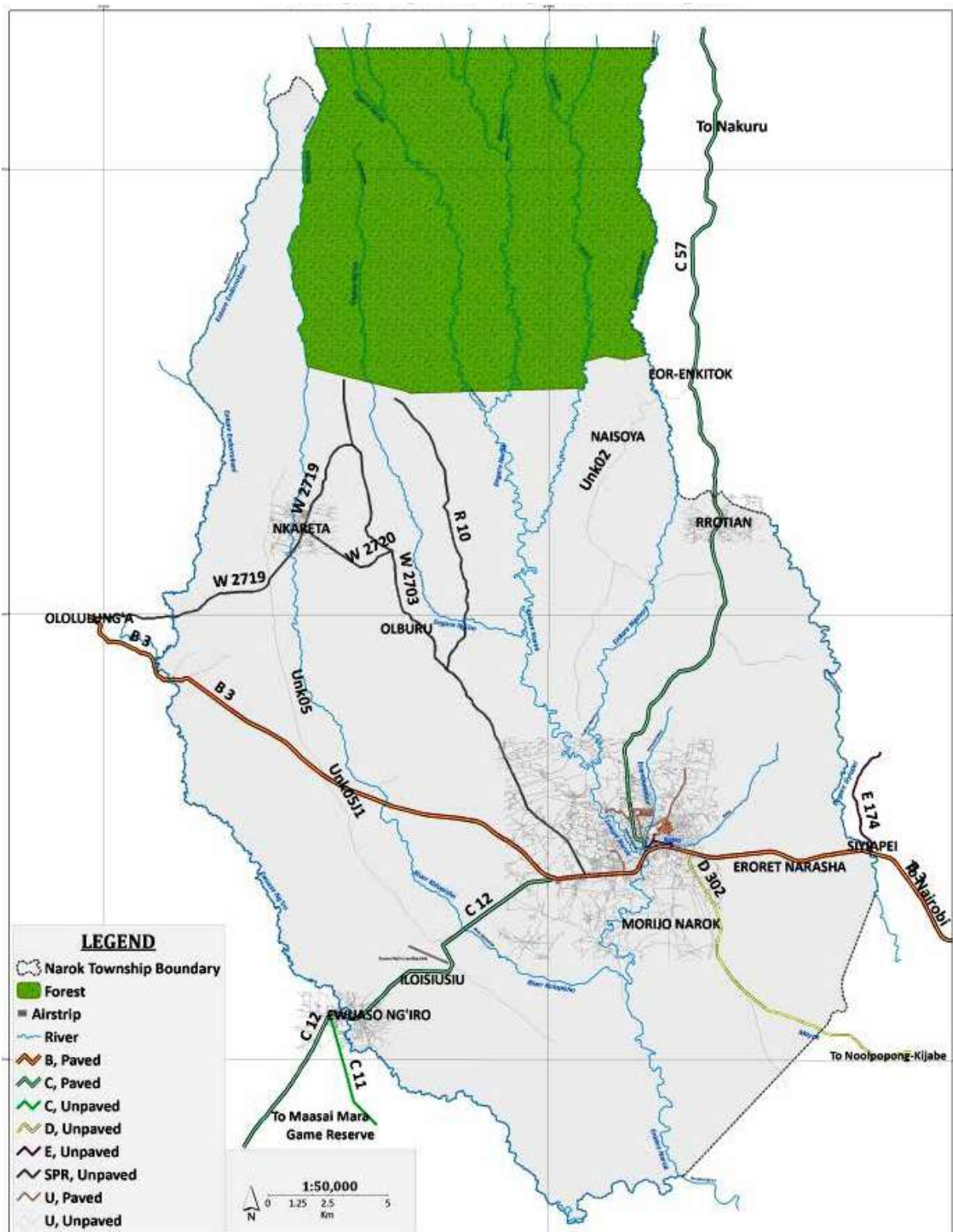
In the town itself, there are a few short tarmacked streets in the CBD area and a few poorly maintained murrum roads in town while the remaining roads are earth roads.

The public way leaves for roads, footpaths and storm water drainage have been encroached on by private developers.

Some of the CBD streets are too narrow to accommodate all the services required for a road. The road reserves should provide for a two way road carriageway, storm water drainage, foot path, motorcycles, bicycles, and street lighting, water supply and sewer lines. On site some of the streets have to be turned into one way drives as they are too narrow to provide space for two cars and other services. There is also an option to demolish buildings which may have encroached onto the road reserves.

On-street parking for small cars is limited and not properly provided for at all locations in town. There is also need for the Lorries, trailers, motorcycles and bicycles to have special designated exclusive parking areas. The current flash parking in the CBD area along Narok-Nairobi Road B3 is neither slightly, traffic conducive nor safe.

Map 8.1: Road Network in Narok Town



Source: Matrix Development Consultants, 2014

### 8.2.3.1 Observations

- Not all the roads which connect residential areas, CBD and Government offices are all-weather. This discourages those who want to invest in public transport in the town.
- Some of the public way leaves have been encroached onto.
- Storm water drainage system and parking is limited.
- Unwillingness of the residents to pay parking charges.

### 8.2.3.2 Traffic Management

The town had started experiencing traffic congestion in the CBD area during peak hours especially on weekdays. Traffic congestion is mostly experienced at the junction of the B3 with C57 roads as well as at the junctions of internal CBD roads with the B3 with C57 roads. **Photo 8.1** below portrays traffic conflict resulting from unregulated traffic management and inadequate discrimination of transport modes.

There is need to create by-passes before Narok town centre to reduce traffic congestion through town and to provide alternative passage when the main bridge on road B3 is flooded. This means redirecting the traffic to reduce congestion at the junctions. The by-passes shall also open up the town for more development.

Most of the roads do not have routine and periodic maintenance due to poor planning and lack of funds. This slows traffic and causes congestion. There is also lack of road signs and street furniture within town and beyond.

*Photo 8.1: Traffic Conflict in Narok Town*



Source: Matrix Development Consultants, October, 2012

### Observations

- Traffic congestions are common at main road junctions.
- Some streets at the CBD are narrow may be converted to only one-way drives and may require acquisition of land to allow for the expansions otherwise.
- The Town should enact and enforce traffic management by-laws to regularly control the traffic in the town.
- To alleviate traffic congestion in the CBD area, two bypass or ring roads are proposed -one on either side of the Nairobi- Narok – Bomet (B3) Road.
- Domestic animals are allowed onto the busy roads.
- The paved roads require routine and regular maintenance to be put in place.

### 8.2.3.3 Non-Motorized Transportation

Non-motorized transportation (NMT) in Narok Town includes bicycles, wheelbarrows, handcarts donkey-carts and pedestrian movement. There are no special lanes or foot paths for them.

Domestic animals are allowed into the town roads posing a challenge to traffic management.

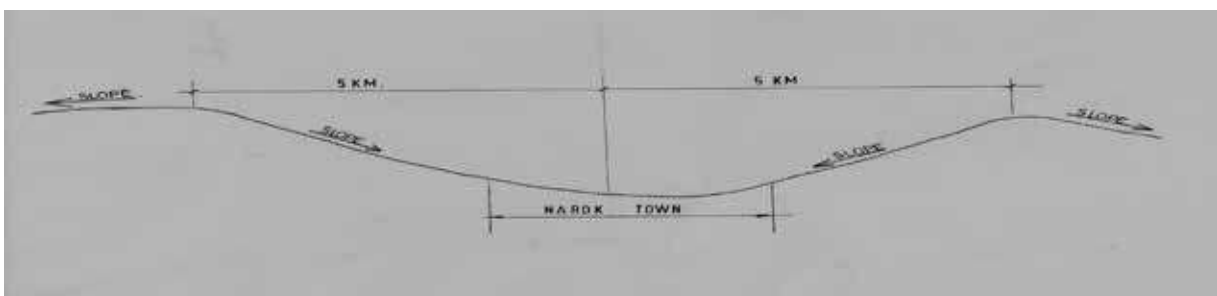
### Observations

- Special corridors and parking areas for NMT modes are missing.
- Absence of proper footpaths and pedestrian crossings.
- Lack of education and awareness to motorists and non- motorists on safe road usage.

## 8.3 STORM WATER DRAINAGE SYSTEMS

All the land up to 5 Km from the town centre along B3 road to Sotik and C57 road to Nakuru drains into Narok town while that beyond 5km drains away from town. The town is currently located in a low lying basin (see Figure 8.2 below).

*Figure 8.2: Cross-section depicting Location of Narok town in a Basin*



Source: Matrix Development Consultants, February, 2014

There is open land for wheat, maize farming and grazing of animals on both sides of the roads and there are very few trees in sight. The open sloping land with no grass and tree cover encourages soils erosion.

The town does not have adequate storm water drainage structures and this has caused soil erosion and flooding in the town.

Storm water drainage on main B3 and C57 roads and Kakia and Esamburmbur River Valleys, contribute to the flooding of the lowest areas of the town. The Enkare Narok River also contributes greatly to flooding in the town especially at the road bridge crossing. This has affected the safety of road users. Details of these are discussed under Chapter 15 on Disaster Management Plan.

The dumping of solid waste into the open storm water drainage system causes the drainage structures (see Photo 8.2 below) to block and as a result contributed to the flooding of the town. The stagnant water in the drains provides environment for mosquitoes breeding and other disease agents.

*Photo 8.2: Solid waste dumped on Open Storm Water Drains*



Source: Matrix Development Consultants, November, 2012

The Ewaso Ngiro South Development Authority has carried out a pre- feasibility study report on flooding of the town. In the above report it is stated that the main causes of floods are:-

- The geographical location of the town;
- Poor drainage structures;
- Deforestation of the Mau; and
- Construction of buildings on drainage way-leaves.

There are sections of stone pitched open drains along the main B3 Road which have been washed away, while others are intact, see Photo 8.3 below. This is true on the drainage on Kakia and Esamburmbur valleys. Part of the storm water from the Nairobi–Narok Road drains into the Kakia River valley. The concrete culverts where the roads cross the Kakia and Esamburmbur River Valleys appear not to be of adequate capacity and cause flooding in the neighbourhood.

*Photo 8.3: Patches of the Stone pitched Kakia Valley Drains Washed Away*



Source: Matrix Development Consultants, November, 2012

### 8.3.1 Remedial Storm Water Drainage Works

The Ministry of Local Government had set aside KES 277,000,000/- for storm water drainage improvements and associated works for Narok town.

New and bigger capacity culverts are to be installed by the former Ministry of Local Government (MoLG) through a contractor on site who is replacing the small existing culverts, see **Photo 8.4** overleaf. In general the new works on drainage structures above seem temporary; and may not meet the current and the near future storm water drainage capacity requirement.

There are two innovative foot bridges 1.3m wide and 5.0m long approximately crossing the Kakia River and are in good working condition.

*Photo 8.4: Remedial Storm Water Drainage Works on Tropical Culvert along Kakia Valley*



Source: Matrix Development Consultants, November, 2012

#### Observations

- Planting of trees, grass and construction of a number of upstream water dams is recommended to reduce runoff after the rains. The dams to be strategically located in order to cover the affected areas.
- The existing drainage structures in town are not of adequate capacity to accommodate flash floods.
- Roads are not provided with storm water drainage structures and not integrated to outfalls.
- Cleaning of the drainage structures is not carried out before the rains and after the rains.
- The new drainage structures being constructed should be constructed only during the dry periods of the year when the river flow is limited.
- The area between the entry of the combined drainage from Esamburmbur and Kakia into Enkare Narok River upstream and beyond the crossing of Narok- Nakuru Road 800m approximate has under size drainage sections subject to avoid erosion and damage by storm water.
- All the main box culverts in the town are undersize in regard to discharge capacities for adequacy on the increased run off for the town and environ.
- The bridge across river Enkare Narok on Nairobi-Narok- Bomet Road does cause flooding,

- and be among the first ones to be checked for capacity adequacy for flood flows.
- Portions of town which are affected by floods may need to be relocated to Lemamet and the area be replanned and be used for recreation and eco-tourism.

## 8.4 WATER SUPPLY

### 8.4.1 General

The primary sources of water for domestic consumption in Narok town are rivers, water kiosks, boreholes and roof water catchment. Other sources include dams, water pans, shallow wells, seasonal streams and water vendors. Narok grapples with over dependency on perennial rivers. The existing water supply system includes small water projects which are operational and serve the town. About 60% of the population of the town is served with potable water.

The town has an existing water supply system with a capacity of 2,000m<sup>3</sup> per day while the demand is 5,000m<sup>3</sup> per day. The supply is not adequate and hence rationing of water is carried out. The storage capacity is soon to be increased from 500m<sup>3</sup> to 875m<sup>3</sup> which is still below expectation for a current population of 67,723 which is expected to rise to 364,423 by the year 2030.

There are other private institutions which do supply water to the town residents and these include:-

- Little Narok water company which supplies 500m<sup>3</sup> per day; and,
- Community borehole at Mwamba- Narok- Olulung'a road.

The town water reticulation and distribution system does not cover the whole town. Areas like London, Olpopong' and parts of Majengo are not connected to the former Council water supply network. They get water supplied by mobile private water vendors, see **Photo 8.5** below.

*Photo 8.5: Private Water Bowsers supplying water within narok Town*



Source: Matrix Development Consultants, May, 2012

### 8.4.2 Proposed water supply by JICA programme

There is a proposed new project for improvement of water supply to the town under JICA programme and Governments of Kenya and Japan. This programme shall provide a new

intake and treatment works 3Km upstream of existing water works, see **Map 8.2** overleaf. The new works shall have a capacity of 4,000m<sup>3</sup> per day, a storage capacity of 2,000m<sup>3</sup> and a new 80 km reticulation pipe work system. The estimated cost of the project is KES 1.2 billion. The construction of the works was expected to start in 2014.

### 8.4.3 Other sources of water supply to rural areas

There are other small projects which supply water to the rural areas surrounding Narok Town.

These include:-

Project Name	Capacity 8hr day
Olopito Water Project	16 m <sup>3</sup>
Naisoya Water Project	80 m <sup>3</sup>
Ilmashariani Water Project	240 m <sup>3</sup>
Nkareta Water Project	16 m <sup>3</sup>
Mwamba Water Project	24 m <sup>3</sup>

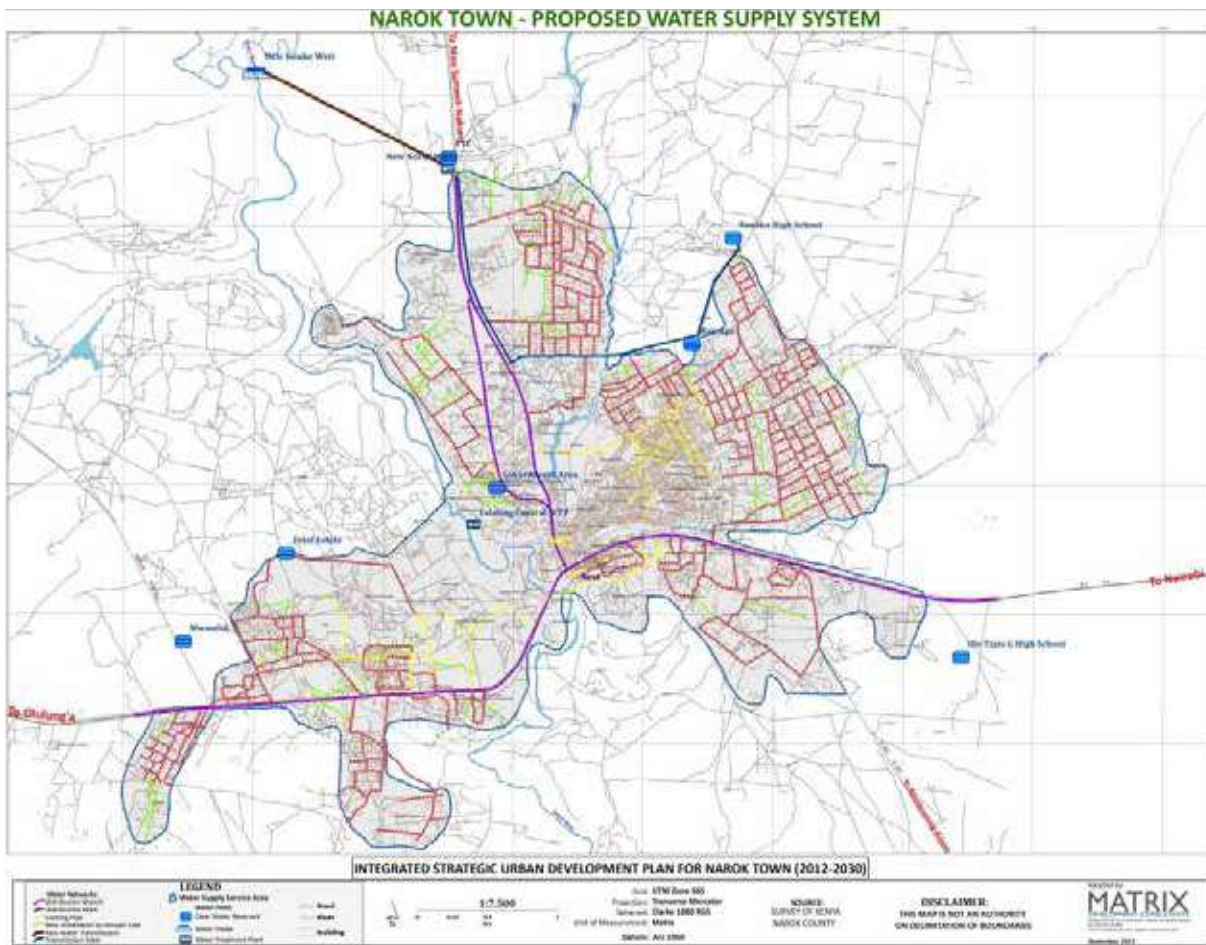
The water from above projects does not go through any formal treatment before being supplied to consumers.

#### Observations

- Implementation of the JICA water proposal programme will alleviate the water shortage in the town.
- There is need to drill more boreholes where best located.
- The existing water supply system requires rehabilitation.
- The Ilmashariani water project can be augmented and be used to supply water to Narok town.
- The construction of dams by various Government Institutions should be co-ordinated to enhance water supply to Narok town and its environs.
- There is need to plant trees on the Maasai Mau Forest to restore forest cover.
- There is need to monitor the water quality from all sources of water.
- There is need to provide individual water connections to most households.
- Promote care and proper usage of the clean water to the residents.
- Encourage residents to willingly pay for the water consumed by them so as to sustain the water supply for the town.



Map 8.2: JICA Proposed Narok Town Water Supply System



Source: Matrix Development Consultants, 2014

## 8.5 SANITATION

Sanitation coverage is defined as the percentage of people with access to improved sanitation facilities compared to the total population within an area. It can be characterised by flush or pour-flush of water born systems, septic tanks, ventilated improved pit latrines and traditional pit latrines.

### 8.5.1 Sewerage System

The town has no central sewerage disposal system. The system of waste water disposal is by septic tanks, pit latrines, bucket and bush. Narok residents dispose human waste whereby (58%) is by pit latrines, (2%) by septic tanks, (39%) by bush and (1%) by others. It is possible that some of the human waste finds its way into rivers which are used as water sources. The Town Council had one exhauster truck of capacity 6 m<sup>3</sup> and charged KES2,500 per trip. There are also two private companies providing exhauster services in the town. The sewage is discharged into a disused quarry abutting the Narok River (See Photo 8.6 below). It has actually been observed that effluent from the waste water trickles into Narok River. This is environmental pollution and must be stopped.

The Town has existing drying beds which are now full and need to be dislugged. They are located 3Km downstream of the Enkare Narok River from town centre. There are plans by the Town through the Central Government to fund a central sewerage system for the town, which is long overdue. This will be prudent when most of the town residents shall be connected

with clean water. The location of sewer lines and the sewage treatment works should be identified now.

*Photo 8.6: Effluent from Sewage discharged into a Disused Quarry*



Source: Matrix Development Consultants, October, 2012

#### **8.5.1.1 Observations**

- There is need to connect piped water to all households as much as possible.
- A master plan for the sewerage system for town is required.
- Provision should be made to acquire land for sewer lines and sewage treatment works for current and future developments.
- Implement a central sewerage system in town.
- Connect all households to the central sewage system
- Provide sewage exhauster services.
- Eliminate environmental pollution in town.
- Alleviate occurrence of water borne diseases.
- Construct public toilets at market places and elsewhere as required
- Encourage and promote payments for sewer charges by residents.

### **8.5.2 Solid Waste Management in the Town**

#### **8.5.2.1 Types of Waste Handling and Disposal**

The main types of solid waste generated were predominantly inorganic matters such as bottles, paper, plastics, plastic containers, polythene papers and old clothes and also organic waste like food and vegetable peels and dead human bodies.

Eighty-five percent (85%) of the waste is burnt in open spaces, which is an environmental hazard (see **Photo 8.7** below) while(46% of the waste is recycled or used (i.e. paper, plastic bottles and old clothes).

*Photo 8.7: Solid Waste Burning in the Open at a Narok Quarry*



*Source: Matrix Development Consultants, October, 2012*

There is illegal dumping of solid waste in an open quarry next to Narok River, some of the dumped waste unfortunately gets blown into the environmentally fragile Narok river.

### **8.5.2.2 Waste Collectors**

The former Narok Town was the main agent responsible for undertaking solid waste management which accounted for 83% of all responses.

Residents living in the town of Narok pay KES 200 per month or KES 20 per collection for waste collection.

#### **Observations**

- The Town lacks capacity and should engage under license private sector service providers to serve the collection of solid wastes in some of the neighbourhoods.
- Town needs to provide areas for sanitary landfills.
- Educate the residents on the need to recycle organic waste
- There is a need for a reliable solid waste collection time table
- It is important to promote awareness of effects of environmental pollution.
- Encourage residents to pay for the collection of their solid waste.

## **8.6 STREET LIGHTING**

The town lacks street lighting in the areas where business activities are carried out at night. The security lights at the individual plots assists in lighting the streets at night.

**Observations**

- There is need to have an integrated street lighting system in place starting with the CBD area.
- Private public partnership should be explored to facilitate the provision of street lighting.

**8.7 BUS PARK**

The existence of public bus and Matatu Park are not adequate for all the vehicles which would like to use it. The bus park is congested and is located on an area which floods.

At the moment transit public transport vehicles have no designated parking space and park along the Narok- Bomet road next to the Midrock Hotel opposite the Kenol Petrol Station before the Enkare-Narok river bridge yet this is not provided for hence unsafe.

**Observations**

- More land is required to plan for a proper bus and matatu park with all the required infrastructural facilities.
- There is no special parking location for the transit vehicles.
- Parking charges should be encouraged on all parking spaces in the CBD area.

**8.8 LORRY PARK**

At the moment there is no special parking for transit and local Lorries. Some of the Lorries park along the main road Nairobi – Narok – Bomet road B3. This is very risk and may cause accidents.

**Observations**

- Land should be made available for the construction of the lorry park.
- The location of the lorry park should be convenient to the market users in the loading and unloading of luggage.
- Lorry drivers be encouraged to pay for the available parking space as a matter of policy.
- Proper and courteous usage of the parking space be encouraged.

**8.9 RAILWAY TRANSPORT**

The town of Narok is not linked by railway to the neighbouring towns like. Nakuru, Navaisha which are connected by railway line. This mode of transport may be necessary now because of the increasing farming and other economic activities that are expanding in the county of Narok.

**Observations**

- A feasibility study on the viability of constructing a railway line connecting Narok to neighbouring county towns is required.

**8.10 AIR TRANSPORT**

Land has been identified for the future construction of an air strip. The facility is currently used mainly by chartered aircrafts by individuals and Government Administrators. At the moment there is limited air transport for the town except that at the Maasai Mara area. The air strip is likely to spur development. The development and expansion of this facility would ease travelling to Narok town and neighbouring Counties by road and air.

## **Observations**

- The airport land needs to be fenced and secured
- This air strip needs to be planned and constructed, as it lacks necessary facilities and it is poorly linked by road to Narok town and other airports in Kenya.
- 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.

### **8.11 FIRE STATION**

The town does not have a fire station and relevant fire bridge and equipment to fight fire disasters when they occur. Most of the existing buildings are not equipped with firefighting extinguishers.

## **Observations**

- Land is required to build a fire station to standard specification
- There is need to promote the necessity and awareness of equipping buildings with firefighting equipment to fight fires in the town.
- The town administrators to plan to acquire and maintain firefighting equipment.

### **8.12 MARKETS**

The town has a number of markets which are operating and of which most of them are open air markets. Among the markets are:-

- Narok new Market "Muthurwa"
- Soko ya Mawe
- Stage
- Ole-Polos
- Soko Mjinga
- Nkareta
- Ewaso Ng'iro

## **Observations**

- The markets need to be planned.
- Be built with required infrastructural services like public toilets water; parking space, eating places, electricity, boundary fence and cleaning services.
- Be provided with adequate security
- Be linked with good road network.
- Be provided with suitable and adequate stalls and sheds for traders.

### **8.13 STADIUM**

The stadium which is located between Narok River and Narok–Bomet Road B3 is used also as an agricultural show ground. It has limited facilities available. It has no proper sitting arrangement, public toilets; lighting and water among others.

## Observations

- Land be provided for recreational parks
- Enough space for football and basketball pitches etc.
- Basic facilities be provided for public toilets, sitting arrangements, water, electricity and sheds.
- The infrastructure be maintained regularly.
- Users of the facilities to be charged so as to sustain the maintenance of the same.

## 8.14 SHOW GROUND

The current stadium is also used as a temporal agricultural Society of Kenya's show ground once in a year. The facilities available are not adequate to accommodate a show ground activities and population.

### Observations

- A suitable site with adequate land is required.
- There is need to Plan for show ground facilities and construct, sheds, toilets, roads footpaths.
- Provide water and electricity
- Charge those who use the space and the facilities

## 8.15 ELECTRICITY SUPPLY

Electricity is supplied by Kenya Power and Lighting Company Ltd. (KPLC). The company offices are in the CBD area of the town off the Narok- Nairobi road.

The total number of customers is 7,000 approximately which is projected to rise to more than 8,000 by end of 2013.

The demand for the power supply is 1.5kW and is enough from available supply.

The sources are:-

- Lanet-Narok 33 kVA
- Naivasha-Narok 33 kVA

There is a proposed 132 kVA new substation at Ilmasharian area 3Km away from the town centre along Narok- Nairobi Road.

Power supply to CBD area is 95% and 85% to the residential areas respectively.

Most of the new applicants are from London, Total, (Moi University area), Tumaini and Lenana Estates.

- African Development Bank (AfDB) has proposed to assist improvement of electrification of the town.
- There is pre-paid bill facility in town and now the corporation is rolling towards Lenana Estate.

### 8.15.1 Power Line Wayleaves

The company has not experienced encroachment of its power line wayleaves in the CBD area. However on areas where the subdivisions have been carried out recently and on community land, fixing of the wayleaves is a challenge.

### **8.15.2 Vandalism of Equipment**

The transformers are sometimes vandalized whereby oil and copper windings are stolen. This is a common problem and is affecting supply of power to the town residents.

More service lines are required to enable power connection to new households in the new upcoming estates.

#### **Observations**

- More service lines to new areas developed are required.
- Residents at new estates should be connected to electricity.
- Residents to be educated on negative effects of vandalism.
- Service lines should be planned in time for new and old developments.
- Encourage development and use of wind power as another alternative of power supply.

## **8.16 TELECOMMUNICATIONS**

Telecommunication services play a big role in development as they enhance efficient and effective communication within the town and facilitate investment opportunities within the town. We have on the ground orange Telkom Kenya limited, Safaricom, Airtel and YU as the service providers.

### **8.16.1 Fixed Wire Telephone**

Narok town is not well covered by fixed wire telephone services; however there is good coverage by Orange Telkom Kenya Limited, fairly distributed in the central business district (CBD) of the town. Mainly the Government Departmental Offices and key business premises. However the peri-urban areas have a lower connectivity or no services at all.

The main challenge faced by the services provider is poor connectivity due to competition from mobile and wireless services providers

Currently optical cable laying is underway. The underground installations are often damaged while carrying out works on other services e.g. water and road works.

### **8.16.2 Mobile and Wireless**

The entire town area is covered by both mobile and wireless phones. Safaricom, Airtel, Yu and Orange are the main cell phone service providers. They are providing stiff competition to fixed wire telephone. Safaricom, Airtel, and YU also provide money transfer services, thus eating into the banking and postal services business.

### **8.16.3 Internet and Data Transfer Services**

Internet and data transfer services are provided through broad band. There are several internet services providers including Orange Telkom, Airtel, Safaricom, YU e.t.c. There are several cyber cafes in town through which residents can access internet services.

### **8.16.4 Postal Services**

Postal services in Narok are offered by the Posta Corporation. Posta Corporation is the sole provider of the rental letter box services. There are however other providers of courier services for letters and parcels. These are mainly bus companies and security firms. There are

also money transfer services through mobile phone companies.

There is need to modernize the provision of this service and introduction of sub-post offices within the municipality in future especially in the satellite centres.

### **Observations**

- Service providers should spread their offices and services throughout the town.
- County Government and service providers should enhance ICT services in town.
- Services should also be extended to satellite centres.

## **8.17 SATELLITE TOWN CENTRES**

There are three satellite town centres which form part of Narok town in the overall planning of Narok town. These centres include Ewuaso Ng'iro, Rrotian and Nkareta. The centres are far apart and at a distance from Narok town, with Ewuaso Ng'iro being the closest to Narok town.

### **8.17.1 Ewuaso Ng'iro**

Ewuaso Ng'iro centre is the second biggest town after Narok. It is a fairly established centre and is linked by tarmac road from Narok town.

The residents get their supply of water directly from the Ewuaso Ng'iro River, while KWS Station residents have their own water supply system with intake at Ewuaso Ng'iro River.

In general the residents of the centre use pit latrines and septic tanks to dispose their human waste.

There are two slaughter houses at this centre. The disposal of waste water from the slaughter houses does cause a challenge on pollution of the environment. This centre is growing fast and requires to be planned to guide development now and in the future.

### **8.17.2 Rrotian and Nkareta**

The satellite centres are upcoming markets with hardly any facilities. They are linked by poor and impassable earth and murrum roads to Narok town especially during the rain seasons. These roads C57, W2703 and W2710 should be upgraded to all weather roads. The centres need to be planned and provided with all infrastructure required to provide the enabling environment for investment.

### **Observations**

- The centres should be planned for in time.
- Be provided with all-weather road networks linking them to Narok town.
- Basic infrastructure be provided at the centres and these include:-
 

✓ Water supply	✓ Solid Waste management
✓ Electricity	✓ Storm water drainage
✓ Sewerage system	✓ Public Service Termini
✓ Telecommunication services	✓ Public Recreational Parks
✓ Postal services	





# Chapter 9

## ENVIRONMENT

### 9.1 OVERVIEW

Urbanisation has environmental consequences. As centres of population and human activities, towns consume natural resources from within and distant sources. The environmental impacts stem from the use of resources, including land, water and energy; waste and wastewater treatment and disposal practices; and both industrial and domestic use of chemicals. The nature and severity of impacts are strongly influenced by the wealth and consumption patterns of a city's inhabitants (UNEP 2000).

They also generate waste that is disposed off both inside and outside the town. In the process, urban areas generate environmental problems over a range of spatial scale: the household and workplace, the neighbourhood, the city, the wider region, and the globe.

Urban environmental problems also create a range of social impacts. They may impair human health, may cause economic and other welfare losses, or damage the ecosystems on which both urban and rural areas depend. Most urban environmental problems entail all three of the impacts, either directly or indirectly. For example, urban air pollution has a direct impact on human health, increasing the incidence of respiratory diseases. Its impact on the economy is mainly indirect, arising largely from productivity losses due to ill health.

On the other hand well-planned, densely populated settlements can reduce the need for land conversion; provide opportunities for energy savings; and make recycling more cost-effective. If towns are properly managed, particularly with adequate attention paid to environmental management, they hold the key to global environmental sustainability (Hardoy, J.E. 2001).

Well planned towns can provide healthy, safe and stimulating environments for their inhabitants without imposing unsustainable demands on natural resources, ecosystems and global cycles. A successful town, in this sense, is one that meets multiple goals. Such goals include:

- Healthy living and working environments for the inhabitants;
- Water supply, provision for sanitation, solid waste collection and disposal, drains, paved roads and footpaths, and other forms of infrastructure and services that are essential for health (and important for a prosperous economic base) available to all; and
- An ecologically sustainable relationship between the demands of consumers and businesses and the resources, waste sinks and ecosystems on which they draw.

Achieving these different goals while also responding to the needs of different groups requires a political and administrative system through which the views and priorities of citizens can influence policies and actions within their neighbourhood where they live and at town level. It also requires legal systems that safeguard citizens' civil and political rights to basic services as well as rights not to face illegal and health-damaging pollution in their home, work or the wider town, and government institutions that are accountable to public scrutiny.

The chapter analyses the environmental situation in Narok town, identifies the main environmental issues, their causes and proposes management strategies for environmentally sustainable urban development.

## 9.2 POOR SOLID WASTE MANAGEMENT

Poor solid waste management was identified as one of the significant environmental problem within the town. Its collection, storage, transportation and safe disposal is a major challenge to the town residents and the local authority. Mounts of uncollected waste was identified mainly in the built up areas in the commercial, bus parks, markets and residential areas where it is generated. Many of those areas had garbage dumped in the open with the resultant health and environmental consequences. The waste blocks the town storm drainage system causing flooding during the rainy spells. The areas mostly affected by poor waste collection services are the CBD, Bus Park and the low income residential areas, especially Majengo.

The major waste components identified included plastics, plastic paper, paper, glass, metals, wood and organic material mainly from food throw-aways. Plastic paper strewn in the commercial and residential areas is a big environmental menace (See Photo 9.1 Below). It pollutes the land, blocks the storm drainage system and is a serious health hazard to cattle and goats when they feed on it. The plastic affects all the components of the urban ecosystems.

The main sources of plastic papers are from packaging of traded goods from the supermarkets, shops and other traded commodities.

*Photo 9.1: Plastic paper strewn in Koonyo Public Park*



*Source: Matrix Development Consultants, May, 2011*

Waste collection, transportation and disposal are the responsibility of the Town. The Town does not provide waste bins to the residents. Residents buy their own waste bins for primary waste storage. There are only a few street bins in the CBD.

Many town residents throw waste in the open where human scavengers, cattle, goats and dogs scatter it as they ravage for feeding and material recovery. Sometimes the Town takes long to collect waste resulting to waste rotting and producing foul smell. It also becomes very favourable ground for disease causing vectors such as mosquitoes and other pathogenic organisms. Wind blows plastic papers from the waste heaps while floods carry the waste into the storm and water sources in the town. Lifting of waste from the ground to the refuse trailer is a difficult task since it involves manual transfers of waste by Town workers. The loading process generates stench, including at the bus stops, markets and other busy/crowded areas.

The Town has limited waste storage, collection and transportation equipment. It has two tractors; two trailers and one skip loader. Skip containers are stationed at strategic areas such as at the bus

park, market and other areas (See Photo 9.2 ). The mentioned equipments are inadequate to serve the entire town effectively.

The Town uses trailers mounted on tractors to collect and transport waste from CBD and some residential areas to the dumpsite (See Photo 9.2 below).The trailers are not adequate to cover the entire town. Some trailers are not covered and therefore go spilling waste as it is transported to the dumpsite. The collection trucks are not licensed by NEMA as required by EMCA waste management regulations 2006.

*Photo 9.2: Solid Waste Collection Vehicles at the Former Town Council of Narok Offices*



*Source: Matrix Development Consultants, May, 2011*

The Town personnel handling waste did not have protective clothing such as nose masks, hand gloves as required by Public Health Act, Waste management regulations 2006 and industrial safety act.

The collected waste is transported for disposal to the illegal dumpsites in the open quarries about one kilometer from the CBD and next to Narok River. The site is an abandoned quarry. Waste is dumped on the site without being covered. The site is not fenced and is close to human settlements. Cattle and goats were seen grazing in the site and feeding on the deposited waste, see Photo 9.3 Overleaf. Solid waste and leachate flows freely to Narok River. There is big risk of groundwater pollution from the leachate since the quarries have deep geological cracks from the blast and quarrying activities.

Medical waste such as medicine bottles, needles, syringes, used bandages and other medical wastes were identified on the site. The neighbours reported night dumping of medical waste including human foetus by private vehicles in the dumpsite. The site is not approved by NEMA and has not undergone Environmental Impact Assessment as required by EMCA, EIA and A regulations 2003.

*Photo 9.3: Illegally dumped Solid waste carried away into Narok River*



*Source: Matrix Development Consultants, October, 2012*

Minimal material recovery or recycling activities were identified in the town save for some scavengers who were recovering some valuables from the dumpsite. The Town has no programs or incentives for material recovery/recycling to involve the town stakeholders such as the private sector, CBOs, NGOs, youth/women/community groups or individuals.

The municipal areas which are rural/agricultural in character are not provided with solid waste collection services by the Town. Waste disposal practices in those areas mainly involve feeding of livestock with the organic material or throwing waste in the shambas including the inorganic components.

### **9.3 HUMAN AND WASTEWATER DISPOSAL**

The town has no sewer facilities. It uses septic tanks and pit latrines for human and waste water disposal. Waste water from domestic, car washing and other urban activities is deposited on the land and in water bodies without treatment. It is a major source of miscellaneous smells and disease causing vectors in the town. In some areas raw sewer was seen leaking and flowing freely polluting land, water and air through bad smells.

The Town uses exhausters to empty septic tanks and pit latrines within the town. The exhausted sludge is deposited at a lagoon within the solid waste dumpsite which was seen to be spilling and discharging the waste water to the land and the nearby Narok River, see Photo 9.4 below.

*Photo 9.4: Effluent from Sewage disposed into a Quarry percolating into Narok River*



*Source: Matrix Development Consultants, October, 2012*

## 9.4 DEGRADATION OF WATER RESOURCES

There was evidence of degradation of surface water resources from ecosystem misuse, riparian encroachment and pollution. This affects the aquatic ecosystems and water quality.

The rivers passing through the Town were turbid with silt. The silt in the rivers was from the upstream catchment areas, soil erosion from the town and agricultural land within the town. There is water resources riparian encroachment by human settlements, mainly farming activities which entail removal of the riparian vegetation thereby enhancing river bank erosion and deposition of eroded soils from the adjacent land. Used oils and greases from the informal sector garages, storm and waste waters and solid wastes usually end up in the natural water resources.

The human waste from overflowing septic tanks and pit latrines end up in the rivers. There is also potential for underground water pollution from the pit latrines especially where their densities are high such as in the low income areas.

Car washing next to Narok river (See Photo 9.5 below) pollutes the river with soapy, oily, greasy and dirty water which flowed freely back to the river.

*Photo 9.5: Vehicles being washed in Narok River*



Source: Matrix Development Consultants, November, 2012

Fertilizer and agro-chemicals from the adjacent agricultural activities end up in the rivers resulting to eutrophication and water pollution respectively. The agricultural activities within the town boundaries have similar impacts to the water resources and wetlands within the area. Uncontrolled fishing has the potential of depleting fish quantities in the rivers.

Most rivers are being degraded by a combination of siltation, reduced inflow, over fishing and pollution. Some swamps have been encroached and have been cleared for agriculture, settlements and other human activities.

## 9.5 LOSS OF VEGETATION COVER/DEFORESTATION

The Town is experiencing loss of vegetation through development intensification, infrastructure development (mainly road network), clearing for agriculture, energy (90% of energy comes from wood and charcoal), and building materials (mainly timber), (See Photo 9.6 Overleaf). This is an undesirable trend that alters the urban ecosystems adversely, through reduced carbon sequestration and climate control, loss of animal fodder and habitat, reduced water retention capacity, increased erosion and loss of aesthetic beauty. The problem is most serious in areas with more intense development such as the Central Business District (including the bus parks, markets and informal sector areas), low income areas and roadsides. The recreation grounds within the town have few trees.

Another ecological dynamic is the replacement of the indigenous vegetation (acacia, leleshwa bush) with exotic species such as Grevillea Robusta, Jacaranda, Cypress, Pepper tree, Cassuarina, ornamentals, flowers and agricultural species. This was observed in the commercial, residential, agricultural and in all land uses within the town. Trends in urban greening and beautification are based on planting of exotic tree species, shrubs and ornamentals.

Deforestation in the Mau forest complex remains a major ecological threat in the region. Deforestation arises from creation of agricultural land, human settlements, harvesting trees for wood fuel and charcoal burning.

Loss of vegetation cover along the water courses and water catchment areas mentioned earlier is a worrying environmental trend.

Efforts by the Town, communities and town stakeholders to intensify vegetation cover were minimal.

*Photo 9.6: Logs for Firewood in Ilmashariani*



*Source: Matrix Development Consultants, June, 2013*

## 9.6 LAND DEGRADATION

Land degradation refers/implies to reduced land quality for the intended use. Soil erosion by water and wind is a significant environmental problem within the town in the agricultural land use, riverbanks, unpaved roads, and bare land spaces. Gully erosion along the roads is very common while wind erosion from the specified areas is generating a lot of dust especially during the dry periods (see Photo 9.7 below). The overgrazing rampant in some areas contribute to soil erosion and land degradation.

*Photo 9.7: Photo 9.7: Erosion along C12 road to Ewuaso Ng'iro*



*Source: Matrix Development Consultants, December, 2012*

Land hazards created by open civil works storm drainage, open quarries and brick making sites are a common feature in the town see Photo 9.8 below. They pose accidents risks to the residents and collect storm water creating favourable breeding grounds for mosquitoes and other diseases causing agents. Uncollected solid waste, used oils and greases from the auto garages, fertilizer and agro-chemicals and other waste from various urban activities are degrading the land and the soils. Mounts of materials from excavated construction and demolition sites are deposited on the site instead of being taken to the official Town dumping site.

*Photo 9.8: Dog Scavenging in an open drain in Narok Town*



Source: Matrix Development Consultants, December, 2012

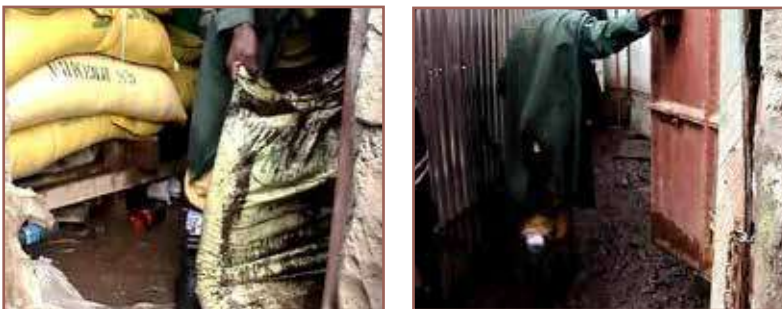
## 9.7 FLOODING

Flooding is a perennial problem within the CBD. This is mainly because the CBD is built on a swamp and at the confluence of rivers. The flooding problem is exacerbated by the low lying terrain and extensive black cotton soils which are very prone to flooding. Some floods come from upstream due to poor catchment management such as deforestation.

Many areas within CBD are paved or are under roofs thereby decreasing the natural water percolating capacity. The storm drainage system in the town is not effective. A short storm of rain gets the town flooding. This increases water logging, soil erosion, muddy patches and creates mosquito and disease causing vectors breeding areas.

The town gets very muddy during the rainy season, see Photo 9.9 below

*Photo 9.9: Muddy rainwater inside a Business after Floods in Narok Town*



Source: Matrix Development Consultants, May, 2013



## **9.8 DROUGHT**

Drought is prolonged aridity in an area. When annual rainfall goes below the average for a long time it leads to low water levels in the environment.

There is increased frequency and magnitude of drought in Narok especially in the lower parts. This is affecting availability of water and ecosystem productivity.

The net effects are reduced food security, water scarcity, loss of livestock and human life. Overall it slows areas development.

## **9.9 ENVIRONMENTAL HAZARDS**

There are some environmental hazards caused by open storm drainage civil works in the CBD and open quarries. The deep open storm drainage and quarries posed safety risks to the pedestrian and livestock. People or livestock can fall in the gaping holes

## **9.10 AIR POLLUTION**

The section highlights both outdoor and indoor air pollution in the town.

The forms of outdoor air pollution identified were dust from open spaces and unpaved roads, smoke mainly from the burning solid waste, foul smells from rotting garbage, stagnant water, septic tanks and pit latrines. Air pollution from vehicle exhaust from burning fossil fuels is increasing as the number of vehicles increase in the town.

Indoor air pollution emanated from use of unclean domestic energy such as Kerosene, charcoal and wood which is widely used in the town especially in the low income areas who cannot afford cleaner sources of energy such as gas and electricity. Dirty waterborne toilets and urinals especially in public places and pit latrines produce foul smell thereby polluting the indoor atmosphere.

## **9.11 AESTHETIC POLLUTION**

Aesthetic is critical to visual pleasantness and should be emphasized in the urban cultural landscape. Unplanned structures with poor building materials affect the visual impression. There are many outdoor advertising boards along the roads and within the CBD.

Some of the bill boards and sign boards are too large and not properly sited. They cause visual, pedestrian and movement obstruction, increasing chances of accidents and hindering mobility within the town.

The many unplanned settlements such as the kiosks in the market built of rudimentary materials and uncollected solid waste affect the urban aesthetics. Removal of the vegetation cover has the same effect.

Some colours used on some buildings are not pleasing to the human eye.

*Photo 9.10: An Unsightly area in Narok Town*



*Source: Matrix Development Consultants, December, 2012*

## 9.12 NOISE POLLUTION

High levels of noise usually above 70 decibels are undesirable and can cause audio problems including hearing impairment. Excessive noise causes stress, headaches, depression, loss of sleep, fatigue among other health and psychological effects. Loud noise with a potential to cause discomfort was identified from discotheques, bars, hooting vehicles at the bus parks, Jua kali activities, garages, workshops, and churches using loudspeakers for worship especially at night. Moving vehicles (especially trailers) generate noise from the engines and from static friction and motion on the road.

## 9.13 POORLY MAINTAINED PUBLIC RECREATION GROUNDS

Public recreation grounds are necessary for human rest and leisure.

The public recreation grounds in the town are poorly maintained, see Photo 9.11 below. They have few trees, no park seats and lack public toilets and water points. Soil heaps from construction sites is dumped in the park.

