

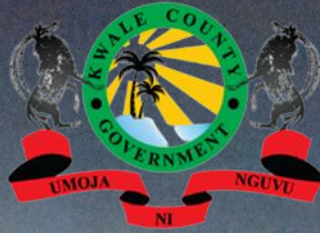


COUNTY GOVERNMENT OF KWALE

KWALE SPATIAL LAND USE PLAN (2022-2032)

An industrious Self-sufficient People in a Liveable Environment





PLAN APPROVAL

CERTIFIED

I certify that the Plan has been prepared as per section 110 of the County Government Act 2012 and Physical Planning standards and guidelines.

Signature

Date.....

COUNTY DIRECTOR OF PHYSICAL PLANNING

RECOMMENDED

Signature

Date.....

COUNTY EXECUTIVE MEMBER OF ENVIRONMENT AND NATURAL RESOURCES

APPROVAL

Hansard No

Date.....

COUNTY ASSEMBLY

ENDORSED

Signature

Date.....

H. E GOVERNOR

FOREWORD



Planning and development are functions assigned to the County Governments under the Constitution of Kenya 2010. Under this function, the counties are mandated to prepare and execute plans that include County Integrated Development Plans (CIDPs), County Spatial Plans (CSPs), County Sectorial Plans and City and Municipal Integrated Development Plans. The County Spatial Plan is an overarching framework that incorporates the long-term spatial vision by integrating the aspiration in all sectors and plans.

This first Kwale County Spatial Plan has been prepared in line with the aspirations of the nation outlined in the national development blueprint- Kenya Vision 2030. This Plan reflects the aspirations of the people of Kwale who desire to be “An Industrious Self-Sufficient People in a Liveable Environment”. The Plan outlines a strategic focus on food security through optimisation of agricultural production, environmental conservation and sustainable development, promoting investments in tourism, industrialisation, as well as trade and commerce. The vision is further supported by proposed interventions that seek to get the most out of the available marine resources while at the same time maintaining critical ecosystem balances. Furthermore, this Plan has given priority to the efficient delivery of services. It envisions sustainable urbanisation by creating a system of developing Liveable human settlements and strengthening linkages through efficient transport systems and infrastructure.

The preparation process of this Plan has been inclusive and involved stakeholders through extensive consultations that targeted input from the grassroots level. Public participation was undertaken in each of the 20 wards.

This Plan will inform our County development priorities and the process of reviewing future County Integrated Development Plans as well as other subsequent plans. A plan can only be as good as its implementation.

I wish, therefore, to give my commitment to the process of implementation of this Plan. Lastly, I call upon all the stakeholders to take up active roles in achieving the aspiration articulated in this Plan and make the Kwale dream of being “An Industrious Self-Sufficient People in a Liveable Environment” a reality.

H. E. SALIM MVURYA
GOVERNOR

PREFACE



The strategic location of Kwale County and its rich base of natural resources provides a myriad of opportunities for economic and social development. As a gateway County, Kwale has within its disposal abundant marine resources. The County is also located along the Great Northern Corridor, stretching from Cape Town in South Africa to Cairo in Egypt, leveraging great regional trade and commerce opportunities. Kwale has the best environment to prosper, attributed to its proximity to the port city of Mombasa, offering prospects in local and international trading.

Transformative national and international infrastructure projects, which include Dongo Kundu bypass, Dongo Kundu SEZ, SGR, proposed Shimoni port, proposed Malindi-Bagamoyo Dual carriage highway, Mwache dam, expansion of Diani airport, all place Kwale at a locational advantage.

The County is also blessed with a rich base of mineral resources, attracting global investment in the mining sector. If harnessed sustainably through a clear benefit-sharing framework, these resources can be a significant source of revenue and employment. Abundant arable land, favourable climatic conditions, and underground water resources create optimism for the County's food security. With a majority of a youthful population and vast natural resources that include productive land, rich mineral resources, favourable climatic conditions and a global brand as one of the best tourism destinations in the world, Kwale has real potential for economic revolution and social transformation. Realising this potential can change livelihoods and make Kwale competitive locally and internationally.

Among many other aspects, all these factors presented a need to have a spatial plan that would coordinate the different individual sectors within a collective set of aspirations of the Kwale people.

The County Government of Kwale has prepared this 10-year GIS-based County Spatial Plan to maximise the available development opportunities and address the challenges that the Kwale people have experienced over the years.

This Plan is a deliberate strategy to transform the livelihoods of the people of Kwale and improve their quality of life by creating employment opportunities, poverty reduction interventions, improvement of environmental conditions, delivery of infrastructure and services, harnessing the full potential of the County resources and good governance. Being the first County Spatial Plan, the impact and outcome of its strategies and policies are expected to stretch beyond its 10-year span. The long-term projects proposed within this Plan will have lifelong effects for improving the economy, environmental health, social well-being, and the future political landscape of the County and its people. Thus, the Plan will affect the organisation of the physical space and trigger economic progress and performance of other development sectors.

H. E. FATUMA MOHAMMED ACHANI
DEPUTY GOVERNOR

ACKNOWLEDGEMENT



The preparation process of this first Kwale spatial plan was a collective effort under the guidance of His Excellency Governor Salim Mvurya and his Deputy Her Excellency Fatuma Ahani. The responsibility of preparing the Plan was assigned to the Department of Environment and Natural Resources. Therefore, I wish to take this opportunity to sincerely thank the Governor and his Deputy for the responsibility and trust that they put in my department to deliver a successful plan.

I also appreciate the role played by all the County Executive Committee Members for their devoted coordination and support. Further, I salute the members of the County Assembly and their respective house committees to ensure that adequate resources were available for the preparation of this Plan and for their efforts in mobilising the ward citizens to support the process.

The completion of this Plan was possible through partnership building. I, therefore, express my gratitude to our partners, who included WWF, CORDIO EA and Base Titanium. We acknowledge the critical role played by the planning team, which comprised of experts from the County Physical Planning division under the leadership of the County Physical Planner Ali Budzuma, Zachary Maritim and Planner Nathan Mutunga of WWF, Planner David Gichuki of Geodev Kenya Limited, who was the lead consultant in the preparation of this Plan. I also wish to express our gratitude to the role played by the Ministry of Lands and Physical Planning through the Director of Physical Planning as well as the National Land Commission, who were available for consultation and guidance.

Additional gratitude goes to sector experts from National Government Agencies and ministries as well as non-governmental partners for their participation, especially in providing their technical input, availing data, and validating information.

We recognise the effort of the Sub-County, ward, and village administrators for their excellent work in the mobilisation of public members for sensitisation, visioning and validation meetings undertaken in all the 20 wards of the County. We value the participation of the members of the public, which gave an insight into the aspirations of the people of Kwale and an understanding of the current development outlook and the way forward to realising the vision.

The preparation of the Plan was a lengthy and intensive process that involved many other institutions and individuals at a personal level. We wish to appreciate all involved for their contribution and input to the Plan.

**SAUMU BEJA MAHAJA`
COUNTY EXECUTIVE COMMITTEE MEMBER
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCE**

EXECUTIVE SUMMARY

Kwale County Spatial Plan (KCSP), 2022-2032, is the first GIS-based spatial Plan to be prepared by the County. The general purpose of a County spatial plan is to provide the spatial structure, appropriate land use and land management policies, coordinate the distribution of people and activities throughout the County to achieve prosperity, equity and sustainable social and economic development. The Plan is a strategic framework that captures the people's aspirations and how such aspirations will be achieved in the next 10 (ten) years. This Plan has been prepared using 2018-2019 baseline data.

The Plan has been prepared to attain socio-economic transformation and land resource optimisation to improve the quality of life of the people of Kwale. It's a people-centred Plan whose axis revolves around 8 key areas of development that will function as pillars for realising the vision as **'An Industrious Self-sufficient People in a Liveable Environment.'** These pillars include: Enhancing agricultural productivity for food security and income generation; Environmental conservation and sustainable development; Promoting Investment in Tourism, Industrialization, Trade and Commerce; Optimising the potential of marine resources and the blue economy; Enhancing the quality of life through effective service delivery; Creating a system for Liveable human settlements and urban development; Strengthening linkages through transport and infrastructure development; and optimisation of County's potential through good governance. Each of the 8 (eight) pillars of the Plan is held together by a specific set of development strategies, policies, projects and programs designed to support the realisation of the bigger picture.

To enhance the attainment of the Kwale vision, the Plan provides a mechanism that breaks down the implementation into short-term, medium-term and long-term projects. It contains a capital investment framework that has ranked flagship projects with their respective estimated cost of implementation. The Plan also contains a framework for self-review and assessment to draw valuable lessons from the implementation process and influence decision-making during subsequent reviews.

The Plan is structured into 5 Parts. Part 1 provides the background for the preparation of the Plan and the planning context. Part II details the existing situation through a thematic analysis. Part III outlines the emerging issues from the synthesis of the current situation. Part IV details the plan proposals broken into thematic strategies and strategic interventions that make up proposed projects, programs and policies. Part V details the County spatial structure and areas of action planning. Finally, Part VI provides the implementation strategy to actualise the Plan.

ALI A. BUDZUMA
COUNTY DIRECTOR OF PHYSICAL PLANNING

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ACRONYMS

| | |
|-------------|---|
| ACE | Adult and Continuing Education |
| ASAL | Arid and Semi-Arid Lands |
| ASM | Artisanal and Small-Scale Mining |
| BPO | Business Process Outsourcing |
| CBO | Community-Based Organization |
| CBR | County Birth Rate |
| CDA | Coast Development Authority |
| CDF | County Development Fund |
| CDM | Clean Development Mechanism |
| CDR | County Death Rate |
| CEA | Cordio East Africa |
| CEC | County Executive Committee |
| CESA | Critically Ecologically Significant Areas |
| CIDP | County Integrated Development Plan |
| CIP | Capital Investment Plan |
| CMR | Child Mortality Rate |
| CSP | County Spatial Plan |
| CWSB | Coast Water Services Board |
| DEC | District Environmental Committee |
| EA | Environmental Audit |
| ECDE | Early Childhood Development and Education |
| EEZ | Exclusive Economic Zone |
| EIA | Environmental Impact Assessment |
| EPZ | Export Processing Zone |
| ESA | Ecologically Significant Areas |
| ESIA | Environmental Social Impact Assessment |
| FAO | Food and Agriculture Organization |
| FBO | Faith-Based Organization |
| FGD | Focus Group Discussion |
| GCP | Ground Control Point |
| GDP | Gross Domestic Products |
| GIS | Geographical Information System |
| GoK | Government of Kenya |
| GPRS | General Packet Radio Service |
| GPS | Global Positioning System |
| GSM | Global System for Mobile |
| IBA | Important Bird Area |
| ICT | Information Communication Technology |
| IMR | Infant Mortality Rate |
| IUU | Illegal unregulated and unreported |
| KAA | Kenya Airport Authority |
| KCB | Kenya Commercial Bank |
| KCDP | Kenya Coastal Development Project |
| KCDP | Kenya Coast Development Project |

| | |
|------------------------|---|
| KCNRN | Kwale County Natural Resource Network |
| KCSDP | Kwale County Spatial Development Plan |
| KEMFRI | Kenya Marine and Fisheries Research Institute |
| KEMRI | Kenya Medical Research Institute |
| KeRRA | Kenya Rural Roads Authority |
| KFS | Kenya Forest Service |
| KIA | Kenya Investment Authority |
| KISCOL | Kwale International Sugar Company Limited |
| KISCOL | Kwale International Sugar Company |
| KISIP | Kenya Informal Settlement Improvement Program |
| KMA | Kenya Maritime Authority |
| KMs | Kilometer Square |
| KMTC | Kenya Medical Training College |
| KNHA | Kenya National Highways Authority |
| KNPHC | Kenya National Population and Housing Census |
| KOSAP | Kenya Off-Grid Solar Access Project |
| KP | Kenya Power Company |
| KPA | Kenya Ports Authority |
| KPC | Kenya Pipeline Corporation |
| KRB | Kenya Roads Board |
| KSG | Kenya School of Government |
| KURA | Kenya Urban Roads Authority |
| KWAWASCO | Kwale Water and Sewerage Company |
| KWFT | Kenya Women Finance Trust |
| KWS | Kenya Wildlife Service |
| KWSC | Kwale Water and Sewerage Company |
| LIS | Land Information System |
| M³ | Meter Cubic |
| M³/d | Meter Cubic per Day |
| M³/s | Meter Cubic per Square |
| MCA | Members of County Assembly |
| MICE | Meetings Incentives Conferences and Exhibitions |
| MMR | Maternal mortality ratio |
| MOWASCO | Mombasa Water and Sanitation Company |
| NDMA | National Drought Management Authority |
| NEMA | National Environmental Management Authority |
| NGO | Non-Governmental Organization |
| NHC | National Housing Corporation |
| NIB | National Irrigation Board |
| NLC | National Land Commission |
| NMT | Non-Motorized Transport |
| NMT | Non-Motorized Transport |
| NOFBI | National Fiber Optic Backbone |
| PA | Protected Areas |
| PLWD | People Living with Disabilities. |
| POC | Potential, Opportunities and Challenges |

| | |
|---------------|--|
| PSV | Public Service Vehicle |
| PWDs | People with Disabilities |
| REA | Rural Electrification Authority |
| RIM | Registry Index Map |
| SACCO | Savings and Credit Cooperative Society |
| SCOFOA | South Coast Forest Owners Association |
| SDG | Sustainable Development Goal |
| SGR | Standard Gauge Railway |
| SPSS | Statistical Package for Social Sciences |
| TUM | Technical University of Mombasa |
| TVET | Technical and Vocational Education and Training |
| UDD | Urban Development Department |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNFCCC | United Nations Framework Convention on Climate Change |
| UTM | Universal Transverse Mercator |
| VIP | Ventilation Improved Pits |
| WAN | Wide Area Network |
| WHO | World Health Organization |
| WRA | Water Resource Authority |
| WWF | World Wide Fund for Nature |

PART I

INTRODUCTION

INTRODUCTION

1.1 Background of County Spatial Plan

The Constitution of Kenya 2010 has mandated County Governments to undertake planning within their areas of jurisdiction. This is emphasised in the County Governments Act No. 13 of 2011, which requires the Counties to prepare and implement the following plans;

The County Integrated Development Plan (CIDP) is a five-year plan that outlines strategies and programmes for infrastructure, physical, social, economic, and institutional development.

City and Municipal Integrated Development Plans. Which encompass both short term and long-term plans for guiding the growth and development of urban areas.

County Sectoral Plans is a sector-specific ten-year plan outlining programmes to be undertaken in their respective development sectors.

County Spatial Plans (CSPs) is a ten-year GIS-based Plan that provides a spatial depiction of the social and economic development of the County. According to the County Governments Act, the County Spatial Plan is a component of the County Integrated Development Plan. However, the County Spatial Plan has a longer time span than the CIDP.

The desire to attain socio-economic transformation of the Kwale people supported by the legal requirement to prepare a County Spatial plan provided a clear motivation to the County Government to prepare and adopt this first County Spatial plan of Kwale.

1.2 Purpose of the Kwale County Spatial Plan

The overall aim of the Plan is to coordinate and optimise the use of land and its resources by influencing the distribution of people and activities to ensure that the County attains prosperity, equity, and sustainable development in line with the people's aspirations. Specifically, the Plan seeks to:

1. Provide a spatial depiction of the social and economic development programs and projects;
2. Integrate economic, social, environmental, land use and physical planning;
3. Design strategies to attain desired patterns of land use, which will guide the nature and location of development and capital investment projects (CIP).
4. Encourage linkages between County plans and national plans;
5. Establish a GIS-based database system to guide land administration and management of County resources;
6. Provide a basis for lower-level planning;
7. Provide a framework for the appropriation of public funds

1.3 The Vision and Development Pillars for the County

This Spatial Plan has a significant role in driving and achieving the ambitions of the Kwale people articulated in their vision statement. The Vision for Kwale County is to be

'An Industrious Self-sufficient People in a Liveable Environment'

To realise the vision, investment and action must be aligned along the following development pillars.

1. Enhancing agricultural productivity for food security and income generation;

2. Environmental conservation and sustainable development;
3. Promoting Investment in Tourism, Industrialization, Trade, and Commerce;
4. Optimising the potential of marine resources and the blue economy;
5. Enhancing the quality of life through effective service delivery;
6. Creating a system for Liveable human settlements and urban development;
7. Strengthening linkages through transport and infrastructure development; and
8. Optimisation of County's potential through good governance

1.4 Objectives of the Kwale County Spatial Plan

The over-arching objective of the Plan is to promote the sustainable development of Kwale County. Specifically, the objectives of the Plan are:

1. To provide an overall spatial framework for the County to guide development;
2. To designate land use zones with specific land-use guidelines.
3. To integrate sectoral policies into the land use plan;
4. To provide policies on which to anchor lower-level plans.
5. To interpret and localise strategic national and regional policies and strategies;
6. To provide a basis for efficient and effective delivery of services;
7. To guide the use and management of natural resources;
8. To provide a guide to environmental protection and conservation;
9. To identify investment areas that will result in job creation and employment;
10. To devise strategies for revitalisation of key development sectors of the economy;

11. To suggest measures for improvement of transport and communication network and linkages;
12. To identify and develop an urban system in the County; and
13. To create urban and rural areas as integrated economic and social activity areas.

1.5 Scope

Geographical extent

The County Spatial Plan covers the entire territory of Kwale County, which lies between Latitudes 3° 3' and 4° 45' south and Longitudes 38° 31' and 39° 31' East. The area measures approximately 8270.2 Km², of which 62 Km² is underwater.

Time Frame

The Plan will guide the development of Kwale County for a period of 10 years from 2018 to 2028.

1.6 The organisation of the Plan

The Plan is structured into six parts, as outlined below:

Part I: Introduction – Project background and planning context.

Part II: Situational Analysis – County Land Cover, Physiography and landforms, population and demography, land, environment, human settlements, Transport, Infrastructure, County Economic Base, and Governance and Institutional Framework.

Part III: Synthesis – County Development Outlook

Part IV: Plan Proposals - Thematic Development Strategies, Policy guidelines

Part V: County spatial development Framework – Kwale County Spatial structure and Action Area Plans.

Part VI: Plan Implementation – Plan Implementation Strategy

PLANNING CONTEXT

2.1 Location Context

Kwale is one of the forty-seven (47) counties in Kenya and one of the six counties that form the coast region. The County borders Mombasa and Kilifi Counties to the North, Taita Taveta County to the West, Tanzania to the South and the Indian Ocean to the East.

The locational context is as shown in Map 1.

The County is linked internationally to Tanzania through the Mombasa- Lunga-Lunga – Tanzania (A7) road, regionally to Kilifi and Taita Taveta counties through Mombasa-Nairobi (A8) highway as well as to Nairobi, which is Kenya's Capital City. The locational attributes of Kwale offer a development advantage to the County in relation to other counties in Kenya.

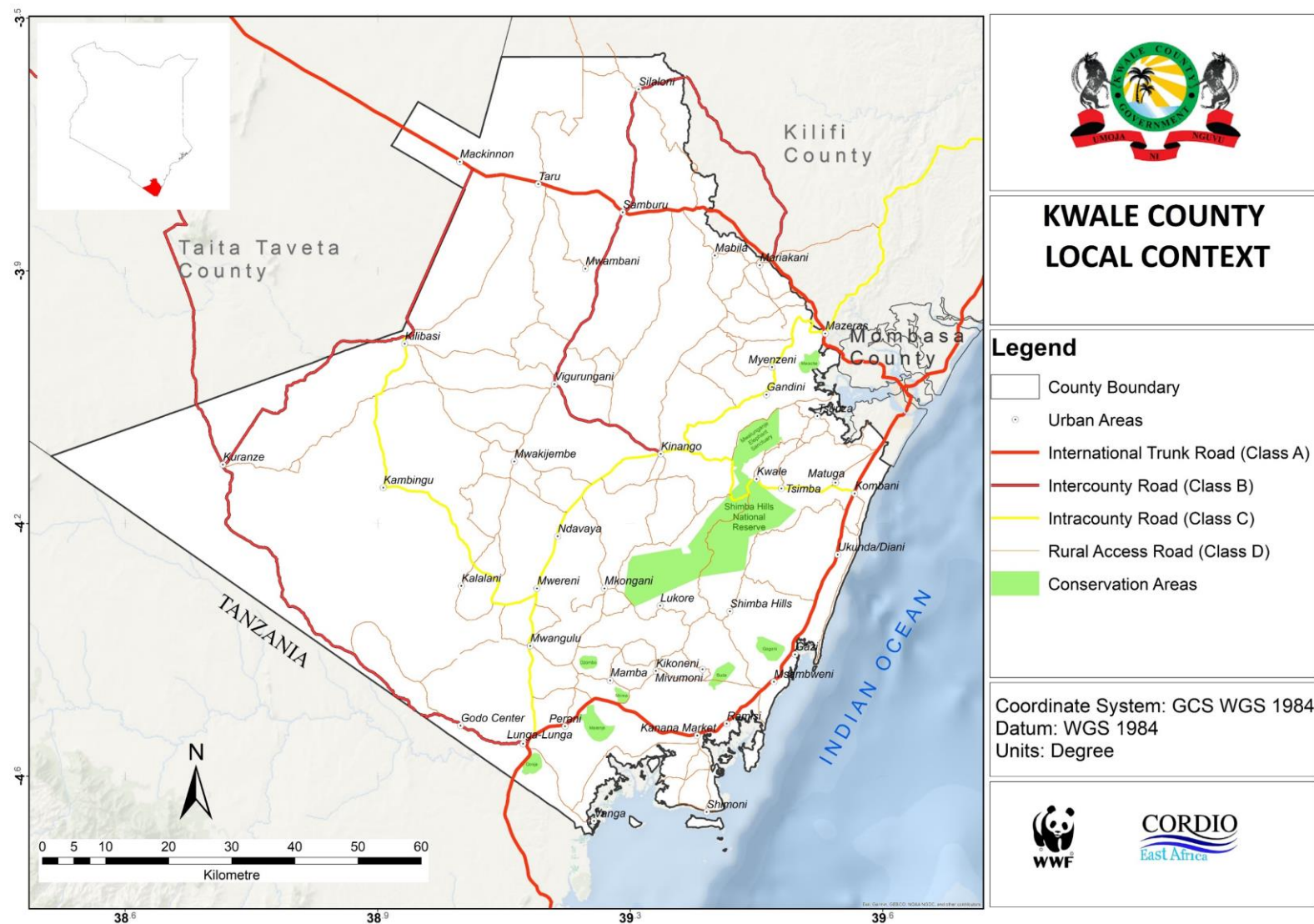


2.1.1 Locational Advantage

The locational advantage that Kwale has is based on the following factors:

- i. The County is directly linked and adjacent to Mombasa, a port city and Kenya's second-largest city, which provides a big market for goods and services.
- ii. The County borders the Republic of Tanzania to the south, which provides access to the international market for goods and services
- iii. It is situated adjacent to the Indian Ocean. Therefore, it ensures access to marine resources and presents an opportunity to link the County regionally and internationally.
- iv. Kwale County is surrounded by reserves and parks from Taita-Taveta County and the Republic of Tanzania, offering a touristic advantage.

Map 1: Locational Context



2.2 Administrative Context

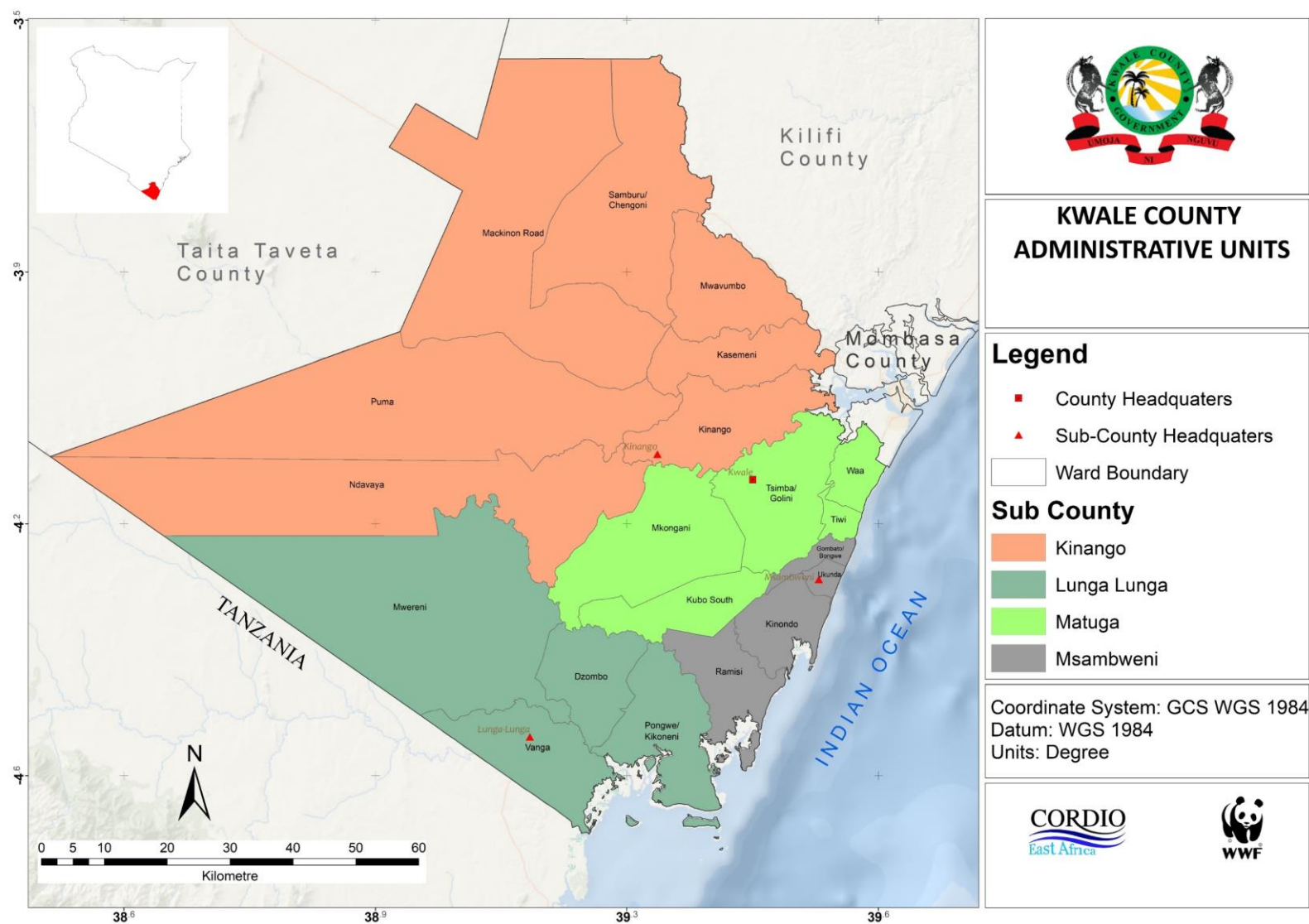
The County has four (4) sub-counties and twenty (20) wards, as shown in Table 1 and depicted on Map 2. Kwale town, the County's headquarters, is located in Matuga Sub County.

Table 1: Administrative units in the County

| Sub- County | Approx. Area (Km ²) | Ward | | |
|--------------|---------------------------------|---|---|---|
| Matuga | 1031.2 | <ul style="list-style-type: none"> • Tsimba Golini • Waa Ng'ombeni | <ul style="list-style-type: none"> • Mkongani • Kubo South | <ul style="list-style-type: none"> • Tiwi |
| Kinango | 4011.7 | <ul style="list-style-type: none"> • Mackinnon Road • Samburu • Chengoni • Puma | <ul style="list-style-type: none"> • Ndavaya • Kasemeni | <ul style="list-style-type: none"> • Mwavumbo • Kinango |
| Msambweni | 362.60 | <ul style="list-style-type: none"> • Ramisi • Kinondo | <ul style="list-style-type: none"> • Ukunda • Gombato • Bongwe | |
| Lunga Lunga | 2864.80 | <ul style="list-style-type: none"> • Mwereni • Vanga | <ul style="list-style-type: none"> • Dzombo • Pongwe Kikoneni | |
| Kwale County | 8270.2 | 20 | | |



Map 2: Administrative Context



2.3 Legal Context

2.3.1. The Constitution of Kenya, 2010

The Constitution lays a foundation for Kenya's planning practices, from preparation to implementation. Kwale County's spatial Plan has been fully anchored within the confines of the Constitution and particularly to the following provisions: Chapter 4 on the Bill of Rights, Chapter 5 on Land and Environment, Chapter 11 on Devolved Government, and Chapter 12 on Public Finance.

2.3.2. Other Legal Frameworks

The Plan has also adhered to the requirements of the following vital legislations:

- i. The Physical and Land Use Planning Act, 2019
- ii. County Governments Act, 2012
- iii. The Urban Areas and Cities Act (Amendment), 2011
- iv. Environmental Management and Coordination Act, 1999)
- v. Agriculture, Fisheries and Food Authority Act, 2013
- vi. Water Act, 2016
- vii. National Land Commission Act, 2012
- viii. The Land Act, 2012.
- ix. Climate Change Act, 2016

2.4. Policy Context

2.4.1. Vision 2030

The policy is a long-term national development blueprint that outlines the aspired national development goals by 2030. The policy has identified various projects and programs to be implemented in the quest to transform Kenya into "a newly industrialising, middle-income country providing a high quality of life to all its citizens in a clean and secure environment." Kwale County Spatial

plan enhances the realisation of the vision through proposed projects and programs in County-level sectors, including Agriculture, Manufacturing, Tourism, Trade and Commerce, and Blue Economy, amongst others.

2.4.2. National Spatial Plan 2015-2045

The National Spatial Plan details the national spatial vision that guides the long-term spatial development of the country for 30 years. The Preparation of the Kwale County Spatial Plan is in line with the provisions and strategies of the National Spatial Plan.

2.4.3. Sectoral policy frameworks

Kwale County Spatial Plan is in line with the following sectoral policies;

- i. National Land use Policy 2017
- ii. National Urban Development Policy

Plate 1: Balance of Justice



- iii. Agricultural Sector Development Strategy 2009-2020
- iv. National Housing Policy for Kenya (2004)
- v. Integrated National Transport Policy Sessional Paper No. 2 of 2012.
- vi. The Wildlife Policy
- vii. National ICT Policy 2016
- viii. Industrial Master Plan
- ix. National Tourism Strategy 2013-2018
- x. National Climate Change Response Strategy, 2010

2.5. Approach and Methodology

2.5.1. Approach

The plan preparation process adopted the following approaches:

a) Participatory approach

The plan preparation process engaged various stakeholders at different levels. Stakeholder participation was through electronic and print media sensitisation, meetings, workshops, and focus group discussions. Table 2 shows the summary of the engagements

Table 2: Summary of Engagements

| Engagement | Participants |
|--|--|
| Project Sensitization | <ul style="list-style-type: none"> County Executive Committee Directors of County Members of County Assembly Sub- County & Ward Administrators 100 community representatives in each ward |
| Visioning | <ul style="list-style-type: none"> 100 community representatives in each ward Multi-disciplinary Experts and County administrators |
| Detailed studies | <ul style="list-style-type: none"> Thematic Experts (Key Informants interviews and Focus Group Discussions) Household heads (Household Survey) |
| Situational Analysis Validation | <ul style="list-style-type: none"> Community representatives from each ward Sub-county and ward administrators Thematic experts at Sub- County level |
| Draft Plan Validation | <ul style="list-style-type: none"> Community representatives from each ward Multi-disciplinary experts at the county level Member of County Assembly Members of County Executive Committee |

b) Multi-Sectoral and Multi-disciplinary

The plan formulation process drew contributions from various experts in multiple sectors and disciplines. The experts were representatives of County Departments; National Government representatives such as; Kenya Wildlife Service, Kenya Forest Service, National Drought Management Authority, Kenya Marine and Fisheries Research Institute; Coast Development Authority; Kenya Rural Roads Authority; Kenya National Highways Authority, Kenya Urban Roads Authority, Kenya Airports Authority, NEMA and Kenya Power among others; and various non-governmental stakeholders and Private investors.

c) Strategic and integrated

The plan preparation entailed participatory identification of development pillars upon which challenges and potentials were identified and strategic interventions adopted. The development pillars were drawn from various thematic areas and integrated to respond to the development vision of the County.

d) Evidence-based

The process relied on verifiable data, information, and knowledge gathered from experts in various disciplines, making observations, photography, ground-truthing, benchmarking, and scenario building.

2.5.2. The process of preparing the Spatial Plan

The process of preparing the County Spatial Plan adopted the following steps;

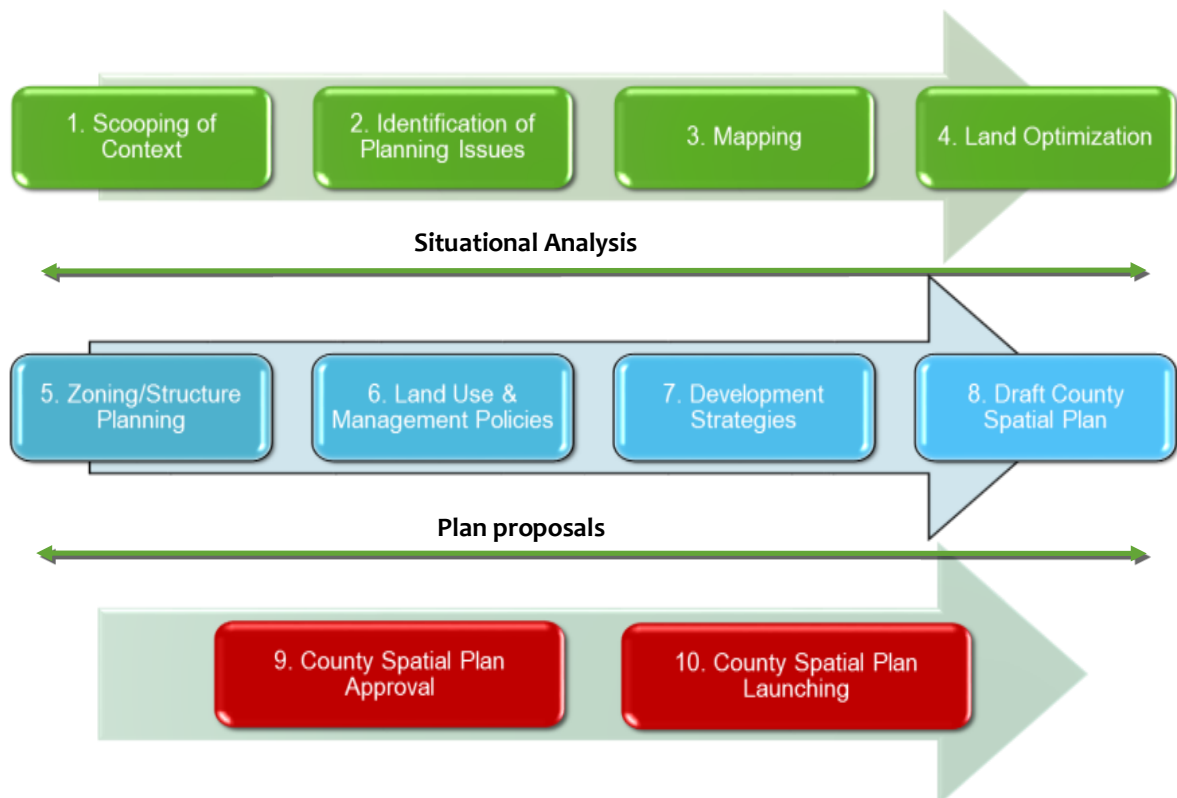


Chart 1: The process of preparing the plan

PART II

SITUATION ANALYSIS



COUNTY LAND COVER

3.1 Land Cover

The County landmass is covered by cropland, including land under annual and perennial crops; Rangelands, made up of grasslands and shrublands; forested areas, woodlands, riverine vegetation, wetlands, built-up areas and water bodies. The land cover is represented by the map below Table 3-1 and Map 3-1.

3.1.1 Crop Land

Cropland forms about 8.92 percent of the total land cover. The crop cover comprises both seasonal and perennial crops. The seasonal vegetation, which includes cassava, maize, cowpeas, green grams, millet, sorghum, sugarcane, and rice, form part of the cropland seasonally. Therefore, the crop cover pattern may change once the crops are harvested. The perennial crops forming part of the land cover include cashew nuts, pawpaws, coconuts, bixa, and cotton. jack fruit, oranges, mangoes, tamarind, pineapples, and bananas.

3.1.2 Shrublands and Grasslands (Rangeland)

This land cover pattern is more visible on the leeward side of the Shimba Hills within the Nyika Plateau. The area exhibits hot and dry climatic conditions. The major land-use activities are livestock keeping and ranching. Rangelands form about 82.18 percent of the total land cover of the County.

3.1.3 Conservation Land

Land considered as conservation land within the County includes the tree-covered areas, aquatic vegetation/flooded areas, and open water, which covers about 8.53 percent of the County's land.

3.1.4 Built-Up Land

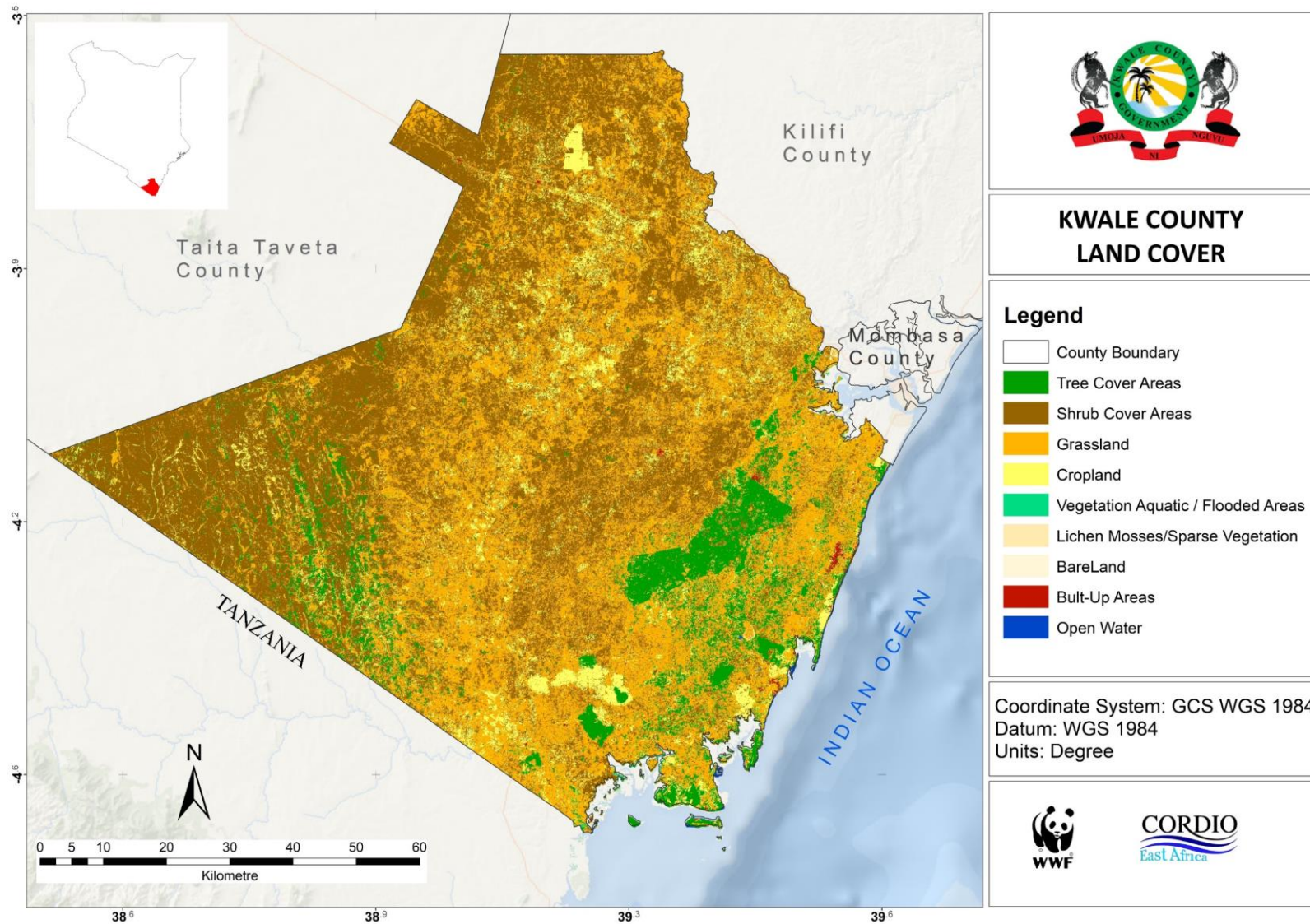
The built-up area accounts for about 0.2 %. Built-up areas are evident in the urban areas within the County.

Table 3: A summary of the County Land Cover

| Land Cover | Area Sq km | Percent (%) |
|--------------------------------------|----------------|---------------|
| Tree cover areas | 688.92 | 8.33 |
| Shrubs cover areas | 3569.04 | 43.16 |
| Grassland | 3226.99 | 39.02 |
| Cropland | 738.00 | 8.92 |
| Aquatic vegetation/ Flooded areas | 6.25 | 0.08 |
| Sparse vegetation | 5.17 | 0.06 |
| Bare areas | 8.97 | 0.11 |
| Built-up areas | 16.77 | 0.20 |
| Open Water | 10.09 | 0.12 |
| Total | 8270.20 | 100.00 |

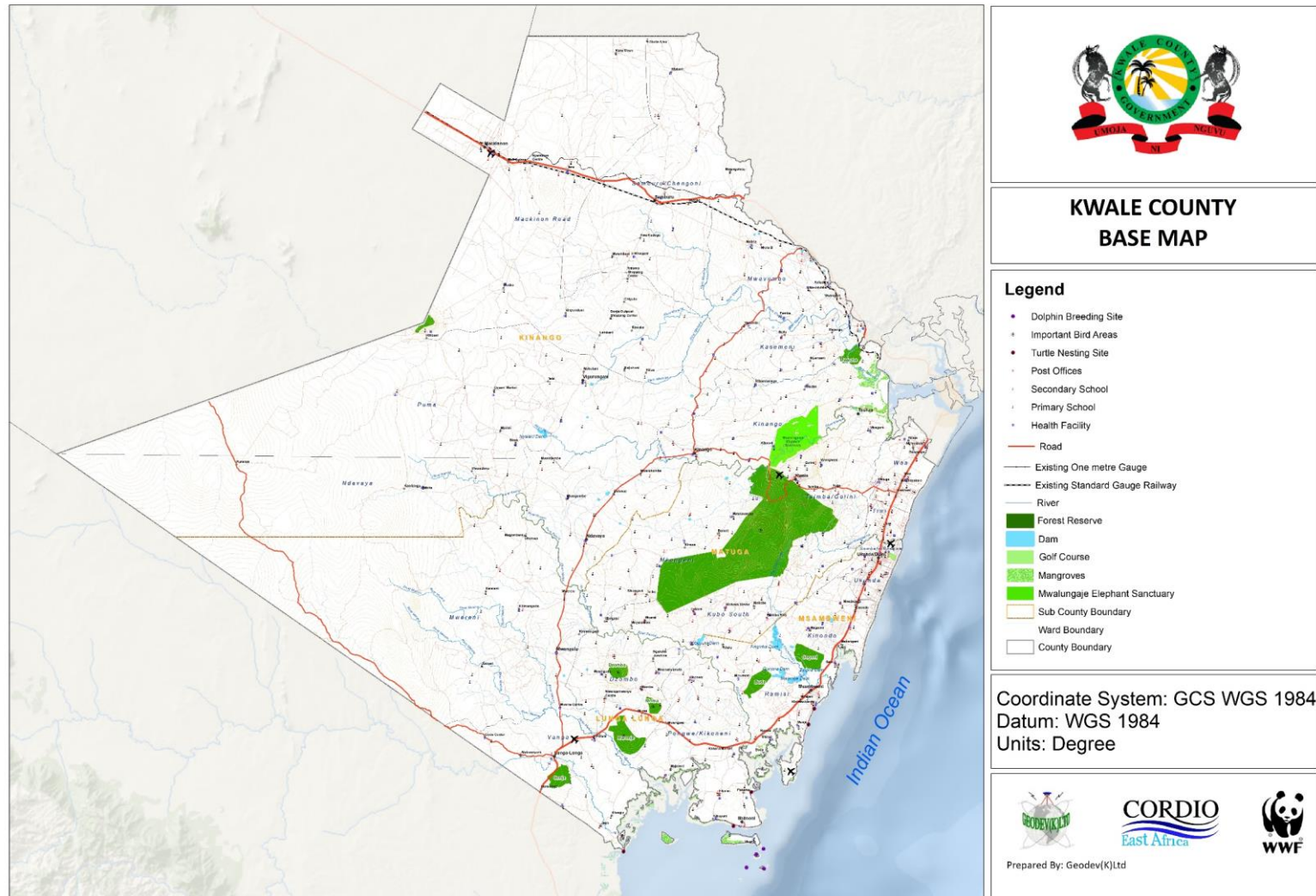


Map 3: County Land Cover



PART II: SITUATIONAL ANALYSIS

Map 4: Kwale County Base Map



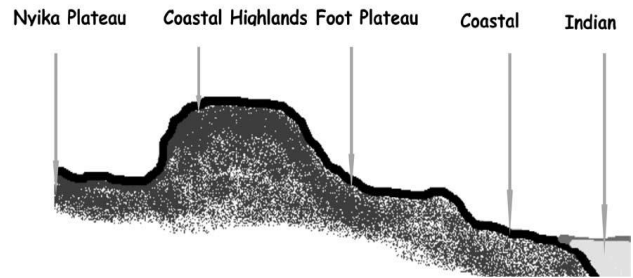
PHYSIOGRAPHY AND LANDFORMS

4.1 Topography and Relief

Kwale County comprises four major topographical zones: the coastal plain, foot plateau, coastal uplands, and Nyika plateau.

- a. **The Coastal Plain** is approximately 30m above sea level and extends to 10 km inland, with the Mombasa-Lunga Lungu Road running almost along the centre of the plain. The coral reef runs almost parallel to the 250km coastline, 300m to 1000m away from the shoreline.
- b. **The Foot Plateau**, which rises behind the Coastal Plain, lies between 60m and 135mamsl. At the base of the Foot Plateau are Jurassic Rocks which are exposed in the northern part of the County. On the eastern edge of the plateau, there is a long ridge of sandhills composed of magarini sands.
- c. **The Coastal Uplands** (commonly known as the Shimba Hills), which rise steeply from the foot plateau, lies at an altitude of 150m to 462m and are composed of many sandstone hills that include the Shimba Hills (420m), Tsimba (350m), Mrima (323m) and Dzombo (462m). Apart from a few summits, the Uplands are more or less flat-topped.
- d. **The Nyika Plateau** (also known as the hinterland) extends from the western edge of the Coastal Uplands as the terrain drops steeply to a plateau, which rises gradually from about 180m. It is a semi-arid area characterised by a basement rocks system except for occasional patches of reddish sand soils and occupies over half of the County.

Figure 1: Cross-section of the topographical zones in Kwale County



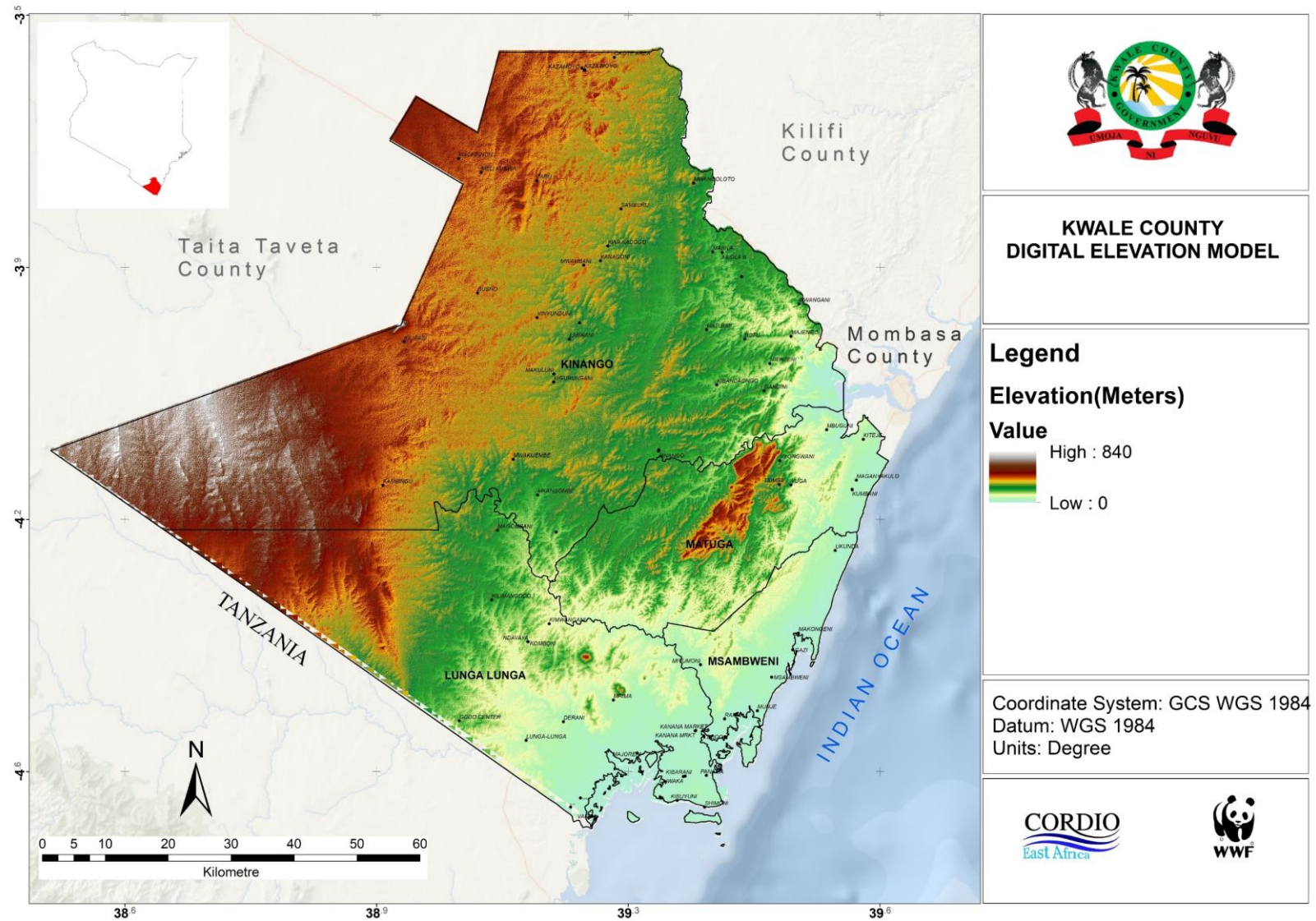
Source: Kwale District & Mombasa Mainland South Regional Physical Development Plan 2004–2034

The County's altitude ranges from zero (0) meters sea level to 420m within the Shimba Hills and 842m on Kilibasi Hill bordering Taita/Taveta County, as shown in Map 4.



PART II: SITUATIONAL ANALYSIS

Map 5: Digital Elevation



4.2 Hydrology

4.2.1 Drainage

The County is well-drained through seven (7) permanent rivers and various seasonal rivers and tributaries. The principal drainage pattern assumes the regional dip; East to South-East direction as indicated in Table 4 and map 6.

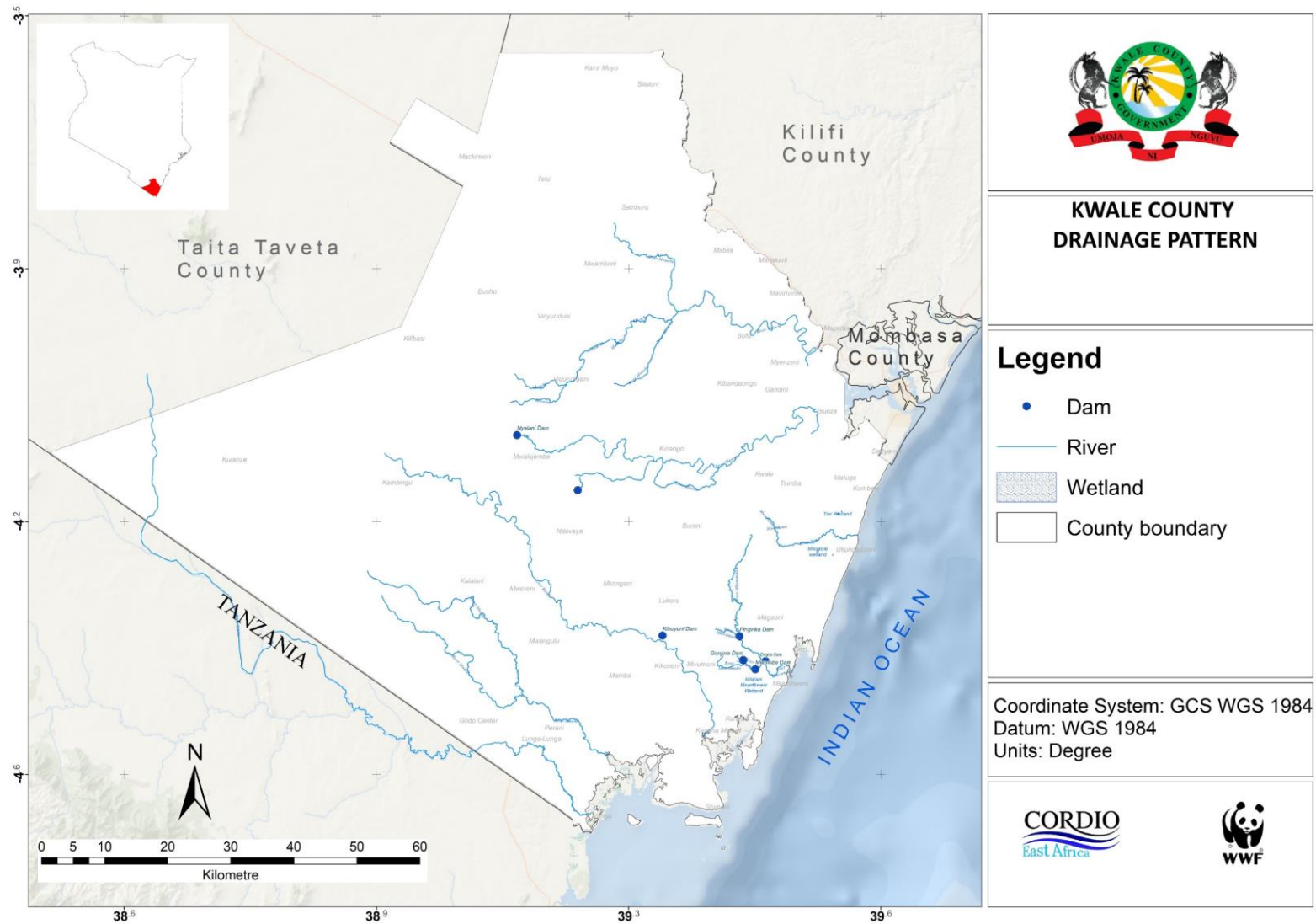
Table 4: Rivers in Kwale County

| River | Source | Areas traversed | Endpoint |
|-------------------|-------------------------------------|-------------------------------|------------------------------------|
| Marere | Marere Spring Shimba rain forest | Shimba Hills National Park | The Indian Ocean at Bombo Creek |
| Mkurumudzi | Shimba Hills | Shimba Hills Msambweni | The Indian Ocean at Gazi Msambweni |
| Umba | Usambara Mountains | Lunga-lunga – Vanga | The Indian Ocean at Vanga |
| Pemba | Marere Spring Kinango area | Kinango-Tsunza | The Indian Ocean at Bombo Creek |
| Ramisi | Chenze Ranges | Mwereni – Shimoni | The Indian Ocean at Bod/Shimoni |
| Mwache | South Samburu | South Samburu | The Indian Ocean at Mazeras |
| Mwachema | Majimboni–Msulwa | Majimboni- Gombato-Diani | The Indian Ocean at Diani |

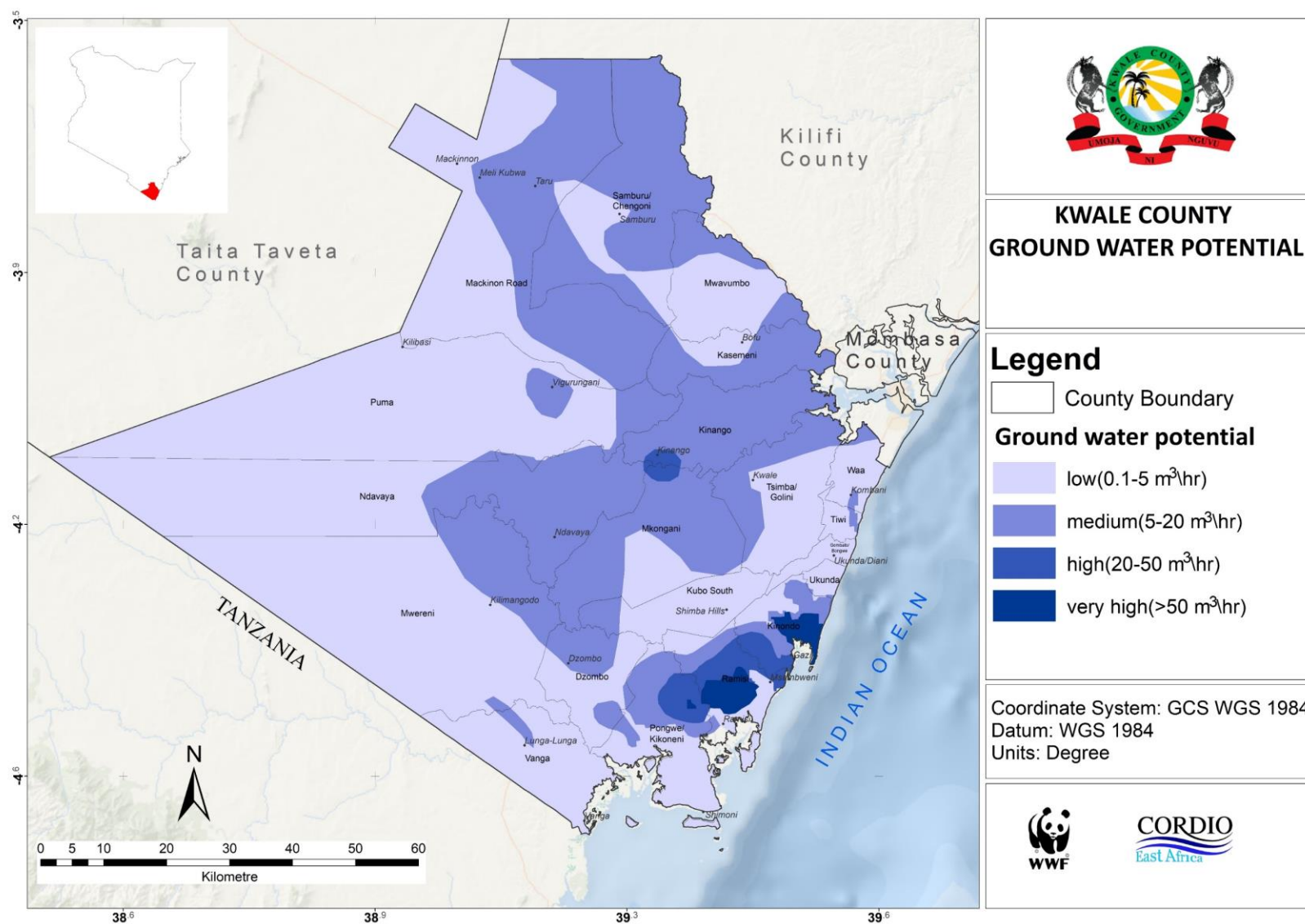
Source: First Kwale County Integrated Development Plan CIDP 2013-2017



Map 6: Kwale Drainage Pattern



Map 7: Underground Water Potential



4.3 Climate

The climate of Kwale County is categorised into three major climatic zones. These zones include; warm and humid, cool and wet and hot and dry.

The warm and humid climate is experienced along the coastal strip. It extends inwards in areas such as Msambweni, Tiwi, Waa, Diani, Vanga, Shimoni and Matuga due to South-West Monsoon and North-Easterly winds, which bring changes to the rainfall and temperatures. Temperatures along these coastal areas range between 26°C and 30°C. Humidity within this zone is approximately 95% annually.

The cool and wet climate is mostly experienced within the coastal highlands in Kwale Town, Shimba Hills, Dzombo and Mrima due to canopy trees' elevation and vegetation cover. Humidity within these areas is also low.

The hot and dry climate is experienced mainly in the ASAL areas of Kinango and parts of Lunga-Lunga Sub-counties. Temperatures within these hinterland areas are higher than the coastal zone, ranging from about 30°C to 40°C, and humidity is approximately 60% annually.

The average temperature in the County is approximately 22°C. The climatic conditions are as depicted on map 8.

4.4 Rainfall

Annual average rainfall ranges from 500mm in the rangelands of the Nyika Plateau to 1200mm in the high rainfall areas of the Coastal Strip. Shimba Hills and Dzombo receive the most rainfall, about 5000mm per annum.

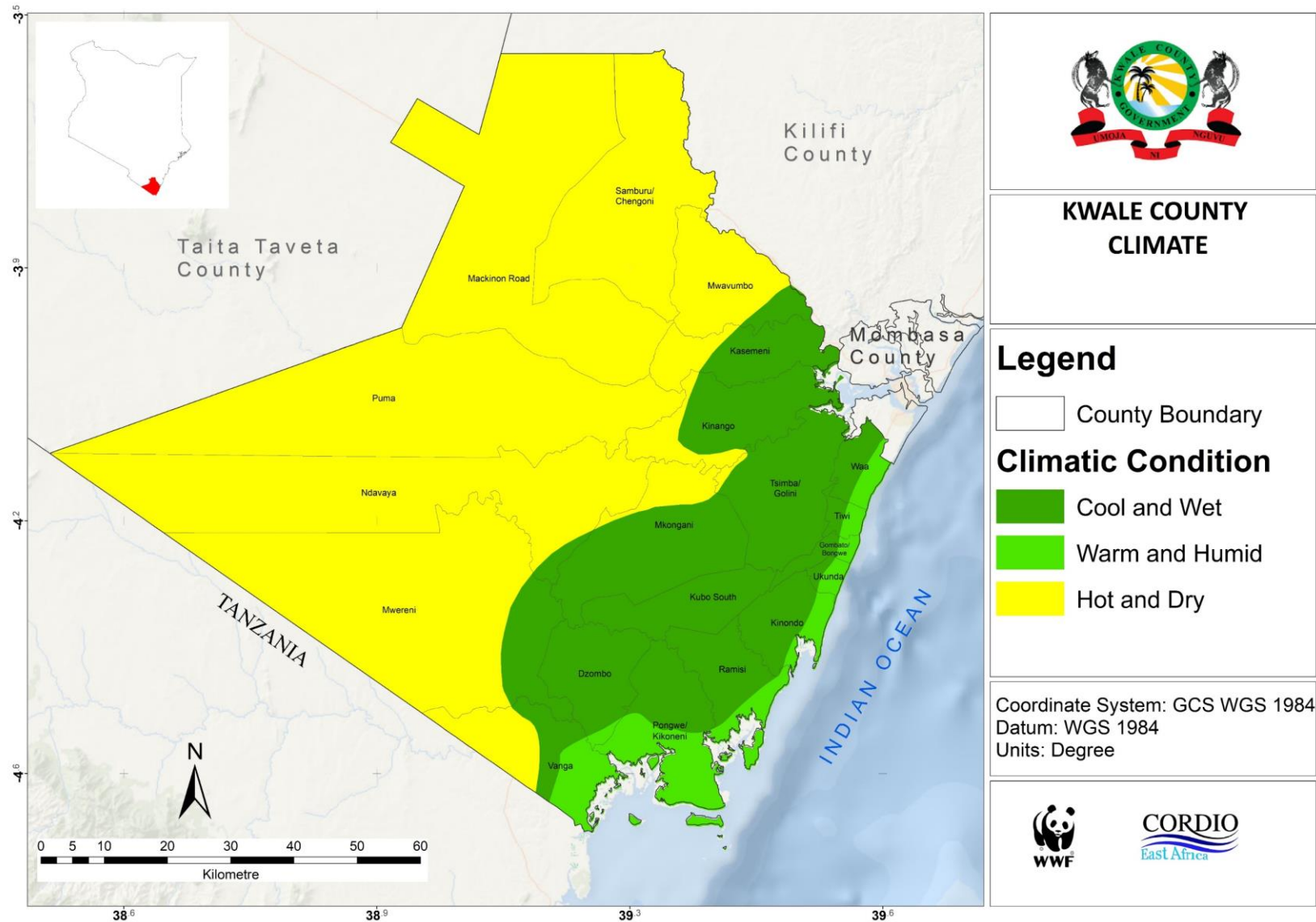
Kwale County is marked by a bi-modal rainfall pattern. The long rains are experienced from mid-March to May with a monthly average of between 75mm-240mm, as indicated in Map 9. The short rains occur from October to December with a monthly average of between 75mm-100mm, as shown in Map 10. The mean annual rainfall is 1100 mm, with the long rains accounting for

approximately 847 mm (77%), while the short rains provide only 253 mm (23%). January and February are the driest months, with less than 50 mm averages. Even though the County's rainfall is bimodal, this pattern has changed due to climatic change over recent years.

4.5 Winds

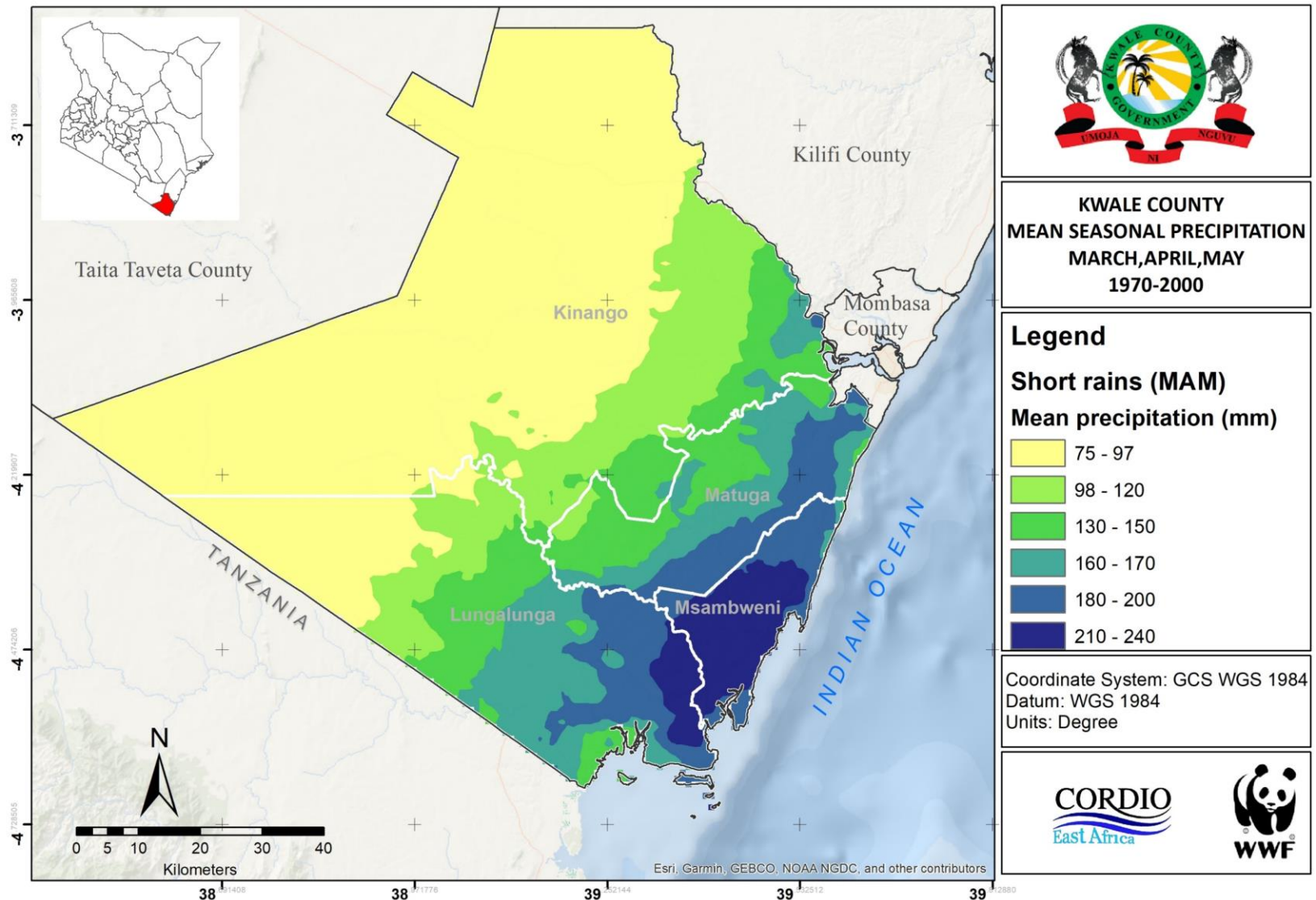
Two prevailing wind directions influence the climate of Kwale County. The Southwest Monsoon winds blow inland from October to March. The North-Easterlies blow towards the sea from April to September. Short rains are usually from October to December when the monsoon winds blow inland. Long rains are from March to May and are influenced by Monsoons blowing towards the sea.

Map 8: Kwale Climatic Condition

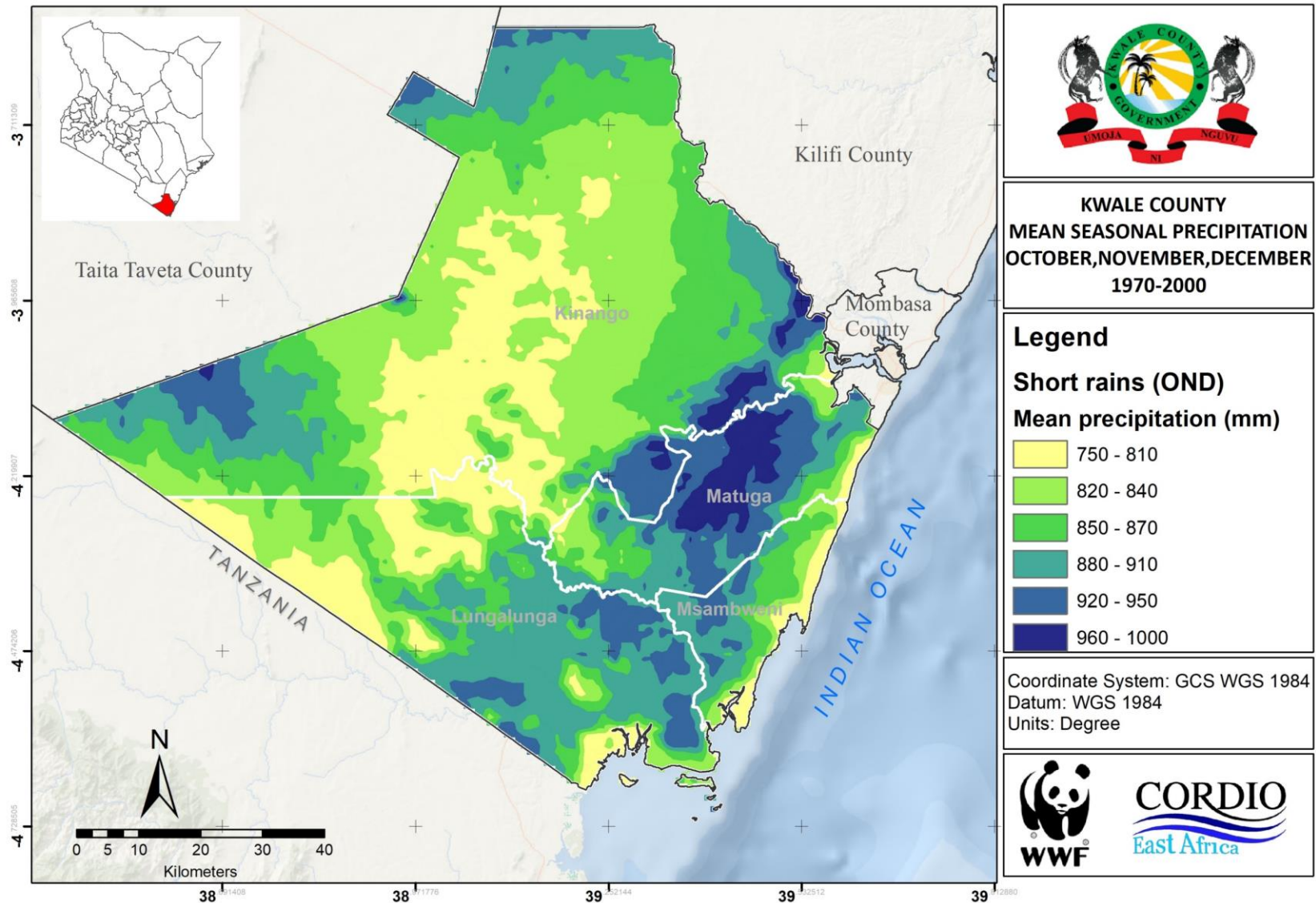


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Map 9: Kwale Long Rains Variability



Map 10: Kwale Short Rains Variability



4.6 Soils

4.6.1 Soil Distribution and Types in Kwale County

The four physiographic zones influence soil distribution and types over the region:

a) Coastal Plain

In this zone, the soils are predominantly sandy and loamy in texture. Areas covered by coastal plain zone types of soils are Chale, parts of Msambweni, Funzi, Shimoni and Wasini Island. Other areas are Muhaka, Ramisi, Majoreni, and Vanga in Lunga-Lunga Sub-County. The soils in this zone are partially saline, shallow, and poorly drained.

b) Foot plateau

The Foot Plateau consists of deep, well-drained permeable loamy soils suitable for agriculture. This soil is found in areas of Matuga

c) Coastal Uplands

The coastal uplands are developed on unconsolidated sandy deposits, shale, and limestone. They range from sand to loam and loam to clay. The areas covered by these soils are Waa,

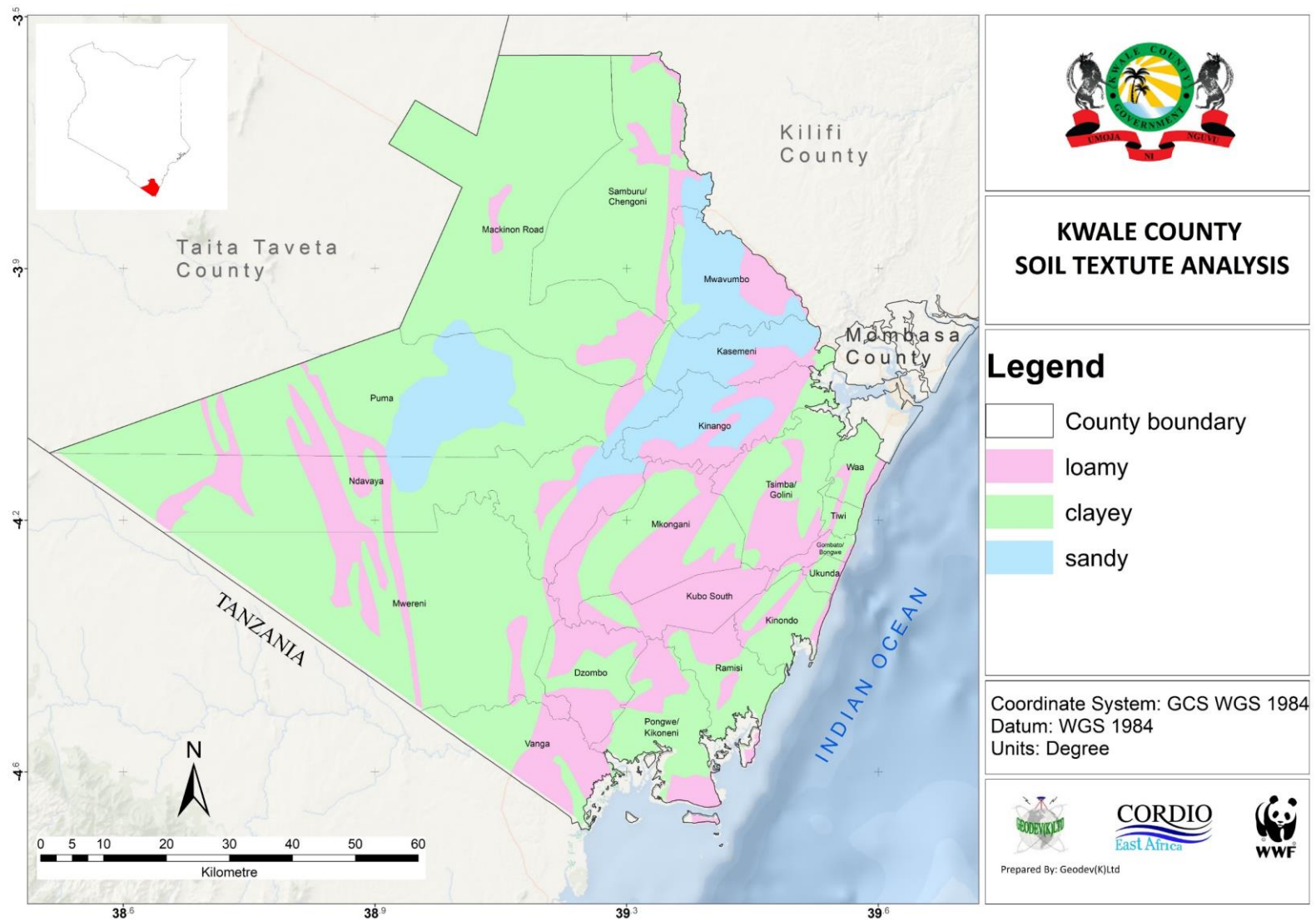
Tsimba, Kundutsi and Bongwe. Other areas endowed with these soils are Shimba Hills, Kikoneni, Perani, Mkongani, Mbuguni, Tsunza, and some parts of Kinango and Mariakani. Soils in these areas are well-drained; however, some areas of Kinango and Mariakani are partially drained.

d) Nyika plateau

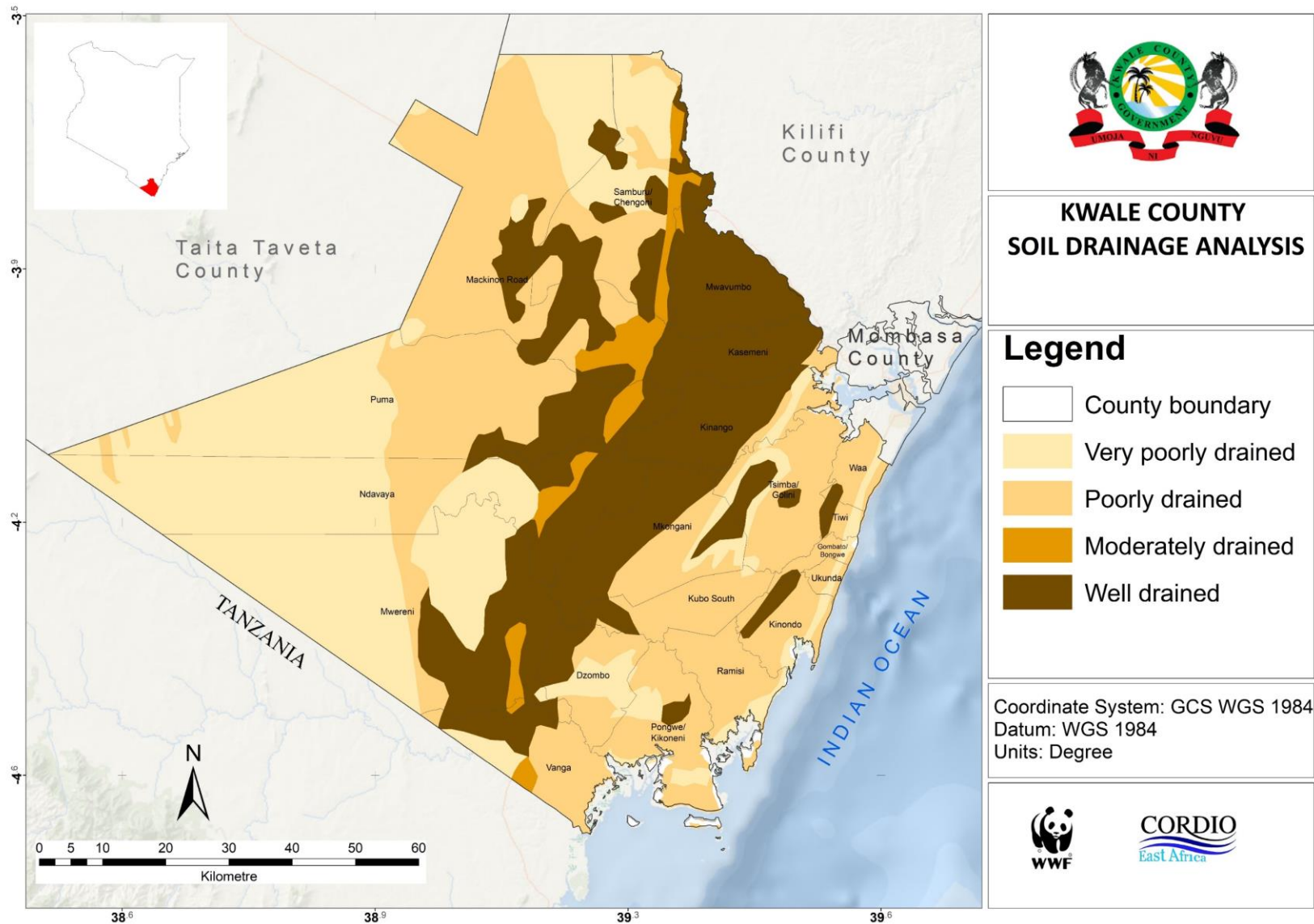
This zone has gritty sandstone, shale, and basement system rocks. The soils in this zone are deep and poorly drained. Areas covered by these soils are Taru, Samburu, MacKinnon, Kilimangodo, and west of Shambini. The County's soil texture, drainage, and depth are indicated in Map 11, Map 12 and Map 13, respectively.



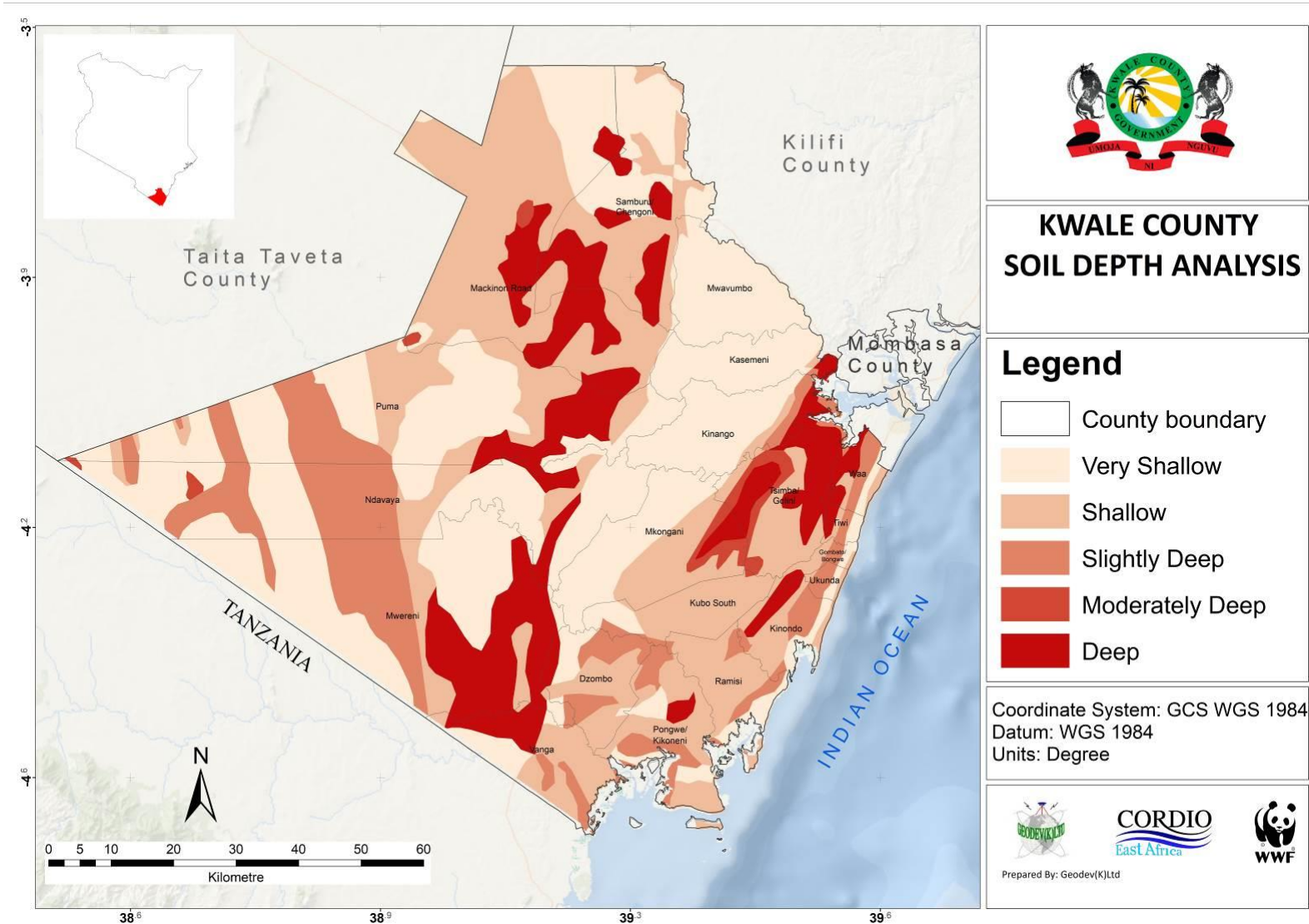
Map 11: Kwale Soil Texture Analysis



Map 12: Kwale Soil Drainage



Map 13: Kwale Soil Depth



4.7 Geology

The County's Geological structure comprises basement rocks, Karoo sediments, Jurassic rocks, and intrusive rocks. The location of these rocks and their economic viability is shown in Table 5.

Table 5: Kwale rock profile

| Rock sediment | Location | Mineral found in Rock | Economic Viability |
|------------------------|---|---|---|
| Basement rocks | Areas of Kinango | Limestone, in the form of gneisses schists, quartzites and granitoids and crystalline | They bear gemstones |
| Karoo sediments | Taru Formation | Sandstone | Rock slabs for construction Traces of coal (mining) |
| | Maji ya Chumvi formation | Rock slabs Minor quantities of coal. | |
| | Mariakani formation | Sandstone | Sandstone: Source of ballast for road and building construction |
| | Mazerras formation | Sandstones and arkoses | Mazerras sandstone |
| Jurassic rocks | Shimba Hills, Kinango and Waa | Limestone blocks and ballast | Manufacturing and construction |
| Intrusive rocks | Dzombo, Chiruku, Mrima, Nguluku Hills and Dzirihiini Hills. | Rare earth elements and phosphates (e.g., Niobium) | Colouring of glass and ceramics, also used in electric motors |

Source: Mombasa South Kwale District Regional Physical Development Plan 2005-2035

4.7.1 Other Sediments and Deposits

Other rock formations include the Magarini **formation**, which includes mineral depositions such as Titanium found in Maumba and Nguluku and Silica Sand found in Ramisi and Msambweni. **Pleistocene sand facies** formed during sea-level fluctuations and consisted of sands with coral debris are found in the places close to the beach line, especially in Ramisi and Majoreni. A **Reef Complex Outcrop** extending 1-3 Km along the coastline is also part of the geology of the County. Quarried building blocks and Guano deposits from caves, used as organic fertilisers, are derived from the reef outcrop.

4.8 Emerging Issues

| Potential | Opportunities | Challenges | Recommendations |
|---|--|--|---|
| Agricultural potential for Food Self-Sufficiency | <ul style="list-style-type: none"> Over 90% of soils are fertile suitable for agriculture Availability of Ground and Surface water | <ul style="list-style-type: none"> Low rainfall in the Nyika Plateau Drying of rivers during drought Salinity and High striking levels of groundwater | Develop irrigation schemes in the Nyika plateau |
| Tourism Potential | Scenic areas, e.g., hills as tourism attraction sites | Underutilisation of natural resources | Promotion of Ecotourism |
| Industrial development | Availability of rocks and minerals | Uncontrolled artisanal mining | Promote industrialisation to tap on the existing mineral resources. |

THE PEOPLE OF KWALE

5.1 Overview

Kwale is a multi-ethnic County with the Digo and Duruma predominantly as the majority tribes. Other ethnic groups living in the County are Kamba's, Washirazi, Wapemba, Waatha, Makonde, as well as other Kenyan ethnic groups, Europeans, Asians and non-citizens who are a minority.

Understanding the County's demographic characteristics and socio-cultural aspects is essential to achieving sustainable human development, determining future land use and demand for infrastructure and services, modelling development, and allocating resources.

5.2 Population

5.2.1 Population size and distribution¹

According to the National Household Population Census of 2019, the County's total population is 866,820 persons comprising 425,121 (49%) males while 441,681 (51%) females. The census established that 18 persons in the County are intersex. The total number of households is estimated to be 173,176, with an average household size of 5.0. The County's annual growth rate is 3.3%.

The population data indicates that the Kinango Sub-County has the highest population of 296,455 in 2019, projected to reach 397,065 by 2028. However, the Sub-County has the least population density amongst the four (4) Sub-counties. Msambweni Sub-County is estimated to have the least population of the four (4) Sub-counties of 177,620 in 2019 and is projected to reach 237,900 by 2028. The Sub-County, however, has the highest population density of 432 persons per square kilometres in 2019

(Census, 2019). The availability of infrastructure and services and favourable climatic conditions influence this population distribution.

In terms of population per Ward, Pongwe/Kikoneni ward has the highest population of 68,235. In contrast, the Tiwi ward has the least population of 23,914 persons. Ukunda ward has the highest population density with 1,784 persons per square kilometre, while Puma Ward has the least population density with 22 persons per square kilometres.



¹ The preparation of this Plan commenced before the 2019 Census; therefore, the figures in this

chapter have been updated to match the 2019 population census.

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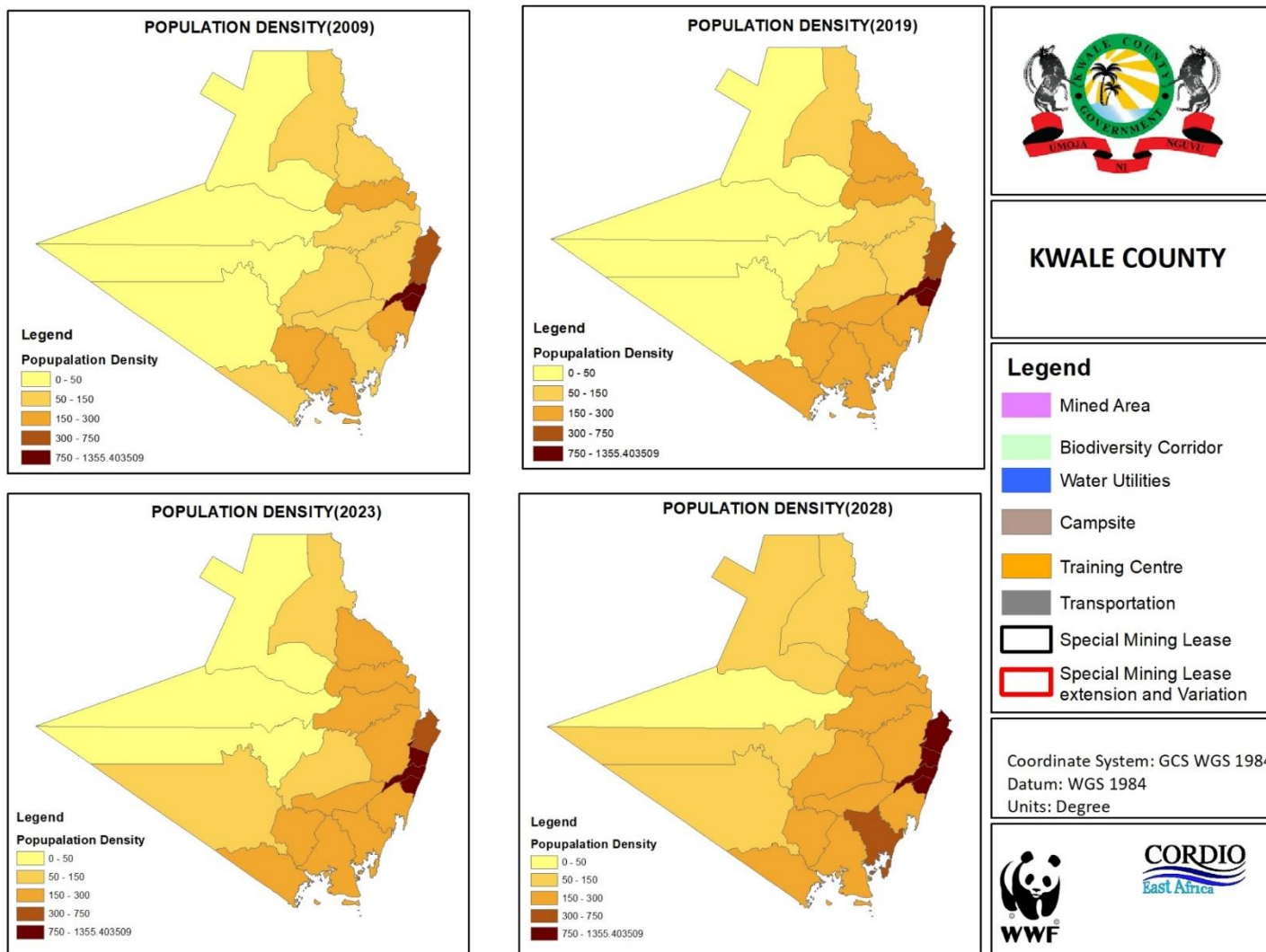
Table 6: Population and Household Size per Sub County and Ward

| Sub-County | Ward | A | Pop. 2009 | PD | HH Size | Pop. 2019 | PD | HH Size | Pop. 2023 | HH Size | Pop. 2028 | HH Size |
|---------------------|------------------|----------------|----------------|--------------|----------------|----------------|--------------|----------------|------------------|----------------|------------------|----------------|
| Matuga | Tsimba Golini | 319.7 | 34,002 | 106.4 | 6,385 | 44117 | 138.0 | 9146 | 50235 | 10414 | 59089 | 12250 |
| | Waa | 82.6 | 37,783 | 457.4 | 7,095 | 50326 | 609.3 | 10847 | 57305 | 12351 | 67405 | 14528 |
| | Tiwi | 33.5 | 19,409 | 579.4 | 3,645 | 23914 | 713.9 | 7218 | 27230 | 8219 | 32030 | 9668 |
| | Kubo South | 186.6 | 23,466 | 125.8 | 4,407 | 35358 | 189.5 | 5480 | 40261 | 6240 | 47358 | 7340 |
| | Mkongani | 430.8 | 37,318 | 86.6 | 7,008 | 50280 | 116.7 | 8671 | 57253 | 9873 | 67344 | 11614 |
| | TOTAL | 1,053.2 | 151,978 | 144.3 | 28,539 | 203995 | 193.7 | 41,362 | 232285 | 47098 | 273226 | 55399 |
| Kinango | Chengoni/Samburu | 625.5 | 32,641 | 52.2 | 6,129 | 61598 | 98.5 | 9817 | 70140 | 11178 | 82503 | 13149 |
| | Ndavaya | 1,016.2 | 27,816 | 27.4 | 5,223 | 38173 | 37.6 | 6,110 | 43467 | 6957 | 51128 | 8184 |
| | Puma | 1,186.5 | 19,860 | 16.7 | 3,729 | 29903 | 25.2 | 4,891 | 34050 | 5569 | 40051 | 6551 |
| | Kinango | 314.7 | 32,571 | 103.5 | 6,116 | 41491 | 131.8 | 7601 | 47245 | 8655 | 55572 | 10181 |
| | MacKinnon Road | 1,188.6 | 31,128 | 26.2 | 5,845 | 48273 | 40.6 | 8,584 | 54967 | 9774 | 64656 | 11497 |
| | Mwavumbo | 278.0 | 31,902 | 114.8 | 5,991 | 43768 | 157.4 | 7613 | 49838 | 8669 | 58622 | 10197 |
| | Kasemeni | 223.9 | 33,642 | 150.3 | 6,317 | 44599 | 199.2 | 8042 | 50784 | 9157 | 59735 | 10771 |
| | TOTAL | 4,833.4 | 209,560 | 43.4 | 39,352 | 307805 | 63.7 | 49,658 | 350491 | 56545 | 412267 | 66511 |
| Msambweni | Gombato Bongwe | 40.1 | 34,846 | 869.0 | 6,544 | 44331 | 1105.5 | 12410 | 50479 | 14131 | 59376 | 16622 |
| | Ukunda | 28.5 | 38,629 | 1,355.4 | 7,254 | 52537 | 1843.4 | 15948 | 59823 | 18160 | 70367 | 21360 |
| | Kinondo | 150.9 | 22,857 | 151.5 | 4,292 | 32546 | 215.7 | 6772 | 37059 | 7711 | 43591 | 9070 |
| | Ramisi | 196.2 | 27,963 | 142.5 | 5,251 | 48276 | 246.1 | 10244 | 54971 | 11665 | 64660 | 13721 |
| | TOTAL | 415.7 | 124,295 | 299.0 | 23,341 | 177690 | 427.4 | 45374 | 202332 | 51666 | 237994 | 60773 |
| Lunga Lunga | Pongwe/Kikoneni | 295.0 | 51,842 | 175.7 | 9,735 | 54227 | 183.8 | 10602 | 61747 | 12072 | 72630 | 14200 |
| | Dzombo | 213.5 | 41,509 | 194.4 | 7,795 | 44983 | 210.7 | 7965 | 51221 | 9070 | 60249 | 10668 |
| | Mwereni | 1,176.2 | 34,628 | 29.4 | 6,503 | 55112 | 46.9 | 9,884 | 62755 | 11255 | 73816 | 13238 |
| | Vanga | 276.9 | 36,119 | 130.4 | 6,783 | 44101 | 159.3 | 8825 | 50217 | 10049 | 59068 | 11820 |
| | TOTAL | 1,961.6 | 164,098 | 83.7 | 30,815 | 198423 | 101.2 | 37,276 | 225940 | 42445 | 265763 | 49927 |
| Kwale County | TOTAL | 8,263.8 | 649,931 | 78.6 | 122,047 | 887,913 | | 350,340 | 1,011,048 | 197,754 | 1,189,250 | 232,610 |

Source: KNPHC, 2019

Note: * A- Area (Km²)
 * PD- Population Density (persons/Km²)
 * HH Size- Household Size

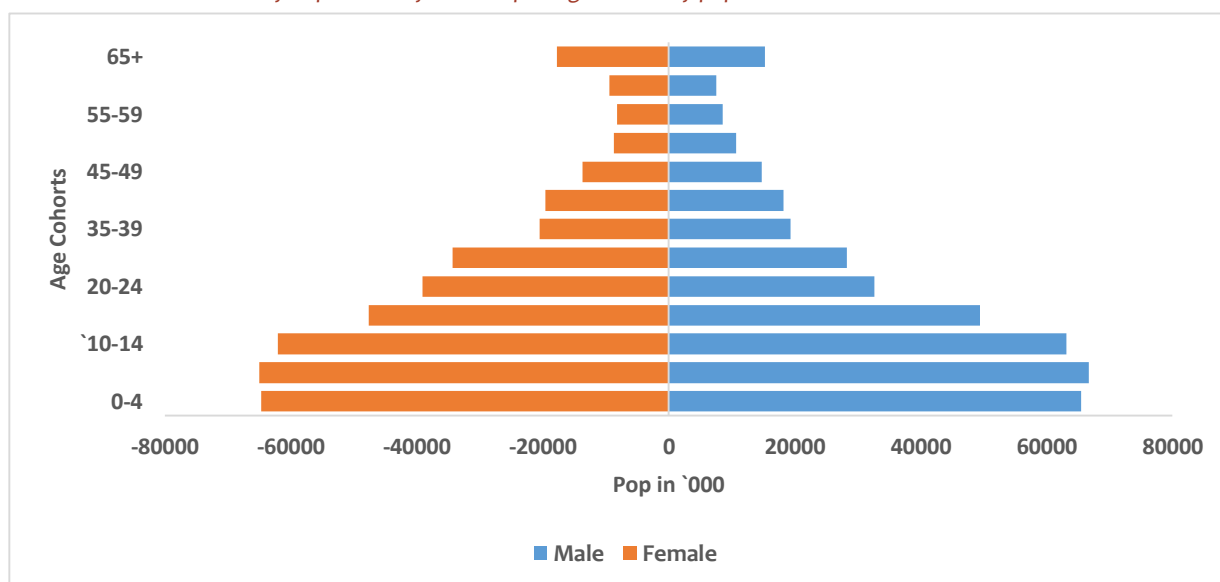
Map 14: Population Density variation from 2009-2028.



5.2.2 Population Structure

Kwale County has a youthful population, with the majority (79.5%) between 0 and 34 years. The population decreases from the age of 35 years and successive cohorts. The aged population, which comprises people whose age is 65 years and above, constitutes 3.4% of the total population in the County. The labour force between 15 and 64 years is estimated to be 49.4% of the total population.

Chart 1: Kwale County Population Pyramid depicting the County population structure



Source: KNPHC, 2019

Table 7: Age Cohort Structure

| Age Group | 2019 (Census) | | | | 2023 | 2028 |
|---------------------------------|---------------|---------|---------|-----------------------|---------|---------|
| | Male | Female | Total | % of Total population | Total | Total |
| Under 1 | 12,299 | 12,331 | 24,360 | 2.9 | 27,738 | 32,627 |
| Pre-School Age 3-5 | 42,027 | 41,224 | 83,251 | 9.6 | 94,796 | 111,504 |
| Under 5 | 65,529 | 64,761 | 130,290 | 15 | 148,358 | 174,507 |
| Primary school Age (6-13) | 103,529 | 101,707 | 205,236 | 23.7 | 233,698 | 274,888 |
| Secondary school Age (14-17) | 43,063 | 41,099 | 84,162 | 9.7 | 95,833 | 112,725 |
| Youth Population (15-29) | 110,421 | 121,118 | 231,539 | 27 | 263,649 | 310,118 |
| Reproductive age-female (15-49) | 187,499 | 205,655 | 393,154 | 45.3 | 447,676 | 526,581 |
| Labour force (15-64) | 214,400 | 231,984 | 446,384 | 51.5 | 508,288 | 597,877 |
| Aged Population 65+ | 15,289 | 17,746 | 33,035 | 3.8 | 37,616 | 44,246 |

Source 1: KNPHC, 2019

5.3 Demographic Characteristics

5.3.1 Demographic Indicators

Table 8: Demographic Characteristics of Kwale County population against National demographic indicators.

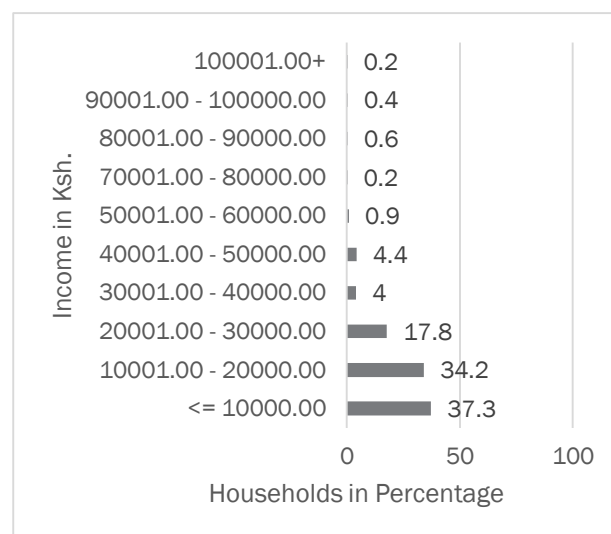
| Attribute | Kwale County | National |
|--------------------------|-------------------------|------------------------|
| Crude Birth Rate | 47.5/1000 | 38.4/1000 |
| Crude Death Rate | 10.1/1000 | 10.4/1000 |
| Infant Mortality Rate | 44/1000 | 39/1000 |
| Child Mortality Rate | 77/1000 | 79/1000 |
| Maternal Mortality Ratio | 346/100,000 | 495/100,000 |
| Life Expectancy | 53 (both male & female) | Males: 58, Females: 61 |
| Average Household Size | 5.3 | 4.4 |
| Sex Ratio | 95:100 | 97:100 |
| Labor Force | 49.4% | 51.9% |
| Dependency Ratio | 102.5:100 | 92:100 |
| Total Fertility Rate | 4.7 | 3.9 |

5.3.2 Household Income

According to the National Household Population Census of 2019, 89.3% of households (approximately 154,646 households) earn less than Ksh 30,000 per month. 37.3% of these (approximately 13,530 households) earn Ksh 10,000 or less per month. An estimated 10.7% of the total number of households in the County (approximately 18,307 households) earns more than Ksh 30,000 per month.

This indicates that, on average, each household in Kwale County would earn about Ksh. 18,814 per month if the household income was summed up and distributed equally among the households. Assuming a household size of 5 persons per household, this would translate that each member of the household would earn Ksh. 3,763 per month equivalent to Ksh. 125 a day. This projects a situation of high levels of poverty and dependence.

Chart 1: Household Income level per month



Source: Field Survey, 2018

5.3.3 Poverty Level

Kwale is among the counties in Kenya with the highest poverty index. The population living below the poverty line (\$1.9 per day) is estimated to be 70.7 %, higher than the national estimate of 45.2% (Kwale County Statistical Abstract, 2015).

The per capita income of the average Kwale residents is approximately Ksh 125 a day, approximately \$1.2 per day. This infers that, on average, most of the County residents are poor.

5.3.4 Literacy Levels

The literacy level in the County is estimated to be 57 %. There seems to be a gender disparity in the County's literacy levels, with 66.6% literacy for males and 47.4 % for females. Literacy levels in Kwale County have been recording an increasing trend attributed to deliberate efforts by the County government in supporting early childhood education and secondary and tertiary education through education infrastructure development and bursary schemes.

5.3.5 Human Development Index (HDI)

The HDI index for Kwale County is 0.44 against the national index of 0.52. This indicates that the County's health, income, and education performance is below the national average.

5.3.6 County Human Resource and Employment

Human resource refers to the productive age bracket of 15-64 years and constitutes the labour force. The County has an estimated labour force of 422,593 persons. Approximately 30% (126,778) of the labour force is unemployed or under-employed.

According to a household socio-economic survey undertaken by Geodev (K) Ltd in 2018, approximately 35.3% of the labour force has the requisite skills and training to be employed or engaged in self-employment. This, therefore, calls for investment in strengthening the capacity and skills of the County's labour force.

5.3.7 Migration Trends

The migration patterns indicate that 40.5% of people move from urban-rural. In comparison, 59.5% move from rural-urban areas (Analytical Report on Migration, 2012). This indicates that more people are migrating from rural to urban areas. This outlook is instigated by low employment opportunities in rural areas leading to people seeking a better life in the urban areas where they will also be closer to essential services.

Table 9: Kwale County Migration Trends as of 2009

| Census | Population | In | Out | Net |
|--------|------------|--------|--------|--------|
| | 469,898 | 17,544 | 14,103 | 3,441 |
| | 649,931 | 9,216 | 14,664 | -5,448 |

Source: 2009 Kenya Population and Housing Census Volume VII Analytical Report on Migration, 2012 and Kenya 1999 Population, Housing Census Volume VI Analytical Report on Migration and Urbanisation, 2014

5.4 Socio-Cultural Characteristics

5.4.1 Culture and Heritage




The culture of the people of Kwale is diverse and varies from one community to another.

Cultural diversity presents a potential for development, especially for tourism promotion. Cultural beliefs and norms range from Digos, Durumas, Kambas, Makondes, as well as the Shirazis and Waathas.


The use of plants for medicine in Kwale County has been practised for many years, especially in rural areas. For instance, the Digo community uses herbal medicine to cure diseases such as malaria and infertility, especially in women, amongst other ailments.



Table 10: A depiction of the peoples Cultural and Heritage practices

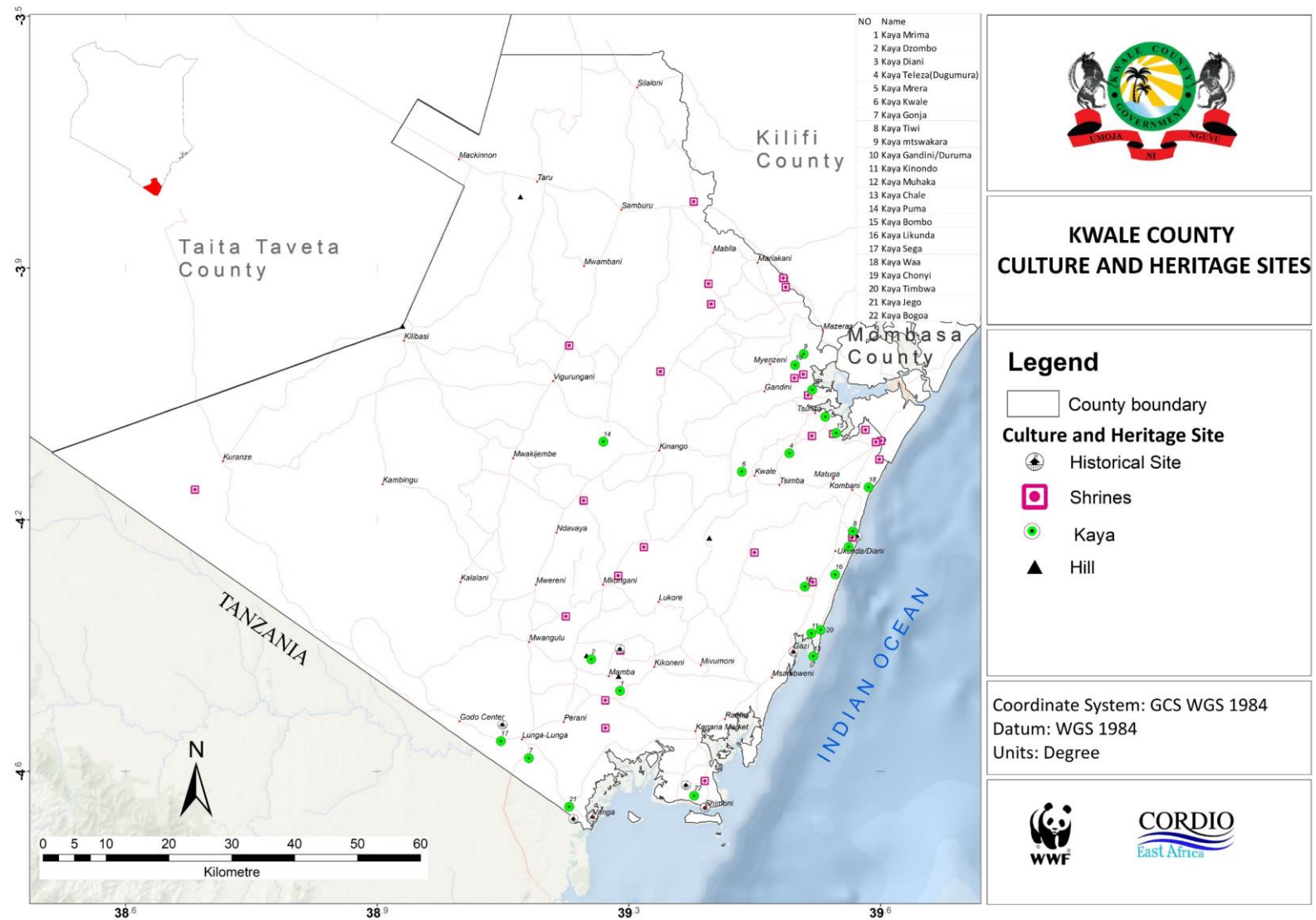
| Community | Economic Activities | Housing Type | Food | Ceremonies | Dressing | Organisational Set-up | Heritage |
|-----------|---|---|---|---|---|--|---|
| | Farming, fishing and tourism |  | <ul style="list-style-type: none"> The staple food of the Digos is cassava | <ul style="list-style-type: none"> Include weddings, burial and special ceremonies such as exorcism Dances include <i>Marimba</i>, <i>Kayamba</i>, <i>Sengenya</i>, <i>Mdundiko</i>, <i>Mdzumbano</i>, <i>chelewa</i> and <i>Chifudu</i>. The rite of passage among the Digo is the marriage | <ul style="list-style-type: none"> The traditional dress of the Digos is known as “gushe”, worn by females, while men wear “kikoi.” Lesos for women and Kanza for men. Ornaments worn include beads, bracelets, earrings, nosepieces, necklaces and bangles. | <ul style="list-style-type: none"> The Digo are organised into Clans, locally known as <i>Fuko</i> (singular) or <i>Mafuko</i> (plural), which are headed by clan elders and are determined by family lineage | <ul style="list-style-type: none"> Heritage sites include kayas, mizuka (shrines), vifudu and other special buildings and sites. |
| | Fishing and tourism activities |  | <ul style="list-style-type: none"> Their staple food is fish and rice. | <ul style="list-style-type: none"> Ceremonies include weddings, burial and special ceremonies such as exorcism The dances include <i>Kayamba</i>, <i>Mdundiko</i> and <i>Dufu</i>. | <ul style="list-style-type: none"> Similar to that of the Digo. | <ul style="list-style-type: none"> Similar to that of the Digo. | <ul style="list-style-type: none"> Include mizuka (shrines) and sites such as colonial DCs residence and colonial prison, a colonial administration block. |
| | <ul style="list-style-type: none"> Livestock keeping, crop farming |  | <ul style="list-style-type: none"> The staple food for the Durumas is Ugali. | <ul style="list-style-type: none"> “hanga ivu”, which is a ceremony observed after the burial of the dead; wedding; circumcision and exorcism | <ul style="list-style-type: none"> Similar to that of the Digo. | <ul style="list-style-type: none"> The organisation setup of the Durumas is focused on the Mbari, which is paternal | Similar to the Digos |

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| | | | | | | | |
|---|---|---|--|--|--|--|--|
| | | | | <ul style="list-style-type: none">• Share some similarities with the Digos on dances such as <i>Kayamba</i>, <i>Mdundiko</i> and <i>Chifudu</i>. | | | |
| <ul style="list-style-type: none">• Crop farming |  | <ul style="list-style-type: none">• <i>Muthokoi</i> is their staple food (a mixture of unhusked maize and beans or pigeon peas) | <ul style="list-style-type: none">• Include weddings (<i>kamandiko</i>), burial, and circumcisions (<i>Mwilu</i>) and Kilumi dance which is meant to appease their gods to provide rains | <ul style="list-style-type: none">• Men traditional wear leather sandals (<i>Akala</i>) and animal skin, while women wear knee-length animal skin dresses embedded with beadwork and necklaces made of beads | <ul style="list-style-type: none">• The Kamba's are organised in clans called <i>Mbai</i>. | <ul style="list-style-type: none">• Kamba heritage includes naming, pottery, weaving and traditional music | |
| <p>NB:</p> <p>a) The Waatha community located around Kilibasi Hill in Kinango Sub-County is highly marginalised and threatened extinction. It is believed that only ten community members can speak the language fluently.</p> <p>b) The Makonde are settled around the Makongeni area of Msambweni Sub County.</p> | | | | | | | |

Source Kwale Regional Plan Final 2005-2035

Map 15: Culture and Heritage Sites



5.5 Emerging issues

| Potentials | Opportunities | Challenges | Recommendations |
|---|--|---|--|
| Job creation and economic development through Cultural tourism | <ul style="list-style-type: none"> Multi-ethnic nature of the population each with varied cultural activities | <ul style="list-style-type: none"> Underutilisation of cultural assets from different ethnic groups | <ul style="list-style-type: none"> Investment in Cultural Tourism for job creation and revenue generation. |
| Production of the skilled workforce | <ul style="list-style-type: none"> A higher percentage of the youthful population Multi-ethnic nature of the population each with varied economic activities | <ul style="list-style-type: none"> High dependency on the working population High levels of illiteracy Increasing population causing pressure on land thus subdivision, need for facilities and amenities High levels of unemployment and poverty | <ul style="list-style-type: none"> Spur County economic growth strategies to create employment. Advocate for formal education Protect agricultural land from subdivision to uneconomical sizes. |



LAND

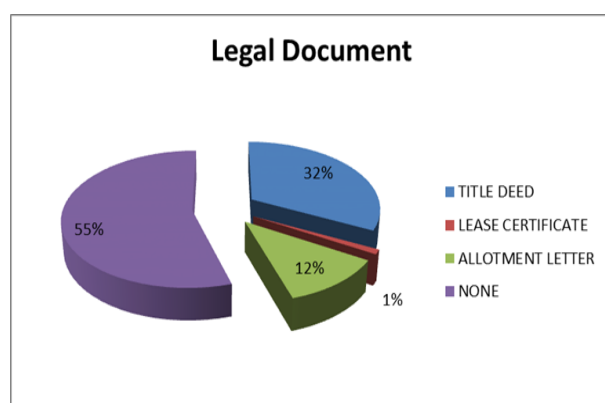
6.1 Overview

Land is a factor of production and the base from which development occurs. The use of land should be in a manner that is sustainable to enhance its productivity and ensure equity and efficiency in the development process.

6.2 Land Tenure

According to the Kwale County CIDP (2013-2017), 22.5 percent of landowners in Kwale have title deeds to their land. A household survey carried out by Geodev (K) Ltd in 2018 indicated that 32 percent of residents in Kwale have title deeds, 12% have allotment letters, 1% have lease certificates, while 55 percent of landowners do not have any legal documentation for land ownership. The lack of possession of legal land ownership documents is attributed to uncollected Title Deeds from the land registry, communal ownership of land, especially within community group ranches and squatting within public land and land belonging to absentee landlords

Chart 2: Status of possession of land ownership documents in the County



Source: Household Survey, 2018

About 62.7 % of the land in Kwale is under ranches. An estimated 16.5 % of the land is adjudicated and 11.3 % is currently undergoing the adjudication process. As indicated in Table 11 and illustrated in Map 16.

Table 11: Land Tenure Status

| Status | Area | Percentage |
|--------------------|---------|------------|
| Adjudicated | 1354.45 | 16.5 |
| Forest | 247.09 | 3.0 |
| Leases | 315.94 | 3.8 |
| Ranch | 5147.98 | 62.7 |
| Ranch/Adjudication | 930.34 | 11.3 |
| Settlement Scheme | 217.37 | 2.6 |

Source: Department of Lands and Physical Planning, Kwale, 2018.



6.3 Average Land Holding Sizes per Ward

The average landholding size for Kwale County is 4.4 Acres and 100 Acres for small and large scales, respectively (Kwale County CIDP, 2013).

According to the consultant's field survey in 2018, Puma has the largest average landholding size of 19.23 acres per person, while Kinondo has the least landholding size of 1.85 acres per person. The mean landholding size for the County stands at 7.8 Acres. Table 12 shows the average land sizes for each ward in the County.

Table 12: Average Land Size in Acres

| Ward | Mean (Acres) |
|-----------------|--------------|
| Vanga | 4.02 |
| Mwereni | 11.28 |
| Pongwe/Kokoneni | 4.14 |
| Dzombo | 5.24 |
| Ramisi | 8.34 |
| Kinondo | 1.85 |
| Bongwe/Gombato | 2.67 |
| Ukunda | 2.71 |
| Tiwi | 6.13 |
| Waa/Ng'ombeni | 2.67 |
| Ward | Mean (Acres) |
| Tsimba/Golini | 3.71 |
| Mkongani | 10.6 |
| Kubo South | 7.42 |
| Kasemeni | 4.63 |

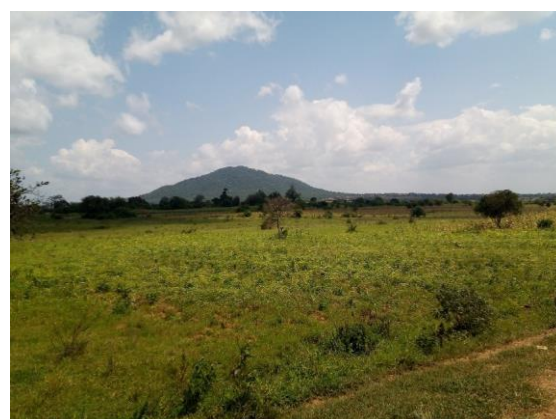
| | |
|------------------|-------|
| Mwavumbo | 6.63 |
| Chengoni/Samburu | 18.75 |
| Puma | 19.23 |
| Kinango | 7.98 |
| Mackinnon Road | 11.96 |
| Ndavaya | 15.89 |

Source: Field Survey, 2018

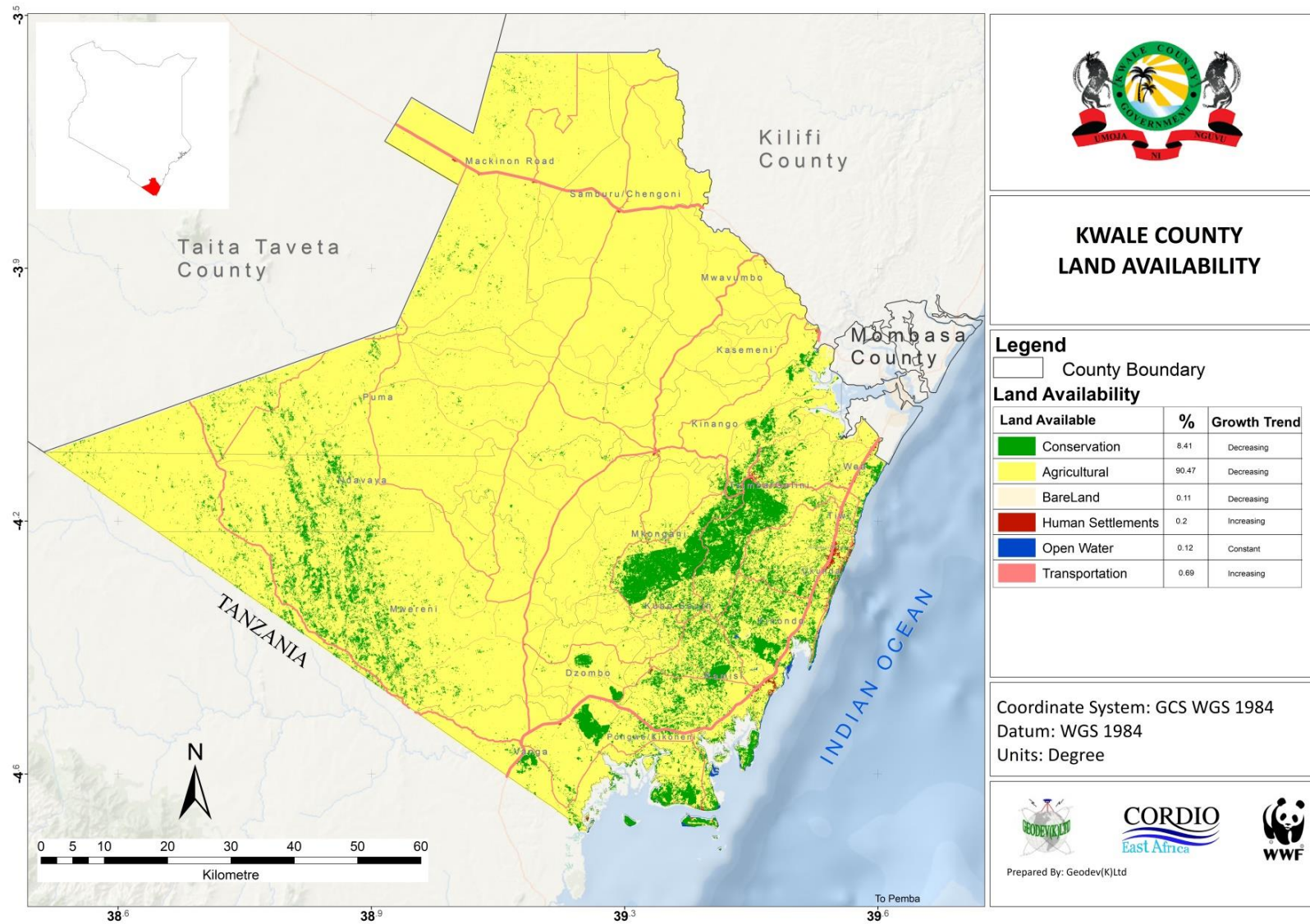
Wards located in the coastal plain, foot plateau and coastal uplands have comparatively small landholding sizes, e.g., Kinondo (1.9 acres), Ukunda (2.7 acres), Waa/Ng'ombeni (2.7 acres) as compared to the region's further mainland in the Nyika plateau, e.g., Puma (19.2 acres), Samburu/Chengoni (18.8 acres) and Ndavaya (15.9 acres).

6.4 Land Availability Assessment

The Land Availability Assessment is an analysis undertaken to identify the available land best suited for specific development activities. The land available for development was calculated by first deducting the built landscape, environmentally sensitive areas, and areas with special attributes that require conservation from the total landmass. The remaining land was assessed based on its natural characteristics and best use. The assessment revealed that approximately 90.47% was available for development. 8.41% was unsuitable because it falls within built-up areas, protected areas or areas of critical biodiversity, and environmentally sensitive areas that require conservation.



Map 17: Land Availability



6.5 Land Potential Assessment

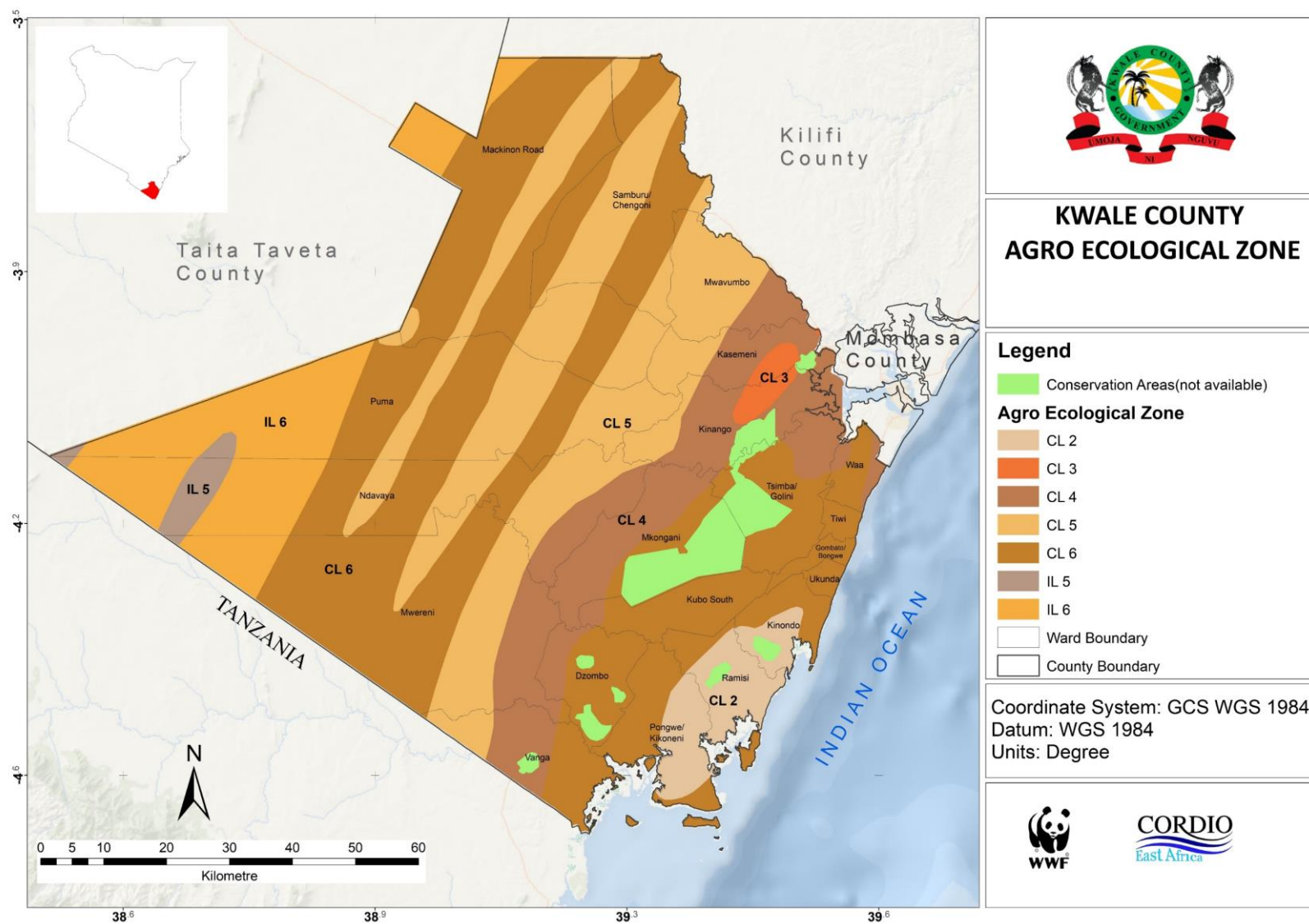
6.5.1 Agro-potential

Kwale County is divided into seven agro-ecological zones according to agricultural potential. The seven zones mainly include the medium and marginal land's potential for crop production and rangelands for livestock production. The agro-ecological zones are shown in Map 17 and their respective prospects indicated in Table 13

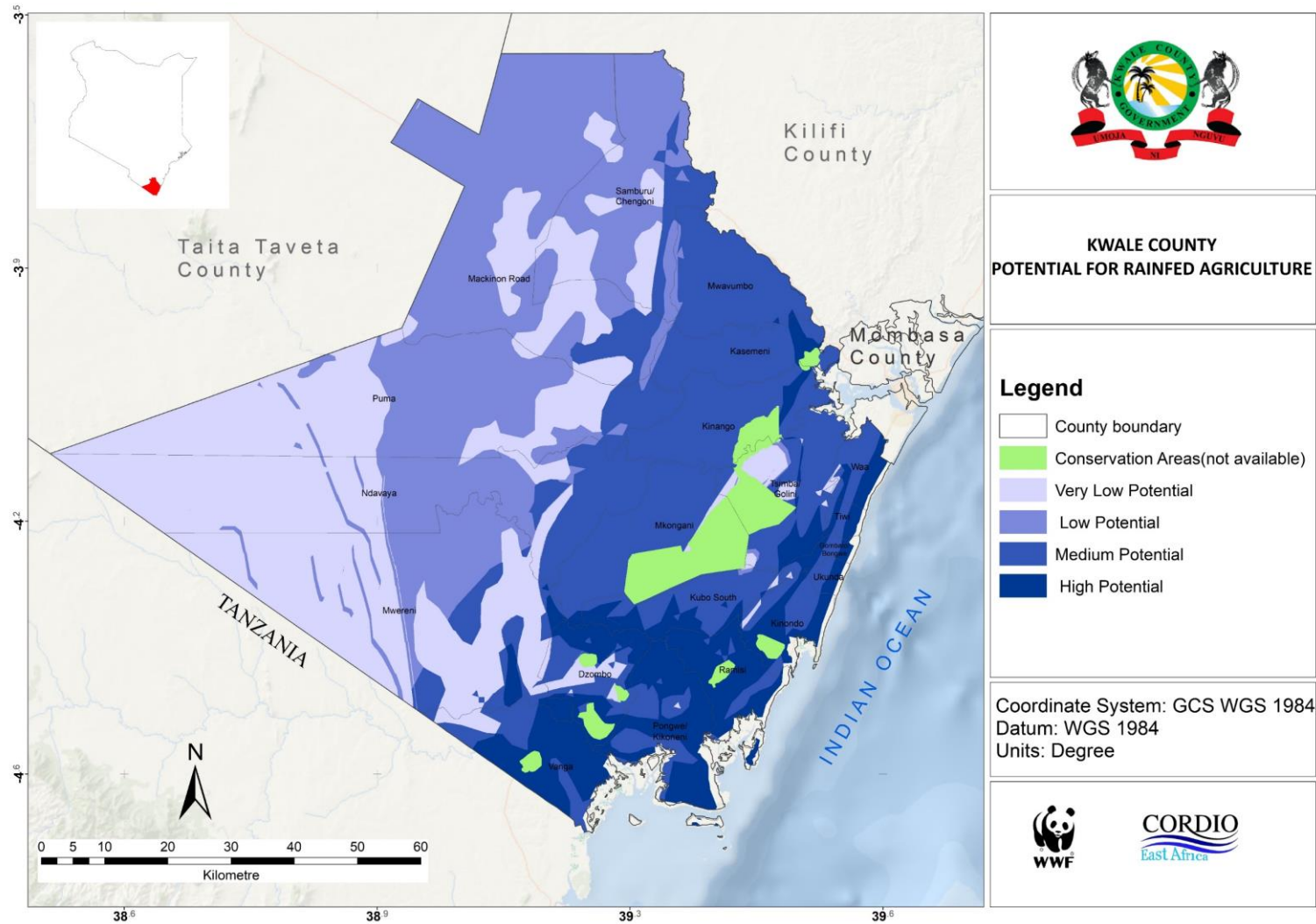
Table 13: Description of the Agro-ecological Zones

| No. | Agro –ecological Zones | Size in Km ² | Existing Practices | Recommended Practices | Challenges |
|-----|--|-------------------------|--|---|--|
| 1 | Coastal Lowland Sugarcane Zone, CL2 | 316.61 | Maize, Cassava, Cashew nuts, Bixa, Grain, Tropical fruits, and Livestock keeping | Suitable for Tropical fruits, coconuts, bixa, rice, sugarcane, cashew nuts, pasture and forage for animal | <ul style="list-style-type: none"> • Overgrazing • Incidences of drought • Overreliance on maize production • Prevalence of pest and diseases • Human-wildlife conflict • Water shortage • Low uptake in agro-technology • Low-value addition • The exploitation of farmers by middlemen • Inadequate extension services |
| 2 | Coconut Cassava, Zone, CL3 | 70.41 | Cassava, Grain and Cereals | Suitable for Coconut, Cassava, grain, tubers, pulses, tropical fruits, oil crops and vegetable | |
| 3 | Cashew nut-Cassava Zone, CL 4 | 1120.38 | Maize, Cassava, Cashew nuts, Bixa, Grain & tropical fruits | High potential for cashew nuts, cassava and sisal; medium potential for grain, pulses, tubers, oil crops, Pasture and forage. | |
| 4 | Coastal Lowland Livestock Zone, CL5 | 1958.35 | Cassava, Grain and Cereals | High potential for cashew nuts, cassava and sisal; medium potential for grain, pulses, tubers, oil crops, Pasture and forage. | |
| 5 | Coastal Lowland Ranching Zone, CL6 | 3467.26 | Livestock rearing, Ranching, Maize, Tropical fruits, Bixa, Maize and Cassava | It is suitable for sorghum, millet, green grams and cassava. | |
| 6 | Inner Lowland Livestock-Millet Zone, IL5 | 102.09 | Small -scale Livestock, Small -scale cassava, Marginal maize farming | Livestock rearing is a predominant activity | <ul style="list-style-type: none"> • Land fragmentation into uneconomical sizes • Lack of agro-processing plants • Low-value addition • Poor farming methods • Low uptake of irrigation agriculture |
| 7 | Inner Lowland Ranching Zone, IL6 | 926.40 | <ul style="list-style-type: none"> • Ranching | Suitable for Livestock rearing (cattle, sheep and goats) | |

Map 18: Agro-ecological Zones



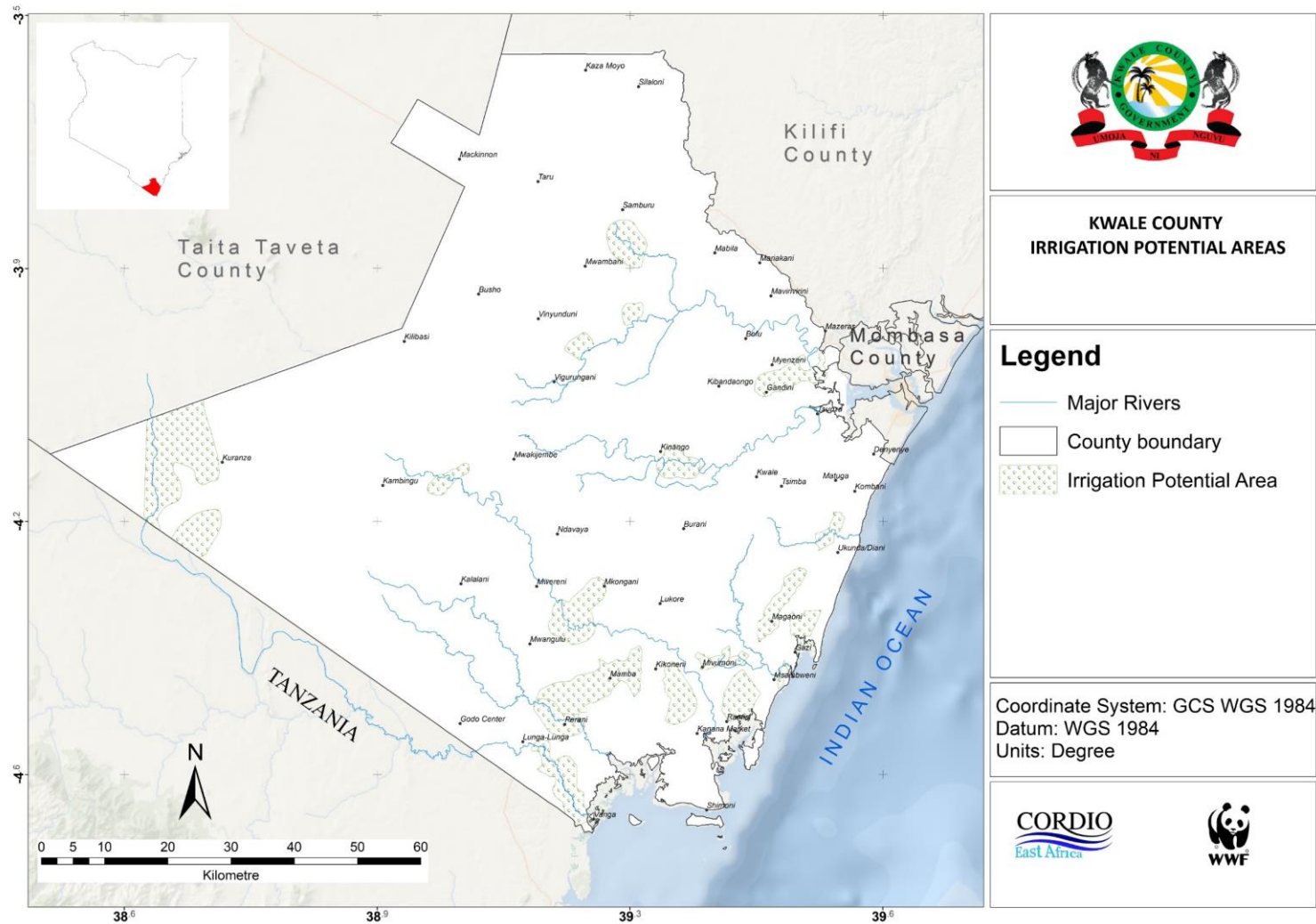
Map 19: Rain-fed Agriculture Potential



Rain-Fed Agriculture Potential

About 11% of the total arable land is considered to be highly suitable for rain-fed agriculture. Approximately 28% is moderately suitable; 29% has low suitability while 30% of the land is deemed to be unsuitable for rain-fed agriculture, as shown on map 19.