*Photo 9.11: Poorly Maintained Koonyo Public Park*



*Source: Matrix Development Consultants, December, 2012*

## 9.14 INSTITUTIONAL, LEGAL AND POLICY FRAMEWORKS

The section looks at the roles of the institutions involved in environmental management within the municipality, the laws/bylaws and the policies.

### 9.14.1 Environmental Management Institutions

Various government ministries and parastatals have varying legal mandates in environmental management. Many of them concentrate on sectoral aspects of the environment such as Kenya Forest Services has the legal mandate of managing forests and trees while the ministry of water manages the water resources.

#### 9.14.1.1 Local Authorities and Environmental Management

The Local Government Act (Cap.265) vests the responsibilities of environmental management in towns with the respective local Towns. The responsibility is undertaken by sections in the Towns except in large local authorities which have established fully fledged environmental departments.

The mandate of environmental management in the town of Narok falls within the clerk of works department whose responsibilities include solid waste management (collection, transportation and disposal), street sweeping and town beautification. It operates mainly within the local government act cap.265 and was headed by a clerk of works. It also coordinates with the other stakeholders involved in environmental management within the town such as government ministries, parastatals, private sector, NGOs, CBOs and the general town residents.

The department is facing enormous challenges in undertaking its responsibilities because of limited capacity. It is poorly endowed financially, technologically and lacks the necessary human capacity to handle the environmental challenges within the municipality. In the financial year 2012/2013 the department was allocated KES 2 million equivalent to 1.5% of the Town budget for that year. That financial allocation was too little to meet its financial needs including buying of environmental equipments such as waste collection vehicles, machinery, and their maintenance, enforcement and other environmental activities and programs. There is understaffing and lack of qualified human capacity to handle the complex environmental issues. Most departmental employees don't have training in environmental management but have only acquired related skills on the job.

#### 9.14.1.2 Other Environmental Management Institutions

There are many other government ministries, departments and parastatals which are involved in one way or another in urban environment management within Narok town. Ministry of environment and mineral resources, ministry of water, ministry of public health and parastatals such as the National Environment Management Authority, Kenya Forest Services, and Ewaso Ngiro South Development Authority (ENSDA) are involved in environmental management according to their legal mandates. For instance, NEMA oversees the general environmental matters in the country and counties including the towns as specified in the Environmental Management and Coordination Act (EMCA 1999), while KFS manages trees and forests in the country and districts as specified in the Forest Act of 2006. NEMA handles the weighty environmental matters such as Environmental Impact Assessment while the less significant environmental matters such as public waste dumping are handled through the Public Health Act or the Town by-laws. The district public health officer

from the ministry of public health works very closely with the municipality to handle public health and environmental matters though they are not answerable to the local authority. The NEMA district environmental officer is the secretary to the district environment committee which brings together all environmental stakeholders in the district including within Narok town.

### 9.14.2 Environmental Legal Framework

In previous years, Kenyan law relating to urban environmental pollution control has developed slowly but haphazardly as a response to individual and critical cases of pollution (Kamau 2005, Okidi, C.O. et al 2008). The existing legal regime is therefore fragmented and consists basically of common laws relating to negligence and nuisance, and statutory provisions dealing with water, air, wastes and toxic and hazardous substances (Kamau 2005). For a long time, the major legislative instruments used to control and regulate activities which are likely to cause water or air pollution in urban areas of Kenya were the Water Act Cap 372; Public Health Act Cap 242; Merchant Shipping Act Cap 389; and Factories Amendment Act 1990. Generally, these instruments have the following functions: (1) they list activities which can be termed as polluting and specific pollutants which are subject to control; (2) they specify the water bodies and aquatic life for which protection is provided; and (3) they establish mechanisms for the prevention of pollution and empower relevant authorities to establish standards, issue permits, monitor pollution, inspect pollution sources, and take remedial measures in case of pollution. Control and prevention of air pollution is carried out through the Public Health Act and the Factories Act whereas waste management is regulated by EMCA, Water Act and Public Health Act. In addition, the lack of specific environmental quality criteria and standards renders the implementation and enforcement of the legal provisions largely ineffectual. Recently a new law in occupational safety and health has also been enacted to regulate the urban working environment.

According to Kamau (2005) statute law, which remains the most significant legal framework for the control of pollution and for urban environmental management and protection in Kenya, has not been efficient enough in dealing with problems of pollution at the national level. Although it has made a good attempt to define actions and activities which are polluting and specific pollutants which are subject to control, it suffers from a number of handicaps, notably the absence of any specialized clean air or waste management legislation, the lack of generally applicable environmental criteria and standards, overlaps between different environmental laws, and the different bodies with responsibilities under them, and finally lack of enforcement powers. It follows that until the new EMCA is able to prove itself, Kenya's hope in curbing water and air pollution will still remain highly dependent on efforts of local authorities, pressure groups and the self-management of industries. At the same time, the lack of a clear urban environmental policy in Kenya has remained a major limitation towards well managed urban environments in the country including the newly created Nairobi metropolis.

Narok town mainly relies on the general nuisance by-law for environmental management including controlling illegal dumping of solid and liquid wastes. Comprehensive by-laws are lacking to control and regulate environment in urban areas. Enforcement of the existing bylaws is a big problem as the Towns lacks adequate manpower for the purpose. Political interference in enforcing environmental by-laws and regulations was also noted. Towns normally intervene for environmental offenders from their wards, adversely affecting enforcement. Lack of manpower reduces the department's capacity to monitor and enforce environmental bylaws.

### 9.14.3 Environmental Policy

Though the Kenya government has severally restated its commitment to sound environmental management (GoK, 2007), it lacks an umbrella environmental policy to guide environmental activities. The country participated in the Stockholm Conference on Human Environment of 1972 in Sweden that highlighted the importance of linking environment to development. But the country was committed to the conservation of its valuable environment long before that as reflected in the designation of protected areas as far back as the 1940s (Ogolla and Ojwang 1996). Consequently, United Nations Environment Programme (UNEP) was established with its headquarters in Nairobi to oversee global environmental issues. The government of Kenya has formulated a wide range of policies for sustainable management and conservation of the environment and natural resources.

An umbrella policy on environment does not exist and is in the process of being developed. Similarly Kenya does not have a national urban policy which is expected also to consider urban issues. The Sessional Paper No. 6 (1999) on Environment and Development has been the nearest equivalent to Kenya's policy on the environment. It was submitted to cabinet and parliament along with the EMCA Bill (1999). Whilst EMCA was endorsed by parliament, the Sessional Paper (1999) was neither discussed nor endorsed. Consequently, the Ministry of Environment and Mineral Resources (MEMR) is operating in the absence of an endorsed over-arching environmental policy to uphold EMCA. EMCA (1999) is therefore Kenya's principal legal instrument on the environment. It is a very ambitious legal framework which has led to the creation of NEMA and recently to the development of regulations, guidelines and standards for the environment. The instrument is consistent with global trends in the environment (Manek 2001). However the framework has not sufficiently considered critical urban issues such as motor vehicle emissions, waste standards, waste recycling and noise regulations.

## 9.15 STAKEHOLDERS INVOLVEMENT IN ENVIRONMENTAL MANAGEMENT

Stakeholders in urban environmental management include all the actors in several aspects of the urban environment and include the local authorities, relevant government ministries and agencies, private sectors, NGOs, CBOs, organized groups (such as women and youth groups) and the town residents.

Despite the Town's lacks of a policy on stakeholders' engagement in environmental management, it nonetheless engages them informally in different environmental management activities. The banks resident within the municipality such as Barclays, Cooperative and Family banks and organized groups such as youth and school children sometimes partner with the Town for tree planting and occasional clean up exercises in the town. The Town has also entered into a symbiotic partnership with some private sectors for environmental purposes. The partnership involves private sector beautification of roads and gardens with the Town where the private sector gains advertising privileges in return for their financial support and involvement.

The structures for stakeholder's participation in environmental management in Bomet municipality are poorly developed. Lack of a guiding policy and appropriate incentives for stakeholders' engagement in environmental management has resulted to no or minimal involvement by majority of stakeholders. Consequently the enormous potential of the various stakeholders in sustainable urban environmental management remains largely untapped.

## 9.16 POVERTY AND ENVIRONMENT

Worldwide there is a strong relationship between poverty and environmental quality including in urban areas. In urban areas the poor bear the greatest burden of urban environmental risks because

of the situation in which they are forced to live. Majority of the urban poor are the women and children.

The poor in Narok town live in overcrowded substandard housing mainly in Majengo (See Photo 9.12 overleaf). Some houses in Majengo are built of rudimentary materials such as mud, cardboards and old iron sheet walls; rusted iron sheet and plastics roofing. Overcrowding increases the risk of airborne infections and accidents. The residents of the low income in Narok town are not served by piped water, sanitation facilities and garbage collection services.

Lack of these services increases the risk of intestinal infections and other communicable diseases.

The poor also contribute to local environmental degradation mainly because the town fails to provide them with the necessary basic services. Since solid waste is not collected in their settlements, they dispose of their waste in inappropriate dumping areas. Denied access to suitable land for housing, families may settle in the protected areas of the town or on fragile ecosystems such as wetlands.

Disposal of human waste from over-water settlements in towns can be a major source of water contamination. When low-income groups engage in environmentally degrading activities, however, it is usually because they have no alternative.

The poor are understandably reluctant to invest heavily in improving the household or neighbourhood environment since they could be evicted at any given time. However, once given housing security, the

*Photo 9.12: Informal Housing in Majengo*



*Source: Matrix Development Consultants, December, 2012*

The poor are defined as those members of a society who are unable to afford minimum basic needs comprising of food, shelter and clothing. Currently the official figures of poverty rate in the larger Narok County stand at about 33.8% (Commission on Revenue Allocation, 2011). Poverty can be classified into two parts i.e. material poverty and relative poverty. It can also be classified into food

poverty and overall poverty. Causes of poverty in Narok County are many, ranging from HIV/AIDS prevalence, unemployment, and squatter/landlessness to illiteracy. It is further characterized by low incomes, high child mortality and dependence ratio.

The major causes of poverty have been identified among others as lack of community involvement in planning, handouts, poor infrastructure, collapse of agricultural marketing institutions, high cost of farm inputs, and delay in payment of agricultural produce, inhibitive cultural practices, corruption, crime and insecurity.

The poor rely heavily on natural resources for their livelihood. There is need to build on existing initiatives and strengthening ongoing process that take into consideration participatory planning and implementation of programs and projects that integrate environmental concerns into development planning and decision making which at the same time enhances sustainability.

## 9.17 ENVIRONMENTAL AWARENESS

Environmental consciousness dictates human activities that have a bearing on environmental sustainability. The higher the level of environmental consciousness, the higher the degree of environmental ethics.

Few environmental awareness programs such as posters, public or group barazas, print and electronic media were operating in the town. As a result residents' environmental consciousness was measured as low as evidenced by indiscriminate littering; throwing of sugar cane chuff in the town, water riparian encroachment, cutting of trees among other indices. This cut across the socioeconomic strata.

## 9.18 ENVIRONMENTAL MANAGEMENT TOOLS

Some environmental instruments such as Environmental Impact Assessment (EIA), Environmental Audit (EA) and Strategic Environmental Assessments (SEA) are supposed to be applied in environmental management as specified in EMCA.

EIA is undertaken for specified new projects before they commence. It is a critical examination of the effects of a project on the environment. An EIA identifies both negative and positive impacts of any development activity or project, how it affects people, their property and the environment. EIA also identifies measures to mitigate the negative impacts while maximizing on the positive ones. An Environmental Management Plan (EMP) to guide project activities is prepared.

On the other hand Environmental Audit (EA) is done on ongoing projects to monitor their impacts on the environment and to assess their adherence/compliance to the set environmental standards and EMP. Projects which require EAI & A are specified in the second schedule of EMCA.

Strategic Environment Assessment is used to integrate environmental consideration into policies, plans and programs. SEA is similar to EIA except that the latter deals with projects.

The objectives of Strategic Environmental Assessment is to systematically integrate environmental consideration into policy, planning and decision – making processes, such that environmental information derived from the examination of proposed policies, plan, programs or projects are used to support decision making by:

- Allowing sustainability principles to 'trickle down' from policies and plans to individual development projects within a particular programme.
- Ensuring that sustainability considerations are incorporated into objectives of policies, plans, programs or projects.
- Identifying environment and sustainability benchmarks by which impacts of policies, plans, programs or projects can be tested, and

- Evaluating whether the potential impacts of a proposed or existing policies, plans, programs or projects are likely to be in accordance with sustainability objective.

In the SEA process likely significant effects of a policy, plan, program or project on the environment, which may include secondary, cumulative, synergistic, short, medium and long term, permanent and temporal impacts are identified, described and evaluated in the environmental report. This also includes evaluation of alternatives.

The above environmental management tools are poorly applied in Narok town despite many projects and programs such as construction of high rise buildings, operating of supermarkets, hospitals, hotels, and slaughter houses requiring them.





# Chapter 10

## URBAN GOVERNANCE

### 10.1 INSTITUTIONAL SYSTEMS

The complexity of Narok towns' governance framework relates to the expected departure from the existing governance and management framework as provided for in Local Government Act, CAP 265 to the Urban Areas and Cities Act 2011. Of significance is the shift of town management responsibilities of Narok town to the Narok town Committee complemented by retinue of administrators and such other staff and officers as the respective Boards may determine. These changes shall be accompanied by expected institutional and management challenges. It is thus imperative that they are well factored in during the implementation of the Narok Town integrated Strategic Urban Development Plan (NISUDP) 2012-2030.

Some of the identified issues and challenges relating to the current institutional and management systems and that are expected to have a bearing on implementation of this plan include:

- Lack of an overarching vision whereby the former Town of Narok never had a common vision that could guide its progress and galvanize the residents' collective ambition especially alongside the country's blueprint Kenya's Vision 2030.
- Inadequate staff capacities for plan preparation and implementation such that though in former Town of Narok there was an approved establishment of 122 employees, the delivery unit of the Narok town was grossly unbalanced. The Town had no established positions for engineering, legal, public health and physical and environmental planning experts. It therefore missed out on benefits accruing from use of professional competencies to identify and prioritize the service needs of the residents and also to develop and implement policies, strategies and plans to conclusively address those needs. Moreover, there was limited technical backstopping from national line ministries.
- Inability to bring on-board more strategic partners to address issues of urban development.
- Poor development control and enforcement of development regulations. Additionally there is poor coordination and communication of approval processes thereby rendering the physical planning liaison committee ineffective.
- Lack of comprehensive and integrated approach in addressing issues of urban development, flooding, environmental degradation, solid waste, circumvention of laid out norms and procedures i.e. private surveyors notably have been known to circumvent Town development control and approval measures set by the Town.
- Poor follow-up mechanisms and absent or weak documentation of lessons learnt and best practices.
- Inadequate mechanisms for accountability and transparency

### 10.2 URBAN MANAGEMENT

- Limited Scope of Service Delivery considering the principle of subsidiarity and in relation to the broad range of services provided for under legislation governing urban areas. The limited scope of available services is a key aspect of urban management challenges for the Narok authorities.

- Inadequate and ineffective communication and information mechanisms with the various channels utilized having equally contributed to the malice of poor urban governance.
- Absence of structured monitoring and evaluation mechanisms for measuring and tracking impact.
- Lack of Stakeholder recognition/participation and engagement in Decision Making whereby stakeholders in Narok town have hitherto not been well organized and have yet to effectively engage with town administration. In the current form, they are quite weak requiring strong capacity building and civic education programmes.
- Poor relations between the Town and stakeholders on one hand and among stakeholders with competing interests.
- Lack of Strong Town brand to drive local economic development whereby the authorities lack innovation to build on Narok Towns’ natural comparative advantages. Existing investments and provision of social and economic infrastructure has largely taken place without sound knowledge of key instruments such as the Narok Town’s development strategy.
- Absence of an institutionalized, organized and enabling business environment improvement strategy in the Narok. For instance the need to integrate tourism with hospitality services is important. Manufacturing and light industry needs to be well organized especially in value addition for livestock and agriculture. Additionally the harmonization and coordination of related regulatory framework is needed
- Inadequate mobilization of resources and revenue required to fund implementation whereby the town is faced with limited resource base to carry out the strategy implementation and how to overcome it is a key feature of the Plan.

### 10.3 URBAN SAFETY AND SECURITY

#### 10.3.1 Types of Crimes and Violence

In Narok town, like in many of our urban areas, crime, violence and disasters have become common place. They constitute a serious impediment to economic and social development and a threat to human welfare. Capacities are lacking for both local communities and authorities to design and implement community sensitive crime and violence prevention and disaster risk reduction strategies and programmes.

Equally important crime and violence is manifestation of ineffective governance, where public institutions are not able to meaningfully generate adequate response and community crime prevention strategies, programmes and mechanisms.

Crime in Narok is contextual and spatial in its manifestation. This is partly as a result of poor planning and design of some parts of the town. The *Table 10.1* below shows some of the main types of crime experienced in Narok and locations/areas of concentration.

*Table 10.1: Areas and Types of Crime in Narok*

Areas of crime	Type of crime
Majengo Estate	Mugging
Open Shambas	Mugging, Rape
Chepalungu Market No Roads	Thuggery
Obong	Thuggery
Kendas	Thuggery
Mukuru	Thuggery
Daraja	Thuggery and Mugging
Kirepe across the Bridge	Thuggery and Mugging

Lack of employment opportunities, particularly for the youth is also a contributory factor to crime in the town. Others factors relate to perceived corruption among security officers. *Table 10.2* below shows causes, victims and the likely perpetrators of crime in Narok:

*Table 10.2: Types of crimes, causes, victims and perpetrators*

Types of crime	Main causes	Victims	Perpetrators	Implications
Breaking in shops	Youth unemployment	Shopkeepers	Youths	Loss of money and business
Alcohol-related fights and beatings	Unemployment	Women	Men	<ul style="list-style-type: none"> <li>• Domestic violence</li> <li>• falling further into poverty</li> </ul>
Domestic violence	Family disputes	women	men	Collapse of family units and bodily harm to victims
Brewing illicit brews	Poverty and idle women	Men and youths	women	Over-drinking and poverty
Theft	Lack of employment & poverty	<ul style="list-style-type: none"> <li>• Local people</li> <li>• Youth</li> </ul>	Male youth	Retrogressive development
Thuggery and muggings	<ul style="list-style-type: none"> <li>• Unemployment and poverty</li> <li>• Idleness and youth unemployment</li> </ul>	<ul style="list-style-type: none"> <li>• Businessmen and women</li> <li>• Farmers</li> </ul>	Youths	<ul style="list-style-type: none"> <li>• Loss of money and property</li> <li>• bodily harm</li> </ul>

### 10.3.2 Policing

The planned area of the town hosts the office of the Officer Commanding Police Division (O.C.P.D.) next to the District Headquarters and the Police headquarters and residential camp next to the Town Offices. Other security agencies include the National Security Intelligence Services (N.S.I.S) with a vast fully furnished District headquarters, Criminal Investigation Offices next to the O.C.P.D.'s office, Administration Police Offices at the southern end of Block V and a camp at the Masikonde Division headquarters; plus the Prisons towards the Narok River. Every Chief's camp within the locations has an Administration Police Camp in the larger Narok jurisdiction. Thus the concentration is in the planned and developed area of the Narok Township boundaries with glaring deficits in the area of Group ranches. These are not adequate enough to meet the policing requirements in terms of the police to citizen ratio and ability to respond on time given the spread. The police service is ill equipped to respond to the needs of the entire planned area. The relationship between the police and public is not cordial, thus affecting effective policing.

### 10.3.3 Crime Prevention

Like the rest of country the capacities are lacking for effective crime prevention and this is both at the community and institutional level. Besides, there are very few interventions that pro-actively target crime prevention such as youth programmes, reducing delinquency, gender-based violence, better resourced personnel, and elaborate public education.

### 10.3.4 Gender Based Violence

Gender violence in the Narok is related to gender roles. Violence targeted at Women is linked to of livestock loss and rape. In cases related to battery, victims taken to hospitals do not reveal the causes of their injuries. In this regard, there is need for awareness creation on women rights and human rights underscoring respect of one another in society. The civil society can also take up the role of promoting rescue measure and mechanisms for women i.e. establishing and equipping rescue centers.

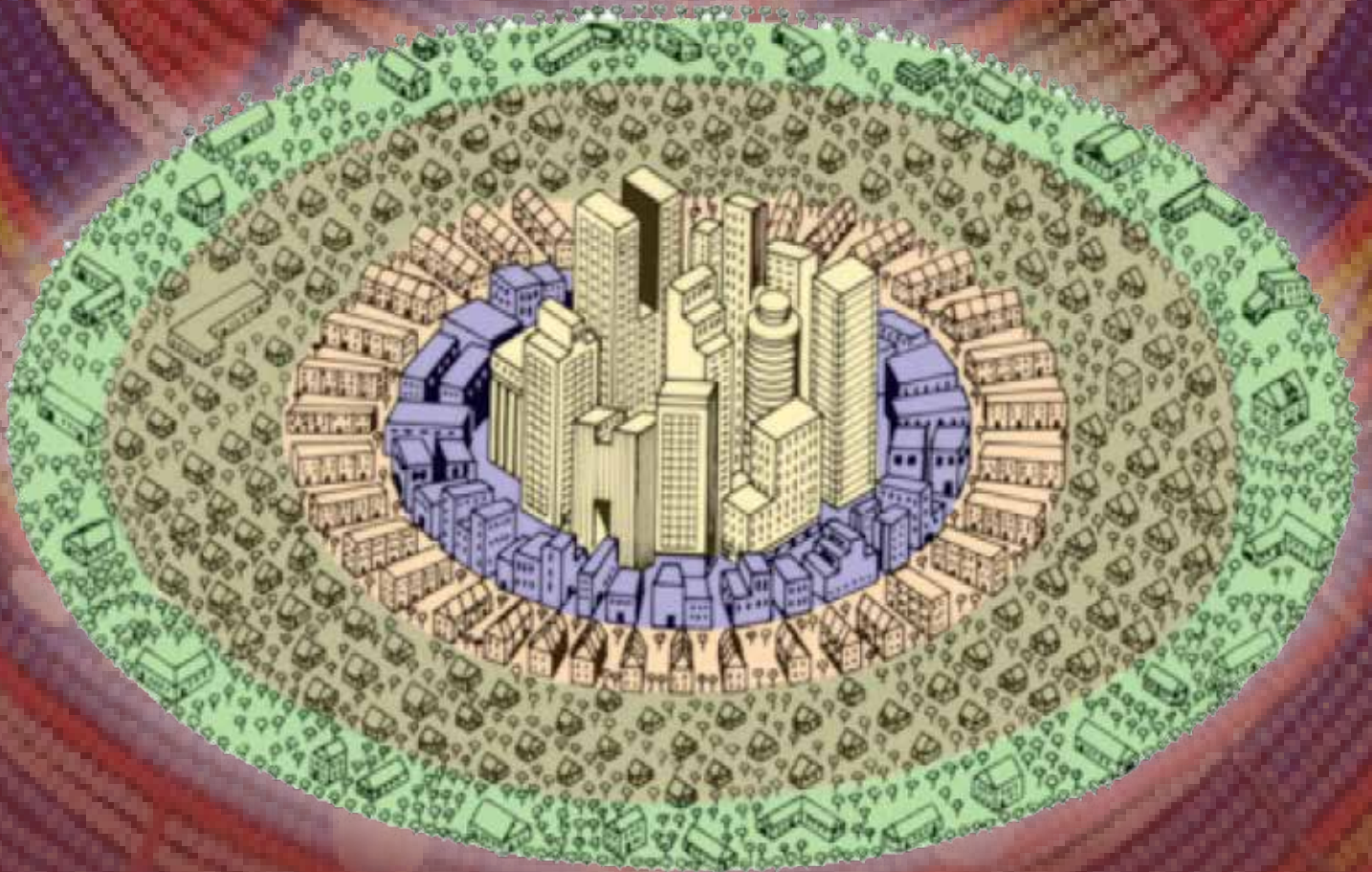
*Photo 10.1: Limited open spaces in Narok*



Source:

In moving forward the following measures are proposed for addressing issues of urban crime in Narok;

- First and foremost issues of crime and violence must be treated as a governance issue requiring pro-active responses at various levels and more importantly should be viewed as part of the broader planning and service provision mandate of the town;
- Ensure positive engagement of the urban Youth either through Integration of the Youth into town and county government activities and management structure e.g. youth Councils, creating Youth employment opportunities through gainful self-employment activities;
- Ensure well planned, equipped and adequate space, recreational facilities for sports and other activities for the youth and urban residents;
- Promote and mainstream gender issues in development processes;
- Enhance safety and security through better physical planning designs and management of public space;
- Develop a better understanding of local crime through conducting victimization surveys, safety audits and assessment and creating databases on Narok urban crime and crime prevention activities and actors and sharing of knowledge on crime prevention approaches and experiences;
- Promoting the culture of prevention at the local level through awareness, peace and crime prevention forums, art and music;
- Ensure effective linkage with other programmes that have a bearing on safety and security;
- Ensure that the police services are adequate and easily accessible to all residents in all areas in Narok;
- Strengthening of law enforcement for crime prevention through increased presence of police.



**PART III:  
SPATIAL DEVELOPMENT MODELS**



# Chapter 11

## DEVELOPMENT MODELS

### 11.1 Analysis of the Existing Urban Settlements

The former Narok Town boundary consists of the Narok Town which is the C.B.D and three other centres i.e. Ewuaso Ng'iro, Rrotian and Nkareta centres.

#### 11.1.1 Narok Town

Narok Town enjoys a primacy of a high magnitude in comparison to the other centres and provides the highest level of services in the primary, secondary and tertiary education sectors. It houses the offices of County Government, the Senate, the Narok sub county and the county commissioner. It provides financial services to the rest of the County through several banks and financial institutions which are sited here. Narok town is the home to the only existing university (The Maasai Mara University) within Narok County and it will soon host two more universities. It provides residential accommodation to all County Government and National Government officers and the business communities of all types.

It has thus rightfully assumed the role of the C.B.D for the Town boundary. Its growth and expansion should be encouraged in a planned manner.

#### 11.1.2 Ewuaso Ng'iro Centre

This is the second biggest centre in Narok. It houses the second biggest KWS camp in Kenya after Naivasha and it is the gateway to the Maasai Mara game reserve, and has the tourism potential of housing medium size hotels. Ewuaso Ng'iro also boasts of the two biggest slaughter houses in Narok County and has the potential of growth in the hides and skin sector as well as Animal Feed production. The growth of this centre should be encouraged in a planned manner.

#### 11.1.3 Rrotian Centre

This centre is within the Agricultural rich hinterland of the County and provides important urban services to its hinterland. This centre has the potential of growth agro based industrial sector specializing on value addition of their agricultural produce. The crops include wheat, barley, maize and numerous horticultural crops such as potatoes, carrots, beans as well as milk. This centre should also be facilitated to grow in a planned manner.

#### 11.1.4 Nkareta Centre

This centre is near the Maasai Mau Forest towards the north western part of Narok town and provides important urban functions to its immediate hinterland. It has the potential of development in the tourism sector by having medium size hotels set up here for those who want to explore the nature trail in the Mau Forest. There are over 200 African Forest Elephants' and Bongo and other forest animals and birds in the forest as an attraction as well as hiking for the enthusiasts. The map below shows the location of the CBD and the three other centres. Nkareta should also be allowed to grow in a planned manner.



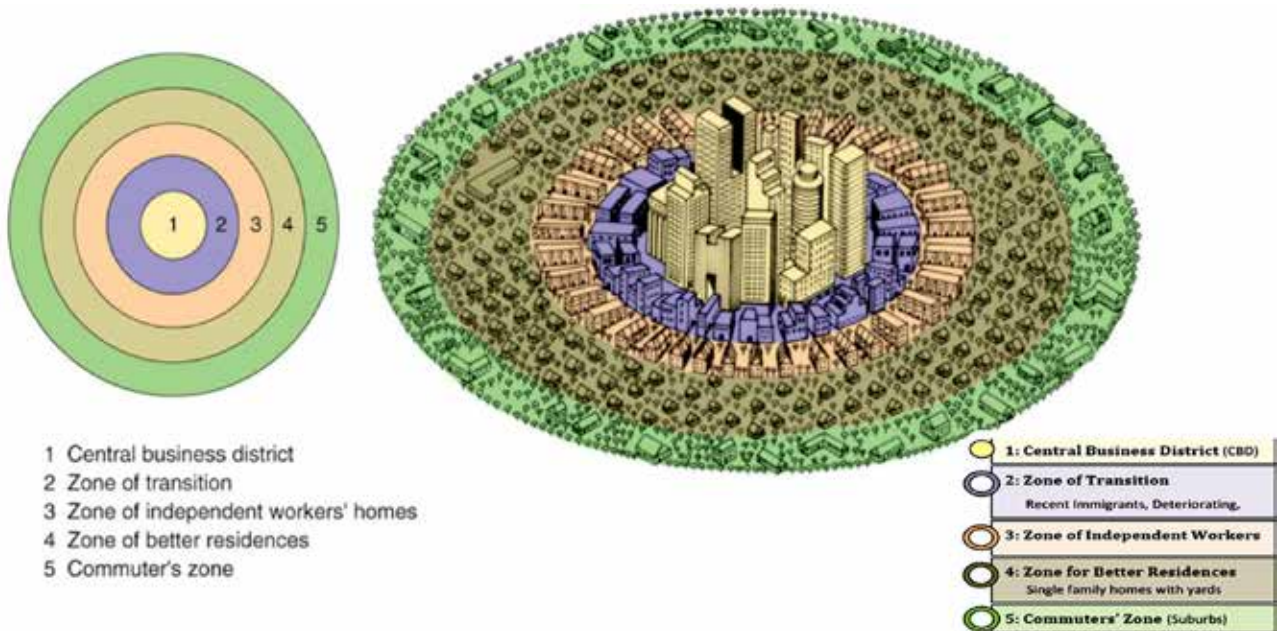
## 11.2 DEVELOPMENT Models

There are many land use models which have evolved over the years such as the concentric rings, sector model, and polycentric and multi nuclei model.

### 11.2.1 Concentric Rings Theory

This theory was developed in the 1920's by Ernest Burgess who sought to model Chicago's spatial structure with regards to the usage of 'zones' around the city. These zones radiated from centre outwards in a form of rings. Attempts at applying this model to European cities have failed; as many cities in Europe have their upper class mostly at the periphery. As a summary, the five names for each zone in the concentric rings model were given as follows: CBD, Zone of Transition, Zone of Independent Workers, Zone for better Residences and Commuters' Zone.

Figure 11.1: Burgess's Concentric Ring Model



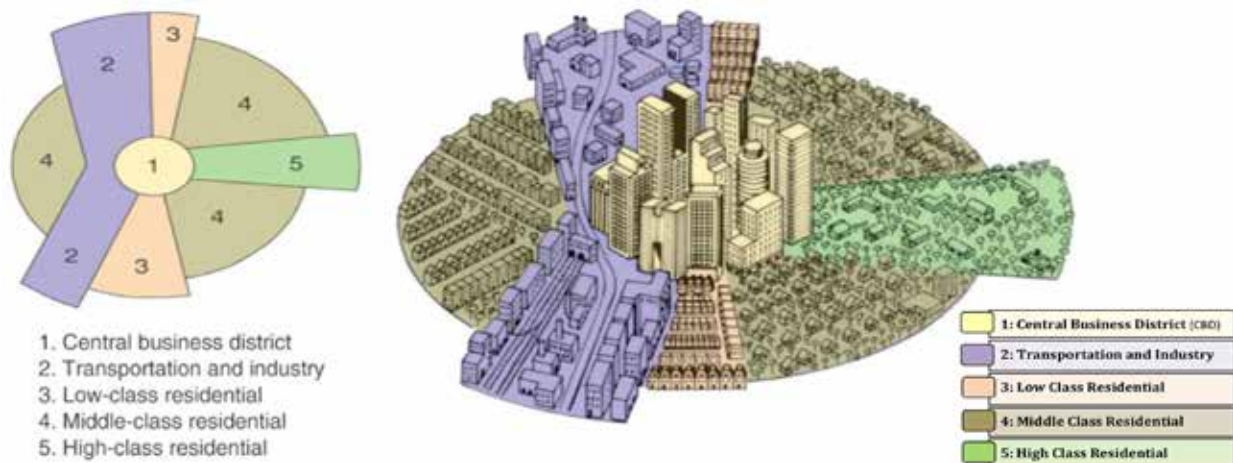
Source: Adapted from Pearson Prentice Hall, 2008

This theory will not relate well to Narok as over 80% of the town is under non-urban use. Analysis of the existing CBD land uses show that it is literally mixed and not according to the rings. Thirdly, this model does not consider existing landscapes and is definitely very old and it does not consider car ownership. Hence this model cannot be applied to Narok Town.

### 11.2.2 Hoyt's Sector Model

This model anticipates a city to develop in sectors instead of development in rings. It accepts that certain areas of a city are more attractive for various activities, whether by chance or geographic and environmental reasons. As the city grows and these activities flourish and expand outward, they do so in a wedge and become a sector of the city. Simultaneously as growth takes place from the Central Business District outwards other sectors are bound to grow along linear features such as the roads and the railway.

Figure 11.2: Hoyt's Sector Model



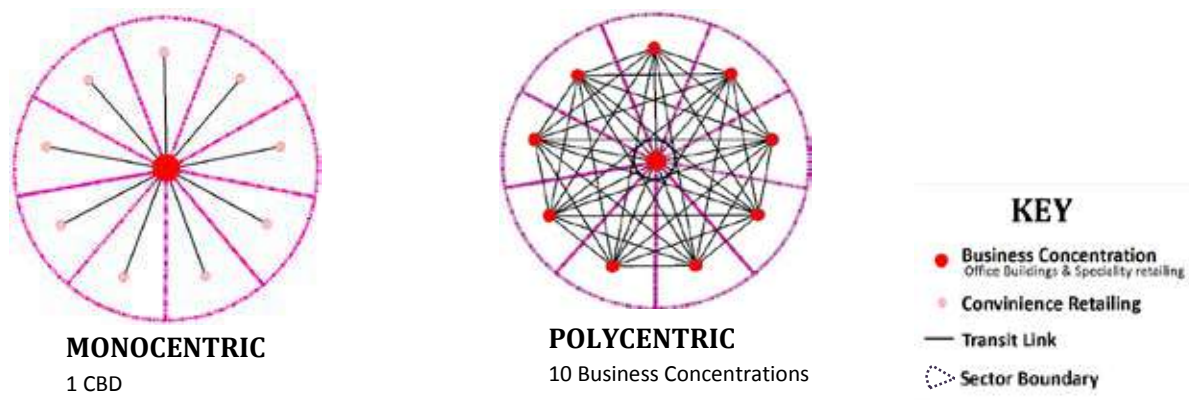
Source: Adapted from Pearson Prentice hall, 2008

The development of Narok partly accepts this model in as far as the growth along the linear features in this case B3 road and C57 roads are concerned. However, it should be noted that over eighty percent of Narok Town is under non-urban use. Secondly Hoyt's model assumes the land to be flat whereas in Narok there are differences in terrain and drainage patterns.

### 11.2.3 The Polycentric Theory

Polycentrism is the principle of organization of a region round several political, social or financial centres. A region is said to be polycentric if its population is distributed almost evenly among several centres in the different parts of the region. Polycentric refers to having many centres especially of authority or control. In the Polycentric pattern, a business concentration is added in each sector and so many links are required to directly connect each sector to the CBD and all outside business concentrations. Transfers or lengthy journeys, which discourage ridership, can be prevented in the polycentric pattern only connecting all sectors directly to all business concentrations.

Figure 11.3: Comparison between Monocentric and Polycentric Model Patterns



Source: Adapted from Richard Layman, 2009

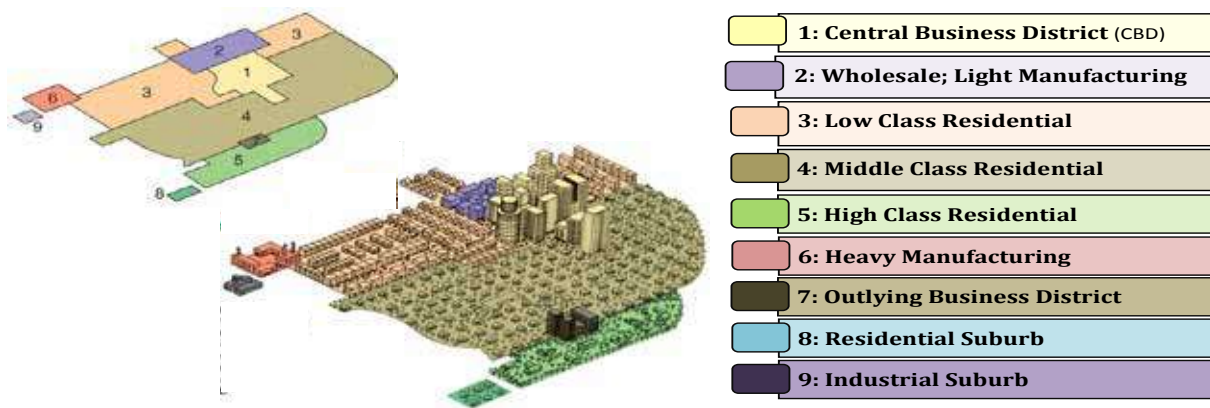
The Polycentric model is a far superior model which presupposes a higher level of connectivity and accessibility. In the case of Narok the existing CBD enjoys a Primacy of a high magnitude

compared to the other centres of Ewaso Ng’iro, Rrotian and Nkareta. Secondly, these centres are still of lower category commercial and business centre and the applicability of this model to Narok is limited. This theory needs to be applied to a far bigger and advanced region than that of the former Town of Narok.

### 11.2.4 The Multi-Nuclei Theory

C.D Harris and E.L Ullman came up with a new land use model which they termed ‘Multi Nuclei Theory’. They suggested that land use patterns in most cities develop around a number of discrete centres or nuclei rather than a single centre as described in the concentric or sector models. This model accepts that even though a city may have begun with a CBD, other CBD’s develop on the outskirts of the city or town to allow for shorter commutes from the outskirts of the city. This creates nodes or nuclei in the city besides the CBD thus the name ‘Multi-nuclei’ Model.

Figure 11.4: Harris and Ullmann’s Multiple Nuclei Model



Source: Adapted from Pearson Prentice hall, 2008

Ullman and Harris recognized that growth might occur around the main CBD and also around the sub centres. These could incorporate industrial and commercial suburbs as well as peripheral residential growth. Hence each sub Centre may have a chance of developing its own activity specialization role according to the local situation. This model would perfectly suit Narok Town boundary whereby the existing CBD could be allowed to grow whereas the centres of Ewaso Ng’iro, Rrotian and Nkareta could also be allowed to grow, each with their own activity specialization.

### 11.3 Preferred Development Strategy

During the stakeholder meeting held in Narok on 15th February, 2013 on ‘Draft Strategies and Proposals’ the issue of how development should be allowed to take place in Narok or in what form should development be allowed to proceed was put forward to the congregation in a simplified manner. The two broad choices put forward were: first, for the existing Narok Town to be allowed to continue to grow outward alone and secondly, to allow the other centres of Ewaso Ng’iro, Rrotian and Nkareta to grow simultaneously.

Almost unanimously, the stakeholders preferred the second option. This implies that the theory of ‘multiple Nuclei’ had more resonance with the stakeholders in Narok. Thirdly, the congregation had felt that any further expansion of the CBD should take place at Lemamet which is not far from the CBD and along B3 road towards the Airstrip.



**PART IV:  
STRATEGIES, MEASURES, ACTION PLANS AND  
IMPLEMENTATION FRAMEWORK**



# Chapter 12

## STRATEGIES AND MEASURES

### 12.1 Overview

This chapter synthesizes the insights variously discussed above into pertinent sectoral 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 Narok into a modern city. This chapter therefore gives the key sectoral strategies and measures and proposed activities.

### 12.2 TRANSPORTATION STRATEGIES

#### 12.2.1 Road Network

It is very important that all the current and proposed roads be put on a digital map for proper record and management. Using the maps prepared, a road inventory can be obtained using the following:-

- Road inventory survey,
- Road condition survey, and
- Naming or coding of roads or streets.

The data from above would then provide the location, width of road reserve length and current road surface finish whether tarmac murrum or earth. The road inventory data should be updated periodically, preferably yearly.

##### 12.2.1.1 Planning of Road Network

The effective planning of the road network requires that we appreciate the existing and the future developments in relation to the planned land use. The proposed new road network should link up well with existing roads. In the planning of the road network consideration should be given to identify and mark the roads as follows:-

- Primary roads (bus routes),
- Secondary roads,
- Internal roads,
- National roads, and
- International roads.

The road reserve widths for each of the above roads must be determined according to the intended use and the known National Road Standards.

All public road reserves and public wayleaves which have been encroached should be reclaimed and for those roads which require more wayleaves the county Government should through legal procedures acquire the land required for the expansion of

the roads. The road reserves should be properly marked on the survey maps and beacons on the ground. The road reserve should accommodate the specified road carriage, footpath; storm water drainage, street lighting and other services that may be necessary. All the road reserves/ public wayleaves be opened for the public to know and protect.

### 12.2.1.2 Road Designs and Implementation

Most of the roads in town which serve CBD area, Government offices and new residential estates are not all weather roads. The county Government has to prioritize the development of the road network in town in line with available financial resources and needs. The works have to be carried out in phases. The construction of the roads shall be as per the road designs and specifications to be established.

### 12.2.1.3 Traffic Management

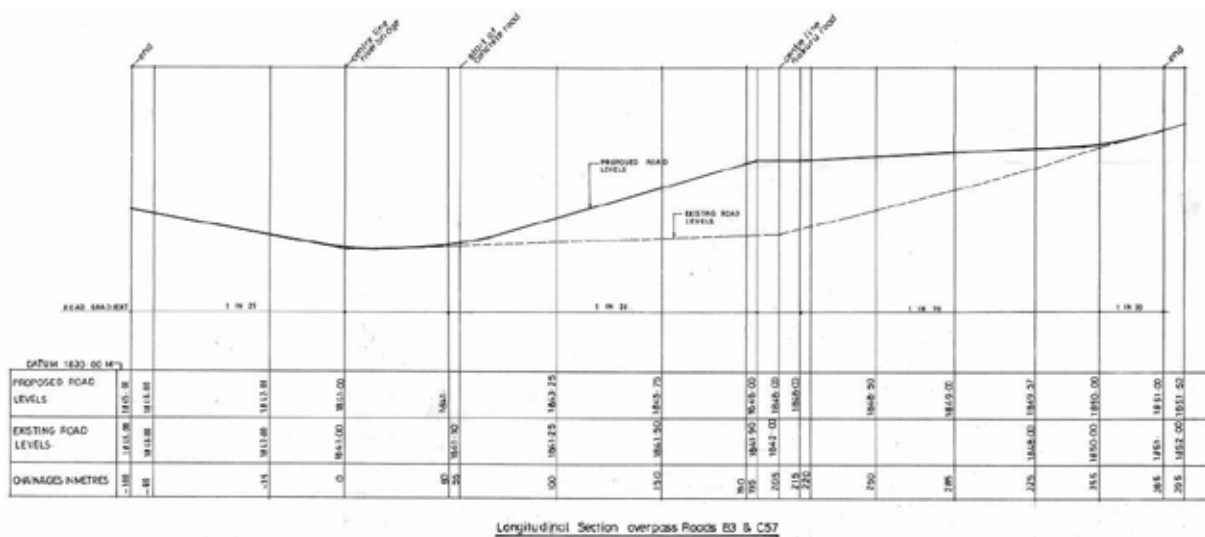
Currently, traffic congestion is manifest in Narok town during working hours. This occurs mainly at junctions of roads B3 and C57, roads C57 and road to Chambai Hotel, and at other junctions on CBD roads.

It is proposed that diversion and rerouting of the traffic flow to cover the following areas be implemented:

#### (i) Junction of B3 and C57

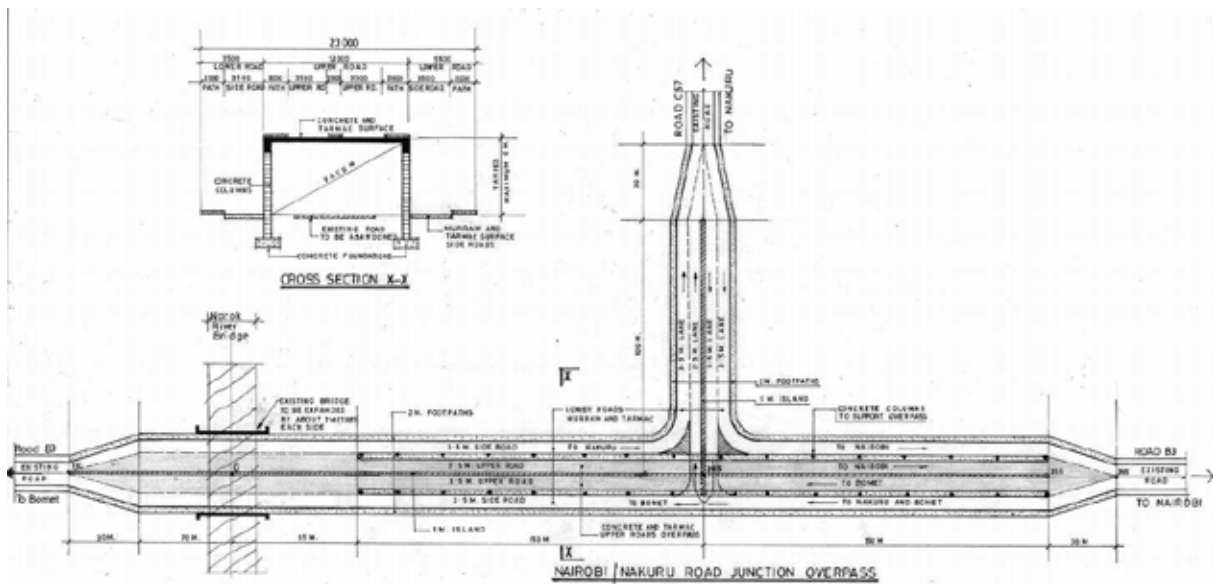
Provide over pass along road B3, widen bridge over Enkare Narok River, and provide service lanes and connecting road links to both C57 and B3. This proposal shall need more land than that which is available now and it is planned that the land be acquired immediately. See Figure 12.1 and 12.2 depicting the proposed overpass.