Map 20: Irrigation Potential



Irrigation potential

The county has a high potential for irrigation. The irrigation potential areas cover approximately 652.35 square kilometres spread across the county, as shown in Map 20.

6.5.2 Tourism Potential

There are numerous tourist attraction sites and places in the County ranging from: sandy beaches in Diani, Msambweni, Shirazi, Funzi, Shimoni, Wasini and Kisite tidal Island; Forests, reserves and conservancies, including natural parks and reserves, namely Shimba Hills National Park Reserve, Kisite Mpunguti Marine Park and Reserve and Diani/Chale Marine Reserve; sanctuaries and conservancies, twenty Islands, and the Indian Ocean. The numerous sites present opportunities for tourism development.



6.5.3 Mining Potential

The County has rich mineral bases, including small- and large-scale deposits of minerals such as titanium, gemstones, rare earth elements (niobium, phosphates), silica sand, zinc, lead and copper, barite, coal, sandstone, limestone, coral and oil/gas. Table 14 shows the County's mineral potential, whereas map 20 illustrates the mineral occurrence in the County.



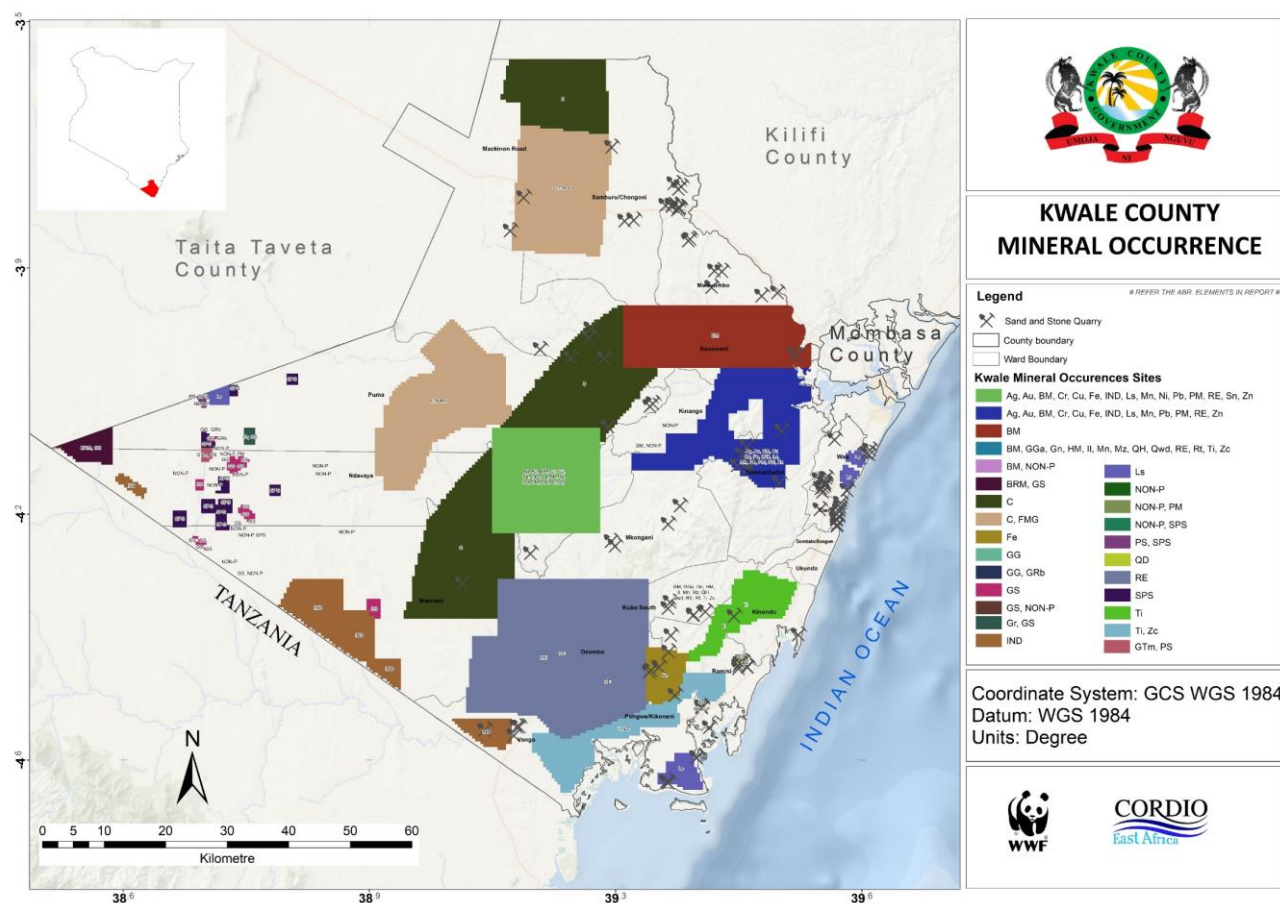
Table 14: Minerals and their area of occurrence in the County

| Mineral | Abbreviation | Location |
|-------------------------------|--------------|---|
| Base & Rare Metals | BRM | Ndavaya Ward, Puma Ward (no Town) |
| Base Minerals | BM | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Bofu, Matumbi, |
| Chrome | Cr | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza |
| Coal | C | Kilimangodo, Vigurungani, Makuluni, Magombani, Kalalani, Mtumwa, Kajichoni, |
| Copper | Cu | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Fuel Mineral | FM | Taru, Samburu, Kwa Kadogo, Kinagoni, Achivwa, Kambingu, Mbita, Tata, |
| Garnet | GG | Kuranze |
| Garnet (Abrasives) | GGa | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Garnet (Gemstone) | Gn | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Gemstones | GS | Kuranze |
| Gold | Au | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Graphite | Gr | Puma Ward |
| Heavy Minerals | HM | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Ilmenite | Il | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Industrial Minerals | IDN | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Iron Ore | Fe | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Lead | Pb | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Limestone | Ls | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Shimoni, |
| Manganese | Mn | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Monazite | MZ | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Nickel | Ni | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze |
| Non-Precious Mineral | Non-P | Kinango, Kuranze |
| Precious Metal | PM | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Precious Stones | Ps | Kuranze |
| Quartzite/Sandstone | QH | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Rare Earths | RE | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Mrima, Mwangulu, |
| Ruby | GRb | Kuranze |
| Rutile | Rt | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Sand | Qwd | Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Semi-Precious stones | SPS | Kuranze |
| Silica Sand | QD | Ramisi |

PART II: SITUATIONAL ANALYSIS

| | | |
|-------------------|-----|--|
| Silver | Ag | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Tin | Sn | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze |
| Titanium | Ti | Kinondo, Mwabungo, Magaoni, Majoreni, Jego, Kanana Market, Kiwegu, Lukore, |
| Tourmaline | GTm | Kuranze |
| Zinc | Zn | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |

Map 21: Mineral Occurrence



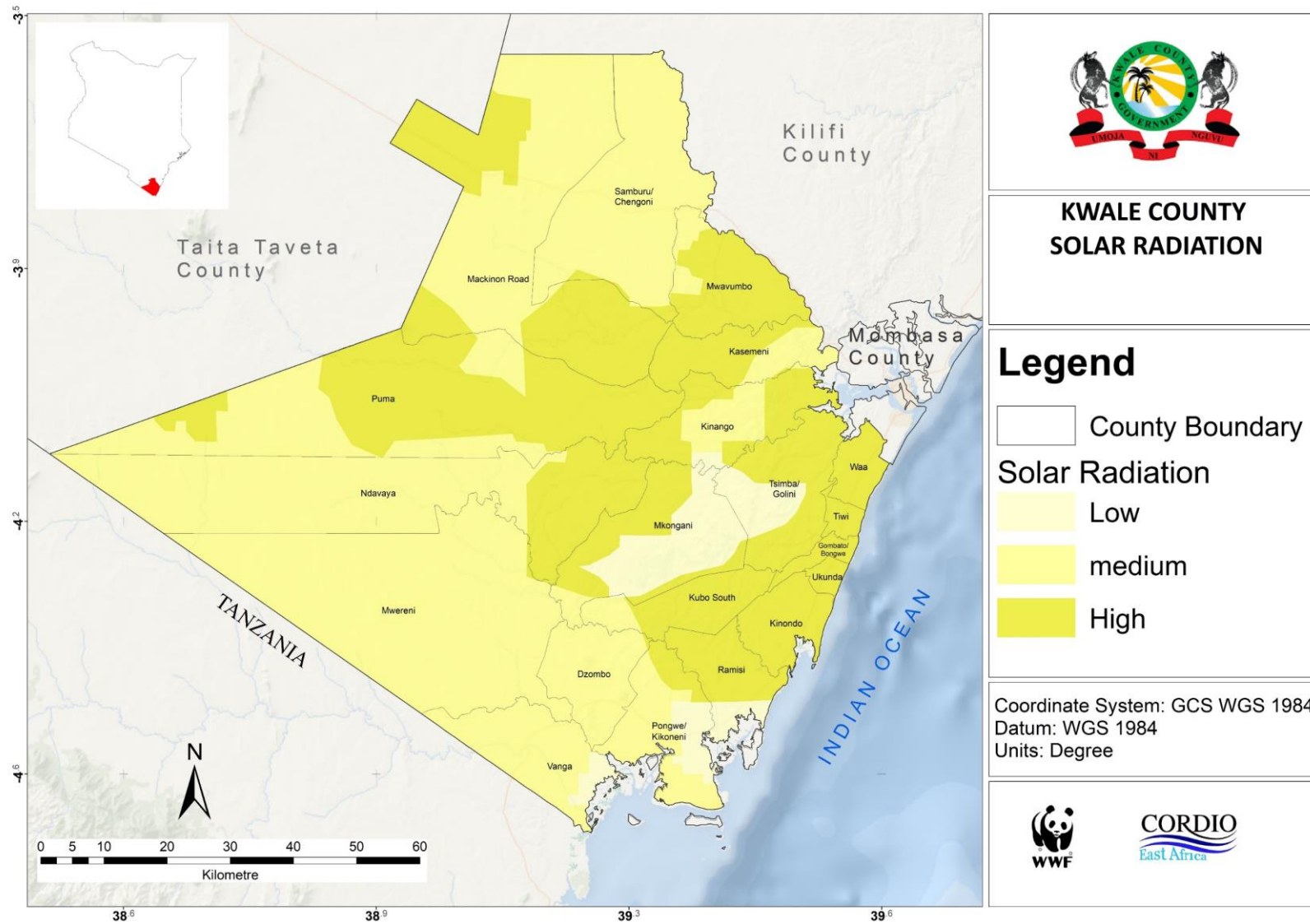
6.5.4 Energy Resources

The County experiences sunshine throughout the year, with the daily sunshine ranging between 6 and 10 hours. The Nyika Plateau and the coastal plain, as shown in Map 6-6, experience high solar radiation indicating the potential for developing commercial-scale solar energy harnessing. The other areas have the potential for household-level solar energy harnessing.

The 250 Km coastline and Kenya's 200 nautical miles exclusive economic zone also presents the County with an opportunity to explore the feasibility of tidal energy. Preliminary wind resource assessments indicate wind speeds within the County range from 8 to 14 m/s, therefore, presenting an opportunity to explore wind energy.



Map 22: Solar Radiation Intensity



6.5.5 Ground Water Potential

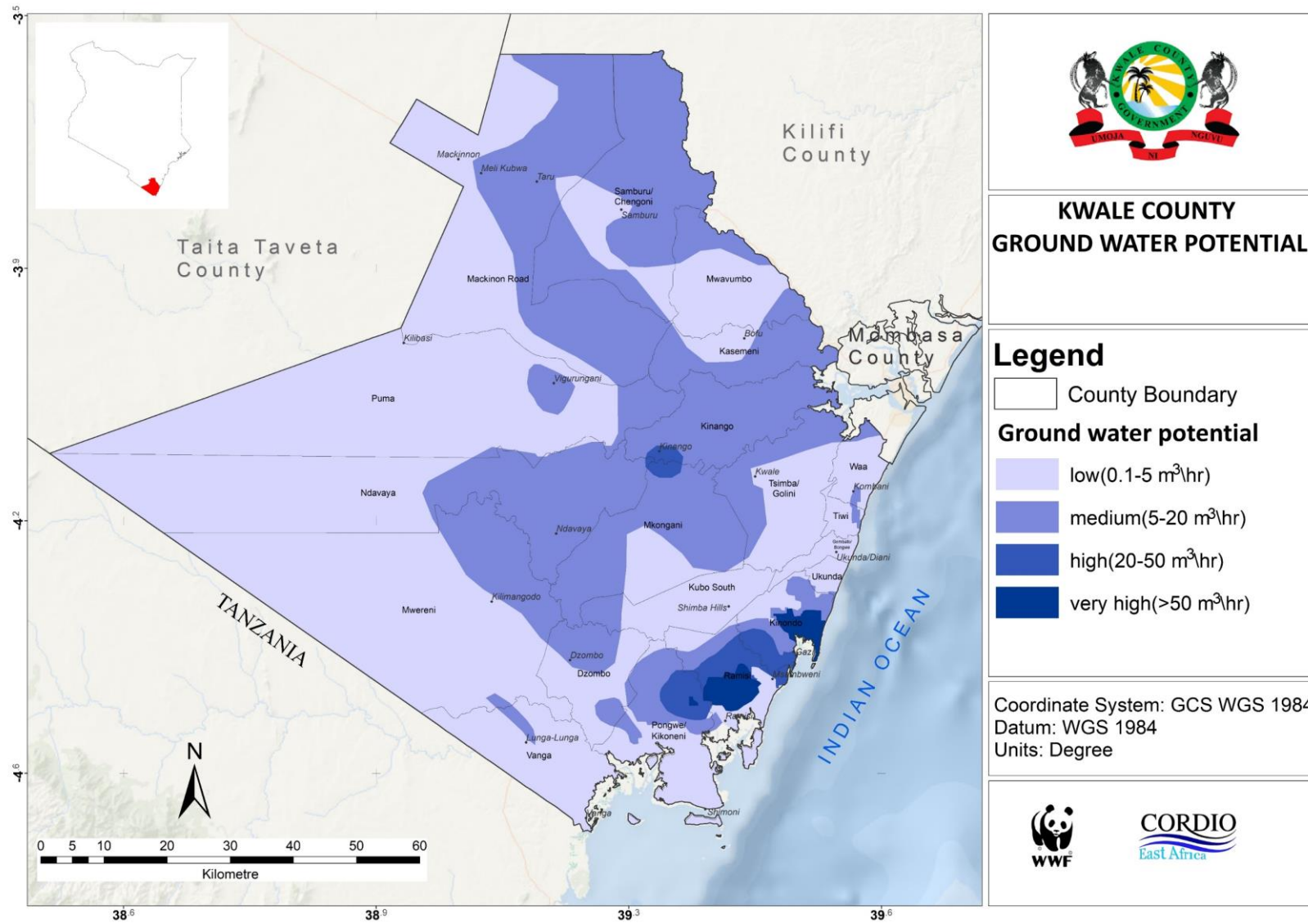
There are four main underground water catchments and reservoir areas along the coastal belt in Kwale. These are:

1. **Tiwi catchment** –The aquifer has a width of 20 km with good quality water. It has a through-flow of $42,000\text{m}^3/\text{hr}$, which reduces to $25,000\text{m}^3/\text{hr}$ to the north of Ng'ombeni due to decreased permeability.
2. **Msambweni catchment** – covers about 42 km^2 with a through-flow of $27,440\text{m}^3/\text{hr}$. Out of the total capacity, only $13,720\text{m}^3/\text{hr}$ can be harnessed without changes in water quality during the dry spell.
3. **Diani catchment** – Covers 19 km^2 and has a very low recharge due to high clay content, which decreases permeability. It has a through-flow of $1400\text{m}^3/\text{hr}$.
4. **Ramisi catchment** – This extensive catchment reaches westward to include outcrops of the Duruma sandstone series. Due to this reason, surface runoff is saline.

The Duruma sandstone series occupy a significant part of the middle area of Kwale County, Kinango and Samburu Divisions. Most of the underground water in this area is saline, with low flow and found in greater depths. The region has great potential for underground potable water along the coastal belt, as depicted in Map 23.



Map 23: Assessment of Underground Water Potential



6.6 Emerging issues

| Potential | Opportunities | Challenges | Recommendations |
|---|---|---|---|
| Irrigation Agriculture and Industrialization | <ul style="list-style-type: none"> The County has adequate surface and underground water resources to support an agricultural and industrial economy. Availability of unexploited minerals. | <ul style="list-style-type: none"> Surface water is not harvested Underground water is not fully exploited | <ul style="list-style-type: none"> Design programmes for surface and underground water harvesting |
| Food self-sufficiency | <ul style="list-style-type: none"> Adequate arable land for food production | <ul style="list-style-type: none"> Underutilized and dormant land parcels Decreasing conservation and agricultural land. Tenure insecurity accounting for 55 % of residents lacking land ownership documents | <ul style="list-style-type: none"> Sensitization of people Adopt a reward-sanction system to motivate people to utilize their lands |



THE ENVIRONMENT

7.1 Overview

The County has a wide range of environmental resources, classified as either terrestrial or marine, playing a major role in socio-economic development. These resources serve as unique identifiers that give spatial character and provide invaluable environmental and ecosystem services

7.2 Terrestrial Resources

7.2.1 Forests

The County has a forest cover of about 5.4%, approximately 449.84 square kilometres

(44,984 Hectares). This cover is below the recommended forest threshold and the constitutional requirement of 10% of the total area.

The forest cover includes the area covered by Kaya forests. There are twenty-two (22) Kaya forests. Of the twenty-two (22), five (5) forests have been surveyed, while 17 have yet to be surveyed. All the Kaya forests have not been secured with a physical fence to deter development intrusion, making them susceptible to land grabbing. Roughly 700 Hectares of the forest cover is not gazetted. A summary of the forest inventory of Kwale County is as shown in

Table 15:

Table 15: Type and Size of Forests in Kwale County

| Name | Location | Size Hectares | Indigenous / planted | Dominant species | Status(gazetted/no n-gazetted) |
|----------------------|-----------------|---------------|----------------------|------------------------|--------------------------------|
| Shimba Forest | Shimba Hills | 24,000ha | Mostly indigenous | Indigenous species | Gazetted in 1932 |
| Mwache | Mwache | 450ha | Indigenous | Indigenous species | Gazetted in 1932 |
| Mangroves | Along the coast | 8354ha | Indigenous | Mangrove (rhizophorus) | Gazetted in 1932 |
| Buda Complex | Msambweni | 685ha | Indigenous | Indigenous species | Gazetted |
| Mrima | Lunga Lunga | 380ha | Indigenous spp | Indigenous | Gazetted 1932 |
| Marenje | Lunga Lunga | 1000ha | Indigenous | Indigenous | Gazetted |
| Dzombo | Lunga Lunga | 800ha | Indigenous | Indigenous | Gazetted |
| Gogoni | Msambweni | 850ha | Indigenous | Indigenous | Gazetted |
| Kilibasi Hill | Kinango | 600ha | Indigenous | Indigenous | Not gazetted (under County) |
| Taru hill | Samburu | 100ha | Indigenous | Indigenous | Not gazetted |
| Gonja Forest | Lunga Lunga | 837 ha | Indigenous | Indigenous | Gazetted |
| Kiruku Forest | Lunga Lunga | 2.49 ha | Indigenous | Indigenous | Not Gazetted |

Source 2: Kenya Forest Service, 2018

7.2.2 Land

The land resource in the County includes all areas under crop, rangelands and the built environment. This landmass could be utilized for developmental activities, excluding conservation areas and areas of environmental and ecological sensitivity. The amount of space

where development can take place amounts to approximately 90% of the County's total area.

7.2.3 Rivers

There are seven (7) permanent rivers and other seasonal rivers and streams. The permanent rivers include; Mkurumudzi, Umba, Pemba, Mwache, Mwachema, Ramisi, and Marere. All seven (7) rivers drain into the Indian Ocean.

Table 16: Flow Statistics of Major Water Sources in Kwale

| River | Volume M ³ /D | Water Quality | Mean Annual flow (M ³ /s) |
|------------|-----------------------------|-----------------------------|--------------------------------------|
| Marere | 9087 | Good | 0.405 |
| Pemba | 7605 | Good, saline at destination | 3.067 |
| Mkurumudzi | 9917 | Good, saline at destination | 0.841 |
| Umba | 6104 | Good saline at destination | 3.726 |
| Ramisi | 8190 | Good, saline at destination | 1.932 |
| Mwachema | 341.73 | Good saline at destination | 0.401 |
| Mwache | - | Good, saline at destination | 1.242 |

Source: Kwale District and Mombasa Mainland South Regional Physical Development Plan (2011).



7.2.4 Wetlands

The main wetlands in Kwale are Kanana, Ramisi, Milalani, Mshiu, Tiwi, Kiwegu, Mwakole and Lunga Lunga wetlands. The wetlands play a vital role in the environment, including carbon sequestration, providing wildlife habitat, purification of water, serving as floodplains, and recharging aquifers. The wetlands are under significant development threat caused by encroachment by human developmental activities that include agriculture and settlement. These activities have a substantial impact on the sustainability of the marshlands.

7.2.5 Terrestrial Wildlife

The County has a unique niche of terrestrial wildlife species. Among the main faunal species found in the County are Sable antelopes, endemic species of the Bovidae family. Other wild animals include elephants, eland, giraffes, yellow baboons, Angolan colobus, snakes, monkeys, Grimm's bushbucks, hyenas, leopards, buffalo, crocodiles, jackals and waterbucks. These animals are found in Shimba Hills National Reserve, Mwaluganje Elephant Sanctuary, and within the ranches and along the migratory routes that they follow seasonally to travel to destinations such as Tsavo East and Tsavo West, Uмба and Mkomazi National Park in Tanzania.

Furthermore, the County is an international bird area hotspot with Kaya Kinondo and Kaya Diani recognized as Important Bird Areas (IBAs) among other IBAs globally. Over a hundred bird species, including 20 coastal bird species and different species of butterflies, are found in these areas.

7.2.6 Hills and Hilltops

Hills are topographical features that create scenic beauty and modify climatic characteristics. The hills offer significant

environmental services that include creating stability of surrounding land. Hills also serve other functions such as providing landmarks for navigation, modifying climatic conditions, providing habitat for wildlife, providing strategic security and defence vantage points, and providing suitable grounds for hoisting communication infrastructure. In contrast, others have a significant number of mineral resources underneath. The hills in Kwale have varied characteristics, some of which are pristine and vegetative, like Kilibasi, Dzombo, Mrima, Kiruku and Shimba Hills. In contrast, others are rocky and dry, such as Taru hill. Mrima Hill, characterized by a pristine green environment and cool climatic conditions, contains rare earth and other minerals.

Plate 2: A section of Kilibasi Hill



Source: <https://blogs.wwf.org.uk/blog/habitats/forests>

7.3 Marine Resources

These are natural resources found within the marine ecosystem. They include the open sea, mangroves, beaches, coral reefs, seaweed, sea birds, marine fauna, islands, and minerals.

7.3.1 Mangroves

Mangroves in Kwale County constitute about 14% of the total mangrove cover in Kenya (KMFRI, 2018). The Mangroves, locally referred to as Mikoko, cover approximately 8354 hectares, with the largest systems in Gazi, Vanga, Tsunza, Bodo-Shirazi, and Funzi. Other

areas where mangrove appears in small quantities include the Tiwi estuary, Shimoni, Wasini Island, and Chale Island. The most dominant mangrove species in Kwale County are *Rhizophora mucronata*, *Avicennia marina*, and *Sonneratia alba*.

Mangroves serve several invaluable ecosystem functions, including providing habitat and spawning areas for marine organisms like fish, crabs, octopi, and holothurians; sediment stabilization, carbon sequestration, such coastal protection (against erosion, wave action, storm surges, and tsunamis), filtering land-based impurities among others. Mangrove forests and seagrass beds perform vital functions in protecting and enriching the coastal ecosystem. Mangroves also offer significant opportunities for carbon trading.

Local communities have traditionally harvested mangrove posts for subsistence and commercial use, such as building material, wood fuel, medicine, and tanning. Despite this, estimates of the area under mangrove cover have not changed significantly.

Mangroves have steadily emerged as viable income generators by offering ecosystem payment services. As part of the Kenya Coastal Development Project (KCDP) implementers, KMFRI has helped establish one of the foremost community-based Clean Development Mechanism (CDM) projects known as Mikoko Pamoja. The project is a carbon offset project in Gazi bay, which protects and rehabilitates degraded mangroves while selling carbon credit.

7.3.2 Seagrass

Kwale part of Kenya's EEZ has seagrass beds, which are important fishing grounds. They form one of the three productive marine ecosystems in addition to mangrove and coral reefs. Seagrass acts as nurseries and forage grounds for commercially substantial fishes

and endangered species such as sea turtles and dugongs. They are estimated to mitigate against climate change by sequestering carbon and storing it in its sediments. This effect helps regulate the pH of seawater, making it less acidic and less harmful to marine organisms with calcium carbonate skeletons such as corals and crustaceans. Trap sediment avoiding coral degradation, hence maintaining high productivity. Nevertheless, the threats of anthropogenic activities such as fishing that degrade the seagrass or sedimentation are causing huge patches of this ecosystem to be lost. If these pressures are not checked, they might cripple the blue economy sector.

7.3.3 Seaweeds

The main seaweed species in Kwale County are *Thalassia hemprichii*, *Halophila ovalis*, *Cymodocea rotundata*, *Kappaphycus alvarezzi*, and *Eucheuma denticulatum*. *Kappaphycus alvarezzi* and *Eucheuma denticulatum* are grown commercially at the County at Kibuyuni in Shimoni, Funzi, Gazi and Mkwiro. They serve as an important habitat for many species and sediments trap, thus keeping coastal beaches pristine through detoxification. In addition, seaweed is among the most dependable carbon sinks in the marine ecosystem, accounting for 20% of all the carbon absorbed within the ecosystem. They are used to produce food thickeners, soaps, shampoos, and cosmetics.

7.3.4 Marine Wildlife

The County's main marine fauna include fish, prawns, crabs, molluscs, turtles, and dolphins. Seagrass beds provide a feeding ground for endangered species such as the green turtle, the hawksbill turtle and the dugong. The Kisite Mpunguti and Diani-Chale marine reserves have been established to protect and conserve endangered species and their breeding grounds.

Plate 3: Turtle; Source WWF Kenya



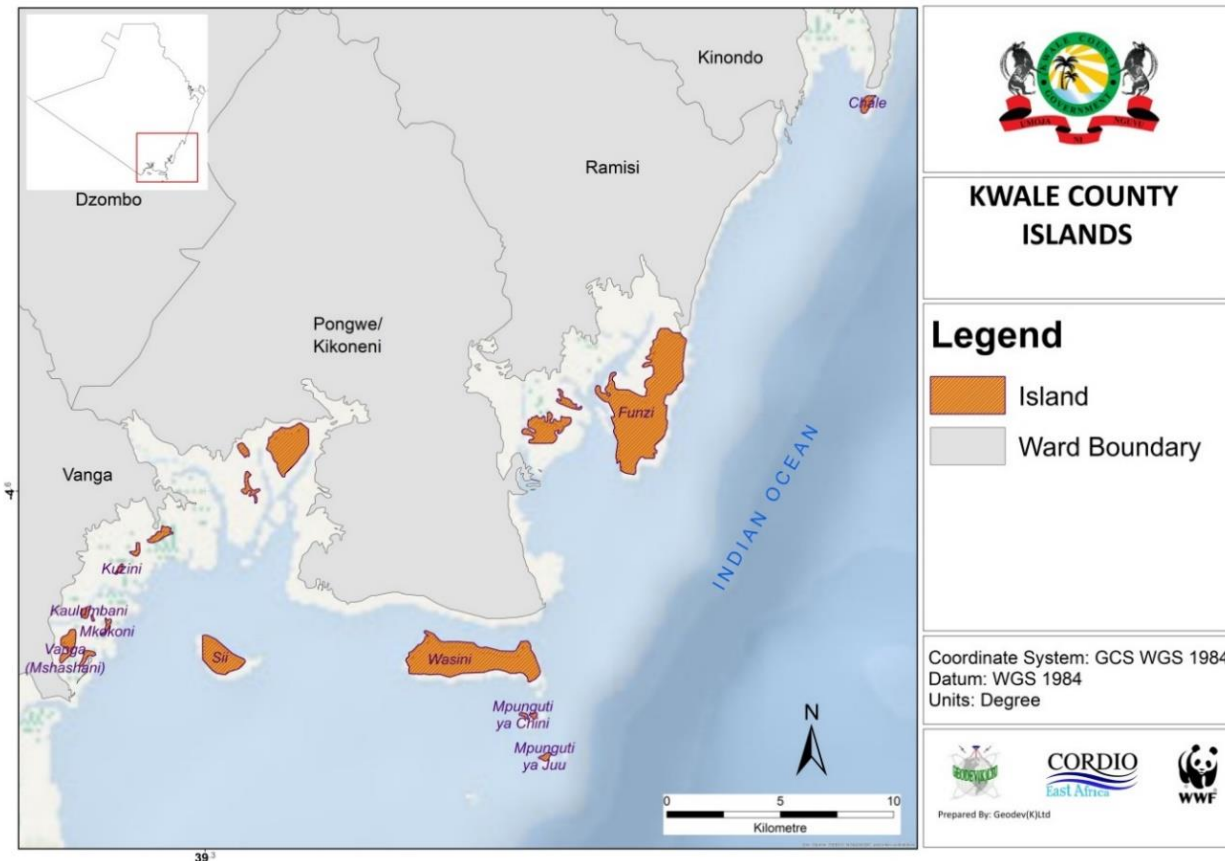
7.3.5 Coral reefs

Coral reefs in the County are fringing reefs, lining the mainland coast and shorelines of small islands and rocks. The reef crest tends to be 500 m to 1.5 m offshore, with a lagoon or emergent backreef between it and the shoreline. The reef crest is generally emergent at low tide, with a height of 1-1.4 m above datum, so the lagoons and back reef areas are shallow/emergent at low tide and covered by water/deeper at high tide. Seaward of the reef crest, the bottom slopes gently to about 7-10 m, then more abruptly to 15-20 m giving way to sand and rubble that slopes down into deeper water. Coral communities are predominantly found on the fore reef at 5-18 m depth and in 'coral gardens in the lagoons and back-reef pools, in less than 1-2 m depth of water. Most of the lagoons/backreef and shallow platform

seaward of the reef crest is dominated by seagrass and algae on rock and seagrass on sandy bottoms. Coral species diversity in Kwale County is the highest in Kenya (at about 220 species). The fringing reefs are broken at river mouths due to their depth, and where freshwater and sediment outflow occur, and these also shelter mangroves, such that the coral reefs, mangroves and seagrasses of Kwale County are intimately linked with each other and support many species of fish and invertebrates that occupy more than one habitat.

Coral reefs are among the most valuable of natural assets. They support many human needs and have defined many of the principal economic activities and opportunities in the County. However, they are vulnerable ecologically to overuse and damage, the principal ones being: Temperature stress and coral bleaching; damaging fishing practices and tourism activities such as trampling and visitation, boat damage and anchors, coastal construction that alters the beach and sediment dynamics, and sewage/nutrient additions from grounds management and septic tanks. Other threats include sediment deposition from terrestrial runoff, domestic and urban pollution from major towns (e.g., Ukunda, Shimoni) and Mombasa city, and industrial pollution from manufacturing (in Mombasa) and chemical use in agriculture (e.g., Ramisi).

Map 24: Distribution of Islands



7.3.6 Islands

There are twenty islands in the County, with the three main islands being Wasini, Funzi and Chale. Four islands (Funzi, Wasini, Chale and Mzizima) are inhabited, while the other smaller islands still exist in their natural form. The islands play significant functions such as habitat (for humans and wildlife), breeding sites for marine species, providing defence against natural disasters such as tsunamis, supporting sand and soil formation, and present potential for tourism, research, recreation and mining.

7.3.7 Open Water

Being a County along the Indian Ocean, Kwale has access to Kenya's Exclusive Economic Zone (EEZ). This 200 nautical mile zone consists of the 12 nautical miles of Territorial and 12

nautical miles of Contiguous Zone. These three zones contain resources such as fish, oil and gas, tidal energy, wind energy, seabed minerals etc. The waters also offer maritime services and sea transport and provide water sports and tourism grounds.

7.3.8 Beaches

The County has approximately 250 Km of coastline, which comprises sandy and rocky beaches, stretching from Pungu to Vanga. These beaches provide world-class recreation destinations and have provided an appropriate avenue for setting up resorts and beach hotels. They are also habitats for marine fauna such as turtles and provide breeding grounds for fish.



7.4 Assessment of Environmentally Significant Areas

Terrestrial and marine ecosystems within the County can be grouped into three broad

categories of Protected Areas (PAs), Critically Ecologically Significant Areas (CESAs) and Ecologically Significant Areas (ESAs). Ecological Support Areas (ESAs) are not essential for meeting biodiversity targets. Still, they play an important role in supporting the ecological functioning of Critical Biodiversity Areas and in delivering ecosystem services. In this plan, these areas are therefore identified and mapped out to support the functionality of the Critically Ecologically Significant Areas and Protected Areas.



Table 17: Classification of Environmentally Significant Areas

| Category | Protected Area | Critical Ecologically Significant Areas | | Ecological Support Areas | |
|-----------------------------|--|--|--|---|---|
| Specific Category | Protected Area: | Critical Ecologically Significant Areas 1: | Critical Ecologically Significant Areas 2: | Ecological Support Area 1: | Ecological Support Area 2: |
| | PA | CESA 1 | CESA 2 | ESA 1 | ESA 2 |
| Description | Legally protected areas | Critical natural and semi-natural areas with little choice. | Critical natural and semi-natural areas with some choice. | Natural and semi-natural supporting areas, areas important for services or ecological infrastructure. | Impacted supporting areas, areas important for services or ecological infrastructure. |
| Examples of features | National Parks and Reserves, Marine National Reserves and other Marine Reserves Gazetted Forests and Kayas. Mostly state-owned and managed, apart from the Kayas, which are community-owned. | Indigenous non-gazetted forest and kayas; community reserves and conservancies; group ranches and private sanctuaries if managed for ecotourism and wildlife; other areas under CBNRM; intact water towers; critical intact wetlands, ecosystems (e.g. mangroves, coral and seagrass), riparian areas and lakes; key areas for threatened species. | Sandy beaches and other natural areas supporting tourism; selected priority areas required for landscape connectivity; gazetted heritage sites; non-gazetted indigenous forest if they are not CESA1; intact riparian corridors if not in CESA1. | Intact wildlife corridor and dispersal areas; intact buffers around protected areas and along the coast if they are not CESA; range and connectivity areas for key species such as elephant; areas required for connectivity; intact riparian buffers if they are not a CESA; other areas important for ecosystem services. | Non-natural areas of wildlife or riparian corridors; forested water towers, buffers around protected areas, and coastal buffers converted to agricultural fields. |

PART II: SITUATIONAL ANALYSIS

| | | | | | |
|--------------------|---|---|--|--|--|
| Areas/Sites | <ul style="list-style-type: none"> • Marine parks; Mpunguti, Diani/Chale, Kisite • National park/reserve-Shimba Hills National Park/Reserve • Gazetted Forests; Shimba Hills, Mwache, Buda, Marenje, Dzombo and Gongoni • Mangrove forests; Gazi, Vanga, Tsunza, Bodo-Shirazi and Funzi | <ul style="list-style-type: none"> • Shimba Hills Water towers, • Kaya Waa, Kaya Muhaka, Kaya Jego, Kaya Tiwi, Kaya Kwale, Kaya Lunguma, Kaya Segga, Kaya Likunda, Kaya Diani, Kaya Mtswakara, Kaya Gandini, Kaya Chale, Kaya Dzombo, K7aya Mrima • Ungazetted forests; Kilibasi and Taru Hills, and Kiruku • Mwaluganje Elephant Sanctuary | <ul style="list-style-type: none"> • Beaches; Pungu to Vanga • Historical/monuments; Fikirini caves, Mwanangoto caves at Shimoni, • Gazi Boardwalk in Kinondo, Wasini Women Boardwalk in Vanga, Majimoto site in Dzombo | <ul style="list-style-type: none"> • Wildlife migratory corridors | <ul style="list-style-type: none"> • Shimba Hills water towers • Wildlife migratory corridors • The coastline |
|--------------------|---|---|--|--|--|

Map 25: Environmentally Significant Areas

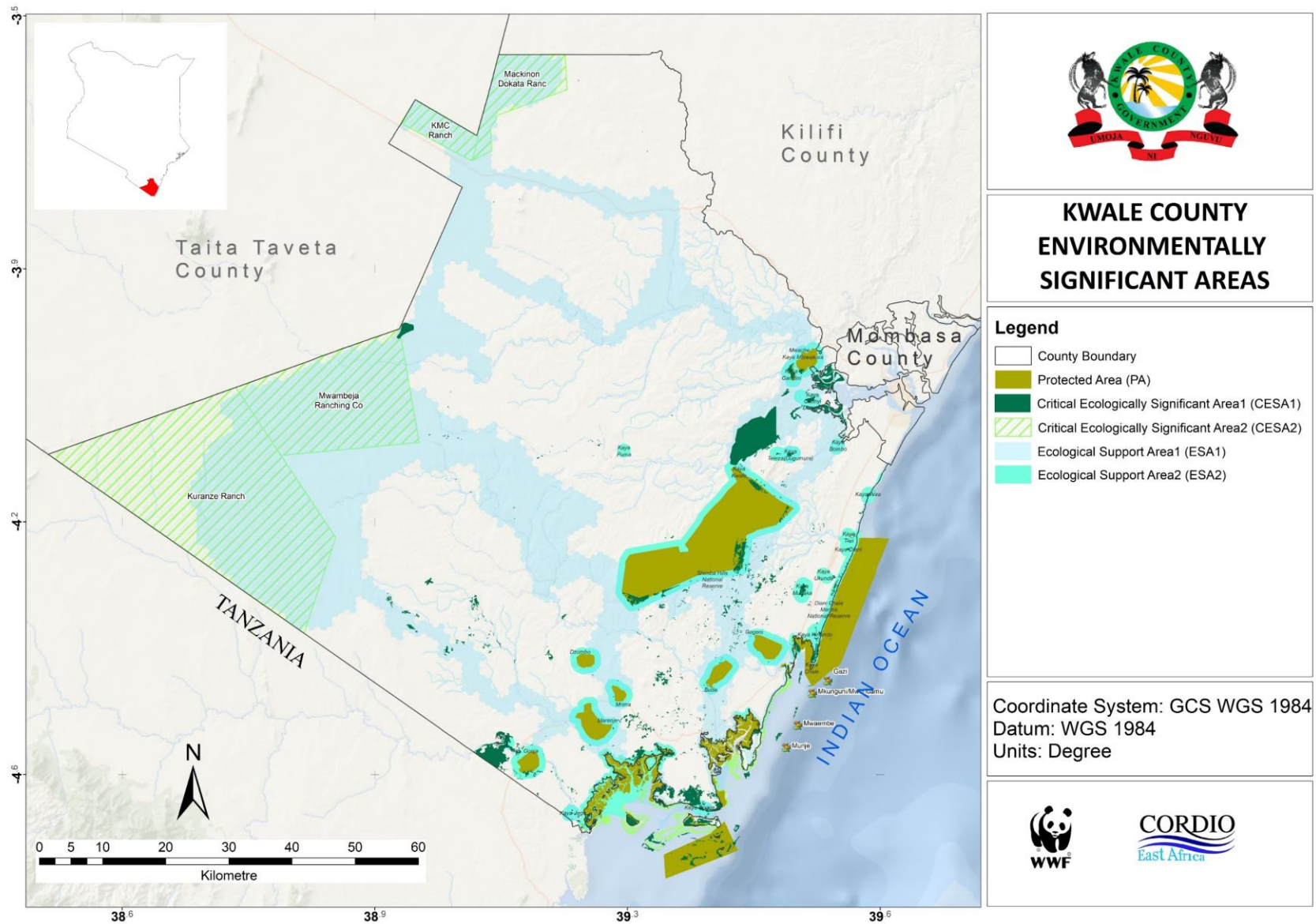


Table 18: State of ESAs

| Environmentally Significant Areas | | | |
|-----------------------------------|---|--|--|
| Area | Ecosystem Function | Threats | Recommendations |
| Riparian Reserves | <ul style="list-style-type: none"> Wildlife habitat | <ul style="list-style-type: none"> Siltation of rivers Encroachment by human settlement and activities; | <ul style="list-style-type: none"> Desilting of rivers Conserving of riparian reserves |
| Wetlands, | <ul style="list-style-type: none"> Wildlife habitat, Purification of water, Serving as floodplains, Recharging aquifers | <ul style="list-style-type: none"> Drying of wetlands Flooding Encroachment by human settlement and activities; | <ul style="list-style-type: none"> Promote rice farming Human settlement should be discouraged |
| Open Sea | <ul style="list-style-type: none"> Marine fishing Maritime transport Wildlife habitat Mariculture Mineral deposits | <ul style="list-style-type: none"> Marine Pollution Overfishing Coral bleaching | <ul style="list-style-type: none"> Protect the marine environment from pollution and degradation No erecting of fences along the beach Promote marine tourism |
| Beaches | <ul style="list-style-type: none"> Habitats for marine fauna | <ul style="list-style-type: none"> Pollution – (littering and open defecation) | |
| Aquifers | <ul style="list-style-type: none"> Sources of water | <ul style="list-style-type: none"> Encroachment by human settlement and activities; | <ul style="list-style-type: none"> No development is permitted in these areas |
| Hills | <ul style="list-style-type: none"> Modifying climatic conditions, Providing habitat, Creating scenic landscapes | <ul style="list-style-type: none"> Deforestation | <ul style="list-style-type: none"> Human settlements shall be discouraged Afforestation Promote eco-tourism |
| Islands | <ul style="list-style-type: none"> Habitat (for humans and wildlife), Breeding sites for marine species, Provide defence against high tides Support sand and soil formation | <ul style="list-style-type: none"> Uncontrolled mining /quarrying of coral rocks Encroachment by human settlement and activities; | <ul style="list-style-type: none"> Regulate mining Rehabilitation of degraded lands Promote eco-tourism activities |
| Forests | <ul style="list-style-type: none"> Wildlife habitats Water towers | <ul style="list-style-type: none"> Deforestation | <ul style="list-style-type: none"> Afforestation and reforestation Gazettement of forests and Kayas |
| Nyika Plateau | <ul style="list-style-type: none"> Wildlife and human habitat | <ul style="list-style-type: none"> Uncontrolled logging/burning of charcoal in areas of Kinango and Lunga Lunga Sub-counties Overgrazing | <ul style="list-style-type: none"> Regulate livestock farming Introduce conservation areas and animal conservancies |

7.5 Waste Management

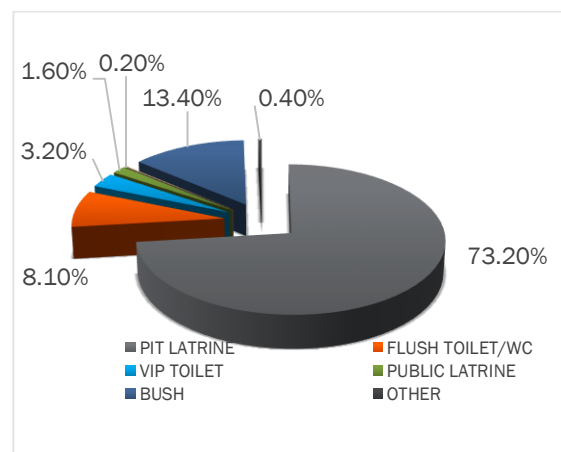
7.5.1.1 Solid waste

According to a household survey done by Geodev (K) Ltd in 2018, approximately 44.5% of households in the County burn the solid waste they generate, while an estimated 29.6% throw their waste indiscriminately in gardens. Approximately 0.7% dispose of solid waste in rivers, around 7.10% bury their waste while those that dump along pavements are 3%. Only about 15.10% of households have access to designate receptacles, highlighting the lack of proper waste disposal sites/equipment as a major contributor to improper waste disposal practices. This could trigger an upsurge in the prevalence of waterborne and other sanitation-related diseases and increase pollution of surface water sources, including marine pollution. Additionally, inefficiencies in solid waste management could compromise the County's competitiveness as a tourist hub due to reduced aesthetic beauty. There is no waste processing/recycling within the County and disposal is through dumping. The County has one designated dumpsite at Muhaka in Kinondo Ward.

7.5.1.2 Liquid waste

The household survey done by Geodev (K) Ltd in 2018 revealed that approximately 73.2% of households use private pit latrines to dispose liquid waste, an estimated 3.2% use Ventilation Improved Pits (VIP). About 13.6% practise open defecation. The County lacks a sewage reticulation and treatment infrastructure. Exhauster trucks are relied upon for disposing of urban septic tanks. However, some instances of such exhausters have reported emptying the untreated waste into the Indian Ocean. This practice poses a major concern to the environment due to the risk of pollution of ocean resources. In addition, the lack of sewerage facilities poses an imminent danger to both ground and surface water resources as most households and institutions use pit latrines for disposing of human excreta.

Chart 3: Depiction on the status of disposal of Human Excreta



Source: Household survey, 2018

7.6 Human-wildlife conflict.

Human-wildlife conflict is a phenomenon that continues to be a major hindrance to conservation efforts in the County; wildlife claim lives, destroy property and cause lifelong maiming. Kinango Sub-County register's elephants, buffaloes, and snake bites as the major causes of conflict. In Matuga, cases of elephants, baboons and snakes are reported. In contrast, Lunga-Lunga cases of elephants, buffaloes and crocodiles are rampant.

7.7 Role of nature in building resilience against climate change

Kwale is endowed with key marine ecosystems that, if well managed, may help its people adapt to prominent impacts of climate change such as ocean acidification, sea-level rise, storms, shifts in species distribution and decreased productivity, as well as their cumulative effects. In addition, sustainable management of ecosystems can play a key role in mitigating climate change by promoting carbon sequestration and storage. In addition, nature contributes to the fiscal revenue, revenue and poverty reduction as sector related to natural resources creates jobs in different capacities.

7.8 Emerging issues

| Potential | Opportunities | Challenges | Recommendations |
|-----------------------------------|--|--|--|
| Environmental conservation | <ul style="list-style-type: none"> Existing conservation areas Environmental management institutions Clean Development Mechanism as an income generator Involvement of public in conservation efforts Natural resources and rich biodiversity of the County | <ul style="list-style-type: none"> Deforestation leading to a reduction in forest cover Human-wildlife conflict Poor waste management Pollution of the County's surface water sources Marine and beach pollution Restriction of access to and obstruction of the seafront Susceptibility to natural and human disasters Land degradation Climate change Minimal enforcement of environmental regulations | <ul style="list-style-type: none"> Promote community-driven Environmental conservation. Strengthening Institutions for Environmental management. Protect Marine Environment from Pollution and Degradation. Restoration and Conservation degraded sensitive ecological areas. Enhance liquid and solid waste management dumping sites Develop a liquid waste management plan |



HUMAN SETTLEMENTS

8.1 Overview

Settlements play a critical role in development because they are social interaction, services, infrastructure, and utility provision centres. They perform an economic function by being hubs of innovation, incubating ideas and technology, and contributing to the economy by providing employment and markets for goods and services. Above all, they are habitats for humankind.

The analysis investigates aspects of human settlement, including types, patterns, form and the trend of human settlements development in the county and the challenges experienced and opportunities in the sector.

8.2 Types of human settlement in the County

Human settlement in the County is rural, peri-urban, and urban settlements in three major types.

8.2.1 Rural settlements

Rural settlements within the County are characterized by clan-based nucleated villages and dispersed single household units across Kinango Sub-County and Northwest of Lunga-Lunga Sub-County. Its distribution is influenced by climatic conditions, topography, infrastructural development, and natural resources.

8.2.2 Peri-Urban settlements

Constitute areas that have started urbanizing but still exhibit some rural characteristics. These settlements occur between the Urban and Rural Settlements. Matuga, Msambweni and Lunga Lunga Sub counties exhibit this type of settlements, particularly along the Mombasa Lunga Lunga Highway and Kombani-Kwale Road.

8.2.3 Urban Settlements

The County has 135 settlements identified as neither urban nor Peri-urban. The

classification of urban settlements in the County ranges from municipalities to shopping centres. The settlements vary in population, function, service, and availability of infrastructure.

Plate 4: Diani Area Settlement

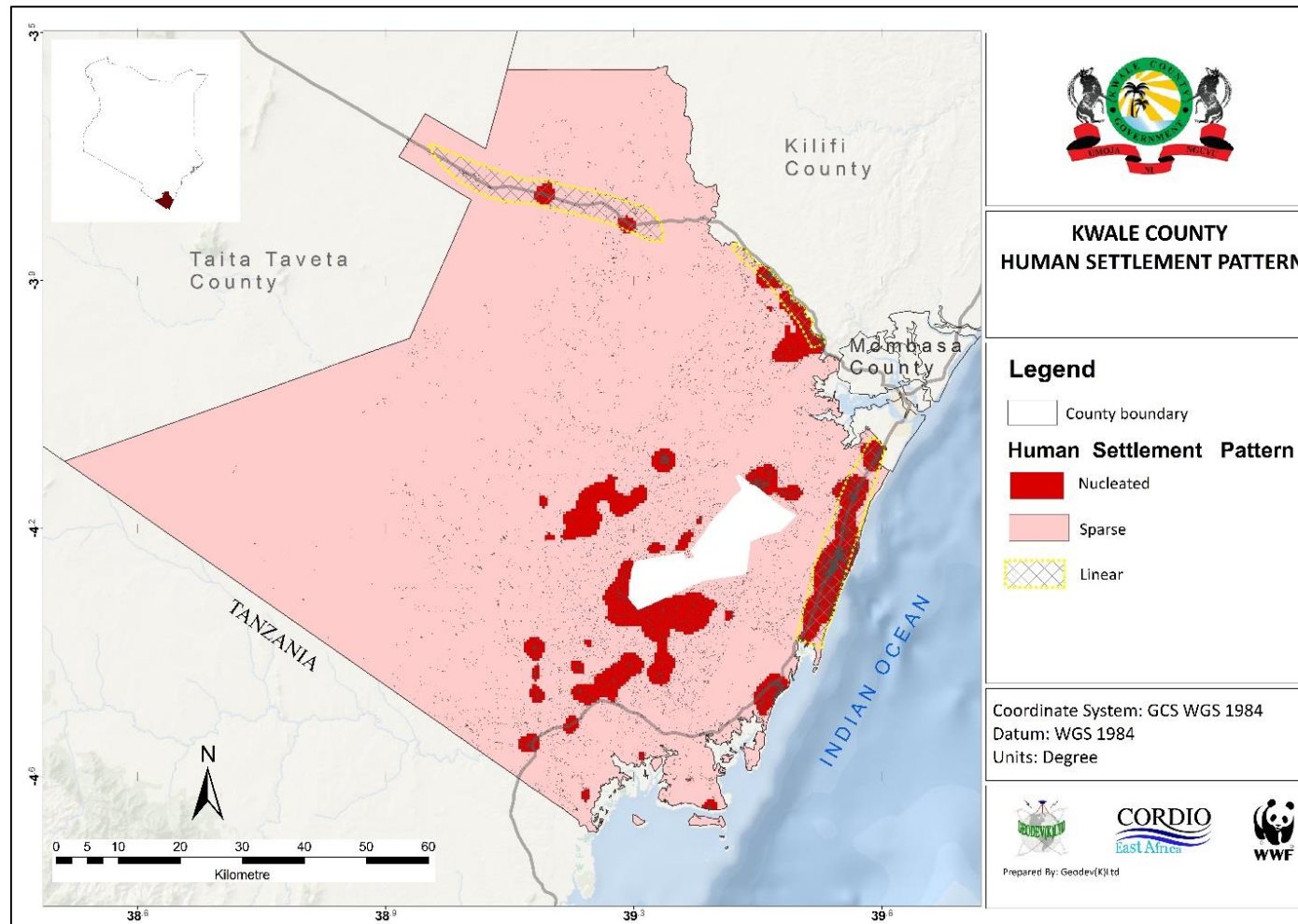


Source: Google Earth

Table 19: List of Urban and Peri-urban areas in Kwale County.

| | | | | | |
|-----|-------------------|-----|-----------------|------|--------------------|
| 1. | Vanga | 44. | Mbegani | 87. | Gandini |
| 2. | Shimoni | 45. | Lukore | 88. | Wamasa |
| 3. | Jego | 46. | Kilimagodo | 89. | Kibandaongo |
| 4. | Kimbuyuni | 47. | Mwambungu | 90. | Tata |
| 5. | Kiwegu | 48. | Kichakasimba | 91. | Vigurungani |
| 6. | Fikirini | 49. | Makobe | 92. | Karege Village |
| 7. | Majoreni | 50. | Mwereni | 93. | Kajonga Village |
| 8. | Kikoyo Village | 51. | Tiribe | 94. | Dziwani |
| 9. | Lunga Lunga | 52. | Magombani | 95. | Kituu |
| 10. | Makwenyeni | 53. | Mkongani | 96. | Kideli |
| 11. | Bodo | 54. | Ukunda | 97. | Mtaa |
| 12. | Mauruni | 55. | Jorori | 98. | Maendeleo |
| 13. | Godo | 56. | Mtsamanyi | 99. | Lologi |
| 14. | Ramisi | 57. | Kirewe | 100. | Miyani |
| 15. | Shirazi | 58. | Ndavaya | 101. | Bofu |
| 16. | Umoja | 59. | Mtumwa | 102. | Makamini |
| 17. | Perani | 60. | Burani | 103. | Mnyenzini |
| 18. | Munje | 61. | Vijenjeleni | 104. | Kilibasi |
| 19. | Sasii | 62. | Tiwi Beaches | 105. | Kivunduni |
| 20. | Kigombero | 63. | Mwaluphamba | 106. | Matumbi |
| 21. | Vigogoni | 64. | Tiwi | 107. | Kaseve |
| 22. | Kisimachande | 65. | Mkangombe | 108. | Kasemeni |
| 23. | Kagera | 66. | Kivumoni | 109. | Vinyunduni |
| 24. | Msambweni | 67. | Mwandimu | 110. | Kwazani |
| 25. | Mababarini | 68. | Mbita Bongo | 111. | Busho |
| 26. | Bondeni Village | 69. | Kwale | 112. | Kuruni Village |
| 27. | Mwachande | 70. | Mafundani | 113. | Mwanda |
| 28. | Mamba | 71. | Mbwaleni | 114. | Kinagoni |
| 29. | Kikoneni | 72. | Waa | 115. | Kinagoni B Village |
| 30. | Mafisini | 73. | Matuga | 116. | Lwanga |
| 31. | Mwanyamala | 74. | Golini Wireless | 117. | Mwangea Village |
| 32. | Chale Island | 75. | Ndauni | 118. | Marondo Village |
| 33. | Mwananyamala | 76. | Guranze | 119. | Samburu |
| 34. | Kalwende | 77. | Mwakijembe | 120. | Chengoni |
| 35. | Gazi | 78. | Lunguma | 121. | Taru |
| 36. | Mivumoni | 79. | Kinango | 122. | Mwangoloto Village |
| 37. | Nguluku | 80. | Kinyasi | 123. | Mackinon Road |
| 38. | Mwangulu | 81. | Ngombeni | 124. | Uvaru Village |
| 39. | Maringoni Village | 82. | Dzimanya | 125. | Egu |
| 40. | Kilulu | 83. | Mbuguni | 126. | Kazamoyo |
| 41. | Tiomin | 84. | Mgamani | 127. | Babakiti Village |
| 42. | Magaoni | 85. | Lutsangani | 128. | Kombani |
| 43. | Mnyalatsoni | 86. | Tsunza | 129. | Silaloni |

Map 26: Human Settlements Pattern



Human Settlement Patterns

Human settlements within the county are characterized by three growth patterns: Linear pattern evident along the coastline and major roads; nucleated pattern evident in urban areas and sparse pattern in the rural areas.

8.3 Urban Settlement Systems

The factors influencing urban growth and development in the County include tourism and hospitality activities, trade and commerce, administrative services, educational institutions, squatter settlements on absentee landlord farms and expired leasehold properties. However, urban development is progressing without a predetermined development strategy and planning. This has led to uncontrolled development characterized by inadequate infrastructure and services. Urban development is also skewed

due to the lack of a spatial development framework to coordinate development.

8.4 Rural Settlement System in Kwale County

The main economic activities within the rural settlements are crop farming-mostly for subsistence and livestock farming. The rural settlement pattern in the County constitutes Clustered, semi, Hamletted, and Dispersed or isolated layouts. These layouts are influenced by physical features-nature of terrain, altitude, climate and availability of water, cultural and ethnic factors: social structure and religion.

Table 20: Hierarchy of Urban Areas

| Urban centre | Criteria of Ranking | | |
|--|---------------------|------------------|--|
| | Population | Level of service | Function |
| Tier 1 principal growth centre/Municipality | 50, 000-249,999 | 42 | County Headquarters, Highest order commercial services and industrial function |
| Tier 2 growth centres / Town | 10,000-49,999 | 22 | High order commercial services and industrial functions |
| Tier 3 (Market Centre) | 2000-9999 | 14 | Retail trade and small value addition industries |
| Tier 4 (Local Centre) | Below 2000 | Below 14 | Low order commercial services |

Clustered rural settlement is more compact or entail more compact housing and are likely to be found in areas with a significant degree of service provision. Extreme dispersion of human settlement can be attributed to severely rough terrain or limited-service provision. Larger areas of Kinango and Lunga-Lunga sub-counties have this type of settlement.

8.5 Assessment of urban areas in the County

The county's urban areas assessment was undertaken based on three parameters: Population, level of service provision, and the functions the centres play. The hierarchy adopted was formulated from the Urban Areas and Cities (Amendment) Act, 2019 and the Kenya Human settlement Strategy of 1978.

Map 27: Existing Hierarchy of Urban Areas



8.6 Assessment of urban growth potential

The assessment of the urban growth potential was done based on the urbanization rate, the current level of services, functions, and the potential of a centre to play a specific function.

8.6.1 Urban growth potential assessment

Table 21: Urban Areas Potential

| Level of the urban area | Potential urban areas |
|---------------------------------|--|
| Principal growth centres | Kwale, Ukunda/Diani, Kinango, Samburu, Lunga Lunga and Shimoni |
| Growth centres | Mackinnon, Msambweni, Vanga, Ndavaya, Tsunza, Shimba Hills, Mazeras, Mariakani, Kuranze, Vigurungani, |
| Market centre | Taru, Bofu, Ng'ombeni, Matuga, Ramisi, Majoreni, Menzamwenye, Mamba, Mwananyamala, Burani, Gazi, Matuga, Kikoneni, Tsimba, Lukore, Mwangulu, Silaloni, Mbita, Kilibasi |
| Rural/Local Centres | Kilimangodo, Mwangwei Kibuyuni, ,Jego, Meli Kubwa, Kaza Moyo, Kwa Kadogo, Banga, Kinagoni, Lamkani, Matumbi, Busho, Gandini, Myenzi, Majengo, Vinyunduni, Mwakijembe, Mwangoloto, Mwangani, Kibandaongo, Mrima, Mwambani, MlolaB, Vuga, Makongeni, Kanana Market, Panama, Fikirini, Mkangombe, Vyongwani, Mbuguni, Kiwegu, Bodo, Munje, Okote Area, Kiteje, Mivumoni, Godo Center, Kambingu, Kimwangani, Kuranze, Mavirivirini, Dzombo, Kafuduni, Kalalani, Makwenyeni, Shirazi, Kilulu, Magaoni, Mnyalatsoni, Mkundi, Makobe, Kichaka Simba, Mbegani, Mwereni, Tiribe, Mwandimu, Mtumwa, Mkongani, Kirewe, Mwaluvamba, Mwalukombe, Kasemeni, Gulanze, Mwena Centre, Nguluku center, Donje, Chigutu, Mdomo, Tata, Mbilini, Sadani, Busa, Kajichoni, Riakalui, Achivwa, Kibaoni, Pemba, Kituu |



8.6.2 Function-based analysis of urban growth potential

8.6.2.1 *Administrative towns*

Kwale Town has the highest potential to grow as an administrative town is the headquarters of the County. The centre is likely to experience increased in-migration with enhanced investments as people search for employment, business, and other opportunities. Similarly, Lunga- Lunga, Kinango, Diani and Samburu Sub County headquarter and ward headquarters bear the potential to develop into administrative centres.

8.6.2.2 *Industrial towns*

The potential assessment is done leveraging the competitive advantages of the respective towns such as accessibility, existing industrial function and availability of raw materials and support infrastructure. Potential industrial centres in the County include:

- **Kinango:** The centre is located in a livestock zone. It's highly accessible and currently hosting the main livestock auctioning market in the County. This gives it a comparative advantage for meat, leather and hides processing.
- **Samburu centre:** The centre is expected to grow as an industrial town due to the earmarked Special Economic Zones, recently commissioned steel milling company, and proximity to standard gauge railway (SGR) and the International Trunk Road A8 (Mombasa – Nairobi-Malaba).
- **Shimba Hills:** The centre is located in a high fruit production zone. The centre has been earmarked to host a fruit processing plant by the County Government of Kwale.

8.6.2.3 *Resort towns*

These are centres those activities such as vacationing, holiday making, eco-tourism, water and motorsports, cultural exhibition and beach tourism are being undertaken or are envisioned to be undertaken. Resort potential centres in the County include;

- **DIANI:** Diani has a reputation for having world-renowned sandy beaches. Its proximity to historical monuments and globally recognized sites such as the Kongo site and its closeness to Shimba hills national park and reserve, Kisite-Mpunguti marine national park, and Chale marine reserve make the town an area ideal global resort. The centre is also envisioned in the Kenyan Vision 2030 as one of the three national resort cities, emphasising wellness and exposure of tourists to the rich can communities
- **Tsunza town:** Tsunza area possesses a massive potential for development as one of the world's best resort destinations. This is attributed to the following: The area lies in a unique peninsula which extends between Mwache creek on the north and Mteza Creek on the south; the area has a stretch of approximately 6 Km of beachfront; the existence of Kaya Chonyi; intense mangrove forest with winding canals that provide a distinctive environment for water sports, conservation and eco-tourism. The area also lies close to Moi International Airport in Mombasa and the SGR through the Dongo-Kundu bypass. It is minimally developed, making it possible for proper planning and structuring.
- **Wasini:** The Island located 3 kilometres opposite the harbour of Shimoni village

has great potential for becoming a major tourist destination in the County. The classy resorts and hotels, Coral gardens, the boardwalks, paradise beach, and the dolphins and whales, which can be spotted in the island's immediate surroundings, make the place a major site for resort tourism development.

- **Funzi:** One of the counties' Islands offers great opportunities for resort tourism development. The island is accessible through air and water and it is blessed with different kinds of tourism activities such as crocodile watching, beach, marine life, the mangrove forest, resorts and hotels that offer accommodation to visitors.
- **Shimoni:** The town has a huge potential for resort tourism development due to several attraction sites such as the historic Shimoni slave caves, Shimoni forests, the Coastline and marine ecosystem.
- **Vanga:** It is the southernmost town in Kwale County. Over 70% of the residents rely on fishing as the main economic mainstay. Additionally, fishing activities act as tourists' attractions in the area; the port in Vanga plays an important role in transporting goods and services to and from the neighbouring country of Tanzania. The mangrove forests also present an opportunity for tourism development.

8.6.2.4 Port towns

The County has a 250Km stretch of the Indian Ocean coastline with natural harbours at Vanga, Shimoni and Kinondo, making it a suitable location for maritime commercial facilities that can enable ships and other

maritime vessels to dock load discharge passengers and cargo. The strategic centres with potential for sea-port development are:

- **Vanga**
Its strategic location and proximity to Tanzania qualify Vanga as a Port City. With fishing being the major source of livelihood for the residents, the development of Vanga as a small port will play an important role in upgrading the town to a major port and a commercial hub
- **Shimoni**
Shimoni, known for its British colonial ruins and slave caves, 'slave holding port,' for east Africa's coastal slave trade stretched from South Africa to the Middle East. Shimoni is a tourist destination on the South Coast of Kenya due to its proximity to the Kenya-Tanzania border with access to Wasini Island via the Shimoni-Wasini channel and Pemba Channel.
The Kenya Ports Authority has earmarked the two centres for development into small ports alongside Funzi. Shimoni centre has also been planned by the Coast Development Authority to be an Industrial Port City.

8.6.2.5 Special towns

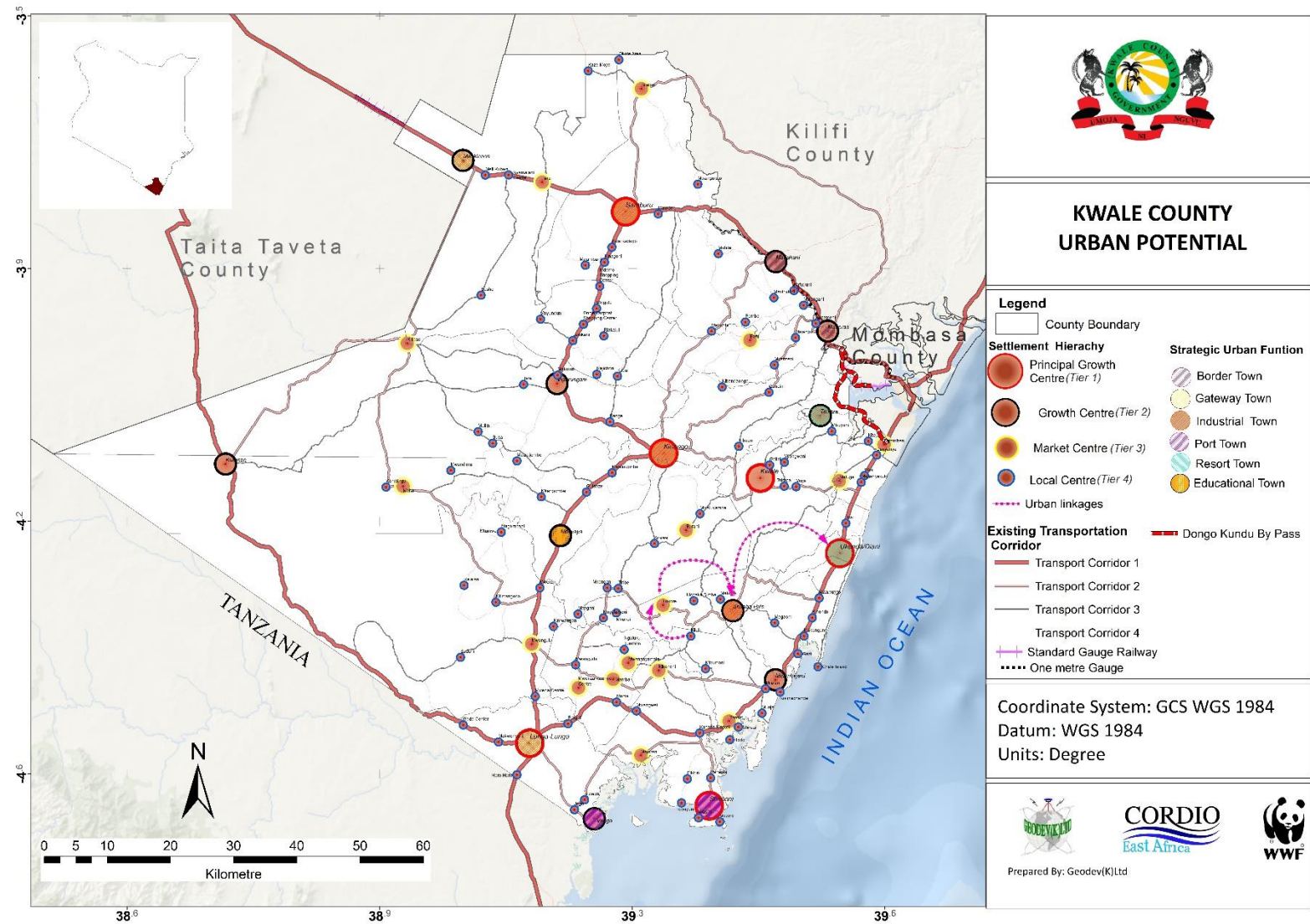
These are centres exhibiting unique characteristics that can enhance the areas potential to develop as urban areas. Their uniqueness is attributed to locational advantage and the socio-economic functions they perform. These centres are mainly entry points into the county and the shared (border) centres between Kwale and other counties. These centres can be developed to promote regional integration and cross-border trade. they include Mackinnon; Mazeras, kalalani (Mariakani), Ng'ombeni, Lunga Lunga and Vanga. Border centres include Mazeras and Kalalani (Mariakani).

8.6.2.6 New town development

This is a deliberate policy measure to establish new towns on greenfield sites. The aim is to promote equitable and balanced urban development, attract and create infrastructure and service provision centres or unlock the socio-economic potential of an area. The creation of towns as selected growth poles allows underdeveloped regions to open. There is an opportunity in Kwale to designate new towns within the western part of the County. Kuranze, Kilibasi, Ndavaya and Mbita exhibit potential for new town development.