Figure 12.1: Longitudinal Section of the B3 road-C57 Road Junction Overpass



Source: Matrix Development Consultants, 2014

Figure 12.2: B3 road-C57 Road Junction Overpass Plan



Source: Matrix Development Consultants, 2014

### (ii) CBD Roads

CBD roads between B3 road and the road to Chambai Hotel as well as within Nyawira area to be made one-way drives only to allow the other side of these roads for flash/parallel parking as the carriage way in most of these road reserves is 8m wide.

### (iii) Road to Chambai Hotel and Nyawira Road

Use the road to Chambai Hotel and link it to Nyawira road as an outlet or inlet for vehicular traffic from Nairobi and Nakuru. This will reduce traffic congestion at junction of roads B3 and C57. These particular roads shall have traffic flowing in both directions.

### (iv) Road to Link Proposed Integrated Central Bus Terminal.

To reduce congestion at the junction of road B3 and C57 in Narok town, it is proposed that Buses and Matatus to and through town be diverted to a new link road starting near road to Maasai Mara University to the proposed integrated central bus terminal.

The integrated central bus terminal shall be for public vehicles in transit. They shall pick and drop passengers at the bus terminal and proceed on their way out. Those vehicles which require some parking facilities will be directed to go and park at the existing matatus park.

This proposed road will open up the area for further development and improve traffic flow in town. The actual location of the road to be determined during design stage.

### (v) New Road Right Hand side of B3 Starting before Stadium.

This is a proposed new road which starts on B3 just before stadium and links road B3 to Nairobi just after Ole-Tips Girls Secondary School.

This road will reduce traffic passing through CBD area effectively decongestion the town of vehicular traffic. The location of the road to be confirmed during design stage.



#### **12.2.1.4 Street Lighting**

The town lacks street lighting in the areas where business activities are carried out at night. The security lights at the individual plots assist in lighting some streets at night. Hence;

- An integrated street lighting system needs to be put in place starting with the CBD area.
- Private public partnership should be encouraged in the provision of street lighting.

#### **12.2.2 Integrated Central Terminal**

It is proposed next to the road leading to government offices which turns off road C57 is an area which has been identified as a location for an integrated central terminal for all mode of transportation. This terminal shall be for public vehicles which shall drop or pick passengers only. Those who want to park will be required to do so at the old bus and matatus parking.

A new roundabout, acceleration and deceleration lanes and new bumps will be required to be constructed on road C57 to ease flow of traffic at the new road junction.

This terminal shall accommodate all the standard travellers' needs. Hotels, booking offices, and shops

The terminal shall be linked to road C57 and B3 through the new road links proposed from Maasai Mara University.

#### **12.2.3 Parking Facilities**

The town has limited parking space for buses, matatus, lorries, trailers, cars, motor cycles, bicycles, handcarts and donkey carts. There is traffic congestion at the existing bus and Matatus Park. Hence;

- Land should be allocated for parking for lorries, trailers and transits buses.
- Proper design and construction and marking of the new parks be done.
- There is urgent need for reconstruction and improvement of the existing bus park.
- The location of the lorry park in relation to the market be such that it is convenient for loading and unloading of luggage.
- The parking area be fenced off.
- Lorry drivers be encouraged to pay for the available parking space as a matter of policy.
- Proper and courteous usage of the parking space be encouraged so as to assist in the maintenance of the facility.

#### **12.2.4 Non-Motorized Facilities**

The residents of Narok travel using many modes require infrastructure facilities which can make movement comfortable in town. The facilities needed shall cover the following:-

- Special corridors and parking areas.
- Proper footpaths and pedestrian crossings.
- Construction of foot paths and parking areas
- Education and awareness to motorists and non- motorists on safe road usage.

- Cycle tracks.
- All the facilities be on both existing and proposed roads within town.

### **12.2.5 Railway Transport**

The town serves a rich hinter land and is connected by road to neighbouring county towns like Nakuru, Naivasha, and Nairobi which are connected by railway line.

- A feasibility study needs to be done on the viability of constructing a railway line to connect to Nakuru, Naivasha and beyond.
- The project has to be economically viable, to be implemented.
- Involve public private partnership in the development above.

### **12.2.6 Air Transport**

The existing air strip needs a lot of improvement and if developed shall spur development and ease travel to Narok town and to other places. Hence;

- The airport land to be fenced and secured.
- Develop and expand the air strip in phases.
- This air strip needs to be planned and constructed, with necessary facilities and be linked by road to Narok town and by air to other airports in Kenya.
- Construct the run – way.
- Construct of terminal building and associated facilities.
- Upgrade the airport as need arises and when it is economically viable.
- 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.

### **12.2.7 Road Safety and Security**

The town residents and travelers lack road safety and security. This can be observed by the way people drive, walk and park in town. The following is proposed to enhance road safety and security;

- A master plan be put in place for all the road network development.
- Parking facilities for all modes of transportation to be provided.
- All parking spaces be marked.
- Road signs be erected and protected.
- All road furniture be fixed and protected at strategic locations.
- Street lighting be erected and maintained.
- The county Government to enact and reinforce management by – laws to control safety in town.
- Road marking be done for carriageway.
- Foot paths corridors and pavement be provided and protected.

## 12.3 INFRASTRUCTURE SERVICES STRATEGIES

### 12.3.1 Storm Water Drainage

The town is located in a low lying area where rivers converge and create a drainage challenge and hence flooding of the town. This is the action plan recommended;

- Prepare a master plan for the storm water drainage based on the master plan of the roads network.
- Acquire land where required for drainage way leave.
- Planting of trees, grass and construction of a number of upstream water to reduce runoff after the rains. The dams to be strategically located in order to cover the affected areas. Locations of the dams to be determined.
- The drainage structures in town should be redesigned for adequate capacity to accommodate flash floods.
- All roads to be provided with storm water drainage structures and be integrated to outfalls properly designed and located.
- Regular cleaning of the drainage structures should be carried out before the rains and after the rains.
- An overall redesign of the drainage structures should be carried out to determine the required discharge capacities of the above structures.
- The new drainage structures should be constructed only during the dry periods of the year when the river flow is limited.
- The area between the entry of the combined drainage from Esamburmbur and Kikia into Enkare Narok River upstream and beyond the crossing of Narok- Nakuru Road 800m approximate should be widened and constructed of (RC) concrete sections to avoid erosion and damage to the sides of the river Valleys.
- All the main box culverts in the town should be evaluated and redesigned in regard to discharge capacities for adequacy on the increased run off for the town and environ.
- The bridge across river Enkare Narok on Nairobi-Narok- Bomet Road does cause flooding, and may be among the first ones to be checked for capacity adequacy for flood flows. If the discharge capacity at the bridge crossing is not adequate the bridge may require to be redesigned a new and be rebuilt with matching the raised road approach sections.
- Portions of town which are affected by floods be relocated to Lemanet and the area be re-planned and be used for recreation and eco-tourism.
- The road sections affected above may be raised accordingly to match existing road levels at both sides of the bridge on road B3 and road C57.

### 12.3.2 Water Facilities

The town has an existing water supply. The demand for water outstrips the existing water supply. The following is recommended for alleviation of the shortage of portable water to the town:-

- A master water supply network be done for the town.
- As much as possible the proposed water supply system be by gravity flow.
- Implement the JICA water proposal programme.
- Drilling more boreholes where best located.

- Extending and improving of the existing water supply system,
- The Ilmasharian water project be augmented and be used to supply water to Narok town.
- Construction of dams by various Government Institutions be co-ordinated to enhance water supply to town and environs.
- Planting trees on the Mau escapement to restore forest cover.
- There is need to monitor the water quality from all sources of water.
- Provide individual water connections to most households.
- Promote care and proper usage of the clean water to the residents.
- Encourage residents to willingly pay for the water consumed by them so as to sustain the water supply for the town.

### 12.3.3 Sewerage Facilities

The foul sewage collection and disposal is proposed to be done separately in two ways and which are:-

#### **Option One** – Independent Sewer Systems for each Centre

Narok town as well as the three key centres to have independent and separate sewerage systems.

#### **Option Two** – Combined Swer for Narok and Rrotian

Both Narok and Rrotian to have one combined sewer line reticulation system and one sewage treatment works at Kambi MauMau. Nkareta and Ewauso Ng'iro to each have individual on site local sewage reticulation system and sewage treatment works.

This option allows for the Rrotian centre 12km upstream of Narok town to have its waste water drainage connected to that of the main town Narok and have one sewage treatment works at Kambi MauMau.

This option may be more expensive than option one where each town centre has its own sewerage system. The sewer connection to Narok shall enable areas where the trunk sewer from Rrotian passes to benefit by connecting to it at predetermined locations. The Rrotian trunk sewer shall connect into the Esamburmbur valley sewer

The main trunk sewer size in Narok town to which Rrotian sewer connects and beyond shall be increased to accommodate for the increased contributed sewage.

In this option Ewauso Ng'iro and Nkareta centres shall have their local and independent sewage treatment works due to their physical locations.

Nkareta is 28.5km upstream to the North West of Narok and Ewauso Ng'iro is to the South West of Narok and downstream of the proposed Narok sewage treatment work at Kambi Mau Mau.

The proposed land for sewage treatment works for Ewauso Ng'iro centre is located 2km approximately downstream of KWS station near Ewauso Ng'iro River. This land needs to be acquired. It is estimated that five acres of land is required.

Sewage treatment works land for Nkareta has been identified and allocated for future use, but land for Rrotian has not been identified though 5 acres should be provided.

The town has no central sewerage disposal system in place. This hinders the fast development of the town. It is proposed that the following action line be taken to improve sewerage system in town:-

- Provide piped water to all households.
- Prepare a master plan for the sewerage system for town.
- Identify sites and locations of sewer lines and sewage treatment works for current and future developments.
- Implement a central sewerage system in town.
- Connect all households to the central sewerage system.
- Provide sewage exhauster services.
- Eliminate environmental pollution in town.
- Alleviate occurrence of water borne diseases.
- Construct public toilets at market places and elsewhere as required.
- Encourage and promote payments for sewer charges by residents.

#### **12.3.4 Institutional Considerations**

The Narok Town at present lacks the necessary qualified and experienced technical staff to implement and run the existing and future proposed infrastructure like roads, stormwater drainage water supply and sewerage system etc.

This makes it fairly difficult for the Town or the new County Government to meet its 2030 vision aspiration on infrastructure development. It is recommended that the new County Government of Narok (CGN) establishes a new technical team which is qualified and experienced to manage the infrastructure development of the town.

There is also need to provide suitable office space and equipment to enable the staff to carry out their duties as expected.

## **12.4 ENVIRONMENT STRATEGIES**

### **12.4.1 Solid Waste Management**

- Town to pass by-law requiring all town residents to have waste bins.
- Town to install street bins and elevated masonry waste storage cubicles for ease of waste collection.
- Increase waste collection coverage and frequency.
- Adopt the seven instruments proposed for plastic management for Kenya (UNEP, 2005) Box1.
- Use enclosed and NEMA licensed waste collection vehicles.
- Close and relocate the illegal dumpsite to the official dump site. Fence and plant trees along the new dumpsite boundary and cover deposited waste with soil.
- Provide protective clothing to waste handlers.
- Establish a department of Public Health and Environment (PHE) in the Town to handle

solid waste management among other environmental issues. The environmental section can later be elevated to a fully-fledged environmental department.

- Provide adequate waste handling technology.
- Make waste management bylaw and build enforcement capacity for the existing waste management laws.
- Promote waste recovery/recycling.
- Handle and dispose hazardous waste separately from the normal municipal waste.
- Follow hazardous waste management guidelines.

*Table 12.1: The Proposed Plastic Management Policy for Kenya*

(1)	A ban on plastic shopping bags that are less than 30 microns in thickness.
(2)	Consumer awareness and anti-littering campaign.
(3)	Promotion of voluntary schemes such as a national code of practice for retailers.
(4)	A plastic bag levy collected from suppliers.
(5)	Support for development of environmentally-friendly alternative bags.
(6)	Support for development of an effective plastic bags recycling system.
(7)	Support for development of a managed disposal system to cater for the plastic bags that will enter the waste stream irrespective of the measures taken.

Source: UNEP, 2006

#### **12.4.2 Waste water disposal**

Provide sewer especially in CBD and the high density areas

#### **12.4.3 Degradation of Water Resources**

- Observe 10-30 metres wide riparian reserve from the high water mark on all water bodies and keep it under natural vegetation cover.
- Control water polluting sources/agents.
- Discourage more human settlements/population and land subdivision to a minimum of one acre near water sources.
- Control grazing and agricultural activities in the swamps, wetlands and other water catchment areas.
- Formulate detailed environmental management plan for the swamps and other water resource areas.
- Control human activities at or near the water sources. Use the waters sources sustainably for domestic, livestock and small scale irrigation, fishing, recreation and ecotourism. Form a water users/ stakeholders management committee and formulate a comprehensive environmental management/action plan to help in managing the water resources.
- Provide sewer or waterborne toilets to stop potential of underground water pollution.
- Remove and stop planting eucalyptus tree species near water sources and replace them with endemic (indigenous) vegetation.

#### **12.4.4 Vegetation Cover/ Afforestation**

- Increase vegetation cover town wide with dominant indigenous species such as Acacia species, Markhamia Lutea, Ficus natalensis, Ficus sycomorus, Ficus thonningii, Albizia species, Kroton species, Podocarpus falcatus, Prunus Africana, Bamboo among others.

The Sub County Forest Officer to advice on the suitable indigenous species.

- Use carbon credit mechanisms to promote tree planting. Involves annual financial payment for keeping some agreed woodlot (Contact NEMA office for details).
- Promote efficiency in wood fuel utilization
- Promote use of non-wood building materials and energy sources
- Practice agro forestry
- Control livestock grazing in urban beautified areas

#### **12.4.5 Land Degradation**

- Control soil erosion on roads and bare spaces including “shambas”. Use engineering road side erosion control techniques, plant vegetation cover, terrace sloppy areas and pave dusty roads and footpaths.
- Control overgrazing
- Control the specified land pollution sources/agents
- Ensure building demolition and excavated materials are dumped on Town authorized sites.
- Discourage unsustainable agricultural practices that remove vegetation cover.

#### **12.4.6 Flooding**

- Provide adequate storm drainage system in the CBD and in the densely built up areas and keep it free from blockage
- Drain the flooded areas
- Enhance sustainable management of upstream water catchment areas and forest to avoid downstream flooding
- Use engineering and environmental flood control measures
- Keep the flood prone areas and the river riparian free from human activities/development.

#### **12.4.7 Drought**

- Build capacity in drought forecasting/early warning systems, mitigation and adaptation.
- Diversify economic livelihoods to non-climate based ones.

#### **12.4.8 Environmental hazards**

- Cover urban storm drainage system
- Backfill open holes and abandoned quarries on the land

#### **12.4.9 Air pollution**

- Ensure vehicles meet exhaust emission standards
- Promote use of non-motorized transport, organize it and provide the necessary supporting infrastructure such as cycling lanes and parking grounds
- Control open burning of materials including solid waste especially in crowded areas
- Safely dispose rotting organic matter and improve hygiene standards in pit latrines, urinals and waterborne toilets to kill the foul smells
- Pave roads/footpaths and improve land vegetation cover to contain dust

- Promote use of cleaner domestic energies such as electricity and liquefied Petroleum Gas to control indoor air pollution

#### **12.4.10 Aesthetic Pollution**

- Siting of outdoor advertisement billboards and signs boards to be approved and regulated by Town Department of Physical Planning
- Control illegal structures and building materials
- Enhance greenery and town beautification

#### **12.4.11 Noise pollution**

- Promote use of acoustics materials and measures at the noise sources.
- Discourage use of loud speakers.
- Discourage heavy traffic from densely populated areas
- Enforce EMCA noise standards.

#### **12.4.12 Public Recreation Ground**

- Maintain, beautify and green the existing recreation grounds. Build public toilets, water points and provide park seats.
- Identify and establish additional public recreation grounds at strategic positions within the town and in residential areas. Buy or acquire land compulsorily
- Encourage sharing of private (e.g. hotels) and institutional (e.g. schools, churches) recreation grounds with the general public.
- Green the Kakia and Esamburmbur Gorges for environmental and recreation purpose
- Factor provision of public recreation grounds in future town development plans

#### **12.4.13 Institutional, legal and Policy Framework**

- Establish environment section in the Town's department of public health to address urban environmental issues. Rebrand it department of public health and environment and work towards establishing a fully-fledged department of environment in the Town
- Strengthen environmental by-laws and avoid overlap. Create enforcement capacity.

#### **12.4.14 Stakeholders Involvement**

- Strengthen structures for stakeholders participation in environmental matters
- Broaden incentives to attract wide participation
- Broaden and strengthen public/ private partnership
- Enhance community participation

#### **12.4.15 Poverty and Environment**

- Reduce poverty by initiating economic empowerment programs for the poor
- Work with the poor in improving their neighborhood environments
- Channel the bulk of environmental resources and programs to the poor



#### **12.4.16 Environmental Awareness**

- Promote community environmental awareness through electronic and print media (including poster), public meetings, organized sector forums, youth and women

#### **12.4.17 Environmental Management Tools**

- Ensure/promote and monitor application of environmental management tools where necessary

### **12.5 ECONOMIC AND INVESTMENT STRATEGIES**

#### **12.5.1 Growth Sectors and the Proposed Overall Strategy**

The overall thrust of the proposed strategy is to generate the economic growth needed to commercialize and modernize the main growth sectors in Narok, i.e. tourism and agricultural sector (livestock and crop production). This can be achieved through transforming providing more local value content to the vast tourism potential of the Town and the wider Narok County. Secondly, agriculture must be catalysed by growing of high-potential value chains and the promotion of diversification into higher-return, on- and off-farm activities. Better integration of local land holding in a more modern tourism land leasing mechanisms combined with sensitivities to the traditional livestock and emerging modern livestock and agricultural practices is important. The development of selected value chains will have multiplier effects that spawn off non-farm employment opportunities. Narok is not a poor County and hence the focus will not be the conventional catchphrase of “reducing poverty and hunger” but to deliberately address the needs of smallholder farmers through possibilities of linking the wider Narok’s large number of smallholder farmers into growth opportunities by improving links to markets and input access, providing affordable business development and financial services, and promoting greater diversification – specifically tailored to the needs of smallholders, women and youth – value chain programmes will aim to “pull” rural households into income-raising activities. Focus will be on improving access to the knowledge tools, buys down risk, and enhances natural resource management needed by vulnerable groups to transition into market-oriented activities in manufacturing, agriculture and tourism.

#### **12.5.2 Catalysing Agro Value Chains**

Smallholder and large scale farming in the wider Narok County must be transformed. For smallholders, the change should be from a largely subsistence activity to one that is run as a business that generates enough income with which smallholders can improve their livelihoods and make a greater contribution to the Narok economy. In this regard, value chains can play a vital role in such a transformation. Improved linkages between farmers and buyers can ensure that farmers tailor their production to meet the demands of the market, rather than simply hope that they can find a market. This will reduce wastage. As value chains become more inclusive, smallholder farmers can access markets that would previously have been denied to them. They can become more actively engaged in adding value to products, by improving quality, packaging and presentation. Development and deepening value chains in Narok can facilitate input supply and finance. This means that processors have greater assurance of raw material supply, thus increasing the use of their processing capacity, reducing costs, and offering reliable employment opportunities. Moreover, developing strong linkages with buyers such as importers and supermarkets provides scope for processors, wholesalers and exporters to innovate. Last but not least, issues of environmental sustainability can be more easily addressed through collaborative chains than when farmers produce in an ad hoc way.

Successful value chains depend on the willingness of all chain actors to communicate, coordinate and collaborate. There is such scope for multi-stakeholder action, either to

address weaknesses in individual chains or to bring together those involved with a particular commodity, including farmer representatives, into associations to resolve common problems and to act as a forum for policy dialogue. It is expected to build on the excellent collaboration shown by those involved in running various programmes in order to promote improved coordination among donor agencies and a better alignment of their work to Narok's priorities.

Increasing attendance at demonstration of new technologies at farmer training centres in Narok would enable them to see first-hand the effects of new methods before taking the gamble of trying the techniques on their own land. There is also need to encourage more smallholders to pick up skills in business and marketing via farmer-based organisations and agriculture business centres. These bodies provide support with inputs such as seeds and fertilizer and the opportunity to pool money together to purchase equipment and to sell produce in bulk. Leaders of the groups receive business training, which they take back to the farm families in their local areas.

In Narok, NGOs are emerging as key agents in supporting agricultural producers and are delivering business management services through coaching programmes. They can also be trail-blazers. NGOs are well placed to try out new approaches and experiment and when their initiatives work they can be taken up by the private sector. Private sector players are providing business services too.

In order to contribute towards a meaningful impact on achieving the objectives of transforming the economic profile of Narok, there will be need for establishment of a wide range of, and strengthen existing, partnership initiatives to leverage resources and expertise beyond the Town's budget to address the economic development challenges of accelerated and shared economic growth and job creation in Narok Town.

Hence there will be need for:

- Increasing value addition in Narok County's vast livestock and existing agricultural production which is minimal.
- Intensification of the cultivation of high value vegetables.
- Processing hides and skins in Narok at Ewuaso Ng'iro to add value.
- Rrotian in the hinterland of the County can be catalysed to provide important urban services to its agricultural areas. This centre has the potential of growth agro based industrial sector specializing on value addition of their agricultural produce. The crops include wheat, barley, maize and numerous horticultural crops such as potatoes, carrots, beans as well as milk. It can be encouraged efforts to grow high value vegetables both for Narok Town and region's towns/cities.
- Promoting Lemanet as a new centre for agro processing and logistics.

### **12.5.3 Improving Business Environment**

The 2010 and the recently-launched Doing Business in Kenya 2012 report compares business regulations across Kenyan towns with a focus on local and national regulations that affect 4 stages in the life of a small- or mid-sized domestic enterprise, i.e. starting a business, dealing with construction permits, registering property, and enforcing contracts. The report shows that differences in local regulations and in the enforcement of national-level regulations can enhance or constrain local business activity. These findings suggest that localities in Kenya can learn from each other and adopt good practices that are already working within the country.

Doing Business in Kenya 2010 was the first sub national report on the country. Although there are differences in the number of procedures, time, and cost to do business in Kenya, some localities already perform up to international standards. In 2010, Narok, Malaba and Thika led the overall ranking (see Table 12.2 below – 2012 figures in brackets.) on the four indicators measured in the report. Isiolo, Nairobi and Kilifi lagged behind other localities. Starting a business is fastest and least expensive in Nairobi at 34 days and 36% of income per capita. Even though Narok came out no 1 overall in 2010, starting a business was slowest in Narok with 81 days, while in Malaba, the cost is almost twice as high as in Nairobi. However, the process to obtain construction-related permits and clearances is easiest in Narok, Nyeri and Malaba, but more cumbersome in Isiolo, Thika and Mombasa. Obtaining all permits to build a warehouse and hook it up to utilities takes less than 70 days in Narok, making it the 15th fastest location worldwide, the same as Denmark. Registering property is fastest in Mombasa, where it takes 23 days. In Isiolo, a special transfer tax levied by the County Town makes registering property almost as expensive as in the Syrian Arab Republic, the world's most expensive place to register property. Resolving a commercial dispute is speedy in Malaba, because the courts in Narok, where these are heard, are strict on adjournments. As a result, the 11 months needed to enforce a contract in Malaba are less than the OECD average (15.5 months).

*Table 12.2: Doing Business In Kenya 2010 And 2012 - Ranking For 11 Kenyan Towns*

Locality	Sub national Rank (2012)	Ease of starting a business	Ease of dealing with construction permits	Ease of registering property	Ease of enforcing contracts
Narok	1 (2)	9 (8)	1 (5)	3 (5)	2 (2)
Eldoret	8 (5)	5 (10)	7 (2)	6 (7)	5 (5)
Garissa	7 (4)	11 (12)	5 (3)	10 (8)	1 (1)
Isiolo	11 (7)	4 (2)	11 (4)	11 (13)	4 (4)
Kilifi	9 (9)	7 (3)	8 (11)	7 (11)	6 (6)
Kisumu	4 (8)	7 (13)	4 (10)	2 (2)	8 (9)
Malaba	2 (1)	10 (6)	3 (1)	5 (4)	3 (3)
Mombasa	5 (6)	3 (9)	9 (7)	1 (1)	9 (8)
Nairobi	10 (13)	1 (5)	5 (11)	9 (12)	11 (13)
Nyeri	6 (10)	5 (10)	2 (6)	8 (10)	10 (10)
Thika	3 (3)	2 (1)	10 (7)	4 (3)	7 (7)
Kakamega	N/A (11)	N/A (6)	N/A (9)	N/A (9)	N/A (12)
Nakuru	N/A (12)	N/A (4)	N/A (13)	N/A (6)	N/A (11)

Source: World Bank (2009, 2012)

In 2012 however, Malaba dislodged Narok from the top overall position. Indeed in terms of dealing with construction permits, the very essence why Narok was top in 2010 saw a drop to 5th position as was the ease of registering properties. One of the reasons it takes longer to start a business in Kenyan localities is the many steps required: 3 more than the Sub-Saharan Africa regional average and 3 times as many as in Senegal.

Dialogue with the private sector will be an important component in the architecture of promoting business in Narok. There will be need to ensure that the economic and social dialogue between the Town, government and the private sector in Narok takes root. Without such a dialogue, promotion of investments in Narok will not be successful and dealing with business will be on a lethargic "business as usual" mode. Activities will focus, partly on the capacity building needed in private sector business associations in order for them both to be able to speak on behalf of the private sector and to match public sector as equal partners

in informational analysis and dissemination needed to facilitate and support the formalized dialogue between the Town, Government and the private sector.

Traditionally, business associations have advocated policy on sector basis. The SMEs have largely been left out of policy dialogue. With the recently enacted SME Act, it would therefore be important to train and coach leaders of the SME in leadership, governance, advocacy and communication, strategic planning, research and resource mobilization.

#### **12.5.4 Promotion of Tourism**

Tourism has over the past three decades become a key socio-economic sector in Kenya with the sector today contributing over 18 per cent of the country's foreign exchange earnings and providing job opportunities to thousands of Kenyans. The Ministry of tourism endeavours to put into consideration various ways to diversify the Kenyan leisure product. Product diversification is geared to be in line with the now popularized concept of Ecotourism as opposed to Mass Tourism. The new concept is a move to a sustainable form of tourism in which all stakeholders obtain optimum benefit while causing minimum damage to the environment. A variety of attractions are encouraged, in a way that focuses on both natural and cultural resources. There is a major shift towards cultural attractions in all tourism circuits.

In Narok, there is need for better integration of the Mara Tourism circuit with hospitality services in the Town as well as developing the transit position of the Town for travellers to Western Kenya. Within the town there is need develop recreational facilities around the river. Given the rich Maa culture, there is an urgent need to establish a modern Maa Cultural Centre in the Town incorporating a museum, Exhibition Hall showcasing the Mara tourism attractions and related promotional facilities.

#### **12.5.5 Developing Wholesale and Retail Trade in Smaller Towns**

Apart from the necessary support for the reconstruction of community businesses in critical agricultural value chains as discussed above, there is an even more important need to create business workspaces for small scale traders in the smaller centres within Narok Town, e.g. Ewaso Ng'iro, Lemanet and Rrotian. In partnership with the County Government of Narok (CGN), it is proposed that traders be facilitated in acquiring workspace through the construction of modern open market sheds. Discussions with traders suggest that there is great need for work space and that private business groups are willing to access loan facilities to develop market stalls.

Apart from the programme for traders described above, this component would also include the current programme to set up Industrial Parks in towns throughout the Country.

Workspace is one of the most crucial factors in the success of small businesses as it is reflected in rent. Traders are ready, willing and able to pay for workspace and small businesses should be catalysed to develop markets in collaboration with CGN. This component is specifically mooted to have interventions that solve the problems that have over the years hindered the growth of the MSE sector in Narok despite their being many initiatives targeting its growth. The burden of lack of permanent workspaces has been one of the biggest reasons for failure of many MSEs in Narok.

#### **12.5.6 Business Skills and Enterprise Training**

The objective of this strategic component is to improve the competitiveness of micro, small and medium enterprises. These enterprises will be supported to improve access to

new markets and to upgrade their technology and processes through linkages with large enterprises and research institutions and to improve access to financial services. Two sub-components may be envisaged under this component. These are: increased access to new markets and technologies, including piloting vertical linkages; and increased access to financial services.

This sub-component will assist small and medium enterprises (SMEs) to increase their competence in a dynamic market environment. Access to markets by SMEs is hindered by lack of viable market information, weak entrepreneurship and limited access to appropriate technology. Product quality, in most cases, does not match the standards required to penetrate regional and global markets. This sub-component will therefore seek to improve the competitiveness of SMEs by improving access to new markets, market information and appropriate technologies. To overcome entrepreneurial challenge the sub-component will support access to technical knowledge and training in business development services (BDS). There will be a particular focus on supporting vertical and horizontal linkages with larger enterprises, through sub-contracting, franchising and other business networks.

An area that is showing promise for integrating youth aspirations nationally with the realities of rural life is the ICT revolution. It is proposed that there be established a Centre for Excellence in ICT where talented youth can freely develop their ICT talents

### **12.5.7 Increased Accessibility and Availability of Financial Sector Services**

There are many financial institutions in Narok Town. If SMEs are to develop and compete in a dynamic environment, they must access technologies, markets and business related skills. This access will be possible only if these enterprises have adequate access to financial services. It has been recognized that although there may be liquid funds available in commercial banks and MFIs, structural rigidities in the financial sector and the perceived risks of lending to SMEs undermine the ability of these enterprises to access credit and other financial services on terms and conditions that are the focus of this sub-component. In enabling the MFIs to serve the needs of those SME's that have the potential to grow through; linkage to other enterprises, financial support and capacity building, it is envisaged that the MESP financial institutions that is already a partner in the agro-business support could play a role in promoting access to appropriate funding by SMEs.

## **12.6 HOUSING AND SETTLEMENTS**

### **12.6.1 Formal and Informal Housing**

The main identified problems include; limited supply of rental housing in the town, high rents, and poor housing structures coupled with inadequate attendant infrastructure, expansion of informal settlements, no formal subdivisions, incompatible land uses, non-adherence to planning and building legislations and regulations and inadequate building finance.

#### **Strategies**

- (1) Re-planning of parts of the town exhibiting informality and ensure observance of development control regulations. These will include among others Lower Majengo, Bobong next to the Post Office, developments facing the town after the administration police lines. Block eleven (11) in the vicinity of Maasai Mara University also needs to be re planned to take into recognition the current development trends that have emerged as a result of the location of the university. Discourage irregular development around the University.

- (2) Zone the areas surrounding Narok Township – especially Olopito; Naisoya, Ilmashariani, and Oleleshwa and ensure observance of development control standards and guidelines. Development control should also be undertaken in other middle and high income areas. These include the University Area and the area around Oleleshwa group ranch, London, Roadstar depot, Kenol area and Lenana.
- (3) Deployment of adequate personnel with requisite skills in the sector;
- (4) Provision of support infrastructure (portable water supply, electricity, sewerage);
- (5) Establishing regularization procedures and undertaking regularization programme for all identified informal developments in the town;
- (6) Develop appropriate mechanisms for availing affordable housing finance,
- (7) Public education on planning and other aspects of building/construction

### **12.6.2 Housing Typologies and Conditions**

Some of the related issues include dwellings mostly built of temporary materials, with poor sanitation and infrastructure facilities, sprawl and poor utilization of both land and the available infrastructure. Within the low income areas standards are not observed including open markets that are congested and thereby restricting movements. Within the middle income area (University Area), developments are done without any conditions attached to them; “London area” is characterized by tiny subdivision, with narrow 6 m roads, no formal subdivisions, and heavy reliance on pit latrines and inadequate and poorly maintained public houses.

Some of the following strategies are proposed to address some of the shortcomings identified above:

- (1) Promote and encourage development and utilization of alternative building materials and technologies
- (2) Strengthening development control –by developing locally and widely accepted building and planning guidelines
- (3) Built capacity to enforce planning and building standards and norms.
- (4) Working with the sub-committee on building and planning, to enhance self-regulation at local level.
- (5) Rationalize road sizes as per set standards by respective government agencies.

### **12.6.3 Spatial Location of Housing**

Some of the identified challenges include lack of separation between residential constructions and other activities and incompatibility of uses, construction on riparian areas and other fragile areas, dumping of waste into rivers and presence of noisy entertainment areas within residential areas.

**Strategies:**

- (1) Zoning and enforcement of zoning regulations; Riparian Reserves and other Environmentally Fragile Areas should be protected from developments e.g. Enkare Narok, Siaipei, Kafia, Esamburbur and Ewaso Ng'iro river basins, and wetlands
- (2) Participatory re-location and resettlement of people living in the environmentally fragile areas and other unplanned parts of the town.
- (3) Strict enforcement of NEMA Noise and Excessive Vibration pollution Control regulations, 2008.

**12.6.4 Housing Demand and Supply**

One of the key challenges noted is the absence of comprehensive and reliable data covering the housing stock, trends and actors in housing construction industry in Narok.<sup>2</sup>

**Strategies**

- (1) Utilize the findings from national housing surveys with particular focus on planned area for effective planning and implementation of housing in Narok.
- (2) Better tracking of building approval and actual construction and building. Encourage close collaboration and feedback between contractors and Town

**Programme**

- (1) A multi-layered programme for lowering housing costs in Narok and enhancing access to housing

This will entail concurrently dealing with the following strategies: making land affordable and accessible to majority of Narok people; innovatively availing project and end user financing; in-building sustainable subsidies into the programme; re-engineering imaginative designs and layouts and wide use of appropriate technologies and techniques; eliminating speculation; while encouraging incremental house construction and labour equity.

**12.6.5 Housing Support Infrastructure**

The main challenges include; poorly developed infrastructure, inadequate water supply, lack of sanitation, and electricity among others.

**Strategies**

- (1) There will be need to allocate sufficient resources to low-cost onsite systems which can fill the sanitation gap in the short-to medium term
- (2) In the medium-long term, sewer and connect entire town;
- (3) Public awareness on importance of using toilets to reduce open /bush defecation;
- (4) Strengthening of exhauster services can also be pursued as an immediate measure where residents construct concrete lined latrines which are regularly exhaustible;

<sup>2</sup> The on-going national survey by Ministry of Housing and National Bureau of Statistics, 2012-13, once completed will provide additional useful data on housing in Narok

- (5) Enhance rain harvesting, water supply and connectivity at household level;
- (6) Encourage domestic water harvesting
- (7) Develop maintenance guidelines articulating role of developers, landlords, tenants and communities.

### **Programmes**

- (1) Collaborate with Water and Sanitation actors such as the department of public health to develop a comprehensive and phased out sanitation programme in identified areas.
- (2) A major water enhancement and conservation programme.

### **12.6.6 Constraints within the Housing Delivery Systems**

Some of the identified issues are: underinvestment in low- and middle-cost housing by private sectors, poor governance, an outdated legal and regulatory framework (lengthy and cumbersome approval procedures), and the high cost of housing finance. Others are high cost of land beyond the reach of the poor, land tenure issues that affect development, few local contractors as well the varying cost of building materials.

### **Strategies**

- (1) In the short term, popularize appropriate building technologies in order to bring down cost of building;
- (2) Three broad housing categories of different neighbourhoods are developed in Narok town. These are: Low Density -High income; Medium Density -Middle Income, and High Density-Low Income
- (3) Encourage private public partnerships in housing construction by providing incentives to developers;
- (4) Review of existing regulatory framework to provide an enabling working environment and support sufficient growth of the housing subsector.
- (5) Designs, quantity and quality that meet the current needs for the low income should be encouraged.
- (6) Introduce innovations in housing finance; - the county government working with national government to introduce housing incentives. There are existing opportunities in Real Estate Investment Trust which was recently launched by Capital Market Authority (CMA). The Town in partnership with county government to establish a Land banking programme to forestall increases in land costs; long term mortgage facilities suitable for the low income earners.
- (7) Formation and popularize housing cooperative in order to pull resources together towards housing. Well established actors can be brought on board to mobilize housing resources e.g. NACHU.
- (8) Titling of land parcels to enable access to credit and for ease of development process.
- (9) Encourage upgrading activities as opposed to demolitions in unplanned settlements.



## **Programmes**

- (1) Aggressive land banking
- (2) Promote increased participation of both county and national governments in housing supply in the town through existing institutional frameworks such as Civil Servants Housing Scheme and National Housing Corporation (NHC).
- (3) Public education programmes: on various aspects of building/construction; plan approval, development control , observance of road reserves and riparian restrictions etc
- (4) Ensure that private developers are reimbursed by service providers for capital cost undertaken through their initiative with prior approval of the service provider.

## **12.6.7 Social Infrastructure**

### **12.6.7.1 Educational Infrastructure**

Constraints include crowded classrooms in public primary schools, few teachers, poor state of classrooms, low education standards, sparsely located as compared to geographical scope. There are also limited special schools. Universities have also grown without inadequate planning for student accommodation.

#### **Strategies:**

In the short term improve and expand educational facilities in Narok;

- (1) Rationalize distribution of schools to enhance accessibility;
- (2) Hire more staff;
- (3) Construction of special schools;
- (4) Developing hostels for student accommodation, including zoning areas for such use.
- (5) Encouraging public private partnership in provision of facilities and services

### **12.6.7.2 Health**

The main problems facing health subsector include inadequate maternity services including ward; lack of personnel (doctors, nurses, midwives etc), inadequate drugs in the health facilities, expensive service from the private clinics, and limited equipment in public health facilities. Encroachment on land meant for health institutions is also a major challenge in Narok.

#### **Strategies**

- (1) Deployment of more medical personnel to the existing facilities
- (2) Expand maternity wards
- (3) Increase coverage of health facilities across the planning Area with focus on areas with deficits

- (4) Provide water to the hospitals/health centers
- (5) Encouraging public private partnership in provision of facilities and services
- (6) Map and survey health infrastructure land and provide titles.
- (7) Clearly demarcate and fence health infrastructural land

#### **12.6.7.3 Community Facilities**

Recreational facilities are inadequately provided despite the large population in the area. The existing ones are not well located. Their maintenance is also quite dire and utilization is infrequent.

##### **Strategies:**

- (1) Renovation of the Narok Stadium
- (2) Promote the use of the existing open spaces and community facilities with full engagement of the youth
- (3) In the case of sporting facilities avail trainers and equipment
- (4) Construction of social halls, play grounds and open parks
- (5) Develop guidelines on maintenance of open spaces and community facilities
- (6) Encouraging public private partnership in provision of facilities

##### **Programmes:**

- (1) Buying of land for recreational facilities
- (2) Collaboration and partnerships with the private sector to rehabilitate existing open spaces and community facilities

#### **12.6.7.4 Religious Purpose**

##### **Strategies include**

- (1) Ensuring that religious institutions observe designated land uses to avoid incompatibility/conflict with other uses.
- (2) Religious purpose should encourage multi use where their facilities (schools, open grounds etc) are open to the public.
- (3) Design of religious buildings should enhance internal acoustics to minimize noise pollution.

#### **12.6.8 Land Use and Housing**

Some of the land related challenges identified include high cost of land, excessive subdivision, encroachment on road reserves and way leaves etc. Demand for types of land will vary depending on what the land is used for and the kinds of activities that will take place on the land. Retail and commercial uses for land in the right place tend to allow land users to extract greater profit.

**Strategies:**

These shall include:

- Short term measures should include community education on appropriate space requirement standards, disadvantages of excessive subdivisions and proper use of land
- Involvement of community in setting aside and safe guarding land for roads and services.

**Programmes:**

These shall include:

- Surveying and titling of plots as an urgent matter
- Identifying land for land banking and developing appropriate basic infrastructure

**12.6.9 Building Materials**

The Building materials sub sector in Narok is characterized by few local contractors as well the varying availability and cost of building materials.

**Strategies:**

- Build the capacity of local contractors through training and skills transfers
- Identify low cost building technologies suitable for the area
- Ensure compliance of contractors with the National Construction Authority Act

**Programmes:**

- Promoting the green buildings concept and the use of appropriate building materials,
- Promote utilization of renewable energy,
- Publicize building works tender requirements and educate the public on the same.
- Promote the participation of public in tendering for building works
- Ring fence a category of building works for local contractors only

**12.6.10 Development Control**

Narok is characterized by poor access roads, limited water and sewer connections suggesting that development control which involves implementation of the approved plans and enforcement of by-laws and regulations at the micro level is lacking. To secure socially acceptable minimum standards, and provide the essential characteristics of land uses such as road patterns and public utilities the following strategies and programmes will apply.

**Strategies:**

- Establish effective mechanisms to proper development control based on sound objectives
- Preparation of appropriate urban land use development plans
- Review of existing regulatory framework to provide an enabling working environment and support sufficient growth of the housing sub-sector.
- Advising private developers on the most appropriate use of both public and private land

**Programmes:**

- (1) Public education programmes: on various aspects of building/construction; plan approval, development control , observance of road reserves and riparian restrictions etc.
- (2) Streamlining the approval process by providing a one-stop service center
- (3) Publicize penalties for flouting existing regulations
- (4) Hire/recruit staff with technical capacities within relevant departments/sections.

**12.6.11 Service Provision**

Narok town is characterized by an inadequate mix of services that can best be addressed by local preferences. This is further encumbered by conflict and competition with other existing service providers to supply the bundle of services that best addresses local priorities.

**Strategies:**

Collaboration should be sought between the town and other service providers.

**Programmes:**

Initiate joint planning programmes with other service providers such as the Ewaso Ngiro South basin authority.

**12.6.12 Housing finance**

The low levels of home ownership in Narok characterized by manyattas and tenancy is driven by limited access to affordable land, high house prices relative to household income, and high finance costs. Additionally Housing microfinance is a relatively new product. As a result, there are few formal channels. These factors, in combination, severely constrain house ownership.

**Strategies:**

- (1) Introduce innovations in housing finance; - the county government working with national government to introduce housing incentives. There are existing opportunities in Real Estate Investment Trust which was recently launched by Capital Market Authority (CMA). The Town in partnership with county government to establish a Land banking programme to forestall increases in land costs; long term mortgage facilities suitable for the low income earners.
- (2) Encourage microfinance options through formation and popularization of housing cooperative to pull resources together towards housing. Established actors such as NACHU can be brought on board to mobilize housing resources.
- (3) Titling of land parcels to enable access to credit and for ease of development process.

**Programmes:**

- (1) Promote increased participation of both county and national governments in housing supply in the town through existing institutional frameworks such as Civil Servants Housing Scheme and National Housing Corporation (NHC).

- (2) Promote the formation of primary housing cooperatives by members of group ranches close to urban area.

## **12.7 Revenue Enhancement Strategy**

### **12.7.1 Increase Reliance on Local Revenue Sources**

To eliminate revenue deficits the TOWN needs to enhance annual revenue yields from all its revenue sources to the point when its operations will be funded more by locally generated revenue than by externally sourced grants. The greatest potential for increased local revenue lies in charging property and agricultural activity taxes.

### **12.7.2 Contribution in Lieu of Rates (CILOR)**

The government never pays contribution in lieu of rates (CILOR) due on public lands. Government offices based in the town should be invoiced directly for rates and other local taxes due on the plots they occupy or use. The approved rate struck should apply to all properties as opposed to charging a reduced rate on lands used by government.

### **12.7.3 Maintenance of a Register of Businesses**

Single Business Permit (SBP) fee payment evasion is rampant and there is no database of individuals and businesses subject to it. This makes enforcement and monitoring of licenses revenue collection difficult. The TOWN should regularly conduct business' survey to set-up or up-date a register of businesses operating in the Town. The register should be reviewed and up-date regularly.

### **12.7.4 User Charge Services Cost Recovery**

The Town should charge fees that ensure full recovery of related operating costs and contributes to surplus reserve fund to finance planned expansion of scale and coverage of its services and renewal of its assets.

### **12.7.5 Property Tax System and Integrated Geographical Information System (GIS)**

The town's tax/rates registers, valuation rolls and survey and physical planning maps and other records that carry information such as plot numbers, sizes, levels, location, ownership and of occupancy of buildings, roads, rivers, schools, recreational grounds, etc. should be digitally integrated so that data arising from transactions relevant to revenue mobilization is captured and recorded in all related registers simultaneously and stored in a Geographical Information System (GIS) for quick retrieval for improved assessment, invoicing and collection of revenue due.

### **12.7.6 Identification and Recording of Assets and Liabilities**

The town needs to verify the nature, size, location and use and valuations of all its assets, develop a fixed assets register, and confirm or reconcile the amounts of all its long and short term liabilities

### **12.7.7 Computerization**

The town should ensure implementation of all accounting modules of the LAIFOMS accounting program.

### **12.7.8 Increase Investment in Operating and Revenue Generating Assets**

The town needs to substantially increase investment in operating assets and equipment. There opportunities for investment in operating assets and equipment for efficient services delivery e.g. in refuse collection / disposal equipment and in cess pit emptying equipment and also in income generating assets such as slaughterhouses, markets, parking areas for all modes of public transport and rental housing.

### **12.7.9 Use of Resource Envelope**

The practice to apportion the available Resource Envelope equally to the wards leads to allocation of small amounts that cannot finance projects with visible impact at ward level. It should instead vote funds for projects capable of generating positive town-wide impact as identified and prioritized through the LASDAP process.

### **12.7.10 Apportionment of Development Costs to Beneficiaries**

Borrowed funds are best suited for financing the development of bankable projects e.g. markets, bus-parks, slaughter houses) whose expected returns are sufficient to service the loan repayment. Justification for use of borrowed funds exists when both the residents and the town do not have resources at hand to satisfy genuine public needs e.g. development of an access road or sewer connection. Under such circumstances the town may secure and use borrowed funds on development of the required facility, apportion the total cost of the facility to properties served by it, and recover the cost in form of a special development rate loaded onto rates normally levied on those served by the facility to facilitate repayment of the loan and operation of the facility.

### **12.7.11 Staff Capacities and competence**

The town should review the terms of service for its financial staff with a view to attract and retain appropriately qualified and experienced personnel. It should also expand its staff complement to levels consistent with the scale and spread of its operations.

### **12.7.12 Collection of Outstanding Revenue**

The town should recruit competent staff to enforce market and other by-laws and impose heavy penalties for confirmed cases of non-compliance. Civic education programs for political leaders, staff and the wider public should be mounted to enhance their awareness of their responsibility pay taxes and other government charges.

### **12.7.13 Employee Jobs Evaluation and Rationalization**

To reduce the proportion of resources committed to staff costs and to review its costs structure to give prominence to services provision, the TOWN needs to conduct job evaluations to rationalize employee jobs contents and to determine optimum staff positions per service/ activity or cost center. It should also develop appropriate training programs for its policy makers and staff to ensure their increased and positive output.

### **12.7.14 Grants and Donor Funds**

The Town should continue to lobby for increased grants revenue from the state and county governments as well as from development agents operating in Narok town.

### 12.7.15 Public Private Partnership (PPPs)

The Town should adopt policies and strategies that encourage involvement of the private sector in provision of some public services through Public Private Partnerships. Public services such as conservancy, markets, bus-park and slaughter house which can be run effectively for the benefit of the general public by the private sector on their own, as contracted agents of the TOWN or in partnership with the TOWN.

Table 12.3: Municipal Financial Structures

SECTORAL INVESTMENTS	2014/15	2015/16	2016/17	TOTAL
	KES Millions	KES Millions	KES Millions	KES Millions
Computerization	5	5	5	15
Geographical Information System (GIS)	-	15	-	15
Develop Valuation roll	15	-	-	15
<b>Sub Total</b>	<b>20</b>	<b>20</b>	<b>5</b>	<b>45</b>







# Chapter 13

## DEVELOPMENT SCENARIOS FOR NAROK TOWN

### 13.1 OVERVIEW

The viability of the formulated vision was further reviewed through the analysis of the existing spatial structure, institutional framework and detailed examination of the key sectoral aspects in order to come up with alternative development scenarios which will best suit Narok town. The alternative development scenarios that emerged were:

- (a) **Narok Town as a Smart City** with improved and modern mobility for both the residents and through traffic complementing a smart economy, smart environment, smart people, smart governance.
- (b) **Narok Town as an Eco-Resort City** through development of the Eco Centre, Maasai Cultural Village and Theatre, Taxidermic zoo and Museum, International Airport, conference facilities, development of medium sized tourist hotels at Ewuaso Ng'iro Centre and development of a nature trail in the Maasai Mau forest,
- (c) **Narok Town as a Vibrant Agro-Industrial Hub** with value addition on the agricultural produce as well as setting up of new industries such as a tannery and animal feed at Ewuaso Ng'iro and large scale flour mills as well as brewery at Rrotian and Lemanet.
- (d) **Narok Town as a University City** with Maasai Mara University and two other universities intending to set up in Narok. This will bring about increased demand for accommodation, services and facilities for students, university workers and lecturers as well as being the main economic thrust of development in the town while allowing the other sectors to grow.

### 13.2 Narok Town as a Smart City

A city can be defined as 'smart' when investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure, fuel sustainable economic development and a high quality of life, with a wise management of natural resources through participatory action and engagement.

Smart cities can be identified (and ranked) along six main axis or dimensions.

- A smart 'economy'
  - Smart mobility
  - A smart environment
  - Smart 'people'
  - Smart 'living'
  - Smart 'governance'
- (a) A '**Smart Economy**' in Narok Town will essentially incorporate the element of 'competitiveness' whereby Narok gets a competitive edge on the other towns in the South Rift as well as Kisii as

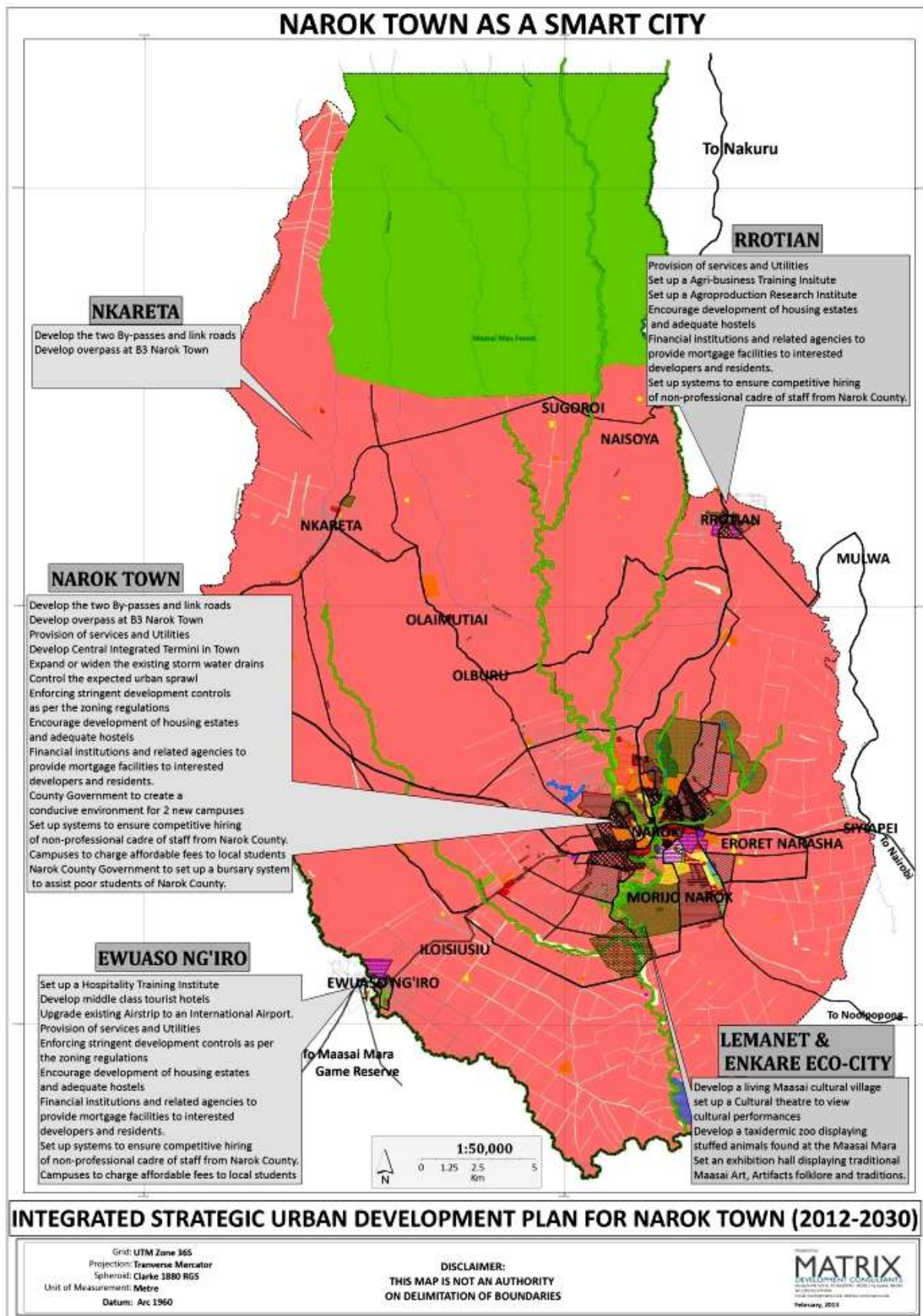
a first choice for investment destination. Narok already has the potential in terms of:

- It is known worldwide as a strategic stopover to the Mara
- It has a tourist image and a brand title as the Maasai Capital
- Rich and arable agricultural hinterland
- Welcoming and hospitable local community
- A wide and conducive resource base

The present plan intervention may have to incorporate the innovative spirit and the entrepreneurship of the people and productivity by creating a business park at Lemanet and promoting small and medium enterprises as well as agro-based industries.

- (b) On **'Smart Mobility'** (Transport and ICT) Narok Town is already connected to the capital city of Nairobi as well as the most of the towns in the South Rift, Nyanza and to Tanzania. Secondly the town already has access in many forms of ICT but our plan intervention will have to improve in local mobility within the town and the local centres by opening up of the two by passes and link roads as well as the overpass, the siting of integrated central terminal; the expansion of the existing airstrip to an International Airport and enhancement of non-motorised transport. Thirdly, the plan will have to advocate for improved use of ICT and GIS through various courses taught at institutions of higher learning and apprenticeship at Youth Talent Centres. This will create an enabling environment for innovation especially with improved education.
- (c) **'A Smart Environment'** (natural resource) in Narok essentially implies an attractiveness of natural conditions, absence of pollution, environmental protection and sustainable resource management. Our plan intervention will definitely have to address the issues of flooding and disaster management, all forms of pollution, environmental protection and overall sustainable resource use in the form of protection of riparian reserves, afforestation, banning of charcoal trade, better agricultural practices, building of higher dams, solid waste management and establishment of public sewer system and establishments of strong enforcement agents to oversee this.
- (d) **'Smart Living'** (Quality of Life) in Narok this will essentially have to include cultural facilities, health conditions, individual safety, housing quality, education facilities, tourist attractiveness and social cohesion of the people. It has been observed already that Narok is a cosmopolitan town. Our plan intervention will address the issues of cultural facilities by establishment of a Maa Cultural Village and Theatre as well as museum displaying the Art and Artifacts of the Maasai. The issue of shortage of educational facilities has also been addressed. The plan has also addressed the issue of recreation facilities and other social amenities.
- (e) **'Smart Governance'** (Participation) in Narok this will imply, participation in decision-making, public and social services, transparent governance. Before this plan intervention it was realized that Narok had a low level stakeholder participation in urban management, with the new constitution's paradigm on public participation on almost many issues this will likely to be a thing of the past. Our Plan Intervention itself is one of the products of the Public Participation so that the local participants will have the right to own the plan. The Plan Intervention has also come up with proposals on 'Transparent Governance'. The county has devolved funds and devolved functions over Governance, in other words giving governance authorities to the local people. **Map 13.1** overleaf shows the above strategic proposals towards making Narok a 'smart city'.

Map 13.1: Narok as a Smart City



Source: Matrix Development Consultants, March 2014

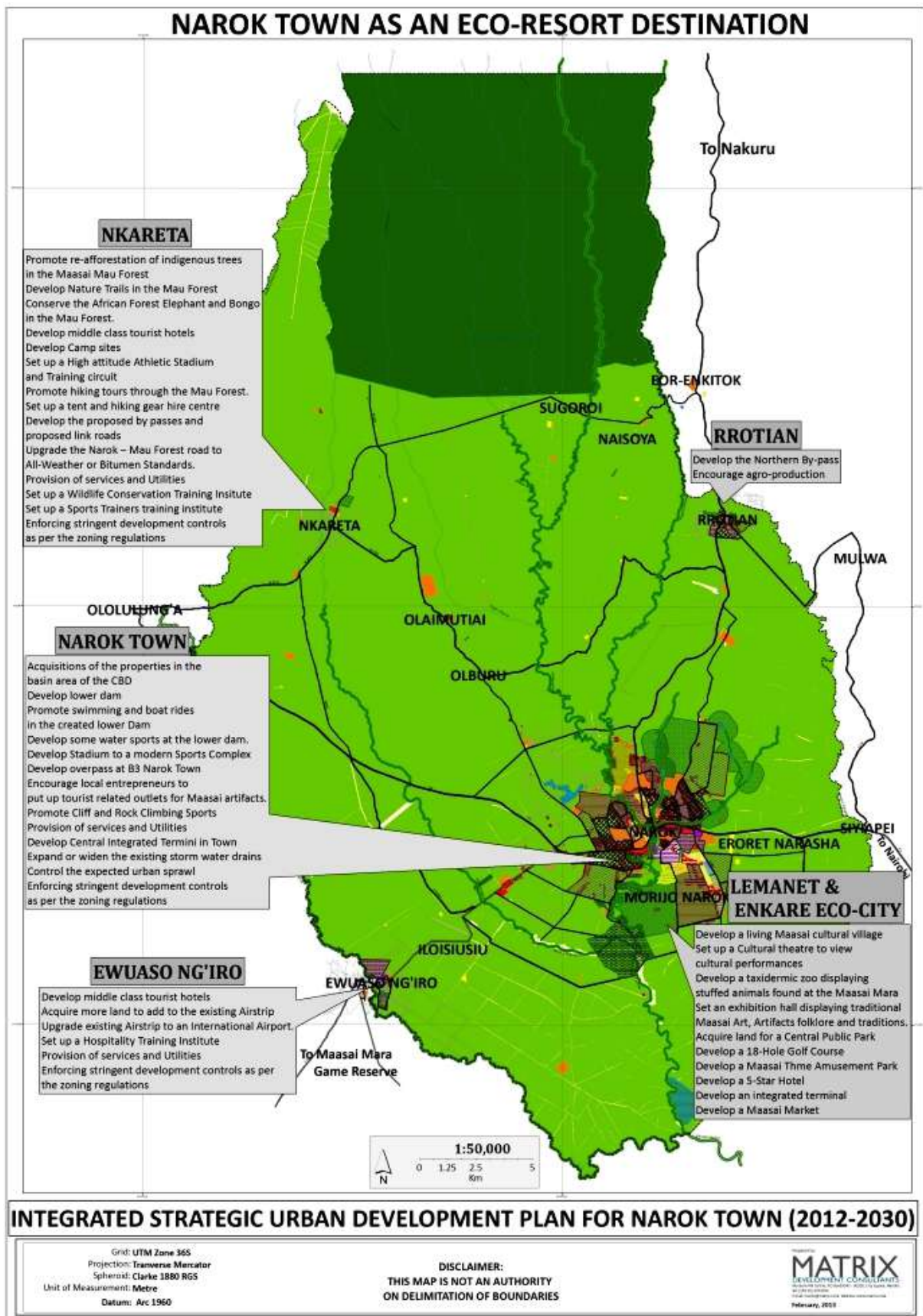
### 13.3 Narok Town as an ECO- Resort City

A 'resort town' sometimes called 'a resort city or resort destination' is a town or area where tourism or vacationing is a primary component of the local culture and economy. Most resort towns have one or more actual resorts in or nearby. Being the gateway to the Maasai Mara and the possible development of some critical facilities such as a golf course, nature trails, a Maasai cultural village and theatre, a museum, an International Airport, existence of good hotel accommodation and improved mobility and services will definitely qualify Narok Town to be a resort town. The action Plans toward achieving this scenario will be:

- (a) Develop the Maasai cultural village at Lemamet which should include a theatre to view cultural performances.
- (b) Develop a taxidermic zoo and a cultural museum displaying stuffed animals found at the Maasai Mara and displaying traditional Maasai Art, Artifacts, folklore and traditions.
- (c) Acquire a site at Lemamet Area for putting up a Nine hole Golf Course
- (d) Acquire more land to add to the existing Airstrip so as to qualify putting up an International Airport.
- (e) Develop Nature Trails to view the African Forest Elephant (who number around 200) and Bongo in the Mau Forest. Camp sites will have to be developed for this purpose.
- (f) Come up with the hiking tours through the Mau Forest.
- (g) Develop middle class tourist hotels at Ewuaso Ng'iro centre as well as Nkareta.
- (h) Develop a high attitude Athletic Stadium and Training area in the town.
- (i) To encourage local entrepreneurs to put up tourist related outlets for Maasai artifacts.
- (j) To develop the proposed by passes, proposed link roads and the Narok – Mau Forest road to All Weather or Bitumen Standards.
- (k) Promote re-forestation programmes in the Maasai Mau Forest particularly of indigenous trees or other friendly species.
- (l) Promote good agricultural practices on the higher areas and allow for mixed agriculture.
- (m) Construct the proposed 7 dams along the Esamburmbur and Kakea valleys towards reducing the flood menace.
- (n) Expand or widen the existing storm water drains which will help move the flood waters into the Enkare Narok at a faster rate.
- (o) In the medium term develop the overpass and the lower dam after acquisitions of the properties in the basin area of the CBD
- (p) Develop some water sports at the lower dam.

Map 13.2 overleaf depicts the location of the various activities proposed towards the realization of this development scenario.

Map 13.2: Narok as an Eco-Resort Destination



Source: Matrix Development Consultants, March 2014

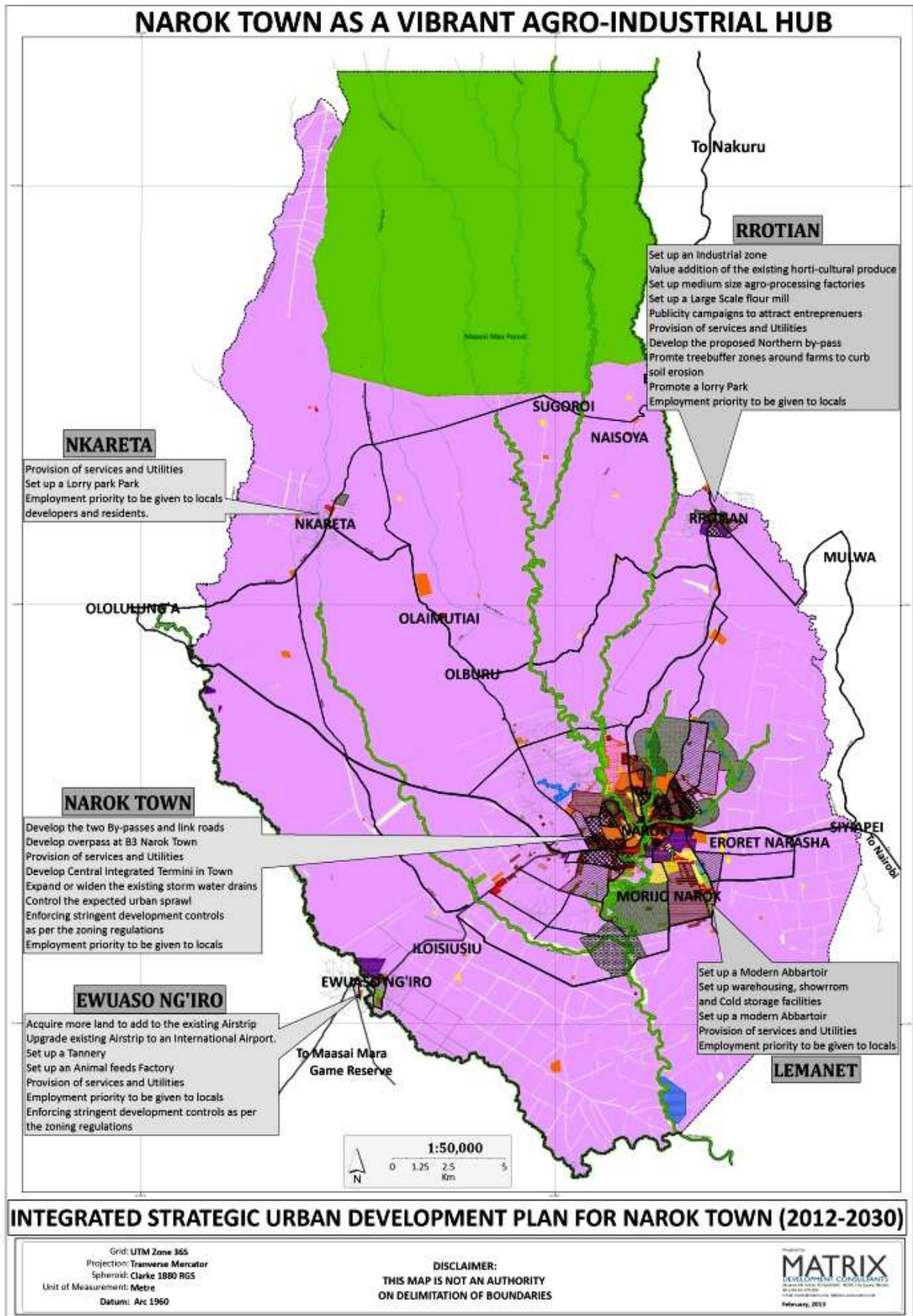
### 13.4 Narok Town as a VIBRANT Agro-Industrial HUB

This envisages Narok as an agro-based industrial centre taking advantage of its rich agricultural hinterland. Its agricultural production includes wheat, maize, barley, hops, potatoes, carrots, milk and beef production and a large variety of horticultural produce. Narok is the largest growing wheat area and yet there is not large scale flour mill. For this scenario to take shape the following activities need to be put in place.

- Setting up an Industrial Park at Lemanet
- Setting up an Industrial Zone at Rrotian
- The County Government of Narok (CGN) to carry out publicity campaigns for local and other entrepreneurs to come to Narok to set up these Industries.
- The water and sewerage service provider to provide water reticulation system and a public sewer line covering the major part of the town and Lemanet.
- Adequate power supply to be made available by County Government of Narok (CGN) involving the private sector.
- Employment priorities to be given to Narok people.
- The County Government to adequately service the Industrial Park with bitumen roads and other basic infrastructure.
- The County Government to implement development control in the usage of the land for Industrial purposes.
- Set up warehousing and cold storage facilities at Rrotian.
- Improve the road network by opening up of the bypasses and link roads.
- Avail adequate water for cattle by making sure the seven dams (7) for flood control are built.
- Create tree buffer zones around the farms so as to reduce soil erosion.
- Improve agricultural practices on the higher reaches of the town boundary.
- Among the large scale industries to be promoted should be a tannery and an animal feeds factory at Ewuaso Ng'iro, a large scale flour mill at Lemanet.
- Value addition medium size factories for the various horticultural produce can be set up at Rrotian.
- Sites for warehousing and cold storage facilities can be set aside at the Industrial Part at Lemanet.

Map 13.3 overleaf shows the various plans of action and where they will be sited within the Narok Town boundary.

Map 13.3: Narok as a Vibrant Agro-Industrial Hub



Source: Matrix Development Consultants, March 2014



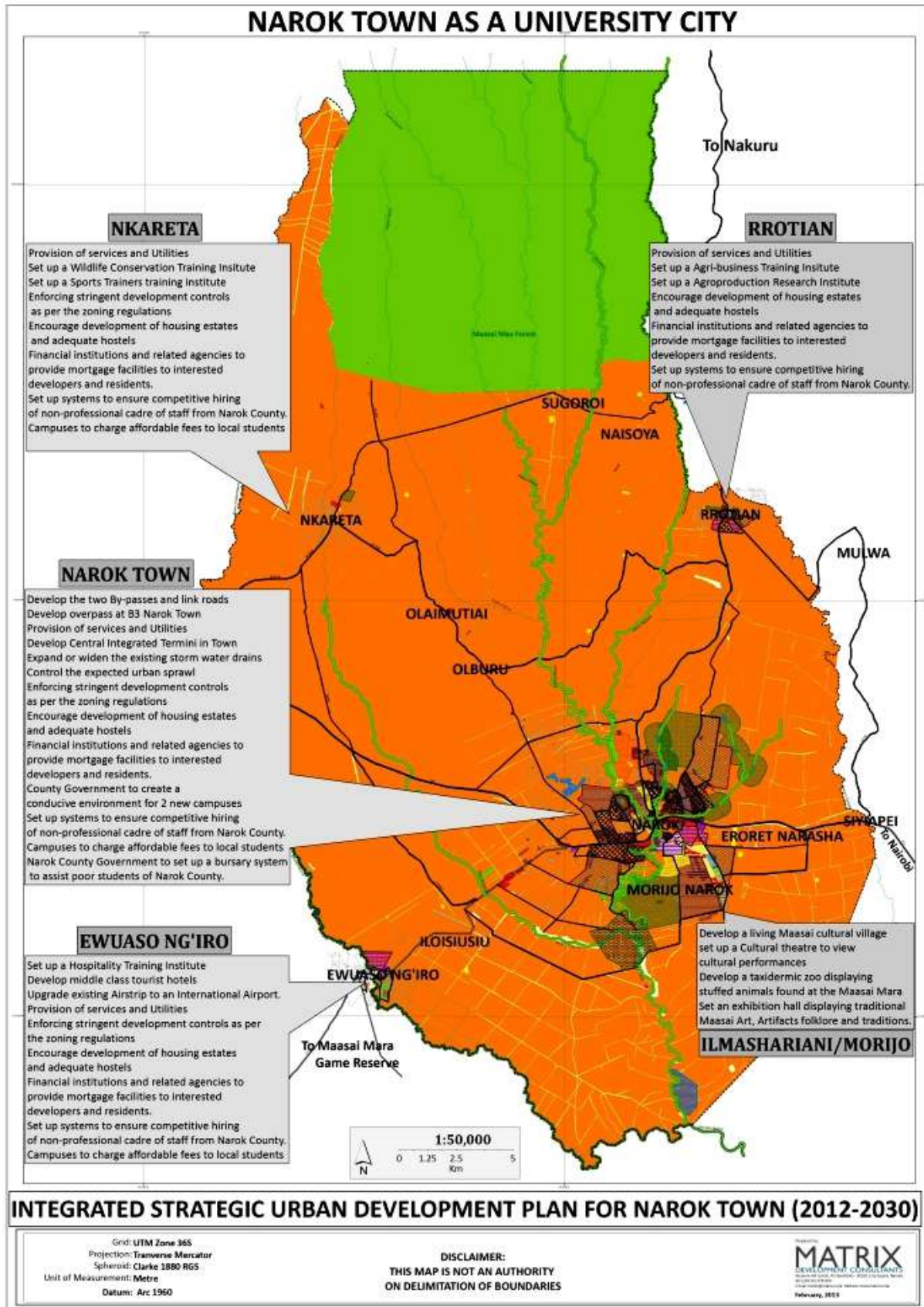
### 13.5 Narok Town as a UNIVERSITY CITY

This envisages Narok as an Educational Centre of repute in the region. Maasai Mara University has already established base in Narok town and it has been reliably reported by Narok County authorities that the Catholic University and another university are on the way to establish their presence in Narok. The implication of this is the influx of people in the form of students and lecturers who will create a demand for goods and services. This will also bring about a demand for accommodation for students, university workers and lecturers. This trend is expected to bring a multiplier effect in every facet of the economy of Narok Town and Narok County as a whole and must be planned and catered for. Under this scenario, the university education in Narok is expected to provide the main thrust of development in the town while allowing the other sectors to grow. However, for this sector to have a smooth landing, the following will have to be set up:

- The water and sewerage undertaker to provide reticulation and a sewer line to serve the town.
- Control the expected urban sprawl through the influx by enforcing stringent development controls as per the zoning regulations proposed in the different areas.
- The financial institutions and other related agencies to encourage development of housing estates and adequate hostels and provide mortgage facilities to interested developers and residents.
- The County Government to take up the challenge of providing interested residents with opportunities to invest in housing and the hostel facilities.
- The County Government to create a conducive environment for the two new campuses to be set up as soon as possible.
- Ensuring that systems are in place for non-professional cadre of staff to be competitively hired from Narok County.
- The campuses to make their fees affordable so that local students could also be able to enroll.
- The County Government to establish a bursary system to help deserving, bright but poor students of Narok County.

Map 13.4 overleaf shows some areas of action and where they will be sited within the Narok Town boundary to promote it as a University City.

Map 13.4: Narok as a University City



Source: Matrix Development Consultants, March 2014



# Chapter 14

## STRUCTURE PLAN

### 14.1 Overview

The projected population for Narok Town in the intervening five year periods 2012-203- is given in the Table 14.1 below showing that by the year 2030, the total population of Narok Town is expected to be 364,423 with total project households of 72,885.

*Table 14.1: Narok Town's Projected Population and Households*

YEAR	POPULATION	HOUSEHOLDS
2009	67,723	13,545
2010	73,138	14,628
2013	92,367	18,473
2018	137,292	27,458
2023	205,495	41,099
2028	309,152	61,830
2030	364,423	72,885

Using the above population projections, the land requirements were then projected for the various 5 year periods and a 3 year period using the following assumptions:-

- Segregation of the population according to income levels 65% for Low Income, 25% for middle income and 10% for high Income earners.
- Since Narok is experiencing a high dependency ratio of 61% of the population being below 20 years. We had to calculate the residential land requirement by using 63.25% i.e. omitting the 0-10 year age group whom by year 2030 would still be under 19 years.
- Average household size to be five (5) persons per household.
- The development densities adopted are as follows:
  - For high density; 50% of the population will be housed in multifamily dwelling units (high rise), that is 70 units per hectare or 70 households per hectare.
  - For medium density; 30% of the population will be housed in multifamily dwelling units at the rate of 60 dwellings per hectare or 60 households per hectare
  - For low density; 10% of the population will be housed in multifamily dwelling units per hectare or 50 households per hectare.
- The residential areas will be sewered.
- The minimum plot size for the high density area to be 450 m<sup>2</sup> if unsewered or 360 m<sup>2</sup> if sewered.

## 14.2 Projected Land Requirement

Using the above mentioned projections and the various assumptions, the projected land requirements are as shown on *Table 14.2* below. The projected land requirements and the various assumptions were also used to prepare the various area action Plans as well as the various zoning Plans:

*Table 14.2: Projected Land Requirements*

code	Land Uses	Existing Land Uses		Projected Land uses (Ha)				
		2013		2018	2022	2027	2030	
		Ha	%	Ha	Ha	Ha	Ha	%
0	Residential	927.85	1.34	3199	4415	6637	8492	12.27
1	Industrial	49.25	0.07	34.79	48	72.15	92.31	0.1
2	Educational	424.06	0.61	330.62	456.31	685.87	877.6	0.91
3	Recreational (Incl. Maasai Mau Forest)	19925.95	20.71	36.04	49.74	74.76	95.6	0.1
4	Public Purpose	127.29	0.18	195.28	279.93	403.85	524.15	0.54
5	Commercial	52.54	0.08	13.0	20.0	-	-	0.13
6	Public Utility	6.23	0.01	48 ha	15 ha	8 ha		0.11
7	Transportation	56.29	0.08	-	-	-	-	-
8	Deferred	248.5	68.47	-	-	-	-	-
9	Agriculture	47382.05	68.47	-	-	-	-	-

Source: Matrix Development Consultants, 2013

What is available land within Narok Town is only 600 acres (242.8 Ha) of land belonging to the former Town of Narok situated at Lemanet. The present County Government of Narok wants to build its county headquarters at Lemanet. The assumption here is that all the devolved ministries and departments will move to the new county headquarters at Lemanet except the ministries and/or departments which will remain under the National Government. This implies that all these Devolved Ministries and/or departments will surrender their existing land and premises to the County Government and will give an additional 10 hectares as available land.

It has been shown in our projected land requirements upto 2013 (table 14.2) that the total land requirement will be 18,663 hectares needed to meet the development needs of the town upto the year 2030. This excludes land under Transportation. This scenario leaves a big land deficit if we consider what available land is. This deficit can only be met by tackling the different ways which can be used to bring Agricultural land to urban use as discussed in Chapter 17.7.

## 14.3 Urban Growth Limits

Before this Plan Intervention, the existing land under urban use constituted only 2% of the total land area in Narok Town. With the land requirement projections to the year 2030 the total area of the town will rise to 26.97%. This will constitute our urban limit within the Municipality. The importance of this is that most of the rich agricultural hinterland will remain as agricultural, and will continue to provide the raw material source for the Agro-industrial sector which is being proposed and emphasized in the plan in order to make Narok a booming agro-industrial hub.

## 14.4 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 as can be seen in the urban suitability map. The map was worked out taking into consideration of the structuring elements, analysis of the existing physical characteristics,

the micro climate, infrastructural provisions as well as the logical directions of urban growth in Narok Town.

During the conceptual framework analysis it was agreed by the stakeholders during the 'strategies workshop' that the centres of Ewaso Ng'iro, Rrotian and Nkareta should be allowed to grow just as the Narok Town CBD grows. Secondly, the stakeholders felt that any future expansion of the CBD should take place at Lemanet which is not far from the CBD as there was available land.

This implied that strategic growth triggers will have to be proposed for Ewasongiro, Rrotian and Nkareta in order to boost their growth. Secondly, the existing CBD cannot be wished away by just shifting to Lemanet. Replanning and rezoning of the bigger part of Majengo and its environs will have to be undertaken particularly as far as the Disaster Management proposals put up in Chapter 15 are concerned.

#### **14.4.1 Ewaso Ng'iro Centre**

It is proposed for this centre to put up both a wholesale cattle market as well as a wholesale agricultural market in Town. The existence of two modern slaughter houses which are capable of coping with high carcasses which can be slaughtered in a day makes this centre most suitable to come up with a tannery as well as an animal feed factory. There is also definitely a high potential for meat and sausage processing facility.

Being the second biggest centre in Narok and being a gateway to the Maasai Mara makes this centre the most suitable for development of middle income hotels which can house the budget tourists as well as resident tourist to the Mara. This centre will thus form part of the Eco-Tourist circuit within the county. It is also proposed to come up with a new commercial zone which will encourage local entrepreneurs to come up with tourism related outlets for Maasai Arts and Artifacts. There is a need to improve the basic infrastructure facilities such as water, sewerage and roads. An integrated residential zone accommodating the three categories has also been proposed

#### **14.4.2 Rrotian Centre**

This centre is in the middle of the rich agricultural hinterland of the county. It has thus a high potential of development of agro-based industries through value addition of the existing agricultural produce which is presently sold in their natural state. It is thus proposed to set up a sizeable industrial zone in the centre to allow for the development of Agro-based industrial development through value addition. It is also proposed to set up a wholesale agricultural produce market with a retail market. It is also proposed to come up with a new commercial zone. There is however a need to improve the basic infrastructural facilities such as water, sewerage and electrical capacity to cope with the industrial capacity. The Northern bypass proposed will also help to open up this centre to other markets.

#### **14.4.3 Nkareta Centre**

This is the centre which is closest to the Mau Forest. There is a potential of this centre playing a very big role in the Eco-tourism circuit within the county. The centre can also accommodate Middle Income Tourist hotels. This will enable tourists to stay at this centre and be able to visit the Nature Trails within the Mau Forests to view the African Forest elephant who number around 200 as well as the Bongo and other forest animals and birds. There is also a potential of developing hiking routes in the forest. This however will need the collaboration of the Kenya Wildlife Services who can set up base at this centre. It is also proposed at this centre to set up a retail market for agro produce. There is a need of improving the W2703 road from B3 to Nkareta and to Mau Forest into an all-weather standard. There is also a need to improve

on the basic infrastructure provision such as water and sewerage in the medium term. The Northern bypass proposed will be able to link up this centre with the Eco-tourism circuit route in the county. An integrated residential hub of various densities has also been proposed at the centre.

#### **14.4.4 Lemanet**

This is the area which has been proposed to bear the main thrust of expansion of Narok Town. It is proposed that the new county headquarters be developed here. It is also propose to develop Masai-Theme Park, Business Park, Industrial Park, ICT Park, a hotel and conference centre, miniature golf course, a residential hub of various densities. This centre will be of great importance to the growth of Narok. It is also proposed to set up an Eco-centre not far and to be connected by a proposed southern bypass road from B3 via D302 to Lemanet, Eco-centre and to join C12 opposite the Airstrip, as shown on the Map.

Within the Eco-centre it is proposed to set up a Living Maasai Cultural Village, a Taxidermic zoo and a Maasai artifact Museum and theatre which form part of the Eco-Tourism circuit. To complete the resort city status it is imperative to propose a 9 hole golf course next to the eco-centre and the expansion of the existing airstrip to that of International Standard. The sanitary landfill, sewerage ponds and muslim and Christian cemeteries are proposed at Morijo south of the Lemanet along Nkare Narok.

#### **14.4.5 Narok CBD**

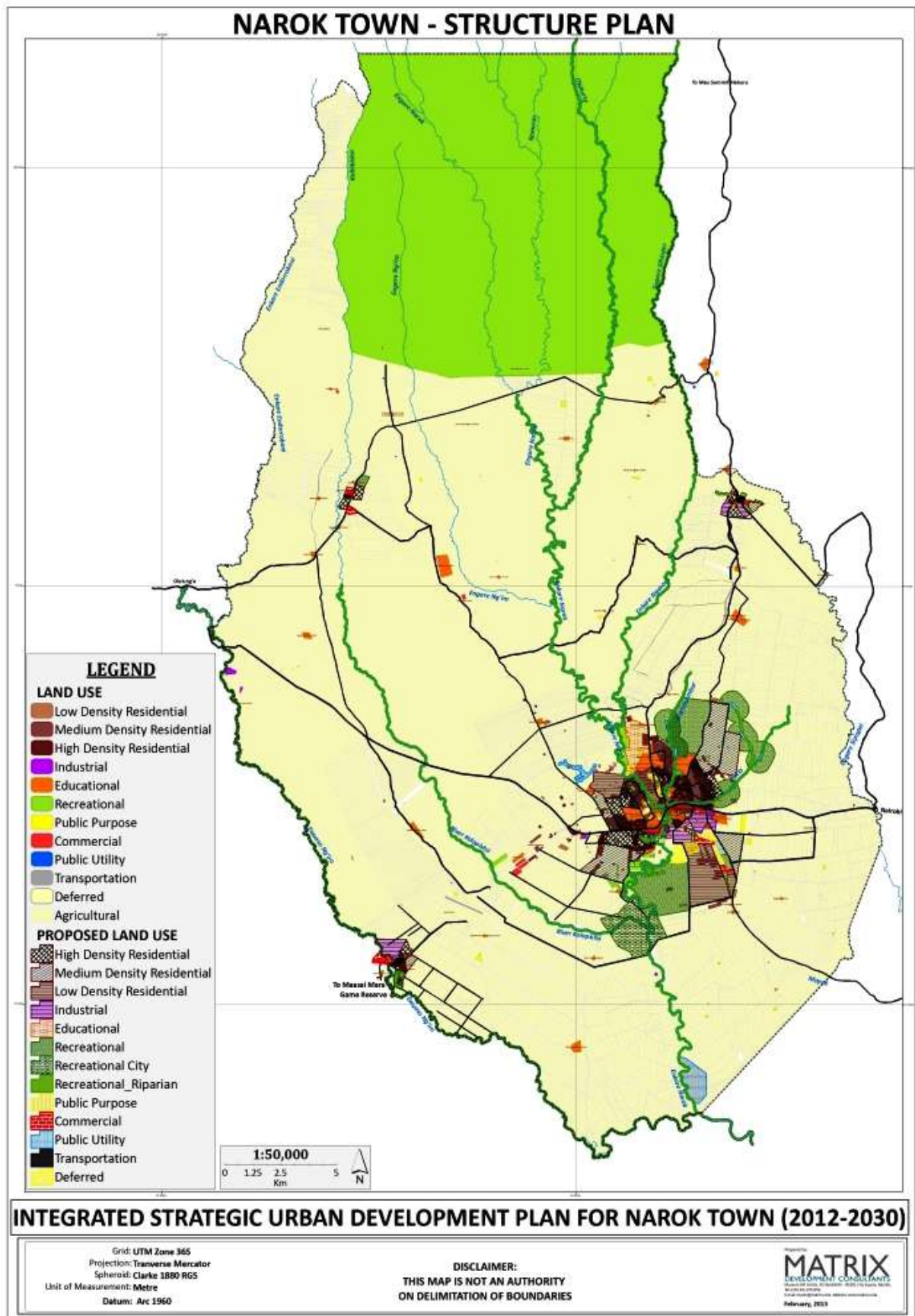
It is proposed that the Narok County Assembly takes over the present County Town land and premises once the County headquarters has been built. It is also proposed in the immediate term to acquire the land and construct the 7 dams proposed (see Map 17 on Flood Management) in order to ameliorate on the flood situation. It is also proposed for re-forestation programmes on the higher lands as well as enforcement of Tree buffer zones on the big farms growing wheat and barley. New storm water drainages channels have been proposed as well as widening of the existing drains (see map).

It is proposed in the Medium Term to acquire the properties in the CBD which get flooded every time it rains. In its place it is proposed to construct overpass and built a lower dam below it and develop a green area and introduce watersports in the dam. It is proposed to re-design the entrance to the CBD and the circulation system across the B3 and C57 roads. It is proposed in the short term to acquire the land next to the existing bus park for expansion, but in the long term acquire land of not less than 15 acres to develop an integrated transport terminal along the B3 road.

In the upper Majengo area and its environs it is proposed to set up six green parks as well as the expansion of the existing New Narok Market and setting up of four other commercial zones. In the lower Majengo area there is a new commercial zone.

*Map 14.1* overleaf illustrates the Structure Plan for Narok town

Map 14.1: Structure Plan for Narok Town



Source: Matrix Development Consultants, March 2013



## 14.5 UTILITIES AND OTHER PROPOSALS

Apart from the proposals which were touching on the four centres and Lemanet, there were general proposals which will affect the whole Narok Town.

### 14.5.1 Roads

The Plan has proposed two by-passes which will aid in connectivity and mobility within Narok.

- **The Northern By-Pass** is proposed to start at the B3 crossing at Siyabei River to E174 leading to Mulwa centre. The road then loops to Rrotian centre to C57. From C57 the road then will pass through Oloroito crossing River Narok at the Laramatak crossing to Nkareta and rejoins the B3 highway at Olulung'a.
- **The Southern By-Pass** on the other hand also starts at B3 road at Empopongi via D302 Lemanet through a proposed road to the proposed Eco-centre and comes out at C12 opposite the airstrip and joins B3 road at Katakala.

Apart from the two bypasses there are several Link roads which have been proposed as shown below. others proposed will be developed as need arises

- From Sechura, through Korea and Fanaka,
- A loop ring road from Sheep and Goat Farm through London to join Nyawira Road
- From Nyawira road to Narok New Market
- Narok SDA passing by former Dos office and Municipal market, passing next to the mosque to join C57 road
- W2703 from intersection with B3 to Olburu
- From B3 opposite Vicmart, looping round Mwamba to rejoin B3 before its junction with C12
- From total along B3, by passing Maasai Mara University to the Quarry
- From B3 at KimsVilla, winding down past Dominion Church, through Polong'a to end near the confluence of Kolopisho and Narok rivers
- From C12 road at Olerai to River Kolopisho
- Have a link road from Block 11 (Maasai Mara University) side to the Proposed Integrated Central Terminal and joining C57 branching into two roads
  - (i) To cross Enkare-Narok river adjacent Afica Hope Centre and link Block 11 to the west of the Administration Police Chapel
  - (ii) To cross Enkare-Narok river at the northern boundary line of the Narok Water and Sewerage Company and join the road to Narok PCEA Church
- Before Narok Stadium, through northern part of Lemanet to join B3 to the west of Ilmashariani Primary School.

### 14.5.2 International Airport

In order to accommodate the various development scenarios put forward and particularly that of Narok as an Eco-Tourism centre it will be necessary to acquire more Land around the existing Ewuaso Ng'iro Airstrip in order to qualify its conversion and development into an International Airport. This will have a multiplier effect in the growth and development of Narok Town as well as the County.

### 14.5.3 Bridges

On the Northern bypass there will be five bridges which will need to be built. These are:

- Bridge 1 – Across Siyabei River at St. Joseph Academy
- Bridge 2 – Crossing Enkare Sikinder at Oloroito.
- Bridge 3 – At Laramatak crossing Enkare Narok river
- Bridge 4 – Crossing Kollopisho river at Nkareta.
- Bridge 5 – Crossing Enkare Endoroboni from Nkareta to Ololunga.

The Southern bypass on the other hand will have two bridge crossings:

- Bridge 6 – Crossing Enkare-Narok river at proposed Eco-.
- Bridge 7 – Crossing Kollopisho within the Eco-city.

Two bridges will be needed to link Block 11(Maasai Mara University side) directly to Narok town by-passing the B3 road.

- Bridge 8 – Crossing Enkare-Narok river adjacent Afica Hope Centre and to the west of the Administration Police Chapel.
- Bridge 9 – Crossing Enkare-Narok river at the northern boundary line of the Narok Water and Sewerage Company to join the road to Narok PCEA Church

### 14.5.4 Dams

In the flood management proposals 7 high Dams have been proposed to be built as a measure on the flood control. Four Dams will be in the Kakia river basin and three Dams are proposed on the Esamburmbur river basin. But 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.
- Land for each dam will have to be acquired.
- 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.

### 14.5.5 Overpass and LowerDams

In the medium term it is proposed that an overpass will have to be built and a lower Dam will have to be built below it covering the properties within the basin in the C.B.D.

### 14.5.6 Storm Water Drains

- A new storm water drain is proposed at Majengo.
- A new storm water drain is also proposed at Lenana, London area and draining to Esamburmbur valley before the cemetery. The two are as shown on the Map below:

### 14.5.7 Riparian Reserve

The Plan has proposed removal of all encroachment, structures and quarrying activities within the riparian reserves, that is 15 metres either side of the rivers. There is a need to create a cutline or develop a tree line to mark the boundary of the riparian reserve.

#### **14.5.8 Widening of Drainage Channels**

The Plan has proposed the widening of some of the drainage channels to enable them carry away bigger volume of water to Enkare Narok river during flood times.

#### **14.5.9 Sewer**

The Plan has proposed the sewerage ponds to be located parallel to Enkare Narok river at Illmashariani. Land has to be acquired.

#### **14.5.10 Solid Waste Management (Long Term)**

The Plan has proposed the sanitary Landfill to be sited near the sewerage Lagoons. Land has to be acquired.

#### **14.5.11 Public and Muslim Cemetery**

The two new sites are proposed also to be near the Lagoons and the Sanitary Landfill. Land has to be acquired.

#### **14.5.12 Other General Proposals**

The Plan has proposed on improved Agricultural practices on the higher lands, as one of the flood control measures and has encouraged mixed Farming.

### **14.6 The Rich Agricultural Areas**

This constitutes a bigger part of the Municipality and the Plan has proposed that it should be left to remain as it will continue to provide a source of raw materials for the agro-Industrial role that has been proposed for Narok.

### **14.7 POLICY PROPOSALS**

The Plan has proposed the carrying out of a Strategic Environmental Assessment 'SEA Process' on the Plan as well as the E.I.A. reports for the by-passes, Dams and the Industrial zones. The Plan has also proposed capacity building in Planning Department as well as The Building Inspectorate sections in order to enhance development control and zoning Regulation in the Town. Last but not least the Plan has prepared detailed Action Area Plans for Narok CBD, Lemanet, The Eco-centres, Ewuaso ng'iro, Rrotian and Nkareta centres as well as the zoning Plans which will guide development in the Town.





# Chapter 15

## DISASTER MANAGEMENT PLAN

### 15.1 overview

Narok town and its environs have since 1991 experienced flash floods that have caused untold suffering and loss of life and destruction of property. This has been the trend anytime rain falls within the town and its environs which has raised concern among the inhabitants and other stakeholders. Challenges identified include inadequate capacities to deal with disasters by both institutions and public, lack of emergency response capacity in ambulances and fire brigade and most buildings do not have firefighting equipment like fire extinguishers.

Apart from floods, other potential disasters in Narok town are those of drought, forest fires and potential of collapsing buildings due to overexposure to flood waters.

### 15.2 Floods

The flooding in Narok town occurs mainly during the heavy rainfall seasons. The flooding is a big challenge and leads to destruction of property; loss of life and disruption of business activities. It also makes certain parts of Narok town inaccessible.

An integrated approach is required to alleviate the current and future flooding of the town.