Map 28: Urban Development Potential



8.7 Housing

Housing development influences the pattern of settlement within an area. A well-articulated housing strategy can be used as a planning tool to offset urban sprawl and direct the physical growth of cities

Adequate housing contributes directly to human health and productivity, which are important both for quality of life and economic development as well as a structuring instrument of the environment in the urban and rural areas. The Government of Kenya has defined the "Big Four" transformation agenda for the Nation, which identifies Four Priority initiatives to be implemented over the next five years, 2017 – 2022, core among them being the delivery of 500,000 Affordable Housing Units.

8.7.1 Housing Tenure

Housing tenure refers to the legal status under which people can occupy the accommodation.

Table 22: Public Housing Units in Kwale

| Name | Number |
|-----------------------------------|--------|
| Diani pool | 1 |
| Kwale hospital housing scheme | 18 |
| Msambweni hospital | 42 |
| Kinango hospital | 34 |
| Kinango pool | 11 |
| Kinango Edu | 1 |
| Agriculture and veterinary | 2 |
| Shimba hills agricultural section | 3 |
| Shimoni fisheries | 27 |
| Samburu health center | 11 |
| Lunga lunga pool | 87 |
| Tiwi health Centre | 18 |
| Kikoneni | 2 |
| Mwangulu agriculture | 1 |
| Mwereni agriculture | 1 |
| Ndavaya administration | 4 |

In Kwale, private developers and the government mainly offer housing provisions. Private developers are the dominant providers, while the County government manages government houses.

Access to decent, affordable housing is a fundamental right in the Constitution of Kenya. Nevertheless, the county faces serious shortfalls in quality housing provision in rural and urban areas. The county's market can produce 30,000-50,000 units per year, supported by initiatives like the Civil Servants Housing Scheme and appropriate building technology, i.e., use of cheap alternative technology, for instance, interlocking blocks.

The County has a total number of 446 public housing units; see table below.

| | |
|----------------------|------------|
| Taru agriculture | 1 |
| Vanga administration | 1 |
| Mackinon | 1 |
| Gazi administration | 3 |
| Kalalani | 2 |
| Kwale pool | 62 |
| Kwale pool vacant | 6 |
| Kwale pool converted | 1 |
| Kwale pool missing | 2 |
| Co-operative Kwale | 2 |
| Survey castle | 4 |
| Veterinary Kwale | 11 |
| VET - UNREG | 4 |
| SIDA KWALE | 16 |
| Kwale Police Line | 18 |
| Diani police | 49 |
| Total | 446 |

Source: Directorate of Housing, Kwale County, 2018

8.8 Emerging issues

| Potential | Opportunities | Challenges | Recommendations |
|---|--|---|--|
| Functional, balanced and sustainable urban development. | <ul style="list-style-type: none"> Existing urban facilities and services Availability of land for urban development. Existing urban centres available for redevelopment Established institutions for urban development and management | <ul style="list-style-type: none"> Poor linkages between urban centres. Underserved urban areas Dormancy of some centres Lack of defined functions of urban areas Urban sprawl Uncontrolled urban development Human settlements are concentrated on the rich agricultural land | <ul style="list-style-type: none"> Develop systematic urban growth Develop function-based strategic urban growth centres Promote compact planned urban development Promote urban-rural connectivity Strengthen urban management and development Promote rural development planning Promote investment in affordable housing |
| <ul style="list-style-type: none"> Affordable housing development | <ul style="list-style-type: none"> Availability of land for Housing development Availability of low-cost building materials. | <ul style="list-style-type: none"> Poor housing conditions lacking basic support infrastructures such as electricity and water | <ul style="list-style-type: none"> Development of social housing programmes |

TRANSPORT

9.1 Overview

The County's transport structure is made of the following modes: road, railway, air, water, and non-motorized transport.

9.2 Road Transport

It is the main mode of transport in Kwale County. The County has a total of 3475.13 Kms of classified roads. The roads are broadly categorized as international trunk roads, national trunk roads, regional roads, County roads and rural access roads.

9.2.1 International trunk roads

These roads transverse the County, linking one country to another country. Kwale County is traversed by two international highways- A7 and A8. A7 highway connects the port city of Mombasa and Kwale Counties via Ng'ombeni- Diani -Msambweni- Lunga Lunga and further connects to Tanzania. The road is bitumen surfaced and measures approximately 95.7 km. A8 connects Mombasa to Nairobi and further to the Malaba border. The segment that traverses Kwale County is bitumen surfaced and measures approximately 52kms. These two segments of international highways are part of the Great North Road which runs from Cape Town in South Africa to Cairo in Egypt. The roads have influenced the development of trading centres, including Tiwi, Waa, Kombani, Msambweni and Lunga Lunga along the A7 road and Samburu, Taru, Mackinnon Road along the A8 road.

9.2.2 Inter-County roads

These are roads that connect areas within the County and neighbouring counties. These roads include Wundanyi-Mwatate-Rukanga-Kuranze-Kibaoni to Lunga Lunga, Lunga-Lunga - Kinango- Samburu- Silaloni which connects to Kilifi County, Kinango-Mariakani-Kaloleni-A7 and the proposed Dongo-Kundu bypass.

9.2.3 Intra-County roads

These roads connect the main urban centres and administrative headquarters within the County.

The two major towns in the County are Kwale and Ukunda and are intra-connected via A7 and B92 trunk roads. Kinango and Lunga Lunga are also accessible from Ukunda-Diani via the two roads and from Kwale via B92 road. The A7 international trunk road also links Ukunda-Diani to Msambweni and Lunga Lunga.

Other roads linking smaller centres include Lunga Lunga-Vanga road, Kinango-Vigurungani- Samburu-Mnago Wa Dola-Guruguru (C203) road, an inter-County and intra-County Road and Kinango-Mariakani-Kaloleni-A7 Mavueni road. Kidimu-Shimoni road is another significant road that connects the A7 highway at Kanana to Shimoni.

These roads are important in providing access to administrative services and socio-economic opportunities within the main urban centres in the County.

9.2.4 Rural access roads

These roads connect lower-order market centres, rural centres and rural hinterlands. They serve as feeder roads from the agricultural areas to the immediate markets and higher order centres of the County.

The main challenge to efficient road transport is the poor road surface. Some lack important linkages such as bridges (Mwakitui and Mwachande).

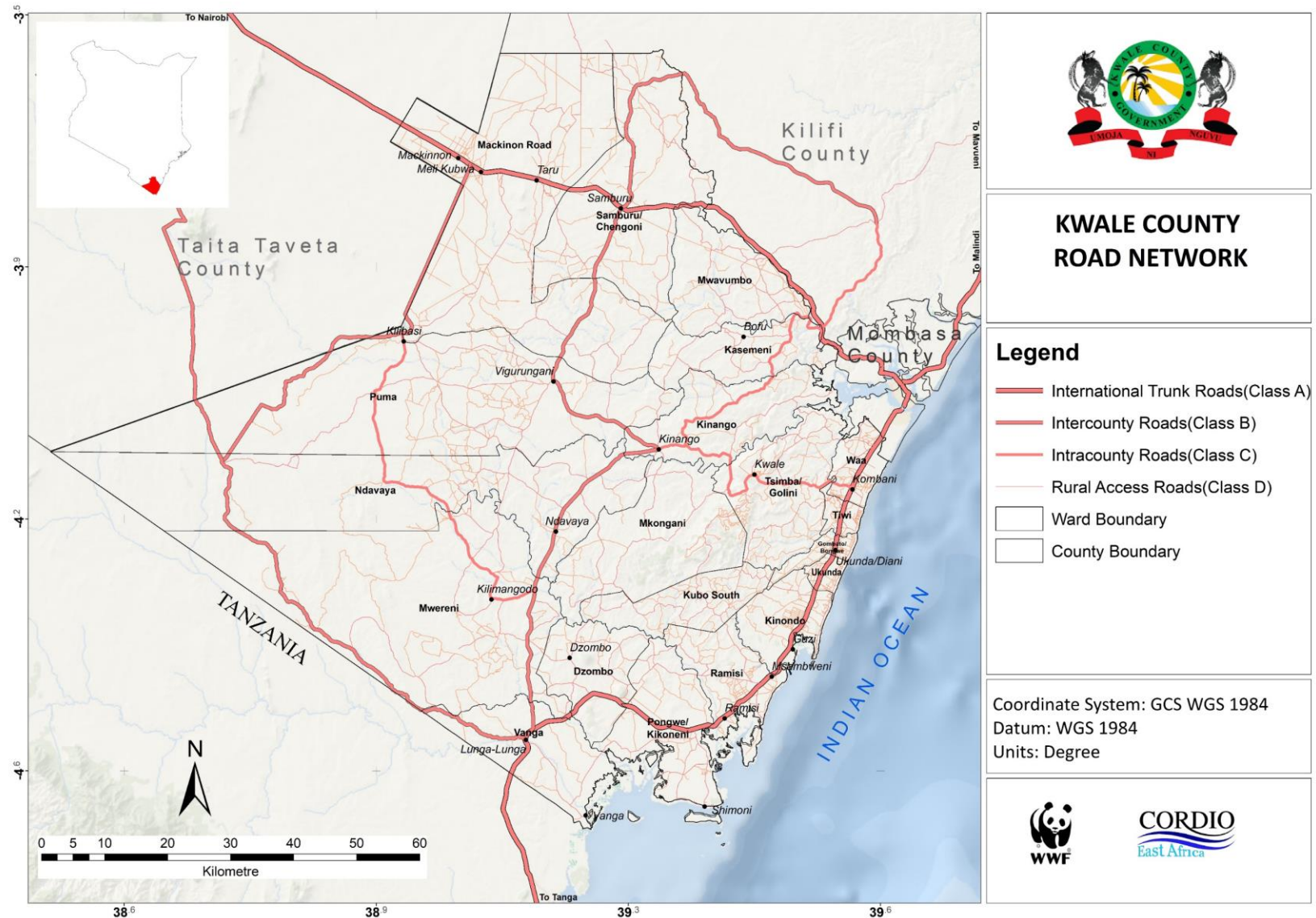
Table 23: Summary of surface conditions and length for classified roads in Kwale County

| CLASSIFIED ROADS | | | | | |
|------------------|-------------|----------|---------|--------------------|-------------------|
| Surface Type | Length (km) | | | | Total Length (km) |
| | Good | Fair | Poor | Under Construction | |
| Paved | 97.477 | 28.995 | 59.56 | 6.891 | 192.89 |
| Gravel | 200.421 | 991.893 | 437.803 | 0 | 1630.12 |
| Earth | 108.297 | 653.862 | 747.632 | 0.407 | 1510.20 |
| Other (Track) | 0 | 54.868 | 87.055 | 0 | 141.92 |
| Sub-Total | 406.165 | 1729.618 | 1332.05 | 7.298 | 3475.13 |
| Condition (%) | 11.69% | 49.77% | 38.33% | 0.21% | 100.00% |

Source: Kenya Roads Board, 2018



Map 29: Kwale County road classification



9.2.5 Flagship Transport Corridors

9.2.5.1 Samburu-Vigurungani-Kinango-Kwale bypass;

The road links the A8 trunk road (Nairobi-Mombasa Highway) to the A7 trunk road (Lungalunga-Mombasa Highway) via Samburu Centre, Vigurungani, Kinango, Kwale Town and Kombani. It is set to upgrade from gravel to bitumen standard to reduce over-reliance on the Likoni channel for connectivity between the South Coast, Tanzania, and the rest of the country.

9.2.5.2 Dongo Kundu Bypass;

The bypass is a flagship project targeted at easing congestion at the Likoni crossing by connecting Mombasa mainland West and the South Coast via Mombasa mainland south. Consequently, the project will result in the bypassing of Mombasa Island. The bypass will link A7 and A8 roads and provide access to the standard gauge railway from the South Coast. The project is being implemented in three phases:

Phase I: Miritini - Kipevu (11 km; complete)

Phase II: Mwache Junction-Mteza (8.9 km)

Phase III: Mteza-Kibundani (6.9 km)

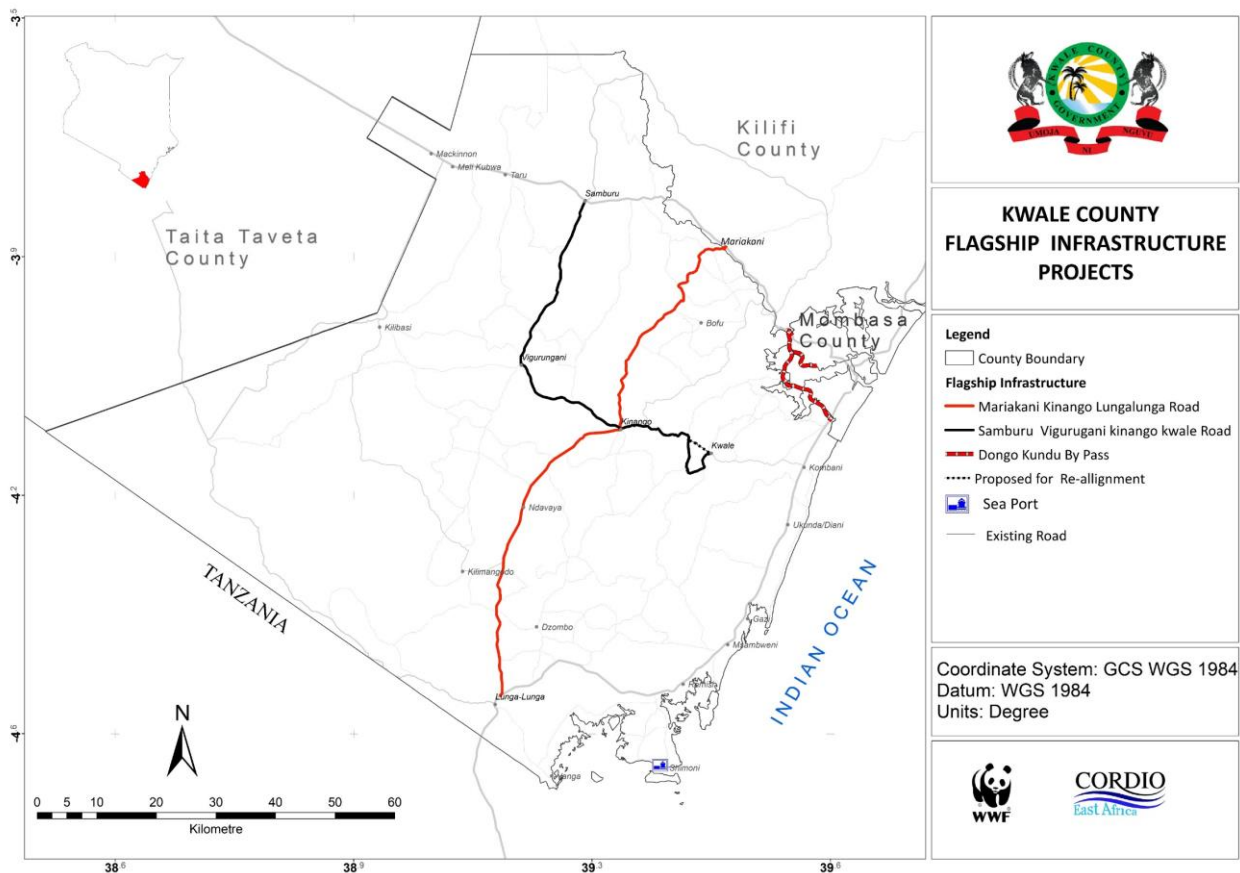
9.2.5.3 Vanga-Shimoni Road;

The intention is to improve transport efficiency between the ports of Vanga and Shimoni. The two-towns exhibit huge potential when it comes to blue economy development. For that reason, the County Government of Kwale has embarked on road improvement so that even the residents can benefit economically and socially.

The County flagship project corridors are as indicated on Map 30.



Map 30: Flagship Transport Corridors



9.2.6 Challenges in Road Transport

1. Congestion and delays at the Likoni channel impede efficient transportation.
2. Some bridges are narrow and are often overtopped during rainy seasons. The problem is also associated with drifts across rivers.
3. Stormwater drainage channels are poorly developed or lacking along gravel and earth roads.
4. Poor roads conditions as most of the lower-level roads and rural roads are earth and potholed, which hinders efficient transportation during the rainy season
5. Some stormwater drains in towns are poorly developed. Most of these drains

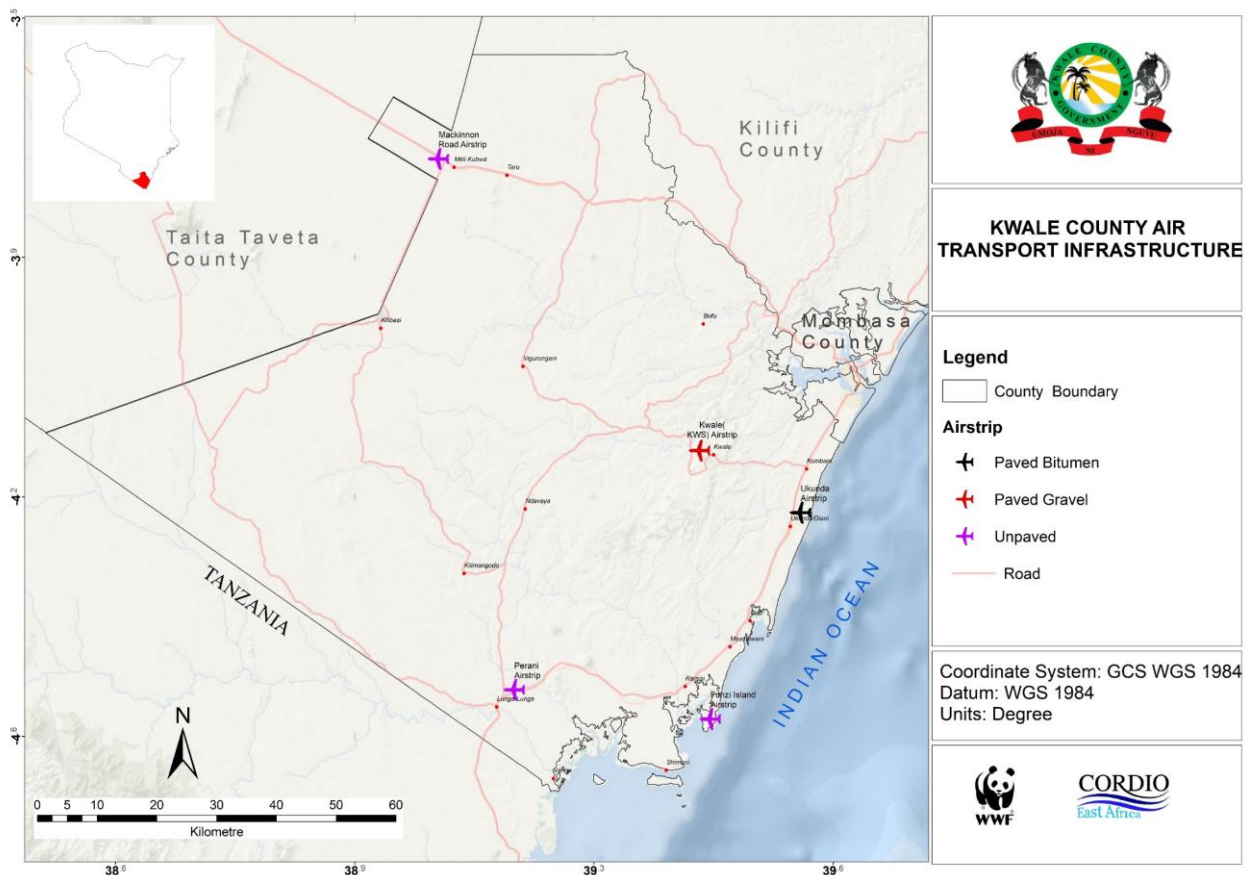
are open but should ideally be closed to reduce clogging and destruction of roads.

6. The lack of proper mainstreaming of tuk-tuk and motorcycle (*boda-bodas*) indicate potential congestion within Diani/Ukunda in the near future.
7. Road transport terminal facilities are lacking in all urban centres except Kwale and Ukunda towns.

9.3 .Air Transport

Kwale County has five air terminal facilities: Ukunda Airstrip, Kwale (KWS) Airstrip, Lunga-Lunga Airstrip, Mackinnon Road, and Funzi Airstrips. Funzi and Kwale (KWS) Airstrip are private facilities.

Map 31: Airstrips and Airports



The only air transport facility with scheduled flights is Ukunda Airstrip, under the Kenya Airports Authority (KAA) management. The airstrip has been earmarked to expand its apron and car park, runway expansion, and upgrading its terminal building. It faces many challenges, including obstacle limitation surface, inadequate land for expansion, and squatters invading the airstrip land.

Ukunda airstrip connects the County to other airports in the country, i.e., Jomo Kenyatta International Airport and Wilson Airport in

Nairobi, Manda in Lamu, Vipingo in Kilifi, Kisumu International Airport and Moi International Airport in Mombasa.

9.3.1 Challenges

1. Kwale (KWS) Airstrip, Lunga Lunga Airstrip, Mackinnon Road and Funzi Airstrips are inefficiently developed with support infrastructure and services.
2. Ukunda runway is short, limiting its potential for optimal operation.

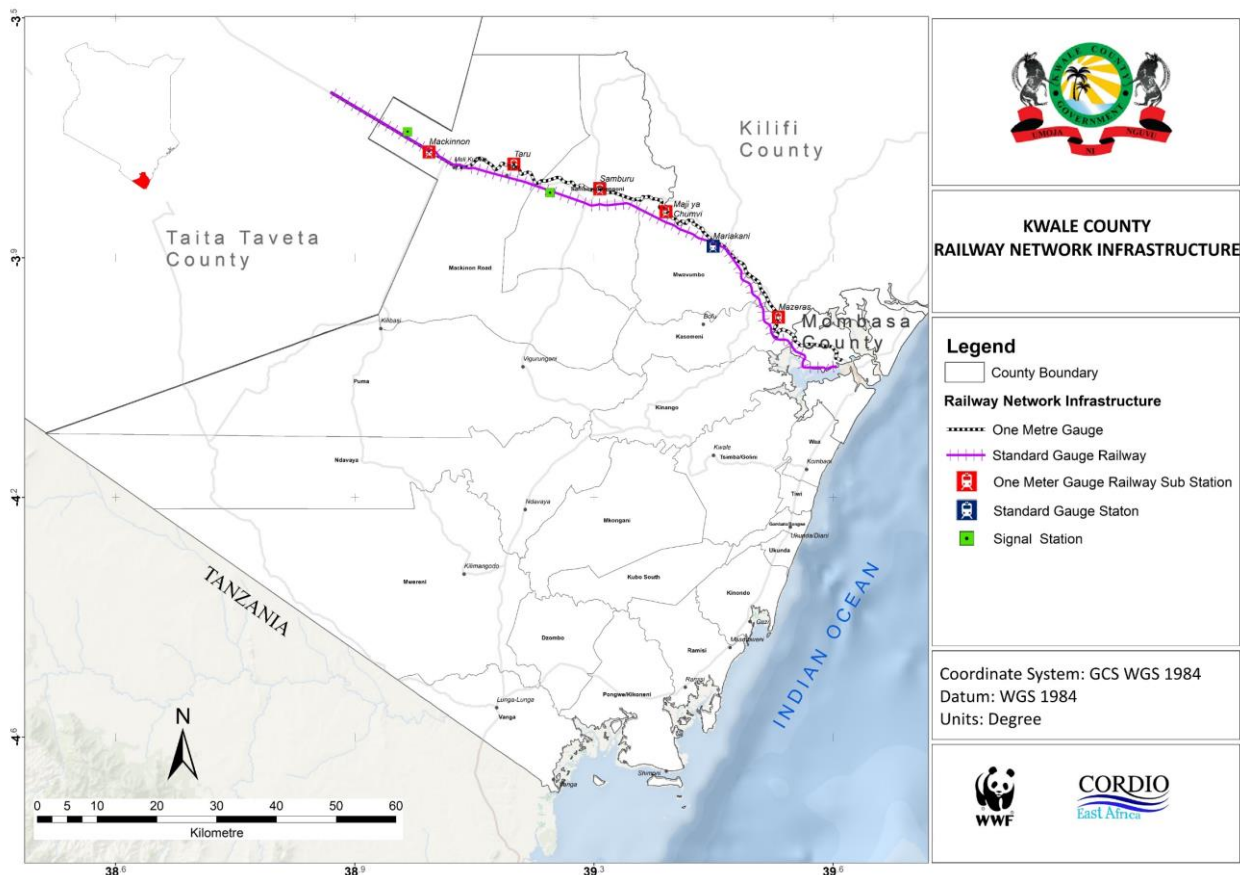
9.4 Railway Transport

The County is served by railway transport in the northern part of the County through two railway lines, meter-gauge and standard gauge railway, operated by Kenya Railways Corporation.

9.4.1 Meter-Gauge Railway

It connects Kwale County to the port of Mombasa, the Kenyan hinterland and Uganda at the Malaba border. The stretch of the meter-gauge railway within Kwale County measures approximately 47 km; interlinking Taru, Mariakani, Samburu and Mackinnon Road towns; with a sub-station set up at Taru.

Map 32: Railway Network in Kwale County



9.4.2 Standard Gauge Railway

Approximately 83km of the SGR passes through Kwale County with one (1) station at Mariakani and signal houses at Taru and MacKinnon. The railway network in Kwale is as shown on Map 32.

9.5 Water Transport

The Indian Ocean is the only medium of water transport in the County. Water transport is common in areas of Shimoni-Wasini-Vanga, Tsunza-Mombasa and Bodo-Funzi. Water transport offers opportunities for business people to move their goods from Tanzania through the Shimoni Public Jetty. It is also used for maritime boating by tourists from Diani to and from the islands of Zanzibar and Pemba.

9.5.1 Water Transport Infrastructure

The County owns Shimoni and Wasini public jetties, while KWS owns Shimoni jetty.

There are three undeveloped natural harbours at Kinondo, Vanga and Shimoni. However, plans are underway to develop the Shimoni harbour into a small port. The port will provide docking and other freight services to regional and other international freight ships and stimulate trading.

9.5.2 Water Transport Services

With a coastline measuring about 250 km, water transport provides maritime/cruise and commerce opportunities between the County and other coastal counties and international markets.

The Likoni Ferry inter-connects Mombasa and Kwale counties creating a good environment for trade and commerce activities.

9.5.3 Missing links in water transport

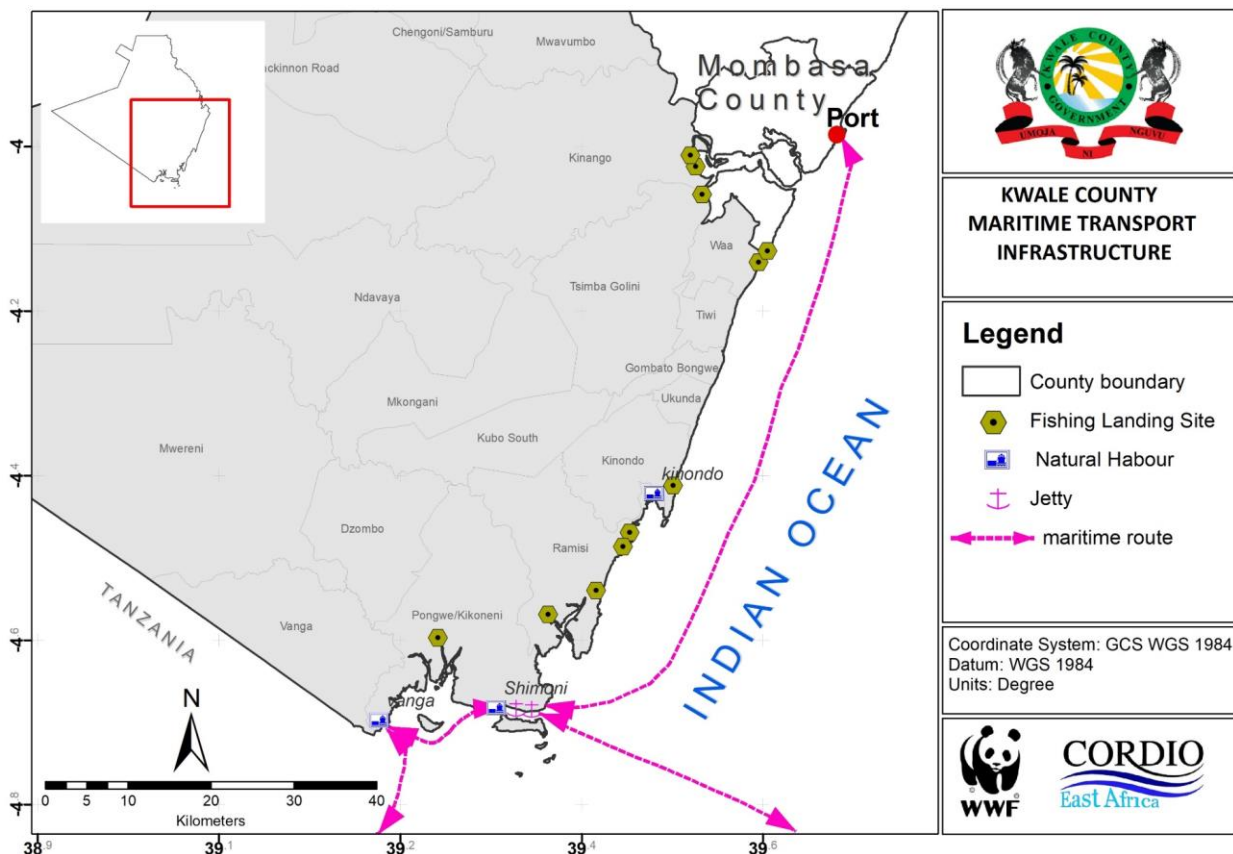
There is need to introduce more ferry services at Shimoni-Wasini, Tsunza-Miritini, Shimoni-Vanga and Bodo-Funzi-Msambweni.

9.5.4 Challenges in Water Transport

1. Private canoe services are unaffordable, while public boats lack sufficient basic water safety amenities.
2. Maritime routes are not designated
3. Lack of supporting infrastructure and facilities such as jetties for marine transportation.
4. No investment in large capacity sea vessels that can ferry a larger number of people and goods
5. During seasons of high-water levels and rough seas, accidents are very common, leading to the loss of lives.



Map 33: Water Transport



9.6 Pipeline

The Kenya Pipeline Corporation (KPC) petroleum line transverses County through Mazeras –Maji ya Chumvi-Taru- MacKinnon. It conveys petroleum products from the port of Mombasa to KPC storage units at the KPC headquarters in Nairobi.

9.7 Urban transport

Road transport is the most popular transport system within the urban areas providing linkages and facilitating the transportation of goods and services from the rural areas to the urban areas and vice versa. Urban transport in Kwale County entails non-motorized (pedestrians and cyclists), freight and business traffic and motorized private traffic within urban areas. In Kwale County, motorcycle bodabodas are the most frequently used means of transport at 63.1%, followed by PSV matatus at 23.3%, according to the household survey carried out during the planning process. About 5.1% use walking as the most frequent mode of transport.

Diani municipality in Kwale County is the most intra-connected through road. It has a better-defined commuter transport system than other urban centres. Due to its well-defined estate, it has an adequate inter-estate commuter transport system. However, its commuter system is dominated by (three-wheelers) tuk-tuks and motorcycle *boda-bodas*, which lack a regulated operation system. Road transport is, therefore, the main mode of transport.

Diani airstrip and the beach hotels have attracted taxis as a means of transport for visitors from the terminal to various destinations.

Except for the A7 trunk road and the beach road, all other roads, including feeder roads to the town, are to gravel standard. The road leading to the airstrip is the only all-weather road (concrete block paved). There are few Non-Motorized Transport (NMT) facilities in Diani. Diani Beach Road is the only one with a pedestrian walkway. Nonetheless, the town

lacks proper parking facilities and loses out on potential revenue opportunities.

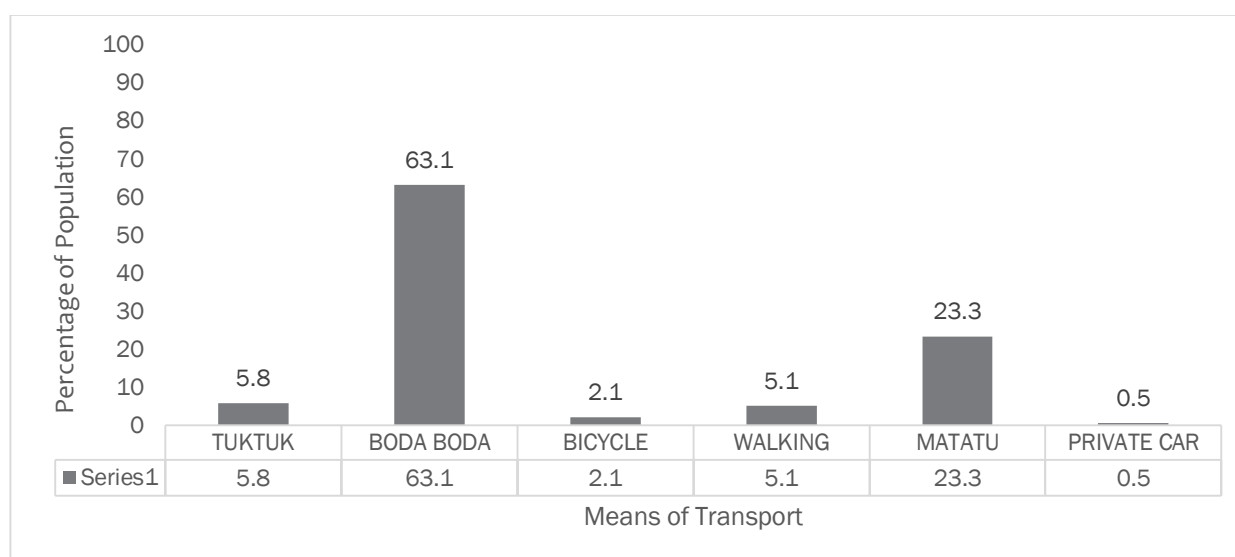
Kwale Town is the second-largest town in the County. Since its spatial scope is smaller, most areas are easily reachable by foot. Motor cycle *boda-bodas* are used to access distant peripheral areas. All streets within the town's core commercial district are tarmacked, whereas access roads to some sections are of earth and gravel standard. There is a need to upgrade its feeder roads and provide pedestrian walkways which are lacking.

Other urban centres of Msambweni, Lunga Lunga and Kinango are relatively small, making it convenient to walk since essential services are reachable within short distances.

9.8 Rural transport

Transport services provide rural communities access to markets, health services, education, and other essential services, often located in the urban areas. The roads linking the rural areas to the County's urban areas are underdeveloped. They are always impassable during rainy seasons. An example of these roads in the County are; Kuranze-Kilibasi-MacKinnon Road. Accessing public transport in rural areas remains a challenge; therefore,

Chart 4: Means of Transport for Households in Kwale



Source: Household survey, 2018

Chart 5: Main Challenge in Transport

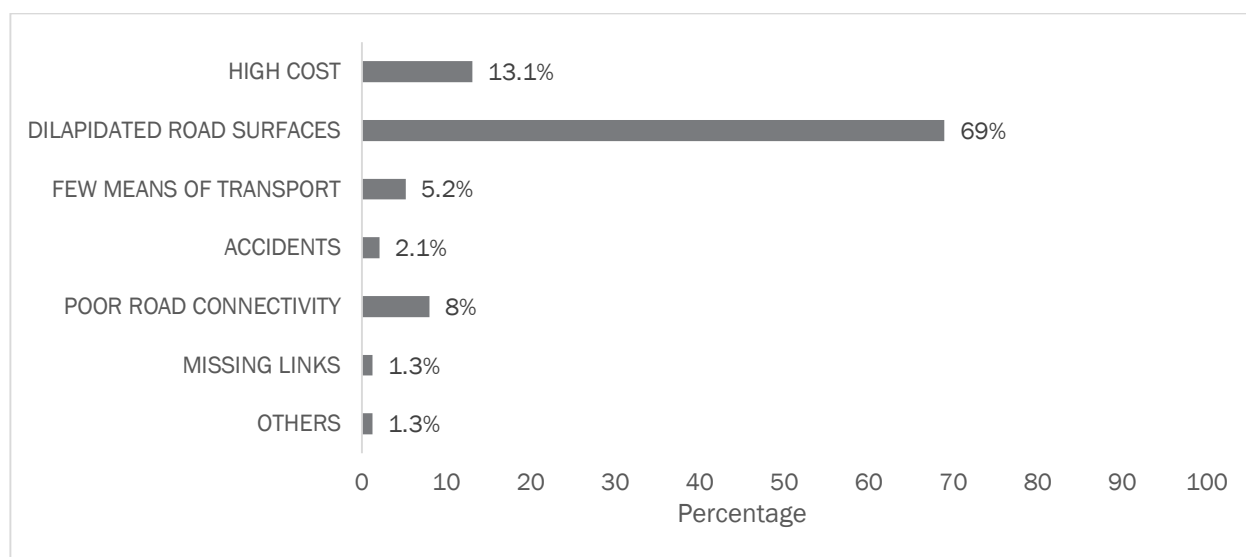
walking, motorcycles and bicycles remain the most preferred means of transport within the rural areas. Enhancing rural-urban connectivity through road surface improvement and increased public transport means will go a long way in striking a balance between urban and rural lives.

9.8.1 Challenges associated with the urban- urban and urban-rural linkages

It is established that the rural-urban linkages are inefficient due to the poor road condition. The poor road network conditions contribute to delays in the movement of goods and services across the urban and rural areas in the County. The delays further impact the economy of the County in varied proportions.

9.8.2 Challenges experienced by the users of the transportation system

According to the household survey done by Geodev (K) Ltd in 2018, boda-boda is estimated to be 63.1% of the main means of transport used by the people of Kwale County. On the other hand, the use of private cars is the least (0.5%) utilized means of transport. The findings on the modal split of the County by means of transport is as presented in chart 9-1. The challenges experienced in accessing transport means are also presented in chart 5.



Source: Household Survey, 2018



According to the household survey, the main challenge faced by residents of Kwale County in the transport sector is dilapidated road surfaces at 69%, followed by the high cost of transport and poor intra- County connectivity at 13.1% and 8%, respectively. Missing links such as lack of a bridge were cited as the main challenge in transport by 1.3% of the households.

9.8.3 Urban Transport Challenges

1. Roads in major towns in the County, such as Ukunda and Kwale, lack NMT

facilities, leading to conflict between pedestrians, vehicles, and motorbikes.

2. The lack of designated hawking areas in major towns creates commotion due to many hawkers.
3. Lack of adequate terminal facilities in major urban areas such as Ukunda results in parking along the major highway, creating traffic jams along the major roads.
4. Lack of adequate public transport hence leading to hike in fare prices for locals.

9.9 Emerging Issues

| Potential | Opportunities | Challenges | Recommendations |
|--|---|---|---|
| <ul style="list-style-type: none"> • Water Transport Ferry and boat services • Freight service transport through rail and road • Local and regional air transport services • Realization of the efficient transport system | <ul style="list-style-type: none"> • Existence of transport infrastructure; roads, airstrips, jetties, and railways. • Existence of transportation institutions, e.g., KPA • Natural harbours for port development | <p>Roads</p> <ul style="list-style-type: none"> • Poor roads condition • Encroachment on road reserve • Inadequate road infrastructure • Poor quality of public transport services. • Lack of intermodal integration • overdependence on road transport • Lack of urban transport policy • Institutional deficiencies <p>Railway</p> <ul style="list-style-type: none"> • Underutilized • Low coverage • Encroachment of meter-gauge railway reserve. <p>Air</p> <ul style="list-style-type: none"> • Undeveloped airstrips • Limited space for expansion of Ukunda airstrip <p>Water</p> <ul style="list-style-type: none"> • Inadequate and inappropriate water vessels • Undeveloped water transport infrastructure | <ul style="list-style-type: none"> • Upgrading existing and developing new Transport Infrastructure • Enhancing coordination and partnership between transport agencies. • Strengthening development control to secure transportation corridors from encroachment. • Enhance efficiency and safety of public transport. |

INFRASTRUCTURE

This plan has analyzed Infrastructure as physical and social. Improvements in infrastructure offer opportunities to improve productivity within the economy and achieve social objectives such as public health and quality education.

10.1 Physical Infrastructure

Physical infrastructure refers to the hard components necessary for the functioning of a modern economy. They are facilitative infrastructure since they enable different sectors of the economy to function. Physical infrastructure includes water supply, drainage and sewerage, solid waste management, and power supply.

Table 24: County Water Demand

| Demand | 2015 (M ³ /day) | 2020(M ³ /day) | 2030(M ³ /day) |
|-------------------------|----------------------------|---------------------------|---------------------------|
| Domestic | 36411 | 44516 | 62998 |
| Institutional | 10811 | 12696 | 16683 |
| Hotel Facilities | 4011 | 4011 | 4463 |
| Commercial & Industrial | 364 | 445 | 630 |
| Livestock | 364 | 5914 | 8043 |
| Total | 51961 | 67582 | 92817 |

Source: Kwale County Water Supply Development Master Plan.

10.1.2 Water Supply systems

The existing water supply in Kwale County consists of three system types:

10.1.3 Bulk water supply

Bulk water is drinking water distributed to consumers through potable distribution pipelines or non-potable water delivery systems such as water tankers and wagons. The primary institution responsible for supplying bulk water in Kwale County is Kwale

Table 25: Bulk water Supply sources

| Source | Location | Capacity | Area Supplied |
|-------------------------|---------------------|--|----------------------------------|
| Mzima springs | Tsavo -Taita Taveta | Total: 4000 M ³ /day Kwale Allocation: 4029M ³ /day | Along the route to Mombasa |
| Marere Springs | Shimba Hills | Total: 9000-15000 M ³ /day Kwale Allocation: 2869M ³ /day | Kwale town, Kinango town and Waa |
| Tiwi Wellfield | Tiwi | Total: 9000-15000 M ³ /day Kwale Allocation: 3745M ³ /day | Tiwi, Diani, Waa |
| Msambweni Boreholes (3) | Msambweni | 340 M ³ /day | Msambweni Town |
| Mwalewa Borehole | Lunga Lunga | 300 M ³ /day | Lunga Lunga Town |
| Chuini Borehole | Vanga | 180 M ³ /day | Vanga |

Source 3: Kwale County Water Supply Development Master Plan.

10.1.1 County water demand

Water utilization in the County includes domestic use, commercial use, public use, industrial use, and recreational use, including water sports, swimming, hotels/lodges and agriculture for irrigation and animal water. Water demand analysis and projections enable planners and policymakers to determine the amount of water required for future use by a particular community, region, or country.

The county's water demand analysis was 51,961 M³/day in 2015 and projected to be 67,582 M³/day by 2020. The projections for water demand in the year 2030 is approximately 92,817 M³/day. Domestic water demand is highest compared to other water uses, as shown in Table 24 below.

Water and Sewerage Company (KWAWASCO). Its primary water sources are; Marere springs, Mzima springs Mkanda Dam, Nyalani Dam and Tiwi wellfield, as Shown in Table 10-1. It has approximately 10,000 active connections and about 5,000 dormant connections across the County. The company currently supplies 17,778 M³/day of water. It has a total water storage capacity of 6600 M³ distributed across nine (9) storage locations (tanks).

The areas served by KWAWASCO and other small-scale water service providers (defined as service providers with at least 100 connections and serving three communal water points) in the County are presented in map 33. However, it is notable that even the areas highlighted as “served areas” are significantly underserved, with several households being unconnected

10.1.4 Community water supply

Mkanda Dam is the largest community water supply system. It is a 16M high reservoir with a storage capacity of 1.26 million Cubic Metres (MCM) operated by the community. Water is pumped to a raw water treatment plant at Mwabandari, Kikoneni and the environs. The dam is undergoing expansions, which include 6 km of 200 mm galvanized iron rising main from Mwabandari treatment works to Mwananyamala tanks (done by the County Government of Kwale, Complete); 6.3 km of

200 mm galvanized iron rising main from Mananyamala tanks to Dzombo hills (done by the County Government of Kwale, ongoing). It has a 1,500 m³ Concrete tank at Dzombo hills; 10 km of 200 mm galvanized iron rising main from Dzombo water tank to Perani (done by Coast Water Services Board); and 8 km of 75 mm distribution to Mwanguda and Mamba.

Apart from the bulk and community water supply systems, other water sources for domestic use include rivers, streams, shallow wells, water pans, and community water points. The types of water sources vary depending on the socio-economic level of an individual. Low-income families heavily rely on water pans which account for 25% of the total population. Against a demand of 51,961 m³ per day as of 2015, KWAWASCO could supply 17,778m³ per day, leaving a deficit of 34,183 M³ per day.

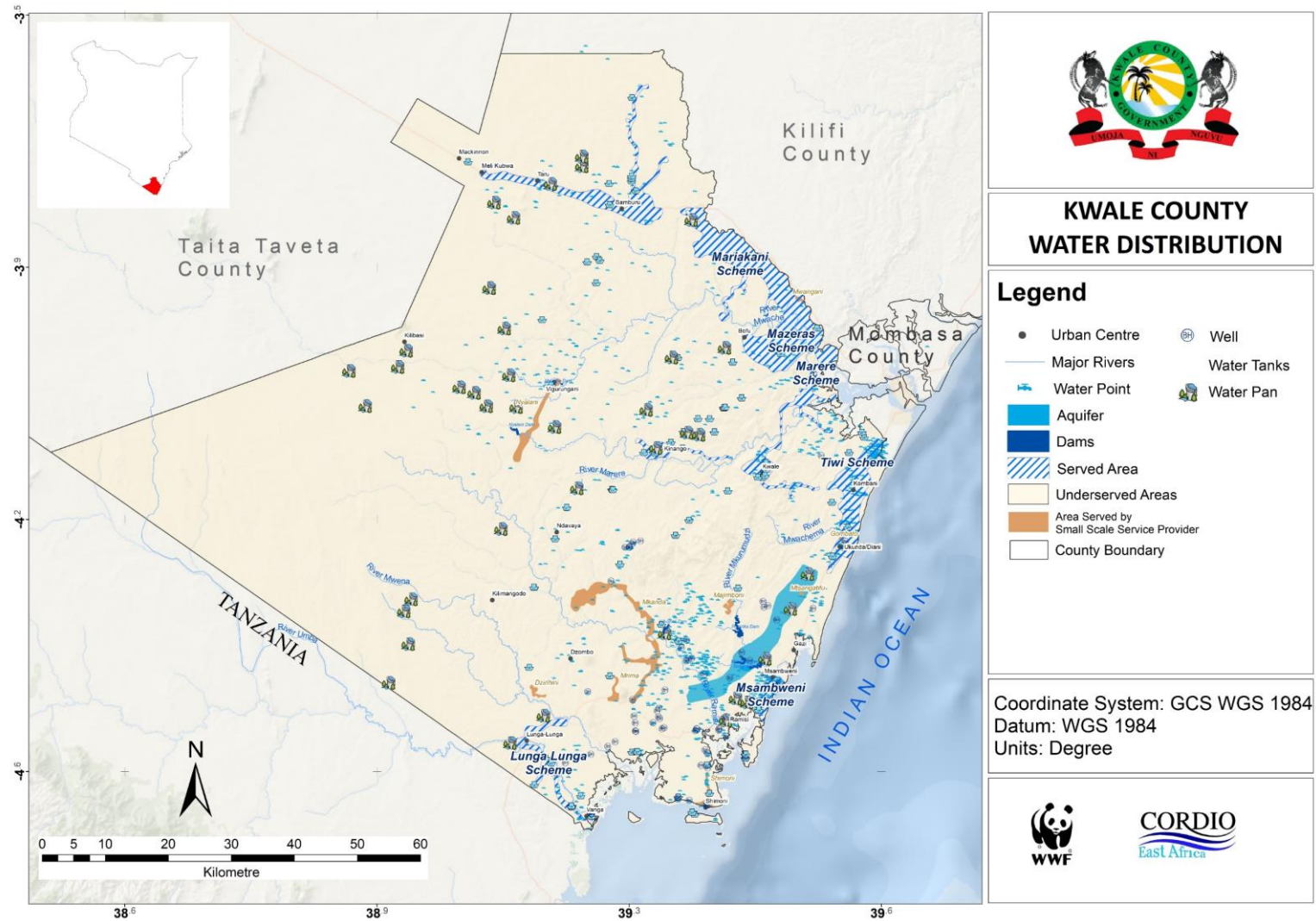
Table 26: Industrial and Irrigation Water Supply

| Source | Capacity (MCM) | Operated by | Use |
|-----------------|----------------|---------------|------------------------------|
| Mkurumudzi Dam | 8.5 | Base Titanium | Mining Operation |
| Upper Koromonjo | 2.8 | KISCOL | Cane irrigation |
| Lower Koromonjo | 2.7 | KISCOL | Cane irrigation |
| Nyalani Dam | - | Community | Fruit & Vegetable irrigation |

Source: Kwale County Water Supply Development Master Plan.

PART II: SITUATIONAL ANALYSIS

Map 34: Water Distribution Map



Source: KWAASCO, 2017

10.1.5 Ongoing water projects

Table 27: On-going Water Projects in Kwale County

| S/No | Projects | Funding (GOK/DONOR) |
|------|--|---------------------|
| 1 | Addendum Works for Bulk Water System Improvement Project | World Bank |
| 2 | Construction of Surface Tanks of Capacity of 500m ³ (five of them) made of Pressed Steel - Kinango | World Bank |
| 3 | Construction of 15 No. 100m ³ -15m high elevated steel tanks and 15No Borehole sites in CWSB Region | World Bank |
| 4 | Development of Boreholes and Equipping submersible pump sets, solar panels and generator sets at five (5) sites in CWSB region - Chuini Borehole | World Bank |
| 5 | Mkanda Water Supply Project phase II | GOK |

Source: Coast Water Services Board

10.1.6 Sewerage System

Sewer development is vital for protecting the environment and natural resources in the County and enhancing livability in the urban areas. All the towns in the County have no

integrated sewer reticulation infrastructure. Due to the lack of a sewage system and inadequacy of pit latrines, Kwale people have been exposed to water pollution and water-borne diseases.

10.1.7 Emerging issues in water and sanitation

| Potential | Opportunities | Challenges | Recommendations |
|--------------------------------|---|---|--|
| Adequate water supply | <ul style="list-style-type: none"> Availability of ocean water can be desalinated for large-scale commercial and residential use. High surface run-off in Kinango, Samburu, Lunga Lunga and other semi-arid regions of the County is viable for constructing water pans. Availability of freshwater aquifers in the County. Relatively high annual rainfall coastal plain and foot plateau viable for rainwater harvesting. Available water supply infrastructure. | <ul style="list-style-type: none"> Limited access to potable water Degradation of Water Catchment Areas Lack of adequate storage for rainwater harvesting Low coverage of water infrastructure Operational difficulties by water service providers Underutilization of ground and ocean water sources | <ul style="list-style-type: none"> Augment the County's water supply capacity. Explore mechanisms for harvesting ocean water. Promote rainwater harvesting. |
| Integrated sewer system | <ul style="list-style-type: none"> Rapidly urbanizing areas | <ul style="list-style-type: none"> Lack of Sewerage Network System in Urban Areas | <ul style="list-style-type: none"> Construct an integrated sewer system covering the whole town |

10.1.8 Solid Waste Management Infrastructure

The collection, transportation and disposal of solid waste are vested upon the County Government of Kwale. There are different types of solid waste generated in the County. These include plastic bags, bottles, cans, garden and kitchen waste and vegetable peels. Since the urban areas of Ukunda/Diani, Kwale, Kinango, Lunga Lunga, Kombani and Msambweni have a high population, they generate large volume of solid waste.

The primary sources of solid wastes in urban areas are the households, industries, retail and

wholesale activity areas and hotels located along the Indian Ocean. According to the National Sustainable Waste Management Policy (2019), “The average per capita waste generation per day is 0.5 kilograms per person”. This implies that the total waste generated in Kwale County per day is 433.41, translating to 158194.65 tonnes per year. The County lacks adequate facilities and infrastructure for waste management resulting in negative implications for terrestrial and marine life due to indiscriminate waste disposal methods. The County has one designated solid waste disposal site and one solid waste-holding bay.

Table 28: Depiction of SWM Facilities in the County.

| S/No. | Facility | Number/ Area |
|-------|-----------------------------|--------------|
| 1. | Solid waste holding bay | Kombani, |
| 2. | A solid waste disposal site | Mwabungo |
| 3. | Trucks | 1 |
| 4. | Tractors | 1 |
| 5. | Skip loaders | 1 |

10.1.8.1 Emerging Issues in solid waste management

| Potential | opportunities | Challenges | Recommendations |
|-------------------------------|--|--|---|
| Proper solid waste management | <ul style="list-style-type: none"> • Availability of Waste management institutions. • The presence of an already established site • Existing institutions participating in waste management in the County | <ul style="list-style-type: none"> • Lack of an Integrated Solid Waste Management System (ISWMS) • Inadequate waste collection centres, dumpsites, waste transportation trucks, skip loaders, skips, bins, and incinerators. • Indiscriminate dumping of solid waste is attributed to inadequate waste receptacles in urban areas. • Beach areas and their precincts lack adequate waste receptacles, leading to increased marine pollution. | <ul style="list-style-type: none"> • Develop an Integrated Solid Waste Management System |

10.1.9 Energy

10.1.9.1 Electricity Supply

The coverage of electricity connection in the County is currently at approximate 43.10%, according to the analysis done by the (KPLC). The number of connections in rural areas has risen significantly recently, following the Rural Electrification Authority (REA) and the National Government-led initiative of Last Mile Connectivity.

Kwale has a high potential for solar energy production due to longer sunshine hours daily. It is among the 14 counties earmarked for the Kenya Off-Grid Solar Access Project (KOSAP) programme whose key components include the establishment of mini-grids for community facilities, enterprises, and households; Installation of stand-alone solar systems and clean cooking solutions for households and installation of stand-alone solar systems and solar water pumps for community facilities.

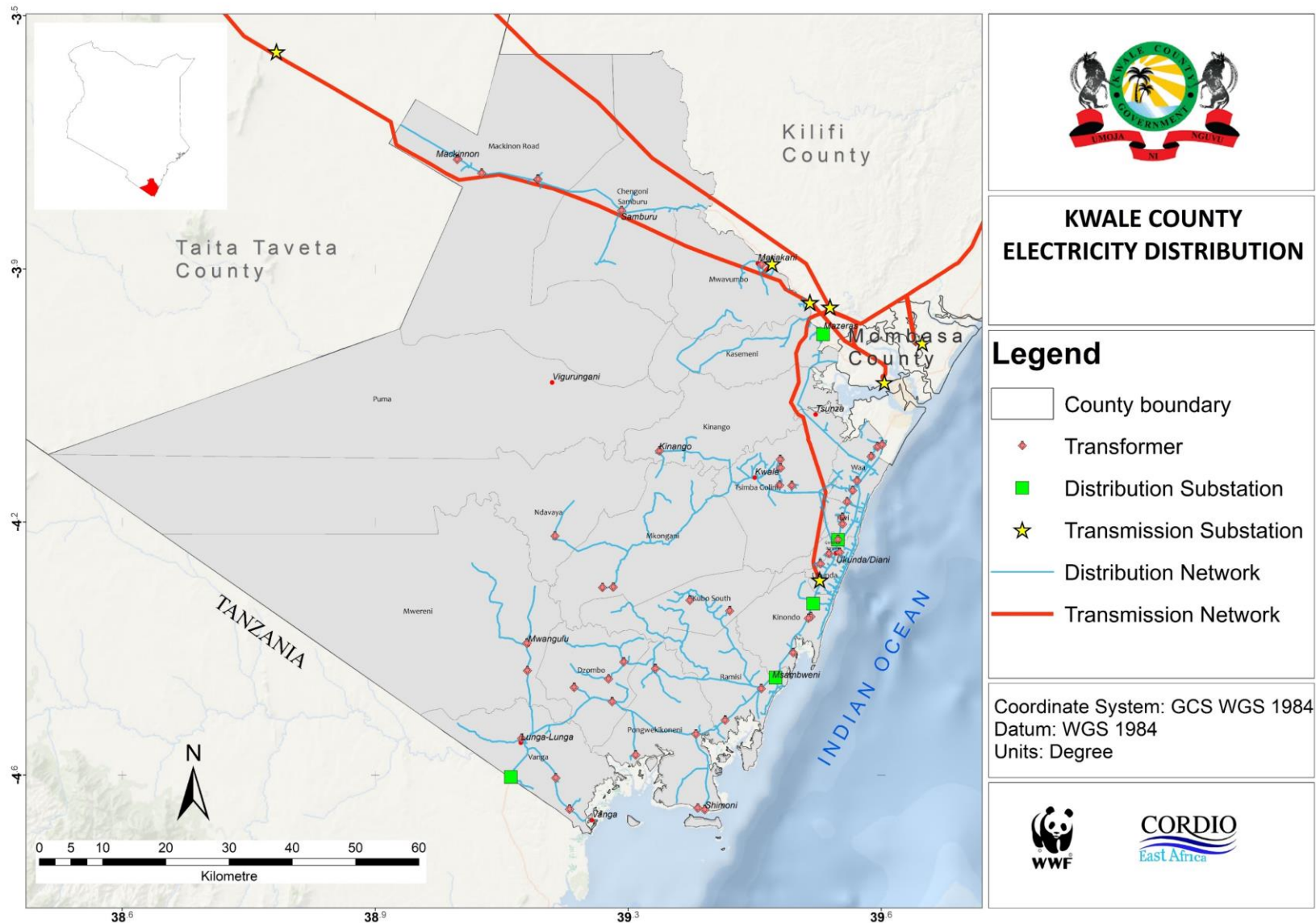
Ukunda ward has the highest electricity coverage at 77.1%, while Mackinnon Road, Ndavaya, and Chengoni-Samburu in Kinango Sub-County are the least connected at 10.3%, 17.4%, and 18.5%, respectively.

The primary energy sources for cooking are wood fuel, charcoal, and LPG. The types of cooking sources depend on the socio-economic capability of a household. The use of firewood is predominant in rural areas, whereas utilization of LPG is in urban areas. 73.9% of households use wood fuel as the primary cooking source. The use of Charcoal and LPG accounts for 21.7% and 1.4%, respectively. The overreliance on wood fuel negatively affects the tree cover, which stands at 10%. Therefore, it is necessary to advocate for the use of alternative sources of energy, such as solar and wind.

Table 29: Emerging issues in energy

| Potential | Opportunities | Challenges | Recommendations |
|--------------------------------|---|--|---|
| Clean energy Production | <ul style="list-style-type: none"> High potential for solar and wind energy. Potential for offshore wind energy and tidal energy. Biogas production in livestock production areas. | <ul style="list-style-type: none"> Low uptake of alternative sources of clean energy (solar and wind) Low coverage of electricity connection | <ul style="list-style-type: none"> Promote clean and affordable sources of energy. Increase electricity coverage. |

Map 35: Kwale County Energy Infrastructure



10.1.10 ICT Infrastructure

10.1.10.1 Role of ICT in the County.

In Kwale County, the application of ICT plays a prominent role in governance. It is an enabler for efficient service delivery. The County has made strides in acquiring and deploying ICT in its operations. Particular sectors such as finance, health, education, agriculture, and the County administration quickly embrace technology to disseminate information and enhance service delivery. The County assembly has also embraced ICT to increase service delivery efficiency in its business transaction.

The launch of Huduma Centre in Kwale Municipality as a one-stop-shop that aims to provide a wide range of services demonstrate how ICT can be leveraged to improve public service delivery substantially

10.1.10.2 Sources of information

The County's access to information is mainly via radio. Approximately 42.6% of Kwale County residents rely on the radio as their primary communication channel. About 26.3% source their information from television, while 1.3% rely on newspapers. An estimated percentage of 33.4 % of County residents have access to the internet. However, 9.8% uses it as the primary

information and communication channel, implying that the potential exploitation of the internet for education, commerce, training, and job creation is minimal. While most parts of Kwale County have good cellular network quality, some parts have poor or no network coverage at all. For instance, Dzombo Ward has network coverage of 30%, Mackinnon Road and Kilibasi are at 20%, Samburu, Chengoni, Mwaroresa, and Silaleni are at 10%. In contrast, parts of Tsimba Golini and Mteza have no GPRS coverage.

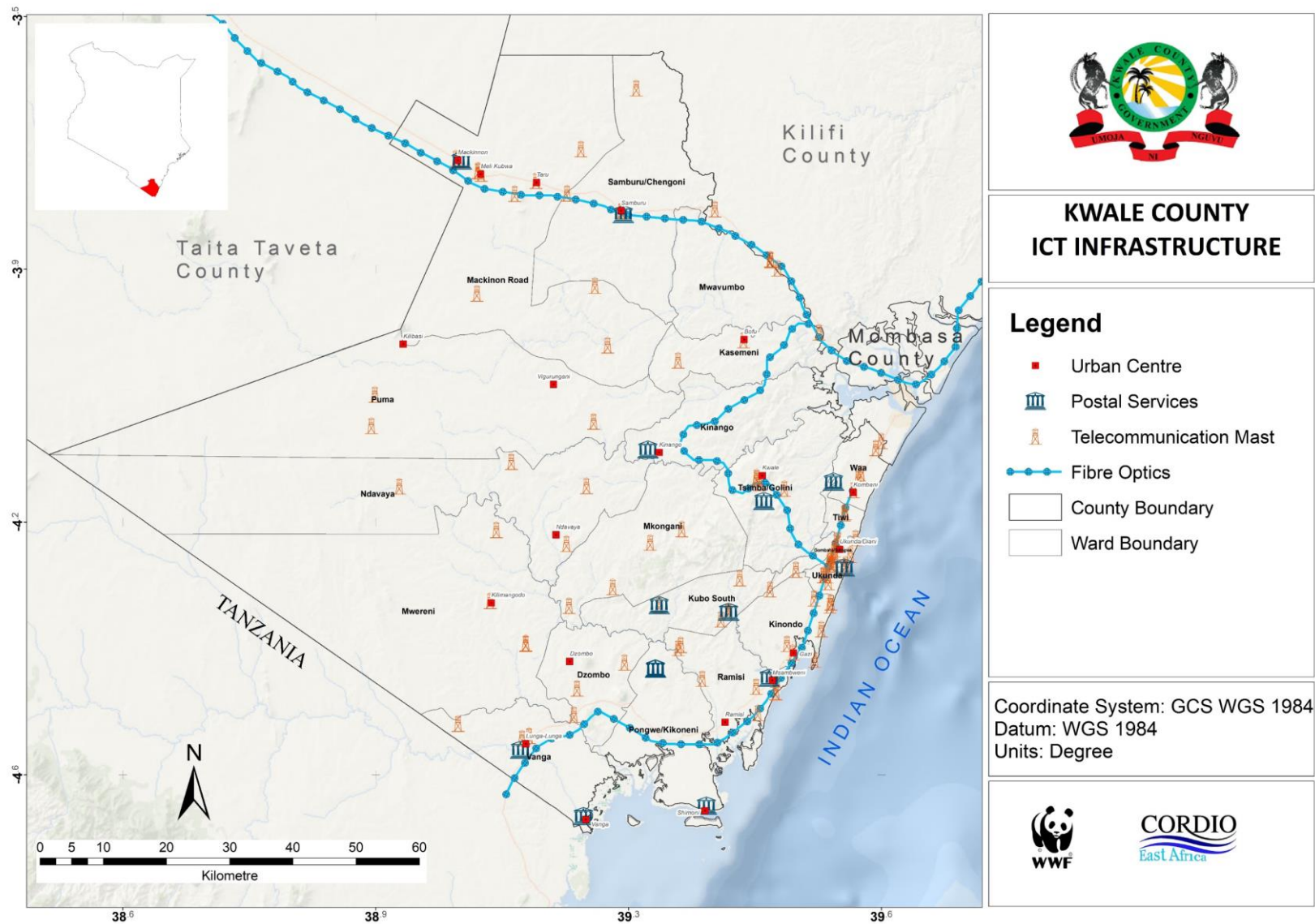
Kwale, Samburu, Kinango, Ukunda/Diani, and Lunga Lunga towns are connected to the National Optical Fibre Backbone. This presents the County government with an invaluable opportunity to lead the way in improving intra-connectivity efficiency in service delivery and internet access in County departments as well as TVETs and ECDEs.

The County has 14 post office branches at Kwale, Msambweni, Kinango, Ukunda, Shimba Hills, Lunga-Lunga, Vanga, Kikoneni, Shimoni, Lukore, Diani, Matuga, Mackinnon Road and Samburu. Map 10-2 shows the distribution of ICT infrastructure in the County.

Table 30: Emerging issues in ICT

| Potentials | Opportunities | Challenges | Recommendations |
|--|--|--|--|
| <ul style="list-style-type: none"> Digital economy | <ul style="list-style-type: none"> Existing Optic Fibre Network Existing telecommunication infrastructure Ongoing ICT programs by National Government | <ul style="list-style-type: none"> Inadequate funds to finance ICT programs- the ICT ministry got only 0.56% and 3.18% of the budget share in 2016/17 and 2017/18 financial years, respectively. Poor cellular GSM and internet connectivity in some areas such as Tsimba Golini and Mteza. Most County offices/departments lack essential ICT equipment such as computers, LAN, and WAN connectivity, thus hindering service delivery. | <ul style="list-style-type: none"> Increase Access to ICT Provision of Basic ICT Equipment/Facilities in County Offices Provide ICT Training and Capacity Building to County staff and the public. Develop a policy and legal framework to enhance ICT development in the County |

Map 36: ICT Infrastructure



10.2 Social Infrastructure

10.2.1 Education

Literacy equips citizens with the knowledge and competencies to seek gainful employment or engage in income-generating activities, promoting entrepreneurship and technological advances. Further, it empowers citizens to participate in social and political decision-making processes; enjoy their fundamental rights, and enable them to lead a dignified life. The County's literacy levels are 57% compared to the national rate of 79%.

10.2.1.1 Pre-Primary Education

Pre-Primary education is important as it creates the foundation for children before transitioning to advanced learning. In Kenya, pre-primary education starts at the age of 3 and ends at 5.

According to Census 2019, the population ages 3-5 is 83,251 persons and is projected to be 111,504 in 2028. This translates into 9.6% of the total population in the County. The County had 921 public ECDE centres and 234 private centres in 2018, with an enrollment rate of 85%. The centres have a teacher to student ratio of 1: 27 against the recommended 1: 25.

According to a socio-economic survey conducted by Geodev (K) Ltd in 2018, the average distance to a pre-primary facility in Kwale is 1 Km, against the 300 metres recommended standards in the Physical Planning Handbook. Students in Mackinnon Road and Mwereni wards cover the longest distances of 2.05 and 1.89 Km, respectively, as shown in Map 37.

Pre-primary school Demand and Projection

The recommended number for a public ECDE facility with two streamed classes is 25 students per class. Therefore, every ECDE facility should accommodate about 50 students.

Considering the population of this cohort - school-going age in 2019 83,251. Thus the County requires 1,665 ECDEs, meaning the County has a deficit of 744 centres. The County's population under this category is projected to increase to 111,504 in 2028. The required ECDE centre is also expected to increase to 2230. Provisions for funding, space, facilities, and staffing to cater for the gap is required.

10.2.1.2 Primary Education

Kwale County has 484 primary schools comprising 401 and 83 public and private primary schools, respectively. The County primary school enrollment rate is 82% against the desired national enrollment of 100%. The teachers' service commission established a gap of 1018 teachers in public primary schools within the County, as shown in Table 31.

Plate 5: Yeje Primary school in Waa/Ng'ombeni



Table 31: No. of Primary School Teachers by sex per Sub-County in Kwale County

| Sub-County | No. of Teachers | |
|------------|-----------------|-------------|
| | Total | Shortage |
| Matuga | 1383 | 225 |
| Kinango | 1482 | 476 |
| Msambweni | 1311 | 372 |
| Total | 4073 | 1018 |

Source, Kwale County Teachers Service Commission, 2018

The average distance to access primary school facilities within the County is 1.33 Km against the recommended maximum distance of 2 Kilometers. However, in MacKinnon Road and Puma wards, students cover an average distance of 3.15 and 2.8 kilometres, respectively, to access a primary school.

Primary School Demand Projection

Primary school-going age is between 6 and 13 years. This cohort had a total population of 205,236 in 2019 and was projected to be 274,888 in 2028. An ideal primary school should have an enrollment of 40 pupils per class and the classes are from standard 1-8 for a two streamed school. Therefore the total number of students in a public primary school should be 640.

With a 100% demand for public primary school facilities, the County required 312 public primary schools in 2018. It will require at least 423 public schools by 2028. Though the demand projection exhibits surplus facilities, the existing schools lack adequate support infrastructure, staff and equipment.

10.2.2 Secondary education

The County has a total of 91 public and 9 private secondary schools. Public secondary schools had a total enrolment of 37,529 students in 2018 enrollment rate of 49%. In 2017, the enrollment was estimated to be 44%. Indicating an increasing trend attributed to 100% transition policy, waived secondary school fees in public facilities and sponsorship to needy students through constituencies' bursary funds.

The County has 826 secondary school teachers and an estimated deficit of 719 teachers, i.e. the teacher-student ratio is 1:45 against the recommended ratio of 1:40. From the household survey, 2018 done by Geodev

(K) Ltd, the average distance to the nearest secondary school is 2.27 Km while the recommended maximum distance of 3 Km. However, MacKinnon Road, Kinango, Mwereni, Samburu and Puma ward secondary school students over 3 kilometres indicate a shortage of schools in these areas. The distribution of secondary schools is shown on Map 39.