#### 15.2.1 Causes of Floods

As mentioned earlier it was only after 1991 that floods started being experienced in Narok town. Existing literature and our own studies have attributed this to several causes which include:-

- The destruction of tree cover and putting the land on large scale cultivation has contributed to the fast flow of water from the higher grounds towards the Narok CBD area;
- Cultivation on steep slopes in places like Rrotian enables the washing away of soil cover and thus soil erosion. This results in reduced vegetation cover to hold back some of the rainwater;
- Inadequate and poorly designed existing storm water drains within the CBD. These cannot cope with the heavy flow during long rains. Some of the drains have been built to flow away from the Narok River
- Some of the drains within the town are used as dumping areas. This coupled with siltage in has led to blockage of some of the drains and effectively restricting the natural flow of water;
- Some of the buildings have been built on the waterways and thus constrict the water channels within Narok town

All the above have contributed to the increase in catchment degradation and in turn have increased the magnitude of the floods in the recent past.

- Lastly, poor location of the town in the basin while being surrounded by higher grounds on all the four sides makes the flooding situation even more precarious.

### 15.2.2 Flood Control and Mitigation

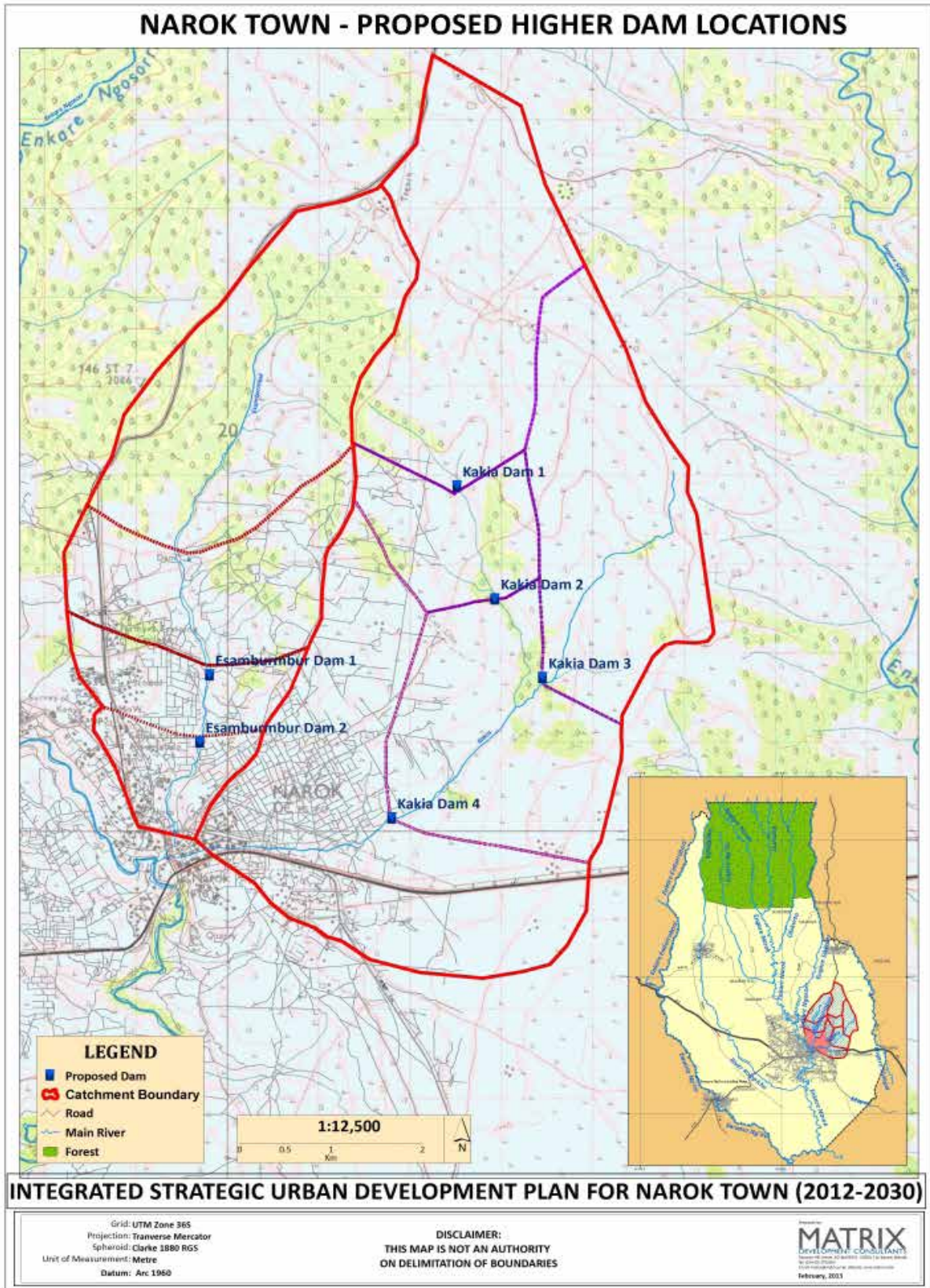
To be able to control the floods and mitigate against its worst impacts, an integrated approach will need to be undertaken. This will have to involve engineering measures on the higher reaches of the Town as well as at the basin area on Narok Town's CBD. Secondly, it will need to involve conservation measures on the higher lands as well as sustainable agricultural practices in order to reduce the water flow down at the basin area. These measures are as follows:-

- (ii) Conduct a SEA study of the plan
- (iii) **Building of High Dams** (7 in number) with 4 Dams in the Kakia Valley and 3 dams in the Esamburmbur valley as shown in the *Map 15.1* overleaf. In the near future to put up another lower dam covering the area where flood waters collect at the CBD. The purpose of these dams is to collect the excess waters which cause flooding. The 7 high level dams will also be able to provide drinking water to the cattle population who come all the water to town to drink from the Enkare Narok River
- (iv) **Acquire the Land for the dam areas** including their respective catchment basins
- (v) **Building of the overpass along the B3 road** in the medium term and building of the lower dam below it and introduction of a green park and watersports area and redesigning of the entrance to the town
- (vi) **Raising the existing level of the road bridge** where the B3 road crosses the Enkare Narok river.
- (vii) **Raising the approaches to the roads B3 and C57** to match the new level of the Raised bridge on B3 road
- (viii) **Construction of 8 double Box culverts of dimensions 2m x 2m** at the identified locations
- (ix) **Widening and Construction of drainage channels having a base of 3m, an upper portion of 8m and a depth of 2.3m** for the storm water drains in town
- (x) **Provision of new storm water drainage in London, Majengo, Lenana, Block 11, Mwamba areas**
- (xi) **Maintaining and cleaning of the drainage structures periodically**
- (xii) **Keeping in check and punishing those who encroach** on the riparian reserves and storm water drainage way leaves
- (xiii) **Conduct EIA for these dams and bypass proposals**
- (xiv) **Provision of two by-passes roads** i.e B3 to C57 and back to B3 road as well as from B3 road to D307 via Lemanet and to C12 road opposite the Ewaso Ngi'ro Airstrip
- (xv) **In the medium term compulsory acquisition of the properties** which get covered by flood waters and relocating them to the Lemanet area
- (xvi) **Where possible, raising all existing finished ground floors of buildings** and for future buildings to allow for a minimum 300mm above existing grounds or existing road centre line levels
- (xvii) **Removing Structures within a 30 metre riparian reserve**
- (xviii) Establishing a visible 15m buffer demarcation on either side of a river bank to depict the Riparian reserve.

- (xix) **Provide three ICT based eminent floods warning system at the town triggered by high water volumes upstream.** The three warning triggers to be located one just after Ntimama Dam, another one on river at Korea area and a last one on the upper reaches of Kafia river
- (xx) **Public education and awareness** of cleaning and maintaining of all drainage structures
- (xxi) **Educate the residents on flood response and action** whenever it floods in town
- (xxii) **Re-afforestation programmes to limit soil erosion** as well as trapping some of the storm water
- (xxiii) **Discouraging and eventually banning charcoal production** and to encourage the use of alternative green sources of energy, e.g wind
- (xxiv) **Re-introduce some of the indigenous tree species** or introduce an economically suitable species to be planted along borders of every farm to act as buffer zones which will also help to trap some of the storm water particularly in the wheat and barley growing farms
- (xxv) **To improve agricultural practices on the higher grounds**



Map 15.1: Proposed Higher Dam Locations



Source: Matrix Development Consultants Adopted from ENSDA Narok Town Floods Control Project Report

### 15.3 DROUGHT

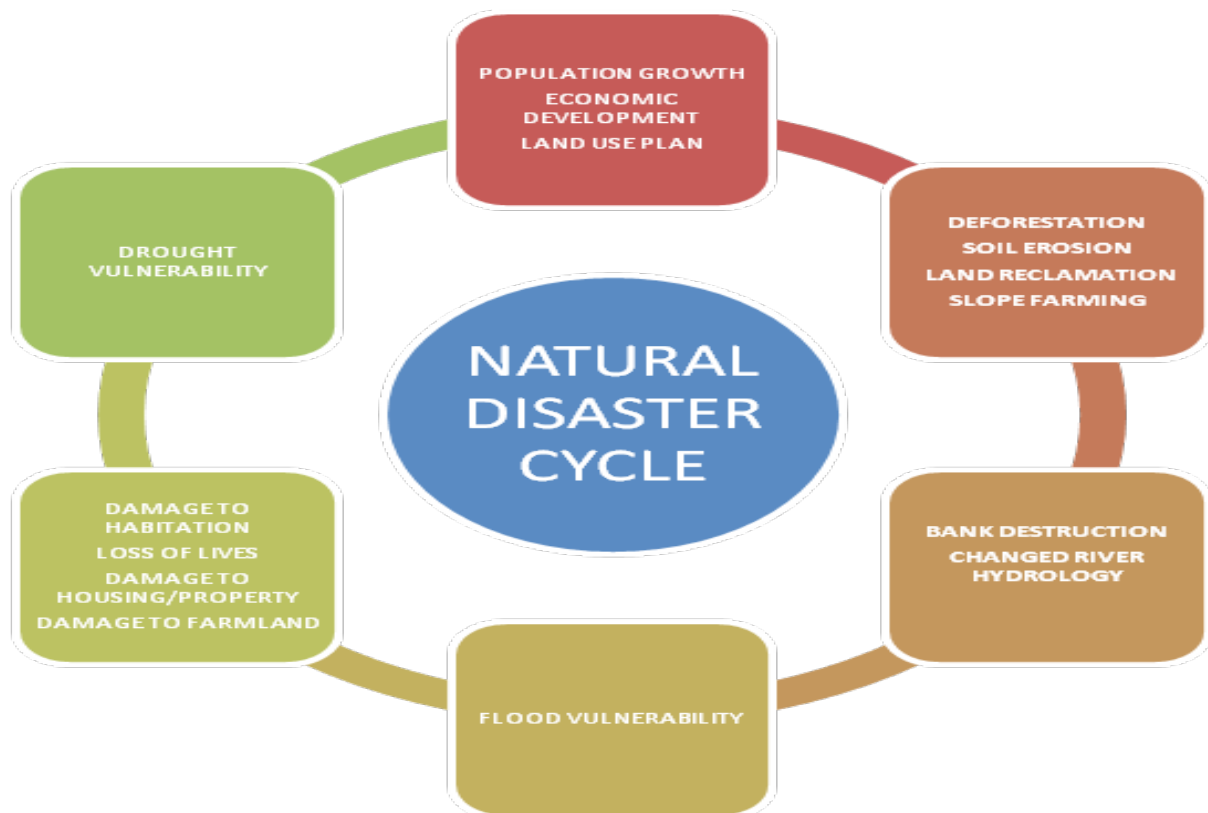
The destruction of the tree cover on land putting the land on cultivation has contributed to the drop of rainfall in Narok. Absence of enough rainfall has led to drought during some seasons. There are also factors such as overgrazing and the current experience of climate change which have also contributed towards the occurrence of drought in Narok.

Drought affects negatively on the economic and social status of the people of Narok and in some instances Kenya as a whole. Several measures need to be put in place to mitigate against drought such as:-

- To improve water harvesting mechanisms
- Planting of drought resistant food crops including root crops eg sweet potatoes, cassavas and yams
- Encourage residents to plant trees and care for them at all times
- Discourage livestock farmers from overgrazing and destruction of trees and grass cover
- The water stored in the 7 dams for flood control can be used for irrigation and for livestock
- Improve on food security by diversifying food crops and practice mixed farming techniques
- Improve on the agricultural practices particularly on the slopes

Figure 15.1 represents the schematic illustration of the progression of vulnerability to floods and droughts

Figure 15.1: Schematic illustration of the progression of vulnerability to floods and drought



## 15.4 Fire Disasters

Fire disasters can occur anywhere. Considering that the Narok town boundary has 195.7 Km<sup>2</sup> under forest there is an even bigger threat of forest fires other than the regular urban type of fires.

Narok Town like many other towns in Kenya is ill equipped to effectively respond to fire related disasters. The town neither has infrastructure nor the equipment to handle fire disasters. There is also lack of trained staff to handle challenges due to fire disasters. The residents also lack a level of preparedness to manage fire disasters when they do occur in its environs.

The following measures will have to be put in place in order to address issues related to fire disasters;

- Construct a well-equipped fire station with well trained personnel in Narok Town. Other subsidiary fire stations need to be put up at Ewaso Ng'iro, Rrotian and Nkareta;
- Provide fire hydrants in Narok town as well as other centres;
- All commercial building to comply with building by laws and factories act by ensuring they are fitted with firefighting equipment and have adequate fire exits.
- Promote public education on prevention and response to fire related disaster

## 15.5 Potential of Collapsing Buildings

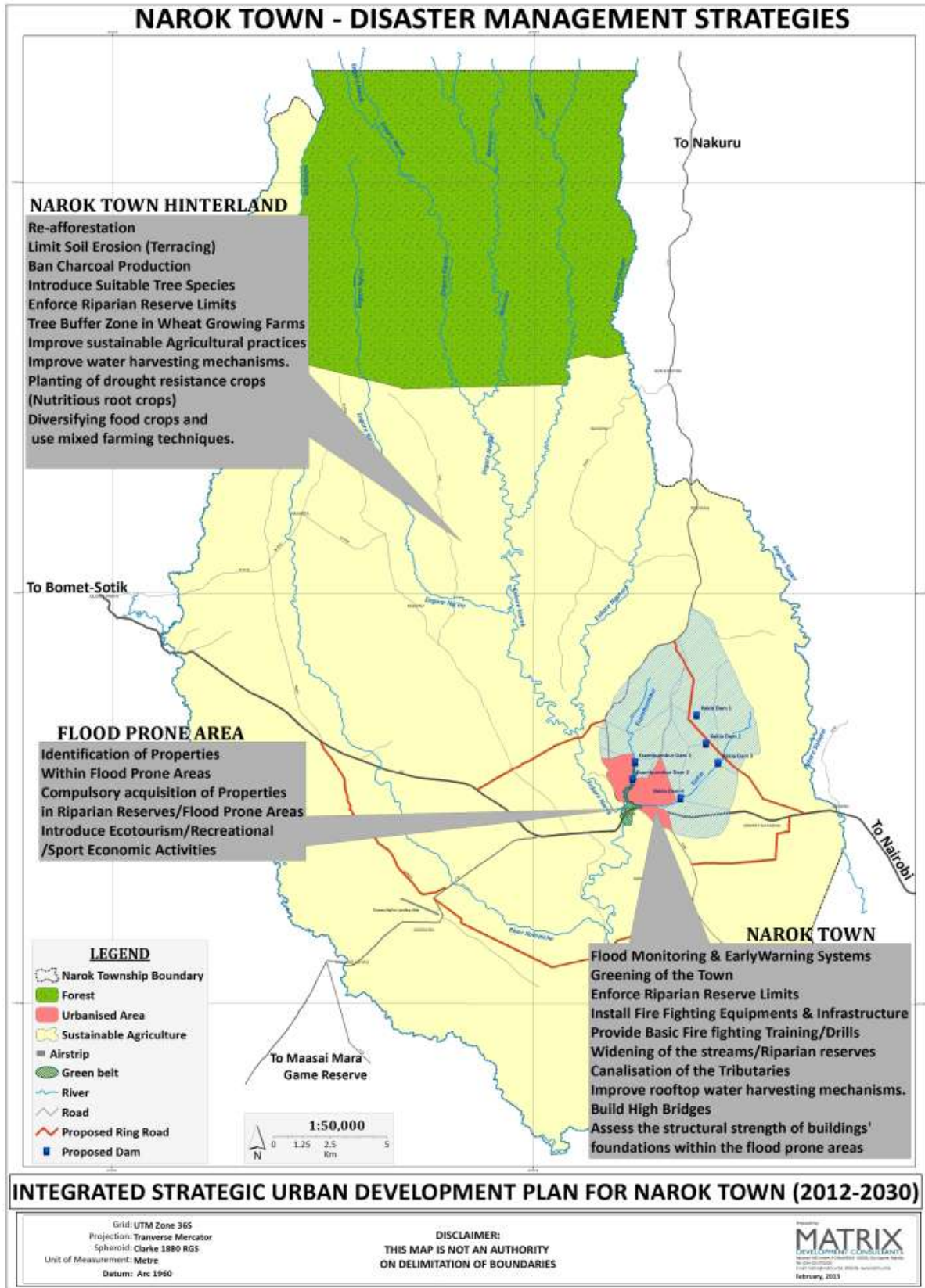
In the recent years the collapse of buildings across various towns in the country has been a frequent disaster with numerous lives having been lost. Among the main causes is that of poor building designs by quacks in the trade and poor enforcement of the building and planning regulations. This further compounded by the absence of adequate capacities at county level to approve and supervise building works. Given the occurrence of other related disaster particularly flooding in Narok, the buildings are more vulnerable to collapsing.

The proposed measures to mitigate against these include;

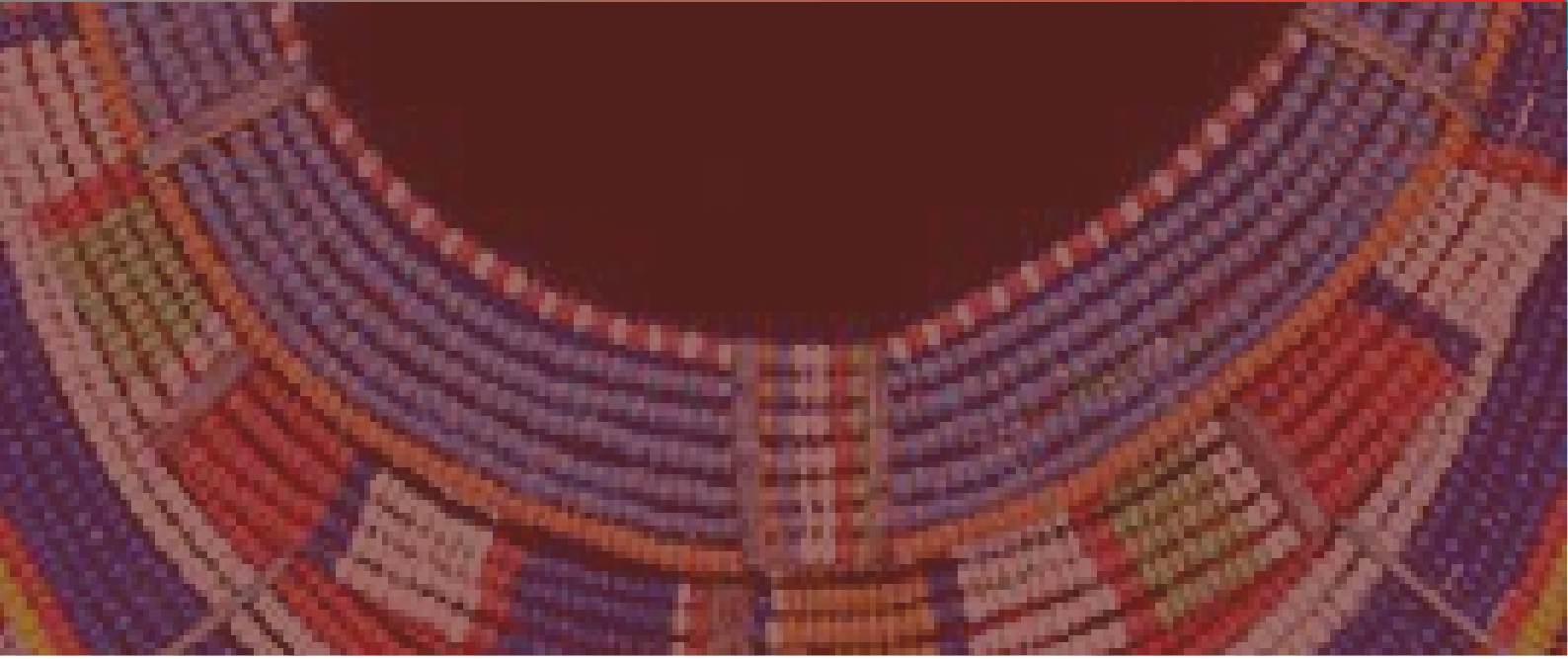
- Creating awareness of the revised building and planning regulations at all levels;
- The County Government of Narok (CGN) to ensure that all buildings are approved and constructed as per drawings produced by registered practioners in accordance with the law;
- The County Government of Narok (CGN) to ensure use of professionals in the building process at all levels;
- Adherence and enforcement of building, planning and zoning regulations;
- Training of contractors and local builders to ensure high standards of workmanship;
- Build capacity by creating a strong Planning department within Narok County;
- The County Government of Narok (CGN) to establish a strong building inspectorate section;
- The County Government of Narok (CGN) to enforce the development conditions as provided for in this plan and the law; and
- Impose heavy fines for those who do not comply.

*Map 15.2* overleaf depicts the Disaster Management Plan for Narok town

Map 15.2: Disaster Management Plan



Source: Matrix Development Consultants, 2013



# Chapter 16

## TOURISM AND CULTURAL HERITAGE

### 16.1 Conservation plan

As highlighted in section 5.5, two key potentials of Narok Town is the fact that it is at the gateway to the world renowned Maasai Mara Game Reserve as well as its unique 'Maa' 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 Maasai Mara provides where all the big five animals are the major attraction. However, the Town benefits very little from this since, other than the fuel refills for the tourist vehicles and consumption of the odd beverages, very little tourism induced business goes on which can boost the economy of the Town.

For Narok 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, sports tourism, hiking in the Maasai Mau Forest. There is also a need for improvement of facilities such as the expansion of the local airport to International standards 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 at Ilmashariani/Morijo to the north of the proposed Maasai Eco-City. 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. Secondly, hiking Tours through the Maasai Mau Forest could be organized with the Nkareta centre acting as the base camp. The Plan has also proposed setting up of a high Attitude Athletic facility at Nkareta to attract world class athletes to come and train at the centre. Nature trails on foot or bicycles have been proposed to the Maasai Mau Forest to view the African Forest elephant among other forest animals. Quite a number of these activities have been proposed at Nkareta 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 Maasai Theme Park at Lemanet. It has proposed the acquisition of Land to set up an Eco-Tourism centre at Ilmashariani/Morijo. Within the eco-centre it is proposed to set up a living Maasai cultural village, a Taxidermic zoo, and a Maasai artifact Museum and Theatre. Within the Maasai Theme Park area at Lemanet it is proposed to set up a Maasai artifact 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. Section 4.3 of this report has discussed the Maa Culture in detail.

Traditionally, Tourism in Narok County had meant game viewing more specifically during the annual migration of the wildebeest and zebras across the Mara river. Many people have considered this phenomenon to be the eighth wonder of the world. These tourists have also been accommodated in expensive game lodges and tented camps with International connections within the game reserve. This has rendered this activity almost out of reach to majority of Kenyans. The Plan has proposed also setting up of middle class hotels at the Ewaso Ng'iro centre across the Ewaso Ng'iro river outside the present Narok Town boundary. This will boost local tourism and enable many Kenyans to

afford visiting the Maasai Mara Game reserve. Local Entrepreneurs are to be encouraged in setting up of such Hotels whereas tour companies should also be encouraged to promote this aspect of domestic tourism through some form of incentives and cost cutting operations. However, the county Government will need to improve the infrastructural facilities at Ewaso Ng'iro centre as has been detailed in the Plan.

Most of the Maasai artifacts and regalia are presently being manufactured at individual household level and its marketing is mainly being done by other people other than the local Maasai. It is proposed as mentioned earlier the setting up of small co-operatives involved in the manufacture of these artifacts and establishment of Maasai markets at strategic places to capture the tourists market. Some of the co-operatives could also be involved in marketing of the artifacts outside Narok to other counties in the Country as well as internationally. Presently this is being carried out at individual entrepreneurial level. This is a big loss to the community in general. If this sector will be organized it will be able to generate more capital to fund other activities within the community as well as boost the wealth generation of the community particularly of the Local Maasai women.

Many of the local people in the county particularly children have not seen the wild animals which are in the Game Reserve. The proposal of setting up of a Taxidermic zoo is to facilitate the creation or establishment of stuffed animals which are found in the game reserve so that school going children and others could get a clear picture of how some of these animals look like and be able to widen their knowledge of the same.

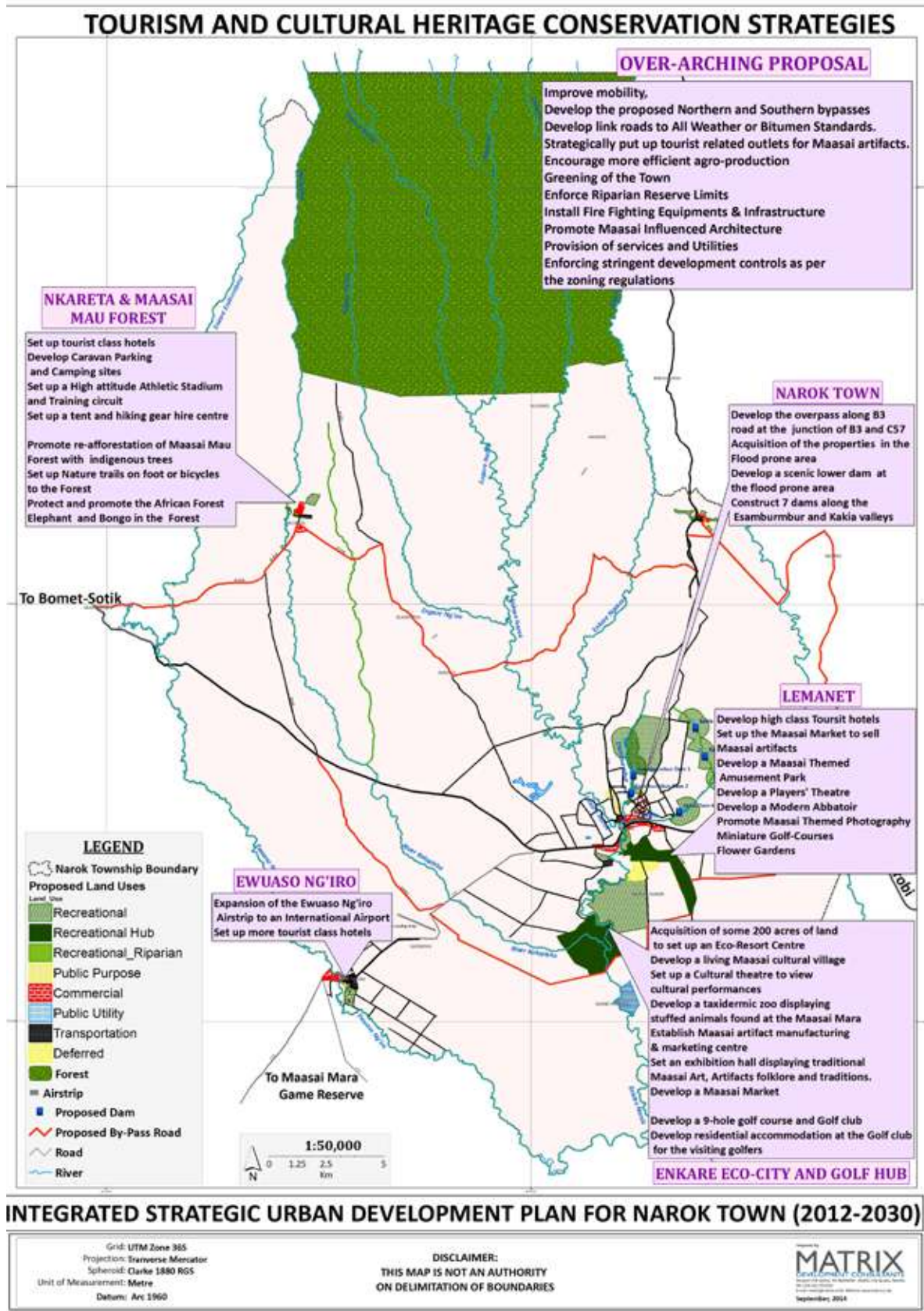
The Maasai have a rich collection of oral literature and history that include: myths, legends, folklores, riddles and proverbs. The Maasai also compose songs and have dances for different occasions. The establishment of the Maasai cultural village will enable the carrying out of such activities including the different types of celebrations as well as a depiction of day to day activities at the household level including display of the Maasai Architecture. The collection of Maasai Artwork includes a full Maasai bridal costume, elder's traditional objects and a warrior's outfit. The art pieces include jewelry, a shield, a warrior's spear, ceremonial headdress, ceremonial clothing made of leather, tribal game board among many other art pieces. These art pieces will be displayed at the proposed Maasai Museum. Inclusive of the above there will be a need to create a "sense of place" or cultural Identity in the Town in order to strengthen its competitive advantage.

In order to allow the Town to get elevated into a Resort City status, it will be important that there is improved mobility, construction of the proposed Northern and Southern bypasses. The putting up of the Nine-hole Golf course at Ilmashariani/Morijo, the high altitude training centre at Nkareta, and setting up of the eco-centre near Lemanet. Other social infrastructures will also need to be set up or improved as well as investments in the medium class hotels. The expansion and elevation of the local Airport to International standards will also be a necessity.

With the implementation of the above mentioned proposals we do envisaged an improved economy for the Town based on Tourism and cultural heritage of the Maasai.

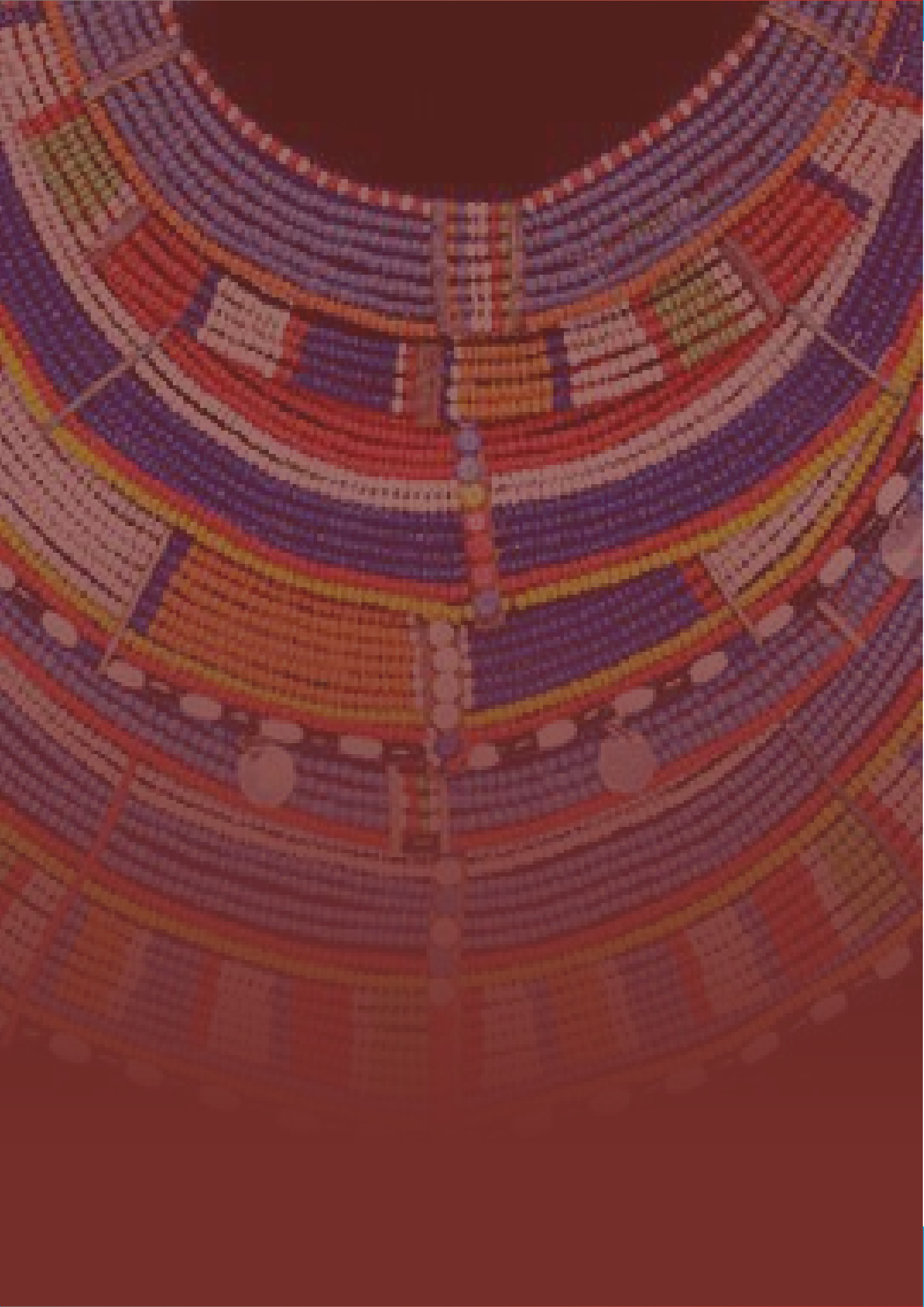
*Map 16.1* overleaf depicts the Tourism and cultural Conservation Plan for Narok town.

Map 16.1: Tourism and Cultural Conservation Plan



Source: Matrix Development Consultants, 2014





# Chapter 17

## ACTION AREA PLANS AND ZONING PLANS

### 17.1 ACTION AREA PLANS

Strategic growth triggers have been proposed in the Plan for Ewuaso Ng'iro, Rrotian and Nkareta centres whereas fresh proposals have been made in the Planning of Lemanet and the Eco-centre whereas new proposals have been made in the replanning of the lower and upper Majengo. This has been done in order to meet the stakeholder wishes that other centres should be encouraged to grow just like the Narok C.B.D. grows at Lament.

#### 17.1.1 Existing (C.B.D)

New storm water drainage channels have been proposed as well as the widening of the existing drains as part of the flood control measures at the lower Majengo area.

It is also proposed in the medium term to acquire the properties which get flooded every time it rains within the basin area. In its place it is proposed to put up a lowest Dam with a green area and an overpass along the B3 road over the Dam. It has also been proposed to acquire the plot next to the existing bus park as an expansion of the bus park but in the long run to acquire another piece of land to set up an integrated Transport Terminal preferably along the B3 road.

The Plan has proposed to set up six green areas or parks in the upper Majengo. It has been proposed to expand the area of the existing New Narok market and setting up of four new commercial zones in the upper Majengo.

In the lower majengo area there is a new commercial zone proposed as well as two new green areas one next to the proposed lower dam. The Plan has also proposed that the area which will be vacated by the offices of the devolved Ministries and departments be part of County Government of Narok's Land bank and to be used for development of housing estates of low and medium density housing estates with Public Private Partnership. These estates could be used to attract the Narok professionals who have settled elsewhere to come and invest in Narok. The *Map 17.1* overleaf shows the Spatial Distribution of these proposals.

#### 17.1.2 Lemanet

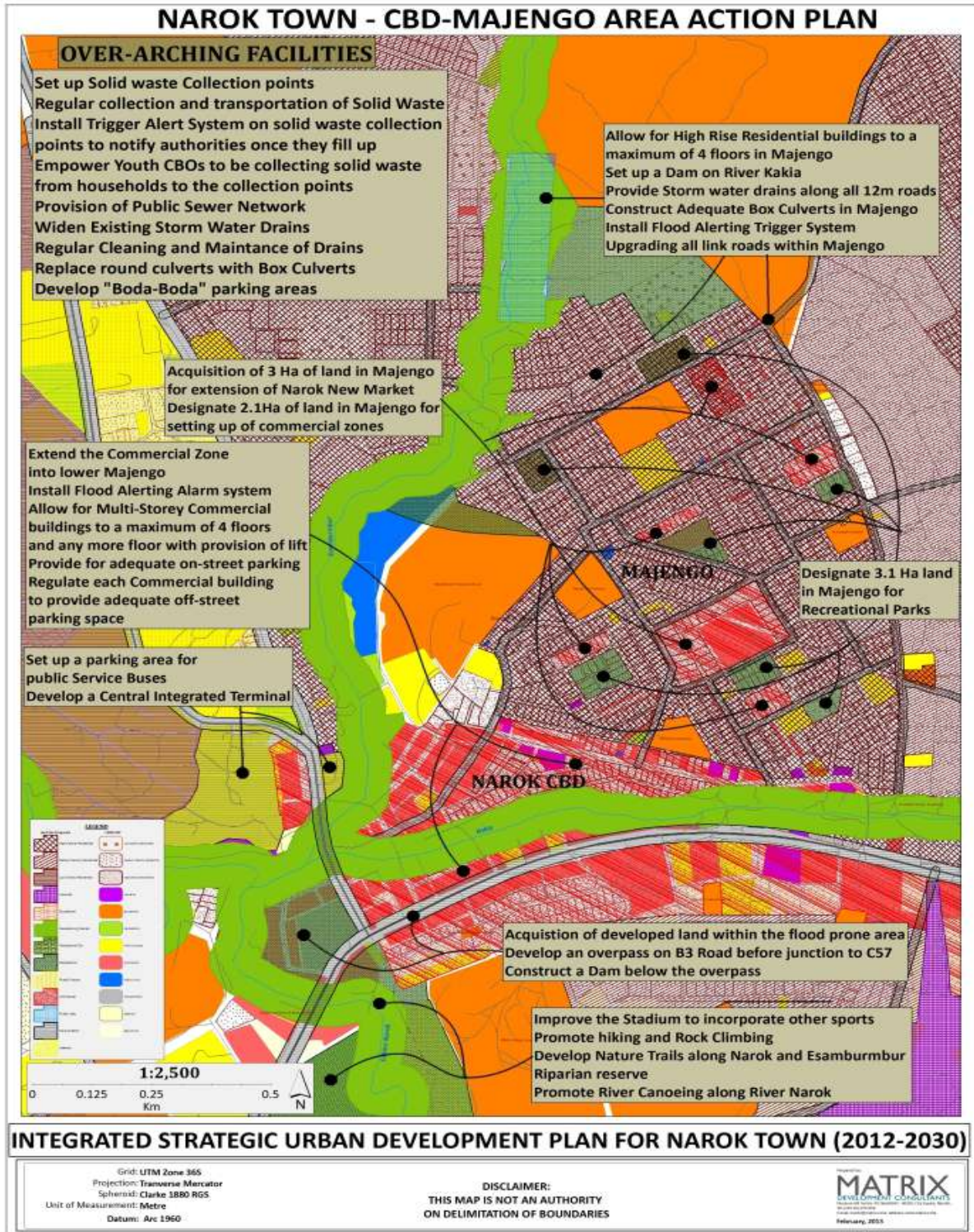
As explained earlier, this is the area which is expected to bear the main thrust of expansion of Narok Town. This is because of the existence of 600 Acres of County Government Land (Formerly Town Land).

The Plan has proposed the setting up of the New County headquarters at Lemanet being near the Central Business District. The Lemanet area is expected in the long run to be the new C.B.D. hence, the need to have it planned carefully in order to take care of the future needs and growth of the Town. Towards that goal the Plan has proposed the setting up of a Maasai-Theme park, ICT Park, a Hotel and conference centre, a miniature Golf course, a Residential hub of various densities. Within the neighbourhood land will need to be acquired to set up the Eco-centre. Within the Eco-centre it is proposed to set up a living Maasai Cultural villages

a Taxidermic zoo and a Maasai artifact Museum and theatre which form part of the Eco-Tourism circuit as well as acquire the 'Smart City', status. To complete the 'resort city scenario' it is imperative to acquire more land next to eco-centre to put up a 9 hole Golf course.

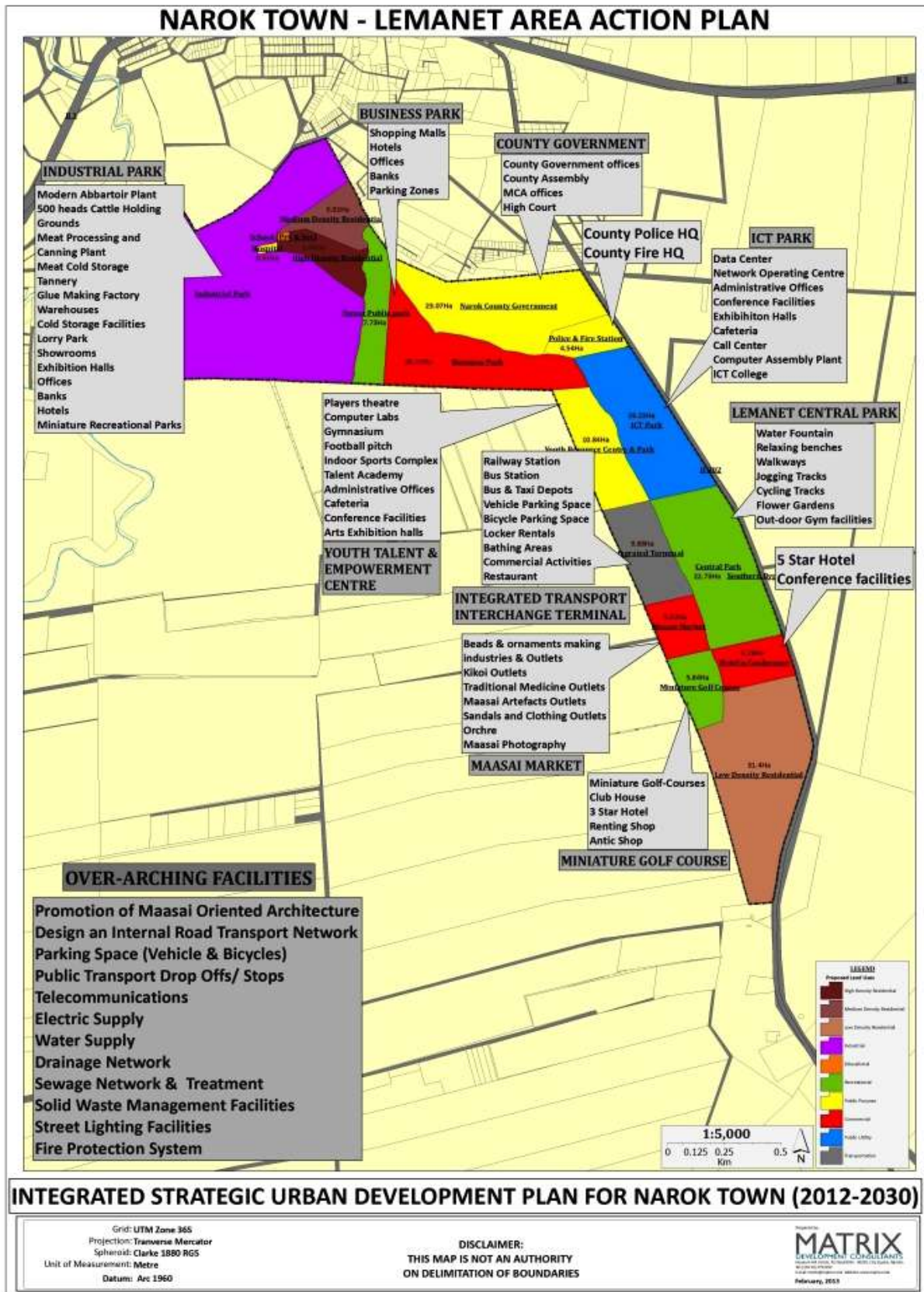
The area action Plan for Lemanet is enclosed in *Map17.2* overleaf.

*Map 17.1: Narok CBD and Majengo Area Action Plan*



Source: Matrix Development Consultants, March 2013

Map 17.2: Lemamet Area Action Plan



Source: Matrix Development Consultants, March 2013

### 17.1.3 Ewauso Ng'iro Centre

This centre has two operating modern slaughter houses which will be able to cope very well with the hides and skins Industry as well as meat and Animal feds industries. The Plan has proposed in this centre the setting up of a Tannery, as well as a meat and sausage processing facility.

This centre being the gateway to the renowned Maasai Mara Game reserve. The Plan has proposed the setting up of middle size tourists hotels which can accommodate the budget tourists as well resident tourists and will play a big role in the Eco-tourism circuit. It is also proposed to set up a new commercial zone which will encourage Local entrepreneurs to come up with the tourist related outlets for the Maasai Arts and Artifacts. However, there will be a need to improve the basic infrastructure facilities such as water, sewerage and roads. There is need of setting up a Residential hub of various densities at the centre. *Map 17.3* overleaf depicts all the proposals at this centre.

### 17.1.4 Nkareta Centre

This centre is very near the Mau Forest and the Plan has pegged its survival and growth to this Natural resource. It is planned to set up middle income Tourist hotels at this centre. This will enable the tourists to stay at this centre and be able to visit the Nature Trails within the Mau Forest to view the African Forest elephant, the Bongo and other Forest animals and birds which are found at this forest. The K.W.S. is expected to co-ordinate this operation with the County Government.

The Plan has also proposed the setting up of a retail market for Agricultural produce. This centre will form part of the Eco—Tourism circuit within the County.