10.2.2.1 Secondary School Demand and Projection

The secondary schools going cohort (14-17 years) accounts for approximately 9.04% of the total population in Kwale. Considering that an ideal public secondary school has an enrollment of 40 students per class, for a two-streamed school from 1-4, then the total number of students should be 320. With a 100% demand for public secondary schools, it is deduced that the County currently requires 241 public secondary schools. Kwale County has 91 public secondary schools, thus recording a deficit of 150 facilities. With a projected population of 112,725 students by 2028, the county has 327 secondary schools.

10.2.3 Adult and Continuing Education

Kwale County has 96 Adult and Continuing Education (ACE) centres comprising 91 public facilities and 5 private institutions.

In 2017 the total number of teachers in these centres was 67 for public and private, as illustrated in table 32.

Table 32: No. of Teachers and Enrolment trends in Kwale County

| No. of teachers | Adult and Continuing Education (ACEs) Centres | | | | | |
|-----------------|---|-------|-------|-------|-------|-------|
| | Year | 2013 | 2014 | 2015 | 2016 | 2017 |
| | Private | 6 | 6 | 7 | 7 | 7 |
| | Public | 93 | 92 | 85 | 71 | 60 |
| | Total | 99 | 98 | 92 | 78 | 67 |
| | | | | | | |
| Enrollment | Male | 973 | 1,264 | 1,204 | 943 | 767 |
| | Female | 4,295 | 4,443 | 4,550 | 4,064 | 3,089 |
| | Total | 5,268 | 5,707 | 5,754 | 5,007 | 3,856 |

Source 4: Source, Kwale County Department of Education, 2018

The total enrollment in 2017 was 3,856 students, with 767 males and 3,089 females. Enrollment has been relatively low considering the County's illiteracy levels. Public sensitization and the establishment of more ACE centres is therefore necessary.

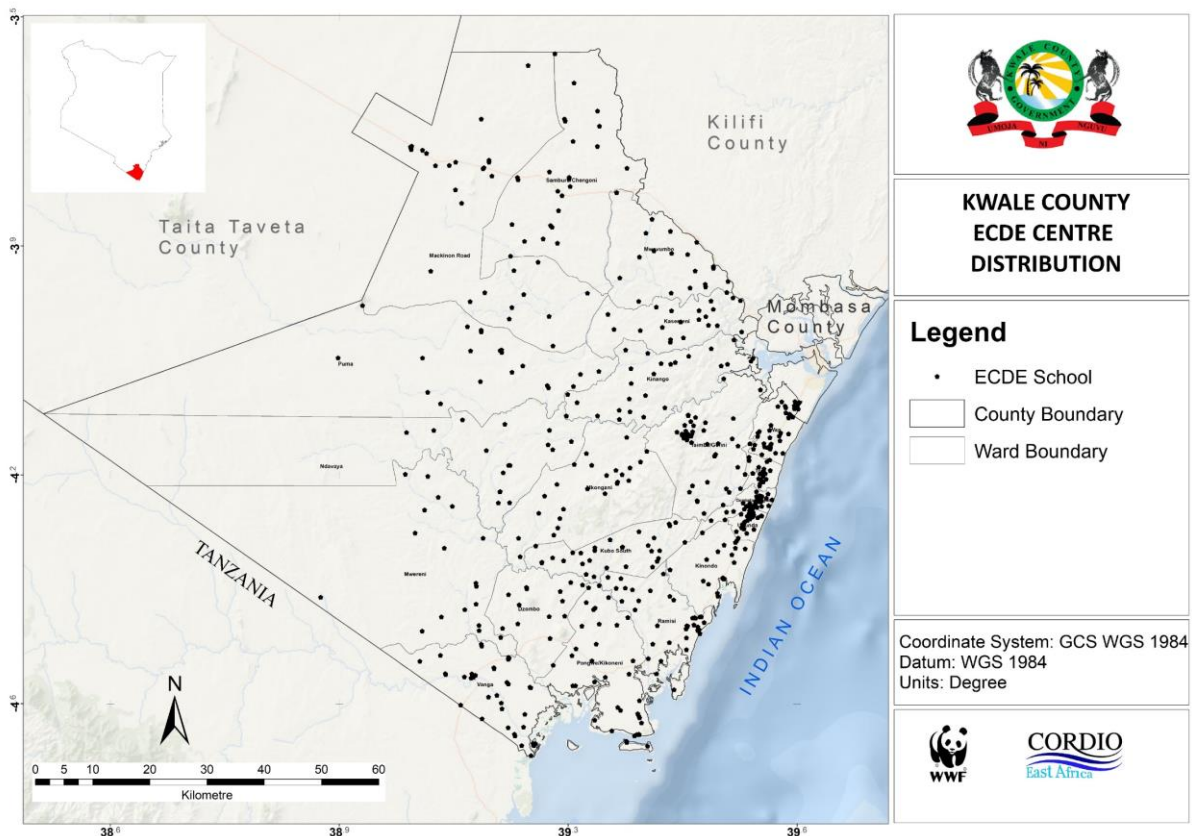
10.2.4 Special Needs Institutions

Kwale County has a total of 22 institutions offering special needs education. These institutions lack specialization on the type of need apart from the deaf and mentally challenged school in Kwale town.

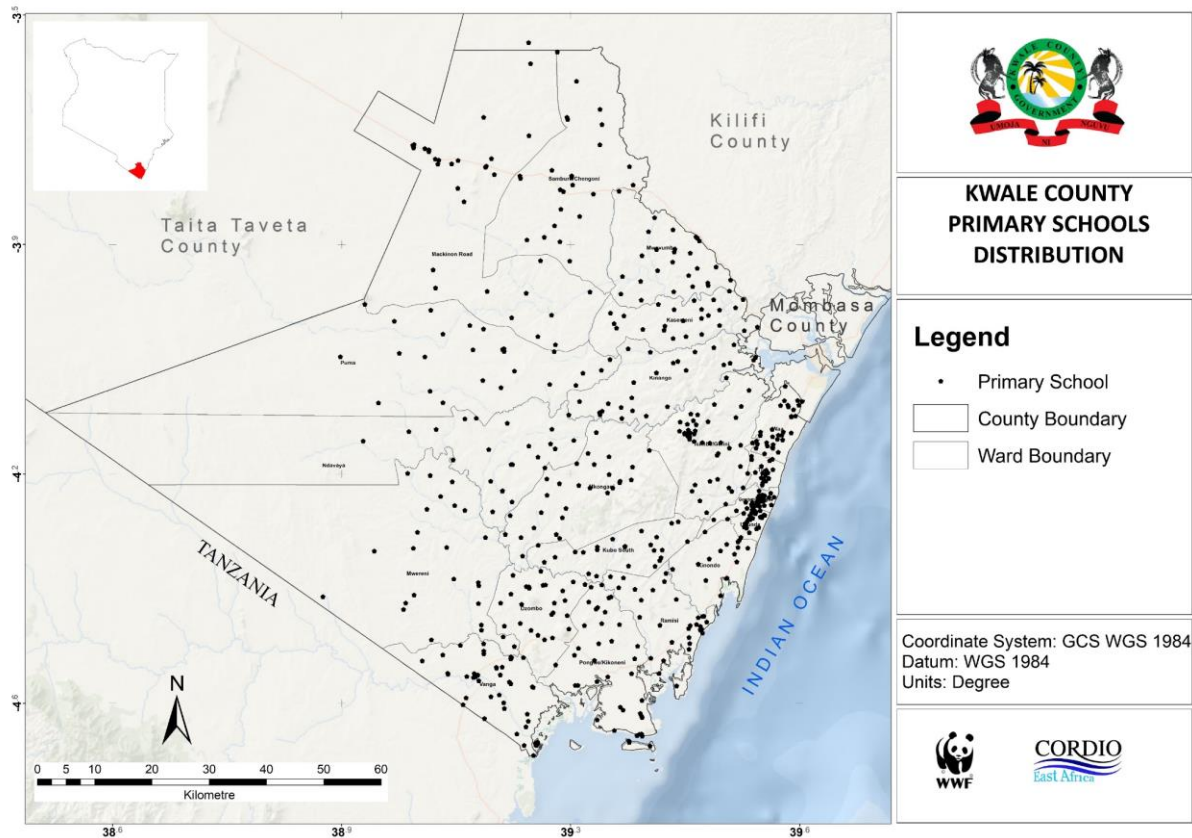
10.2.5 Tertiary

The County has one satellite campus of the Technical University of Mombasa, one Kenya School of Government (KSG), two Kenya Medical Training College (Kwale and Msambweni) and thirty-three (33) technical and vocational training centres (polytechnics) offering tertiary education. There are private, professional colleges in Ukunda/Diani that offer courses related to hospitality, hair and beauty, and ICT training. The distribution of tertiary education facilities is as shown on Map 40.

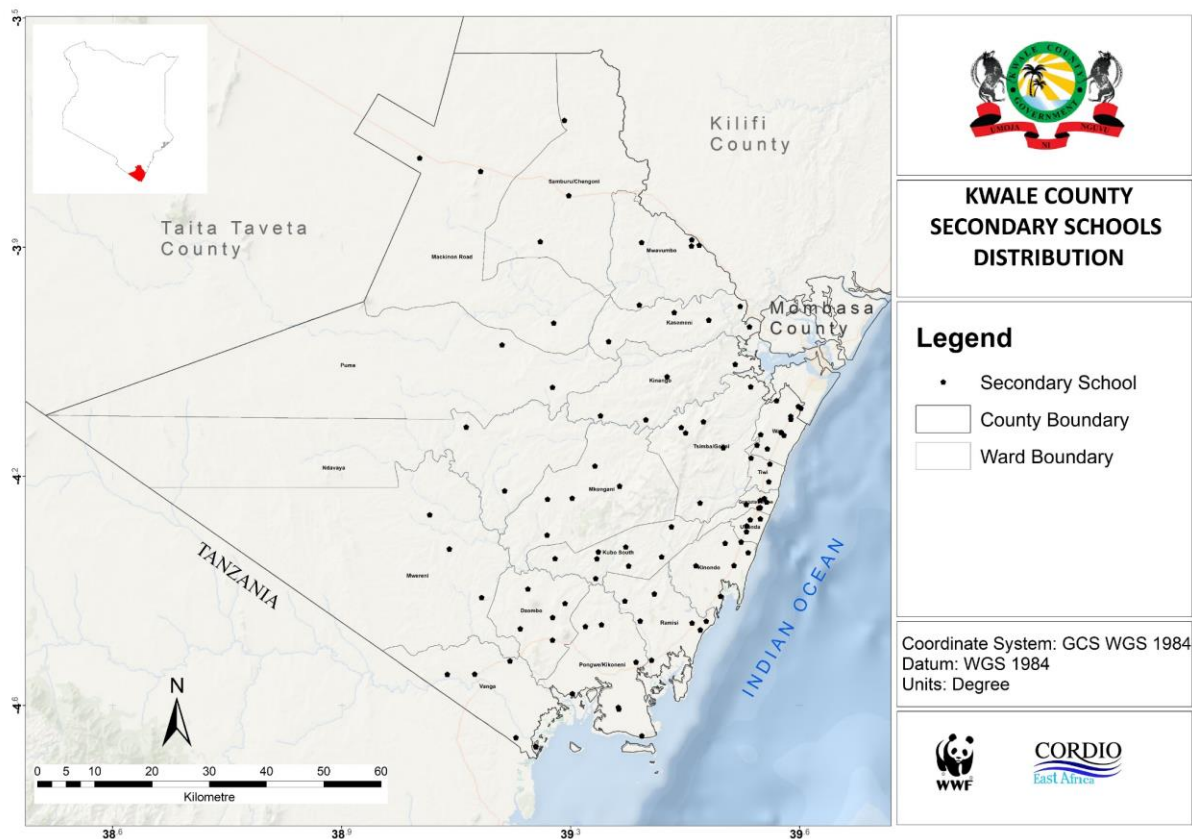
Map 37: Distribution of ECDE Centres



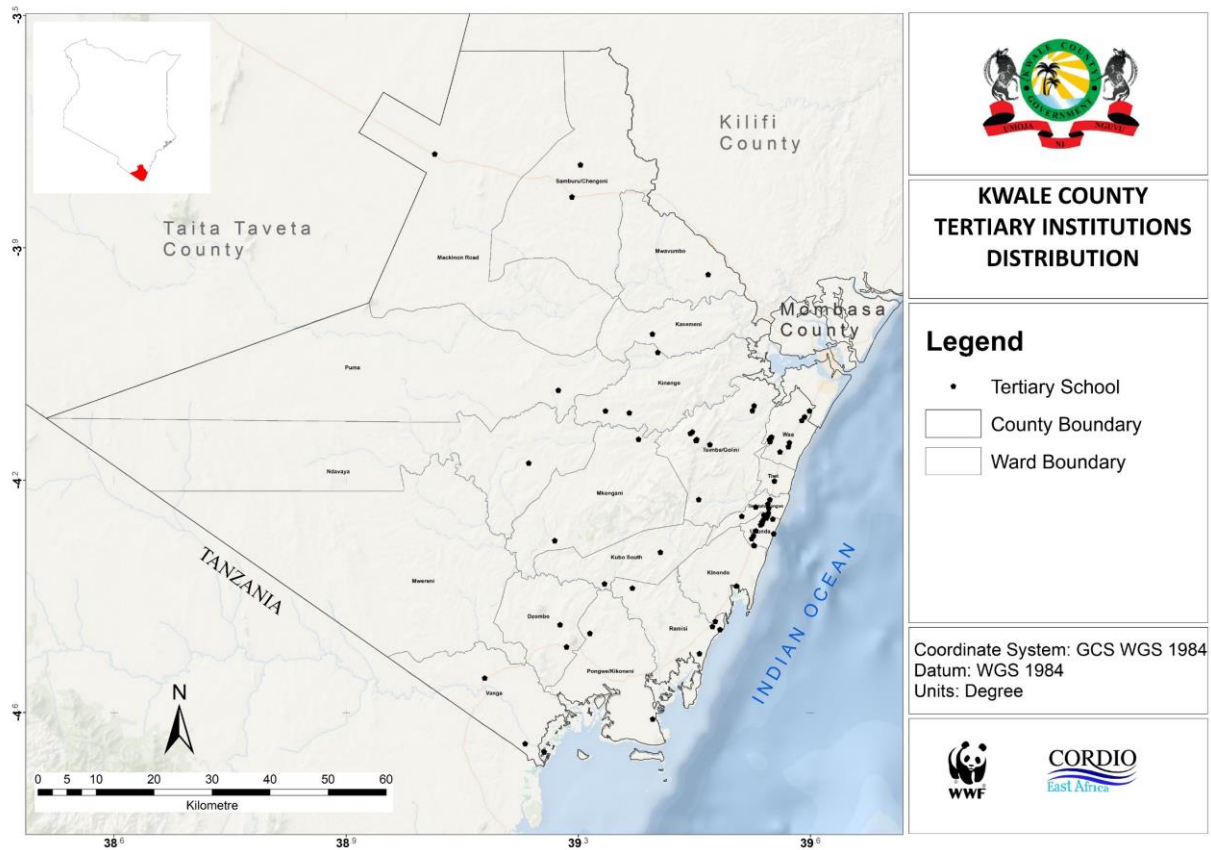
Map 38: Distribution of Primary Schools



Map 39: Distribution of Secondary Schools



Map 40: Distribution of Tertiary Education Facilities



10.2.6 Emerging issues in education

| Potential | Opportunities | Challenges | Recommendations |
|---|--|---|--|
| Development as an education hub in the Coastal region | <ul style="list-style-type: none"> Existing education facilities. Availability of trained and untrained teachers. Elaborate on education policies. National and local education grants and scholarships. Existence of civil societies and private investors supporting education. | <ul style="list-style-type: none"> High levels of illiteracy, at 53% Poor Infrastructure and Inadequate teaching staff in basic education. Low transition rates Inadequate teaching staff, tools and equipment in technical and vocational centres. High drop-out rates. | <ul style="list-style-type: none"> Enhance pre-primary education Improve access to basic education Enhance tertiary education |

10.2.7 Health

10.2.7.1 Health Care Facilities in County

The county's healthcare facilities total 260 facilities, comprising of 1 County referral in Msambweni, 3 Sub- County hospitals, 11

health centres, 123 dispensaries, and 121 community units. Table 10-8 and Map 10-7; show the Health Care Facilities in Kwale County and their distribution.

Table 33: Health Care Facilities in Kwale:

| Level | Public | Private | Total |
|-------------------------|------------|-----------|------------|
| 6- National Referrals | 0 | 0 | 0 |
| 5- County referrals | 1 | 0 | 1 |
| 4-Sub- County hospitals | 3 | 0 | 3 |
| 3- Health centres | 9 | 1 | 10 |
| 2- Dispensary /Clinics | 64 | 32 | 96 |
| 1 – Community units | 121 | 0 | 121 |
| Total Facilities | 227 | 33 | 260 |

Source: Kwale County Department of Health, 2018

Table 34: Depiction of the Health Facilities Status

| Level | Catchment Population | Current population (2018) | Facilities required (2018) | Existing Facilities | Gap | Projected population (2028) | Facilities Required | Future gap (2028) |
|-------|----------------------|---------------------------|----------------------------|---------------------|-----|-----------------------------|---------------------|-------------------|
| 6 | 4,000,000 | 855,451 | | - | | 1,160,865 | | |
| 5 | 1,000,000 | | 1 | 1 | 0 | | 1 | 0 |
| 4 | 100,000 | | 9 | 4 | 5 | | 12 | 8 |
| 3 | 30,000 | | 29 | 11 | 18 | | 39 | 28 |
| 2 | 10,000 | | 86 | 78 | 8 | | 116 | 38 |
| 1 | 5,000 | | 171 | 121 | 50 | | 232 | 111 |

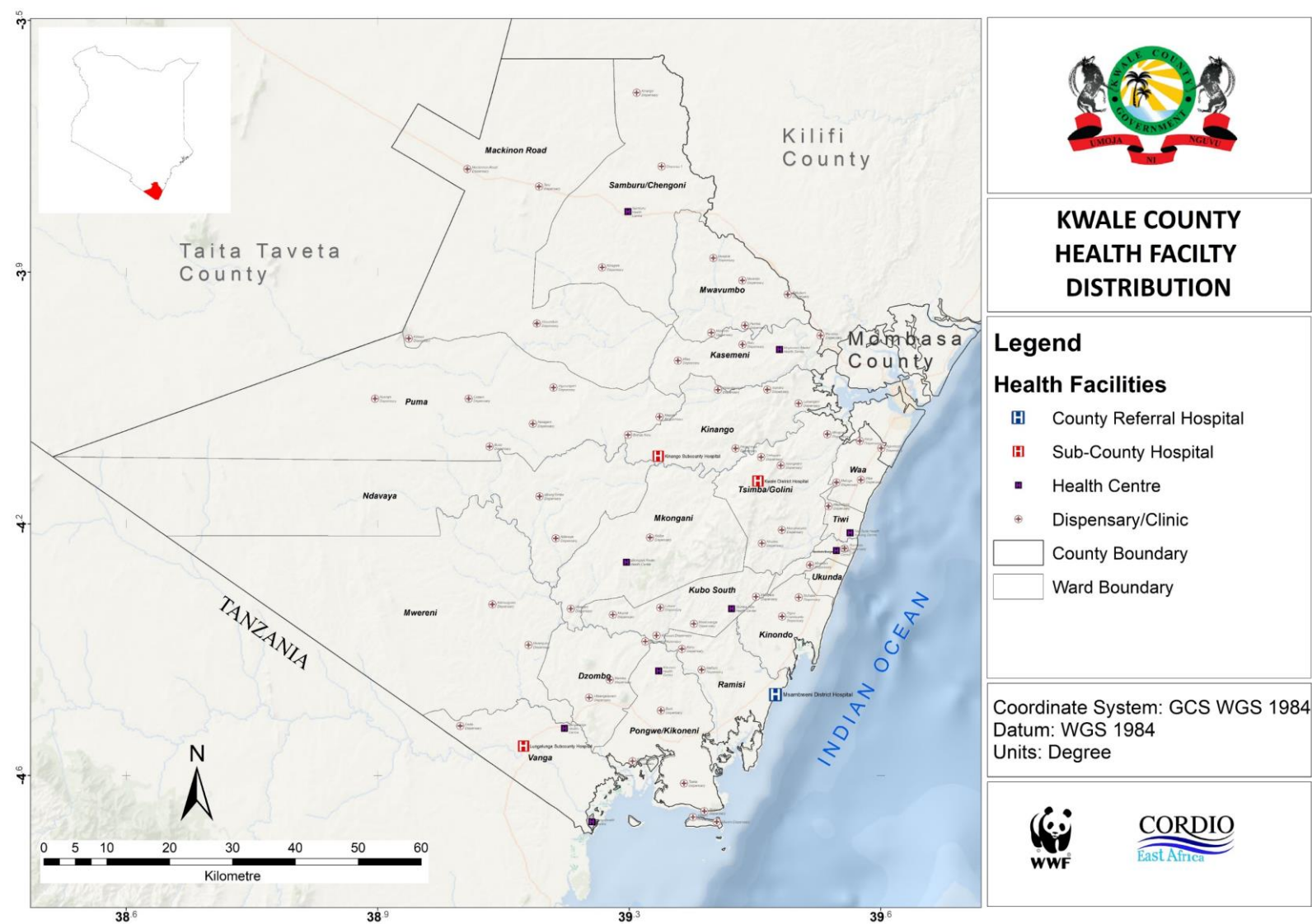
Source, Norms and Standards for Health Service Delivery in Kenya, 2014

10.2.7.2 Health Facilities Gap Analysis

Regarding the Human Resource for Health Norms and Standards for health service delivery in Kenya, 2006, the County has a surplus of 37 community units. Still, it has a deficit of 18 level 3 health facilities and 5 level 4 hospitals. Interventions are needed to meet the deficit since it is projected to rise by 2028.

The average distance to the nearest health facility within the County is 7 kilometres; however, WHO recommends an average distance of five (5) kilometres confirming the shortage of facilities. The County has 54 doctors and 452 nurses. This translates to a doctor population ratio of 1: 15,842 and a nurse population ratio of 1:1,893. The recommended doctor population ratio is 1:1000.

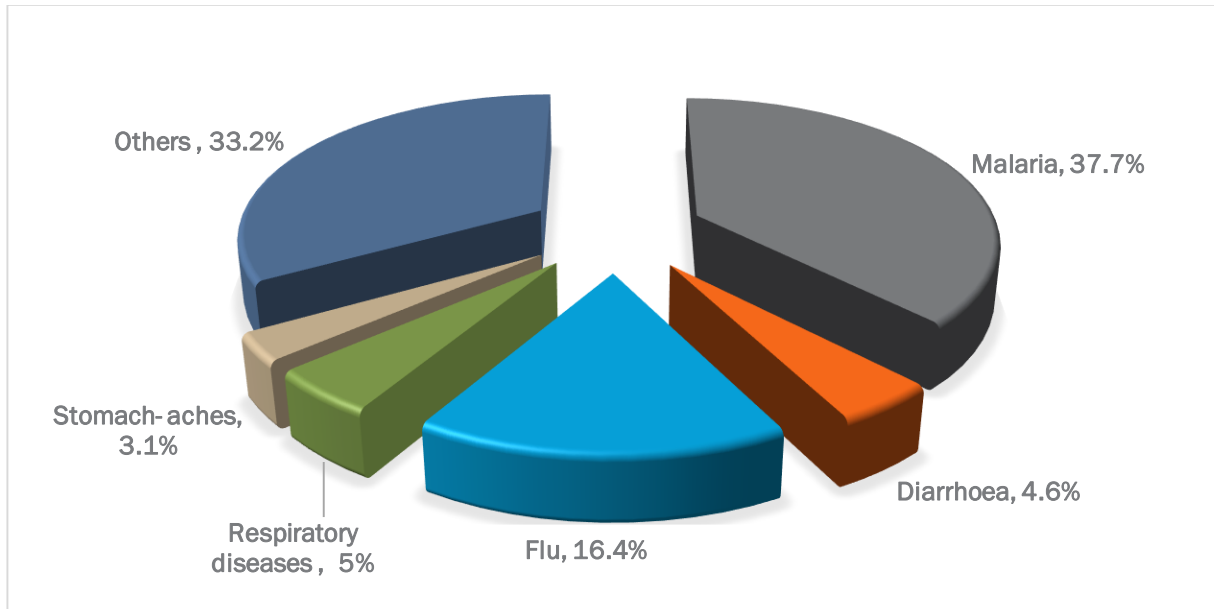
Map 41: Distribution of Health Facilities in Kwale County



10.2.7.3 Disease Prevalence and Morbidity

The five most common diseases recorded in the health facilities in the County are Malaria, Respiratory diseases such as influenza, diarrhoea, stomachaches and other diseases that include accidents, i.e., fractures and

Chart 6: Five Most Prevalent Diseases in Percentage



injuries, Bilharzia, Hypertension, Pneumonia, Rheumatism (joint pains) and Urinary Tract Infection. These diseases contribute to the County's morbidity, which stands at 22.5 per cent. Five Most Prevalent Diseases in Percentage is as shown by Chart 6 below.

10.2.7.4 (HIV) & AIDS Prevalence

County HIV prevalence is estimated to stand at 5.9%, with women having a higher rate at 70% and men at 30%. The County is estimated to have 1.6% of the total number of people living with HIV in Kenya.

77/1000, lower than the national rate of 79/1000.

10.2.7.6 Cemeteries

In most communities of the County, there are family and clan burial sites (maziaraz).

10.2.7.5 Maternal, Infant and Child Mortality Rate

The County has a Maternal Mortality Rate (MMR) of 346/1000 and an Infant Mortality Rate (IMR) of 44/1000. However, Child Mortality Rate (CMR) in the County is

10.2.8 Emerging issues in the health sector

| Potential | Opportunities | Challenges | Recommendations |
|-------------------------------|---|---|---|
| Efficient healthcare delivery | <ul style="list-style-type: none"> Existing health facilities for upgrading Defined structure for healthcare provision Availability of NGOs and FBOs | <ul style="list-style-type: none"> High Disease Prevalence Drugs and substance abuse Inadequate health facilities. Inadequate health support infrastructure and facilities. inadequate medicine Insufficient health-care personnel High infant and child mortality rates. Lack of specialized healthcare. | <ul style="list-style-type: none"> Promote Preventive healthcare Provide accessible Curative healthcare Construct more health facilities |

PART II: SITUATIONAL ANALYSIS

| | | | |
|--|--------------------------|--|--|
| | in healthcare provision. | <ul style="list-style-type: none">• Overreliance on curative care over preventive care.• Lack of land ownership documents for some facilities.• High cost of healthcare. | <ul style="list-style-type: none">• Equip health facilities with adequate personnel and infrastructure |
|--|--------------------------|--|--|



10.2.9 Recreation and Community Facilities

Refers to amenities principally used to support community services, leisure, and cultural activities. Such Facilities include town halls, senior citizen centres, community halls, meeting rooms, and community centres.

10.2.9.1 Community Centres

The County has one amphitheatre in Kwale town, 24 social halls distributed at ward levels and two cultural centres in Kwale and Kilibasi.

10.2.9.2 Public Parks and Stadia

The County has 2 public parks, i.e., Baraza Park in Kwale town and Kinango Park in Kinango.

One County stadium in Kwale town. Most youths depend on undeveloped neighbourhood playgrounds and schools' playgrounds for sporting activities.

10.2.9.3 Rehabilitation and Children Rescue Centres

There is one rehabilitation Centre in Kwale County, i.e., Kombani Rehabilitation Centre, with about 600-1000 persons. There is a medium-security prison in Kwale for both males and females. However, the County lacks children rescue centres.

10.2.10 Emerging issues in recreational and community facilities

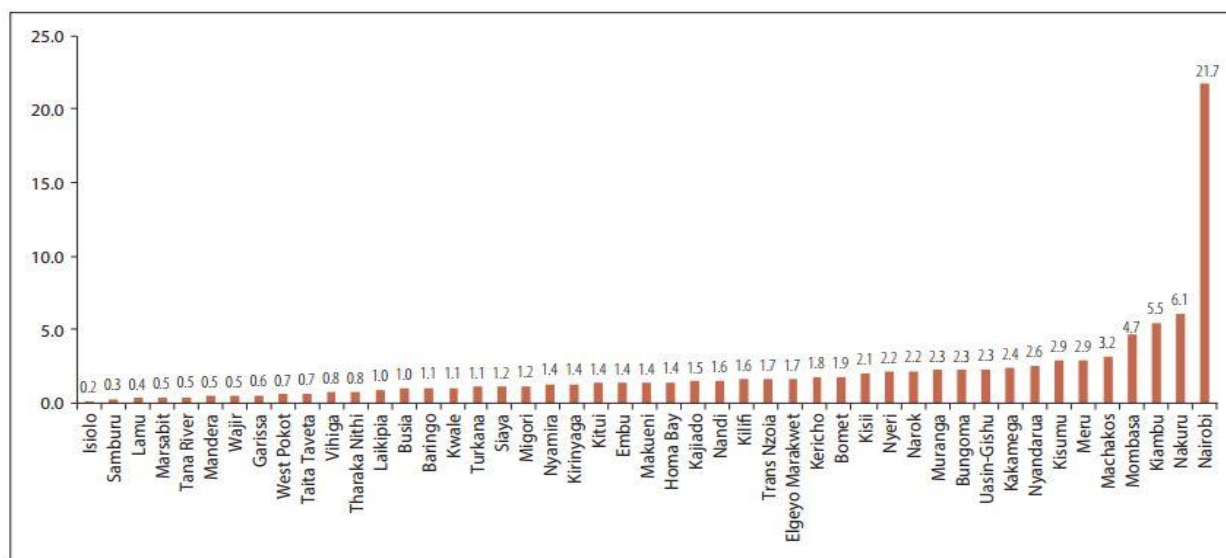
| opportunities | Opportunities | Challenges | Recommendations |
|---------------------------------|---|---|--|
| Recreational development | <ul style="list-style-type: none"> • Availability of recreational facilities and ward social halls for talent development • Availability of talent • Cultural diversity • Development control department for safeguarding land for recreational facilities. | <ul style="list-style-type: none"> • Limited Number of Parks, Stadia and Playgrounds, rehabilitation and creation cultural Centres and social Halls • Illegal acquisition of land meant for Recreational Facilities • Undeveloped Recreational Facilities • Inadequate Fire Emergency Response Facilities | <ul style="list-style-type: none"> • Provide adequate and appropriate recreational and community facilities |

THE COUNTY ECONOMY

11.1 Overview

The County contributes about 1.1% of Kenya's Gross Domestic Product (GDP). It is among the counties with a small share of GDP as indicated

Chart 7: Share of Counties in GDP (2013-2017)



11.2 Economic Sectors in Kwale

The economy of Kwale is driven by several sectors: agriculture, tourism, mining, fishing, trade and commerce, and manufacturing.

11.3 Agriculture

The agriculture sector can be classified into crop production and livestock production.

11.3.1 Crop production

Approximately 84.8% of the households in Kwale practice crop farming. However, about 86.2% of these households practice crop farming for subsistence. Both food and cash crops are grown. The main food crops grown in the County include maize, cassava, sweet potatoes, beans, peas and green grams, while cash crops grown include: cashew nuts, coconut, sugarcane, bixa and semi-commercial crops like citrus, passion fruits, pineapples and mangoes. Recently, Moringa production has

by Chart 11-1. Nonetheless, many of these counties are growing relatively faster, signifying the potential for a catch-up. Over the period 2014-2017, Kwale County has maintained an average growth of 5.6%

come up as an agricultural activity within the County.

The County has a high potential for crop production, especially in: Kubo South, where there is high potential for horticulture such as Mangoes, citrus, and passion; Lunga Lunga, Vanga, Mwereni, Dzombo and Kikoneni, where there is high potential for cereal production especially maize, green grams, cowpeas and Matuga and Msambweni which are coconut producing zones.

Irrigation agriculture can be utilized to produce large-scale horticultural crops, especially vegetables and fruits, including capsicum (pili pili boga), okra (mabenda), onions, African eggplant (tunguja), pepper, eggplant (biriganya), amaranthus (mchicha), pawpaws, watermelons, tomatoes and bananas.

Other crops such as seaweed, black nightshade (mnavu), futswe and cowpeas (mkunde) and

(mitsunga), which grow well and wild in most areas in the County, can be commercialized to derive income out of them. These crops are also very rich in vitamins and minerals and can be a means to offer food security.

11.3.1.1 Crop Storage

The household survey conducted by Geodev (K) Ltd indicated that 58.8% of households practising crop farming store their produce in their houses while 36.9 % store in traditional granaries. This shows that the majority of the farmers store their produce rudimentarily, which increases post-harvest losses and compromises the quality of the produce.

11.3.1.2 Crop Irrigation

The field survey indicated a low level of irrigation farming. Approximately 5.8% of the households in the County engage in crop irrigation, for instance, Kanana and KISCOL.

11.3.1.3 Crop produce marketing

Approximately 59.4% of the households practising commercial farming sell their produce directly to consumers. Approximately 32.8% of households sell their produce to intermediaries who often exploit them. There is a need for an integrated value chain approach in the marketing of produce and sensitization of farmers on value addition and establishing agro-processing industries.

11.3.1.4 Source of seeds/planting materials

Approximately 64.3% of the households obtain seeds from their previous harvests. About 7.7% of the households obtain seeds/planting materials from government institutions and initiatives. This indicates that most households use uncertified seeds/planting materials, thus continuing low production.

11.3.1.5 Access to extension services

The Household survey done by Geodev (K) Ltd indicated that approximately 67.7% of households have no access to expert farming

information and 22.4% access farming expertise from the County extension officers. Other farmers rely on other sources of information such as media, cooperatives, trade fairs/ shows and form model farmers.

11.3.1.6 Mechanization

Approximately 34.5% of the farming households use machinery on their farms, of which 57.10% hire from private owners. In comparison, 32.3% use their machinery. Initiatives to promote access to farm machinery should be put in place to optimize farm productivity in the County.

11.3.2 Livestock Production

In Kinango and parts of Lunga Lunga Sub-counties, pastoralism, ranching and agro-pastoralism are practised. The main livestock activities comprise rearing cattle, goats, and camels. There is a total of 10 ranches in Lunga and Kinango Sub-counties. Out of these, 6 are private company ranches and 4 community ranches. Apart from the ranches, 68.8% of households practice livestock farming on a small scale and depend on grazing fields for pasture.

The County has an expansive livestock zone covering approximately two-thirds of the county, which presents an opportunity for livestock rearing for beef, dairy, hides and skin processing.

11.3.3 Livestock Infrastructure

11.3.3.1 Extension services

Each sub- County has a veterinary surgeon. Ideally, each ward should be served by an animal health officer; however, 12 wards are adequately covered by animal health extension officers. The County also has 5 artificial insemination officers, 3 of whom couple as ward animal health officers. The field survey indicated that 44.6% of livestock farmers access livestock extension services.

Table 35: Livestock Officers

| Rank | Number | Area of serving |
|----------------------------------|--------|-----------------|
| Director Veterinary services | 1 | Entire County |
| Veterinary Surgeon | 4 | 4 Sub-Counties |
| Animal health officers | 12 | 12 Wards |
| Artificial Insemination officers | 5 | County |

Source: County department of agriculture; Livestock

11.3.3.2 Livestock markets, slaughterhouses and cattle dips

The County has 3 main active livestock markets: Mwangulu, Mwakijembe, and Kinango. However, these facilities lack support infrastructure and services such as banking services.

The County has four (4) slaughterhouses and nine (9) slaughter slabs. However, one (1) slaughter facility is publicly owned. Some of these facilities, such as the Kinango slaughter slab, are in poor condition and require rehabilitation.

Table 36: Livestock Infrastructure

| Ward | Slaughterhouses | | Cattle Dips |
|--------------------|----------------------|---|---|
| | Public | Private | |
| Waa\Ng'ombeni | Pungu slaughterhouse | | Ng'ombeni cattle dip |
| Tsimba Golini | | Slaughter slab | Mbuguni cattle dip, Vyongwani cattle dip |
| Kubo south | | Slaughter slab | Majimboni cattle dip, Lukore cattle dip Makombe cattle dip, Kichaka samba cattle dip, Majimoto cattle dip, Mwaluvanga cattle dip, Shimba hill cattle dip |
| Mkongani | | | Mtsaviani cattle dip |
| Ramisi | | | Ramisi cattle dip |
| Pongwe/Kikoneni | | Kikoneni slaughter slab | Pongwe / Kikoneni cattle dip Mwandeo cattle dip |
| Dzombo | | Mamba slaughter slab | Ngulukulu cattle dip |
| Vanga | | Lunga large slaughter slab Perani slaughter slab | Kitsukwa cattle dip Mtsongo cattle dip |
| Mwereni | | Mwangulu slaughter slab | Mwereni cattle dip, Kilimangodo cattle dip |
| Ndavaya | | | Ndavaya dip |
| Kinango | | Kinango slaughter slab | Ngozini cattle dip |
| Puma | | | Mwamandi cattle dip |
| Mackinon Road | | | Mgallani cattle dip |
| Samburu / chengoni | | | Matope cattle dip Silaloni cattle dip Kinangoni cattle dip |
| Kasemeni | | Kasemeni slaughterhouse | Mtaa cattle dip |
| Mwavumbo | | Mariakani slaughterhouse | Mwabila cattle dip Kafuduni cattle dip Matumbi cattle dip |
| Kinondo | | Mwabungo slaughterhouse Bomani slaughter slab | |

Source: County department of agriculture; Livestock

11.3.4 Poultry

Poultry farming is mainly practised at the subsistence level within the County. However, poultry commercialization is viable in the County due to proximity to the ready market, including Mombasa and Diani.

11.3.5 Apiculture



Apiculture is an emerging economic activity within the County being promoted in the rural areas as one of the industries that improve off-farm incomes and conserve the environment, supplementing local fishermen incomes and reducing overfishing and destroying marine ecosystems. Commercial bee-keeping has recently started to be realized in Lunga Lunga, Kilibasi, Tsimba and Matuga. However, apiculture within the County is very low due to:

- High cost of inputs such as the beehive, which cost on average Ksh. 4500.
- The farmers lack adequate skills in managing bees and handling hive products.
- Inadequate training for both farmers and extension staff.
- Limited access to appropriate bee-keeping equipment.
- There is an underdeveloped marketing system of hive products both locally and internationally due to quality and marketing organisations problems.
- Lack of adequate and intense research on the existing bee-keeping

technologies, equipment, and product utilization.

- Low prioritization of bee-keeping in relation to other enterprises in the wider agricultural sector.
- Therefore, the necessary financial and technical support to fully exploit the County's potential for beekeeping should be provided.

11.3.6 Aquaculture

There is minimal freshwater fish farming practised in the County. Only 31 active ponds are found in institutions of learning and farmer groups. This is a sharp decline from the previous 338 fishponds established during the Economic Stimulus Program. Freshwater fish farming remains unpopular in the County irrespective of wide marketing by the national government. This scenario is influenced by water scarcity, low agro-technological uptake, and unreliable fish farming inputs within the County. The availability of freshwater wetlands in the County offers a great opportunity for fish farming.

Marine water aquaculture (Mariculture) in Kwale is still in its infancy. It has considerable potential as an alternative source of livelihood and additional income., this subsector has been constrained by low technology uptake, high capital requirement and inadequate extension services. The mangrove areas along the coastal strip of Kwale have a high potential for Mariculture. Several community projects have been started, including mangrove mud crab farming at Tsunza and Vanga and oyster farming at Gazi. Seaweed cultivation is currently active within four sea sites in Mkwirow, Kibuyuni, Funzi and Gazi. The Kenya Coast Development Project (KCDP) has also initiated a project of milkfish production in ponds and collection of wild fingerlings for marketing to other farmers, including outside the County at Makongeni.

Opportunities for aquaculture investment in Kwale exist in:

- **Integrated aquaculture:** Aquaculture can easily be integrated with conventional crop and livestock farming using fish ponds.
- **Cage culture:** This can be done in the permanent rivers, Indian Ocean, and dams within the County.
- **Ornamental fish culture:** There are only a handful of ornamental fish producers in the County, yet there

exists a ready market for the products locally and internationally

11.3.7 Agro-Forestry

Farmers in the County have adopted agro-forestry due to the ongoing promotion of agro-forestry and tree planting sensitization programs. Industries such as *Kutoka Ardhini EPZ in Lunga Lungu*, *South Coast Forest Owners Association (SCOFOA)* and *Asante Capital EPZ in Ukunda* have contributed to an increase in the numbers of agroforestry farmers. The promotion of this land-use system will broaden the economic base for the County while conserving the environment.



11.4 Emerging issues in Agriculture

| Potential | Opportunities | Challenges | Recommendations |
|---|--|--|--|
| <ul style="list-style-type: none"> • Self-food sufficiency | <ul style="list-style-type: none"> • Available land suitable agricultural • High Irrigation potential in the County • Potential for growing Industrial crops • Available Mari-culture potential zones • Potential for emerging agriculture practices such as aquaculture and apiculture | <ul style="list-style-type: none"> • Growing of unsuitable crops irrespective of agro-ecological potential • Land Fragmentation • Low uptake of modern farming technology • Prevalence of pests and diseases • Poor post-production handling • Over-reliance on rain-fed agriculture • Restricted access to credit • High cost of farm inputs • Dormant agricultural training and research institutions • Inactive and dormant farmers' cooperative societies. • Inactive demonstration farms • Inadequate extension personnel • Lack of farmers information system | <ul style="list-style-type: none"> • Preserving and optimizing agricultural land • Intensification and diversification of Farming Systems • Creating Fiscal Measures to Support Farmers • Strengthening institutional support and extension services • Embracing Value Addition in Agriculture • Promote Agri-business |



11.5 Tourism and Hospitality

The County contributes significantly to the total national tourism revenue due to the varied tourism assets.

The sector is estimated to employ the largest number of people directly and indirectly in the County. The people employed directly in the sector undertake various activities, including security personnel, chefs and cooks, room stewards, gardeners/landscapers, tour guides and operators, waiters, language translators, animators, masseuses, and IT experts, receptionists, hotel managers, among others. Those employed indirectly through the sector include security companies, taxi operators, tour guides and operators, food suppliers, building, construction and maintenance, animators, and artisans.

In addition, the sector contributes indirectly to improving service delivery and infrastructure.

11.5.1 Tourism Assets in Kwale County

The County has numerous tourist attraction assets ranging from the world-renowned sandy beaches, historical and monumental sites, natural parks and reserves, conservancies, ecotourism sites, Islands, Indian Ocean and hospitality facilities, culture and heritage of the people of Kwale.

11.5.1.1 Sandy beaches

They include the 17 km stretch of pristine white fine sandy beach in Diani, Msambweni, Shirazi, Funzi, Shimoni, Wasini and Kisite tidal Island. The Beaches are ideal for beach tourism, such as snorkelling sports, basking, picnicking, camping, photography, among others.

11.5.1.2 National parks and Reserves

The County has 3 National parks and reserves: Shimba Hills National Park Reserve, Kisite bandas in Shimba Hills and Kaya Kinondo eco-tourism project in Kinondo are community-owned. In addition, the Mwaluganje Elephant

Mpunguti Marine Park and Reserve, and Diani/Chale Marine Reserve. Shimba Hills National Park Reserve is used for bird watching, sightseeing, photography, camping, nature trail to Sheldrick waterfalls and botanical research.

Kisite Mpunguti Marine Park and Reserve offer snorkelling, diving, swimming with dolphins, sunbathing and marine conservation tourism.

Diani/Chale Marine Reserve is a gazetted marine reserve whose management and operation has not been realized yet. The reserve stretches from Waa to Chale along the coastal line. It offers an opportunity for sport fishing, sky diving, surfing, snorkelling, and boat riding.

11.5.1.3 Historical and monumental sites

The County has several historically significant sites. They include Fikirini caves, Mwanangoto caves at Shimoni, Kongo Mosque in Ukunda, Lwayo La Mlungu in Mwereni, Nyumba Ya Hoe – Kilibasi, Vanga Ruins, Jumba la Mbaruku in Gazi and Komboza Caves at Diani, among others. The Kaya Forests including Kaya Kinondo, Kaya Waa, Kaya Muhaka, Kaya Jego, Kaya Tiwi, Kaya Kwale, Kaya Lunguma, Kaya Sega, Kaya Likunda, Kaya Diani, Kaya Mtswakara, Kaya Gandini, Kaya Chale, Kaya Dzombo, Kaya Mrima among others. The sites are the potential for cultural tourism and ecosystem services.

11.5.1.4 Conservation sites

The County hosts unique places that are used as tourism sites. They include; Gazi Boardwalk in Kinondo, Wasini Women Boardwalk in Vanga and Majimoto site in Dzombo, Sable

Sanctuary in Kinango is a community conservancy currently used for tourism activities.

11.5.1.5 Islands

There are 20 islands in the County, 4 of which are inhabited and include Wasini, Funzi, Mzizima and Chale. The islands offer an opportunity for exploration and island tourism.

11.5.1.6 Indian Ocean

The County enjoys the luxury of being a preferred tourist destination throughout the year. The peak season is in December. The high season ranges from January to March and July to August, while the low season is only between May and June. The open water of the Indian Ocean is also a tourism asset for the County. It offers varied tourism activities such as surfing, kayaking, diving, swimming, photography, sport fishing and snorkelling.

11.5.1.7 Hospitality

There are 14 tourist star-rated establishments in the County with a bed capacity of 3293. These facilities offer the County an opportunity to exploit the Meetings Incentives Conferences and Exhibitions (MICE) tourism model. The County has a high potential for investment in the hospitality sector, particularly during implementing the vision 2030 flagship project, namely Diani Resort City, whose construction is on course and the possible Tsunza Resort town.

Others include; Neptune Beach Hotel, Almanara, Southern Palms, Diani Sea Lodge, Pinewood, Kaskazi Beach Hotel, Baharini, Amani Tiwi, Travellers, The Maji House.

Map 42: Hospitality Establishment

| No. | Establishment | Rooms | Beds | Ratings |
|-----|---|-------|------|---------|
| 1. | Diani Reef Beach Resort & Spa | 143 | 286 | ***** |
| 2. | Leopard Beach Resort and Spa | 198 | 396 | ***** |
| 3. | Swahili Beach Resort | 125 | 250 | ***** |
| 4. | Baobab Beach Resort & Spa | 343 | 686 | **** |
| 5. | Diani Sea resort | 170 | 340 | **** |
| 6. | Lantana Galu Beach | 47 | 240 | **** |
| 7. | Leisure Lodge Beach & Golf Resort | 253 | 506 | **** |
| 8. | Msambweni Beach House and Private Villa | 5 | 24 | **** |
| 9. | Indian Ocean Beach Resort | 101 | 180 | *** |
| 10. | Morning Star Apartments | 50 | 65 | ** |
| 11. | Neptune Palm Beach Resort & Spa | 60 | 120 | ** |
| 12. | Neptune Paradise | 92 | 184 | ** |
| 13. | Papillon Lagoon Reef Hotel | 150 | 300 | ** |
| 14. | Saruni Ocean Beach Resort | 10 | 20 | ** |

Source: Tourism Regulatory Authority, 2018

11.6 Impacts of human activities on tourism assets

The County's economy relies on tourism as the main source of income and revenue for the residents and the County. Whereas these assets are the backbone and the remedy for poverty reduction and economic development, they face severe adverse effects from human-related activities.

- Because of its position between the ocean and the terrestrial area, the coastline attracts many human activities, leading to overexploitation and mismanagement. The hotels are located less than a kilometre from the shoreline. Recreational activities on the beaches such as Bidi Badu beach affect the marine ecosystem due to the

disposal of solid waste into the ocean, leading to choking and a decrease in the population of marine species.

- Mining activities have led to a decrease in forest and vegetation cover, which forms part of the tourism assets in Kwale County. Examples of these activities include base titanium mining in Kubo Southward.
- Potential for damage to historical sites have also been realized, as is the case for Vanga Ruins and the Kayas in the County as the County lacks proper management structure.

- Overfishing in Vanga and Shimoni town has also led to a decrease in marine species, leading to scarcity.
- Increased urbanization and the demand for housing have led to a decrease in the total land area for beaches as housing development has taken place in reserved beach areas. It has also led to the conversion of conservation areas into urban dwellings, as witnessed in Vanga and some parts of Shimoni.

11.7 Emerging issues in Tourism

| Potential | Opportunities | Challenges | Recommendations |
|--|---|--|---|
| Tourism diversification potential | <ul style="list-style-type: none"> • Availability of tourist sites and areas and hospitality establishments. • Existing forms of tourism products in the County. • Undeveloped tourism products such as community tourism. | <ul style="list-style-type: none"> • Lack of diversification • Overreliance on beach and resort tourism. • Poor marketing. • Overreliance on foreign tourists. • Low awareness creation on existing tourism assets • Lack of adequate support tourism infrastructure • Insecurity. • Poor beach management • Undeveloped tourism assets. • Low participation by the local community in tourism activities • Lack of protection and conservation of some tourist attraction sites. | <ul style="list-style-type: none"> • Enhance and develop tourism assets • Strengthening Existing Forms of Tourism • Diversification of Tourism Products • Marketing Kwale as a global tourist destination |

PART II: SITUATIONAL ANALYSIS

Map 43: Existing tourism sites

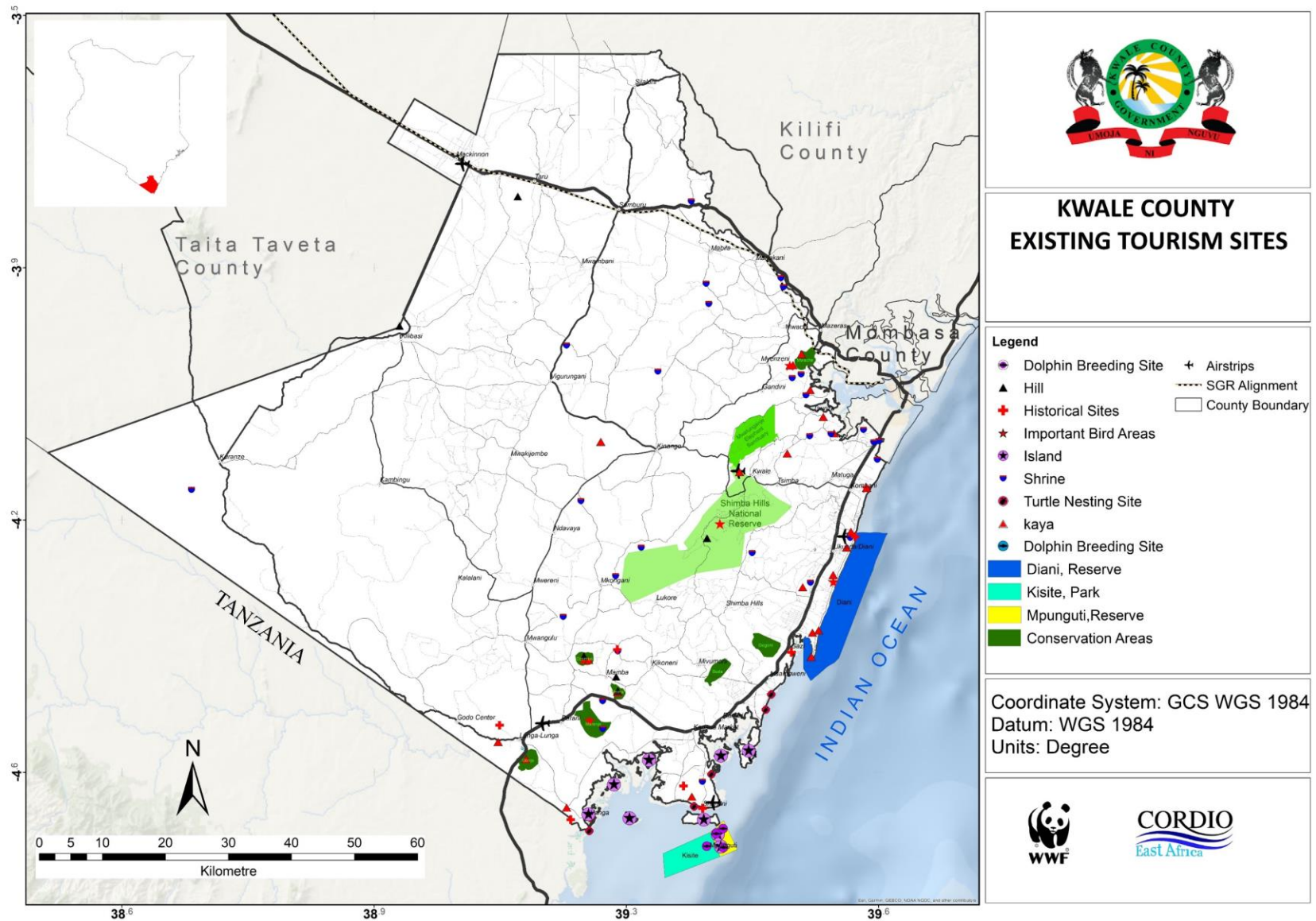


Table 37: Tourism Potential Assessment

| Asset | Sports Tourism | Meeting Incentives & Conference Exhibitions (MICE) | Eco-Tourism | Education and Research | Resort Tourism | Cultural Tourism | Commercial Tourism | Medical Tourism | Community Tourism | Maritime Tourism |
|-------------------------------|----------------|--|-------------|------------------------|----------------|------------------|--------------------|-----------------|-------------------|------------------|
| Hospitality Facilities | ✓ | ✓ | ✓ | | ✓ | ✓ | | | | |
| National Parks and Reserves | | | ✓ | ✓ | | | | | | ✓ |
| Conservation sites | | ✓ | ✓ | ✓ | ✓ | ✓ | | | | |
| Indian Ocean | ✓ | | ✓ | ✓ | | | | | ✓ | ✓ |
| Beaches | ✓ | | ✓ | ✓ | ✓ | | | | | ✓ |
| Islands | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | ✓ |
| Historical and Monument Sites | | | ✓ | ✓ | | ✓ | | | ✓ | |

The County has high tourism potential, especially in eco-tourism. Currently, most of the tourism activities focus on resort tourism, but the County has opportunities for other forms of tourism.

11.8 Industrial Economy

The County has several industrial activities in processing and manufacturing which make up the industrial economy. These activities are agro-processing, mining, cottage industries, manufacturing, industrial processing and urban-based industries.

11.8.1 Agro-processing industries

These are industries that focus on the value addition of agricultural products. Such industries in Kwale County include Kenya Bixa Limited in Tiwi, which processes Annatto seeds into Annatto natural food colours (Norixin and bixin) and other by-products; Asante Capital in Ukunda that processes wood into wood products such as plywood, veneers and charcoal briquettes; Kutoka Ardhini Limited in

Vanga which processes cooking oil from tea trees. Kwale Coconut Processors Limited in Ukunda focuses on extracting coconut oil from coconuts. At the same time, Kwale International Sugar Company Limited in Ramisi processes cane into sugar and ethanol and other by-products such as molasses.

Plans are underway to establish a fruit processing plant in Kubo South and ginnery to process cotton in Kinondo. The industries which focus on mining include Base Titanium Limited in the Makongeni area (Kinondo ward), which specializes in the extraction of titanium, while Coast Calcium Limited in Waa specializes in the processing of limestone into hydrated lime and other limestone products.

11.8.2 Manufacturing

Under this category, Top Steel Kenya Limited in Mwavumbo producing steel products is the only manufacturing industry. A recently commissioned steel milling company in Samburu is also known as Devki Steel Milling Company.

11.8.3 Industrial Processing

Several industrial processing firms focus on water bottling, such as Asilia, Marere and Rayan. Recently, Huawei Kenya Food Company Limited has started putting up a fish processing plant at Kibuyuni in Shimoni for processing fish into snacks for export. ME Corporation has put up a moringa processing plant in Msambweni while Nyari Sisal Estate processes sisal production in Taru, Kinango Sub County.

11.8.4 Cottage industry

This is an industry based on personal skills and culture. The cottage industries, also called household-based industries, are production units mostly based on home goods and

services derived from locally available raw materials. Fuel, manual power and skills drive operations under these industries. Their products end up in the local market.

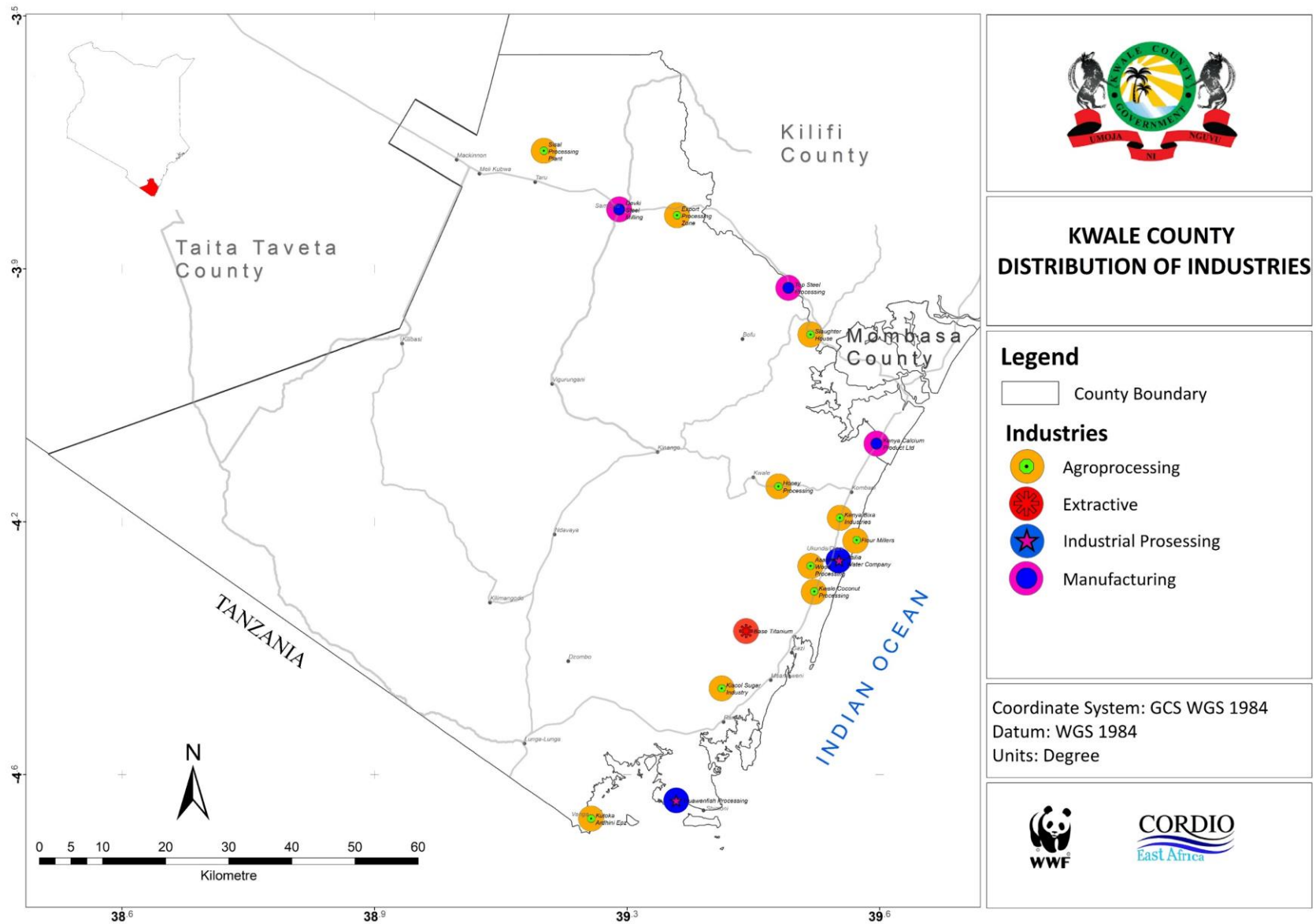
The cottage industries in Kwale operates in producing in several areas such as brick production, coral stone cutting, woodworks, food vending and eateries, herbal medicine extraction, charcoal and briquettes production, weaving, artwork, pastries, bicycle, motorcycle and tuk-tuk repair, cassava flour production, honey production and shoe making and repair. The cottage industries occupy the biggest share of the industries but the larger share of its operations at a small scale.

Table 38: Industrial Distribution in Kwale

| Industry | Type | Location |
|---------------------------|-----------------------|----------|
| Top Steel | Manufacturing | Mwavumbo |
| Asante Wood | Agro-processing | Ukunda |
| Base Titanium | Extractive | Kinondo |
| KISCOL Sugar Industry | Agro-processing | Ramisi |
| Huawenfish | Industrial Processing | Kibuyuni |
| Kenya Calcium Product Ltd | Manufacturing | Waa |
| EPZ | Agro-processing | Samburu |
| Asilia Water Company | Industrial Processing | Ukunda |
| Kenya Bixa Industries | Agro-processing | Tiwi |
| Kwale Coconut | Agro processing | Ukunda |
| Devki Steel Milling | Manufacturing | Samburu |
| Slaughter House | Agro-processing | Mazeras |
| Sisal processing | Agro-processing | Taru |
| Honey production | Agro-processing | Tsimba |
| Kutoka Ardhini Epz | Agro-processing | Vanga |

Source: Field survey 2018

Map 44: Existing industries



11.9 Emerging Issues in the industrial economy

| Potential | Opportunities | Challenges | Recommendations |
|-------------------------------|---|--|---|
| Industrial development | <ul style="list-style-type: none"> • Availability of mineral resources. • Production of Industrial crops e. g. Cotton • Marine resources, e.g., Fish • The proximity and strategic location of the Port of Mombasa • Livestock production in Kinango and Lunga Lunga • Existing urban areas | <ul style="list-style-type: none"> • Low production of raw material such as agricultural products. • Inadequate support infrastructure such as water supply and electricity for industrial development • Poor linkage due to inadequate transport infrastructure for moving products and accessing markets. • High cost of doing business in the County, e.g., High taxation for industrial establishment. | <ul style="list-style-type: none"> • Promote value addition • Encourage Cottage Industries • Develop appropriate infrastructure for supporting industries • Support industrial-skill development • Develop Kwale as an Industrial investment hub |

11.10 Trade and Commerce

11.10.1 Retail and Wholesale

Trade and commerce provide a level of exchange of goods and services. Retail trade is consumer-based and focuses on exchanging goods and services from business to consumer, while wholesale operates from either business to business at a larger scale or business to the consumer at a smaller scale. The wholesale and retail sector creates a channel between the production and consumption of goods and services.

The retail activities in Kwale take place both within urban areas and rural areas. Urban areas are where the bulk of retail trading activities occur due to the high population, income levels, and infrastructure, among other factors. Kwale County has two main trading centres, which are Ukunda-Diani and Kwale. Other centres include Msambweni, Kinango, Lunga-Lunga, Taru, Samburu and Kombani. In rural areas, trading takes place within local trading centres. The County has a total of 66 trading centres.

Goods traded consist of locally sourced mangoes, fish, coconuts, charcoal, sugar, cassava, beef and oranges. These goods are also sold to markets outside the County, such as Mombasa, Tanzania and Nairobi, largely without value addition. Trading also involves goods sourced outside the County, including maize flour, textile, confectionery, electronics, and machinery. These are mainly sourced from Mombasa, Tanzania and Nairobi.

Retail trading activities in the County take place in open-air markets, periodic open-air markets where trading activities shift from one location to another on different days of the week. For example, Wednesday is a market day for Kwale Town and Mamba. Others include retail outlets such as shops, supermarkets and kiosks, hawking and roadside vending.

Wholesale activity mainly involves purchasing, storing, and selling goods to retailers, industrial users/authorities, other wholesalers, and intermediaries. Wholesale trading within Kwale County is mostly concentrated within urban areas. Wholesale outlets mainly consist of depots and direct sourcing of goods by external traders.

11.10.2 Financial Services

The financial services in County are provided by mainstream banks, cooperatives, microfinance institutions and mobile money transfer agencies. Mainstream and microfinance banking services are predominantly within the main urban areas of Ukunda-Diani, Kwale and Kinango Towns. Banks in Kwale Town include Kenya Commercial Bank and Equity Bank, while Ukunda-Diani has Kenya Commercial Bank, Barclays Bank, Equity Bank, Commercial Bank of Africa, National Bank of Kenya and Co-operative Bank, among others. Microfinance institutions include Kenya Women Finance Trust (KWFT), Imarika Sacco in Ukunda-Diani, KWFT Msambweni and Kinango branches, and Yehu, Teachers Sacco, to mention a few.

Banking agencies such as Co-op Kwa Jirani, KCB Mtaani, and Equity Bank agents have set up shops throughout the County to provide banking services in urban areas and rural areas with no mainstream banks. Mobile money transfer agencies are spread throughout the County, with M-pesa and Airtel Money having a strong presence.

There are 184 registered cooperatives societies in Kwale County, 74 active, while 110 are dormant. These cooperatives can be broadly put in the following categories: Agricultural Marketing Cooperatives, Fisheries Cooperatives, Livestock Marketing, Investment, Savings and Credit Cooperative Societies (SACCOs).

Table 39: Kwale County Cooperatives

| Type | Registered | Active (as of March 2018) | Activities |
|----------------------------|------------|------------------------------|---|
| Savings and Credit (SACCO) | 104 | 53 | Savings and credit |
| Agricultural Marketing | 41 | 7 | Marketing of Agricultural Produce |
| Livestock Marketing | 8 | 4 | Marketing of Livestock Produce |
| Fishermen Marketing | 8 | 1 | Marketing of fish |
| Dairy Marketing | 7 | 1 | Marketing of Dairy Produce |
| Handicraft Marketing | 3 | 2 | Marketing of Wood curving's |
| Housing | 5 | 4 | Purchase of Land and construction of Houses |
| Mining | 3 | 0 | Marketing of Minerals |
| Multipurpose | 3 | 0 | Marketing various products |
| Consumer | 1 | 0 | |
| Investment | 1 | 1 | Ice making and marketing |
| Total | 184 | 73 | |

Source: County Department of Cooperatives

11.11 Emerging issues in trade and commerce

| Potential | Opportunities | Challenges | Recommendations |
|---|---|---|--|
| <ul style="list-style-type: none"> Economic vibrancy | <ul style="list-style-type: none"> Access to local, regional and international markets through road, water and air. Existing urban areas as centres for trade Existing livestock, fresh produce and fish markets in the County. Available Trading centres Access and availability of markets Available Financial institutions | <ul style="list-style-type: none"> Trade in the County are largely informal. Limited access to finance and credit facilities Inadequate trade support infrastructure. Low membership in cooperatives and a high number of dormant cooperatives Low returns on market products. Inadequate knowledge of available markets. Lack of specialized markets for specific products. Low investment in trade and commerce | <ul style="list-style-type: none"> Facilitating formalization of informal trade Promoting affordable and accessible credit to SMEs Creation of enabling legal and regulatory environment Promote entrepreneurial skill development Organizing and supporting traders in product-oriented cooperatives |

11.12 Mining

11.12.1 Mineral base in Kwale

The County is endowed with various mineral resources, as indicated in Table 11-3 and Map 11-4. The mineral resource includes; Titanium (rutile, ilmenite, zircon) at Nguluku and Shimba Hills; Gemstones at Kuranze; Rare Earth Elements (niobium, phosphates) at Mrima Hills and Samburu; Silica Sand at Waa, Tiwi and Ramisi; Zinc, Lead and copper at Mkang'ombe, Mwache, Dumbule and Dzitenge; Baryte at Lunga-Lunga; Coal at Maji ya Chumvi; Sandstones at Mariakani; Limestone at Shimoni and Waa; Coral at the coastline and Oil/Gas at onshore and offshore.

Mining activity in the County is undertaken at both large and small scale. Base Titanium is currently undertaking large scale mining at Nguluku and Mafisini areas while exploring the potential mine to extend its mining further North and South of the current operations. Coast Calcium Limited at Waa.

Artisanal and Small-Scale Mining (ASM) occur in many parts of the County, including sand harvesting in Tiwi and Msambweni, coral rock cutting in Funzi, Waa, Kinondo and gemstones

in Kuranze. The predominant artisanal and small-scale mining activities are river sand harvesting, silica sand harvesting, gravel and quarrying. The haphazard nature of ASM makes it difficult to regulate as it often takes place outside the mainstream industry (formal sector). There are immense advantages to be gained by mainstreaming artisanal and small-scale mining sector, key among them being widening of the tax base, a likelihood of safer, healthier and more environmentally compliant operations and enhancement of investment environment for large scale mining, through the elimination of some of the threats caused by informal mining.

The exploitation of the County's mineral base offers Kwale a significant growth potential and could contribute significantly to driving economic growth, not only in mining, oil and gas but also in support sectors such as transport, energy and finance.

As an emerging industry, the mining sector is fragile and needs to be supported by an enabling regulatory environment through public participation, appropriate compensation and resettlement of displaced

persons, environmental protection to grow, stabilize and generate sustainable revenues for

the government, as well as to deliver local economic and social development ambitions.