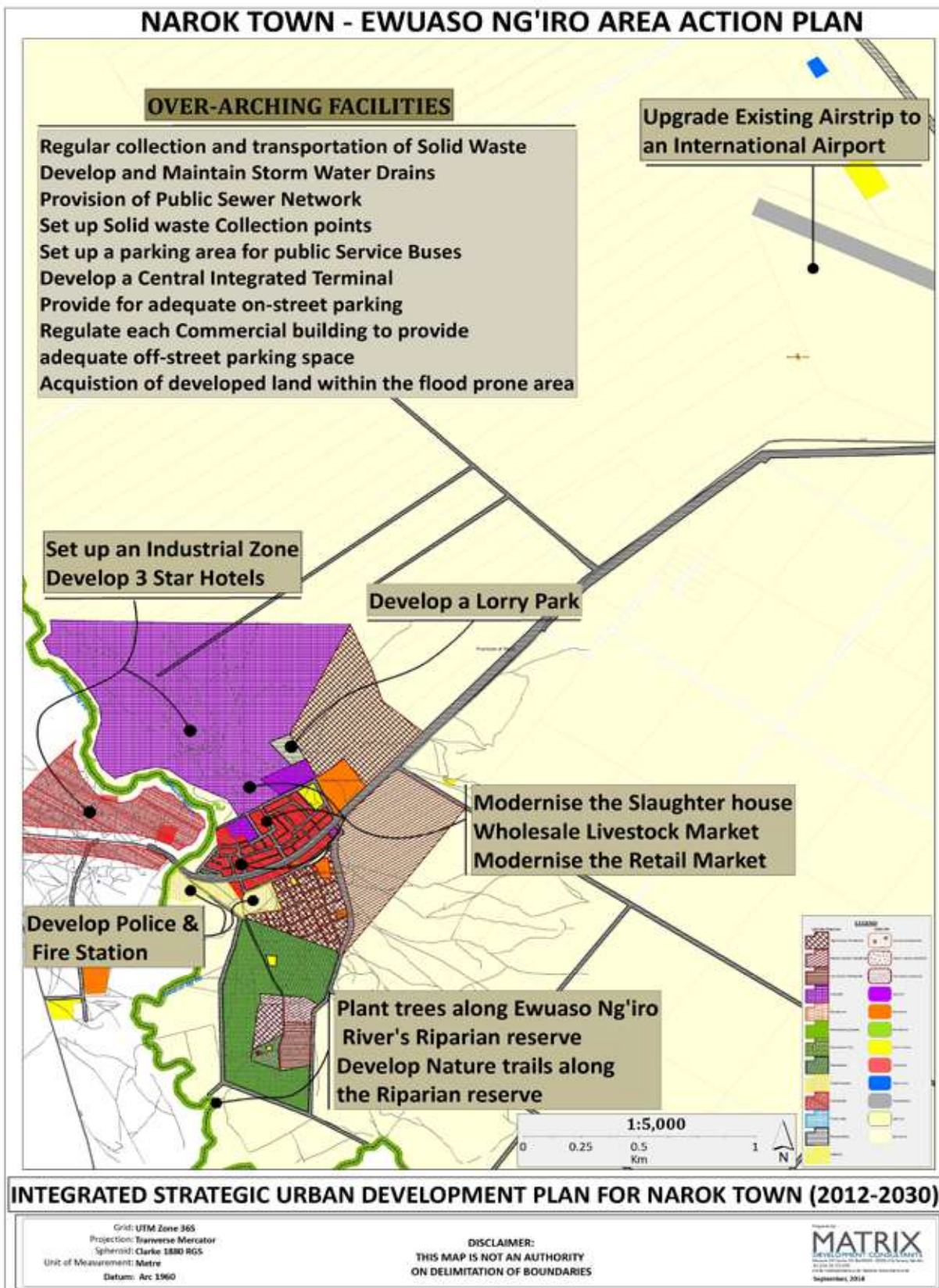
The Plan has also proposed the setting up of a residential hub of various densities. However, there is a need of improving the basic infrastructure facilities in the centre. The Action area Plan for the centre is enclosed as *Map 17.4* overleaf.

### 17.1.5 Rrotian Centre

This centre occupies a strategic location in the middle of the rich Agricultural hinterland of the County. It has thus a high potential for development of agro-based industries based on value addition. The Plan has proposed an industrial zone to cater for this specialization. The Plan has also proposed agricultural produce market as well as a retail market. The Plan has also proposed a new commercial zone. The Plan has also proposed a residential hub of various densities. There is however, a need to improve the basic infrastructure facilities such as water, sewerage and electrical supply to cope with this industrial role. The Northern bypass proposed will also help to open up this centre to other markets.

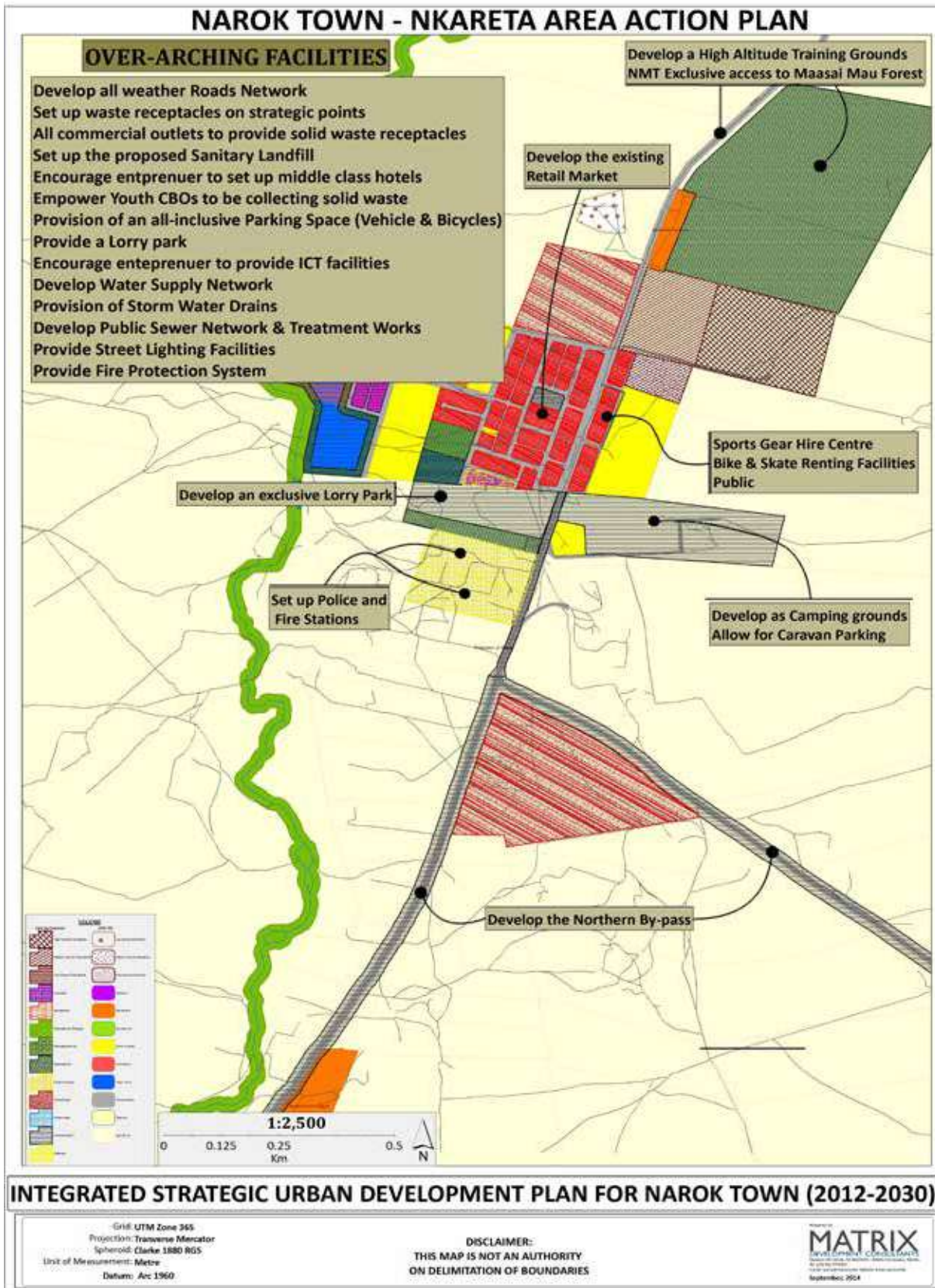
*Map 17.5* depicts all the proposals at Rrotian centre.

Map 17.3: Ewuaso Ng'iro Area Action Plan



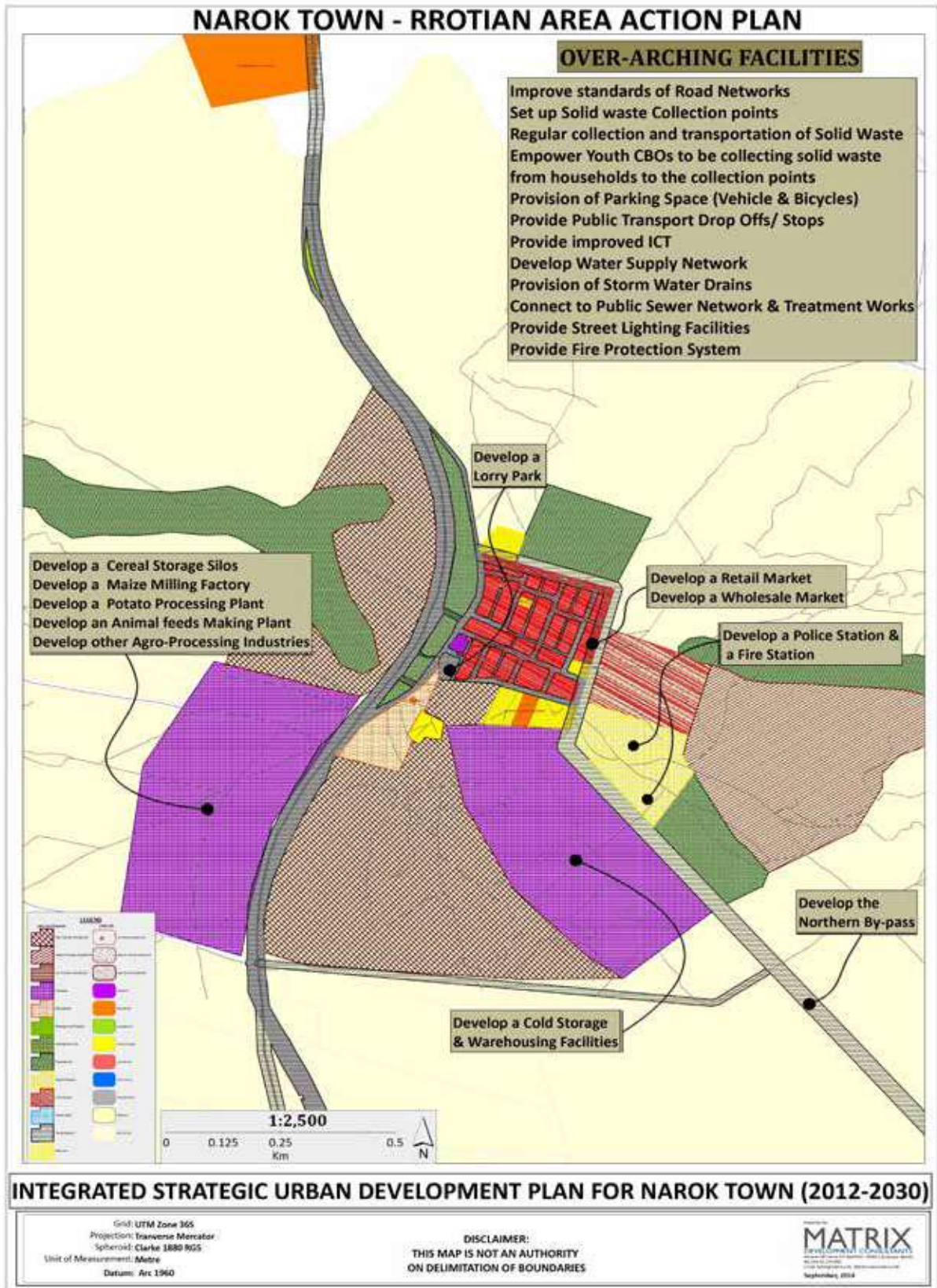
Source: Matrix Development Consultants, March 2013

Map 17.4: Nkareta Area Action Plan



Source: Matrix Development Consultants, March 2013

Map 17.5: Rrotian Area Action Plan



Source: Matrix Development Consultants, March 2013



## 17.2 ZONING PLANS

The built environment, the type, location and Intensity of existing landuse defines the character of the Town. Understanding how much land is presently devoted to Residential, Commercial, open space and other uses as well as the locations of vacant and undeveloped properties is an important step in developing a vision for the future. The town's zoning and landuse regulations are its central tools for controlling its array of landuses. These controls influence future development patterns.

Zoning regulations are motivated by the need to regulate the location of commercial and industrial activities. Modern zoning regulations divide landuse into three types: Residential, Commercial and Industrial. Within each designation, more specific aspects of development (e.g. building proximity, height and type) are also determined. Zoning is often used to maintain the distinctive character of a town or city.

Some could argue particularly for Residential areas, that there may be adverse concerns of such zoning in relation to economic segregation. However, the consequences of not zoning would be juxtaposition of incongruent landuses in a town like Narok.

Therefore, zoning endeavours to achieve harmonious, pleasant and compatible development in our towns.

Zoning regulations should be subject to periodic review depending on dynamic changes and levels of services and demand for various uses of land. The proposed zoning regulation for Narok Town CBD, Lemanet, Ewasong'iro, Rrotian and Nkareta are presented below in the Table 17.1 whereas the respective area zoning Plans are presented in Plan Nos. 17.6 to 17.9 overleaf.

Table 17.1: Narok Town Zoning Regulations Table

ZONE CODE	AREA COVERED	GROUND COVERAGE (%)	PLOT RATIO (%)	TYPE OF DEVELOPMENT	REMARKS
RLD1	Bordering Nkairamram primary school to the west and Enkare Narok to the east	50	35	Bungalows Masionette Minimum Plot size – 0.2 Ha unsewered to 0.1 Ha sewered	Maximum Level – 2 Parking – 2 per dwelling Allow for Densification
RLD2	East of Enkare Narok river and west of the tarmac road covering all the current government offices and government housing from the AP camp to the south and bordering EMS to the north	50	35	Bungalows Masionette Minimum Plot size – 0.2 Ha unsewered to 0.1 Ha	Maximum Level – 2 Minimum Road size 9m Parking – 2 per dwelling Allow for Densification Allow for 10% surrender for Public Purpose on Sub-division
RLD3	Borders Lemanet to the east and the proposed by-pass to the south	50	35	Bungalows Masionette Minimum Plot size – 0.2 Ha unsewered to 0.1 Ha	Maximum Level – 2 Minimum Road size 9m Parking – 2 per dwelling Allow for Densification Allow for 10% surrender for Public Purpose on Sub-division
RMD1	Bordering RHD1 to the north, Palong'a primary to the south and along the proposed sewer to the east	50	75	Mansionets, bungalows, semi-detached Minimum Plot size – 0.05 Ha unsewered to 0.1 Ha sewered	Maximum level- 2 levels unsewered 4 levels on sewered Minimum Road width- 9m apartments allowed on different zones. Parking – 1 per dwelling Allow for 10% surrender for Public Purpose on Sub-division
RMD2	Borders B3 to the south running parallel to the east of the road leading to Nkareta up to Nkairamram primary school				
RMD3	Bordering the university to the south and Enkare Narok to the east	50	75	Mansionets, bungalows, semi-detached Minimum Plot size – 0.05 Ha unsewered to 0.1 Ha sewered	Maximum level- 2 levels unsewered 4 levels on sewered Minimum Road width- 9m apartments allowed on different zones. Parking – 1 per dwelling Allow for 10% surrender for Public Purpose on Sub-division
RMD4	Borders Ensambulbul River to the east, Narok High school, Narok Pastoral Institute and Lenana primary school to the west up to the road leading to Ntimama's home to the north				
RMD5	Along the road leading to Nkosana primary school to the north and bordering RHD7 to the south and proposed Dam	50	75	Mansionets, bungalows, semi-detached Minimum Plot size – 0.05 Ha unsewered to 0.1 Ha sewered	Maximum level- 2 levels unsewered 4 levels on sewered Minimum Road width- 9m apartments allowed on different zones. Parking – 1 per dwelling Allow for 10% surrender for Public Purpose on Sub-division
RMD 6	To the north of Kafia River and running parallel the old Majengo up to south of road leading to Nkosana primary school				
RMD 7	Area between commercial zone CZ 3 to the north IZ 1 to the east and bible college land to the south	50	75	Mansionets, bungalows, semi-detached Minimum Plot size – 0.05 Ha unsewered to 0.1 Ha sewered	Maximum level- 2 levels unsewered 4 levels on sewered Minimum Road width- 9m apartments allowed on different zones. Parking – 1 per dwelling Allow for 10% surrender for Public Purpose on Sub-division
RMD 8	Running along old Nairobi road to the west opposite Lemanet				

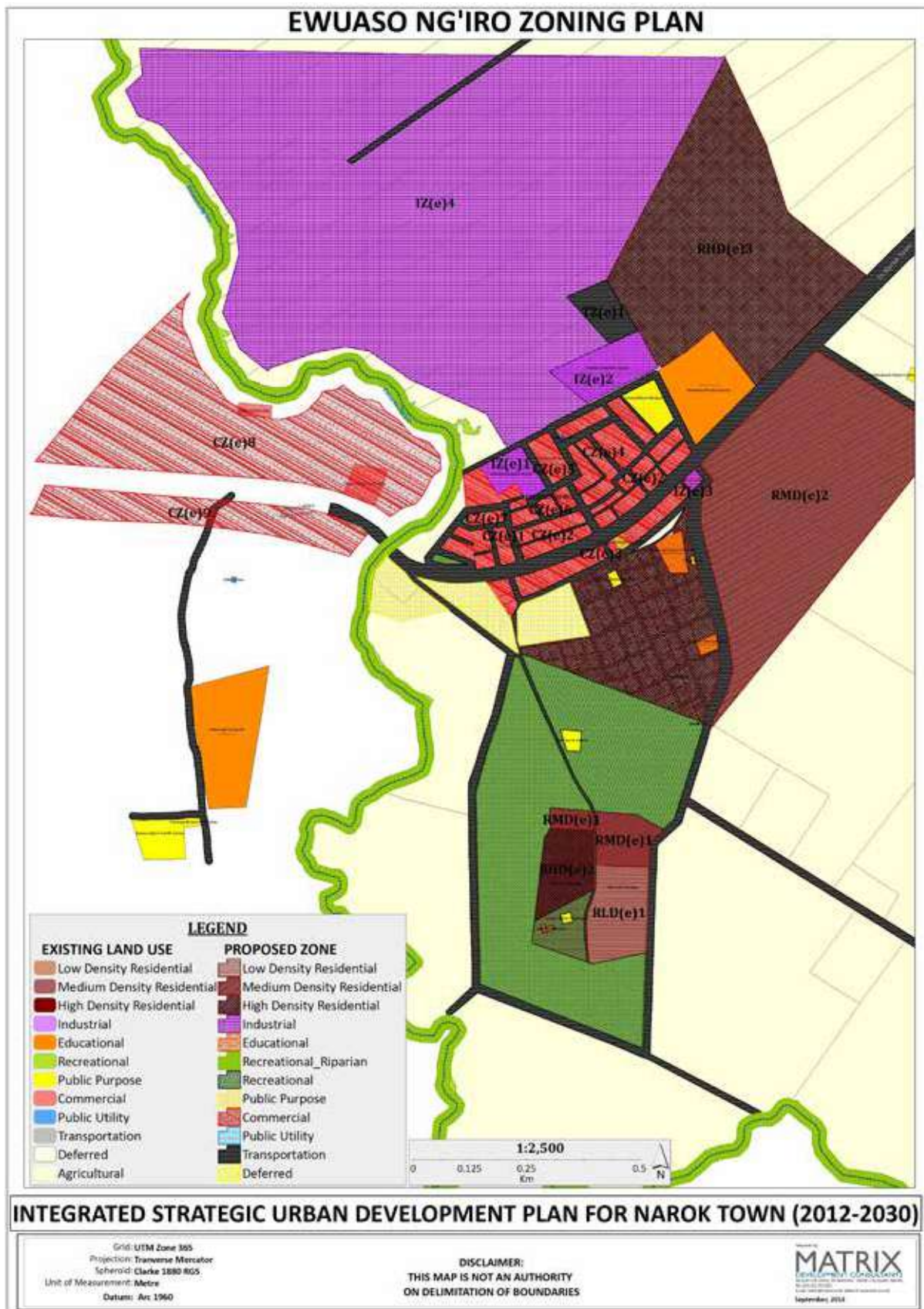
ZONE CODE	AREA COVERED	GROUND COVERAGE (%)	PLOT RATIO (%)	TYPE OF DEVELOPMENT	REMARKS
RHD 1  RHD 2	Running along B3 to the north of Total area Bordering Enkare Narok to the east and commercial zone CZ 4 to the north	75	100	Row housing Mansionets Semi-detached Flats developments Minimum Plot size – 0.05 Ha unsewered to 0.03 Ha sewered	Maximum level – 2 levels unsewered 4 levels on sewered Minimum Road width – 9m apartments allowed on different zones. Setbacks – 3m from the boundary Parking – 1 per dwelling Allow for densification Allow for 10% surrender for Public Purpose on Sub-division
RHD 3  RHD 4	Bordering the University to the north, commercial zone CZ 5 to the south and the link road joining the university and B3 North of B3 and bordering the university to the east		100	Flats developments Minimum Plot size – 0.05 Ha unsewered to 0.03 Ha sewered	Maximum level – 2 levels unsewered 4 levels on sewered Parking – 1 per dwelling Allow for Redevelopment
RHD 5  RHD 6	Within block 11 and bordering the university to the south Upper Majengo	75	100	Row housing Mansionets Semi-detached Flats developments Minimum Plot size – 0.05 Ha unsewered to 0.03 Ha sewered	Maximum level – 2 levels unsewered 4 levels on sewered Minimum Road width – 9m apartments allowed on different zones. Setbacks – 3m from the boundary Parking – 1 per dwelling Allow for densification Allow for 10% surrender for Public Purpose on Sub-division
RHD 7  RHD 8	Bordering road to Nkosana primary school to the north South of Kikia river and north of B3 up to Royal Vision Primary	75	100	Row housing Mansionets Semi-detached Flats developments Minimum Plot size – 0.05 Ha unsewered to 0.03 Ha sewered	Maximum level – 2 levels unsewered 4 levels on sewered Minimum Road width – 9m apartments allowed on different zones. Setbacks – 3m from the boundary Parking – 1 per dwelling Allow for densification Allow for 10% surrender for Public Purpose on Sub-division
RHD 9  RHD 10	Bible school to the north, Lemanet to the east, the quarries along Enkare Narok River to the west Running from PCEA church to the south to Lenana primary school to the north and Ensambulbul River to the east		100	Row housing Mansionets Semi-detached Flats developments Minimum Plot size – 0.05 Ha unsewered to 0.03 Ha sewered	Maximum level – 2 levels unsewered 4 levels on sewered Minimum Road width – 9m apartments allowed on different zones. Setbacks – 3m from the boundary Parking – 1 per dwelling Allow for densification Allow for 10% surrender for Public Purpose on Sub-division
CZ 1 CZ 2	North of Kikia valley Lower Majengo Nyawira's bar North of B3 up to Kikia Valley East of C56 up to the post office	75	150	Commercial offices Flats-If Sewered Minimum Plot size – 0.05 Ha	Minimum level –4 levels Additional levels (From 4) with provision of a Lift Parking – 1.5 for every Office space Additional Parking for Cyclists Setbacks – 2m Front 1.5m Back Provide pedestrian Walkways Allow for Redevelopment

ZONE CODE	AREA COVERED	GROUND COVERAGE (%)	PLOT RATIO (%)	TYPE OF DEVELOPMENT	REMARKS
CZ 3 CZ 4	First four rows East of Enkare Narok River running along B3 up to the junction of old Nairobi road B3 Running along B3 from the stadium up to opposite Vicmart supermarket	75	100	Commercial offices Flats-If Sewered Minimum Plot size – 0.05 Ha	Maximum level –4 levels Additional levels (From 4) with provision of a Lift Parking – 1.5 for every Office space Additional Parking for Cyclists Setbacks – 2m Front 1.5m Back Provide pedestrian Walkways Allow for Redevelopment
CZ 5  CZ 6- CZ 8	Front row along B3 from Total petrol station to Vicmart supermarket Lemanet area	75	100	Commercial offices Flats-If Sewered Minimum Plot size – 0.05 Ha	Maximum level –4 levels Additional levels (From 4) with provision of a Lift Parking – 1.5 for every Office space Additional Parking for Cyclists Setbacks – 2m Front 1.5m Back Provide pedestrian Walkways Allow for Redevelopment
IZ1	Covering all NCPB up to the northern boundary of Lemanet	75%	100%	Godowns Cold Rooms Silos Minimum Plot size – 0.1 Ha Carpentry Metalwork Fabricating Minimum Stall size – 10×20m	Maximum level – 2 levels Parking – 1 for every 10 workers Additional Parking for Cyclists Setbacks – 6m Front 3m Back Provide pedestrian Walkways Allow for Redevelopment
IZ 2	Western end of Lemanet	75%	100%	Godowns Cold Rooms Warehouses Minimum Plot size – 0.1 Ha Carpentry Metalwork Fabricating Minimum Stall size – 10×20m	Maximum level – 2 levels Parking – 1 for every 10 workers Additional Parking for Cyclists Setbacks – 6m Front 3m Back Provide pedestrian Walkways Allow for Redevelopment

Source: Matrix Development Consultants, March 2013

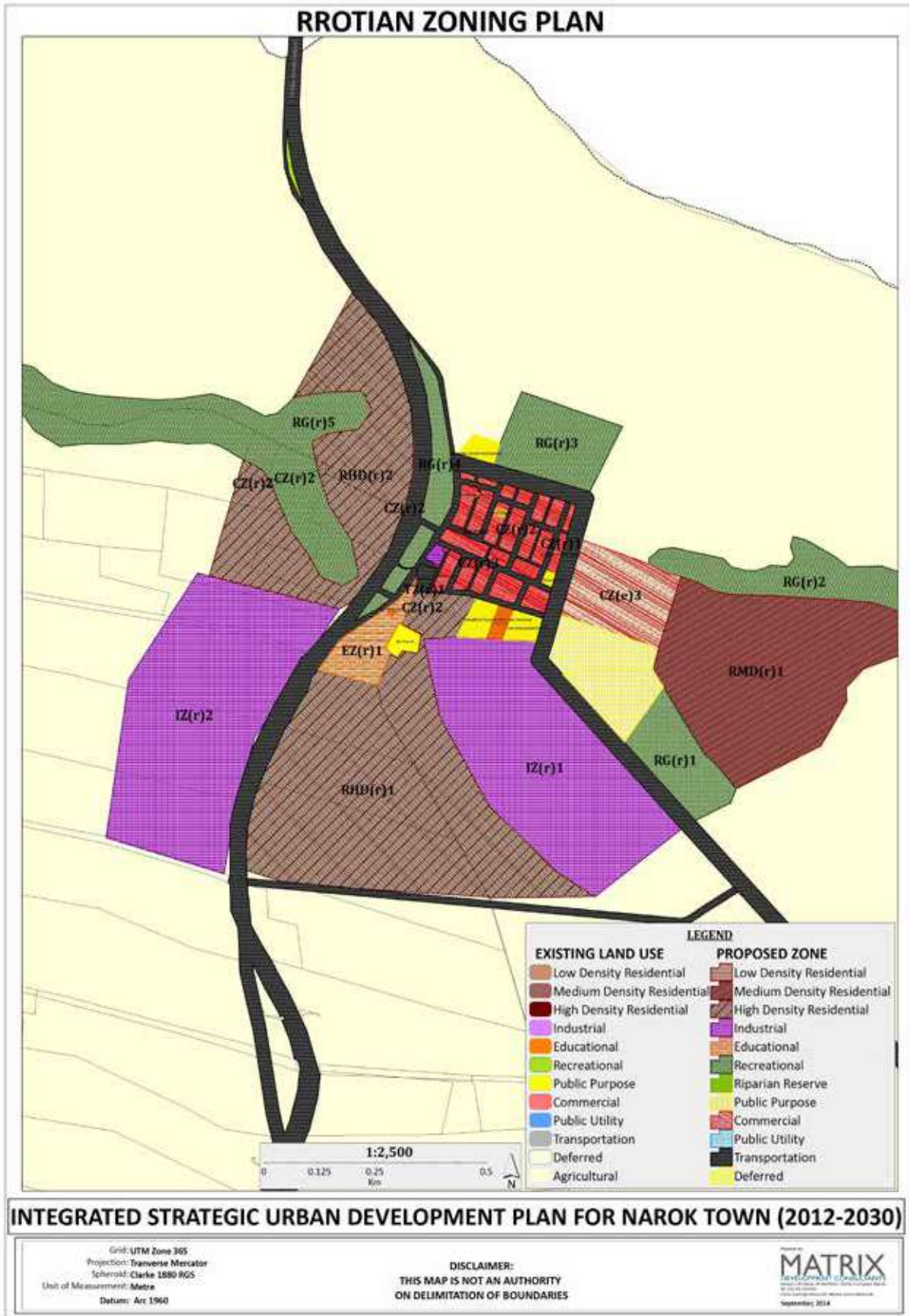


Map 17.7: Ewuaso Ng'iro Zoning Plan



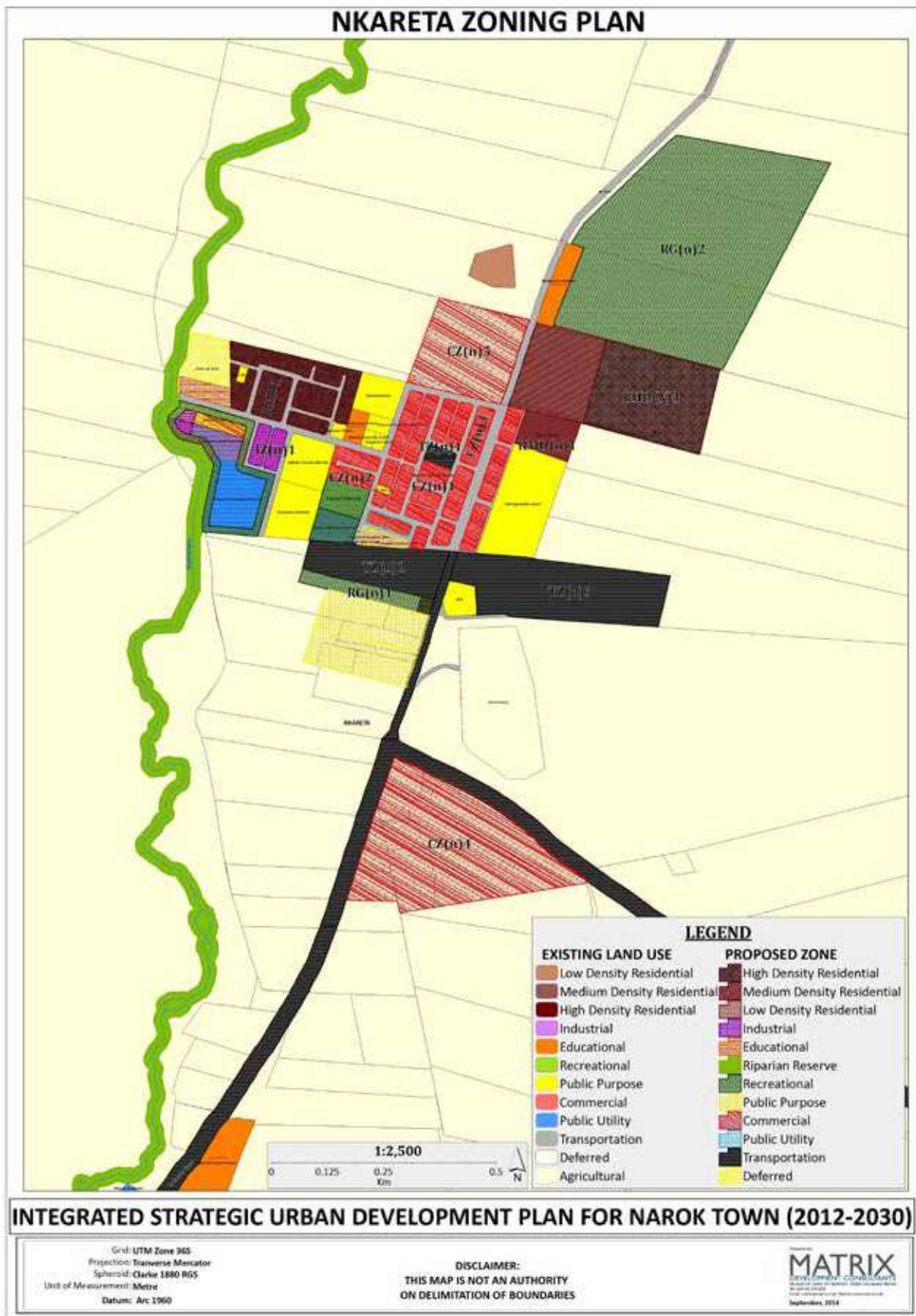
Source: Matrix Development Consultants, March 2013

Map 17.8: Rrotian Zoning Plan



Source: Matrix Development Consultants, March 2013

Map 17.9: Nkareta Zoning Plan



Source: Matrix Development Consultants, March 2013





# Chapter 18

## PLAN IMPLEMENTATION STRATEGY

### 18.1 COMMUNICATION STRATEGY

#### 18.1.1 Guidelines for the Communication Strategy

The centrality of communication to the promotion of good governance, effective urban management and citizens' participation is now an acceptable principle. In this regard the process must be supported by a targeted public communication and engagement strategy supportive of the goals of the Plan.

In this regard, the establishment of broad guidelines for the public communication and engagement strategy is expected to ensure the smooth operation among the different levels of governance and citizens. Besides the establishment of a mechanism of public communication between and among the various entities within the County is meant to;

- Avoid unwieldy and expensive bureaucracies at Town and County levels and calls for cooperation, coordination and communication;
- Standardize the processes and format of communication of the Plan;
- Enhance effective communication of the Executive committee decisions in a manner that provides information with clarity and accuracy;
- Offer opportunities for public input to help identify needs and set priorities, comment on proposed strategies and programmes in the Plan and provide information and feedback;
- The overarching principals of communication and information strategy for the Plan shall be;
- Integration of communication in all activities ;
- Allow the access to information by media in accordance with Article 35 of the Constitution;
- Adhere to media ethics, standards and professionalism;
- Promote national values, the Bill of Rights and the Rule of Law;
- Promote Openness and Accountability;
- Provide mechanisms for continuous sharing of information in real-time;
- Motivate citizens to participate in issues of governance and encouraging them to stand up for their rights.

#### 18.1.2 Media for Delivering the Plan

There is a range of communication tools that shall be used for effective dissemination of the Plan. These tools are diverse and shall include;

### **18.1.2.1 Generation of popular Versions of the Narok-ISUDP 2012-2030**

This shall involve the generation of popular drafts of the NISUDP 2012-2030 for dissemination alongside other IEC materials. The popular version will give background, rationale and the proposals of the planning process alongside quick win projects.

### **18.1.2.2 Electronic and Print Media**

Channels under this medium include Journal Articles, Local newsletter Pamphlet or brochure, National Newspapers, TV and Radio Magazines. For the purpose of the NIUSDP 2012-2030, it is acknowledged that radio will be the primary source of information given Narok Town's large rural hinterland. Overall, these channels will concurrently be used to run advertising features. Similarly documentaries or infomercials will be used in the electronic mass media for dissemination.

### **18.1.2.3 Field/Documentation days/ Conference/Forum or Information Session as provided for in the second schedule<sup>3</sup> of the UACA 2011**

Popularly referred to as Public meetings/barazas, are powerful avenues for information exchange and sharing. The use of citizen fora is now a legal requirement to provide information and generate important feedback. For the case of the NIUSDP 2012-2030, these will be meetings held quarterly or on a needs basis around key thematic areas and strategy milestones. Furthermore platforms such as the Local Urban Forum<sup>4</sup> should be encouraged and institutionalised.

### **18.1.2.4 Social Media, Web 2.0 tools and Art/music Festivals**

The Plan publicization is expected to take advantage of the increased ICT capacity in the country by extension Narok. For the purpose of the NIUSDP 2012-2030, the residents particularly the youth will be kept abreast with information through social media. This will involve web 2.0 based communications and information sharing platforms such as Facebook, twitter, blogs and interactive websites which enable users to interact and collaborate with each other in discussions as moderators or contributors of content. Besides, art and music functions that are particularly popular with the youth will be other vehicles for spreading the urban planning agenda for Narok.

### **18.1.2.5 Word of Mouth publicity**

Information exchange by word of mouth shall continue to be a convenient medium for disseminating information on the Plan especially given the town's rural set up. For the purpose of the NIUSDP, appropriate slogans relating to the Plan will be generated and utilized to further publicize and anchor the Plan.

## **18.2 INSTITUTIONAL AND GOVERNANCE STRUCTURES**

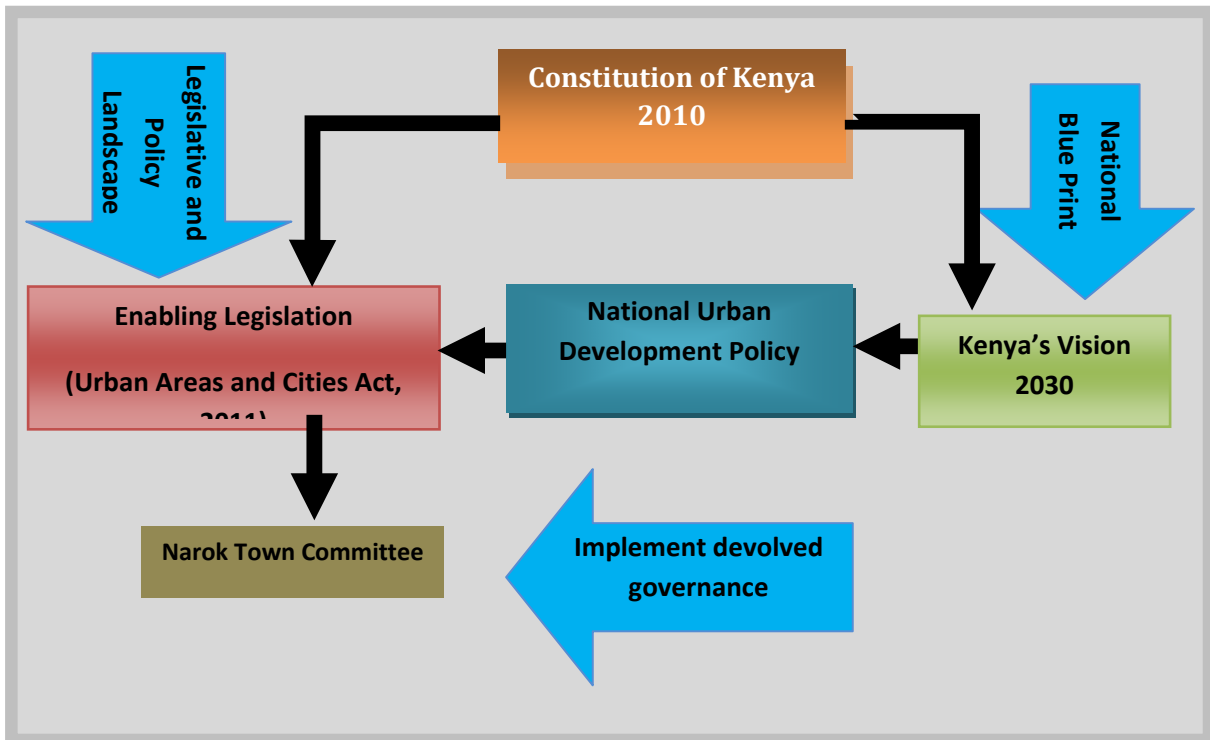
The implementation of the NISUDP 2012-2030 is happening against a backdrop of the repeal of the Local Government Act 265 and its replacement by the Urban Areas and Cities Act 2011 which gives effect to article 184 of the Constitution of Kenya 2010. Besides these, there are other legal provisions already existing and in the drafting stage that create for a competitive legal framework. In the same

<sup>3</sup> The rights of and participation of residents in the affairs of their city or urban area

<sup>4</sup> There are already 14 Local Urban Forums in other towns including Malindi, Mombasa, Embu, Nairobi, Nakuru, Eldoret, Kisumu etc that have been instrumental in assisting residents to articulate their urban issues and concerns in their respective areas including influencing the National Urban Development Policy

spirit the implementation of the Plan needs to take into account the evolving legislative environment. Equally important is the existence of other numerous legislations and policy frameworks that apply to urban development in general and must therefore be observed<sup>5</sup>. The Figure 18.1 gives an overview of some of the legal and policy context that will have a direct bearing on the implementation of the Plan.

Figure 18.1: Legal and Policy Context of the Narok ISUDP 2012-2030



Additionally, as stipulated in the UACA 2011, Narok Town will be administered through a Town Committee<sup>6</sup>. It is expected to oversee the delivery of services by Administrators working with technical teams, to ensure efficient delivery of services to urban residents as well as enhance citizen participation. In this regard the Committee shall be expected to champion and ensure full implementation of the NIUSDP 2012-2030.

Another major area that needs to be underscored for the successful implementation of the Plan is the critical role of citizen participation. Recently, the Constitution of Kenya 2010 has introduced benchmarks for urban governance and management that place a lot of emphasis on engagement of people in matters of development including decision making in affairs that affect them. These are highlighted in the Urban Areas and Cities Act 2011 especially under Article 2 subsection (1) of the second schedule as well as the third schedule. Additionally there are strict provisions for citizen participation, public communication and access to information plus civic education as found in parts 8, 9 and 10 of the County Government Act, 2012. In this regard, the Narok Town proposes the setting up of "Narok Steering Committee (NSC) for the Integrated Strategic Urban Development Plan 2012-2030"; a local inclusive committee (see Figure 18.2 overleaf) that will provide oversight role during the preparation and implementation of the Plan. It is expected that in undertaking its mandate the

5 These may include EMCA 1999, Public Health Act, Revised edition 2012(1986), PPA 1996, Land Registration Act 2012, Transitional Authority Act 2012, County Government Act 2012, The Land Act 2012, The National Land Commission among others

6 Refers to a committee appointed by the county governor and approved by the county assembly as per Urban Areas and Cities Act 2011.

committee will constitute other thematic sub-committees on sectoral issues such as on planning and building. The committee working in tandem with the Town Committee will provide the much needed avenue for citizen engagement in decision making process.

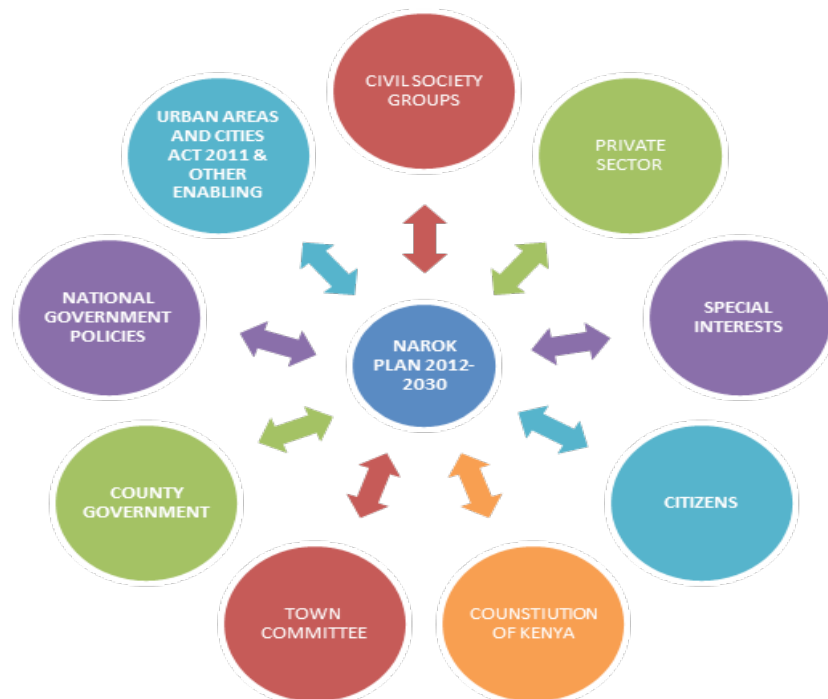
Figure 18.2: The “Narok Steering Committee (NSC) for the Integrated Strategic Urban Development Plan 2012-2030”

The Narok Steering committee is expected to play a critical role in driving the preparation, and implementation of the overall strategic plan 2012-2030 by acting as a channel for harnessing views and inputs of local community. The objectives of the local committee are: To ensure effective participation and soliciting inputs from the Narok residents and interest groups during the plan preparation and implementation; Jointly with County administration to provide regular feedback to the citizens on the plan preparation and implementation process; To popularize the plan making process and ensure adequate support and endorsement by citizenry and the local approving authorities; Solicit and sustain participation of different stakeholders during plan implementation; and Monitor the implementation of Narok-ISUDP 2012-2030. Additionally, the steering committee aims to build on the Narok Town Strategic Urban Development Plan 2012-2030 by guiding and monitoring how the Town’s process will evolve over the next several years. With regard to membership, the Narok Steering Committee brings together different key urban development actors in Narok.

**External Actors and Factors**

The Plan implementation will equally be the subject of interest to many stakeholders and factors. These are important in that they are independent and interdependent as well as mutually reinforcing towards the implementation of the overall goals of the NIUSDP as illustrated in Figure 18.3 below

Figure 18.3: External Factors Expected to Influence the Plan



## Strategies

The following broad strategies have been informed by the fore going discussions and seek to address the various governance and institutional challenges and issues in Narok Planning Area;

- Identify Internal Champions to popularize and over see the implementation of the Plan to its logical conclusion. It is expected that those chosen as Champions should internalize the content and spirit of this Plan, the UACA 2011, the relevant parts of the County Government Act and other legislations and policies.
- Create awareness on the roles of the new **“Narok Steering Committee (NSC) for the Integrated Strategic Urban Development Plan 2012-2030”**, as an opportunity to enhance citizen ownership, participation and accountability as per the Urban Areas and Cities Act 2011.
- Ensure active participation of stakeholders through the relevant committees such Narok Steering Committees for the Integrated Development Plan or Narok Building and Building Subcommittee.
- Articulate in participatory manner a clear and compelling vision for the Narok Town and develop a proper brand for Narok Town.
- Promote accountability mechanisms in budgeting and financial matters by enhancing openness and budgetary literacy of the citizens.
- There is a need to review and redefine the roles and mandates of the key stakeholders
- Create more awareness and disseminate development agenda to the residents directly and by using modern ways of disseminating information.
- There is need to reduce some of the infrastructure constraints that impede economic development. For instance value addition should be promoted; the business regulatory framework should be responsive to the private sector.
- In consultation with County Public Service Commission, strengthen internal staff capacities through hiring additional professional staff.
- Promote and adopt policies and strategies that encourage involvement of private sector in provision of services both in business and essential services.
- Ensure observance of development control measures / procedures, sub divisions, approval of housing plans, change of user and consolidation among others. There is need to establish appropriate Strategies for Urban development and acceptable procedures which should be packaged for dissemination to the public.
- Develop a coordination mechanism for urban development sectoral policies to reduce overlapping responsibilities and gaps evident between and among various agencies in Narok planning area.
- Introduce sufficient monitoring, control and evaluation indicators and mechanisms.
- The need to borrow from national and international best practices in the sector.
- Establish framework for joint coordination and collaboration-to ensure joint programming and joint feedback sessions among others.
- Ensure better and effective provision of services through robust internal checks- Citizen Score Cards, Service Score Cards, Performance Contracts, automating processes such as approvals, ticketing etc. Further, review and re-energize and ensure full operationalization of Service Charters.
- Strengthen the capacity of other local actors –CBOs, NGOs, neighborhood associations;
- Encourage periodic consultations with all citizenry through proposed frameworks-

- Operationalize the citizen Fora as per the Urban Areas and Cities Act 2011.
- Popularize the Narok Communication Strategy for the ISUDP 2012 – 2030.
- The implementation team should pull out quick win-short term projects for implementation in order to enhance and sustain overall buy in of the Plan.