Table 40: Minerals in the County

| Mineral | Abbreviation | Location |
|----------------------|--------------|---|
| Base & Rare Metals | BRM | Ndavaya Ward, Puma Ward (no Town) |
| Base Minerals | BM | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Bofu, Matumbi, |
| Chrome | Cr | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza |
| Coal | C | Kilimangodo, Vigurungani, Makuluni, Magombani, Kalalani, Mtumwa, Kajichoni, |
| Copper | Cu | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Fuel Mineral | FM | Taru, Samburu, Kwa Kadogo, Kinagoni, Achivwa, Kambingu, Mbita, Tata, |
| Garnet | GG | Kuranze |
| Garnet (Abrasives) | Gga | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Garnet (Gemstone) | Gn | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Gemstones | GS | Kuranze |
| Gold | Au | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Graphite | Gr | Puma Ward |
| Heavy Minerals | HM | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Ilmenite | Il | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Industrial Minerals | IDN | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Iron Ore | Fe | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Lead | Pb | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Limestone | Ls | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Shimoni, |
| Manganese | Mn | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Monazite | MZ | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Nickel | Ni | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze |
| Non-Precious Mineral | Non-P | Kinango, Kuranze |
| Precious Metal | PM | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Precious Stones | Ps | Kuranze |
| Quartzite/Sandstone | QH | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Rare Earths | RE | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Mrima, Mwangulu, |
| Ruby | GRb | Kuranze |

| | | |
|-----------------------------|-----|--|
| Rutile | Rt | Lukore, Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Sand | Qwd | Shimba Hills, Kilulu, Makobe, Kichaka Simba |
| Semi-Precious stones | SPS | Kuranze |
| Silica Sand | QD | Ramisi |
| Silver | Ag | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |
| Tin | Sn | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze |
| Titanium | Ti | Kinondo, Mwabungo, Magaoni, Majoreni, Jego, Kanana Market, Kiwegu, Lukore, |
| Tourmaline | GTm | Kuranze |
| Zinc | Zn | Ndavaya, Mwakijembe, Mkangombe, Mwalukombe, Gulanze, Kwale, Tsunza, |

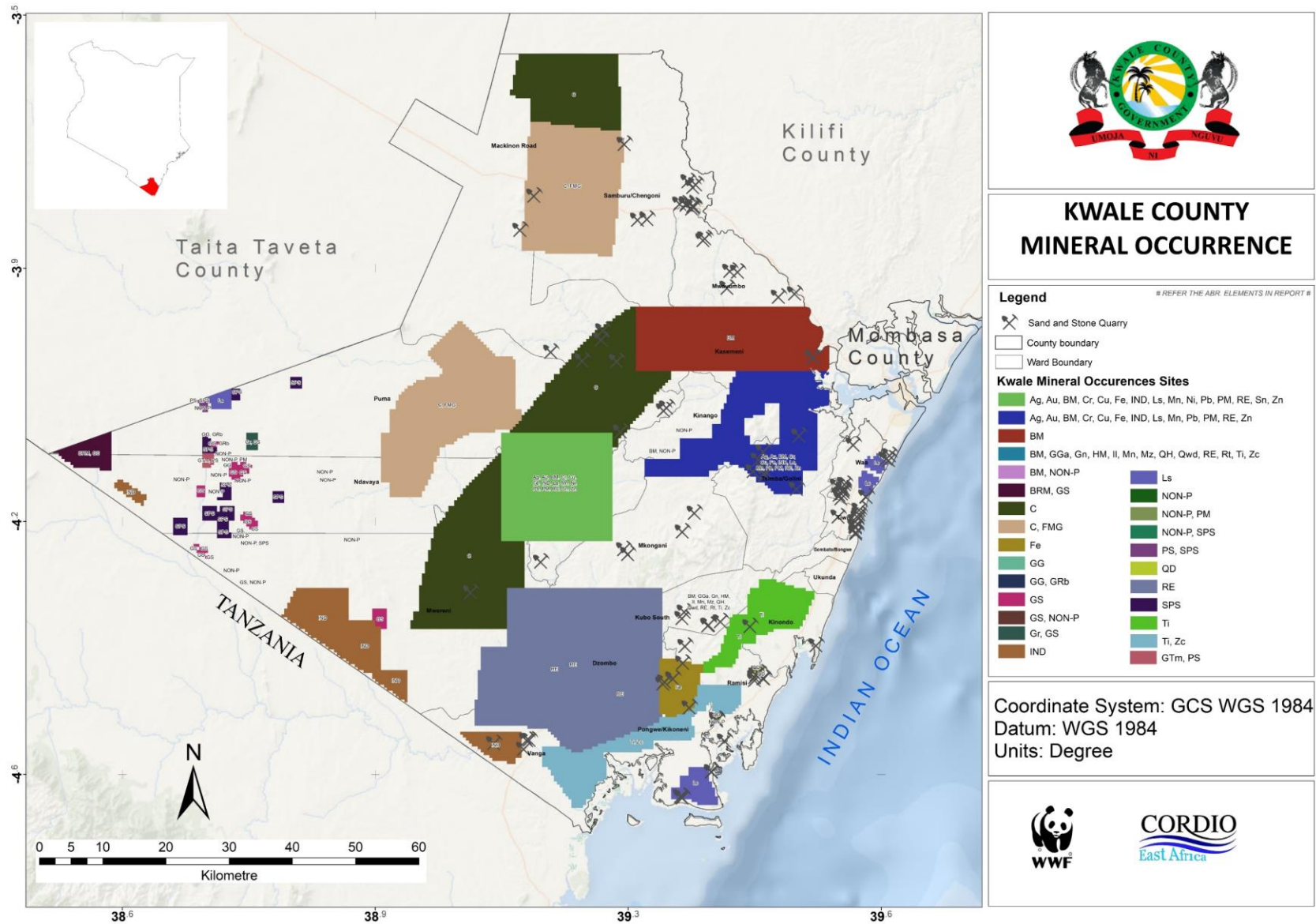
Source: Mineral Cadastral -Kenya

11.13 Emerging issues in Mining

| Potential | Opportunities | Challenges | Recommendations |
|---|---|---|---|
| <ul style="list-style-type: none"> Mining and industrialization development | <ul style="list-style-type: none"> Availability of minerals Existence of legal frameworks to guide mining | <ul style="list-style-type: none"> Environmental pollution, especially by large scale miners. Inadequate awareness creation on mineral exploitation among the communities. Unregulated artisanal and small-scale mining. Although ASM is an income-generating activity for the County residents, it is often associated with smuggling, tax evasion, health and safety risks, and various illicit activities. | <ul style="list-style-type: none"> Undertake County geological surveys to establish mineral resource distribution and economic viability. Mechanize and streamline the operations of artisanal and small-scale miners to enhance productivity and safety. Enhance social safeguard mechanisms for the mining industry in the County. Formalize Artisanal and Small-scale Mining (ASM) into the County economy by forming co-operatives. Promote in-situ location of mineral processing plants. |

PART II: SITUATIONAL ANALYSIS

Map 45: Existing Mineral Distribution



11.14 Blue Economy

The blue economy within the context of this plan refers to the use of the ocean and its resources to improve the livelihood of their communities. The County is a beneficiary of vast marine resources from Kenya's 12 nautical miles of territorial waters, 12 nautical miles of the contiguous zone and 200 nautical miles of an exclusive economic zone within the Indian Ocean.

The benefits of the blue economy in the County can be derived from the following themes:

1. Fishing
2. Oil, gas and Offshore minerals
3. Maritime tourism

4. Maritime transport
5. Energy
6. Marine ecosystem services

11.14.1 Fishing

The County has abundant fisheries reserves along its coastline. Major fish reserves include Shimoni, Vanga, Waa, Msambweni, Diani, and Tiwi. The main fish caught are Rabbit Fish, scavengers, Snappers, Parrotfish, Mackerel, Octopus, sardines, prawns (*Kamba*) and Squids.

The commonly used fishing methods are the traditional ones, including Gillnets, Basket traps, reef seines, cast nets, hooks and lines, fence traps, and ring nets.

Table 41: Depiction of Fish Yields in the County

| Fishing Products | Yield in Kgs | | | |
|------------------|--------------|--------|--------|--------|
| | 2013 | 2014 | 2015 | 2016 |
| Rabbit fish | 160553 | 189103 | 211831 | 176829 |
| Scavengers | 136658 | 162446 | 179432 | 160570 |
| Snappers | 99879 | 108474 | 117854 | 107209 |
| Parrot fish | 138953 | 151256 | 148250 | 120059 |
| Mackerel | 118355 | 126593 | 102962 | 100283 |
| Octopus | 181334 | 188638 | 215657 | 237490 |
| Squids | 100471 | 118696 | 134507 | 122903 |

Source: County Department of Fisheries, 2018

11.14.1.1 Landing sites

The County has 56 gazette fish landing sites managed by 20 Beach Management Units. Out of these 56 landing sites, 7 are developed with a permanent fish Banda and an 8th one has been proposed to be developed. Most of these

landing sites have lost land to private developers due to failure to state the location with all the coordinates during gazettelement. Deliberate efforts must be implemented to regularize the landing sites and reclaim the grabbed land.

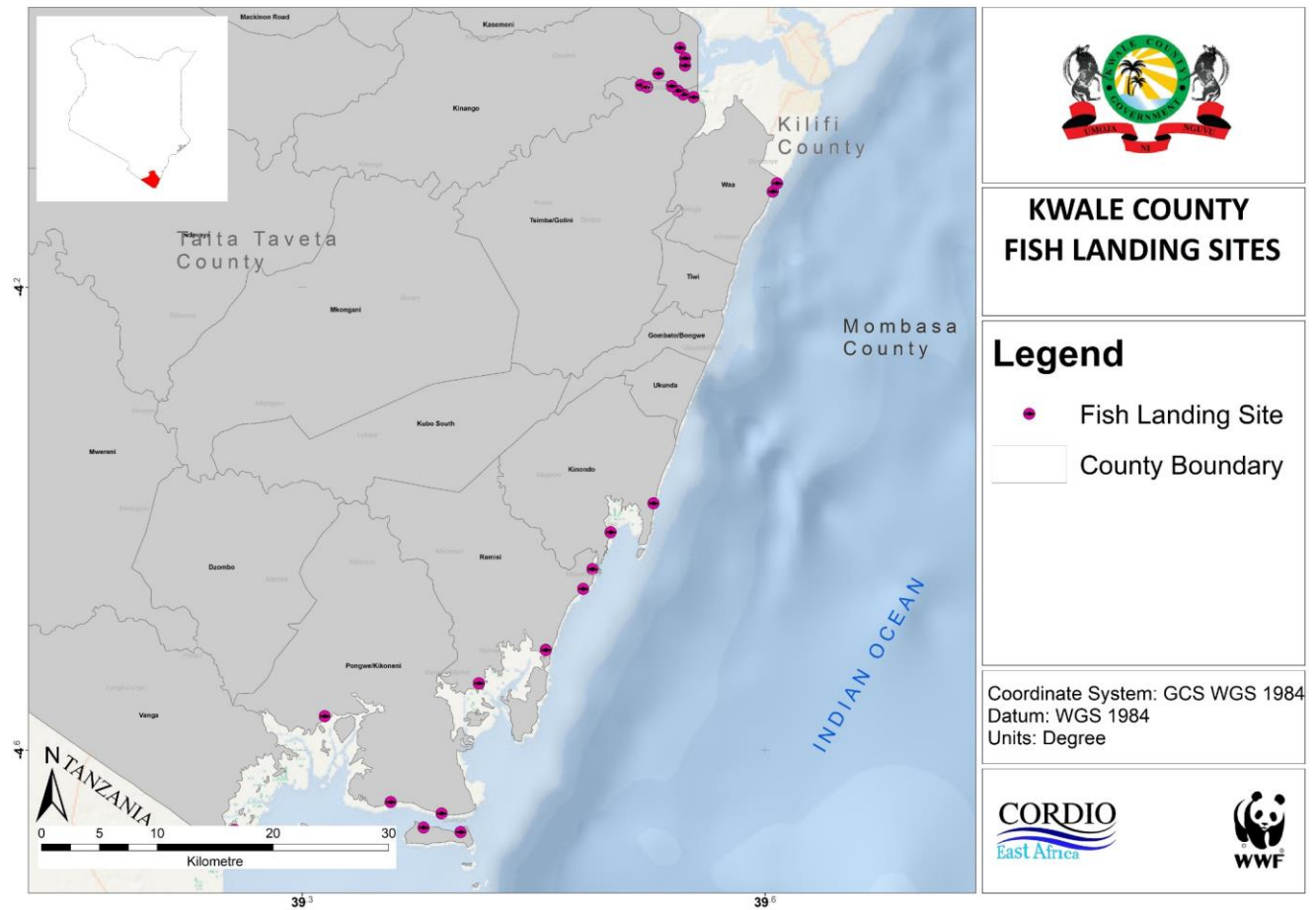
Table 42: County Landing Sites

| S/No. | Name of the landing Site | Location |
|-------|--------------------------|-----------|
| 1 | Bodo | Msambweni |
| 2 | Shirazi | Msambweni |
| 3 | Ramisi | Msambweni |
| 4 | Chale Jeza | Msambweni |
| 5 | Chale | Msambweni |
| 6 | Mgwani | Msambweni |
| 7 | Funzi | Msambweni |
| 8 | Gazi | Msambweni |

| | | |
|----|--------------------------|------------|
| 9 | Mwakore | Msambweni |
| 10 | Kibuyuni | Lungalunga |
| 11 | Koromo/Chiromo/or kiromo | Lungalunga |
| 12 | Mtimbwani | Lungalunga |
| 13 | Kivuma | Lungalunga |
| 14 | Mzizima/Kijiweni | Lungalunga |
| 15 | Aleni | Lungalunga |
| 16 | Mwanjeni | Lungalunga |
| 17 | Chete Cha Kale | Lungalunga |
| 18 | Munje/Munge | Msambweni |
| 19 | Mkunguni | Msambweni |
| 20 | Mawezani | Msambweni |
| 21 | Mwaembe | Msambweni |
| 22 | Kingwende | Msambweni |
| 23 | Mvuleni | Msambweni |
| 24 | Mwaepe | Msambweni |
| 25 | Mwanyanza | Msambweni |
| 26 | Rigata | Msambweni |
| 27 | Mwakamba | Msambweni |
| 28 | Trade winds | Msambweni |
| 29 | Gomani | Msambweni |
| 30 | Mwamombi | Msambweni |
| 31 | Anzuani/Anziwani | Lungalunga |
| 32 | Shimoni | Lungalunga |
| 33 | Kiwambale | Lungalunga |
| 34 | Bati | Lungalunga |
| 35 | Kichangani/Shangai | Lungalunga |
| 36 | Nyuma ya maji | Lungalunga |
| 37 | Wasini | Lungalunga |
| 38 | Bogowa | Lungalunga |
| 39 | Mkwiro | Lungalunga |
| 40 | Tiwi Mkunguni | Matuga |
| 41 | Tsunza | Kinango |
| 42 | Bofu | Kinango |
| 43 | Mwadumbo | Kinango |
| 44 | Mbonje | Kinango |
| 45 | Guya | Kinango |
| 46 | Kiwegu | Lungalunga |
| 47 | Vanga | Lungalunga |
| 48 | Jasini | Lungalunga |
| 49 | Jimbo | Lungalunga |
| 50 | Mwandamo | Msambweni |
| 51 | Nyumba sita | Msambweni |
| 52 | Mwagandizo | Matuga |
| 53 | Nyari | Matuga |
| 54 | Kikadini | Matuga |
| 55 | Mbuguni | Matuga |
| 56 | Mwanyerere | Matuga |

Source: County Department of Fisheries, 2018

Map 46: Existing Fish Landing Sites



11.14.1.2 Value addition and fish Marketing

Locally, fish is mainly marketed fresh at the landing sites. Due to the lack of cold storage facilities in some landing sites and fish processing plants within the County, the fishermen sell the highly perishable catch cheaply to avoid losses. There are no structured market systems for fish. The County's fish export consists of octopus and live fish (ornamental fishes) sold to Mombasa and Kilifi Counties exporters.

There is minimal value addition undertaken in the fishing industry. The fresh fish from landing sites are deep-fried or frozen and sold directly to local consumers.

Ornamental fishery (life fish) is also a thriving business in Kwale County. However, due to their perishable nature, immediately after they are landed, the fish are taken to holding facilities of the dealers in Mombasa and Kilifi awaiting exportation.

11.14.2 Challenges in the fishing sector

- Rudimentary fishing methods
- Illegal unregulated and unreported (IUU) fishing Lack of capacity to embrace new fishing technologies
- Immigrant, illegal fishermen.
- Unstructured marketing system
- Limited value addition leading to low incomes
- Hence, the low supply of fish cannot satisfy the local market and tap the export market.
- Lack of safety at sea due to strong waves
- Conflicts at the international maritime border.
- Grabbing of fish landing sites by the private developers.
- Indiscriminate fishing due to poor equipment

11.14.3 Oil and Gas

There is the potential offshore occurrence of oil and gas.

However, no active prospecting activities have been carried out; as such, the exact quantities and commercial viability of such minerals have not been established.

11.14.4 Maritime transport

Kwale has a relatively underdeveloped marine transport industry. Maritime transport in the County is mostly via small boats and canoes, often motorized. In addition, such marine vessels have limited passenger and cargo capacity, thus hindering the County from leveraging the ocean's limitless transportation capacity. The lack of ports, jetties, piers and other docking areas for ships and other larger vessels is also a major hindrance to optimising the County's marine transport potential. The docking facility is at Shimoni Jetty, earmarked to develop a port. The County also has 3 other natural harbours: Vanga, Kinondo and Waa, which could be developed into small ports to enhance marine transport.

The County has immense potential for inter and intra marine transport, which can promote the economy of Kwale County. For instance, the County should explore the feasibility of having high-capacity liners to provide an alternative to connecting through Likoni Crossing for people and businesses along the coastline from Waa to Vanga. A well-developed marine transport system could also create an avenue for revenue from marine tourism by offering tourists a transport package that includes an opportunity to sample the scenic beauty of the ocean, islands, and attractive beaches from Waa to Vanga.

11.14.5 Marine energy

Marine energy is a renewable energy source whose development and utilization can complement the energy needs of Kwale County and Kenya as a whole. However, the County is yet to tap into its potential in marine energy by exploring marine energy sources such as offshore wind energy, onshore wind energy, wave power and tidal energy.

11.14.6 Maritime Tourism

Maritime tourism refers to sea-based recreational activities such as boating, yachting, snorkelling, ski diving cruising,

nautical sports as well as shore-based activities, such as land-based whale watching, reef walking, beach strolling, sunbathing cruise ship supply and yachting events, within the overall ambit of the marine environment.

Of these activities, only beach strolling, boating, snorkelling, reef walking and sunbathing happen on a small scale.

11.14.7 Marine Ecosystem Services

These refer to the ocean's benefits that ensure a healthy environment for economic activities and promote social well-being.

Such benefits may have a monetary value attached to them, such as is the case for Clean Development Mechanism scheme run by *Mikoko Pamoja* or have non-monetary benefits such as absorbing terrestrial environmental shocks like providing carbon sinks, influencing climate, serving as an outfall for terrestrial waterways (including treated wastewater) and providing habitat for several species thus ensuring biodiversity. The County has an opportunity to explore the potential of marine ecosystem services provided by the Indian Ocean.

11.15 Emerging issues

| Potential | Opportunities | Challenges | Recommendations |
|--|---|---|--|
| <ul style="list-style-type: none"> Marine economy expansion | <ul style="list-style-type: none"> Marine resources Water transport Wind and tidal energy Potential for Oil and Gas Marine Tourism | <ul style="list-style-type: none"> Lack of knowledge on the spatial extent and location of marine mineral and hydrocarbon extractives. Destruction of marine ecosystems Lack of capacity for exploitation of marine resources. Low-value addition in the fishing industry. Grabbing of fish landing sites. Harassment by foreign marine police. Lack of designated fish markets and fish preservation facilities. Inadequate investment in the Blue Economy activities. Under-explored marine transport. | <ul style="list-style-type: none"> Mapping and inventorying existing marine resources Conservation of marine ecosystems Build capacity for the adoption of the modern value chain of the fishing industry Promote Mariculture in the County Explore the viability of marine energy resources Provide appropriate support infrastructure for maritime transport |

GOVERNANCE AND INSTITUTIONAL FRAMEWORK

12.1 Overview

Governance is the process of facilitating, regulating and articulating the management of public affairs at various levels. The KCSP is multi-sectoral and cuts across all development aspects and therefore need for networking of various sectors and actors that will include the following:

- Public Sector (state actors and institutions)

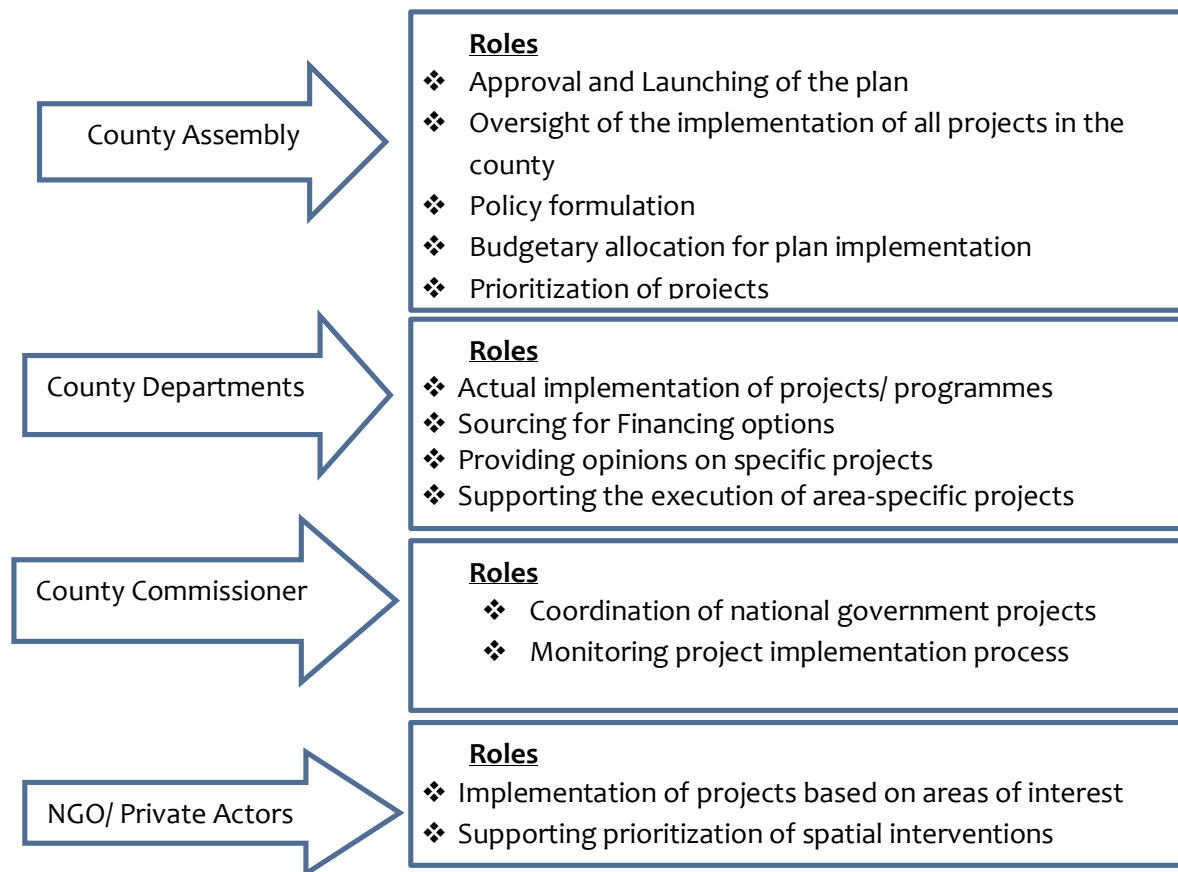
- Private sector (Companies and parastatals)
- Civil society (NGOs/ FBOs/ CBOs)

Development entails regulating and coordinating the relationships and interactions of various development actors through a set of standards, institution frameworks, norms, and processes.

12.1.1 County Spatial Plan Implementation Structures and Key Roles

Implementation of this plan will be realized through a concerted effort by the following institutions

Figure 2: Plan Implementation Structure



12.2 County Administrative Structure

12.2.1 Public Service Delivery

The administrative arm of the County is pivotal to public service delivery. It is comprised of representatives of the national government whose responsibility is the coordination of national government functions, whereas the County government is responsible for the formulation and implementation of policies, development plans, programs and projects and entire devolved functions of government that are decentralized from County to Sub-County, ward and village levels.

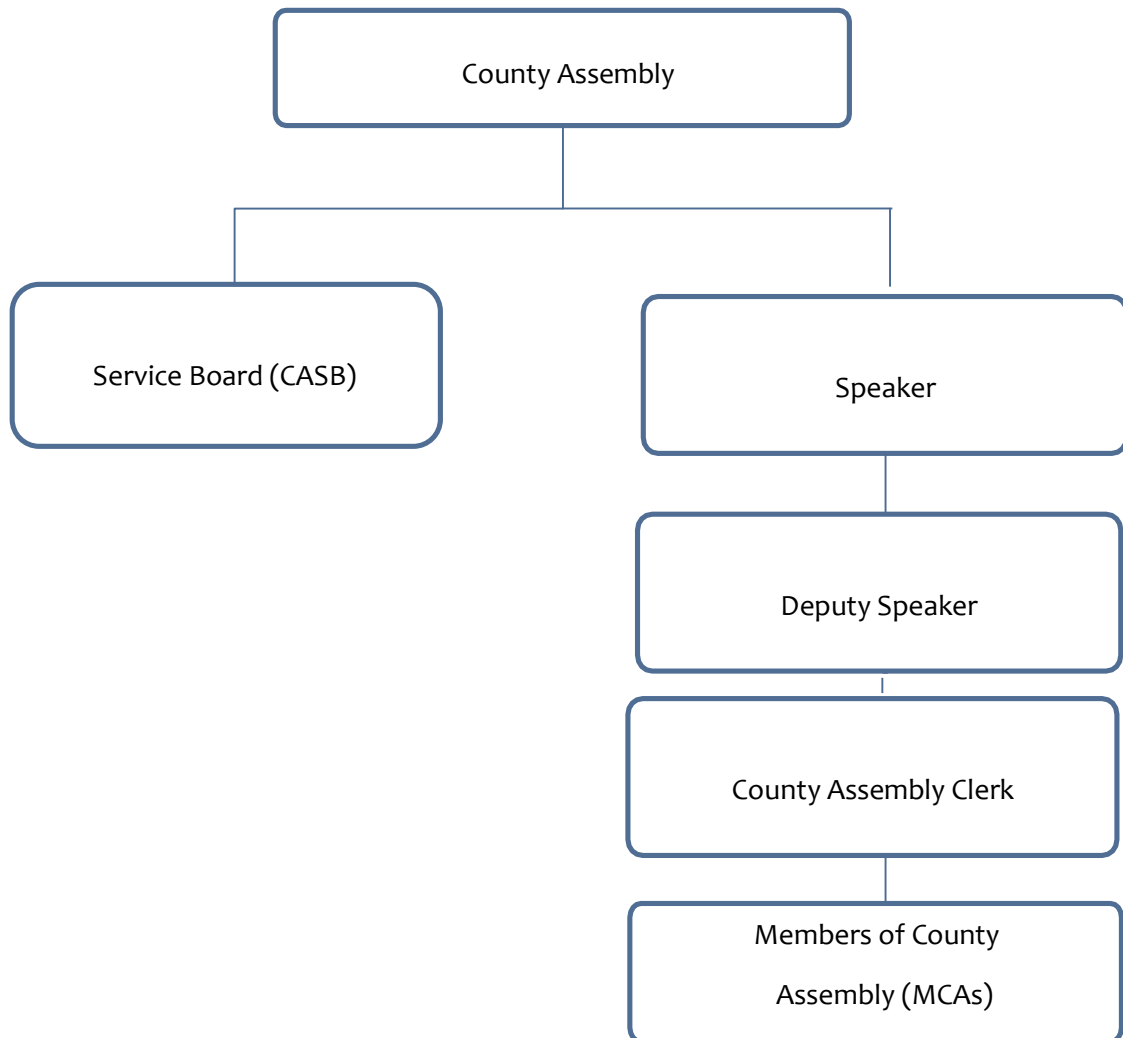
Getting Services closer to the people is ensured through coordination by the 4 Sub-County administrators, 20 ward administrators and 77 village administrators who are supposed to be supported by a village council. However, village councils have not been established yet.

In the County, services are delivered through departments which include Agriculture, Livestock and Fisheries; Education; Health Services; Trade, Tourism, Investment and ICT; Social Service and Talent Management; Infrastructure and Public Works; Environment and Natural Resources; Water Services; Finance and Economic Planning; Public Service and Administration.

12.2.2 Public Participation and representation

The political structure whose role has been and will be fundamental in preparation and subsequent implementation of the County Spatial Plan is the County Assembly, which is responsible for formulation of policies and legislation, oversight over the executive, approval of County plans and budgets while ensuring representation of the people by Members of the County Assembly (MCAs). The County Assembly Structure is as shown in Fig. 3.

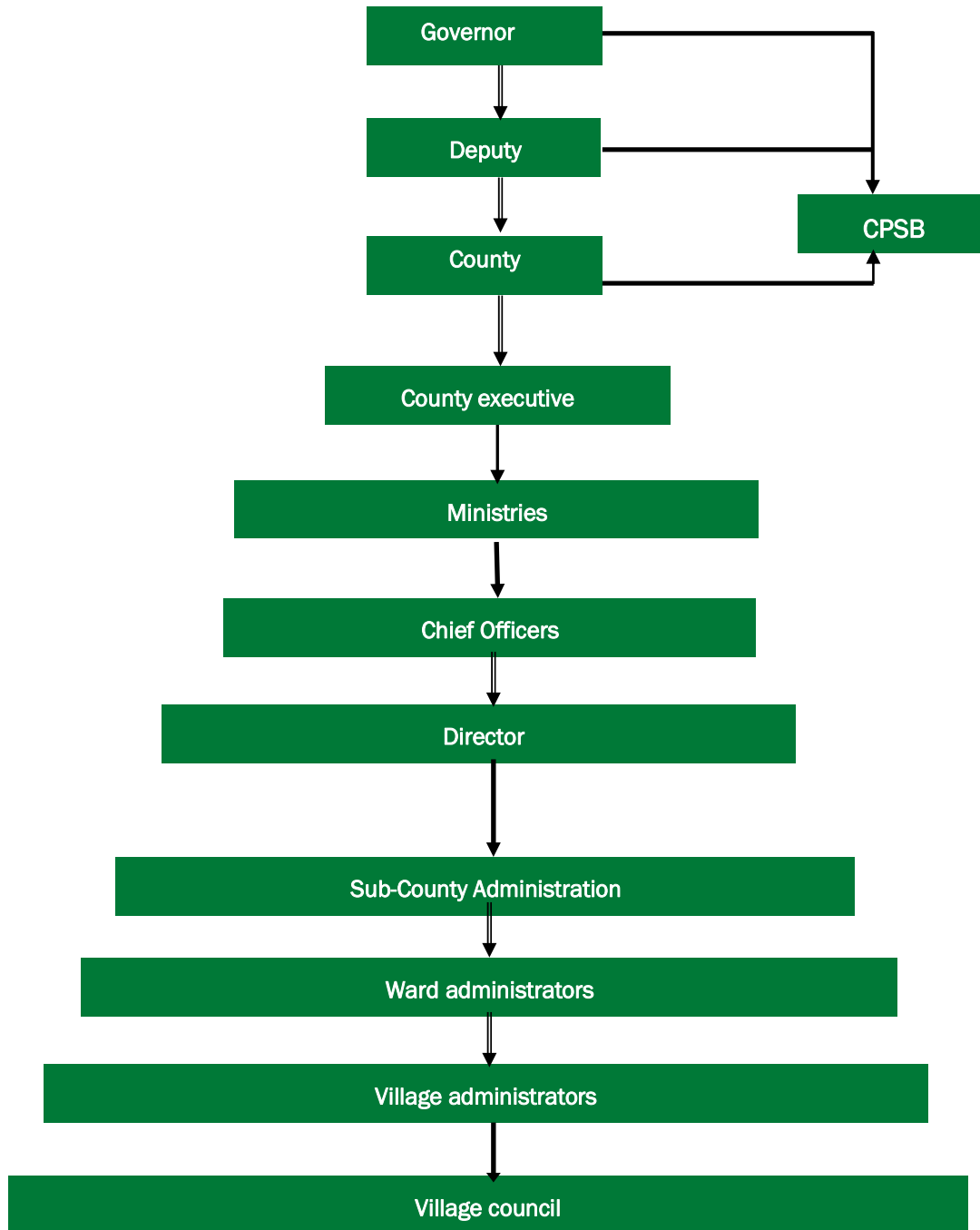
Figure 3: County Assembly Structure



The County Executive consisting of the County Executive Committee (CEC), is responsible for decision-making and comprises the Governor, Deputy Governor,

the County Executive Committee members, and the County Secretary, who is the head of the Public Service. The County Executive structure is shown in Fig. 4 below.

Figure 4: County Executive Structure



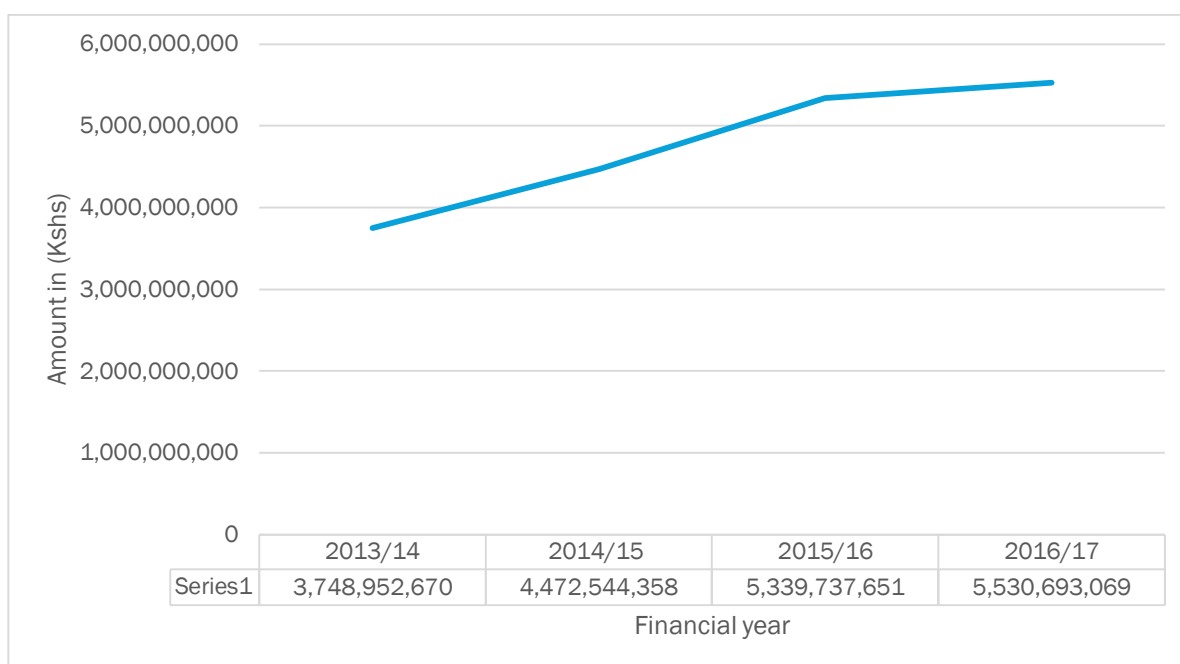
12.3 Public Finance and Revenue Administration

Department of Finance and Economic Planning is responsible for steering the County to mobilise required resources, supply chain management, economic growth and financial management. Kwale County

government has three main sources of revenue that include:

- i. Equitable share from the consolidated fund of the National Government. The allocation has been increased from Kshs 3,748,952 to Kshs 5,530,693, 693 in FY 2013/14 and 2016/17 as shown in the chart below:

Chart 8: Equitable Share for Kwale County:



Source: Annual Development Plans for Kwale County for the respective financial years, 2013-14, 2014-15 and 2015-16

However, the allocation for the fund has been fluctuating and Kwale County is yet to receive Equalization Fund as an external source of revenue. The allocated funding was at Kshs 398,430,000, 365,227,500 and 574,403,250 respectively for FY 2016/17, 2017/18 and 2018/19 respectively.

- ii. County's major internal revenue sources come from land rates,

business permits, royalties and advertisements. The total internal revenue showed an upward trend from Kshs.112,091,697 to Kshs 158,210,962 from 2013 to 2016. The revenue dropped to a total of Kshs 138,060,119, as shown in the table below.

Table 43: County internal Revenue

| Sector | 2013 | 2014 | 2015 | 2016 | 2017 |
|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Land rates | 78,537,606 | 63,710,003 | 52,515,086 | 53,092,173 | 40,176,080 |
| Business permits | 21,617,717 | 42,385,040 | 57,223,148 | 60,552,431 | 60,671,524 |
| Royalties | 9,493,132 | 26,006,002 | 30,255,884 | 31,845,730 | 26,546,406 |
| Advertisement | 2,443,242 | 7,801,436 | 14,849,163 | 12,720,628 | 10,666,109 |
| Total | 112,091,697 | 139,902,481 | 154,843,281 | 158,210,962 | 138,060,119 |

Source; Annual Development Plans for Kwale County for the respective financial

12.3.1 Other revenues

12.3.1.1 Conditional grants

Another source of revenue is conditional grants from government and non-government organizations to implement special programs and projects within the County. The grants are obtained from User

Table 44: conditional grants

Fees Foregone, Road Maintenance, Fuel Levy, Fun, Leasing of Medical Equipment, World Bank and DANIDA grant to mention but a few. The County received a total of Kshs. 1,538,503,668 between year 2014 and 2018. The amount received between FY 2014 and 2015 indicates a notable upward trend.

| Financial Year | Amount |
|----------------|----------------|
| 2017/18 | 724,981,687 |
| 2016/17 | 404,483,305 |
| 2015/16 | 339,828,675.85 |
| 2014/15 | 69,210,000 |

Source; Annual Development Plans for Kwale County for the respective financial years

12.3.1.2 Unconditional grants

The County has also benefited from partnerships with external development agencies interested within the County.

12.3.1.3 Non-County Revenues

These revenues do not flow directly to the County government but are used to implement the county's projects. An example is the National Government CDF.

12.3.1.4 National Government Constituency Development Fund

Kwale County received a total of Kshs. 2,145,141,889 from the NG-Constituency

Table 45: CDF Allocation

Development. The fund was channeled through; Msambweni, Matuga, Kinango and Lunga Lunga constituencies. The fund is used in different community-level development projects such as the construction, rehabilitation and equipping of health facilities, infrastructural improvement of educational facilities, security, environment, and sports. The table below shows each constituency's amount as CDF from 2013 through 2018.

| Sub County | 2013/14 | 2014/15 | 2015/16 | 2016/17 | 2017/18 |
|-------------|-------------|-------------|-------------|-------------|-------------|
| Msambweni | 79,719,089 | 114,822,943 | 121,739,588 | 81,896,552 | 86,810,344 |
| Kinango | 110,038,096 | 160,757,031 | 170,798,644 | 81,896,552 | 86,810,344 |
| Lunga Lunga | 94,755,147 | 137,602,963 | 146,069,368 | 81,896,552 | 86,810,344 |
| Matuga | 84,008,780 | 121,321,937 | 128,680,719 | 81,896,552 | 86,810,344 |
| Total | 368,521,112 | 534,504,874 | 567,288,319 | 327,586,208 | 347,241,376 |

Source: NGCDF.GO.KE

The allocations to the constituencies had increased over the years, starting from 2013 to 2016, after which the allocation dropped in the subsequent financial years. Kinango Constituency received the highest contribution to the fund during this period owing to the ASAL conditions of the area and the population needs of the area.

12.3.2 Challenges facing revenue collection

- Poor accounting systems
- Rate and tax defaulters
- Lack of automation of revenue collection system

- Unfavourable business trends which directly affects the various sources of revenue

12.3.3 Expenditure

The expenditure of County revenue is classified into recurrent and development expenditure. The figures indicate that the county's recurrent expenditure between 2013 and 2016 was larger than the development spending. This signifies that less money was spent on development programs and projects; thus, the revenue is not influencing development properly. The table below shows the spending of the County from the year 2013 to 2016 in respective expenditure categories.

Table 46: recurrent expenditure for the County for the period 2013 to 2016

| Year | Recurrent | Development | Total |
|---------|---------------|---------------|----------------|
| 2013-14 | 2,637,973,408 | 1,864,928,637 | 4,502,902,045 |
| 2014-15 | 2,768,738,011 | 2,893,131,189 | 5,661,869,200 |
| 2015-16 | 2,834,278,692 | 2,910,679,239 | 5,744,957,931 |
| TOTALS | 8,240,990,111 | 7,668,739,065 | 15,909,729,176 |

Source; Annual Development Plans for Kwale County for the respective financial years, 2013-14, 2014-15 and 2015

Execution of the planned activities in the County government is evaluated on the implemented programs and projects. The assessment of the sector spending as a measure of efficiency indicated that only the department of agriculture, livestock and fisheries had the highest spending rate, 95% of the allocated funds and implemented 19 projects out of the planned 21 projects,

followed by the Department of Finance and Economic Planning which was at 55% and all other departments were below average in their expenditure. This was attributed to delayed disbursement of funds, lack of requisite human resources and adequate facilitation. The table below captures the funding of the County's departments from the year 2014-2019.

Table 47: departmental funding

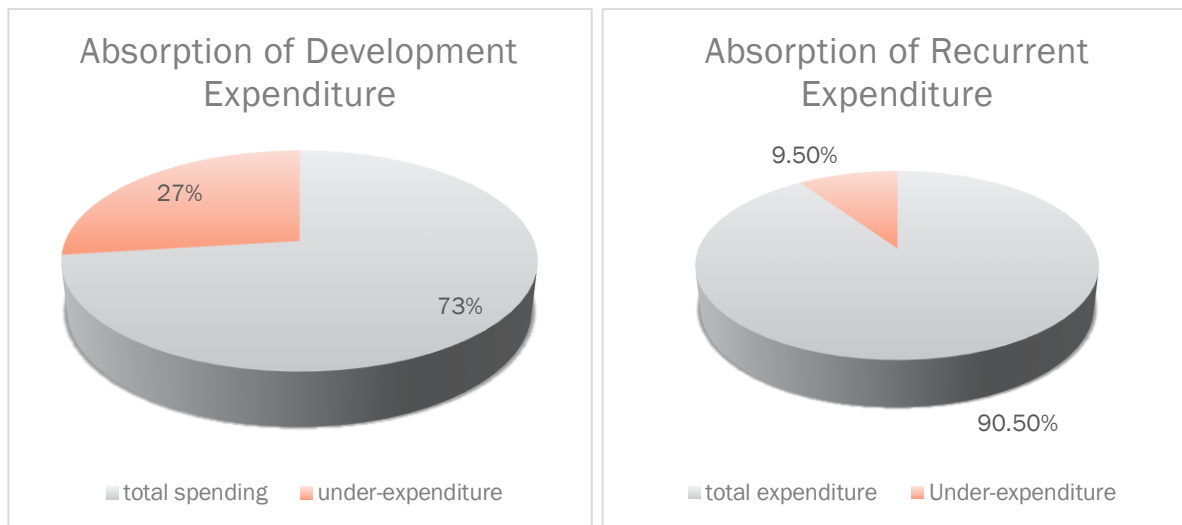
| Department | No of Budgeted Projects | Budget (Kshs) | Actual Expenditure (Kshs) | No of the Projects implemented | % of Funds used in the implementation |
|---|-------------------------|----------------|---------------------------|--------------------------------|---------------------------------------|
| Executive | 11 | 186,125,000.00 | 102,673,754.21 | 5 | 55% |
| Finance and Economic Planning | 1 | 57,838,351.22 | 17,351,505.40 | 1 | 30% |
| Community Development culture and talent Management | 42 | 301,733,056.00 | 117,149,248.81 | 18 | 39% |
| Education and Human Resource | 98 | 327,725,000.00 | 107,194,125.82 | 3 | 33% |
| Water Services | 45 | 402,976,088.60 | 173,120,087.80 | 18 | 43% |
| Infrastructure Development and Public Works | 29 | 259,469,735.20 | 105,473,787.98 | 19 | 41% |
| Health Services | 26 | 361,124,631.00 | 150,561,194.80 | 6 | 42% |
| ICT, Tourism | 22 | 88,800,000.00 | 13,993,725.00 | 1 | 16% |
| Department of agriculture, livestock and fisheries | 21 | 341,486,923.00 | 325,700,878.00 | 19 | 95% |
| Lands, Physical planning and Natural Resources | 41 | 139,002,148.00 | 55,200,105.00 | 23 | 40% |
| Total | 336 | 2,466,280,933 | 1,168,418,413 | 113 | 47% |

Source: Absorption Data per Department

The absorption of a budget is the expenditure from the total budgeted expenditure spent in one financial year. For instance, the financial statement for 2015/2016 revealed under expenditures in both the recurrent and development expenditure at 9.5% (Kshs.47, 027,477) and

27% (Kshs.131, 093,496) respectively. The absorption data for 2015/2016 was shown below for various departments.

Chart 9: Development expenditure for FY 2015/16



Source: Auditor general's report for the financial year 2015/2016

The department with the highest budgetary allocation was the health department, with about Kshs262, 920,000. On the other hand, the Land, Environment, Mining and Natural Resources department received the least amount, about Kshs144, 160,000. The department with the highest absorption rates was the Public Service and Administration. The recurrent and development expenditure rates were 95.2% and 86.8%, respectively. The total absorption rate of the entire budgetary allocation for the department was 94%.

The lowest absorption rate was in Industry, Trade and Investments, with 54.7% for recurrent expenditure and 20.1% for development expenditure. The total absorption rate of the department's total budgetary allocations was 31.7%. However, two departments in the County have been receiving more funding over the years: Education, Research & Child Development, and Medical and Public Health Services. This, therefore, shows a keen interest by the County government in the two fields of health and education.

12.3.4 Governance challenges in Kwale County

- **Institutional Incapacities**

This is evidenced in understaffing, inadequate funding and lack of requisite facilities and equipment that hinders the achievement of set milestones

- **Inadequate Service Delivery**

The level of service delivery in the County is insufficient in aspects of education, health, and sanitation and infrastructure development.

- **Inadequacies in public expenditure and financial management**

This impacts negatively on the implementation of projects as attributed by low absorption of budgetary allocation and lack of sufficient staff to support project implementation and other essential facilitation.

- **Inadequate Public Engagement**

The principle of participation is derived from the fact that people are the ultimate beneficiaries of development and agents of development. In Kwale County, participation has been promoted through public consultative meetings. However, the participation has not been well structured according to age and gender, promoting the dominance of consultative meetings by men

and limiting the participation of women and youth.

- **Poor Plan implementation**

There is a lack of/or low plan implementation in the County. This is attributed to inadequate resources and lack of political will manifested in uncontrolled development, duplication of projects and inequitable development.

- **Inadequate Disaster Response Mechanisms**

Low level of disaster preparedness to counter famine in the ASAL areas, fire outbreak and floods, among other disasters in all the sub-counties

- **Insecurity**

Insecurity is a threat to development, majorly destabilizing the County's economy. This is evidenced by incidences of insecurity in the form of burglary in urban areas and banditry within the areas of Kuranze and Mbita; incidences of murder have been experienced especially around the areas of Ukunda, Bongwe and Mabokoni, robbery against livestock traders along Kwale-Kinango road and youth gangs that terrorize communities.

- **Untapped Talents**

talents in football, basketball, cooking, music, theatre art and creative art, handicrafts, swimming and deep-sea diving are poorly nurtured due to lack of talent exhibition events, talent academies and talent management centres.

12.3.5 Cross-cutting issues

- High unemployment, especially among the youth.
- **High poverty level-** approximately 70.7% of the population in Kwale County is living below the poverty line at \$1.9 per day, which is higher than the national estimate, which

stands at 45.2 %. This is partly attributed to the high unemployment rate and natural factors such as drought and inefficiencies in production systems.

- **High (5.5%) HIV/AIDS Prevalence** mainly a menace to the youth aged between 15-24 years, women and children born while infected.
- **Vulnerable groups include the people living with HIV/AIDs, orphans, Persons with Disabilities (PWDs), and the elderly.** These groups face limitations in their capacity to be engaged in productive activities and access opportunities. Due to high illiteracy levels, gender inequality in ownership and control of productive family resources.
- **Increase in Social Vices** such as Drug Abuse/Child Abuse/Extremism and Pornography: This is among the youth or young people who are prone to hard drugs and substances abuse due to negative interactions with tourists, easy access to drugs and other substances, peer pressure, poverty, lack of parental guidance, low enforcement of laws and unemployment among the youth.

12.4 Emerging issues

| Opportunities | Challenges | Recommendations |
|--|--|--|
| <ul style="list-style-type: none"> • Defined structure of governance • Existing governance institutions • Legal frameworks requiring public engagements • Availability of local talent | <ul style="list-style-type: none"> • Institutional incapacities • Inadequate public engagement • Poor plan implementation • Inadequate disaster response mechanisms • Insecurity and social vices • Untapped talents | <ul style="list-style-type: none"> • Enhancing Capacity for good Governance • Enhancing Service Delivery • Enhance Public Participation • Improve Fiscal Management • Enhance Disaster Preparedness and Response • Curbing Insecurity and social vices • Promote Talent Development |



PART III

PLAN SYNTHESIS



COUNTY DEVELOPMENT OUTLOOK

13.1 Overview

The need for planning is derived from the concerns of the people and planning needs assessment. The aspiration of the people of Kwale was established from the shared vision of the people. They desire to have “*An Industrious Self-sufficient People in a Liveable Environment.*” This vision is further clarified in the plan’s objectives, as presented in the background chapter. The realization of this vision requires that change occurs in synergy across sectors in the County. However, the envisioned change is curtailed by challenges identified in the thematic analysis that precedes this chapter. The situation analysis reveals excellent potential and opportunities for realising the County’s vision. At the same time, some challenges hinder the utilization of opportunities and potentials. The situation culminates in a development outlook, as presented below.

13.2 Potential

The potential established in Kwale County includes the existing resources and prospects that can be used directly or converted to promote socio-economic transformation. The potentials include – Industrialization potential, Agricultural potential, Tourism potential, Urbanization potential, Transportation and Freight service potential, and Environmental conservation.

13.2.1 Industrialization

Kwale County has a robust industrial base, as evidenced by agricultural activities that include animal husbandry (ranching and dairy farming, fish farming, beekeeping, and poultry), crop cultivation, both in plantation farming and smallholdings as well as forestry. The county has a broad mineral resource base from rare earth metals, rocks, soils, and crude oil prospects. The County also has a wide range of marine resources, including aquatic animals, rocks, minerals, and crude oil. These resources, as mentioned above, serve as convertible for

industrialization on raw materials that offer opportunities for manufacturing and processing.

There must be enablers such as efficient transport, labour force, energy, and land for industrialisation to occur. Kwale County has a constantly growing and youthful population, both skilled and non-skilled, supporting successful industrialization and market for industrial products. Also, the County has permanent rivers, the ocean, solar and wind energy, which can be harnessed to produce energy to support various industries. Furthermore, the County already has an existing multi-modal transport system that ranges from air, water, and land, which links the industry to the market and the raw materials to the industries

13.2.2 Tourism development

Tourism is dependent on attraction sites and areas and supports infrastructure and facilities. Kwale County has both natural and human-made resources that attract tourism activities. These resources include forests (terrestrial and aquatic), hills, ocean, pristine sandy beaches, islands, wildlife and parks, wildlife sanctuary, wetlands, caves, ruins, heritage sites, and shrines (*Kayas*). The support facilities and services in Kwale County include hotels and conference facilities, transportation networks, and termini. Touristic opportunities also exist within diverse cultural activities inherent in the people of Kwale.

13.2.3 Environmental Conservation

Environmental conservation has a role in saving the earth from the loss of species and ecosystems from man’s quest to meet daily needs. The concept of sustainability draws from the ability of the current and future generations to enjoy the ecological and ecosystem functions that nature offers. Resources in Kwale County are both natural and human-made; they both play ecological functions presenting the necessity to protect and conserve them for current and future generations of Kwale. These resources include the forests (gazetted and communally owned), the wetlands, the rivers, the ocean, hills and hilltops, prime agricultural lands, coral reefs, wildlife, parks (marine and

inland). Animal corridors and disposal areas, shorelines, and aquatic vegetation. These resources offer food and are responsible for building resilience against natural hazards. They, therefore, require effective and adequate protection for the continuity of the ecological system.

13.2.4 Agricultural potential

The wide and diverse natural characteristics of Kwale County presented in its physiography shows different potential for livestock keeping and crop production. The County has potential for livestock keeping in dairy, beef, poultry, apiculture, Fish farming. The practice can take place in free-range, zero grazing, ranching as supported by the vast land in various parts of the County. Fish farming is a great potential that can be undertaken in areas with a persistent surface water potential that includes areas along permanent rivers, estuaries, and in the open ocean waters through caged fishing. High-value crop cultivation has potential in urban areas that have lost vast land for regular traditional crop cultivation. Plantation agriculture potential, on the other hand, exists in areas with vast land that have long enjoyed limited land fragmentation. Further, the agricultural potential is coupled with the availability of markets within the County, region, nationally, and internationally Kwale being a gateway County to the republic of Tanzania. The County also has a huge labour force and a transport system for the movement of farm inputs to the market.

13.2.5 Urbanization

The potential for urbanization is inherent in the existing 135 urban areas identified in the analysis. The urban areas play varied roles ranging from local centres to Municipalities based on the range of services and population threshold. These centres are connected to production areas and resources, forming the epitome of integration and differentiation of labour, raw materials, and services and offering a residential function. Furthermore, these centres provide a matrix of development corridors connected by networks and open up the County for intensive development.

13.2.6 Transportation and Freight

The multi-modal transport network in the County, ranging from roads, air, railway (both meter gauge and standard gauge), presents the potential for efficient transportation development. Kwale County is home to the famous Diani beach that attracts tourists worldwide; therefore, developing an integrated transport network and termini will ensure the growth of the tourism sector and boost the County's GDP. In addition, an efficient transport network will increase access to the County from the region and internationally. Agricultural development will also be boosted as the rural hinterland of the County is endowed with many farm products; hence efficient transportation network will ensure the products are delivered to the market in good time.

13.3 Challenges

Despite the County's huge development potentials, as discussed above, several challenges hinder the growth and development of the County. These challenges have led to the increased poverty rate and underperformance of vital economic sectors. These challenges are briefly discussed below.

13.3.1 Poor infrastructural development

A well-developed infrastructure is fundamental and is a major economic driver in a region. An analysis of the infrastructural condition of Kwale County presented some gaps in crucial areas such as energy, water supply, and waste management. Also, the weak rural-urban linkage has led to increased poverty rates in the County as access to agricultural products and raw materials from the rural areas have been hindered. Poor road networks have also blocked access to the County's tourist sites, such as the Vanga –Shimoni road, which becomes impassable during rainy seasons.

13.3.2 Low adoption of technology

There is low uptake of technology in agricultural and industrial productivity; in turn, this has led to a decrease in agricultural productivity and low industrial productivity. The low utilization of technology in agricultural production and

industrial development is food insecurity and decreased revenue collection.

13.3.3 Production and technological Issues

The indigenous and traditional production methods dominate the County's production activities. Looking into the agricultural sector, the residents still indulge in indigenous breeds of livestock whose productivity is generally low and limited. In crop farming, the residents still use uncertified seeds and do not optimise the land's agro potential.

With the current opportunity in technology, the level of adoption of technology in production is limited. In the County, both in the crop, livestock production, and the manufacturing sector. The County has neither adequately mechanized agricultural activities nor has it leveraged appropriately on technology to market its products.

13.3.4 Limited exploitation of the Value chain

The production in Kwale County has remained dominant at the primary level, mainly extracting raw materials from their natural state. Despite the broad industrial base in the County, there is a minimal value addition taking place in the County. Currently, the processing industries are few and are shutting down despite the continuous production in the County. Furthermore, the industrial crops and products in the County are taken to the market in their raw form despite their potential value chain in the processing.

Livestock products achieve only three levels of the value chain that includes slaughtering for beef, transportation, and storage, while milk products are extracted transferred to the market for consumption.

13.3.5 Under exploitation of natural resources in the County

Kwale County enjoys a vast natural, economic, and human resource base. These resources are either underutilized or unexploited. The resource base ranges from the blue economy, rare earth minerals, rocks, soils, wildlife (flora and fauna), aquatic and terrestrial, prospects of

crude oil, rivers, productive agricultural land, and culture and heritage site. The utilization of these resources is not optimal and is coupled with limited exploitation techniques. The blue economy has the opportunity for fishing, fish farming, tourism and sports, transportation, mining, and energy harnessing. Some of these opportunities are untapped, or their exploitation is at a bare minimum.

The agricultural land in the County with different potential is underutilized by the traditional farming methods and below the threshold carrying capacity of livestock. Additionally, the selection of seeds is poorly undertaken as farmers inbreed or utilize their produce as seeds in the next planting phase.

The variety of opportunities of tourism activities presented by the resources of the County is unexploited from water sporting, cultural and heritage sites, plantation farms to adventure areas. Additionally, the urban-based tourism potentials of the County are untapped.

Despite the broad energy potential of the County in the wind, solar, hydro, and wave, there is still a limited power supply to support industrialization in the County, with the people suffering power outages and high costs of power.

Furthermore, despite the endowment of the County by building materials and suitable soils for construction, the road conditions are poor and rendered impassable during rainy seasons, hindering exploitation of resources and delays in movement across the County while the housing sector is suffering inadequacy in supply.

13.3.6 Environmental Issues

Deforestation activities are common in the community forests and shrines, threatening extinction. The residents in the County use the forests for economic and social benefits in an uncontrolled manner. The challenge comes when the community members do not restore the tree cover by planting to replace the cut trees.

Solid waste pollution and management challenges have become inherent in major urban

areas within Kwale County. The collection and management of the County are not effectively done in the County. These wastes finally find their way into the environmentally sensitive areas impacting the ecological functions of the ESAs.

Industrial and combustion activities are also increasing pollution of the air in the County due to the emission of greenhouse gases in the atmosphere. The concentration of pollutants is consistently rising due to the increasing number of combustion activities in the County.

These environmental issues gradually contribute to climate change in the County and globally. The increasing quantity of carbon dioxide in the atmosphere is causing disequilibrium in the biogeochemical cycle that, in the end, has resulted in natural hazards that include extreme weather conditions like drought and floods. Therefore, the role of nature in building resilience in Kwale County is compromised, and the resident suffers from natural hazards and calamities due to interference with nature.

13.3.7 Governance and Institutional Issues

Governance affects all sectors and development in the County. The ineffectiveness in governance in the County has impacted service delivery, poverty index, project implementation, land administration and management, environmental management, security, social vices, financing, and institutional capacities.

Currently, the County is experiencing inadequacies in providing health, education, and physical infrastructure. The limited institutional capacities in finances, skilled human resources, and machinery have hindered effective service provision in the County.

The institutional systems of the people that govern society have influenced the County's social, economic, and environmental development. The cultural values of the people of Kwale have resulted in land fragmentation for the benefits that are tied to land ownership.

Furthermore, limited empowerment of society has resulted in the inherent poverty that is observed in the County. The community

members rely on necessary production skills and limited capital, mainly the inherited land.

The institutional system and governance of the County have inadequately marketed the County's tourism and natural resource base to promote optimal and increased exploitation of the resources. Also, the marketing systems for various products are not well structured to support the residents in accessing the market for their products.

Finally, the County project implementation is ineffective due to a prolonged timeline in completing the various projects. Additionally, The funding of these projects is often delayed leading to the same problems of ineffective project implementation.

13.4 Recommendations

The following key recommendations are necessary to propel the County towards achieving its vision and mitigating the above challenges.

1. Enhance agricultural productivity for food security and income generation.
2. Environmental conservation and sustainable development
3. Promote investment in Tourism, Industrialization, Trade, and Commerce
4. Optimize the potential of marine resources and the blue economy
5. Enhance the quality of life through effective Service Delivery
6. Create a system for liveable human settlements and urban development
7. Strengthen linkages through transport and infrastructure development
8. Optimize the County's potential through good governance

The above recommendations will form the pillars on which the strategies will be anchored. The discussions under the strategy section emphasize the above recommendations by giving key proposals in every thematic area.

PART IV

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THEMATIC DEVELOPMENT STRATEGIES

The development strategies seek to guide the management of resources and optimization of opportunities and find mechanisms to address challenges towards improving socio-economic conditions, environmental well-being, and the quality of life of the Kwale people.

The strategies spell out the basis on which all areas of the County will have the opportunity to develop and grow to their potential within the next ten years and beyond. The strategies are designed to make the Kwale people self-reliant in food production and job creation; the County is more competitive, socially cohesive and environmentally sustainable. The target is to make the spaces and communities within urban and rural areas Liveable and achieve integrated development. With the County expecting a population of about 1,160,865 by 2028, measures have to be put in place to adequately provide services for this population and build a platform for economic growth and mitigate the impacts of the population increase.

The strategies will respond to the aspirations of the people through eight development themes;

- Theme 1:** Enhancing agricultural productivity for food security
- Theme 2:** Environmental conservation and sustainable development
- Theme 3:** Promoting investment in Tourism, Industrialization, Trade and Commerce
- Theme 4:** Optimizing the potential of marine resources and the blue economy
- Theme 5:** Enhancing the quality of life through effective Service Delivery

- Theme 6:** Creating a system for liveable human settlements and urban development
- Theme 7:** Strengthening linkages through transport and infrastructure development
- Theme 8:** Optimizing the County's potential through good governance

The elements of these themes will be achieved through policies and actions that need to be put in place and implemented within the coming 10 years.

14.1 Theme 1: Enhancing Agricultural Productivity for Food Security

14.1.1 Overview

In Kwale County, about 84.8% of households depend on agriculture as their main source of livelihood. The County has a high potential for agriculture, as depicted by adequate crop and livestock production land. Approximately 90 per cent of the County's land is suitable for either crop or livestock farming. The County also has abundant marine food resources, including fish and seaweeds, yet Kwale has suffered perennial food shortages over time. Numerous challenges hamper sufficiency in agricultural production and food security in the County. This plan provides key strategies and policy guidelines to address the challenges identified and leverage the County's potential for agricultural productivity.

14.1.2 Challenges

- **Overreliance on subsistence farming:** about 86.2% of the households in Kwale County practice subsistence farming whose production is insufficient to sustain the households to the next harvest season.
- **Overreliance on maize production as staple food:** In Kwale County, there is overdependence on maize as the main

food crop, just like in Kenya. This leads to growing maize in some areas where it is unsuitable, resulting in poor yields that do not sustain the food requirements for the next harvest season. The preference of maize as the staple food also compromises the individual nutritional requirements of the people.

- **Land Fragmentation in rich agricultural potential areas** – The subdivision of land into smaller portions of land within rich agricultural potential areas such as Dzombo, Mrima, Shimba Hills, Kikoneni, Nguluku and Majoreni will ultimately impact the productivity of those areas which are the food basket of the County.
- **Low uptake of modern farming technology:** agriculture in Kwale is still being practised using traditional farming methods such as hoeing, burning for land preparation and use of uncertified seeds, traditional pest control methods, use low yielding livestock breeds and low uptake of Artificial Insemination. These factors continuously contribute to low productivity in both crops and livestock.
- **Poor post-production handling and lack of value addition** attributed to Lack of appropriate knowledge, skills and technology for product handling and storage facilities coupled with lack of value addition, especially for fruits, fish and other perishable products, compromising their quality and leading to loss and food wastage.
- **Restricted access to credit** arising from undefined rights, especially within

community ranches, makes investment in agricultural production difficult. Land ownership documents are not at hand in areas where the land ownership has been defined. This also restrains the people from significantly investing in agriculture.

- **Environmental degradation** – arising from overgrazing, deforestation, and cultivation along river banks and slopes- has impacted the climatic conditions resulting in significant soil erosion and drought, affecting agricultural production. In addition, tampering of marine ecosystems, such as the destruction of corals through sea pollution, has resulted in dwindling fish production. This, in turn, affects the food security of the County.
- **Drought and Over-reliance on rain-fed agriculture:** 70% of Kwale County is ASAL characterized by low rainfall and high temperatures susceptible to drought, yet almost all the agricultural activities are rain-dependent, including crop production and pasture for livestock. This poses a relatively high likelihood of crop failure resulting in famine, high food costs, and low farmers' returns.
- **Inefficiencies in the food supply chain: middlemen who often exploit the farmers dominate the food supply chain.** In addition, the collapse, dormancy and mismanagement of farmers' cooperatives have resulted in difficulty in accessing markets and obtaining credit for agribusiness.
- Inadequate training and skills for farmers attributed to lack of adequate staff and dormant farmers training

centres in Mackinnon, Matuga, Kikoneni and Mkongani. In some instances, the centres are functional, but the farmers are reluctant to adopt new farming technologies.

- **Human-wildlife conflict:** Incidents of human-wildlife conflict are encountered in Mackinnon and Mkongani, which often lead to the destruction of crops.
- **Prevalence of pests and diseases:** common diseases such as Newcastle, east-coast fever, foot-and-mouth, trypanosomiasis, leaf rust and parasites such as army worms, ticks, fleas, moth, and weevils affect the production and storage of food.
- **The high cost of inputs,** including fertilizers, certified seeds, machinery and equipment, pesticides, hinder production given that majority of the people in the County are poor.
- **Poor post-production handling and lack of value addition** attributed to Lack of appropriate knowledge, skills and technology for product handling and storage facilities coupled with lack of value addition, especially for fruits, fish and other perishable products, compromising their quality and leading to loss and food wastage. The lack of agro-processing industries has also been attributed to the County's low-value addition of agricultural produce.
- **Inactive demonstration farms and dormant farmers' cooperative societies:** Most Government Agricultural demonstration farms in the County are dormant. This has significantly lowered the number of farmers on practical training on best

farming practices. The limited exposure to modern methods has hindered maximizing production and output from individual farms.

14.1.3 Strategies

Strategy 1: Land Optimization through Zoning by Potential and Suitability

Land optimization is a land management practice applied to maximize returns out of the land by maintaining an appropriate balance between the population demand for land to undertake development activities, such as food production, settlements, and environmental conservation. The practice will be used to maintain an efficient intensity of the land use and safe levels of development and population to maintain acceptable standards of environment and amenity for the people. This will be achieved through appropriate zoning of land that is supported by information about its most suitable land uses and productivity potential.

Under this strategy, the County shall be zoned into the following production zones:

- Zone 1: High Potential Crop Zone
- Zone 2: Medium Potential Crop Zone
- Zone 3: Mixed Farming Zone
- Zone 4: Ranching Zone

Key Strategic Interventions

- Delineation of growth centres.
- Carry out land suitability assessment per crop
- Enhance agricultural production per unit area of land.
- Mainstreaming climate change resilience and mitigation in land use planning
- Prepare land and crop suitability maps based on soil, water, land drainage, water table depth and groundwater

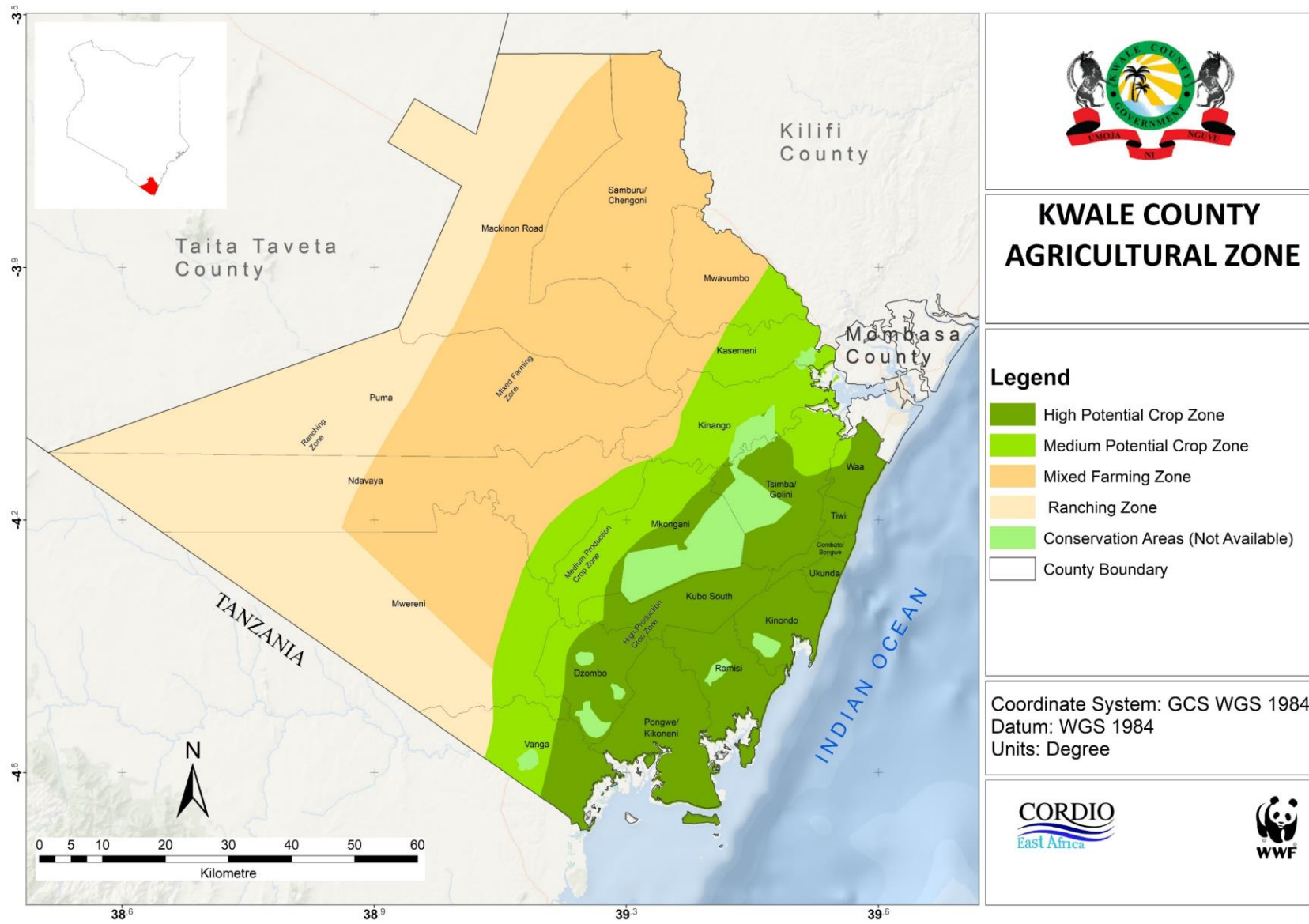
quality and other agro-hydrological conditions prevailing in different areas;

- Develop suitable farming systems for different areas based on water availability and climate conditions. This can be done quickly using modern tools such as remote sensing and GIS
- Land-use zoning by potential and suitability.



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Map 47: Agricultural Zones



Strategy 2: Protection and Conservation of Agricultural Land

Land set aside for agricultural production will be safeguarded against fragmentation through an undue subdivision, environmental degradation, conversion of land use and encouragement of sustainable agricultural practices.

Key strategic interventions

- The County will undertake rural planning, emphasising areas with greater agricultural potential.
- Training of farmers on sustainable agricultural practices.
- Defining urban growth limits
- Promoting clustered settlement patterns.
- Discourage subdivision of land in agricultural areas and promote bigger land holding.
- Adopt measures to discourage deforestation.
- Discourage overstocking / overgrazing

Strategy 3: Revamping Farmer Training, Extension Services and Research

The strategy seeks to strengthen the capacity of the local farmers through knowledge transfer and skills development by providing farmers with adequate training and extension services. Training and skills development will be emphasized on current and emerging farming and production methods and technologies to enhance good husbandry and optimal production. The preferred model will target farmers at the household level.

Institutional strengthening and development shall be key in achieving the desired outcome under this strategy.

Key Strategic Interventions

- Decentralize extension services to village unit levels.

- Build partnerships with non-governmental extension service providers and research institutions.
- Adopt a commodity chain development approach for maize, mangoes, citrus fruits, coconut, cashew nut, cassava, sugarcane, Bixa, livestock and fisheries
- Develop a County Farmers Information System to track production.
- Promotion of Rural Innovation Community Centres at the ward level.
- Launch programmes farmer competitions through agricultural fairs and exhibitions.
- Organize farmers into priority commodities cooperatives.
- Revamping dormant agricultural training institutions.
- Establish four County-owned demonstration farms at Matuga, Bachuma, Lungalunga and Kuranze.
- Encourage privately owned demonstration farms.
- Adopt ICT as a tool for farmer information dissemination

Strategy 4: Diversification of Farming Systems

The strategy aims at adopting diversified approaches to production to ensure increased agricultural output. This strategy shall adopt measures to produce enough food for consumption and surplus for sale to generate income. The strategy combines approaches and systems to ensure sufficient surplus production of various foods consumed locally or exchanged for other commodities not produced within the County.

The other aspect of this strategy is to ensure that optimal production out of the land integrates conservation and respects ecological biodiversity, whereby the ecosystem will self-regenerate through the farming practice.

Key Strategic Interventions

- Promote sustainable agriculture through afforestation using tree crops.
- Adopt agricultural intensification
- Adopting urban agriculture.
- Promote organic farming.
- Encourage mixed farming within the ASAL regions using irrigation agriculture and incorporate small-scale animal rearing within high potential crop production areas.
- Encourage biodiversity-based crop production by growing indigenous high-value crops such as Moringa and Seaweed.
- Revamp production of cashew nut, coconut, Bixa, sunflower and cotton as industrial crops.
- Introduce pomegranate and avocado farming under irrigation agriculture.
- Encourage farming of horticultural crops such as amaranthus, capsicum, okra, eggplants, passion, watermelon, pepper, papaya, tomatoes, bananas, onions, night black-shed ('mnavu'), "futswe", "mtsafwe", cowpeas, hare lettuce ('mchunga') under irrigation agriculture.
- Promote the growing of drought-resistant crops and improve livestock breeds.
- Promote commercial fodder production.
- Encourage the production of organic fertilizers and discourage the use of industrial fertilizers.
- Promote the use of certified seed varieties.
- Consider the introduction of cage fishing and inland aquaculture.
- Upscale the practice of apiculture.

Strategy 5: Promotion of Irrigation Agriculture

Approximately 70% of the County lies within ASAL regions, meaning that rain-fed agriculture cannot be depended upon to achieve the County's food security. The strategy shall ensure sustainable agricultural

production through the use of irrigation methods. The irrigation shall be undertaken around major dams, including Mwache and Nyalani and smaller dams. It will also advocate establishing other two strategic dams in the Uмба and Ramisi river systems. Through irrigation, crops such as amaranthus, capsicum, okra, eggplants, passion, watermelon, pepper, papaya, tomatoes, bananas, onions, night-black-shed ('mnavu'), 'futswe', cowpeas, hare lettuce ('mchunga') can be planted.

At a small scale, irrigation shall also be promoted using underground water sources such as boreholes, wells, roof catchments and stormwater capture.

Key Strategic Interventions

- Mapping of potential irrigation areas
- Development of dams along rivers Uмба, Pemba, Mambome, Mwena and Ramisi; and upgrading of dams along Mkurumudzi River and Mkanda Dam
- Establish irrigation schemes within Mwache and Nyalani, and along Uмба and Ramisi rivers
- Encourage and support school gardening programs
- Adopt applicable irrigation technologies
- Promote research on irrigation agriculture.
- Modernization of irrigation infrastructure

Strategy 6: Promoting Environmental Conservation and Restoration.

Agricultural production happens within the environment, thereby making it a key consideration for designing strategies for enhancing productivity. Aspects of the environment range from soil quality, water quality and availability, suitable climatic characteristics, and human activities happening around the agricultural areas. Tampering with the balance of the aspects will always impact agricultural production and productivity. Conserving and restoration

of the environment for optimal agricultural production shall be paramount. Issues such as climate change, erosion and siltation of rivers, bush burning, soil quality depletion, overstocking, deforestation and low forest cover contribute to low yields in agriculture. Therefore, the strategy is to mitigate the impacts of these issues and restore the land to optimum production levels.

Key Strategic Interventions

- Promote afforestation and planting of leguminous trees in Kinango and Lunga Lunga using appropriate bamboo species
- Afforestation along riparian areas along Ramisi, Mwache, Uмба, Mwena, Mwachema, Mkurumudzi and Marere Rivers.
- Restoration of mangrove forests as fish habitats in Tsunza, Gazi, Shimoni, Vanga, Bodo and Msambweni.
- Conservation and Restoration of catchment areas of the major rivers
- Encourage organic farming as opposed to the use of inorganic fertilizers and chemical herbicides, which alter soil PH and lead to poor yields
- Discourage cultivation on riparian reserves to mitigate soil erosion and flooding of farmlands
- Promote rice and tuber farming in Vanga, Kanana, Ramisi, Mshiu, Mwangwei, Dzombo and Lunga Lunga.
- Encourage contour farming and terracing along slopes
- Discourage on-farm burning
- Prescribe appropriate farm carrying capacity per acre for livestock
- Encourage planting of suitable cover crops between rows of the main crop.

- Mainstreaming climate change resilience and adaptation programmes into local development plans.

Strategy 7: Embracing Value Addition in Agriculture

Value addition in agriculture shall be promoted as a practice where alteration of raw agricultural produce shall be encouraged to enhance the original or raw products' economic value and consumer appeal. This strategy is geared at reducing post-harvest wastages as well as increasing the economic value of crop and animal products. This will be achieved through local preservation and industrial processing methods.

Key Strategic Interventions

- Promote traditional food preservation methods such as fish, mango and cassava
- Adopt modern preservation methods
- Establish a County strategic food reserve and decentralized food collection centres at the Sub-County level.
- Establish food processing centres: fish at Shimoni and Vanga, cereals at Dzombo, fruits at Shimba Hills, meat processing at Kinango, a tannery at Vigurungani, rice milling at Mwangwei, coconut at Msambweni, cashew nut at Kwale. Sunflower and cotton ginnery at Kinango
- Promote Public-Private Partnerships in value addition

Strategy 8: Modernization of agriculture

This strategy entails transforming agricultural practices from traditional to modern farming methods. The modernization consists of using improved seeds, modern farm machinery such as tractors, harvesters, threshers, etc., chemical

fertilizers and pesticides in an optimal combination with water.

Key Strategic Interventions

- Adopt appropriate modern irrigation methods
- Adopt mechanization of agriculture
- Modernize husbandry practices through artificial insemination, greenhouses, and precision agriculture technology.
- Undertake crop suitability assessment.
- Adopt research in pest and disease control.
- Modernize storage facilities
- Shift from subsistence farming to agri-business.

Strategy 9: Strengthening of Urban-Rural Linkages

Under this strategy, the interrelationship between rural areas as agricultural production areas and urban centres such as marketplaces as well as a source of agricultural inputs has to be strengthened. The urban centres also act as incubation centres for technologies in agriculture and innovation.

Key Strategic Interventions

- Improve road connectivity networks.
- Upgrade the roads connecting production and market areas

Strategy 10: Establishing Efficient Marketing Systems

One of the major challenges faced by farmers in Kwale has been timely access to markets as well as poor pricing for their produce. This strategy fosters efficient and fair marketing by providing mechanisms to enhance competitiveness and establish a value chain for farm products. It is foreseen that by doing this, the livelihood of farmers will be improved significantly.

Key Strategic Interventions

- Promote consumption of locally produced products
- Diversify production
- Develop strategic wholesale markets for fresh produce at Kombani, Msambweni
- Support farmers to form cooperatives to facilitate pricing and marketing of produce
- Provide adequate and appropriate infrastructure for the expansion of existing livestock auction centres at; Mwangulu, Kinango and Mwakijembe
- Establish fish markets at Vanga and Shimoni
- Hold annual trade fairs to showcase products produced in Kwale County at Makongeni
- Develop a County Farmers Information System to track production
- Promote partnerships and joint ventures in the production and marketing of local products to regional and international markets
- Promote value addition, product differentiation and branding to enable venturing into new markets
- Promote the use of ICT in marketing

Strategy 11: Creating Fiscal Measures to Support Farmers

The strategy aims to cushion farmers against high production costs, post-production losses, exploitation and unfair competition and promote access to funding for agricultural activities.

Key Strategic Interventions

- Provide measures to regulate tariffs for products
- Encourage standard packaging of farm produce to maximize returns
- Encourage farmers to take up cover against risks through insurance

- Tax reliefs and subsidies in farm inputs to reduce the cost of production
- Establish a farmers' credit financing fund

Strategy 12: Promote Agri-business

This strategy aims to shift from consumer agriculture to commercial agriculture, where agricultural production shall be mainstreamed within the County's economy by building structures that will propagate better agriculture practices for income. The strategy will require adopting a more holistic approach to sustainable agriculture as a commercial venture by creating value chain systems that align the farmer, the marketplace, producers and suppliers of farm inputs, machinery and equipment and promoting innovation in agriculture for job creation.

Key Strategic Interventions

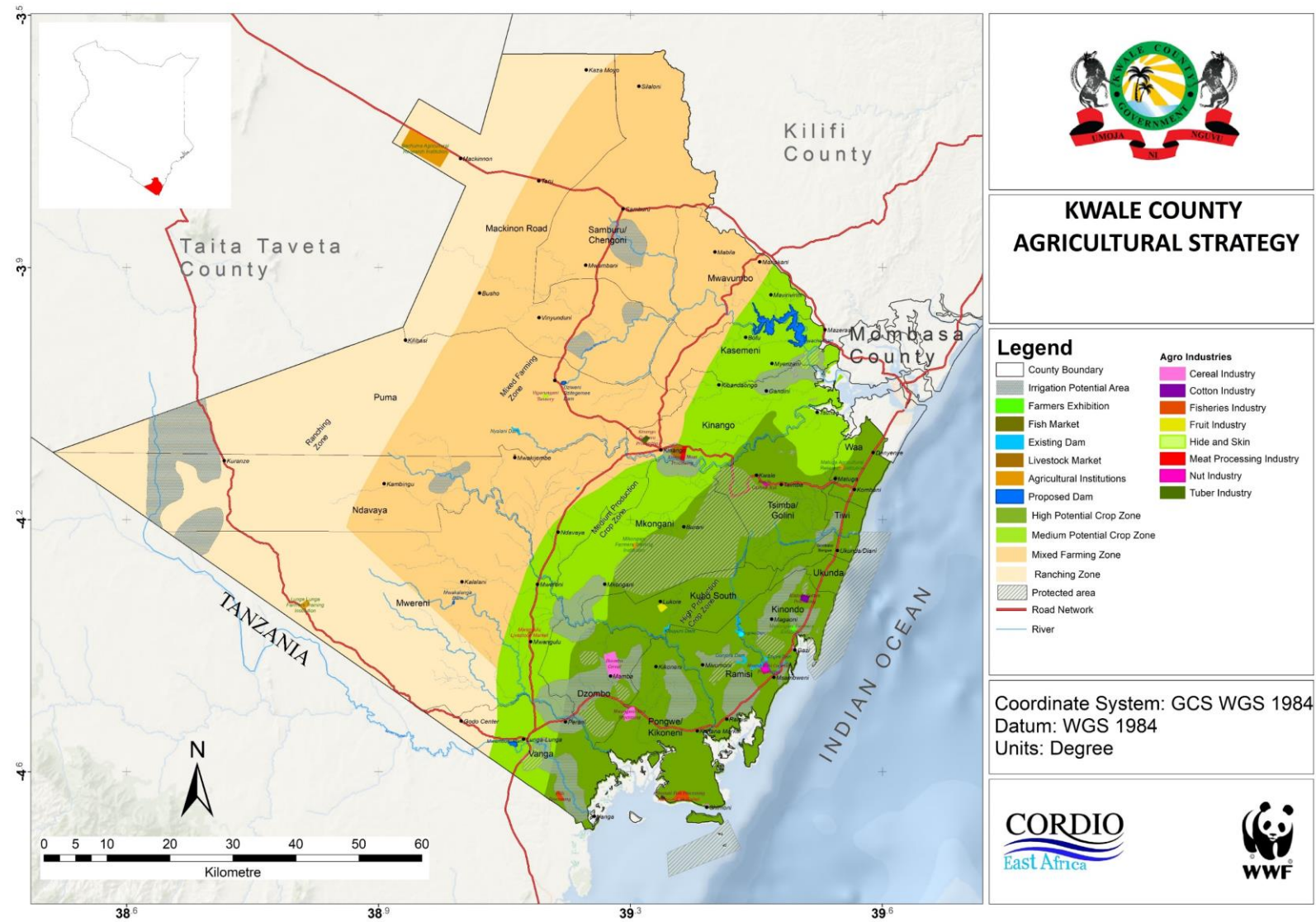
- Capacity building through training of farmers on agri-business.
- Formulation of an agri-business policy for the County.
- Develop market information and intelligence system to update farmers regarding consumer demands and changing preferences.
- Establish Agro-processing industries.
- Devise mechanisms for leveraging existing funds such as youth funds, women enterprise development funds, and Uwezo Fund.
- Propagation of niche agricultural products for Kwale County.
- Support access to agricultural inputs such as machinery, seed and fertilizers.
- Build partnerships among stakeholders in agri-business, including farmers, cooperatives, suppliers of input, research institutions.

- Adopt appropriate agricultural production and marketing technologies, including certified seeds, fertilizers, mechanization, irrigation, greenhouses, and ICT.



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Map 48: County Agriculture Strategy Map.



14.2 Theme 2: Environmental Conservation and Sustainable Development

14.2.1 Overview

Environmental conservation is a mechanism that employs various management systems, including protection, restoration and preservation of natural resources and ecosystems to safeguard environmental wellbeing. The fundamental principle is to recognize the environment first as a habitat for human life and other forms of life and second as a source for development. This calls for utilization of resources to ensure the environment is safeguarded against adverse effects of human development activities and enhance its ability to absorb the shocks from anthropogenic activities such as industrial activities, extraction of raw materials, intensive agricultural activities, human settlements and abstraction of water. Importantly, environmental conservation shall ensure that such activities are carried out in a manner that enables the natural ability of the environment to replenish its essential components and resources and self-rejuvenate.

The environment is the foundation upon which the functionality of different sectors of the economy is grounded. In the face of population pressure coupled with increased demand for natural extractives, Kwale County faces several challenges in its endeavour to balance its developmental needs and environmental sustainability. Some of these challenges include:

14.2.2 Challenges

- **Deforestation** is caused by overreliance on wood fuel (73.9% and 21.7% of households depend on firewood and charcoal as their main cooking fuel, respectively), clearing forests for agriculture and human settlements. This has resulted in a diminishing forest cover, currently at about 5% against a

recommended minimum of 10% land cover.

- **Human-wildlife conflict** in areas abutting Shimba Hills National Park, Tsavo East National Park and Reserve and Mwaluganje Conservancy, resulting in loss of human and animal life and property damage. Apart from the conflict surrounding wildlife areas, other parts of the County have also experienced conflict between humans and wildlife. There have been profound cases of snake bites across the County, some of which have led to the loss of lives.
- **Pollution of the County's surface water sources** through the disposal of industrial and domestic waste into water bodies through mining tailing, poor agricultural practices which have encouraged soil erosion leading to siltation of some rivers such as Mkurumudzi, Mwachema and Ramisi rivers and riverbed sand harvesting. The pollution is coupled with reducing volumes of water in the rivers and drying river streams.
- **Poor disposal of solid waste**, especially in urban areas, is occasioned by inadequate waste receptacles, lack of designated disposal and waste collection points and a coordinated system from the household to the disposal level.
- **Degradation of water catchment areas.**
- **Lack of wastewater reticulation and treatment system in urban areas:** The County's urban areas rely on household septic tanks and pit latrines, with disposal of raw sewage by exhausters (vacuum trucks) often done in the Indian Ocean. Other areas of the County

still experience open defecation. Water inadequacy has also been a challenge in waste management. In most areas, the choice for human waste has been pit latrines due to the inadequate water supply required to adopt other disposal methods.

- **Marine and beach pollution** through open defecation along the Indian Ocean beaches due to lack of sanitation facilities, littering, coral bleaching, sedimentation from the terrestrial sources, especially along river mouths and estuaries of Mwachema, Ramisi, Mkurumudzi, Mwache, Pemba and Mteza rivers
- **Fire vulnerability** arises from perennial bush fires and fire disaster unpreparedness due to firefighting equipment and infrastructure shortages and the absence of a fire department.
- **Restriction of access to land obstructs the seafront**, blocking sea walls. This compromises the aesthetics of the seafront apart from restricting many people from accessing the beach for recreation. Further construction along the beach compromises sea animals' life and breeding patterns such as turtles and crabs.
- **Susceptibility to natural disasters especially flooding** in Vanga, Mshiu, Mwangwei, Kanana and drought in Kinango and parts of Lunga Lunga sub-counties.
- **Land degradation** through mining activities such as Large-scale extraction of silica sand in Msambweni and Dalgube, burrowing – some of which is done through explosives – for road construction material in Mazeras and

Taru areas, large scale mining of titanium in Maumba, cutting of coral bricks in areas of Waa, Tiwi, Kinondo and Funzi.

- **Poor mitigation of environmental footprints** left by large scale infrastructural development such as the construction of the standard gauge railway, roads and port development need to be considered before implementation.

14.2.3 Strategies

Strategy 1: Promote community-driven forest conservation

Integrating the community in afforestation and reforestation programs shall be emphasized to realize the recommended 10% minimum forest cover within the next ten years. This will significantly reduce the cost of implementation of forestry programmes. It will further enhance the local communities' sense of community ownership in forests conservation, making it easier to safeguard against destructive activities such as unsustainable logging and charcoal burning.

Key Strategic Interventions:

- Supporting the communities to establish community forests.
- Establishing County tree nurseries and forestry demonstration centres.
- Integrate community and private woodlots within County and national government forestry programmes.
- Encourage communities and schools to practice roof catchment of rainwater for tree planting.
- Establishment of a reward system for community tree planting.
- Encourage afforestation by using food trees such as oranges, mangoes, cashew nuts and coconut trees.
- Replicate community initiatives such as the *Mikoko Pamoja* carbon offset

scheme (Clean Development Mechanism) in each ward.

- Establish forest buffers for dams and water pans.
- Promote community sensitization programmes, capacity building and awareness campaigns on forestry.
- Mainstreaming afforestation in celebrating all County, national and international holidays and events.
- In cooperating afforestation clauses when leasing government land
- Reforestation of mangrove forests through;

Restrict the conversion of mangrove areas into other uses and encourage reforestation of mangrove forests in Gazi, Msambweni, Bodo, Vanga, Funzi, Wasini and Tsunza.
- Promote alternative energy sources to charcoal and wood fuel.
- Incorporate greening and tree planting in development approval.
- Securing existing community forests.
- Mainstreaming Kaya forests into the County's forestry conservation programs.
- Encourage protection and conservation of indigenous communities and private forests and shrubs.
- Incentivize communities abutting forest ecosystems so that the socio-economic benefits of forest conservation are clearly understood and empirically verifiable.

Strategy 2: Restoration and Conservation of Water Catchment Areas

Water towers are a critical component of Kwale County's environmental setup. Water catchment areas act as a source of recharge for rivers, streams and springs. The sustainability of Shimba Hills and other river catchment towers will ensure that the County will sustain its current and future water needs and environmental quality.

Key Strategic Interventions:

- Buffering of Shimba Hills water tower from human activities
- Preparation and implementation of management plans for the Shimba Hills water tower and river catchment areas
- Rehabilitation of Shimba Hills water tower and the river catchment areas through planting of indigenous tree species
- Monitoring of activities within Shimba Hills water tower and river catchment areas through appropriate zoning and enforcement

Strategy 3: Undertake Urban Greening

Urban green spaces are an invaluable asset in environmental conservation as they help improve the liveability of urban areas through sequestration of carbon, purification of air, absorption of atmospheric heat and improvement of urban aesthetic appeal. They can generally be referred to as urban breathing spaces equivalent to lungs in human beings and are integral to ensuring quality environmental health. Urban administrations shall be supported and encouraged to green urban public spaces. Private developers shall be required to incorporate greening into their development plans.

Key Strategic Interventions:

- Greening of urban areas through planting flowers, grasses and trees on allocated green spaces. For biodiversity, a single species should not exceed 10% of the species planted
- Establishing arboreta in Diani-Ukunda, Msambweni and Kwale town at Mkurumudzi estuary, Mwachema bridge Kwale baraza.
- Support school greening initiatives within the urban areas
- Incorporate urban design in the preparation of urban plans

- Incorporate greening in approval of development plans.

Strategy 4: Improve efficiency in Collection, Transportation and Disposal of Solid Waste in Urban Areas

Solid waste management in urban areas in Kwale County faces several constraints, which have to be addressed to improve the liveability of towns in the County. Urbanization is on the upward trajectory in the County. Therefore, it is expected that the volume of solid waste generated will proportionately increase. Therefore, this calls for improved investment in solid waste management regarding human resources, waste management mechanisms, technology, and infrastructural inventory.

Key Strategic Interventions:

- Provide adequate solid waste collection infrastructures such as skips, litter bins and transfer stations within the urban areas.
- Designate solid waste disposal sites at every Sub-County
- Close all non-designated waste disposal sites
- Incorporate waste management as a consideration of renewal of business licensing and permits
- Sustain awareness and sensitization on proper solid waste management
- Introduce 'polluter pays principle in the form of Extended Producer Responsibility (EPR) on plastic packaging companies
- Develop a County waste management plan

Strategy 5: commercialize waste management through waste processing

Waste and garbage are always viewed as non-valuable products of consumption. As a result, uncontrolled dumping and disposal become an environmental concern. However, there is value in waste. The strategy is to intentionally extract value from waste instead of dumping it as trash

through waste processing to derive useful by-products and encourage reuse. This will enhance the quality of the environment and ultimately create an economy and income from the waste generated and present an opportunity for job creation for the local people.

Key Strategic Interventions:

- Establish a waste processing facility around Mwabungo dumpsite through Public-Private Partnership (PPP)
- Partner with private investors to construct and operate sanitary landfills through Public-Private Partnerships (PPPs) at each Sub County
- Support formation of at least one youth group per ward and provide them with necessary equipment and infrastructure to collect and dispose of waste from the household level
- Encourage segregation of solid waste by type during collection

Strategy 6: Develop Liquid Waste Reticulation and Treatment Infrastructure

The lack of liquid waste reticulation and treatment infrastructure in Kwale County presents an existential health hazard and an imminent constraint to the County's development ambitions, especially in urban areas. Currently, the County's urban areas rely on septic tanks and pit latrines to dispose of human excreta. Development of wastewater reticulation infrastructure will ensure that Kwale's groundwater resources are not compromised by contamination from un-inspected (and often malfunctioning) septic tanks and leaching from pit latrines. In addition, the development of a sewerage network will incentivize urban vertical development and provide a cheaper alternative to vacuum tanks (exhauster services).

Key Strategic Interventions:

- Design and construct sewer reticulation system for all urban areas

- Encourage the development of Communal Septic Sites (CSS) in rural areas
- Adopting Public-Private Partnerships (PPP) for financing sewerage infrastructure
- Encourage recycling and reuse of wastewater

Strategy 7: Mitigate Soil Erosion and Siltation of Rivers and Dams

Siltation of the County's surface water sources (rivers, streams, water pans and dams) indicates soil erosion upstream, possibly due to increased deforestation and inappropriate agricultural practices in areas abutting the water sources. The siltation of surface water sources threatens the County's water security and precipitates flooding of riverine lands.

Key Strategic Interventions:

- Avail seedlings of indigenous tree species such as bamboo to be planted in areas prone to erosion.
- De-siltation of affected rivers dams and water pans including Ziwa la Mwanunje in Waa/Ng'ombeni ward, River Ramisi River, Mwachema and Mkurumudzi River.
- Educate farmers on appropriate farming practices along slopes and within areas abutting rivers.

Strategy 8: Secure, Restore and Control Land Use within Wetlands and Floodplains in the County

Wetlands and floodplains are important components of the environment that absorb environmental shocks, provide essential ecological support services, and generally contribute to maintaining environmental homeostasis. Wetlands in Kwale County are increasingly being threatened through invasion by agricultural activities and human settlements. Persons living on floodplains have also had to contend with periodic displacement during rainy seasons. Interference with

floodplains has also worsened the effects of flood-related emergencies due to obstruction of natural waterways.

Key Strategic Interventions:

- Relocate persons and livelihood activities within wetlands and floodplains.
- Promotion of sustainable rice and tubers cultivation in wetlands and floodplains.
- Compulsorily acquire significant wetlands under private ownership.

Strategy 9: Strengthening Institutions for Environmental Monitoring, Audit and Compliance

While development activities are key contributors to Kwale County's socio-economic growth, they also threaten the County's future environmental wellbeing. Since the existing artisanal and large-scale mining activities are already compromising environmental health, such as through the contamination of River Ramisi, it is critically important that the County Government of Kwale adopts a more proactive approach in tackling pollution caused by mining.

Notably, risky and carefree practices such as disposal of untreated/under-treated effluent into rivers, excessive and wanton abandonment of mining tailings continue to go unpunished even in the existence of Environmental Impact Assessment (EIA) reports. Therefore, the County government must adopt a more hands-on approach for tackling mining-related environmental contamination, especially considering the economic cost of restoring the environment, health risks, and hazards.

Key Strategic Interventions:

- Have dedicated County environmental enforcement officer(s) attached to the mining sector.

- Work closely with NEMA to ensure strict enforcement of recommendations made in EIA reports
- Monitor and audit all artisanal and large-scale mining areas in the County for environmental compliance
- Restoration of degraded mining areas

Strategy 10: Improve Sanitation along Public Beaches

Kwale County is home to some of Kenya's most scintillating, pristine beaches, including Diani beach. However, irresponsible disposal of waste along beaches is an imminent threat to their aesthetic appeal and marine life. Therefore, it is prudent that the County implements measures to ensure the protection of beaches from littering.

Key Strategic Interventions:

- Construct toilets/provide mobile eco-toilets in all public beaches in the County
- Provide adequate litter bins along public beaches
- Install warning signs against wanton littering near beach areas
- Support Beach Management Units (BMUs) in carrying out their mandate
- Carry out monthly beach clean-up exercises

Strategy 11: Protect the Seafront

Sections of the County's seafront are characterized by limited access and restricted view of the aesthetic appeal of the open sea and beaches. This has mostly been attributed to grabbing public beaches and putting up physical barriers between the open sea and beachfront properties. Therefore, all the relevant stakeholders should implement measures to safeguard the socio-economic and environmental interests related to the seafront.

Key strategic interventions:

- Regulate building and development along the coastal line through zoning

and the adoption of appropriate zoning standards.

- Open all beach access roads and repossess all grabbed public beaches.
- Establish appropriate beach riparian reserves and sustain applicable buffers and setbacks
- Prohibit the construction of sea walls along the shoreline and demolish the ones already existing
- Initiate and sustain a beach cleaning programme along the Indian ocean beaches

Strategy 12: Protect Marine Environment from Pollution and Degradation

Continuous pollution of the marine environment is an existential threat to marine life and the maintenance of a balance in the abiotic conditions of the marine biome. Sustainable wellbeing of the marine environment will only be achievable through concerted efforts by the public and relevant regulatory authorities involved in marine environmental protection, including NEMA, Kenya Ports Authority, Kenya Maritime Authority, and the County Government of Kwale.

Key Strategic Interventions:

- Control of human activities within ecologically sensitive Marine Protected Areas (MPAs) in the County such as Diani/Chale and Kisite Mpunguti marine national parks and reserves
- Protect near-shore coral reefs from damaging activities such as soil erosion, non-point pollution, dredging and illegal harvesting of marine corals
- Explore and gazette all coastal islands, including the inhabited islands within the County.
- Conserve and maintain deltas and estuaries by designating them as conservation areas

Strategy 13: Promote Equitable Benefit Sharing in the Conservation of Natural Environmental Assets

Promote community-based Natural Resource Management

Key Strategic Intervention:

- Preparation of Natural Resource Management Plans for; Diani-Chale Marine Reserve, Kisite Mpunguti National Marine Park and Reserve, and Shimba Hills National Park and Reserve.
- Development of a benefit-sharing policy for County Natural Resources.

Strategy 14: Protection of Forest Resources through Legislation

The risk level of forest degradation generally increases when such areas are not under legal protection. Therefore, corrective measures must be taken to prevent further degradation occasioned by a legal lacuna.

Key Strategic Interventions:

- Identify and gazette community forests at risk of degradation

Strategy 15: Establishment of New Conservation Areas

In addition to existing conservation areas, the County must establish new conservation areas to help protect its forest genetic resources (indigenous tree species) and help attain the 10% minimum tree cover.

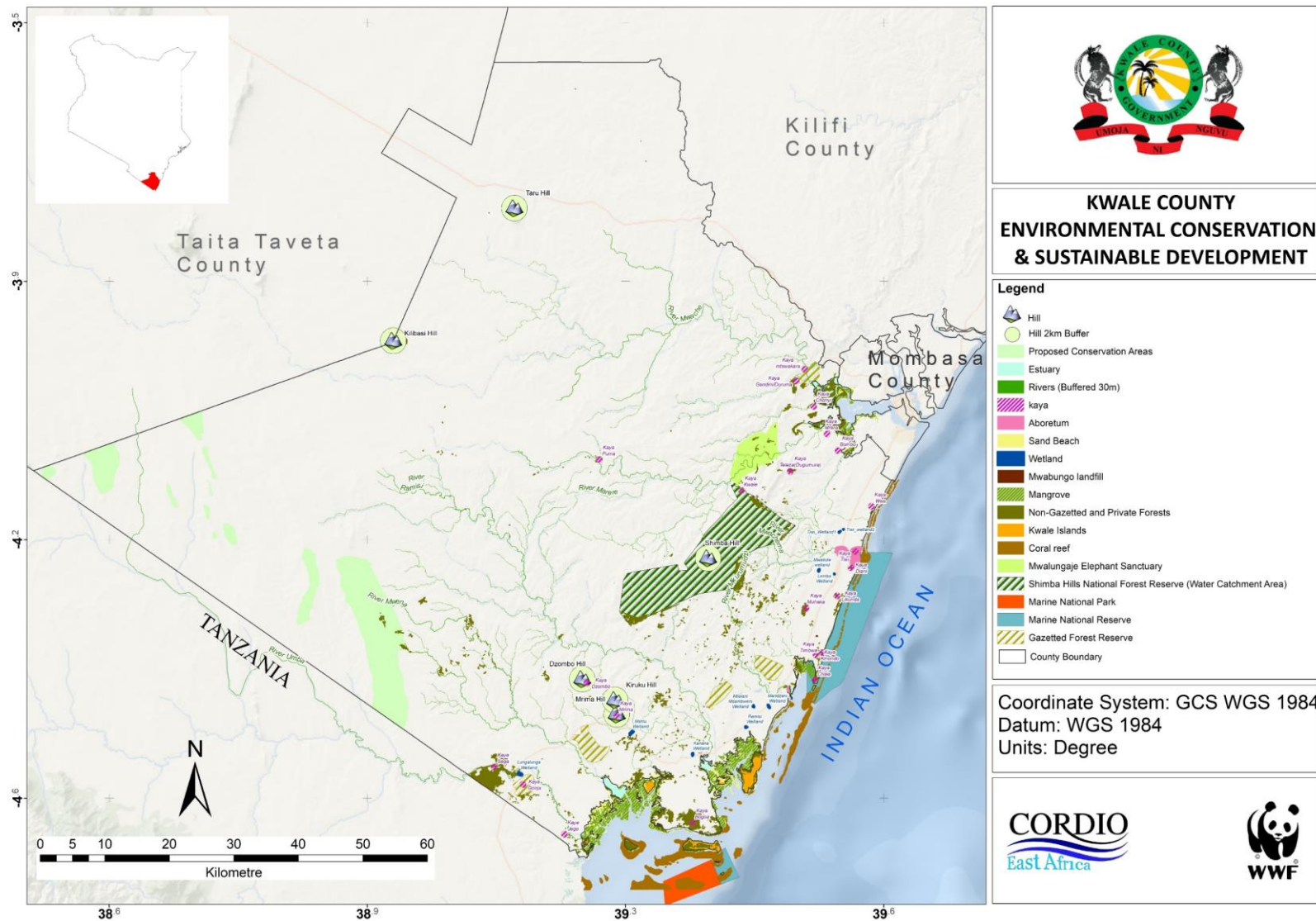
Key Strategic Interventions:

- Buffering of hills with forest.
- Planting of trees along with riparian areas.
- Gazettement of new conservation areas.
- Intensify vegetation cover within the ASAL areas.
- Preservation and restoration of archaeological sites including Kongo mosque, Jumba la Mbaruku etc.
- Establish urban parks at the Mwachema estuary and Msambweni and arboreta at Diani/Ukunda, Nyumba sita in Msambweni, Kanana, Kinarini in Kwale town, and Gazi.



PART IV: PLAN PROPOSALS

Map 49: Kwale County Environment Strategy



14.3 Theme 3: Promoting Investment in Tourism, Industrialization, Trade and Commerce

The economy of Kwale operates within sectors of agriculture, tourism, industrialization, trade and commerce, which act as its drivers. Activities within these sectors are at varied scales. Despite several sectors driving the economy, the county's economic performance has been low, leading to low growth, low-income levels, and poverty. The slow growth of the economy is directly attributed to the decline in agriculture, tourism and industries while opportunities in trade and commerce have not been maximized. Mining is also coming up as an emerging sector in the economy of Kwale.

The strategy is to trigger development by investment in industrialization through value addition, tourism, and industrialization and exploit optimal potential from emerging mining, trade, and commerce sectors. This will diversify the economy of the County cushion against recession arising from potential collapse in some sectors. Diversification will also create more jobs to improve the income levels and livelihoods of Kwale people.

Attention will be given through a sector-by-sector approach to development in:

- Tourism
- Industrialization and value addition
- Trade and commerce

14.3.1 Promoting Investment in Tourism

Tourism is ranked first in its contribution to foreign exchange and is one of the major economic pillars of Kwale County. It is a key contributor to the County's household incomes through direct and indirect employment. However, in recent years, the

sector has experienced a significant decline leading to loss of jobs and income.

The tourism activities in Kwale are centred majorly on the beach resort and eco-tourism related to parks and reserves; Shimba Hills National Park and Reserve, Mwaluganje Elephant Sanctuary and Kisite Mpunguti Marine Park and reserve. The decline in the performance of the sector has partly been attributed to tourism being seasonal and having limited diversity of the packages being offered.

Objectives

- Enhance the contribution of tourism as a sector of the economy and as a source of employment for Kwale people,
- To diversify tourism
- To strengthen existing forms of tourism

14.3.2 Challenges

- Lack of diversification of tourism in the County with overreliance on beach and resort tourism.
- Poor marketing is characterized by an over-emphasis on beach and resort tourism and a narrow target market.
- Overreliance on foreign tourists, especially Europeans.
- Low awareness creation on existing tourism assets
- Lack of adequate tourism infrastructure
- The threat of insecurity arising from the 1997 ethnic clashes in Likoni, general election periods and random acts of international terrorism.
- Poor transport infrastructure limits access to other tourist attraction sites.
- Unstructured and uncoordinated beach management - tainted

image resulting from the harassment of tourists by beach vendors.

- Poaching and human-wildlife conflicts
- Environmental degradation and loss of biodiversity through human activities
- Low research on tourism
- Low uptake of technology to market and manage tourism as a sector
- Low participation by the local community in tourism activities
- Lack of protection of some tourist attraction sites.

14.3.3 Strategies

Strategy 1: Strengthening Existing Forms of Tourism

Existing forms of tourism in Kwale County include; beach and resort tourism and eco-tourism. These forms of tourism need to be enhanced to increase the number of tourists visiting the County and build Kwale's tourism on the existing packages as a foundation to revamp the sector.

Key Strategic Interventions

- Enhance marketing through branding and promote a large number of tourist destinations online; Encourage tourism by own citizens within the country
- Restoration and rehabilitation of historical sites and buildings including Kongo Mosque, Komboza caves, Shimoni slave caves (Mwanangoto), Gazi ruins (Jumba La Mbaruku), Lwayo

Lwa Mulungu, Fikirini caves, Tswaka, Kayas

- Conservation of natural environment through the establishment of animal sanctuaries for breeding of the endangered species, the establishment of the boardwalk at Tsunza, designating hiking and picnic sites in Shimba Hills National Park and Golini Cliffs
- Upgrade existing tourism infrastructure
- Upgrade existing transport infrastructure linking tourism sites
- Ensure good real estate planning in all key resorts and destinations areas.
- Encourage domestic tourism
- Enhance coordination and cooperation between the different agencies, authorities and organizations concerned with tourism at all levels.
- Sustain capacity building and training for beach operators
- Designate areas for beach vendors to sell their wares along the beach
- Introduce beach and water sports as part of beach resort tourism
- Initiate beach cleaning programs, provision of public sanitation facilities along the beach and around tourist attraction sites
- Improvement of access to the beach through lighting and maintenance of beach access roads
- Operationalize Diani-Chale as a marine reserve through community management
- Plan and develop Tsunza as a resort town
- Enhance the following Tourist Attraction Sites

Table 48:tourism attraction sites

| Site | location | Intervention |
|-----------|---------------|---|
| Viewpoint | Katsimbalwena | Set up infrastructure commensurate to a viewpoint |

| | | |
|----------------------------------|---------------|-------------------------------|
| Munyu war caves | Mazeras units | Protect and preserve |
| Chinduni tourist attraction site | Chinduni | |
| Maji Moto springs | Maji Moto | Protect and preserve |
| Skeleton pillars | Gazi | Protect, Restore and Preserve |
| Mwaluganje Elephant Sanctuary | Shimba Hills | Protect and preserve |
| Lwayo Iwa mulungu | Mwereni | Conserve |
| Luvundoni park | Mwena | Protect and preserve |

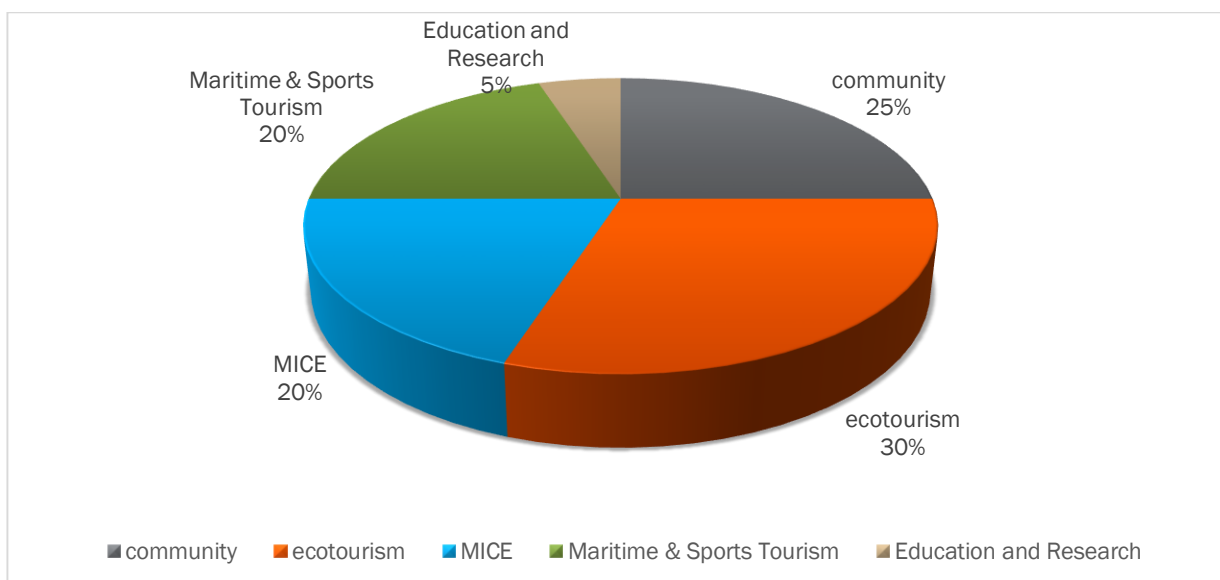
Strategy 2:

Diversification of Tourism Products

Diversification will target the development and adoption of alternatives to the existing tourism products and packages to widen the range and scope of products, choice and preference, enhance their experience, and compete with the world's best tourist destinations.

The untraditional forms of tourism which will be promoted for diversification include Meetings Incentives Conferencing Exhibitions (MICE), Maritime Tourism, Eco-tourism, Sports tourism, community tourism, research and education tourism.

Chart 2: Tourism Diversification Strategy



Meeting Incentives and Conference Exhibitions (MICE)

MICE is a form of tourism built upon dedication to planning, booking, and facilitating conferences, group events, training, workshops, seminars and other events. For MICE to contribute to 20% of the

annual tourism returns, the County has to have adequate accommodation capacity, adequate conference facilities, hotel capacity (food, beverages, and entertainment), appropriate Information Technology infrastructure, an efficient transport system, and safety and security.

Key Strategic Interventions

- Set up a world-class Conference Centre at Waa and Tsunza
- Conduct international investment promotion projects to invite foreign investors to invest in Kwale's tourism sector
- Offer incentives for the development of MICE facilities
- Establish a County MICE promotion unit
- Upgrade the standards of hotels, resorts and other MICE facilities in the County
- Promote local MICE knowledge and capability through related certification and accreditation
- Strengthen local safety and security
- Improve local support infrastructure, including transport linkages, ICT, waste management infrastructure, water supply and electricity
- Hold regular exhibitions, trade fairs to showcase high-quality products from Kwale County
- Integrate other forms of tourism as attractions into MICE promotion

The County has a large potential in MICE strengthened by the established star-rated hotels and resorts, strategic location along the Kenyan Coastline, accessibility by road, air transport facilities, and a suitable climate.

Sports Tourism

The target is to make Kwale County attractive as a destination for competitive sporting activities and leisure sports such as water sports (surfing, beach sports (beach soccer, volleyball, rugby), jet ski, scuba diving, motorsports, sky diving, etc. archery, among other kinds of sports.

Under this strategy, sports tourism is projected to contribute to at least 10% of the

County's tourism earnings. This will be achievable if the County provides safety and stability, has international standard sporting facilities and infrastructure, an efficient transport system, adequate international standard accommodation facilities, and the capacity to coordinate international-level events. This can be achieved through the following interventions:

Key Strategic Interventions

- Market Kwale County is an excellent destination for motorsports and leisure sports (beach and water sports).
- Promote investment in the development of sports infrastructure.
- Develop an international-standard stadium at Lunga-Lunga.
- Promote annual sporting events.
- Establish a sports academy at Kwale.
- Develop an archery range and camping site at Kuranze
- Promote Public-Private Partnerships in the development of water sports
- Promote the designation of a motorsport circuit in the County

Maritime Tourism

Maritime tourism is a form of tourism that will be achieved by promoting sea-based recreational activities such as boating, yachting, snorkelling, sky diving, cruising, yachting events, scuba diving, swimming with dolphins, reef walking, nautical sports as well as shore-based activities, such as land-based whale and dolphin watching, beach strolling, sun bathing; all of which are carried out within the overall ambit of the marine environment to contribute at least 10% of the tourism income for the County.

Key Strategic Interventions

- Develop a maritime tourism circuit from Tsunza to Vanga

- Enhance the quality of the marine environment through conservation activities
- Capacity building of beach operators
- Enhance safety and security of the coastline using coast guards, lifeguards
- Marketing Kwale County as an excellent destination for investing in maritime tourism
- Promote Public-Private Partnerships in the development of maritime tourism

Education and Research Tourism

The County has significant biodiversity areas, including Important Bird Areas (IBAs), the Indian Ocean, forests, some of which contain globally-sought species of animals and plants, which can be used to build a tourism package on research and education. Under this package, the focus is to attract foreign visitors to Kwale to undertake research and gain knowledge. Already, education and research tourism are taking place on a small scale. This strategy aims to scale up this form of tourism to contribute at least 5% of income earned from tourism.

Key Strategic Interventions

- Market Kwale County's marine, terrestrial and cultural resources as potential areas for education and research tourism
- Conserve the County's biodiversity, ecologically sensitive areas and other natural environmental resources
- Partner with research institutions to promote education and research activities in the County
- Publicize and showcase the research carried out in Kwale County
- Support the establishment of research institutions in the County
- Promote Ndavaya as an Education and Research Town

- Promote knowledge and education exchange programs
- Establish a museum at Kongo recreational complex
- Preserve and promote indigenous culture

Community Tourism

Community-based tourism will be promoted to empower local communities to manage and operate tourism activities and offer visitors a deeper experiential, participatory, cross-culturally and interactive insight into their culture and environment. As key stakeholders, the communities will exercise greater control and accrue more benefits than they would otherwise receive. It will allow visitors to connect closely with the communities they visit and give tourists authentic cultural experiences while retaining revenue in respective rural communities.

The diversity of the composition of the people of Kwale County presents diversified cultural aspects such as cultural dances, traditional ceremonies, cuisines and attire. The respective communities can run these tourism enterprises that provide services such as village tours, nature walks, performances, and meals on their initiatives.

Key Strategic Interventions

- Establish a County cultural Centre in Tsunza
- Protect and conserve Kaya as a cultural heritage site.
- Preserve culture and heritage through documentation
- Establish community cultural villages in Matuga, Lunga Lunga, Kinango and Msambweni sub counties
- Promote homestay visits as an alternative to hotels
- Build capacity for communities to undertake community tourism
- Hold annual cultural events.

Strategy 3: Strengthen Partnerships to promote growth and investment in Tourism

To realize the full potential of the tourism sector in Kwale, there will be a need to cultivate a strong and reliable partnership between public service providers and regulators, community and private investors in tourism. The partnership may be enhanced through several interventions.

Key Strategic Interventions

- Conduct international investment forums to invite foreign investors to invest in Kwale's tourism sector
- Develop relevant policy and legal framework guiding Public-Private Partnership
- Providing incentives to the Private sector to encourage investment in Kwale's Tourism
- Sensitize the public on partnerships for investment
- Showcase investment opportunities through the internet and mainstream media
- Provide incentives in the form of tax waivers to investors in the tourism sector
- Increase budgetary allocations for tourism promotion and development
- The twinning of urban areas in Kwale with cities in other parts of the world

Strategy 4: Improve the infrastructure and service delivery to make Kwale attractive for investment in tourism

The strategy emphasizes connectivity by creating linkages between the various tourist sites and the surrounding areas, thereby enhancing accessibility while ensuring comfort, time-saving, and reduced costs.

Key Strategic Interventions

- Construction and repair of access roads leading to the tourist sites.
- Fast track completion of Dongo Kundu bypass.
- Upgrade and modernize Diani Airport
- Develop maritime transport circuit from Tsunza to Vanga through Tsunza-Diani-Gazi-Funzi-Shimoni-Vanga nodes. This will provide linkage from Tsunza to Vanga.

Strategy 5: Marketing Kwale as a global tourist destination

The strategy aims at giving Kwale County a competitive edge by packaging it as a world-class tourist destination. This will be achieved by showcasing its niche tourism products to the rest of the world.

Key Strategic Interventions

- Hold local and international tourism fairs and exhibitions
- Establish a County Tourism Promotion Unit
- Develop Partnerships with tour operators and agencies to market Kwale County's tourism
- Use of mainstream media and online platforms for marketing
 - Enhance partnerships to market Kwale in the international tourism market
 - Identify, secure and publicize tourist attraction sites in the County.

Strategy 5: Promote domestic tourism

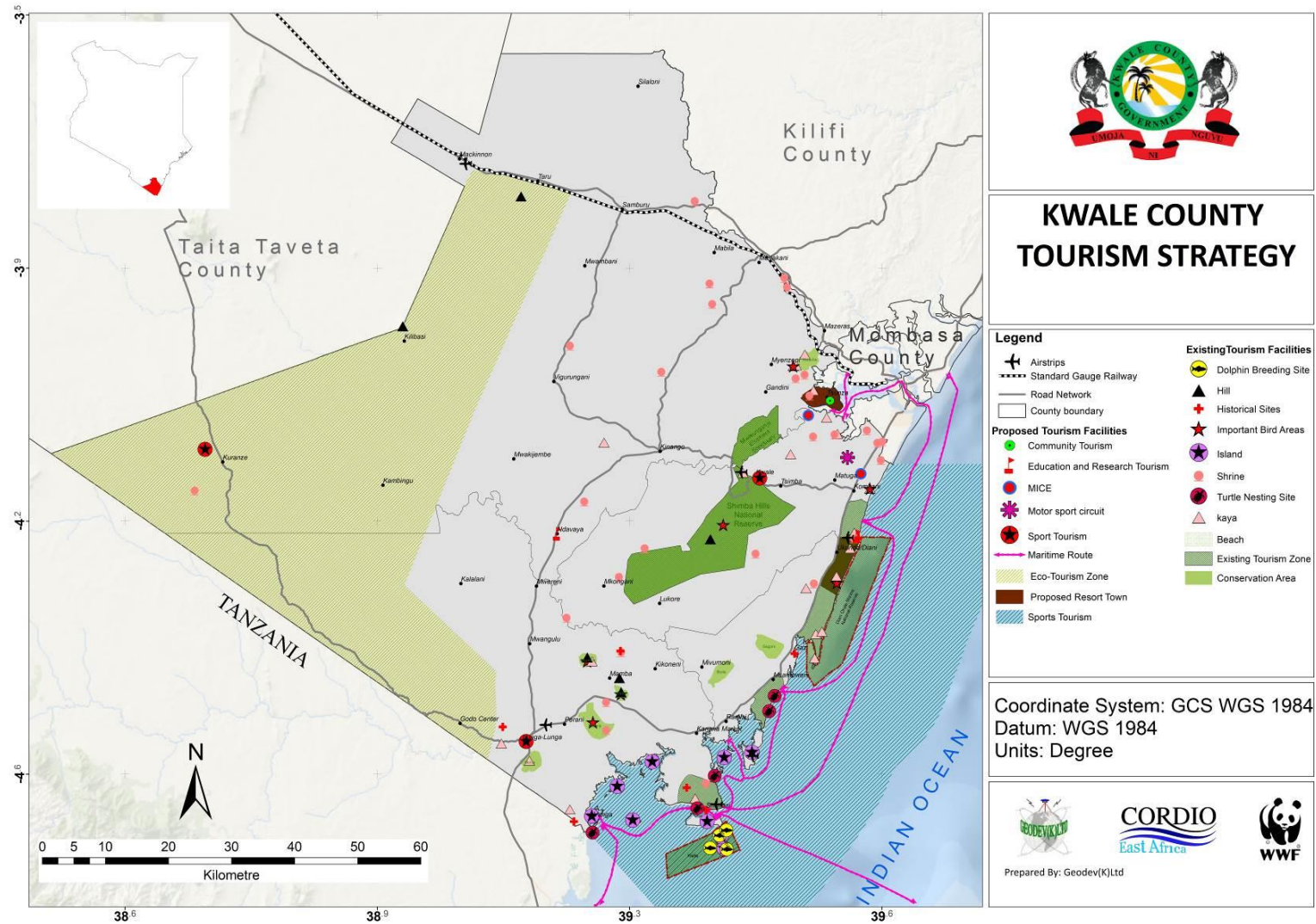
The strategy encourages Kenyans to visit the County and reduce overdependence on foreign tourists. This will ensure the continuous flow of tourists all year round and solve the problem of tourism being a seasonal sector of the economy.

Key Strategic Interventions

- Carry out awareness campaigns on domestic tourism
- Offer incentivized tourism packages to attract domestic tourists
- Build partnerships with tour operators and agencies to refer local tourists to Kwale
- Provide incentives to local tour operators and tourism agencies to refer visitors to Kwale County



Map 50: Tourism Development Strategy



14.3.4 Enhance Industrialization and Value Addition

Industrial development presents the opportunity to make the economy of Kwale County diverse and more dynamic. Optimization of industrial development entails; strengthening existing industries, reviving collapsed industries, and establishing new ones.

14.3.5 Challenges

The industrial sector in Kwale is slow-paced and needs revitalization to flourish. The following are the factors hindering industrial development:

- Inadequate plants for processing, manufacturing and extractive industries across the County.
- Poor linkage due to inadequate transport infrastructure for moving of products and access to markets in areas such as Samburu, Ndavaya, Mwereni at Mwangulu, and Kinango, among others
- High cost of electricity for running the industries; KISCOL have started their power generation to reduce electricity costs and
- High taxation rates contribute further to the perils of the County's industrial sector.

14.3.6 Strategies

Strategy 1: Enhancing industrialization

This strategy proposes a framework to boost the growth of the main industries in Kwale County, including manufacturing, processing, extractive and cottage industries whose potential needs to be harnessed to generate sufficient employment opportunities and contribute to the County's economic development.

Key Strategic Interventions

Diversification of industries through establishment

a) Extractive industries

- Mechanizing and streamlining the operations of artisanal and small-scale miners to enhance productivity and safety
- Employ environmental enforcement officers and attach them to the mining sector.
- Enhance social safeguard mechanisms for the mining industry in the County.
- Undertake County geological surveys to establish mineral resource distribution and economic viability.
- Formalize Artisanal and Small-scale Mining (ASM) into the County economy by forming co-operatives.
- Promote in-situ location of mineral processing plants.
- Rehabilitating derelict land previously used for mining

b) Processing industries

Agro-Processing

Locate agro-processing plants within the agricultural zones:

- Coconut industry at Msambweni
- Cashewnut in Kwale
- Cereal processing in Dzombo
- Cassava in Kinango
- Rice processing in Mwangwei
- Fruit processing in Shimba Hills
- Cotton ginnery in Kinondo
- Provide an integrated, efficient, reliable, affordable and sustainable transport infrastructure to support industrial development.
- Promote traditional niche food value addition methods for fish, mango and cassava.
- Adopt efficient modern preservation methods for agricultural produce.

Industrial Processing

- Establish industrial processing plants for;
 - a) Fish processing at Kibuyuni and Vanga.
 - b) Meat processing at Kinango
- Providing technical and financial support.

Manufacturing

- Establish a tannery at Vigurungani.

Strategy 2: Supporting Cottage Industries

This strategy will harness local skills and talents by using locally available materials and promoting self-employment.

Key Strategic Interventions

- Formation of co-operatives to provide technical and financial support, training and marketing.
- Allocate space and structures in urban and rural areas to carry out production and trading activities.
- Promote assertive marketing campaigns both locally and internationally.
- Sensitize players in the sector on intellectual rights and enforce regulation on the same.
- Organize periodic exhibitions and trade fairs to showcase cottage industry products.
- Develop standards for the County's cottage industry products.
- Encourage the location of cottage industries in villages and urban areas.

Strategy 3: Developing appropriate infrastructure supporting industries

Infrastructure is a prerequisite for industrial development. They enable transporting raw materials to factories, finished products to markets, and facilitating production processes.

The areas proposed for industrial development have inadequate infrastructural services. This strategy, therefore, seeks to improve infrastructure to

enhance the operational efficiency of the industries.

Key strategic interventions

- Develop appropriate infrastructure that supports industrial development, including electricity, roads, railways, water supplies, waste management systems, housing and Information Communication Technology systems in all areas earmarked for industrial development.

Strategy 4: Earmark and plan areas for industrial development.

This strategy promotes industrial growth by establishing key industrial hubs that optimize productivity and reduce operating costs through shared infrastructure. It will also serve as an incentive to potential investors by providing planned and serviced areas.

Key strategic interventions

- Set up a Special Economic Zone (SEZ) at Kiteje and Samburu.
- Establish Export Processing Zones (EPZ) at Lunga Lunga.
- Develop Kinango, Samburu and Shimba Hills as industrial towns.
- Establish industrial parks in Kwale and Ukunda/Diani municipalities.
- Establish airport and warehouse areas at Perani and Shimoni.

Strategy 5: Support industrial-skill development

Research, innovation and education are pivotal to industrialization. Therefore, there is a need to devote resources for skills development in readiness for industrial take-off.

Key strategic interventions

- Provide a scholarship for industrial technical-oriented training.
- Forge partnership with National Industrial Training Authority (NITA)

to train the County's human's resources.

- Align the education curriculum in TVETS with industrial demands.

Strategy 6: Increase financing for industrial development.

To meet the high cost of industrialization, there is a need to involve other stakeholders in cost-sharing for development areas through various financing methods.

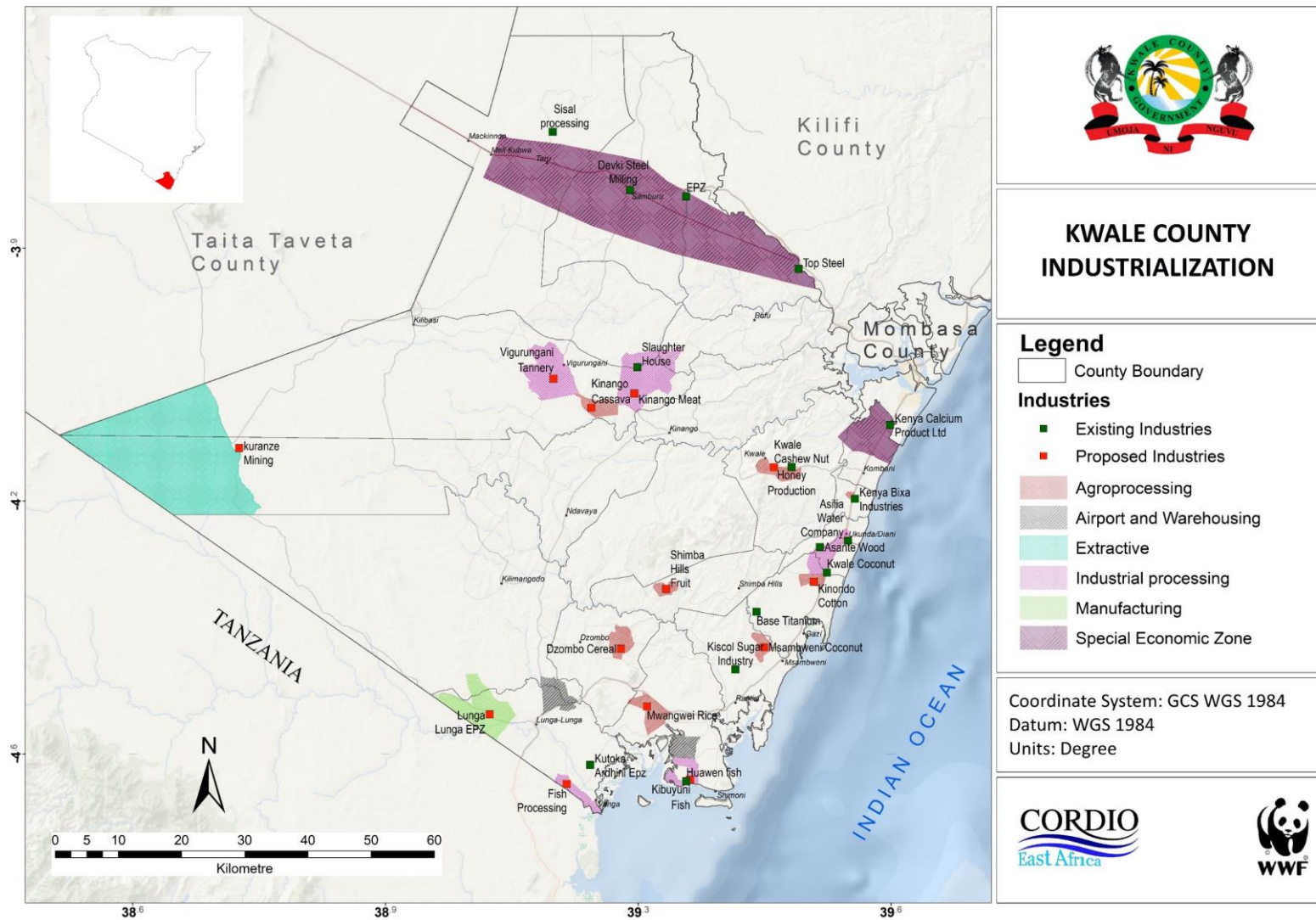
Key strategic interventions

- Encourage partnerships in industrial development.
- Prioritize industrial development in County resource allocation.
- Organize and facilitate County industrial development forums.
- Seek Foreign Direct Investments (FDI).



PART IV: PLAN PROPOSALS

Map 51: Industrial Development Strategy



14.3.7 Promoting Trade and Commerce

Trade and commerce provide the channel through which goods and services from other sectors such as industry and agriculture are bought and sold from one party to another. It also includes banking, advertising, insurance, warehousing, transportation and so forth. Therefore, trade and commerce provide support for other sectors by providing an avenue for exchanging goods and services. Trade and commerce are also major sources of revenue for the County government. However, Kwale County's trade sector has some challenges which inhibit socio-economic development. Therefore, the plan's main objective is to upscale the current trade and commercial activities by promoting commerce and investment for an enhanced economy of Kwale County.

14.3.8 Objective

- To improve ease of doing business
- To upscale the current trade and commercial activities through investments for economic progress

14.3.9 Challenges

- Limited access to credit facilities due to lack of collateral for credit services emanating from a lack of land ownership documents (title deeds) and high lending rates by existing financial institutions.
- Absence of banking institutions in some trading centres such as Mwangulu and Kinango
- Inadequate infrastructure, including roads, markets, water, electricity, sewerage, and solid waste management.
- Low membership in cooperatives and a high number of dormant cooperatives. Only 73 of 184 registered cooperatives are active; the rest are dormant.
- Low returns on market products.
- Inadequate knowledge of available markets.

- Lack of specialized markets for specific products.
- Trade and commerce in the County are largely informal.
- Low investment in trade and commerce.

14.3.10 Strategies

Strategy 1: Formalize trade and commerce in the County

The formal sector can provide more permanent high-quality jobs for the population. Kwale County has the potential for flourishing in trade and commerce. With trade remaining informal, it is impossible to achieve efficiency in carrying out trade and commerce at local, regional and national levels and to reach new markets. This strategy seeks to enhance trade and commerce by formalizing it in line with the vision 2030, which intends to formalise trade and commerce in the country fully.

Key Strategic Intervention

- Organization and registration of informal ventures as SMEs.
- Providing access to formal credit facilities and services to enable expansion and establishment of formal trading and commercial ventures.
- Strengthening cooperatives through coordination and regulation of their management.

Strategy 2: Increase returns on market products

One of the main challenges affecting traders is low returns on their market products which can be attributed to low value addition, lack of storage facilities compelling traders to sell their commodities cheaply, especially for perishable goods, saturated markets with common goods (oligopoly), among traders and limited access to markets. The strategy seeks to fetch higher earnings of market

products for the traders by addressing the challenges mentioned above.

Key Strategic Intervention

- Product value addition enables venturing into new markets such as branding, packaging and product differentiation.
- Lowering the cost of production to increase profit margins.
- Introduce a tech-based trade information platform to consolidate information about the market to encourage direct trading.

Strategy 3: Trade marketing

Low purchasing power is one of the challenges affecting trade and commerce. This can be addressed through trade marketing. Trade marketing aims to increase the demand for the product at the wholesaler, retailer or distributor level while ensuring the needs of the consumers are sustained.

Key Strategic Intervention

- Enhance access to information on new markets for traders.
- Embracing modern technology in trade marketing.
- Encourage product promotion between manufacturers and trading partners through the use of incentives.
- Create a one-stop-shop information centre on investment opportunities in trade and commerce within the County.
- Market local products in local, regional, national and global markets.
- Take advantage of the *Jumuiya ya Pwani* economic block for diversification and liberalization of markets.
- Holding inter-County trade fairs and exhibitions.

Strategy 4: Promote entrepreneurial skill development

Having the right knowledge and skills for business presents a great advantage. It helps businesses reinvent and come up with new and innovative ideas. Having critical knowledge in trade and commerce could also mean a competitive advantage of one business over the others. The strategy aims at enhancing entrepreneurial knowledge and skills for carrying out business.

Key Strategic Intervention

- Training traders and entrepreneurs on efficient trading and commercial methods and practices.
- Encouraging youth initiatives in different wards to impart knowledge and skills for carrying out business.
- Putting up Biashara centres in each Sub-County and within the Special Economic Zone.

Strategy 5: Create an enabling environment for trade and commerce

Enabling key stakeholders in trade and commerce is crucial in achieving growth in our economies. It ensures that we take advantage fully of opportunities that arise in the sector. This is especially where it may be hard for the government to do it alone. The County government of Kwale should create an enabling environment to pull other players to invest in trade and commerce.

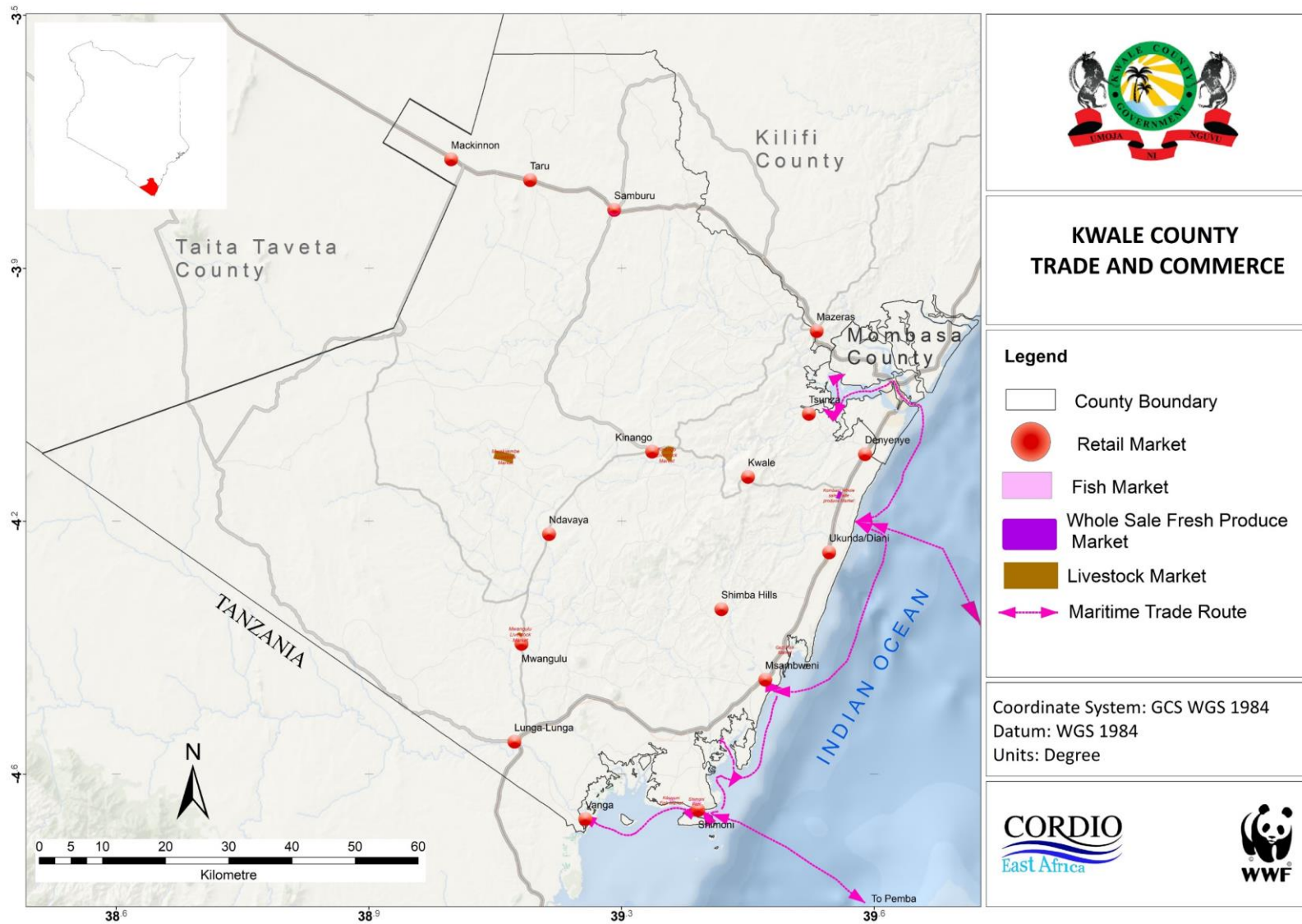
Key Strategic Intervention

- Develop, improve and maintain key support infrastructure for trade.
 - Provide adequate and appropriate infrastructure for the expansion of existing livestock auction centres at; Mwangulu, Kinango and Mwakijembe
 - Establish fish markets at Vanga and Shimoni

- Upgrading and maintenance of road across the County linking centres such as; Msambweni, Kinango, Lunga Lunga, Taru, Samburu, and Kombani
- Develop telecommunication throughout the County through; installation of telecommunication masts across the County
- Promote access to funding through
 - Establish a County investment fund to support small and medium enterprises startups.
 - Facilitate issuance of title deeds to act as collateral to access credit facilities.
 - Partnerships with financial institutions to provide favourable lending rates and suitable products to potential entrepreneurs.
- Encourage stakeholder partnerships for investment in trade and commerce.
- Provide security in high-risk trading areas such as the Mwangulu livestock market
- Initiate programs to provide incentives to investors and entrepreneurs across the County, such as:
 - Advice on tax-efficient investment,
 - Grants,
 - Reducing license fees and,
 - Tax exemptions.