These strategies will be realized through the following broad programme proposals;

- (1) Awareness and Plan Popularization Programme.
- (2) A Private Public Partnership Programme.
- (3) Capacity Building Programmes for citizens, staff and leaders – M& E training, reorientation training, accountability training, planning and building standards and regulations training, disaster risk management training.

## 18.3 HUMAN RESOURCE STRATEGY AND FUNDING

### 18.3.1 Current Staff Complement of Narok Town

The town has an approved establishment of 122 employees and all of them are filled. It has no established positions for engineering, legal, public health, environment and physical planning experts and therefore misses out on benefits accruing from use of professional competencies to identify and prioritize the services needs of the residents and to formulate and implement policies, strategies and plans to conclusively address those needs. Table 18.1 below outlines the strength of the Town's staff in terms of numbers, salary grades and spread by departments in which they are deployed.

Table 18.1: 2012 Narok Town Staff Compliment

Cadre of staff	Salary Scale	Position title	No. Ap-proved	NO. In-post	No. va-cant	Clerk's Dept.	Trea-surer's Dept.	Engi-neering & Urban Plan-ning	Public Health & En-viron-ment	Social Services & Housing
Only 5 (4% of total) Management positions in salary scales 1-8 Staff	3	Town Clerk	1	1	-	1	-	-	-	-
	4	Town Treasurer	1	1	-	-	1	-	-	-
	5	Asst. Town Clerk	1	1	-	1	-	-	-	-
	8	Planner II, Auditor I,	2	2	-	1	-	1	-	-
13 positions (11% of total) in salary scales 9-14 for Supervisory / Technical Staff	9	Admin. Officer 1	1	1	-	1	-	-	-	-
	10	Survey Asst., Acct III. Programmer, CDO	4	4	-	1	1	1	-	1
	13	Audit clerk I, Procurement Asst.	3	3	-	2	1	-	-	-
	14	Asst. Inspector, Artisan II, CO II	5	5	-	1	3	1	-	-
105 employees (85% of total) in salary scales 15-18 for Skilled Support Staff	15	Audit clerk III, CO III, Copy Typist III, Driver II, Rev/clerk II	15	15	-	5	9	-	-	1
	16	Driver III, Nursery Teacher, Rev/clerk III, CO IV, Artisan	45	45	-	2	8	-	1	34
	17	Tele operator, Driver III, Attendant	7	7	-	2	-	4	1	-
	18-22	Askari II, Cleaner II	37	37	-	16	1	19	1	-

Cadre of staff	Salary Scale	Position title	No. Approved	NO. In-post	No. va-cant	Clerk's Dept.	Trea-surer's Dept.	Engi-neer-ing & Urban Plan-ning	Public Health & En-viron-ment	Social Services & Housing
TOTALS			122	122	-	33	24	26	3	36

All departments are grossly understaffed. The Public Health and Environment Department has only cleaners deployed at the slaughterhouse. The Social Services and Housing Department has 35, mostly nursery school teachers. There are no officers to oversee its Works and Public Health operations.

The approved staff positions at management and technical supervisory levels (salary scales 4-13) are too few to effectively attend to the services needs of residents of a town the size of Narok. The majority of the Town's staff fall in the salary scales 14-22 and include clerical officers, cleaners, messengers, drivers, market attendants, social workers, revenue clerks, askaris and bus park attendants.

### 18.3.2 Summary of key Human Resource Areas of Concern

- About 53% of the town's annual revenue is used on financing staff costs leaving a proportionately small amount (45%) to finance services provision and assets acquisition and maintenance
- The town does not have suitably qualified staff to follow-up at professional and supervisory management levels
- Collection of markets and other user charge revenue is constrained by inadequate enforcement officers.

### 18.3.3 Human resource strategy and reform proposals

#### 18.3.3.1 Staff Capacities and Competences

The Town should review the terms of service for its financial staff with a view to attract and retain appropriately qualified and experienced personnel. It should also expand its staff complement to levels consistent with the scale and spread of its operations.

#### 18.3.3.2 Employee Jobs Evaluation and Rationalization

The town should review its costs structure to allocate more resources to services provision as opposed to staff costs. It needs to conduct job evaluations to rationalize employee jobs contents and to determine optimum staff positions per service/ activity or cost center. It should also develop appropriate training programs for its policy makers and staff to ensure their increased and positive output.



*Table 18.2: Human Resources Management Investments*

SECTORAL INVESTMENTS	2014/15	2015/16	2016/17	TOTAL
	KES Millions	KES Millions	KES Millions	KES Millions
Employ professionally qualified staff	5	10	15	30
Training needs assessment	5	-	-	5
Train TOWNors, senior and other staff	5	5	5	15
Sub Total	15	15	20	50
Sectoral Total to 2030	100			

## 18.4 FAST TRACKING AND BUILDING SYNERGIES WITH ONGOING INITIATIVES

NISUDP 2012-2030 will work closely with other ongoing development projects such as the proposed World Bank Capital Project, Ewaso Ngiro South Development Authority's (ENSDA) Flooding Initiative , JICA water projects.

For example in 2012, the Mara River Basin will benefit from a KES 9.6 billion funding for projects in Kenya and Tanzania. The funds, mobilised by the Nile Equatorial Lakes Subsidiary Action Plan Programme (NELSAP), will cover water supply, forest conservation, resource monitoring, irrigation, and building of dams. Residents of Narok are concerned with the effects of climate change and how this is exposing riparian populations to rising incidents of poverty.

The funds will go partly towards the setting up of an integrated watershed management project, and conservation of the Maasai Mau and Trans Mara forests of which KES 19.1 million would be spent on protecting the Maasai Mau and Trans Mara ecosystems, which will go a long way in enhancing household incomes. Primary beneficiaries would be households, institutions, industries, and farmers.

It has also been reported that Ewaso Ngiro South Development Authority will construct three dams and water reservoirs worth KES 550 million in Suswa and Narok. The dams will curb excessive damages caused by adverse weather conditions especially during the rainy seasons. The authority, also intends to plant 2 million trees near Longonot area to assist to control floods in Suswa.

## 18.5 MONITORING AND EVALUATION MECHANISMS

Monitoring and Evaluation is one of the most critical elements for the effective implementation of the NISUDP 2012-2030. Like in many other towns and cities in Kenya, aspects of monitoring and evaluations have neither been well articulated nor effected in development and services delivery processes. Capacities for effective monitoring and evaluation are also lacking both within the Town and community level. As an entry point, the implementation team and actors must put in place adequate monitoring and evaluation mechanisms to ensure that the Plan remains relevant; and more importantly that intended results and impacts are realized, documented and disseminated at various levels including to the citizenry.

While this section provides the general guidelines for monitoring and evaluation, an inbuilt and more elaborate monitoring and evaluation system will be developed and aligned to the various sectoral proposals.

## 18.6 LINKING LOCAL TO NATIONAL M&E SYSTEM

Monitoring and evaluation for the NISUDP will need to be linked up to other relevant institutional frameworks such as the Medium Term Programme (MTP) established at the national level by the Kenyan Government under the National Integrated Monitoring and Evaluation System (NIMES). The focal point for NIMES is the Monitoring and Evaluation Directorate (MED) of the Ministry of Planning and National Development's (now Devolution and Planning) NIMES.

The former Ministry of Local Government also developed Monitoring and Evaluation Guidelines to support the LASDAP process.

The NISUDP 2012-2030 will therefore take into consideration the above existing frameworks in an effort to establish a more effective and widely accepted monitoring and evaluation system. It will also observe any relevant provisions from the county government's policies, legislations, and regulations. The internal capacities will be built to effectively undertake monitoring and evaluation plus effectively use information generated from evaluation processes to make decisions.

The monitoring and evaluation will aim at achieving the following:

- (a) Developing process information and the quality indicators and provisions for continuous collection of data;
- (b) Ensure that the implementation of the various components of the Plan translate into meaningful results and impacts;
- (c) Ensure there is adequate participation of stakeholders including all relevant committees, departments and the citizenry;
- (d) Document and provide feed through and feedback to the various stakeholders on the Plan implementation;
- (e) Identify potential problems in implementation of the NISUDP at an early stage and come up with possible solutions. It will also accommodate changes in community needs;
- (f) Monitor the efficiency with which the different components of the plan are being implemented and suggest remedial measures and improvements.

Additionally the monitoring and evaluation will encompass the following:

- A description of plans/programmes that were to be as part of the Plan in a certain period of time,
- A description of objectives impacts and indicators that were to be realized upon implementation,
- Details of the Plan including technical and financial inputs,
- Operational status and outputs of all the plan components, and
- Remedial measures undertaken to ensure that outputs/impacts are well delivered.

Table 18.3: M&amp;E Framework for Narok

Component	Comments on the desired Ends
Inputs	-This should include, among others, technical, land legislations, and financial resources devoted towards realization of the Plan and components of the Plan -Also would include services provided and other urban development actors. -Indicate details of sourcing and cost.
Outputs	-Include among others, the products the Plan and the related components that are expected to produce/deliver as a result of the inputs or services provided -Should also take note of the effect and impact of the outputs to the citizens and the town in general
Impacts	Examining if the goals or objectives of the Plan/its components have been met. Examining the levels of impacts across various groups and any changes resulting from any physical improvements
Processes	-Measuring if both operational and implementation processes are being followed. -Aspects/level of community/beneficiary participation in plan implementation, taking note of special groups such as women, disabled and youth
Schedules	Measuring if the implementation of the Plan is adhering to the stipulated time and budget lines. -if there are delays, they should be recorded and reasons well noted

## 18.7 LAND AVAILABILITY FOR URBAN DEVELOPMENT

It should be noted that Narok town has very little public land and considering that the town is still growing and expanding, this needs to be guided through proper planning. For this to happen, land will need to be made available for various uses in the future. This will be achieved in various ways as outlined below:-

### 18.7.1 Land Acquisitions

Land could be acquired by using the “Land Acquisition Act” for the purposes of putting up urgently required public facilities. Of priority would be land for putting up a fire station, Referral hospital, eco-centre development, sanitary landfill, sewerage treatment plant, cemeteries, industrial and business parks, an integrated terminal for all land transport modes, expansion of the airport, residential estates of various densities and other emerging needs.

### 18.7.2 Land Pooling

Land pooling is a form of temporary public ownership that seeks to achieve unified control over large areas and means of financing public service installations during the crucial land development stage of urban growth. This process entails a public authority like the County Government of Narok (CGN), to assemble numerous parcels of Land without paying compensations to the owners. Instead, the Town services and subdivides the Land for urban use and returns most of the resulting building sites or plots to the original owners on prorata basis (i.e. on proportion to their Land contributions) and sells the remaining sites to recover public costs.

Government or public-sponsored land pooling is an efficient way to convert rural land to urban use and allows the Government to capture some of the land value increases resulting from the supply of inputs. This system is widely used in South Korea, India, Japan and China. Locally in Kenya, the process has been used in Changamwe, Mombasa where the Changamwe Re- Pooling Scheme was implemented through the former Municipal Town of Mombasa. The latter is an example of how this scheme can succeed.

### **18.7.3 Public – Private Partnership**

Private Investors in Narok could be encouraged to partner with the County Government of Narok (CGN) in raising funds for the acquisition of land for specific projects and share the accrued profits. For instance, land could be acquired for medium or high density residential use, after which a block of flats on tenant purchase could be put up and availed to the residents. Owners of private land zoned for Industrial purposes, for instance, could be allowed to enter into direct arrangements with private entrepreneurs for purposes of putting up industries with the County Government of Narok overseeing this and providing requisite infrastructure and basic services. The private investors' contribution will be in the form of land and could work out a profit-sharing arrangement or how to sublease the land.

### **18.7.4 Revolving Fund**

Government/Municipal funds could be set aside for purchase of strategic land. For instance, the government or municipality could buy out some of the plot owners in the freehold area near the C.B.D. and develop rental housing scheme. The proceeds could then be shared on a 50 – 50 ratio whereby the Government/Municipality remains with the asset and 50% of the rent whereas the balance of the of the rent could remain in the revolving fund to be used to replicate the exercise at another site.

### **18.7.5 Open Market Transactions**

Entrepreneurs could be encouraged to be involved in a willing buyer, willing seller transactions when looking for land to put up various types of investments provided the particular piece of land has been zoned for that purpose. However, this will need a lot of publicity once the Plan is complete to make entrepreneurs aware of this possibility. Social media and the Local Planning Steering Committee could be used to popularize these options amongst the local owners in the Town and could even attract external or international investors.

### **18.7.6 Subleasing of Land**

The owners of the land in the freehold area could, for instance, sublease their land for the various urban uses and earn reasonably good amount of money while still remaining as the lessor of the land. However, this implies that government regulations such as change-of-user will need to be compiled with.

### **18.7.7 Land Banking**

The County Government of Narok (CGN) could have more controls on the development control conditions on subdivision and change of users.

Presently, a large number of freehold owners near the C.B.D. are operating commercial enterprises on hitherto agricultural land. These should revert to 99-year leases and bring these lands under direct government control and be able to increase the government's land bank. These conditions apply to the whole country as per the Government Land Act.

## **18.8 SOME PRIORITY PROJECTS to spur ECONOMIC GROWTH**

### **18.8.1 Quick-Win Projects**

Whereas the capital investment needed to operationalise the proposed programmes for stimulation of economic investment in Narok Town may be high and unachievable in the short run, nevertheless there are certain projects that can catalyse business in Narok even

with low capital investment. In our view, these can also be designed to prevent frustration among emerging business community over delays and to cater for substantial improvements in the town that are dogged by long processes and procedures. Quick-win projects can bring about vital gains in the financial well-being of the business community and residents in general.

Narok is the bread basket of Kenya, with a sizeable chunk of the wheat, corn and tomatoes consumed in Nairobi coming from this vast area that is endowed with fertile farmlands, a reliable climate and able farmers. The town is also the gateway to the world-famous Maasai Mara Game Reserve that boasts the presence of the Big Five, the natural spectacle that is the wildebeest migration and, perhaps, one of the world's most diverse wildlife concentration areas. The migration is also one of the wonders of the World and the fact that it partially occurs in the Maasai Mara positively promotes tourism.

Narok town is also the leading producer of barley and wheat in the country. The wheat is consumed locally and also used by industries -both local ones and those based in Nairobi. Quick Win programmes will need to focus on the town's capital investments and catalytic activities that focus on the following:

- Set-up a Town Planning Department of the town with at least 3 qualified planners.
- Uptake of GIS especially in land-related data update, storage and retrieval
- Develop the Northern by- pass road (from B3 road at Siyiapei -Mulwa-Rrotian-Nkareta-join B3 at Olulung'a)
- Develop the Southern by pass road (from B3 road at Empopongi-Lemanet-proposed Eco-centre-Ewuaso Ng'iro Airstrip- join B3 road at Katakala).
- Develop Infrastructure to establish Lemanet as a new commercial hub
- Link roads to by – pass from CBD and residential areas as well as in Block 11 and major residential areas
- CBD roads upgrading
- Develop a Modern Maa Cultural Centre in Morijo, Narok Town
- Designate the Central Integrated Transport Terminal
- Overpass at B3 and C57 junction
- Storm water drainage in Narok Town
- Modern Abbatoir at Lemanet
- Infrastructure and facilities to encourage development of slaughtering value addition at Ewuaso Ng'iro
- Expansion of the water supply system(JICA)
- Acquisition of 20Ha of land for Sewerage treatment works and Sanitary Landfill at Kampi MauMau
- Foul sewer and connection To Narok trunk sewer
- Construct Flood control dams,
- Infrastructure to establish Rrotian as a centre for Agro processing for Agricultural products
- Set Fire station plant and equipment at Narok town, Lemanet and at key centres
- Develop the proposed County Headquarters At Lemanet
- Electricity grid expansion to cover not supplied, especially Nkareta

- Redevelopment of the river banks as a leisure resort and natural walkway
- Establish ICT Centre of Excellence at Lemanet
- Modern business workspaces for small scale traders at Nkareta, new CBD and Ewaso Ng'iro
- Strategically put up solid waste collection receptacles in Narok Town CBD
- Restoration of the rivers' riparian reserves
- Afforestation of Mau forest & upper catchment areas of Narok Town
- Increase vegetation cover town wide
- Reduction of hill degrading activities
- Planting trees/beautify the Koonyo grounds and put up park seats
- Covering storm drains & backfilling quarries
- Emerging modern livestock rearing with utilisation of better veterinary facilities;
- Value addition for livestock products - Expansion and Development of Ewaso Ng'iro market by installing basic facilities such as toilets, water, sheds and shade;
- Growing interest in ecotourism which can boost incomes for local communities;
- Cultivation of medicinal plants (e.g.. *Aloe vera*); and
- Promotion of Model Co-operative through support to peri-urban rural and urban community co-operative for empowering the youth and women.

## 18.9 How the proposed activities will affect Employment

### 18.9.1 Eco Tourism collaboration with International Travel and Hotel Chains

The rural areas of Narok Town are a vital part of the Maasai Mara ecosystem as it forms the wildlife dispersal areas for the Reserve. There is an increasing arrangement of leased land from individual Maasai landowners with the objective of having the landowners receive a substantial and direct income from wildlife. In addition, such arrangement have the potential to catalyse sound land management policies including, controlled grazing, holistic management practices, low volume and low impact tourism, and community land-use plans.

As part of such arrangements, there should be more efforts to set up projects, which can benefit the local communities through education well as health facilities with a focus on maternal and child disease, HIV/Aids, TB, malaria and waterborne diseases. Increasingly, the focus needs to be on supporting youth and women's enterprises, including the development of new income-generating activities. While it is not easy to estimate the effects on employment, it is estimated that over 5,000 jobs for women and youth can be created from such arrangements.

### 18.9.2 CBD

The space in the CBD is very congested. It is recognized that retail hawking business needs to be near the potential customers: travelers and hence the area around the bus stop is very attractive for this type of business. If a few retail sheds were to be constructed around the bus stop, (not more than 500 m<sup>2</sup>) this can have the potential to create employment for about 200 retailers and itinerant hawking retailers.

### 18.9.3 Lemanet, and Ewaso Ng'iro Centres

Jua Kali Sheds can be established to create work spaces for artisans. Establishment of

new sheds by about 2,000m<sup>2</sup> of space for artisans working outside the sheds could create additional employment of about 100 artisans and workers in the above centres. There is space to establish a new agro-industrial Zone in Lemamet (e.g. for processed potatoes and other products) totaling 3000m<sup>2</sup> of space which could (together with the other measures) create employment for at least 1,500 people.

In order to encourage additional retail trade, new sheds for retail trade (about 1,000m<sup>2</sup> of mini shops) could be established. These would create employment for at least 500 people.

To promote processing of wheat, the County and town can partner with private sector to construct a milling plant in Lemamet. Direct employment effects can be in the region of 100.

#### **18.9.4 Nkareta**

It is envisaged that dairy cattle farms (e.g. 100 each 2-acre zero grazing farms) would create employment and incomes for about 500 new farmers in Nkareta. To cater for horticultural crop growing in this area, it is also proposed that there be established two new storage centres each 500m<sup>2</sup> of space for onions and related crops. The above new measures could create employment for an additional 1,000 people.

### **18.10 CAPITAL INVESTMENT PLAN FOR NAROK TOWN**

#### **18.10.1 The Need for a Process of Planning and Funding Capital Investments**

Given current trends in urbanization of Narok Town as discussed in section 4.1 on population structure dynamics, the unprecedented growth of urbanisation in the town creates a pressing demand for the County to further invest in infrastructure and other assets to support economic and social development. Such investments require capital that often far exceeds available resources. The unavailability of capital as discussed in Sec 6.4, in turn, puts a premium on the need for the County to build capacity to appraise and prioritize its investment decisions. Hence, there is an increasing need to establish and maintain a process of planning and funding capital investment as a regular activity integrated within the Town together with its other activities and based on principles of good public management.

From the above perspective, investment is understood as the acquisition or building of new assets, or major repair and replacement of existing assets that have an economic life longer than one year and a value above a specified threshold. Capital investment planning (CIP) by the County would include (or should include) capital investment by the Town itself and by its entities, including enterprises established and owned by the County for the provision of services in the town. CIP may include investment by the private sector through public-private partnerships (PPP). There are at least three substantial challenges in dealing with CIP in Narok and other smaller urban areas.

There is an intrinsic timing challenge. On the one hand, allocating funding for capital projects should be done annually within the County and Town's budgeting cycles. On the other hand, complex infrastructure projects may require several years' preparation and "packaging" before external financing (grants or loans) can be sought.

##### **18.10.1.1 Timing Challenge**

There is an intrinsic timing challenge. On the one hand, allocating funding for capital projects should be done annually within the County and Town's budgeting cycles. On the other hand, complex infrastructure projects may require several years' preparation and "packaging" before external financing (grants or loans) can be sought.

### 18.10.1.2 Desired Demands and Availability of Funds

As detailed in Section 6.4, once the cost of paying salaries is met, there are hardly any funds left for capital expenditures. Secondly, desires for capital investment are always higher than available funding. Therefore, the County, like in the case for all urban areas in Kenya, must make choices. Capacity to Capital Plan

### 18.10.1.3 Capacity to Capital Plan

Often, new and contemporary approaches to evaluate options for complex infrastructure projects usually exceed the Local Authorities' technical capacities, even in larger urban areas of Kenya. For example, capital investment should be considered within the frameworks of life cycle costing and assessment of alternatives (for example, reducing demand for the service/facility, engaging the private sector). Such a consideration is not often easy to quantify and evaluate objectively by the Local Authorities. In addition, CIP is an evolving area of public management. Local governments across the world are continuously trying new approaches.

## 18.10.2 Relating CIP to other Town Activities

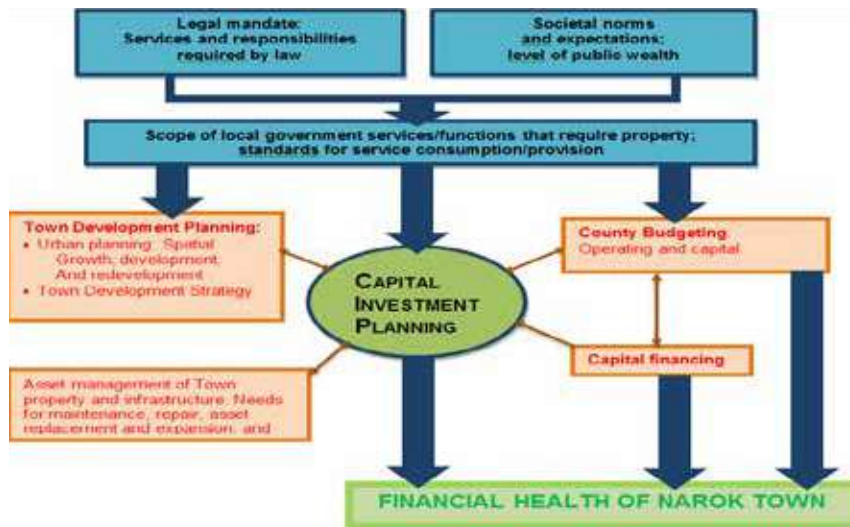
Capital investment is not a standalone activity for the County with regard to the Town but sits at the intersection of two interrelated areas: asset management and financial management. *Figure 18.4* overleaf presents a "big-picture" overview of how CIP should ideally relate to other areas within Narok Town. The first key principle of contemporary good public management as shown by the blue boxes is that the properties and infrastructure in which the town invest should be only those needed for the services and programmes that the town provide for its residents.

In turn, whatever services provided are defined either by law (mandatory services) or by local policies (discretionary services). For example, the County Government Act requires counties to provide some pre-school childcare services, and the town may be asked by the County Government of Narok (CGN) to invest in more day-care facilities. In any event, service provision mandates, along with societal expectations and the wealth in the public sector, form the scope of properties and the standards for consumption and provision of services that the town must address in its CIP process.

The red writings show three inter-related factors that provide input to the CIP progress: sources of projects, funding, and finance. Finally, the green writing depicts a very important aspect of CIP; decisions related to capital investment, city budgeting, and financing -all of which directly impact the town's financial health and its future ability to fund services required by the residents.



Figure 18.4: Capital Investment Planning and Relationship to Other County/Town Activities



Source: Adapted from World Bank, 2011.

### 18.10.3 Importance of the Choice of Development Model for the Town

Chapter 13 discusses alternative development scenarios which would best suit Narok town. The alternative development scenarios that emerged were:

- (a) **Narok Town as a Smart City** with improved and modern mobility for both the residents and through traffic complementing a smart economy, environment, people and governance;
- (a) **Narok Town as an Eco-Resort City** through development of the Ecocentre, Maasai Cultural Village and Theatre, Taxidermic zoo and Museum, International Airport, conference facilities, development of medium sized tourist hotels at Ewaso Ng'iro Centre and development of a nature trail in the Maasai Mau forest;
- (a) **Narok Town as a Vibrant Agro-Industrial Hub** with value addition on the agricultural produce as well as setting up of new industries such as a tannery and animal feed at Ewaso Ng'iro and large scale flour mills a brewery among others; and,
- (a) **Narok Town as a University City** where Mara University provides the focus of developmental activities in the Town.

It was envisaged that the choice of the model by the people of Narok will of course determine the focus of the Integrated Plan and hence the key capital expenses for the future of Narok. For example if the choice is **Narok Town As A Vibrant Agro-Industrial Hub**, it would imply incurring high costs for infrastructure take advantage of the County's rich agricultural hinterland.

In the final Stakeholder Workshop held in Narok Town on Thursday, 5<sup>th</sup> December, 2013, the choice made by the people of Narok was a blend of all the four development alternatives. Hence the CIP has been prepared with the knowledge that a combined blend of the four development scenarios has been made by the people of Narok.

### 18.10.4 Financing Strategy for the CIP

In order to achieve the objectives of the Narok Town ISUDP as well as the national objective of accelerating economic growth and poverty reduction, a proper financing strategy of the Plan is critical. Funds mobilization is crucial to the implementation of the City priorities. To ensure that the funding of the projects have been effectively done, the first fiscal year of the CDP, 2014/15 has been set aside to carry out a massive funds mobilization for the projects. This will ensure that projects will only commence once funds have been guaranteed.

### 18.10.5 Proposed Capital Costs for the first 3 years

The various sectoral capital costs for the first 3 years have been identified based on the review of the proposed sectoral strategies. Details are given in Annex 2 and summarized in *Table 18.4* below.

*Table 18.4: Summary of Short Term 3 year Capital Costs.*

SECTORAL ACTIVITY	2014/15	2015/16	2016/17	TOTAL
	KES (Million)			
Housing and Social Infrastructure	770	605	675	2,050
Environment	43	38	38	119
Economic and Investment	220	740	1,840	2,800
Municipal Financial Structures	20	20	5	45
Town Planning and Management	2,000	550	550	3,100
Transport and Infrastructure (Includes costs for Narok CBD and 3 main centres and cost of availing land)	10,361	8,124	11,400	29,885
<b>TOTAL FOR 3 YEAR CAPITAL INVESTMENT PLAN</b>	<b>13,414</b>	<b>10,077</b>	<b>14,508</b>	<b>37,999</b>

For the 3 year period, the total is KES 38 billion.

#### (i) Housing and Social Infrastructure

Whereas informal housing is not yet a big problem in Narok, it is clear that the problem needs to be nipped in the bud and hence this will be a key issue to be addressed. Other aspects of housing and social services e.g. improving housing typologies and conditions, spatial location of housing, improving housing delivery systems, improving educational infrastructure, improving health infrastructure, improving community facilities, can be addressed through a combination of several sources of funding as shown in *Table 18.11*.

#### (ii) Environment

Most of the capital expenses in this sector can be funded by the County government. These include items like waste handling technology (Refuse vehicles), and covering storm drains & backfilling quarries.

#### (iii) Economic and Investment

All the capital expenses proposed in this sector relate to the future development of the Town as a centre of creating employment and wealth for Narok County. For example, the infrastructure to establish Lemanet as a new centre for Logistics for Agricultural products will catalyse the new centre as a focal point for agro-industrial logistics. Similarly, by funding the capital infrastructure and facilities to encourage development of slaughtering value addition at Ewaso Ngiro, this will catalyse the establishment of an animal processing centre in the whole of the region. Again, a blend of private, central government and county funding is envisaged.

## (iv) Municipal Financial Structures

Modest capital expenses have been proposed in relation to Computerization of revenue operations, establishment of a Geographical Information System (GIS) and development of a modern Valuation roll.

## (v) Town Planning and Management

Expenditures have been proposed for the establishment of a modern Town planning Unit in the County as well as an allocation for compensation to people whose land will have been acquired for proposed town expansion and re-planning.

## (vi) Transport and Infrastructure

The capital expenditures proposed relate to a wide range of expensive but necessary infrastructure in respect of the Northern by-pass road Olulung'a-Mulwa-Siyiapei; a new Southern by-pass road, C12 – B3, Link roads to by-pass from CBD and residential areas; new CBD roads, Buspark and Carparks, overpass at B3 and C57 junction, storm water drainage. In addition there are infrastructure projects and cost of acquisition of land for public use in the smaller centres of Ewuaso Ng'iro, Rrotian and Nkareta as detailed in *Table 18.5* overleaf. The total land acquisition cost of KES. 315.4 Million will be borne in 2015/6 financial year.

### 18.10.6 Cost of Availing Land for Public Purpose Use

It is assumed that land will be bought or compulsorily acquired for putting up sewerage treatment works and sanitary landfills, public cemetery, water treatment works, markets, police stations, expansion of the airport, fire stations and recreational grounds. The cost of land has been calculated at the current market value. The *Table 18.5* overleaf gives the detail of the public facility, land sizes and costs involved in the purchase or acquisition of land at the respective centres. The costs of land were obtained from private sources in the land sector in Narok Town. Another assumption which has been adopted is that land at Lemanet belongs to the County and hence its purchase or acquisition has not been computed. From the *Table 18.5* below it can be seen that the total cost of availing land for public use will be KES. 315,366,707. These are based on current, 2014, land values within Narok County.

*Table 18.5: Cost of Availing Land for Public Use Facilities Development*

NAROK TOWN			
LAND USE	SIZE (HA)	ESTIMATED COST/ACRE (KES)	TOTAL COST (KES)
7 UPPER DAMS @ 4HA	28	1,500,000	103,782,000
RECREATIONAL WATER PARK (LOWER DAM)	5.5	2,000,000	27,181,000
CENTRAL INTEGRATED TERMINAL	5.2		25,698,400
RECREATIONAL OPEN SPACES IN MAJENGO	4.18		20,657,560
EXTENSION OF NAROK NEW MARKET	3		14,826,000
SEWER TREATMENT PLANT AND SANITARY LANDFILL AT KAMBI MAUMAU	15		55,598,711
PUBLIC CEMETERY AT KAMBI MAUMAU	5		18,532,904
TOTAL COST			
EWUASO NG'IRO CENTRE			
LAND USE	SIZE (HA)	ESTIMATED COST/ACRE (KES)	TOTAL COST (KES)
INDUSTRIAL ZONE	72.7	120,000	21,557,004
LORRY PARK	1.1		326,172
SEWER TREATMENT PLANT	2		593,040
POLICE STATION	2		593,040
FIRE STATION	2		593,040

<b>NAROK TOWN</b>			
<b>LAND USE</b>	<b>SIZE (HA)</b>	<b>ESTIMATED COST/ACRE (KES)</b>	<b>TOTAL COST (KES)</b>
TOTAL COST			23,662,296
<b>RROTIAN CENTRE</b>			
<b>LAND USE</b>	<b>SIZE (HA)</b>	<b>ESTIMATED COST/ACRE (KES)</b>	<b>TOTAL COST (KES)</b>
2 INDUSTRIAL PARK	35.3	200,000	17,445,260
SEWER TREATMENT PLANT	2		1,000,000
FIRE STATION	2		988,400
POLICE STATION	2		988,400
TOTAL COST			20,442,060
<b>NKARETA CENTRE</b>			
<b>LAND USE</b>	<b>SIZE (HA)</b>	<b>ESTIMATED COST/ACRE (KES)</b>	<b>TOTAL COST (KES)</b>
TRANSPORTATION (LORRY PARK)	2.72	100,000	672,112
TRANSPORTATION (PUBLIC & CARAVAN PARKING)	5.64		1,393,664
HIGH ALTITUDE TRAINING TRACK	19.4		1,940,000
FIRE STATION	2		500,000
POLICE STATION	2		500,000
TOTAL COST			5,005,776
NAROK COUNTY TOTAL COST OF AVAILING LAND FOR PUBLIC USE			315,366,707

How do these proposed expenditures compare and relate to the total County budget? Table 18.6, below details the 3 year County budget (from the year 2013/14).

Table 18.6: Narok County Budget

	<b>Sector</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>KES</b>				
	Agriculture, livestock and fisheries	1,116,812,000	1,326,234,000	1,394,206,000
	Energy sector	1,111,500,000	1,194,000,000	1,281,500,000
	Trade and Commerce sector	241,000,000	298,500,000	511,000,000
	Urbanization sectors	712,998,889	1,121,248,889	1,779,998,889
	Lands, forestry, water and natural resources	194,650,000	345,650,000	315,650,000
	Transport infrastructure	5,071,750,000	6,296,425,000	6,872,900,000
	Industrialization	158,700,000	1,031,500,000	1,045,100,000
	Health	3,631,222,000	4,148,085,700	4,558,002,200
	Education	670,700,000	849,450,000	962,200,000
	Institutional Capacity Building	684,730,000	662,330,000	596,780,000
	Gender, Youth and Social Services	502,000,001	698,250,003	789,000,004
	Safety and Security	351,400,000	394,400,000	405,900,000
	Wildlife, Heritage and Tourism	454,000,000	977,000,000	1,243,000,000
	<b>GRAND TOTAL</b>	<b>14,901,462,890</b>	<b>19,343,073,592</b>	<b>21,755,237,093</b>

Source: County Government of Narok, 2013

According to the Budget above the proposed total county expenditures will be KES 19 billion in 2014/15 and KES 22 billion in 2015/16 and a projected KES 25 billion in 2016/17. It is not easy to directly compare the County budget with the Narok Town ISUDP CIP budget since the County budget is not detailed enough to apportion actual programmes. However, it is clear that elements of the County Budget allude to certain expenditures that would fall under sectoral items discussed in the NISUDP. For example, agriculture, livestock and fisheries, trade and commerce sector, urbanisation sectors, lands, forestry, water and natural resources, transport infrastructure, industrialization, health, education, institutional capacity building, gender, youth and social services, safety and security are all County budgeted expenditures that would relate to the detailed proposed expenditures presented

in the CIP. Hence, the County budget would imply a budget of about KES 8 billion annually to similar sectoral activities in the NISUDP. This compares well with the proposed expenditures in the CIP.

## **18.10.7 Funding the Investments**

### **18.10.7.1 Introduction**

The 2014/15 Capital Budget will represent the funding for the first year of the CIP. Projects in the first year of the Plan generally represent the Town's most immediate investment priorities and at KES9.7 billion is a very high figure. Projects that are included in the Plan are stated as priorities but of course, are not guaranteed for funding as the Plan is a reflection of the stated needs within the Town. In this regard, the CIP is intended to be a fluid document that will be subject to change each year as priorities are re-assessed and as additional information on funding streams becomes more defined. Losses of L ATF, emergencies, unforeseen and extraordinary expenditures in the operating budget, are all factors that can force a change in the assumptions of the CIP. The mobilization of these funds is critical if Narok will have to contribute to the overall goals of accelerating economic growth and poverty reduction in Narok

The following are some of the sources of funds for the CIP:

- Central Government County transfers;
- Own taxes and revenues from assets;
- Development Cooperation (DP) funding e.g. JICA; and,
- Private and related collaborative sources (PPPs, Shelter Afrique etc).

### **18.10.7.2 Central Government County transfers**

By the end of 2013/14 FY, the Central Government has planned to have transferred KES210 billion to the 47 counties of Kenya (Commission of Revenue Allocation, 2013:iv). Of this amount, Narok County is expected to be allocated KES4.15 billion. Going by current Government of Kenya trends in growth of expenditure allocations, at best it would be expected that the 2013/14 allocation will not increase to more than 5% annually over and above the 2013/14 allocation. Hence, the expectation is that for subsequent years, the allocations will be 2014/15 (KES4.4 billion), 2015/16 (KES4.6 billion) and 2016/17 (KES4.8 billion).

### **18.10.7.3 County and Town Taxes**

Narok County expects to get KES 5.7 billion in 2013/14 from its own sources comprising KES 4.5 billion from the former County sources; KES 0.6 billion from the former urban authorities, and KES 0.155 billion from the Narok Town Council of Narok operations.

### **18.10.7.4 Capital Assets**

As discussed in Chapter 6, the town has not been able to invest sufficiently in equipment and other capital assets required for optimal operation. The current stock of capital assets includes only slaughterhouse/slabs, ODM market, Narok Water & Sewerage Company, thirteen rental houses, two exhauster trucks, one tractor and one lorry. These are currently valued at approximately KES 200 million. approximately KES200 million.

### 18.10.7.5 Proposed Funding Structure

Given the level of capital expenditures and the scope of the Narok Town ISUDP, it is clear that there must be innovative ways to raise the funding needed for the CIP. There are various ways in which this can be done as proposed in *Table 18.7* below. This will have to be a mix of GoK funding, mostly County funds and development partners. Where possible PPP arrangements will have to be catalysed.

*Table 18.7: Proposed Sources of Funding the 3 Year CIP by Sector*

SECTORAL ACTIVITY	FUNDING SOURCES				
	GoK	PPP	County	DPs	Total
	KES (Million)				
1. Housing and Social Infrastructure	695	100	1,125	130	2,050
2. Environment	8	26	81	4	119
3. Economic and Investment	340	760	1,640	60	2,800
4. Municipal Financial Structures	-	-	45	-	45
5. Town Planning and Management	300	-	1,700	100	2,100
6. Transport and Infrastructure	12,930	-	15,428	2,527	30,885
<b>GRAND TOTAL</b>	<b>14,273</b>	<b>886</b>	<b>20,019</b>	<b>2,821</b>	<b>37,999</b>

## 18.11 THE PLAN IMPLEMENTATION

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.

Table 18.8: Spatial Planning Implementation Matrix

**Issue 1: Inefficient Central Business District**

SPATIAL PLANNING						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Clogged Storm Water Drains	Narok town CBD	Unblock and Clean up clogged drains	Kazi kwa Vijana initiative	Short Term	CGN	
			Provide dams and animal watering points upstream	Short Term Medium Term		
			Set by-laws and impose fines on those who resist	Short Term Medium Term		
Uncontrolled Hawking	Narok town CBD Along B3 road Along C57 Road	Plan for the strategic operations of this informal sector	Designate certain areas for Informal Trading	Short Term	CGN	
			Convert strategic streets which are less busy into periodic open air markets at certain times of some days of the week	Short Term		
			Re-site hawkers into Narok New Market after its expansion	Medium Term		
Inadequate Recreational Facilities	Narok town CBD Ewuaso Ng'iro Rrotian Nkareta	Efficiently manage the existing Koonyo Public Park	Fence off Koonyo Public Park	Short Term	CGN	
			Provide Public seats	Short Term		
			Provide solid waste collection receptacles	Short Term		
			Regular maintenance of trees, flowers and grass	Short Term		
		Create new recreational areas strategically in all the key centre	Plan for the new designated recreational sites at Majengo, Ewuaso Ng'iro, Rrotian and Nkareta	Medium Term		
Un-named roads and Streets	Narok Town CBD	Improve on orientation and location of buildings and businesses	Name of Streets after prominent persons of Narok through adoption of County Government of Narok's minutes	Short Term	CGN	

**Issue 2: Un-Planned and Un-coordinated Urban Development**

SPATIAL PLANNING						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Urban Sprawl and Unregulated development	Lower Majengo Block 11 Mwamba	Control development activities including sub-divisions	Utilise the Narok ISUDP zoning plan to control development and sub-divisions	Short Term	CGN	
Lack of Development control activity in the town		Initiate Development Control Functions	Set up a Town Planning and lands Department The Town planning Unit to have not less than one senior planner and two assistant planners Employ a land surveyor Set up an enforcement section of the new planning section Development Control Functions to be initiated			

Table 18.9: Transport and Infrastructural Facilities Plan Implementation Matrix

**Issue 1: Water Supply**

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
<b>Inadequate Water Supply</b>	Narok town;	Prepare water master plan.	Carry out phased water supply development.	2YEARS	NAWSC JICA	10
		Identify and allocate land for water facilities; treatment works; storage and wayleaves.	Beacon all water facility land.	3YEARS	NAWSC NC	1.5
		Increase the supply of water through already planned and funded projects.	Implement the JICA water proposal	3YEARS	NAWSC JICA NC	1100
		Site the best locations for more water boreholes.	Drill more boreholes.	3YEARS	NAWSC NC	16
		Encourage private investment in water supply.	Allow for private public partnership in water supply	5YEARS	NAWSC NC	10
		Take good care of existing water supply system.	Rehabilitate, improve and extend existing water supply system.	3YEARS	NAWSC NC	90
			Augment Umasharian water project.	3YEARS	NAWSC NC	20
			Monitor and maintain good water quality for supply.	3YEARS	NAWSC	2
		Avail clean water to all.	Provide individual water connections to most households.	3YEARS	NAWSC	150
Promote public awareness on efficient care and usage of water.	Promote care, proper use of the clean water and willingness to pay for it.	BI-ANUALLY	NAWSC NC	0.5		

**Issue 2: Road Transport**

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) xMILLION
Narok is well connected nationally by road.  Other areas of the town are poorly linked by road.	Narok town CBD, and Ewauso Ng'iro;	Improvement of town roads to all weather roads.	Beacon all road reserves and public wayleaves.	3YEARS	CGN , KURA	5
		Improvement of main CBD linking road network in town	Reclaim all encroached public wayleaves Do phased road development.	5YEARS		195
			Improvement starting with CBD town roads and on primary roads connecting Government offices and residential areas.	5YEARS		6880
		Improve storm water drainage structures on all the CBD and town linking roads	The corresponding storm water drainage structures and parking be implemented at the same time.	5YEARS		1530



TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) xMILLION
Traffic congestion	Narok town CBD	Widen road junctions	Improve junctions of CBD roads with Nairobi- Bomet road and Narok-Nakuru road.	3YEARS	KURA , NC	10
		Provide road signs and furniture	Enforcement of traffic management by-laws. Erect clearing seen, road signs and furniture.	3YEARS	KURA, CGN	5
	Road bye-passes	Introduce two road By-passes. [Northern and Southern]	Determine and mark the location of the road bye- passes on the Maps. Prioritize the construction of the roads.	5YEARS	KURA, CGN ,GOK	6110
Poor leakage to forest area Laitugira	Above northern bye-pass road	Introduce a by-pass Nkareta-Naisoya-Eor Enkitok and link road to Loitugira centre		10 YEARS	KURA CGN, GOK	1850

### Issue 3: Non -Motorized transport

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Exist by Boda Boda e.t.c	Narok town	Identify special corridors and parking areas.	Construct footpath and parking areas and mark pedestrian crossings.	3YEARS	KURA , CGN	12
			Erect road signs and furniture			
		Provide road signs and furniture.	Provide regular public awareness to motorists, non-motorists and pedestrians on road safety aspects.	5YEARS	5	

### Issue 4: Railway Transport

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Lack of railway Transport	Narok town	Prepare master plan for railway line development Link Narok to neighbouring county towns by railway line.	Carry out a feasibility study for establishment of a railway line.	3YEARS	MOTI, RVR	200
		Identify possible location of railway line and railway station for future use.	Beacon land for railway transport facilities.	3YEARS	MOTI, RVR	10

### Issue 5: Air Transport

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Some land allocated for airstrip. Limited air transport exists.	Narok town	Prepare master plan for the proposed airport	Locate more land for future expansion of airport. Secure the land	5YEARS	MOTI, KAA	40
		Allocate more land for future expansion. Link town to National and County airports.	Do phased airport development. Developments around airport to be in harmony with those of the airport.	LONG TERM	MOTI, KAA, CGN	ACTORS TO PROVIDE
		Identify sources for funding development of airport.	Encourage private public partnership in the development of the airport.		MOTI,CGN,KAA	

### Issue 6: Bus Park

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Inadequate and congested bus park.	Narok town	Identify and allocate more land for bus park and associated facilities.	Beacon land for bus parks, car park and boda boda	3YEARS	CGN	9
		Secure funding for the improvement of bus park and associated facilities.	Demarcate areas for local and transit vehicles. Develop parking spaces as per the assessment needs.	5YEARS	CGN, KURA	40
		Promote awareness and willingness to pay for parking charges.	Enact bye-laws on enforcement of parking arrangements and collection of parking fees.	3YEARS	CGN, KURA	2

### Issue 7: Lorry Park

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
No special parking for lorries.	Narok town	Allocate suitable land for parking of lorries	Beacon land for parking of lorries.	3YEARS	CGN	3.5
		Provide for infrastructural services.	Develop suitable parking space for lorries.	5YEARS	CGN	40
		Parking space to be charged.	Enforce parking arrangements and collection of parking fee.		CGN	0.2

## Issue 8: Sewage Disposal

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Lack Of An Existing Central Sewerage System.	Narok town	Prepare master plan for sewerage system.	Implement phased sewage disposal system.	3YEARS	NAWSC CGN,NEMA	10
		Identify and allocate land for sewage treatment works and wayleaves	Beacon all land for sewerage system facilities.	3YEARS	NAWSC CGN, GOK, NEMA	10
		Establish sources for funding for improvement of sewage disposal system.	Construct the priority trunk and primary sewerlines connecting zones all the way to the sewage treatment works.	3YEARS	NAWSC CGN	494
		Facilitate individual sewer connections	Connect individual households and institutions to the sewerlines	5YEARS	NAWSC CGN	80
		Encourage private public participation on sewage exhauster services and public toilets.	Allow for private public participation in disposal of sewage.	5YEARS	NAWSC CGN, NEMA	20
		Enlighten residents on protection of environment and good sanitation habits.		3YEARS		0.2

## Issue 9: Storm Water Drainage

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
INADEQUATE DRAINAGE SYSTEM	Narok town	Enlighten residents on protection of environment and good sanitation habits.	Improvement of drainage system be phased starting at the CBD area. Beacon all public wayleaves.	3YEARS	NAWSC CGN	0.5
		Master plan for stormwater drainage system required.	Planting of trees and grass on higher areas.	5YEARS	NAWSC CGN, NEMA	8
		Prevent soil erosion by a forestation grass planting and terracing.	The natural drainage valleys be located canalized where possible and to have adequate discharge capacities.	5YEARS	MLH&UD NAWSC CGN NEMA	190
		Provide lined storm water drainage system.	All other drainage structures elsewhere at foot paths and road crossings be identified and adequately designed to accommodate storm water floods.			
		Alleviate flood	Re-plan the low lying area prone to flooding. Make flood prone area a recreational and eco- tourism area.	3YEARS	NAWSC CGN, NEMA	45
		Prevent dumping of solid waste on drainage channels.	Construct reservoirs and dams	5YEARS	NAWSC CGN, NEMA	300
	Regular cleaning and maintenance of all drainage structures.	3YEARS	NAWSC CGN, NEMA			

### Issue 10: Street Lighting

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Lack of street lighting	Narok town CBD	Preparation of master plan.	Implement phased erection of street lighting starting with CBD area.	3YEARS	CGN	8
		Identify source for funding the works.	Involve private public partnership in the provision of street lighting.	3YEARS	CGN	20
		Promote need and protection for required street lighting to residents and business community.	Maintain the street lighting.	5YEARS	CGN	0.2

### Issue 11: Fire Station

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Lack of a fire station in town .	Narok town	Allocate land for fire station and associated facilities.	Beacon the land for fire station. Design and construct station to specification.	5YEARS	CGN, GOK	91
		Source for funds to implement project	Procure and maintain fire fighting plant and equipment.			
		Building owners and business community to understand and be equipped with disaster management skills.	Business owners to provide portable firefighting equipment within their premises.	3YEARS	CGN TRADERS	ACTORS TO PROVIDE

### Issue 12: Markets

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Most of the markets are open air type.	Muthurwa, Soko ya mawe stage, Olepolos, Soko mjinga Nkareta , Olulunga Ewauso Ngiro.	Allocate land for the markets and associated facilities.	Beacon the market land.	3YEARS	CGN	6
		Re-plan the areas marked for markets.	Design infrastructure for each market and linkages to road network.	5YEARS	CGN	5
		Prepare infrastructural needs assessment for each site.	Implement development of markets in phases. Provide security to all.			45
		Source for funds for development of the markets.	Enforce collection of rental charges.	5YEARS	CGN	2

### Issue 13: Stadium

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Existing stadium serves as a multiple purpose facility.	Narok town CBD	Allocate more land for a proper stadium and other recreational facilities.	Beacon the stadium and all recreational facilities.	3YEARS	CGN	6
		Plan for stadium and other recreational facilities	Identify the needs of the stadium users and on other similar facilities. Design and provide the required infrastructure. Maintain infrastructure. Enforce collection of rental/gate charges.	5YEARS	CGN	50
		Promote sport.		3YEARS	CGN	0.2

### Issue 14: Show Ground

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Lack of a demarcated area as show ground. The current stadium is used as a show ground	Narok town	Identify and procure suitable site with adequate land.	Beacon the show ground land.	3YEARS	CGN	5
		Plan for show ground infrastructural facilities.	Develop the show ground infrastructure to specification and needs assessment. Provide all the required services. Promote and charge those who use the space and the facilities.	5YEARS	CGN PPP	40
				3YEARS	CGN	0.2

### Issue 15: Electricity

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Inadaequate electricity supply to the town residents.  Not all residents are connected to KPL &Co. power	Narok town	Re-planning for power wayleaves in line with existing ground development.	Beacon power wayleaves.	5YEARS	MEP, KPLC	ACTORS TO PROVIDE
		The public to protect the powerline and power facilities.	Provide more service lines to new estates which have been developed	5YEARS	MEP, KPLC	
		Assist individual residents to connect to existing powerlines	Connect individual residents and institution with electricity.	3YEARS	MEP, KPLC	
			Explore the use of wind power.	3YEARS		

## Issue 16: Telecommunication

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) xMILLION
Services are provided by Orange Telkom (k) Ltd; Safaricom ;Airtel and Yu.	Narok town	Services to be availed to all competitively.	Service providers to spread and improve connectivity to all parts of Narok town and environs.	5YEARS	MICT	ACTORS TO PROVIDE
		Promotion of the usage of ICT in transacting business and in development agenda.	ICT services to be enhanced by County Government and service providers.	3YEARS	MICT, CGN	
			Service coverage to be extended to satellite town centres.	5YEARS	MICT, CGN	

## Issue 17: Infrastructure and Utilities in Ewuaso Ng'iro

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Ewuaso Ng'iro Centre is on C12 and is connected to Narok by road B3 . It lacks basic infrastructure	Ewuaso Ng'iro	Establish and construct all weather roads in the market centre to provide suitable environment for business.	Beacon all road reserves and public wayleaves and build the roads	2 YEARS	KeRRA , CGN	2
			Construction of roads	5YEARS		115
	Ewuaso Ng'iro	Link the Ewuaso Ng'iro to Narok town and Lemanet	Repair road C12 and construct link roads to the Northern, and Southern by-passes	5YEARS	KeRRA , CGN, KeNHA	226
			Improve stormwater drainage in the market centre.	Construct and maintain the storm water drainage.	5YEARS	KeRRA, CGN
In adequate water supply	Ewuaso Ng'iro	Identify and allocate land for water facilities; treatment works; storage and wayleaves.	Beacon all water facility land.	3YEARS	NAWSC	2
		Site the best locations for more water boreholes.	Drill more boreholes.	3YEARS	NAWSC CGN	6
		Supply water to all residents	Design water supply system and implement in phases	5YEARS	NAWSC JICA CGN	90
		Encourage residents to harvest water from roof catchment and store it on ground tanks	Residents and communities to be made aware of conserving and harvesting rainwater	3YEARS	NAWSC	1
			Encourage and allow private public participation in provision and maintenance of water services	5 YEARS	CGN	9
		Encourage private investment in water supply.	Allow for private public partnership in water supply	5YEARS	NAWSC CGN,PPP	6
		Take good care of new water supply system.	Monitor and maintain good water quality for supply	3YEARS	NAWSC	2
		Avail clean water to all.	Provide individual water connection to most households	3YEARS	NAWSC CGN	3
Promote public awareness on efficient care and usage of water.	Proper usage of the clean water and willingness to pay	3YEARS	NAWSC, CGN, PPP	0.2		

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
<b>Lack of an existing central sewerage system</b>	Satellite Town Centres; Rrotian; and Nkareta.	Prepare master plan for sewerage system.	Implement phased sewage disposal system.	3YEARS	NAWSC CGN, NEMA	6
		Identify and allocate land for sewage treatment works and wayleaves	Beacon all land for sewerage system facilities.	3YEARS	NAWSC CGN, GOK, NEMA	3
		Establish sources for funding for improvement of sewage disposal system.	Construct the priority trunk and primary sewerlines connecting zones all the way to the sewage treatment works.	5YEARS	NAWSC CGN	90
		Facilitate individual sewer connections whereby possible	Connect individual households and institutions to the sewerlines.	5YEARS	NAWSC CGN	20
		Encourage private public participation on sewage exhauster services and public toilets.	Allow for private public participation in disposal of sewage.	5YEARS	NAWSC CGN, NEMA	8
		Enlighten residents on protection of environment and good sanitation habits.				

## Issue 18: Infrastructure and Utilities in Nkareta

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Centre is connected to Narok by road B3 by Northern by-pass and W2719. It lacks basic infrastructure	Nkareta Market Centre	Construct all-weather roads in the market centre to provide suitable environment for business.	Beacon all road reserves and public wayleaves and build the roads	2 YEARS	KeRRA , CGN	2
			Construction of roads	5YEARS		117
		Link Nkareta to Narok town and Lemanet	Construct link roads to the Northern by-pass	3YEARS	KeRRA , CGN, KeNHA	50
		Improve stormwater drainage in the market centre.	Construct and maintain the storm water drainage.	5YEARS	KeRRA, CGN	30
In adequate water supply	Nkareta Market Centre	Identify and allocate land for water facilities; treatment works; storage and wayleaves.	Beacon all water facility land.	3YEARS	NAWSC	2
		Site the best locations for more water boreholes.	Drill more boreholes.	3YEARS	NAWSC CGN	8
		Supply water to all residents	Design water supply system and implement in phases	5YEARS	NAWSC JICA CGN	19
		Encourage residents to harvest water from roof catchment and store it on ground tanks	Residents and communities to be made aware of conserving and harvesting rainwater	3YEARS	NAWSC	1
			Encourage and allow private public participation in provision and maintenance of water services	5 YEARS	CGN	0.5
		Encourage private investment in water supply.	Allow for private public partnership in water supply	5YEARS	NAWSC CGN,PPP	1
		Take good care of new water supply system.	Monitor and maintain good water quality for supply	3YEARS	NAWSC	2
		Avail clean water to all.	Provide individual water connection to most households	3YEARS	NAWSC CGN	3
		Promote public awareness on efficient care and usage of water.	Proper usage of the clean water and willingness to pay	3YEARS	NAWSC, CGN, PPP	0.2
Lack of an existing central sewerage system.	Nkareta Market Centre Nkareta Market Centre	Prepare master plan for sewerage system.	Implement phased sewage disposal system.	3YEARS	NAWSC CGN, NEMA	6
		Identify and allocate land for sewage treatment works and wayleaves	Beacon all land for sewerage system facilities.	3YEARS	NAWSC CGN, GOK, NEMA	3
		Establish sources for funding for improvement of sewage disposal system.	Construct the priority trunk and primary sewerlines connecting zones all the way to the sewage treatment works.	5YEARS	NAWSC CGN	22
		Facilitate individual sewer connections whereby possible	Connect individual households and institutions to the sewerlines.	5YEARS	NAWSC CGN	7
		Encourage private public participation on sewage exhauster services and public toilets.	Allow for private public participation in disposal of sewage.	5YEARS	NAWSC CGN, NEMA	1.5
		Enlighten residents on protection of environment and good sanitation habits.				



## Issue 19: Infrastructure and Utilities in Rrotian Market Centre

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Centre is connected to Narok by road C57 and by Northern by-pass. It lacks basic infrastructure	Rrotian Market Centre	Construct all-weather roads in the market centre to provide suitable environment for business.	Beacon all road reserves and public wayleaves and build the roads	2 YEARS	KeRRA , CGN	2
			Construction of roads	5 YEARS		136
		Link Rrotian to Narok town and Lemant	Construct link roads to the Northern by-pass	3 YEARS	KeRRA , CGN, KeNHA	70
		Improve stormwater drainage in the market centre.	Construct and maintain the storm water drainage.	5 YEARS	KeRRA, CGN	39
In adequate water supply	Rrotian Market Centre	Identify and allocate land for water facilities; treatment works; storage and wayleaves.	Beacon all water facility land.	3 YEARS	NAWSC	2
		Site the best locations for more water boreholes.	Drill more boreholes.	3 YEARS	NAWSC CGN	15
		Supply water to all residents	Design water supply system and implement in phases	5 YEARS	NAWSC JICA CGN	19
		Encourage residents to harvest water from roof catchment and store it on ground tanks	Residents and communities to be made aware of conserving and harvesting rainwater	3 YEARS	NAWSC	1
			Encourage and allow private public participation in provision and maintenance of water services	5 YEARS	CGN	0.5
		Encourage private investment in water supply.	Allow for private public partnership in water supply	5 YEARS	NAWSC CGN,PPP	1
		Take good care of new water supply system.	Monitor and maintain good water quality for supply	3 YEARS	NAWSC	2
		Avail clean water to all.	Provide individual water connection to most households	3 YEARS	NAWSC CGN	3
		Promote public awareness on efficient care and usage of water.	Proper usage of the clean water and willingness to pay	3 YEARS	NAWSC, CGN, PPP	0.2
Lack of an existing central sewerage system.	Rrotian Market Centre	Prepare master plan for sewerage system.	Implement phased sewage disposal system.	3 YEARS	NAWSC CGN, NEMA	6
		Identify and allocate land for sewage treatment works and wayleaves	Beacon all land for sewerage system facilities.	3 YEARS	NAWSC CGN, GOK, NEMA	3
		Establish sources for funding for improvement of sewerage disposal system.	Construct the priority trunk and primary sewerlines connecting zones all the way to the sewage treatment works.	5 YEARS	NAWSC CGN	32
	Rrotian Market Centre	Facilitate individual sewer connections whereby possible	Connect individual households and institutions to the sewerlines.	5 YEARS	NAWSC CGN	7
		Encourage private public participation on sewage exhauster services and public toilets.	Allow for private public participation in disposal of sewage.	5 YEARS	NAWSC CGN, NEMA	1.5
		Enlighten residents on protection of environment and good sanitation habits.				

## Issue 20: Infrastructure and Utilities in Lemanet

TRANSPORT AND INFRASTRUCTURAL FACILITIES						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x MILLION
Centre is connected to Narok by road D302 linked to B3. It lacks basic infrastructure	Lemanet	Construct all-weather roads in the market centre to provide suitable environment for business.	Beacon all road reserves and public wayleaves and build the roads	2 YEARS	KeRRA , CGN	1
			Construction of roads	5 YEARS		8
	Lemanet	Link Rrotian to Narok town and Lemanet	Construct link roads to the Northern by-pass	3 YEARS	KeRRA , CGN, KeNHA	180
		Improve stormwater drainage in the market centre.	Construct and maintain the storm water drainage.	5 YEARS	KeRRA, CGN	2
In adequate water supply	Lemanet	Identify and allocate land for water facilities; treatment works; storage and wayleaves.	Beacon all water facility land.	3 YEARS	NAWSC	0.5
		Site the best locations for more water boreholes.	Drill more boreholes.	3 YEARS	NAWSC CGN	6
	Lemanet	Supply water to all residents	Design water supply system and implement in phases	5 YEARS	NAWSC JICA CGN	3
		Encourage residents to harvest water from roof catchment and store it on ground tanks	Residents and communities to be made aware of conserving and harvesting rainwater	3 YEARS	NAWSC	0.5
			Encourage and allow private public participation in provision and maintenance of water services	5 YEARS	CGN	0.5
		Encourage private investment in water supply	Allow for private public partnership in water supply	5 YEARS	NAWSC CGN, PPP	0.5
		Take good care of new water supply system.	Monitor and maintain good water quality for supply	3 YEARS	NAWSC	0.5
		Avail clean water to all.	Provide individual water connection to most households	3 YEARS	NAWSC CGN	1.5
		Promote public awareness on efficient care and usage of water	Proper usage of the clean water and willingness to pay	3 YEARS	NAWSC, CGN, PPP	0.2

<b>TRANSPORT AND INFRASTRUCTURAL FACILITIES</b>						
<b>CHALLENGE/ POTENTIALS</b>	<b>AREA</b>	<b>STRATEGY</b>	<b>PROGRAMME/ ACTION</b>	<b>TIME FRAME</b>	<b>ACTOR</b>	<b>COST (KES) x MILLION</b>
Lack of an existing central sewerage system.	Lemanet	Prepare master plan for sewerage system.	Implement phased sewage disposal system.	3YEARS	NAWSC CGN, NEMA	5
		Identify and allocate land for sewage treatment works and wayleaves	Beacon all land for sewerage system facilities.	3YEARS	NAWSC CGN, GOK, NEMA	2
		Establish sources for funding for improvement of sewage disposal system.	Construct the priority trunk and primary sewerlines connecting zones all the way to the sewage treatment works.	5YEARS	NAWSC CGN	28.5
		Facilitate individual sewer connections whereby possible	Connect individual households and institutions to the sewerlines.	5YEARS	NAWSC CGN	2
		Encourage private public participation on sewage exhauster services and public toilets.  Enlighten residents on protection of environment and good sanitation habits.	Allow for private public participation in disposal of sewage.	5YEARS	NAWSC CGN, NEMA	1.5
Lack of County offices and housing	Lemanet	Plan design and phase development of the proposed new Headquarter.	Implement phased construction of buildings as per the immediate needs	5YEARS	CGN MLH UD	950
Lack of electricity supply	Lemanet	New overhead transmission line be planned by KPL.CO. to site	Supply three phase power supply to site	3YEARS	CGN ME	15

Table 18.10: Environment Implementation Matrix

**Issue 1: Poor Management of Solid waste**

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Littering & dumping in open places	Commercial Zones (markets, Bus park) High density residential areas, Streets.	Minimise littering and open dumping	Provide waste storage bins & cubicles. Promote anti-litter/dumping campaign	Short term Long term	CGN, RESIDENTS, NEMA, NGOs, CBOs	3 p.a.
Plastic papers litter	CBD, Commercial & high density areas	Reduce plastic menace	Adopt the 7 point Govt. plastic mgt. proposal (box1)	Medium to long term	NEMA,CGN, Businesses, Residents, CBOs	
Poor street sweeping	CBD, Commercial & high density areas	Enhance street cleanliness	Provide more street sweepers and technology	Long term	Town,PPP	5 p.a.
Inadequate storage bins/cubicle	CBD, Commercial & high density areas	Increase primary & secondary waste storage capacity	Provide primary waste collection bins. Build more masonry waste cubicles in CBD & high density areas	Long term	CGN, Residents	5 P.a.
Low collection coverage and frequency	CBD, Commercial & high density areas	Increase collection coverage & frequency	Buy more waste collection equipment. Embrace ppp in waste collection	Long term	CGN, Private sector	KES5m p.a.
Poor transportation methods	Town wide	Improve waste transportation method.	Adhere to EMCA waste transport requirements/ regulations	Short term	CGN, Private sector	Sh.2m
Lack of protective clothing for waste handlers	Municipal workers	Enhancement of waste handlers' safety.	Provide waste handlers with protective clothing & equipment	Immediate	CGN,	KES0.2m p.a.
Inadequate waste handling technology	Commercial, high density residential, streets	Enhance waste handling technological capacity.	Purchase more waste handling technology e.g. .Refuse trucks, Tractors, push carts, blooms,	Short term	CGN, Private sector	KES15m p.a.
Minimal waste recovery/recycling.	Town wide	Promote waste recovery/recycling	Give incentives. Promote public awareness.	Long term	CGN, NGOs, CBOs, Residents, NEMA	KES5m p.a.
Mixing of municipal waste with hazardous waste(mainly medical waste)	From private medical institutions	Avoid mixing of hazardous waste with municipal waste.	Separate hazardous waste at the source. Handle hazardous waste according to EMCA (waste regulations) requirements.	Immediate	Private hospitals	KES1m p.a.
Poor disposal techniques	Illegal dumpsite	Dispose of waste in an environmentally acceptable manner.	Open the new official dumpsite. Fence the site & plant green buffer. Cover waste after dumping.	Immediate	CGN	KES3m

**Issue 2: Poor Human & Waste Water Disposal**

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Disposal on land & in water bodies	Town wide	Dispose human & waste water in the sewerage system	Install sewer in the CBD & high density areas.	Long term	CGN (Water Sewerage Co.)	
Lack of Sewer	Town wide	Dispose human & waste water in the sewerage system	Install sewer in the CBD & high density areas.	Long term	CGN (Water Sewerage Co.)	

**Issue 3: Degradation of Water Resources**

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Riparian encroachment	Along streams/River and wetlands.	Restoration of the riparian reserve	Observe 30m riparian reserve on all water bodies. Stop human activities along riparian reserve. Green the riparian reserves with indigenous vegetation.	Short term	MW, MEMR, NEMA, KFS, CGN, NGOs, CBOs, Residents	KES2m p.a.
Pollution from eroded soils, oils, greases, agrochemicals, urban storm, wastewater, car washing and solid waste.	At the intersection of the roads and Rivers	Reduce pollution of surface waters.	Check soil erosion mainly along the roads. Control oils & grease spill from Jua kali. Reduce use of agro-chemicals. Install sewer & storm drainage in town. Stop car wash near water bodies. Stop dumping solid waste in water bodies.	Short term	CGN, NEMA	KES2m. p.a.
Encroachment & degradation of water catchment areas.	Mau forest & upper catchment areas	Stop further encroachment, deforestation & degradation of the catchment areas	Replace Exotic vegetation (e.g. Eucalyptus with indigenous trees. Control land subdivision, human settlements and unsustainable agricultural practices.	Short-long term	CGN, MW, MENR, NEMA, KFS, NGOs, Communities	KES3m.p.a.
Potential of underground pollution from pit latrines & leaking septic tanks	CBD & high density areas	Minimise potential of underground water pollution.	Construct sewer in the potential areas.	Medium –long term.	CGN (Water & Sewerage co.)	

**Issue 4: Loss of Vegetation Cover**

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Loss of vegetation cover from urban development densification, infrastructure development, harvesting for building material & energy, agricultural activities and livestock feeding. Replacement of indigenous species with exotic species	Town wide	Increase vegetation cover all over town with more indigenous species. Promote efficiency in wood fuel utilization. Promote use of non-wood building materials & energy sources. Practice agro forestry. Control livestock grazing in urban beautified area	Tree planting. Establish tree nurseries (Public, Community, and private.). Promote wood energy saving measures.eg .energy saving jikos. Make bylaws to control livestock grazing/roaming in town. Embrace carbon credit schemes	Short-long term	CGN, KFS, Residents NEMA	KES 2m p.a.

## Issue 5: Land Degradation

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Overgrazing, poor agricultural practices, Soil erosion Land pollution from used oils, greases, agrochemicals, solid & liquid waste. Dumping of materials from construction & demolition sites. Flooding	Roads/ paths, Town & Rural setups.	Control overgrazing, soil erosion and bare spaces including "shambas". Control land pollution.	Use road side engineering soil erosion control techniques. Control overgrazing & Plant vegetation cover in the affected areas. Terrace the shambas & the sloppy areas. Pave dusty roads & footpaths. Provide urban storm drainage system. Backfill open holes, abandoned wells, pit latrines and quarries. Control land pollution sources. Ensure material from construction/demolition site is dumped in the Town official dumpsite.	Short-term	CGN, KURA, Residents	Sh.5m p.a.
Encroachment of the hills	Mau hills	Reduce hill degrading activities	Discourage high density settlements & plant cover crops or trees on the hills	Short-Long term	Communities, KFS, CGN	KES2m p.a.

## Issue 6: Flooding

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Flooding of built up & low lying areas. Lack of/blocked storm drainage system. Disease vectors breeding grounds.	CBD & high density areas	Control flooding in the affected areas.	Provide storm drainage system in the affected areas. Keep storm drainage free from blockage. Drain flooded areas. Use engineering & environmental flood control measures. Use integrated disease vector control measures in the flooded areas. Better management of the upstream catchment areas to avoid downstream flooding.	Long term.	CGN, MEMR, MA	

## Issue 7: Air Pollution

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Pollution from vehicle exhaust and smoke mainly from burning solid waste. Foul smells from rotting garbage and pit latrines. Dust from roads, footpaths & bare grounds. Indoor air pollution from use of wood/charcoal/kerosene, unkempt urinals & waterborne toilets,	CBD (market, Bus park, Roads/ paths, Public places (e.g. bars).	Control outdoor & Indoor air pollution.	Ensure vehicles meet exhaust emission standards. Promote use of non-motorised transport ("BodaBoda"), organise it and provide cyclic lanes and parking area. Controls open burning of materials including solid waste especially in crowded area. Safely dispose off rotting organic matter & improve hygiene standards in pit latrines/waterborne toilets and urinals. Pave roads/footpaths. Improve vegetation cover in bare grounds. Promote use of cleaner domestic energies such as electricity, & LPG.	Long term.	CGN, NEMA, KURA, KP, Premises owners.	KES5m p.a.

## Issue 8: Air Pollution

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Visual pollution from many large & poorly sited outdoor advertising billboards and signboards. Poorly sited illegal structures (e.g. kiosks) built of rudimentary materials. Vegetation Removal.	CBD, Satellite Markets & along major roads.	Control/ contain aesthetic pollution.	Billboards & sign boards to be approved by the Town. Control illegal structures and building materials. Enhance greenery and town beautification.	Immediate.	CGN	

## Issue 9: Noise Pollution

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
High noise levels from bars, discos, churches, Bus park and market.	CBD& Satellite Markets	Reduce Noise pollution by adhering to EMCA noise standards.	Ensure use of acoustic materials from the noisy buildings. Discourage use of powerful loudspeakers. Control unnecessary vehicle hooting in town.	Short term.	NEMA,CGN	

## Issue 10: Few and Poorly Maintained Public Recreation Grounds

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
No trees. Soil dumped there No park seats No public toilets & water points	Town	Rehabilitate the recreation grounds	Plant trees/ beautify the grounds and put park seats. Remove the dumped soils. Encourage sharing of existing institutional (e.g. schools, churches) recreation grounds with the general public. Factor provision of public recreation grounds in future town development plans. Build public toilets & water points in the recreation park.	Short term.	CGN	KES2m

## Issue 11: Poverty & Environment

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Poverty is an agent of environmental degradation in the town. The poor suffer the brunt of environmental degradation.	Low income areas in the town & rural	Reduce environmental degradation caused by poverty and improve environmental quality in the poor neighborhoods.	Reduce poverty by initiating economic empowerment programs for the poor. Involve the poor in improving their neighborhood environments. Channel more resources for environmental programs for the poor residents. Improve the housing/living conditions for the poor.	Long term.	CGN, CDF, SMEs, Govt arms	KES10m p.a.

**Issue 12: Institutional, Legal and Policy frameworks.**

ENVIRONMENT						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Weak environmental management institutions. Overlapping environmental legal framework and poor enforcement. Lack of environmental policy.	Town wide.	Strengthen environmental legal and institutional framework/capacity. Ensure environmental considerations in all development activities.	Strengthen sectoral environmental institutions. Ensure enforcement of environmental laws & bylaws. Integrate environmental considerations in all development activities	Long term.	Govt. arms & all development actors.	

**Issue 13: Stakeholders' involvement**

ENVIRONMENT						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Poor stakeholders' involvement in environmental management. Poor participation incentives.	Town wide.	Enhance & broaden stakeholders' participation in environmental matters.	Strengthen structures for stakeholders' participation in environmental matters. Broaden incentives to attract wide participation. Broaden and strengthen public/private partnership. Enhance community participation.	Long term	CGN, NEMA.	KES2m p.a.

**Issue 14: Environmental Awareness**

ENVIRONMENT						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Low environmental consciousness among town residents. Low environmental awareness promotion. Poor residents' environmental ethics.	Town wide.	Enhance environmental consciousness among town resident.	Use electronic and print media, posters, public meetings, organized sector forums and groups.	Long term.	CGN, NEMA, Environmental Sectoral actors.	KES1m p.a.

**Issue 15: Environmental Management tools**

ENVIRONMENT						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Low or no application of environmental management tools (e.g. EIAs, EAs, SEAs) in urban projects, policies and programs.	Town wide	Ensure/promote application of environmental management tools	Create more awareness on the tools. Monitor & enforce their application where necessary.	Long term.	NEM, CGN, Environmental sectoral players.	



**Issue 16: Drought**

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Increased frequency & magnitude	Town & lower arrears	Minimize drought impact on the population	Enhance capacity in drought forecasting, early warning systems, mitigation & adaptations.	Long term	Dpt. of Met., County Govt, ministry of special programs, MENR, Ministry of agriculture & Livestock	

**Issue 17: Environmental Hazards**

ENVIRONMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Accident prone open storm drains & quarries	CBD & quarry areas	Cover storm drains & backfill quarries.	Cover the civil works storm drains & backfill the open quarries with construction debris & soil.	Short term	CGN, NEMA, quarry owners	

Table 18.11: Economic and Investment Plan Implementation Matrix

**Issue 1: Economic and Investment Strategy**

ECONOMY AND INVESTMENT						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Need to increase value addition of agriculture in Narok	Lemanet	Establish Lemanet as a new centre for Logistics for Agricultural products	Infrastructure (inclusive of needs for private Agro Industrial Park) at Lemanet to encourage establishment of agro processing and logistics	Short Term (2013 – 2015)	NCG	300
				Medium term (2015 – 2025)	PS	2000
				Long Term (2025 – 2030)	PS	2500
	Ewaso Nyiro	Increase value addition of current slaughtering activities	Establish infrastructure and facilities to encourage development of processing activities related to slaughtering	Short Term (2013 – 2015)	NCG	200
				Medium term (2015 – 2025)	PS	1500
				Long Term (2025 – 2030)	PS	500
	Ewaso Nyiro and Nkareta	Cooperate with institutes of higher learning to promote modern livestock keeping		Short Term (2013 – 2015)	NCG	100
				Medium term (2015 – 2025)	CG	2000
				Long Term (2025 – 2030)	PS	500
Sub Total						9,600
Increasing local value addition from tourism	CBD	Promote Narok Town as centre for maa culture and gateway to Maasai Mara	Modern Maa Cultural Centre in Narok Town *Museum *Exhibition Hall *Village life showcase	Short Term (2013 – 2015)	CGN	300
				Medium term (2015 – 2025)	PS	800
				Long Term (2025 – 2030)	PS	1000
	CBD	Promote Narok Town as a rural leisure metropolis	Re-development of the river banks as a leisure resort and natural walkway	Short Term (2013 – 2015)	CGN	500
				Medium term (2015 – 2025)	PS	2000
				Long Term (2025 – 2030)	PS	3000
Sub Total						7,600

<b>ECONOMY AND INVESTMENT</b>							
<b>CHALLENGE/ POTENTIALS</b>	<b>AREA</b>	<b>STRATEGY</b>	<b>PROGRAMME/ ACTION</b>	<b>TIME FRAME</b>	<b>ACTOR</b>	<b>COST (KES) x 1 MILLION</b>	
Need to improve Business Skills and Enterprise Training	Lemanet	Promote ICT as part of business development strategy for the youth	Establish ICT Centre of Excellence	Short Term (2013 – 2015)	CGN	500	
				Medium term (2015 – 2025)	PS	1000	
				Long Term (2025 – 2030)	PS	1000	
	CBD	Promote Business and ICT as part of middle and high level curriculum at Mara University	Collaborative activities with Mara University	Short Term (2013 – 2015)	CGN	200	
				Medium term (2015 – 2025)	PS	500	
				Long Term (2025 – 2030)	PS	1000	
<b>Sub Total</b>						<b>4,200</b>	
Need to create facilities for business and industry	Nkareta	Create business workspaces for small scale traders		Short Term (2013 – 2015)	CGN	300	
				Medium term (2015 – 2025)	PS	500	
				Long Term (2025 – 2030)	PS	500	
	Ewaso Nyiro	Create business workspaces for small scale traders		Short Term (2013 – 2015)	CGN	500	
				Medium term (2015 – 2025)	PS	800	
				Long Term (2025 – 2030)	PS	1000	
	CBD	Create business workspaces for small scale traders		Short Term (2013 – 2015)	CGN	300	
				Medium term (2015 – 2025)	PS	1000	
				Long Term (2025 – 2030)	PS	2000	
	<b>Sub Total</b>						<b>6,900</b>
	<b>TOTAL</b>						<b>18,700</b>

Table 18.12: Housing and Social Infrastructure Plan Implementation Matrix

**Issue 1: Housing and Social Infrastructure**

HOUSING AND SOCIAL INFRASTRUCTURE						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Addressing problem of informal housing	Lower Majengo Bobong next to the Post Office Developments facing the town after the administration police lines Block eleven (11) in the vicinity of Maasai Mara University Oleleshwa group ranch area, London, Roadstar depot, Kenol area and Lenana	Re-planning of the town Discourage irregular development around the University Regularization of informal developments	Zone Olopito; Naisoya, Ilmashariani, and Oleleshwa Enforce development control standards and guidelines Development con - University Area Public education on planning	Short Term (2013 – 2015)  Medium term (2015 – 2025)	CGN  National Gvnt  Residents	200
		Provision of support infrastructure (portable water supply, electricity, sewerage)	Deployment of adequate personnel	Medium term (2015 – 2025)	CGN  National Gvnt	2000
Sub Total						2,200
Poor Housing Typologies and Conditions	Entire town and in particular  Middle and low income neighborhoods- (University Area, London area etc)	Promote ABTs Strengthening development control  Built capacity to enforce planning and building standards and norms	Establish Narok Planning and Building Sub-committee  Rationalize road sizes Working with the sub-committee on building and planning, to enhance self regulation at local level.	Short Term (2013- 2015)	CGN	150
				Medium term (2015 – 2025)	National Govt	300
				Long Term (2025 – 2030)	Private Sector  Community	200
Sub Total						650
Spatial Location of Housing	Entire town	Zoning and enforcement of zoning regulations Protect Riparian areas ---Enkare Narok, Siaipei, Kakai, Esamburmbur and Ewaso Ng'iro river basins, and wetlands	Participatory re-location and resettlement of people Enforcement of NEMA regulations	Short Term (2013 – 2015)	CGN	200
				Medium term (2015 – 2025)	National Government  NEMA	200
Sub Total						400
Constraints within the Housing Delivery Systems	Entire town	Popularize appropriate building technologies Review of existing regulatory framework Introduce innovations in housing finance Encourage institutional housing Formation and popularize housing cooperative Titling of land parcels Promote PPP	Public education programmes: on various aspects of building/ construction; plan approval  Aggressive land banking  Civil Servants Housing Scheme, NHC.	Short Term (2013 – 2015)	CGN	200
				Medium term (2015 – 2025)	CGN	3000
				Medium term (2015 – 2025)  Long Term (2025 – 2030)	CGN PS	20,000
Sub Total						23,200

## Issue 2: Social Infrastructure and Community Facilities

HOUSING AND SOCIAL INFRASTRUCTURE						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Constraints in the educational infrastructure	Entire Narok	Rationalize distribution of schools to enhance accessibility; Developing hostels for student accommodation Encouraging public private partnership in provision of facilities and services	Hire more staff; Construction of special schools	Short Term (2013 – 2015)	CGN  Private Sector	300
				Medium term (2015 – 2025)		3000
				Long Term (2025–2030)		
Sub-total						3,300
Constraints in the health sector	Entire Narok Town	Increase coverage of health facilities across the planning area with focus on areas with deficits	Deployment of more medical personnel to the existing facilities Expand maternity wards Encouraging public private partnership in provision of facilities and services	Short Term (2013 – 2015)	CGN  National Gvnt  Private Sector	10,000
				Medium term (2015 – 2025)		
				Long Term (2025–2030)		
		Provide water to the hospitals/health centers	Medium term (2015 – 2025)	CGN	5000	
	Map and survey health infrastructure land and provide titles.	Demarcate and fence health	Short Term (2013 – 2015) Medium term	NGC	200	
Sub-total						15,200
Inadequate community facilities	CBD	Renovation of the Narok Stadium Promote the use of the existing facilities Develop guidelines on maintenance of open spaces and community facilities	Buying of land for recreational facilities Partnerships with the PS to open spaces In the case of sporting facilities avail trainers and equipment Construction of social halls, play grounds and open parks	Short Term (2013 – 2015)  Medium term (2015 – 2025)	NGC Private Sector	6,900
Sub-total						6,900

HOUSING AND SOCIAL INFRASTRUCTURE						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Security	Entire Narok Town	Ensure positive engagement of the Integration of the Youth into town and county government activities and management structure e.g. youth Towns, creating Youth employment opportunities through gainful self employment activities; Ensure well planned, equipped and adequate recreational space, facilities; Promote and mainstream gender issues in development processes; Enhance safety and security through better physical planning designs and management of public space; Develop a better understanding of local crime through conducting victimization surveys & Innovative crime prevention approaches; Ensure accessible police services	Support Youth Enterprise by making clear provisions for procurement services for youths	Short Term (2013 – 2015)	CGN	150
			Assist formation of Youth led Cooperatives	Short Term (2013 – 2015)	National Government	
			Avail space for recreational facilities	Short Term (2013 – 2015)	Private Sector  KUSCO	
			Strengthen gender assessment and analysis capacity within the county. Promote CPTED approaches in Planning the town	Long Term (2013 – 2025)	Community	
			Undertake Crime and Victimization Survey	Short Term (2013 – 2015)		
			Develop Crime Observatories	Long Term (2013 – 2025)		
			8 Avail more facilities to house policing services	Short Term (2013 – 2015)		
Sub-total						150
TOTAL			52,000			

Table 18.13: Human Resources Reform Implementation Matrix

**Issue 1: Staff Costs**

HUMAN RESOURCE REFORM						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
About half of the town's annual revenue pays staff costs, the other half pays for services provision and investment.	Narok Town	Reduce proportion of staff costs to total revenue.	Evaluate and rationalize job contents Determine optimum staff positions per service, activity or cost Centre Train policy makers, senior and other staff to increase their efficiency and productivity	Short term	Residents CGN Technical Job Evaluation experts Trainers.	-

**Issue 2: Staff Capacities**

HUMAN RESOURCE REFORM						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
The town's does not have enough and competent staff.	Narok Town	Town to employ adequate and competent staff	Recruit staff	Short term	Narok Town Residents Political leaders Resource Persons	20
		Town to adopt appropriate, cadre specific human resource development programmes	Town to carry out staff training needs survey	Long term		15
			Train staff			15
Sub Total						50

**Issue 3: Performance Contracts**

HUMAN RESOURCE REFORM						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Measurement of Performance of political leaders, senior officers and institutions is based on targets in performance contracts as opposed to those in budgets	Narok Town	Harmonize implementation of performance contracts with budget implementation	Sanctions and conditions applicable to performance contracts should apply to implementation of budgets.	Short term Long term	Narok Town Residents Political leaders Resource Persons	-

Table 18.14: Financial Sector Reform Implementation Matrix

**Issue 1: Revenue generation**

FINANCIAL SECTOR REFORM						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
The town incurs annual financial deficits as its total expenditure usually exceeds revenue.	Narok Town	Increase local revenue yields	The greatest potential lies in Increase land (property) rating	Short-term	Narok TC Residents	-
		Lobby for increased grants from the national government.	Increase local cess levies on commercial outputs of livestock ranching and large scale farming.	Medium-term	Cereals, potatoes and Livestock farmers Traders	-

**Issue 2: Capital Investments**

FINANCIAL SECTOR REFORM						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Town's capital investments cannot enable it generate sufficient revenue to sustain an acceptable quality and scale of public services delivery.	Narok Town	Increase and sustain investment in operating assets and equipment	Invest revenue earning assets e.g. markets, solid waste management equipment, cess-pit exhausters, bus-parks, slaughter-houses etc.	Medium-term Long-term	Narok TC Residents Private Public Partnerships Other stakeholders	-

**Issue 3: Revenue collection**

FINANCIAL SECTOR REFORM						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Evasion of payment of TOWN dues is common.	Narok Town	Enforce town by-laws	Impose heavy fines for confirmed cases of evasion of payment of town dues	Short-term	Narok Town, Residents Political leaders	-

**Issue 4: User charge services costs recovery**

FINANCIAL SECTOR REFORM						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
User services revenues do not fully cover related costs.	Narok Town	Regular reviews of user services fees	Town to review its licence fees and user charge fees regularly.	Short-term	-	-

**Issue 5: Lack of Reliable Databases on Businesses and Tax Payers Resident in Narok town**

FINANCIAL SECTOR REFORM						
CHALLENGE/POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Impossible to prepare realist revenue budgets  Town uncertain of revenue due	Narok Town Revenue planning and collection	Maintain registers of properties, businesses and transport operators located in the Town.	Town to regularly conduct businesses surveys to set-up or up-date registers of businesses in it area.	Short-term	- Narok TC Residents Other stakeholders	-



## Issue 6: Property (Land) Rating

FINANCIAL SECTOR REFORM						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Town has not developed a valuation roll	No basis for assessing and collecting rates	Develop a Valuation roll for the entire town Maintain records of owners and users of plots and lands	Review and up-date Valuation rolls and land and plots registers regularly	Short-term	CGN Residents Valuers Other stakeholders	15
Sub Total						15

## Issue 7: Computerisation

FINANCIAL SECTOR REFORM						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Installation of computerized accounting in progress	Narok Town	Computerize the entire MIS fully	Implement all accounting modules of the LAIFOMS accounting program.	Short-term	CGN	15
Sub Total						15

## Issue 8: Geographical Information System (GIS)

FINANCIAL SECTOR REFORM						
CHALLENGE/ POTENTIALS	AREA	STRATEGY	PROGRAMME/ ACTION	TIME FRAME	ACTOR	COST (KES) x 1 MILLION
Uptake of GIS platform	Narok Town	Link accounting registers to digital GIS.	The TOWN's tax/rates registers, valuation rolls, and survey and physical planning maps be digitally linked so that land related data is captured and recorded in accounting registers and stored in a GIS.	Short-term	CGN	15
Sub Total						15

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# ANNEX I

## Narok ISUDP – 3 Year Capital Investment Costs

SECTORAL ACTIVITY	2014/15	2015/16	2016/17	TOTAL
<b>1. Housing and Social Infrastructure</b>				
1.1. Addressing problem of informal housing	50	65	75	190
1.2. Improving Housing Typologies and Conditions	25	35	50	110
1.3. Spatial Location of Housing	50	55	60	165
1.4. Improving Housing Delivery Systems	45	50	70	165
1.5. Improving educational infrastructure	50	50	60	160
1.6. Improving health infrastructure	35	40	50	125
1.7. Improving community facilities	15	10	10	35
1.8. Infrastructure for disaster management	500	300	300	1,100
Sub Total	770	605	675	2,050
<b>2. Environment</b>				
2.1. Waste storage bins & cubicles	3	3	3	9
2.2. Improving waste transportation	2	0	0	2
2.3. Protective clothing & equipment	0.2	0.2	0.2	0.6
2.4. Waste handling technology (Refuse vehicles)	15	15	15	45
2.5. Fencing garbage site & planting green buffer	3	0	0	3
2.6. Restoration of the riparian reserve	2	2	2	6
2.7. Reduction of pollution of surface waters	2	2	2	6
2.8. Afforestation of Mau forest & upper catchment areas	3	3	3	9
2.9. Increasing vegetation cover town wide	2	2	2	6
2.10. Road side engineering soil erosion control techniques	5	5	5	15
2.11. Reduction of hill degrading activities	2	2	2	6
2.12. Planting trees/beautify the grounds and park seats	2	2	2	6
2.13. Covering storm drains & backfilling quarries	2	2	2	6
Sub Total	43	38	38	120
<b>3. Economic and Investment</b>				
3.1. Infrastructure to establish Lemanet as a new centre for Logistics for Agricultural products	50	150	100	300
3.2. Infrastructure and facilities to encourage development of slaughtering value addition at Ewuaso Ng'iro	20	80	100	200
3.3. Infrastructure to establish Rrotian as a centre for Agro processing for Agricultural products	50	150	100	300
3.4. Collaboration with institutes of higher learning to promote modern livestock keeping at Ewaso Ng'iro and Nkareta	10	20	70	100
3.5. Modern Maa Cultural Centre in Narok Town	10	40	250	300
3.6. Redevelopment of the river banks as a leisure resort and natural walkway	20	80	400	500
3.7. Establish ICT Centre of Excellence at Lemanet	10	40	450	500
3.8. Collaborative ICT capacity building activities with Mara University	20	80	100	200
3.9. Modern business workspaces for small scale traders at Nkareta, new CBD and Ewaso Ng'iro	30	100	270	400
Sub Total	220	740	1,840	2,800
<b>4. Municipal Financial Structures</b>				
4.1 Computerization	5	5	5	15
4.2 Geographical Information System (GIS)	-	15	-	15
4.3 Develop Valuation roll	15	-	-	15
Sub Total	20	20	5	45

SECTORAL ACTIVITY	2014/15	2015/16	2016/17	TOTAL
<b>5. Town Planning and Management</b>				
Sub Total	1000	550	550	2100
<b>6. Transport and Infrastructure</b>				
6.1. Northern by-pass road Ololunga-Mulwa -Siyiaspai	1,600	1,535	1,050	4,185
6.2. Southern by pass road C12 – B3	850	475	600	1,925
6.3. Link roads to by – pass from CBD and residential areas	1,200	2,345	2,915	6,460
6.4. CBD roads	130	95	95	320
6.5. Buspark and Carparks	60	35	10	105
6.6. Overpass at B3 and C57 junction	118	65	53	236
6.7. Storm water drainage	135	47	8	190
6.8. water supply system(JICA)	1,334	33	33	1,400
6.9. New foul sewerage system	465	94	10	569
6.10. Flood control dams,	120	150	30	300
6.11. Fire station plant and equipment	65	20	6	91
6.12. Other road links to residential areas Lenana , Majengo, Mara University	100	120	918	1,138
6.13.Link roads to Centra Bus Terminal and Mini ByPass	115	115	216	446
Subtotal costs [Narok town]	6,292	5,129	5,944	17,365
Proposed County Headquarters At Lemanet				
6.14.County Offices, County Assembly and Governors House	650	200	100	950
6.15.Main road access To Lemanet off road B3	90	85	5	180
6.16. Water supply	8	2	2	12
6.17. Site civil works	6	4	4	14
6.18. Electricity to site - 3 phase	12	2	1	15
6.19. Foul sewer and connection To Narok trunk sewer	8	14	7	29
Subtotal for Lemanet	774	307	119	1,200
County By- Pass Road				-
6.20. Nkareta Naisoya – Eor Erikitok	200	175	1,475	1,850
Sub Total	7,266	5,610	7,538	20,414
Add 10% for professional consultancy services	727	561	754	2,041
Sub Total	7,993	6,171	8,292	22,455
<b>GRAND TOTAL</b>	<b>10,046</b>	<b>8,124</b>	<b>11,400</b>	<b>29,570</b>