Map 52: Trade and Commerce Strategy



14.4 Theme 4: Optimizing the Potential of Marine Resources and Blue Economy

Kwale is a coastal County with approximately 250km of coastline and is directly connected to Kenya's Exclusive Economic Zone (EEZ). The coastline and the EEZ contain diverse natural resources ranging from oil and gas extraction, fish and seafood supplies, tidal energy, minerals, biological diversity and ecological support services, water sports, tourism, and ecotourism potential maritime transport routes for trade and commerce. If optimally leveraged, the marine resources can transform the economy, livelihoods and quality of life of the Kwale people in general.

However, this sector has been massively underexplored, attributed to various challenges.

14.4.1 Challenges

- Under exploitation of the fish resources by concentrating fishing activities only along the territorial sea.
- Destruction of marine ecosystems, including coral reefs, mangrove, fish spawning grounds, by development along the beaches, marine dumping, dredging and sand harvesting, and mangrove clearing.
- Underexplored marine transport.
- Lack of knowledge on the spatial extent and location of marine mineral and hydrocarbon extractives. The Government of Kenya is yet to map all the marine extractives.
 - Low value addition in the fishing industry, characterized by sale of whole fish to intermediaries and directly to consumers. The level of value addition is largely limited to sun-drying, smoking and deep-frying fish.
 - Lack of designated fish markets and fish preservation facilities.
- Inadequate institutional support for fishermen is characterized by difficulties in accessing credit facilities and harassment by foreign marine police.
- Grabbing of fish landing sites.
- Lack of capacity and skills to fully optimize available marine resources.
- The absence of a strategic plan guiding the utilization of marine resources.
- Inadequate investment in the Blue Economy activities.

14.4.2 Strategies

Strategy 1: Mapping and inventorying existing marine resources for exploration

Kwale County is strategically located to derive maximum benefits from Kenya's exclusive economic zone activities. Therefore, the County Government must build partnerships to conduct relevant surveys and mapping of all marine extractives, including marine mineral deposits, fisheries, oil and gas, and environmental hotspots hydrocarbon deposits, to determine their commercial viability and spatiality extent.

Key Strategic Interventions:

- Prepare an integrated marine spatial plan

Strategy 2: Build the capacity of the local fishermen to undertake deep sea fishing

Fishing activities in Kwale are concentrated within the territorial sea due to the low capacity of their fishing equipment available for local fishermen. Just a small number of fishermen venture into deep sea fishing. Consequently, most of them are unable to do deep sea fishing. As a result of using inappropriate vessels, they are often exposed to the dangers of the rough seas. Therefore, there is a need to build capacity amongst fishermen to increase the volume of

their catch and subsequently realize an increase in income earned from fishing.

Key Strategic Interventions:

- Organize Beach Management Units (BMU) into co-operatives.
- Loan high-capacity boats and equipment to fishing co-operatives to venture into deep sea fishing.
- Enhance maritime safety and security through regular patrols.
- Train fishermen on appropriate fishing skills, safety and technology.
- Build partnerships to acquire high-capacity fish storage facilities through Public-Private Partnership.

Strategy 3: Promote Sustainable Modern Fishing Technologies.

The strategy aims to encourage fishermen to adopt suitable fishing techniques and methods which are efficient while at the same time do not compromise the sustainability of marine resources.

Key Strategic Interventions:

- Capacity building through training of fishermen on appropriate techniques
- Establishment of a hatchery within Kisite-Mpunguti Marine Reserve.
- Strengthening the enforcement of fishing and maritime laws.
- Explore the viability of cage fishing.

Strategy 4: Promote Mariculture in the County

The strategy seeks to expand seaweed farming as a viable marine economic activity and plant mangroves as fish habitats. Seaweed farming is currently being practised on a small scale by farmers in Kibuyuni, Mkwiro, Funzi and Gazi. However, the product's production and marketing need to be optimized to derive the product's benefits

fully. Seaweed farming has the added advantage of being an economic activity that promotes environmental conservation while enabling households to increase their earnings.

Key Strategic Interventions:

- Provide existing seaweed farmers with techniques to increase production and marketing value.
- Establish nurseries for mangrove at Gazi and seaweed at Kibuyuni.
- Facilitate mechanization of seaweed farming.
- Popularize mariculture through sensitization and training.
- Promote partnership building for mariculture between communities, research institutions and private organizations.

Strategy 5: Provide appropriate support infrastructure for maritime transport

Kwale County has not adequately invested in marine transport, yet the ocean has a higher capacity to transport people and goods than the road, rail, and air. Therefore, the expansion of maritime transport is important to realize the economic potential and viability of the blue economy as a pillar of development. Developing maritime infrastructure will complement and reduce over reliance on road transport. Investment in maritime transport could also be comparatively at a lesser cost than upgrading all the roads to tarmac standard.

Key Strategic Interventions:

- Designate and map a maritime transport route from Vanga to Tsunza.
- Provide appropriate support infrastructure for marine transport. Shimoni Jetty should be upgraded to a seaport and jetties constructed at Funzi, Wasini, Vanga, Msambweni,

Bodo, Tsunza, Diani Kongo estuary, Mkunguni, Waa/Tiwi and Gazi.

- Introduction of ferry services to serve between Shimoni and Wasini; and community boating between Tsunza and Miritini.
- Support local communities to invest in public water transport in the proposed route.
- Offer incentives to investors interested in water transport.

Strategy 6: Promote the proposed Tsunza-Vanga maritime route as a tourism circuit

The 250km shoreline part of which has been proposed as a maritime route between Vanga to Tsunza through Shimoni, Msambweni, Gazi, Diani, Tiwi, Waa and Pungu presents an attractive, pristine environment and landscape which offers great opportunities for sight-seeing, photography, videography, research, water sports, yachting, cruising, and commercial boating amongst other tourism activities. This maritime route has realistic tourism potential as a circuit due to its blending with diverse culture and tourism sites distributed along its onshore destinations. However, limitations in maritime transportation stand as a hindrance to the development of this form of tourism. This circuit will connect Kwale with other tourist destinations nationally and internationally.

Key Strategic Interventions:

- Integrate onshore activities along the tourism circuit by designating strategic landing sites where other tourism packages are showcased.
- Maintaining environmental cleanliness and aesthetics along the beachline through onshore greening and beach cleaning programs
- Offer incentives to facilitate licensing for operation along the circuit.

- Market the Kwale maritime tourism circuit as a world tourism destination.
- Build partnerships and co-operation with Mombasa and Kilifi, Mombasa and Lamu County governments, Kenya Ports Authority, Kenya Maritime Authority, KEMFRI and other stakeholders in promoting the circuit.
- Install adequate navigation aids.
- Enhance coastal safety and security.

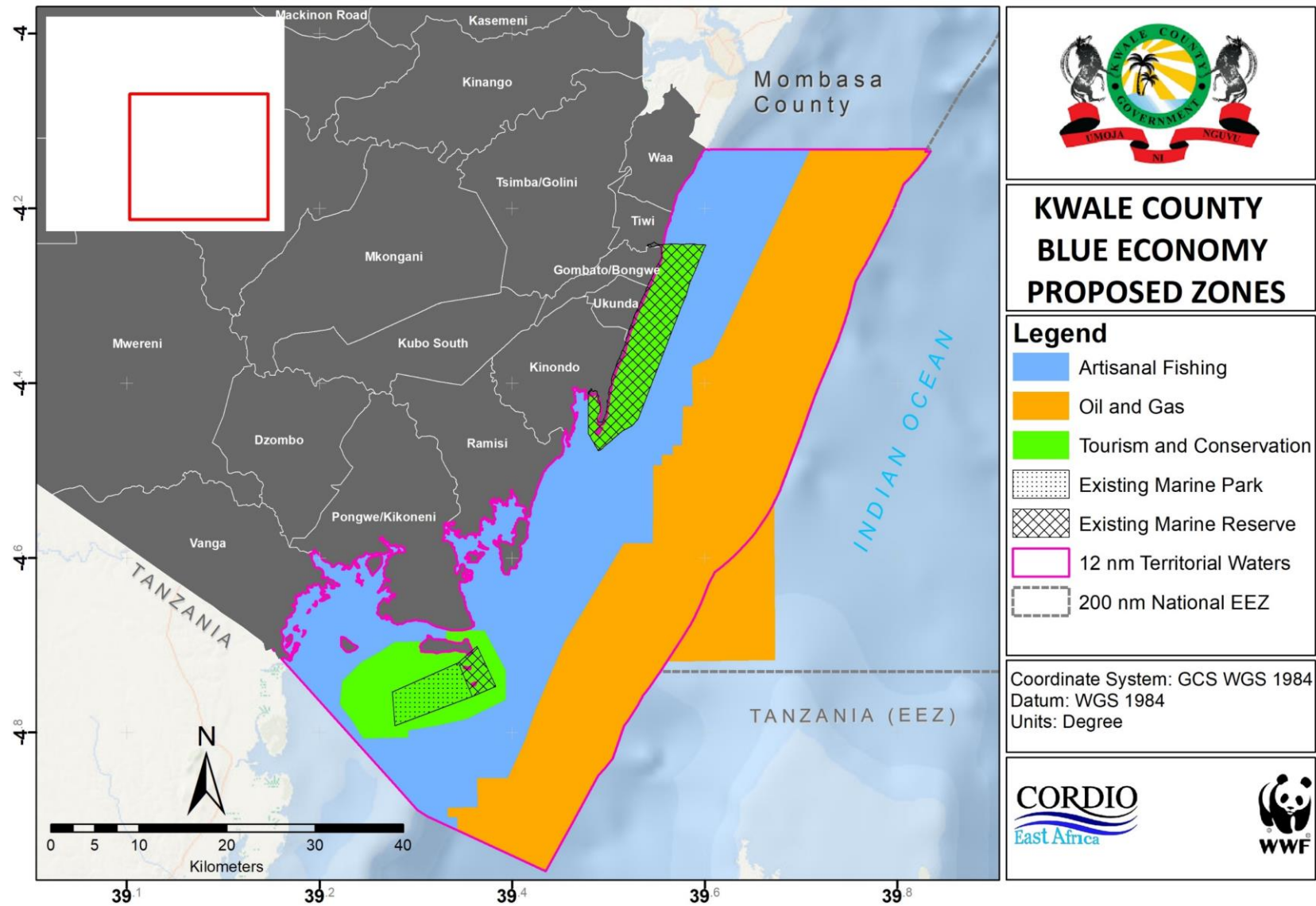
Strategy 7: Development of tidal and wind as alternative energy sources.

This strategy aims to tap into the potential of offshore and onshore wind and Indian Ocean tidal energy as sources of clean and affordable energy in the County to meet the county's energy needs and support industrialization.

Key Strategic Interventions:

- Undertake feasibility studies on offshore and onshore wind and tidal energy viability.
- Build a partnership between the National Government and County Government of Kwale to develop offshore and onshore wind and tidal energy.

Map 53: Blue Economy Strategy



14.5 Theme 5: Enhancing the quality of life through effective service delivery

This strategy aims at providing adequate infrastructure that will be efficient, equitable and appropriate in addressing the current and future needs of the population in Kwale County.

The strategy will focus on the following physical and social infrastructure:

- Water Supply
- Electricity
- ICT
- Solid Waste management
- Liquid waste management
- Education
- Health
- Community and recreation facilities

14.5.1 Water supply

Apart from conserving water resources, the development strategy for water supply involves increasing supply and distribution systems to meet projected demands. Water is essential for domestic, industrial, and agricultural purposes. Unreliable access to clean, sufficient water has often hampered the advancement of agriculture and industries.

The provision of clean water and proper sanitation facilities in urban areas ought to be given immense emphasis owing to the rapid rate at which rural populations are moving into urban setups, straining the already insufficient resources.

Inter-basin and interstate water transfers will address anticipated water shortages and uneven distribution. Interim measures to address water shortages include harvesting rainwater, stormwater in ponds for non-potable use, and groundwater development. Non-structural measures such as water conservation and water-saving devices will also need to be encouraged.

14.5.2 Challenges

- **Limited access to potable water**

- Currently, the County can supply about 17,778m³ per day against a demand 48,661m³ per day, resulting in a deficit demand of approximately 30,883 m³ per day.
- Low access to piped water with only 26.4%

- **Degradation of Water Catchment Areas**

Loss of forest covers approximately 1139.27 Ha, especially in Shimba Hills.

- **Lack of adequate storage for rainwater harvesting**

One of the flagship projects and initiatives under vision 2030 is to increase water storage and harvesting. Due to the critical importance of water harvesting and storage in increasing the area under irrigation and in flood control and water supply, the County government aims to develop a multipurpose dam that is expected to pump 196000 litres of water to Kwale and Mombasa daily.

- **Low coverage of water infrastructure**

Kwale County is underserved with water due to the inadequate reach of KWAWASCO and small-scale community water service providers. Such under service is characterized by low coverage of water reticulation infrastructure, especially in rural areas. However, some sections of the areas connected with piped water are underserved. The following urban agglomerations are underserved: Kwale, Kinango, Diani/Ukunda, Msambweni and Lunga Lunga.

- **Operational difficulties by water service providers**

Several technical and financial difficulties hamper the quality of service and efficiency

of KWAWASCO. These have led to frequent rationing, intermittent water supply, loss of revenue, high levels of non-revenue water, and limited potable water supply within KWAWASCO's service area. Operational difficulties are characterized by high power bills, understaffing, and lack of standard water treatment facilities within the County.

- **Underutilization of ground and ocean water sources**

Kwale County's groundwater resources can meet the County's current water demand, with a surplus to spare. The Indian Ocean also holds an almost limitless supply of water which can sustainably provide enough water for commercial, domestic, institutional and agricultural uses. However, the County's groundwater and ocean water are underexploited due to financial limitations and lack of prioritization of water supply, thus exerting pressure on surface water resources such as rivers, dams, and water pans whose capacities and spatial coverage are limited.

14.5.3 Strategies

Strategy 1: Augment the County's water supply capacity

The County's main aquifers, namely Msambweni, Diani, Tiwi, Mwachema, Umba, Mwena, and its seven main rivers, can provide adequate water for domestic use and surplus water for agricultural, industrial and commercial uses. However, the County's current deficit for potable water stands at approximately 30 883m³.

This strategy aims to increase water supply to meet current water demand through expansion and rehabilitation of water supply infrastructure and optimization of water drawn from the surface and groundwater sources, which are currently under-utilized.

Key Strategic Interventions

- Augmentation of Tiwi water scheme to serve Tiwi and Ukunda/Diani

- Increase abstraction from Msambweni aquifer and augment Msambweni Water Supply Scheme.
- Expand Water Supply Scheme coverage
- Rehabilitation and Augmentation of:
 - Ukunda Water Supply
 - Lunga Lunga Water Supply
- Establishment of Kwale Urban Water Supply Improvement Project to increase access to water for Kwale Town and its environs.
- Construction of dams Mwakalanga Dam, Dziweni Dzitegemee Dam, Kizingo Dam, and Mwache Dam for the supply of water for domestic, livestock and irrigation
- The County government support construction of water pans and the drilling of boreholes.
- Laying a distribution network to support the Mkanda-Dzombo mainline via Dzombo Water Supply Distribution Network
- Improve water supply to all public institutions, especially health facilities.

Strategy 2: Restoration and protection of the Water Catchment Areas and Water Sources

To meet Kwale's water demand, there is a need to protect water catchment areas and sources as provided by Environmental Management and Coordination (Revised, 2018) Act, Water Act 2016 and other relevant regulations. There is a need to enforce these laws to conserve and protect water resources, especially catchment areas, from adverse human activities causing

degradation and pollution. This will promote the utilization of these resources sustainably.

Key Strategic Interventions

- Enforcement of environmental laws and regulations to protect water catchment areas.
- Gazettement of water towers
- Establish a County tree planting program to increase the forest cover of the catchment areas
- Conservation of riparian reserves.
- Promote the use of alternative sources of energy for domestic use.

Strategy 3: Explore mechanisms for harvesting ocean water

This strategy utilises the limitless water resource within the Indian Ocean to supplement the existing water supply schemes and meet the County's water demand. While terrestrial water sources (rivers, streams, springs, and boreholes) are faced with existential threats resulting from the degradation of water towers and water catchment areas, the ocean's capacity to supply water is not threatened by the same. Therefore, the utilization of ocean water is an essential step towards ensuring that the County is water-secure.

Key Strategic Interventions

- Desalination of Sea Water through Public-Private Partnerships

Strategy 4: Promote partnerships in water service delivery

The establishment of water infrastructure requires intensive capital, thus supplementing public investment through Public-Private Partnerships.

Key Strategic interventions

- Offer incentives for Water Service Providers
- Support community-managed water supply projects

Strategy 5: Expand coverage of water supply services

KWAWASCO's service area is legally defined as the entire Kwale County. However, the company's actual served area is limited to within the main urban areas of Kwale Town, Diani-Ukunda, Kinango, Msambweni, Lunga Lunga and their environs. Even so, the urban areas are often underserved. Besides KWAWASCO, there are also several community water supply schemes whose services supplement the company. However, vast sections of the County are either underserved or unserved by water reticulation infrastructure.

Key Strategic interventions

- Augment the County's water supply capacity by developing the requisite infrastructure for water storage, abstraction, treatment and supply.

Strategy 6: Put up infrastructure for high volume water storage and rainwater harvesting

Water for household use is collected by a variety of physical methods ranging from manual (e.g., dipping) to passive (e.g., roof catchments and diversions) to mechanical (e.g., pumps), and it is stored in a variety of containers.

The strategy envisages enhancing community engagement in rainwater harvesting to increase access to water within the County through installing appropriate infrastructure.

Key Strategic interventions

- Provision of water tanks in public institutions for rainwater storage.
- Public awareness creation on rainwater harvesting techniques and technologies.
- Formulate building by-law for urban areas requiring the installation of rainwater harvesting facilities as a prerequisite for approval

14.5.4 Energy and Electricity Supply

14.5.5 Challenges

- **Limited Access to Electricity**
 - Only about 43.1% have access to electricity.
 - High costs of connections and related costs
- **Low Adoption of Alternatives Sources of Power**
 - Solar use for lighting in the County stands at about 21.3%.
 - No use of wind and tidal sources
 - Biogas is utilised by 0.5%
- **Limited Cross-Sectoral Integration**
 - Lack of consultation among government agencies during the implementation of their projects
 - Interference of infrastructure in the way leaves

Objectives

Energy infrastructure development in the planning period aims to address three the following objectives:

- Increase accessibility to the grid network
- Expand and upgrade the network capacity
- Increased access to alternative power sources
- Promote the use of cheaper and affordable energy sources

14.5.6 Strategies

Strategy 1: Exploration of Alternative Sources of Energy

There is a need to adapt and expand renewable energy generation in the County. The objective is to supplement the national grid deficit. Following a least-cost approach, the County can prioritize the development of alternative energy for household and institutional use, rural electrification, and urban street lighting.

Key strategic interventions

- Establishment of solar energy production farm in Kinango Sub-County.
- Establish solar-fed mini-grids.
- Carry out a feasibility study to develop onshore and offshore wind energy projects.
- Establish a partnership between the National Government and County Government of Kwale to develop offshore and onshore wind energy
- Seek Public-Private Partnership in the development and management of offshore and onshore wind energy
- Promote the use of Liquefied Petroleum Gas (LPG).

Strategy 2: Extension of Power Transmission Lines

In increasing coverage to unserved areas in Kwale County, the following infrastructure is required; extension of transmission lines, construction of substations, installation of transformers and poles.

Key strategic Interventions

- Expedite the implementation of the last mile project in the County.
- Extending electricity supply to unserved areas in the County.
- Provision of electricity to all public institutions.

Strategy 3: Creating awareness on clean and affordable sources of energy

The strategy aims at promoting the use of clean sources of energy at household and institutional levels using locally available resources. This will result in reduced prevalence of Upper Respiratory Tract Infections (URTIs), reduce household expenditure on fuel and promote conservation of the County's tree cover.

Key strategic interventions

- Promote the use of energy-saving *jikos*.
- Establish community briquettes making schemes at ward level.
- Support development of institutional and household biogas production plants.

14.5.7 Information Communication Technology (ICT)

14.5.8 Challenges

- Insufficient Access to ICT Services
 - Poor quality of cellular network/GSM
 - Lack of ICT centres in the County
- Inadequate Staff, Facilities and Limited Working Skills
 - Low budgetary allocation with only 3.18% of the budget share in 2017/18 financial years, respectively
- Low Uptake of ICT in Various Departments
 - There is low use of services in the respective departments within the County, with Finance and Economic Planning and Medical and Public Health Services registering some automation of their services
 - Lack of a central data storage unit
- High Cost of establishing the ICT infrastructure
- Objectives To ensure the provision and maintenance of infrastructure necessary for ICTs development, such as reliable electricity supply, telecommunications, and transport.
- Promote and support the systematic, relevant and sustainable development of ICTs.
- Embark on extensive educational and training programmes to provide qualified ICTs personnel and knowledge workers in all sectors.

14.5.9 Strategies

Strategy 1: Increase Access to ICT

The strategy strives to improve access to ICT for enhanced access to information, improved service delivery and job creation for residents of Kwale County.

Key Strategic Interventions

- Increase budgetary allocation and prioritize the ICT projects
- Automate the service delivery systems, e.g. revenue collection, planning and development approvals, single business permits, trade licenses, and tender application, among others.
- Establish community-based ward level ICT centres

Strategy 2: Provision of Basic ICT Equipment/Facilities in County Offices

There is a need for the County to provide basic facilities and equipment to have a viable ICT sector whose functionality is efficient and reliable. The strategy will ultimately help realise improved quality of service and enhanced revenue collection for the County government.

Key Strategic Interventions

- Install necessary facilities such as LAN, MAN and WAN to cover County Offices, Sub-County/Ward office and County headquarter.
- Establish a Central Data Unit in Kwale Town for the County government.
- Encourage interconnectivity and data sharing among departments.
- Equip County offices with appropriate equipment required, such as desktops, laptops, servers, and printers.

Strategy 3: ICT Training and Capacity Building Programs

To be a competitive County in the 21st century, the County needs to invest in continuous capacity building through training its workforce and youths. This

strategy seeks to improve the quality of service delivery for the workforce and innovation in ICT.

Key Strategic Interventions

- Training and capacity building for the County staff
- Fast-tracking the implementation of Constituency Digital Innovation Hub
- Organize annual County ICT innovation competitions
- Establish a County ICT centre in each of the 20 wards
- Establish a County ICT incubation and innovation centre.

14.5.10 Liquid Waste Disposal

14.5.11 Challenges

- **Lack of Sewerage Network System in Main Urban Areas**
 - Major towns within the County lack an integrated sewage reticulation infrastructure.
 - The County demands sewerage infrastructure capable of handling approximately 38,929m³ of wastewater per day (80% of water demand).
- **Inadequate water**

The County's water supply schemes and reticulation infrastructure leave out most areas of the County as either unserved or underserved; thus, hindering sanitation, especially in urban areas.

Strategies

Strategy 1: Provide wastewater management systems in the urban centres.

This strategy seeks to provide wastewater management systems in urban areas, municipalities, towns and market centres to improve sanitation and minimize environmental pollution. It will involve the provision of appropriate infrastructure for sewage and stormwater management.

Key Strategic Interventions

- Develop a wastewater reticulation system for each urban area
- Seek partnership for investment in developing sewerage systems in the municipalities, towns and market centres.
- Construction of modern ablution blocks within urban areas
- Carry out feasibility studies for the establishment of treatment plant(s) in the County

14.5.12 Solid Waste Management

14.5.13 Challenges

- Lack of an Integrated Solid Waste Management System (ISWMS):
 - Low level of segregation of waste at household and institutional levels
 - Low recycling interventions.
- Inadequate infrastructure and human resources for solid waste management
- Inadequate waste collection centres, dumpsites, waste transportation trucks, skip loaders, skips, and bins
- Disposal of waste in undesignated areas
- Littering

14.5.14 Strategies

Strategy 1: Adopt an Integrated Solid Waste Management System

Integrated Solid Waste Management (ISWM) is an approach to maintaining a clean and healthy environment. It establishes the preferred order of solid waste management as follows;

- Waste reduction**- this is the first step in the waste hierarchy, and it entails waste minimization
- Recovery, reuse and recycling** – second step in the waste hierarchy. It aims at reclaiming material from the waste stream and reducing the

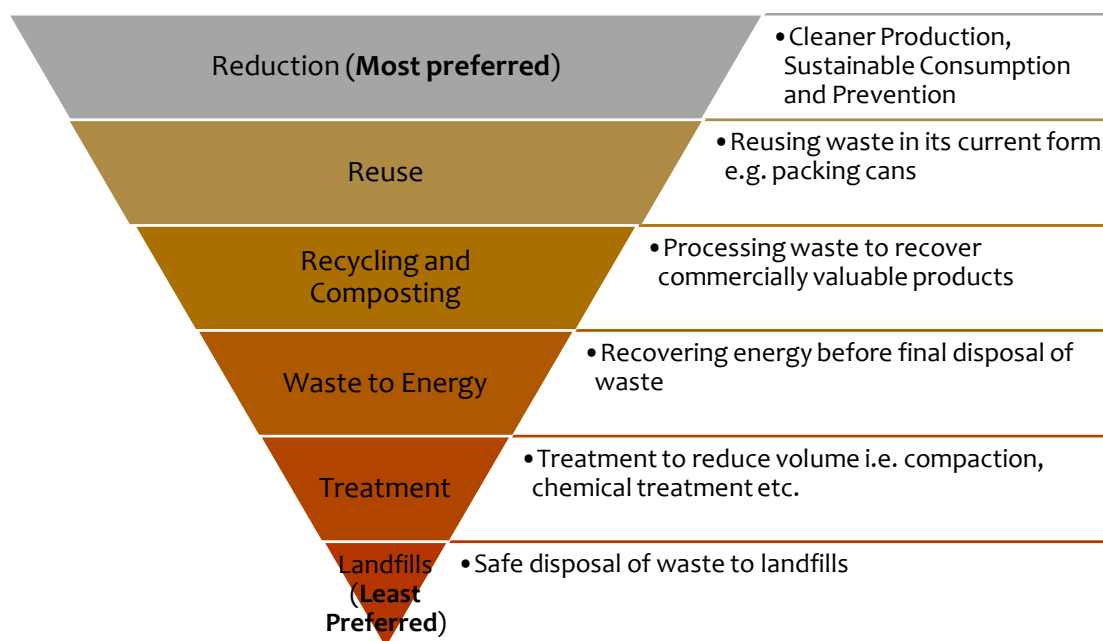
volume of waste generated that moves down the waste hierarchy

- c. **Waste disposal** is the final step involving dumping and incineration of waste without energy recovery. Before this, some treatment is done

to change the characteristics of the waste to reduce the quantity or harmfulness of the waste.

An illustration of an Integrated Solid Waste Management is as shown below;

Figure 5: Integrate Solid Waste Management



Source: The National Solid Waste Management Strategy, NEMA 2004

Key Strategic Interventions

- Develop sanitary landfills
- Establish, designate and gazette dumpsites for urban areas.
- Promote the use of recycled and recovered materials
- Develop a standard incinerator with energy recovery facilities
- Establishment of transfer stations at strategic areas, especially in major urban areas
- Establish zones for waste collection to enhance a regular waste collection system.
- Adopt Public-Private Partnership in waste management and recycling.
- Awareness Creation on the need for a Clean and Healthy Environment

Strategy 2: Commercialize waste management

The strategy aims to promote waste management as an income-generating activity and job creator. It will involve synergizing efforts from the private sector, the County Government of Kwale and the public.

Key Strategic Interventions

- Engage youth groups and Community-Based Organizations (CBO) in waste collection
- Explore market opportunities for the recovered and recycled materials
- Establish waste processing facility at Mwabungu

- Incentivize commercialization of waste management.

Strategy 3: Formulation and enforcement of legal and policy requirements

The County needs to develop legal guidelines to regulate, streamline, and improve efficiency in the County's waste management. Such guidelines should borrow from best international practices and be tailored to address the unique challenges facing the County's waste management. In addition, the County needs to enhance compliance with the existing environmental legislation.

Key Strategic Interventions

- Develop policies on economic instruments, including taxes, fines and incentives for solid waste management.
- Enforcement of NEMA solid waste management regulations.
- Formulation of Extended Producer Responsibility (EPR) Policy
- Formulate a County solid waste management plan

14.5.15 Education

Education is the most important aspect for individual and global success. It helps to realize the potential and inborn talents and more productive lives. In Kwale County, it is one of the most primary foundations of economic development. The County has all levels of education from the ECDE to tertiary levels. However, this sector is faced with many challenges, as discussed below.

- **Poor performance**

This results from understaffing, poverty and gender roles:

- Public Pre-primary teacher-pupil ratio is 1:27 vs 1:25; Public primary teacher-pupil ratio is 1:41 vs 1:40 and Public secondary teacher-student ratio of 1:45 vs 1:40

- Poverty hinders most children from going to school full time due to lack of food and clothing and school fees leading to poor performance.
- Gender prejudice exists in the allocation of household chores where girls are assigned more duties than boys, reducing their learning time.
- **High levels of illiteracy:** due to lack or low access to educational facilities and poor enrolments in the County in all levels of education, especially in adult classes. The enrolment rates are 85%, 82%, and 49% in ECDE, primary and secondary school education, respectively. The County is underserved with secondary school facilities and skewed distribution of primary schools.
- **Poor Infrastructure and Inadequate Teaching Facilities** – Inadequate infrastructure and shortage of permanent classrooms, especially in primary schools coupled with lack of enough facilities such as desks, books/libraries, computers and classrooms, are also a problem.
- **Low transition rates:** The County faces low transition rates from primary school to secondary schools, secondary to higher education institutions due to dropouts, poverty, early marriages, and teenage pregnancies.
- **Low quality of education:**
 - With the low teacher-student ratio, inadequate teaching facilities, and poor infrastructure, both teachers and students fail to deliver efficiently and lead to poor performance in education.
 - Frequent changes and curriculum revision sometimes involve huge financial resources and create gaps

- that discontinue the education system.
- **Less emphasis on skill training** – Under-equipped technical, vocational education institutions are limiting the acquisition of technical skills.
- **High drop-out rate** – Affects both girls and boys at all levels of learning due to early pregnancies and the practice of early marriage among some communities, drug and substance abuse, child labour, petty trade and negative influence of tourism industry on school-going children.
- A proportion of unemployed people with higher education and technical skills discourages the youth from pursuing education.

14.5.16 **Strategies**

Strategy 1: Improving access and performance in Basic education

Basic education is a key element towards poverty reduction and boosting the economy directly and indirectly. Therefore, this strategy ensures that pre-primary, primary and secondary schools are well equipped with human resources and other educational facilities to improve performance. This strategy will also promote practical lessons and curriculum activities that allow children to explore their talents.

Key Strategic Interventions

- Establishment of additional primary schools in Ndavaya, Puma and Mwereni wards.
- Establishment of 54 new secondary schools within the County.
- Setting up of learning infrastructure for children with special needs.
- Employing skilled staff to fill the deficit
- Promote education research through the construction of community libraries in each ward.
- Increase coverage of school feeding programmes in pre-primary and primary schools
- Encourage investment in education by the private sector
- Initiate Education mentorship programmes.

Strategy 2: Enhance literacy level in the County

Illiteracy hinders a country's development and limits socio-economic opportunities, leading to poor living standards. This strategy, through education, aims at addressing illiteracy in the County by ensuring that people can read and write. Therefore, the County should cater to the needs of the young, old, and other vulnerable groups to access formal education.

Key Strategic Interventions

- Emphasize sustained sensitization and campaigns on the need for formal education
- Strengthening adult education programs
- Establish more special needs schools in each sub-County

Strategy 3: Improving Education Infrastructure

The strategy aims at providing requisite infrastructural elements lacking in educational facilities such as enough sanitation facilities, classrooms, desks and playgrounds/sporting facilities in schools. This will improve the quality of basic education in the County and provide an excellent environment to nurture various talents.

Key Strategic Interventions

- Upgrading infrastructure in the existing schools, classrooms,

libraries, labs, sporting facilities and sanitation facilities and equipping them appropriately.

Strategy 4: Promote investment in Quality Education

Quality education is an essential component of the socio-economic wellbeing of a people. It involves proper training and imparting appropriate knowledge and skills to learners to enhance workforce competitiveness and promote job creation. To realize this, there is a need to set aside resources to create a good learning environment at all levels of education.

Key Strategic Interventions

- Funding Education through bursaries
- Employing skilled personnel.
- Establishment of a Teacher Training College
- Increase County spending on County scholarships for bright and needy students
- Mainstream ICT in all levels of education
- Encourage cooperate social responsibility investments Programs in education.

Strategy 5: Support Policies for 100% Transition in Basic Education

This strategy aims at 100% transition students in all levels of basic education; preprimary, primary, secondary schools, and tertiary institutions by ensuring t

Key Strategic Interventions

- Encourage Re-admission of School dropouts
- Increase access to bursaries
- Enhance coordination and partnership of agencies, departments, and stakeholders at the national and County level.

- Expand the existing infrastructure to accommodate the high enrollment rates

Strategy 6: Promote Technical and Skills Training

Vocational training is a key element in providing various skills sets in the County. This will provide trainees with skills that match market demands and enhance creativity and innovation.

Key Strategic Interventions

- Revision and development of market-driven curriculum for vocational training centres
- Establishment of a County technical and vocational education and training (TVET) centre of excellence
- Liaise with established universities in Kenya and abroad to develop research centres and campuses within the County. (Marine, mining, agriculture, and tourism)
- Provide adequate technical and vocational education and training (TVET) centres across the County.
- Establish internship and apprenticeship programmes for TVET graduates.
- Promote public-private partnerships to enhance investment in TVETs.

Strategy 7: Strengthen Integration of Religious and Formal Education

Religious Education in schools contributes not only to the personal reflection and development of young people but should also heighten respect for the beliefs of the other and help build a diverse but cohesive society. Therefore, this strategy seeks to create a harmonious society by instilling good morals, social acceptance, and respect for various religious and other belief systems.

Key Strategic Interventions

- Support religious education initiatives within the County.

14.5.17 Health

The health sector in Kwale provides medical services, public health and sanitation services provided by 260 public and private facilities. However, the sector exhibits a high child mortality rate (77/1000), maternal mortality rate (346/1000), infant mortality rate (44/1000), low nutrition status, and low immunization coverage (77%). However, the plan's health strategy aspires to develop well-equipped health facilities to enhance the quality of life through effective service delivery.

This is attributed to the following challenges.

- High Disease Prevalence: Malaria, Diarrhea, Flu, Respiratory diseases and Stomachaches are the top five prevalent diseases in the County. They jointly contribute to 22.5% morbidity.
- Drugs and substance abuse for the youths lead to poor health.
- Inadequate access to the health centres due to long distances and access roads and inadequate access to emergency response services and support facilities like electricity, water and funds.
- Inadequate health infrastructure capacity such as staff houses, inadequate x-ray labs, inadequate ambulances, limited bed capacity, lack of oncology centre and lack of laboratories in most health facilities.
- Low investment in health care where there is inadequate medicine due to poor supply chain for medicines and disproportionate doctor-patient ratio.
- High infant and child mortality rates.
- Lack of specialized healthcare.
- Overreliance on curative care over preventive care.
- Lack of support infrastructures such as electricity, intermittent water supply,

poor sanitation facilities, dilapidated buildings structures that need renovation, lack of fencing in some facilities, poor waste management and inadequate incinerators.

- Lack of land ownership document for some facilities.
- High cost of healthcare.
- Objectives
- To ensure staff development and establishment
- Eliminate Communicable Conditions
- Provide essential health services

14.5.18 Strategies

Strategy 1: Make Health Care Affordable

Social health insurance has been recognized as one of the support systems to achieve universal health coverage. There is a need for the County to enhance health insurance for its residents. Alternatively, the County can plan/identify various innovative methods of health services financing, including user fees and donor funds. Therefore, this strategy seeks to make health care affordable to every individual, especially the needy.

Key Strategic Interventions

- Sensitization of citizens to ensure that they enrol to NHIF health cover to increase insurance coverage.
- Adopt policies to Enhance health insurance coverage for the poor.
- Establishing more public health centres within the County to ensure easy accessibility.

Strategy 2: Promote Preventive Healthcare.

Preventive healthcare will address some of the common diseases, including the top five major illnesses experienced within the County. They include malaria, HIV/AIDS, typhoid, cholera and respiratory diseases. The aim is to minimize costs in medical health through preventive healthcare

Key Strategic Interventions

- Employ more community health workers to administer health services
- Increase the number and frequency of free checkups and medical screening camps and stations.
- Create awareness on HIV/AIDS prevention and other infectious diseases such as TB and Cholera.
- Undertaking campaigns to improve nutrition and sanitation.
- Enhance immunization to reduce infant and child mortality
- Adopt policies for promoting home-based health care

Strategy 3: Promote Investment in Health Care

Improving health care will require investment in health infrastructure development, purchasing drugs and medicine, health personnel, and other support systems. Therefore, this strategy aims at mandating and prioritizing expenditure on health and engagement of the various stakeholders in the provision of affordable health care.

Key Strategic Interventions

- Incentivize private investment in health care
- Increase public spending on healthcare
- Establish Specialized Medical facilities for Cancer and Urology
- Support healthcare initiatives by Non-Governmental Organizations (NGOs)
- Facilitate land ownership documents for the health facilities that lack title deeds.

Strategy 4: Promote Human Resource Development in Healthcare.

Human resource development strategy aims at planning, managing, and supporting the health workforce involved in delivering effective health services. It's a process of increasing knowledge, skills, capacities, positive work attitudes, and values to foster good health. There is a need for the County to undertake capacity building initiatives to upgrade employee knowledge and skills to innovate continuously. This is because innovation requires continuous learning to enable employees to adapt to changes in their work environment and design innovative approaches to respond to them.

New healthcare technologies are being introduced into the workplace to facilitate work and learning. Therefore, it is necessary to accord them sufficient technical skills to eliminate factors impeding their ability to take advantage of technological advances to learn and generate new innovative ideas.

Key Strategic Interventions

- Continuous Capacity Building for Health Workforce by developing and implementing employee capacity building programs
- Offer more medical scholarships for advanced medicine to medics in the County.
- Train more specialized doctors.

Strategy 5: Improvement of Health Infrastructure

The County should invest in the renewal, expansion of health facilities and reach out to rural areas with additional mobile clinics. There is a need also to provide adequate support infrastructure in all health facilities.

Key Strategic Interventions

- Venturing into mobile clinics for remote areas.
- Establishment of Gender-Based Violence Recovery and Counselling Centre

- Establish additional drug addiction and rehabilitation centres to establish at least 1 health centre per ward provision of adequate infrastructure in health facilities, including water, electricity, medical equipment, and waste management facilities.

14.5.19 Recreation and Community Facilities

14.5.20 Challenges

- **Limited Number of Parks, Stadia and Playgrounds,**
 - There are only two public parks in the County; Kinango and Kwale towns.
 - The County also lacks standard stadia
- **Insufficient Number of Cultural Centres and Social Halls**
 - The County is underserved by cultural centres, threatening the erosion of local cultural practices that need to be preserved for future generations.
 - Several cultural heritage sites in the County have been neglected, a major threat to their existence. These include a Kayas and Tsikitsi dance which are among the unique features and practices in the County.
- **Illegal Acquisition of Land meant for Recreational Facilities**
 - Cases of irregular allocation of land set aside for recreational sites have been experienced, e.g., in Kinondo Ward. However, this can be attributed to the fact that most of this facility is not defined and developed.
- **Degradation of Recreational Facilities**
 - Degradation of beaches can be stated as one of the main challenges experienced in the County.
- **Inadequate Fire Emergency Response Facilities**

14.5.21 Strategies

Strategy 1: Enhance Socio-Cultural Heritage and Social Integration

The strategy aims at preserving Kwale's rich culture, promoting socio-cultural heritage and integration in the County. In addition, the strategy aims at promoting peaceful coexistence among communities.

Key Strategic Interventions

- Organizing County and inter County cultural events for documentation of cultural assets
- Recognize and nurture talents through talent academies, annual games and sports.
- Designate public Parks around Kongo estuary and Msambweni.
- Rehabilitate Kwale Cultural Centre.
- Establish Cultural Villages.

Strategy 2: Provision of appropriate infrastructure for nurturing talents

There is a need for the County to provide a suitable environment for training and nurturing talents. This will promote talent development and utilization as a key component of socio-cultural integration, entertainment and job creation.

Key strategic interventions

- Establish youth talent centres, academies and sports grounds to nurture talent
- Establish annual County sports events
- Construction of modern sports stadium with modern facilities
- Constructing, equipping and staffing counselling and rehabilitation centres for drug addicts

Strategy 3: Improve Kwale County's Fire Emergency Preparedness and Response

Domestic and wildfires are some of the hazards to which the County population is vulnerable. Such vulnerability is comparatively higher in urban areas, given that they are aggregations of human settlement, with varied socioeconomic and industrial activities likely to trigger fires. Given its inadequate human resource and equipment inventory to deal with fire emergencies, Kwale County ought to implement measures to mitigate fire hazards.

Key strategic interventions

- Develop a County fire emergency response plan

14.6 Theme 6: Creating a system of liveable human settlements and urban development

Human settlements are the accumulations of people, infrastructure and services. They are agents of economic growth by providing favourable locations for productive investment through the concentration of activities and people, which secures economic and technical efficiency. Consequently, the development of human settlements is a critical process in transforming the lives of the people of Kwale.

In Kwale County, human settlements range from large urban areas to small villages in the rural areas. However, these human settlements face challenges that manifest through overcrowding, water shortage and poor sanitation, pollution, traffic congestion, and crime, amongst others, due to inadequate infrastructure and services to match the growing population. In addition, urban development is mostly experienced along the coastline and major transportation corridors that result in inequalities in the spatial distribution of growth centres across the County.

- Install fire hydrants in major urban centres of Diani-Ukunda, Msambweni, Kinango and Lunga Lunga
- Have fire station in Kwale Town and sub-stations in major urban centres of Diani-Ukunda, Msambweni, Kinango, Lunga Lunga, Taru, Mackinnon Road and Samburu
- Create fire breaks within County forests
- Carry out periodic fire emergency drills
- Adopt policies for fire and emergency response in all public areas.

These challenges facing human settlements and the imbalanced growth of the County prompts the need to formulate a framework for the management of future urban growth and the location of physical developments in urban and rural areas to facilitate a coherent system of human settlements. Therefore, this framework is geared towards guiding human settlement development in both rural and urban areas through a model that will facilitate a balanced system of human settlements as well as provision of adequate infrastructure and services to improve the living conditions of the people living now and in the future within the County. To realize this objective, the following challenges must be addressed.

• Sprawl in human settlements

The County's high urbanisation rate coupled with the lack of a human settlements development framework to guide urban human settlements has resulted in urban sprawl. Urban sprawl in the County is manifested by spillover settlement developments into the urban hinterlands eating up the rich agricultural land, especially in Ukunda/Diani, Kinango and Kombani centres. The sprawling developments result from inadequate infrastructure and services

within the designated urban areas to cater to the existing and growing population.

- **Uncontrolled development**

Urban areas in the County are developing without an urban planning framework/policy or development plans. Developing such plans/frameworks has constantly faced challenges, especially public resistance due to inadequate public sensitization on urban and rural development planning. Lack of these development plans limits controlled development by adhering to the County's development control processes such as applications for development and approval of such developments. This has resulted in haphazard urban development manifest in mushrooming peri-urban growth centres that lack defined urban core such as Ndenyeye, Ramisi, Mamba, Kanana Market, Mwangulu, Kinondo, Ng'ombeni, Milalani, Waa, Matuga, Tiwi, Perani, Ndavaya, Vuga, Lukore, Shimba Hills, Kombani, Bofu, Gandini, Mwakijembe, Gazi, Mwereni, Busho, Kilibasi, Mkongoni. In addition, all the urban centres in the County lack proper constituted institutions to provide management and development control enforcement services.

- **Unbalanced regional development**

The distribution of urban growth centres is not balanced across the County. Urban growth centres have concentrated along the major transport corridors-international highways, i.e., Mombasa- Nairobi- Malaba Road, Mombasa- Lunga Lunga Road and the coastal strip directing development away from the County's interior.

- **Dormancy of urban centres**

Some centres within the County exhibit dormancy due to minimal infrastructure and resource development and lack of clearly ascribed service function. Such centres include Kwale, Vanga, Ramisi, Tsunza and Msambweni.

- **Underserviced Human settlements**

Most of the urban areas in the County experience inadequate services such as housing, water and sanitation, and infrastructures such as sewerage and solid waste management system. Daily migration patterns between Kwale and Mombasa Counties manifest such services and infrastructure inadequacies. A large portion of workers in Kwale reside in Mombasa County, especially in Likoni. Thus workers immigrate into the County during the day and migrate in the evening to Likoni. In addition, the lack of adequate infrastructure and services in growth centres has slowed economic development within the County, further illuminating the migration of the labour force from the County to Mombasa.

In the rural areas, human settlements are also under-serviced. Rural human settlements in the County are dispersed and are often small clan settlements. This dispersed system makes it challenging to provide key infrastructure and services to the households.

The poor linkage between urban and rural areas

Poor road conditions weaken Urban-rural linkage within the County. This has led to higher transportation costs and underdevelopment in the rural settlements. The demand by the rural population for non-food goods, farm inputs and services and demand for food goods by the urban dwellers can only be met if there is a proper and functional urban-rural linkage.

14.6.1 Strategies

Strategy 1: Develop systematic urban growth

Systematic urban development entails concentrating development to selected competitive socio-economic hubs as production and economic growth centres while tapping their respective socio-economic potential.

Key Strategic Interventions

- Adopt function based urban growth and planning.

Table 49: Strategic Growth Centres

| Strategic Function | Urban areas |
|--------------------|-----------------------------------|
| Industrial | Samburu, Kinango and Shimba Hills |
| Education | Ndavaya |
| Resort | Tsunza and Diani/Ukunda |
| Border | Mazeras, Mariakani and |
| Gateway | Mackinnon and Lunga Lunga |
| Port | Vanga and Shimoni |

Strategy 2: Adopt a hierarchy of urban areas as a basis for infrastructure and service provision

This strategy seeks to rank the urban areas in the County based on their current and anticipated future service provision and the catchment population. Each rank has its expected infrastructural threshold provided by the Urban Areas and Cities Act, 2017. The strategy shall use the model as a planning guideline and enable the County government to adequately provide services at appropriate levels and provide sufficient key infrastructure and facilities to match the population needs and ensure balanced development.

Key Strategic Interventions

- Classify and upgrade growth centres into the four respective tiers and improve their capacity to provide effective and sufficient infrastructure and service delivery.
- Provide services proportionate to the level of the urban centre
- Encourage settlement within these service centres.
- Establish a clustering mechanism approaching tier 4 human settlements to allow for competitive, integrated development and economic efficiency in investment.

Table 50: Proposed Urban Hierarchy

| Level of Urban Areas | Urban Areas |
|----------------------|---|
| Municipality | Kwale, Ukunda/Diani |
| Town | Mackinnon, Taru, Samburu, Kinango, Mwangulu, Msambweni, Lunga-Lunga, Shimoni, Vanga, Ndavaya, Tsunza, Shimba Hills, Denyenye Mazeras, Mariakani |
| Market centre | Ramisi, Gazi, Matuga, Kikoneni, Vigurungani, Tsimba, Lukore, Mamba, Mwangwei, Banga |

| Level of Urban Areas | Urban Areas |
|----------------------|---|
| Rural/Local Centres | Kilimangodo, Kibuyuni, Majoreni, Jengo, Meli Kubwa, Kaza Moyo, Kwa Kadogo, Kinagoni, Lamkani, Matumbi, Kilibasi, Busho, Gandini, Myenzeni, Majengo, Vinyunduni, Mwakijembe, Mwangoloto, Mwangani, Kibandaongo, Mrima, Mwangani, Mlola B, Vuga, Makongeni, Kanana Market, Panama, Fikirini, Mkangombe, Vyongwani, Mbuguni, Kiwegu, Bodo, Munje, Okote Area, Kiteje, Mivumoni, Godo Center, Kambingu, Kimwangani, Kuranze, Mavirivirini, Dzombo, Kafuduni, Kalalani, Makwenyeni, Shirazi, Mwananyamala, Chale Island, Kilulu, Magaoni, Mnyalatoni, Mkundi, Makobe, Kichaka Simba, Mbegani, Mwereni, Tiribe, Mwandimu, Mtumwa, Mkongani, Kirewe, Burani, Silaloni, Mbita, Mwaluvamba, Mwalukombe, Kasameni, Gulanze, Mwena Centre, Nguluku Junction, Mwenzamwenye Centre, Donje Outpost Shopping Center, Chigutu, Mdomo Shopping Center, Tata, Mbilini, Sadani, Busa, Kajichoni, Riakalui, Achivwa, Kibaoni, Pemba, Kituu, Ng'ombeni |

Strategy 3: Promotion of Urban containment and rural protection

Urban containment and rural protection refer to the principle of encouraging new development to occur within planned and serviced areas of the County to protect conversion of rural land to urban land and creating more compact rural settlements to minimize land fragmentation and free enough land for agricultural development.

With the reinforcement of workable policies, this strategy will counter urban sprawl and uncontrolled development by defining urban limits and spatial extent permissible for urban development to occur.

Key Strategic Interventions

- Encouraging infill development and redevelopment of existing urban areas
- Delineate urban edges (urban growth limits) for all urban areas
- Discourage conversion of agricultural land to other land uses.
- Public sensitization on the need to free agricultural land
- Establish guidelines for minimum land holding sizes of agricultural land

Strategy 4: Stimulate rural growth through rural development planning.

The County's rural areas are endowed with natural resources which are either underexploited or unexploited. Optimal exploitation of these natural resources presents the County with an opportunity for economic development in the rural areas. This strategy seeks to assist rural settlements in fully tapping into their potentials, maximising the use of the available resources, and reaping all possible socio-economic benefits accrued from these local-scale ventures.

Key Strategic Interventions

- Develop tourism attraction and mining sites in the rural areas
- Promote community tourism
- Establish rural agro-based industries
- Provide proper and adequate linkage between the rural areas and the urban areas.
- Sensitization on urban and rural planning.
- Undertake natural resource mapping within the County and sensitize the citizens on the same

Strategy 5: Designate rural-service centres

Designating rural/local service centres will facilitate the efficient provision of basic infrastructure and services for the rural population.

Key strategic interventions

- Provision of basic infrastructure (power, education, health, water and sanitation) and services to the local centres.

Strategy 6: Strengthen urban management for effective urban development

To ensure functional and liveable human settlements, there is a need to establish a clear and functional urban management system. This strategy seeks to facilitate the establishment of urban administration provisions for all four tier growth centres according to the urban hierarchy provided by the Urban Areas and Cities Act.

Key Strategic Interventions

- Establish municipality's boards for Kwale and Diani/Ukunda.
- Establish town committees for towns
- Establish market centres and rural service management structures
- The County to legislate for market centres and rural administration.
- Conduct periodical training and capacity building to the appointed administrators

Strategy 7: Promote investment in affordable housing

The strategy aims at achieving sufficient, safe and affordable housing for the County residents. This aims to counter sub-standard housing and the overcrowding effect on service delivery in rural and urban settlements.

Key Strategic Interventions

- Set aside serviced land for County housing development in urban areas
- Promote PPP to finance housing development in the County.
- Promote low-cost housing for the low-income earners in the urban areas
- Promote the use of cheaper building technologies

- Promote building and construction training courses within the vocational institutions
- Undertake a technical assessment of land availability.

Strategy 8: Promote industrialization and trade.

A high percentage of the resident population of Kwale commute to neighbouring counties to work and access basic infrastructural services depriving Kwale of its active human resources. The strategy seeks to counter this challenge by containing and sustaining its resident population by creating an enabling environment for existing and new industries to flourish, increasing employment and income-generating opportunities, and attracting investments in trade and infrastructural development to minimize the need for migration.

Key Strategic Interventions

- Promote Private Public Participation incentives to attract investments in Kwale County.
- Strengthen existing EPZs and establish Samburu and Kiteje Special Economic Zones (SEZs) and Export Processing Zones (EPZs) at Samburu, Ukunda and Kiwegu areas.
- Improve transport infrastructure linking production and market areas and rural and urban centres.
- Strengthen tertiary institutions to provide entrepreneurial training.
- Develop markets for high-value food production and upscale commercial agriculture in rural areas like Shimba Hills.

Strategy 9: Strengthen urban-rural linkages.

The main urban centres are located along major transportation corridors to the North, East and South-East of Kwale County. On the other hand, rural centres dominate the

western and central parts and are not adequately connected to key terrestrial transport routes. The result is a gap in service delivery, transportation of farm inputs, equipment and machines, food and farm produce, labour and technology transfer.

This strategy aims to integrate and support positive economic and social links between urban, peri-urban and rural areas into a singular web to realize equitable development.

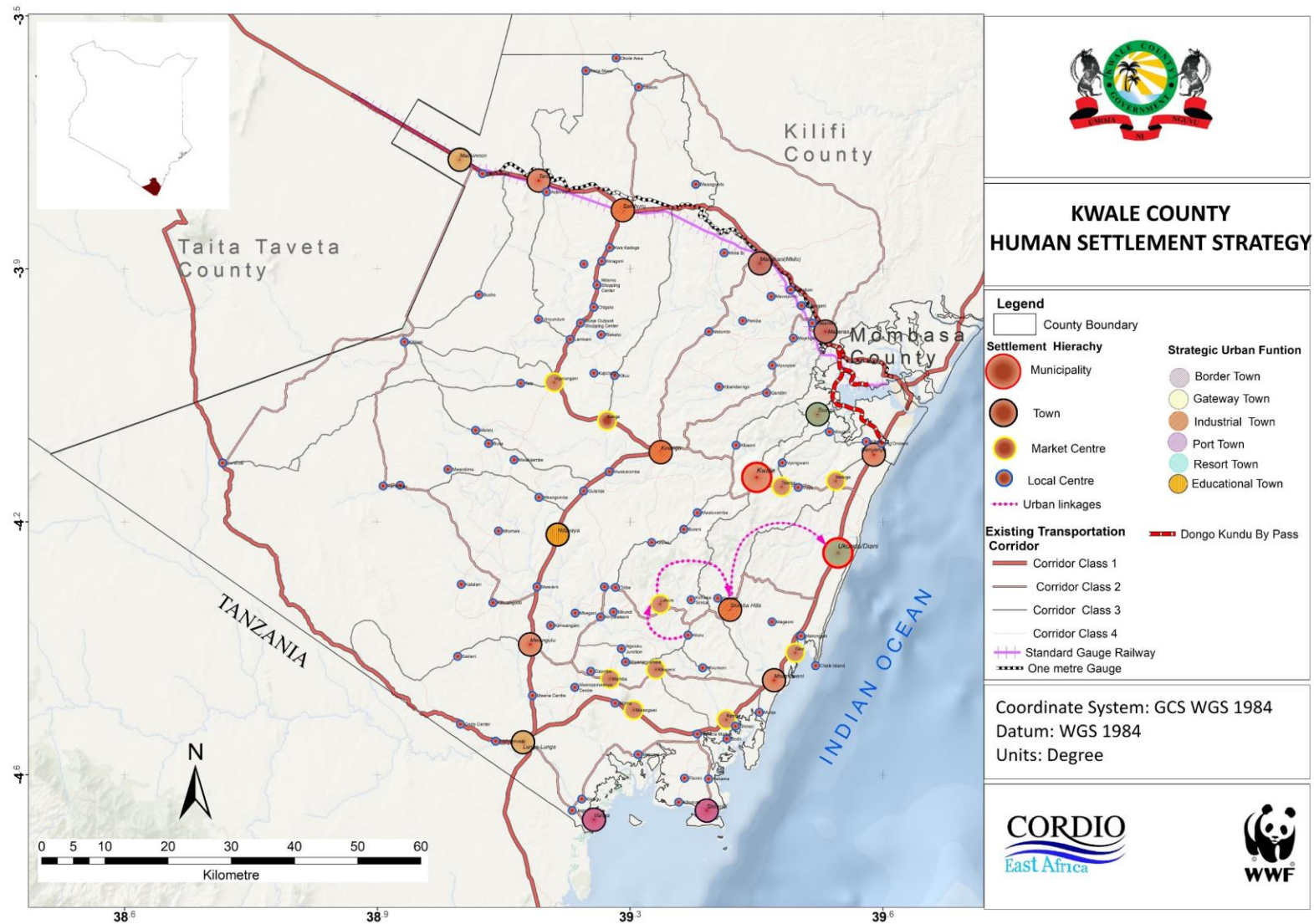
Key Strategic Interventions

- Review and fast track implementation of ongoing construction work for transport networks.
- Upgrade all road networks to appropriate road classes.
- Perform suitability analysis and establish coordinated development between urban centres with complementary functions.
- Prioritize the development of key transport infrastructure in the underserved areas (Western and Central Parts).



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Map 54: Human Settlement Strategy



14.7 Theme 7: Strengthening Linkages through Seamless Transport and Infrastructure

The linkage and the inter-relationship between rural and urban areas are the foundation for sustainable development. Rural areas are centres of production of food consumed both within the rural and urban areas, raw material for industrialization, most of which takes place within urban areas and provides a source of labour for urban areas. On the other hand, urban areas are centres of economic activities, innovation, and service provision, apart from being the marketplace for what is produced in the rural place. This relationship is symbiotic. For instance, in Kwale, most of the food that is consumed in Ukunda, Diani and even Mombasa is produced in areas such as Kikoneni, Mwananyamala, Shimba Hills, Dzombo and Mkongani and industrial raw materials such as coconut, silica sand, fruits also sourced from rural areas such as Kingwede, Dalgube and other areas. The strength of this relationship can only be reinforced by proper networking through efficient and functional transport and infrastructure, which shall make movement between and within the rural and urban areas seamless.

This is achievable by improving existing transport corridors, opening new corridors and reinforcing the inter-linkage between the different modes of transport within the County.

The aspiration is to have reliable, seamless and affordable systems for the movement of people, goods and services. These networks should build upon the interdependence between the rural and urban areas and existing linkages that Kwale County has with its neighbouring counties, Tanzania as an international market and the rest of the world.

Infrastructural development projects currently ongoing such as tarmacking of Samburu-Kinango; Lunga Lunga-Vanga;

Mlalani-Shimba Hills; Kanana-Shimoni roads; construction of the Dongo Kundu bypass; expansion and upgrading of the Diani airport; proposed development of a seaport at Shimoni; widening of the Malindi-Lunga Lunga highway are all considered in the overall strategy. Considerations for urban mobility shall also be made.

The failure of Kwale County to maximize its development potential has partly been due to the poor interplay between the urban and rural areas. This poor inter-linkage has resulted in poor pricing of farm commodities, the prevalence of middle-men; limited access to markets; inadequate access and high costs of farm inputs, breakdown of service provision in the rural area; losses of produce; under-employment and poverty.

14.7.1 Challenges

- **Lack of an Integrated Transport System in the County**

The transport system in Kwale County is not integrated and each transport mode, including road, rail, water and air, is managed and operated autonomously. There exist missing links in the interconnectivity of transport modes

Inefficiency in the regulation of public transport; poor traffic management leads to traffic congestion, especially in urban areas and the emerging challenge of uncontrolled boda-boda and tuk-tuk (rickshaws) within rural and urban areas present systematic symptoms of a poor and inefficient transport system.

- **Poor and Inadequate Transport Infrastructure-** Challenges of inadequacy and poor conditions face the existing transport infrastructure.
- **Under Road transport,** out of the total 3475.13 kilometres of classified roads, only 11.6% (97.447 Km of paved roads, 200.421Km of gravel roads and 108.297Km of earthen roads) is in good condition. Lack of road furniture, including bridges,

traffic calming facilities, road signage, designated pedestrian walkways and crossings are characteristic problems to the road infrastructure within the County.

- **In the area of air transport**, there is one functional airstrip; Ukunda Airstrip and four others at Perani, Mackinnon, Funzi, and Kwale. Ukunda
- Funzi and Kwale airstrips are paved but are operated privately, whereas MacKinnon Road and Perani airstrips are undeveloped.
- **Water transport** is underutilized with a few private boat operations traversing between Shimoni and Pemba, Shimoni and Wasini, Bodo and Funzi, Diani and the islands of Zanzibar. The boat operations give less consideration to the safety of the passengers and operators. The low uptake of water transport as a major mode is due to the underdeveloped water transport infrastructure. The three natural harbours of the County at Vanga, Shimoni and Kinondo, have yet to be developed. Potential water transport routes such as Vanga-Shimoni-Tiwi-Waa-Mombasa are currently not being explored.
- As for **Rail transport** in Kwale, the County is served by a meter gauge railway line measuring approximately 47km with stations and substations at Mazeras Samburu, Mackinnon, Taru, Mwembeni and Manjewa and the standard gauge railway line, which measures approximately 83km with stations at Mariakani and communication stations at Taru and MacKinnon Road. Both railway lines run along the northern part. The southern production areas of the County, including the anticipated port activities at Shimoni, lack a direct link to both railway lines.

• **Encroachment of Transport Corridors**

Development within road reserves, rail reserves, pipeline reserves, and high voltage electricity lines is a common challenge in the County. This interferes with the development of the infrastructure and poses a safety risk. Such instances are evident in MacKinnon, where people have developed on the Mzima pipeline and Kenya Pipeline corporation oil pipeline reserve, developments along the Likoni-LungaLunga highway. In addition, many urban road reserves in Diani municipality have been encroached upon.

• **Irregular Road Reserves within Adjudication Schemes**

Road reserves set aside during prior adjudication processes are characterized by Dead ends, irregular road widths and shapes making them hard to identify and difficult to develop

The unclear marking of these road reserves, especially in urban areas such as Ukunda, Msambweni and Tiwi, which is also urbanizing, makes it vulnerable to unintentional and intentional encroachment. As a result, many access roads have been illegally occupied with private developments.

14.7.2 Strategies

Strategy 1: Upgrading and Maintenance of Existing Transport Infrastructure

This strategy will involve expanding and improving the standard of existing transport infrastructure in the County. The strategy strives to promote transportation in Kwale County to enhance urban mobility and connectivity between urban and rural areas and connection within rural areas. This is fostered towards improving access to services and markets, reducing transportation costs, reducing travel time, promoting the integration of communities, boosting tourism activities and consequently spurring economic growth.

The infrastructure to be upgraded and maintained includes roads and corridors, railway, air and water transport facilities.

Roads improvement shall target all significant roads through grading and tarmacking of strategic corridor roads connecting Kwale County to the neighbouring counties of Taita Taveta, Kilifi, Mombasa and other regional and international destinations; intra-County roads linking the main urban centres; and strategic rural access roads connecting production areas.

The strategy for railway transport shall target the expansion of railway services to cover other parts of the County. In addition, the strategy shall strive to develop water transport as an integral part of the transport system within the County and further expand the capacity for air transport.

Key Strategic Interventions

- Dualling of Mombasa – Lungalunga (A7) Highway to efficiently serve the proposed seaports and airports.
- Upgrading to all-weather standard of Mariakani-Kinango-LungaLunga road through Ndavaya; LungaLunga-Godo-Kuranze(Wundanyi-Mwatate-Rukinga-Kuranze-A7-LungaLunga B56); Kuranze-Kilibasi-Mackinon C203; Kuranze-Nyango-Vigurungani Class E; Kwale-Kinango;
- Carry out periodic road surveys and maintain a database for the County roads.
- Improvement of road furniture, including bridges, traffic calming facilities, road signage, designated pedestrian walkways and crossings in main roads.
- Completion of Funzi Causeway.
- Upgrading of bridges at Ramisi, Marere, Mwachande, Umba and Mwache.
 - Expand and improve the Diani Airport.

- Improvement of existing private airstrip at Kwale and Funzi through Public-Private Partnership.
- Upgrading and completion of shelly beach-Pungu to Chale Island beach road
- Operationalize and upgrade Perani and Mackinon airstrips.
- Upgrading of Wasini and Shimoni Jetty.

Strategy 2: Promoting Multi-Modal Transport System

For a transport system to be efficient and fair, it must serve diverse demands. The multi-modal transport system is a system that shall target seamless integration of operations in all modes ranging from air, water, road and NMT. This will make travelling timely, affordable, accessible and reliable.

Key Strategic Interventions

- The introduction of maritime transport routes along the Indian Ocean serves the following nodal points: Shimoni, Wasini, Tsunza, Vanga, Funzi and Msambweni.
- Preparation of Kwale County Integrated Transport Master Plan.
- Designate boda-boda and tuk-tuk shades
- Designate boda-boda and tuk-tuk biking lanes and pedestrian walkways.
- Construct four bus terminal facilities at Mariakani, Kinango, Lunga Lunga and Ukunda.

Strategy 3: Enhance and Strengthen Coordination and Partnership between Transport Agencies

This strategy seeks to establish a harmonious service delivery system through partnerships between transport stakeholders, including public members, transport service providers

and operators, and government regulatory agencies in the transport sector.

The objective shall be to address the aspects of investment in infrastructure delivery, quality of service, safety and security of the people as key components of an integrated transport system.

The aim shall also be to establish and strengthen the synergies among the different stakeholders, which will ultimately help avoid duplication of roles and reduce conflicts.

Key Strategic Interventions

- Adopt joint planning and stakeholder participation in planning and designing transport infrastructural development projects.
- Development of a County integrated transport information management system (CITIMS).
- Development of a County Traffic management plan.

Strategy 4: Strengthening Development Control for Securing of Transport Corridors

This strategy is designed to respond to encroachment issues on land reserved for transport infrastructure development. This shall be achieved by ensuring that all developments within the County are subjected to approval processes by relevant authorities to avoid development taking place on land reserved for infrastructure development and transport corridors. For development already encroaching on infrastructure reserves, measures shall be undertaken to remove such encroachments.

Safeguarding the interests of the environment and people through the ESIA and EA and resettlement action plans for infrastructural development that involves the transfer of people and livelihood is necessary.

Key Strategic Interventions

- Undertake Environmental and Social Impact Assessments for transport infrastructure developments and implement all the proposed mitigation measures in the Environmental Management Plans.
- Preparation of resettlement action plans for infrastructural development, which requires relocation of people.
- undertaking appropriate zoning and set land use standards for all urban centres
- adopt pre-planned development approach to implementation of projects
- Demarcation of transport corridors with permanent markers/beacons.
- Continuous public sensitisation on the existing laws and policies relating to construction.

Strategy 5: Promoting the use of Non-Motorized Transport (NMT)

NMT is a key element of encouraging clean urban transport whose amenities facilitate human-powered transportation, e.g. pedestrian crossing, walkways, footbridges, cycle lanes and other facilities. The strategy seeks to promote Non-Motorized Transport (NMT) by providing space for NMT and a conducive environment where NMT is safe, attractive, convenient and free of cost for the users, especially within urban areas. It shall entail providing NMT infrastructure and allocating adequate and sustainable funding for its development and promotion. Emphasis is also given to the integration of NMT with other modes of transport.

Key Strategic Interventions

- Allocate adequate space for NMT when reserving land for roads development
- Construction of sidewalks, crosswalks, and bicycle lanes within Diani and

Kwale municipalities as pilot projects replicates in other urban areas.

- Develop an NMT master plan.
- Undertake urban greening
- Encourage partnership between the County and private developers in the improvement of NMT.
- Installation of street furniture
- Adoption of urban design
- Enhancement of pedestrian safety

Strategy 6: Development of New Transport Infrastructure Facilities.

In enhancing accessibility and efficiency of integrated transport in the County, more areas need to be connected by improving and upgrading existing infrastructure and providing new facilities and infrastructure. This is not only focused on bridging the infrastructural gap but also intended as a strategic intervention to induce development by providing key strategic infrastructure to provide the County with a leap towards its prospected development status.

Key Strategic Interventions

- Construction of new bridges at Kongo
- Construction of bridges to enhance rural access.
- Tarmacking of Kidimu-Majoreni-Kidomaya-Vanga road
- Tarmacking of Mwangwei-Majoreni road
- Construction of an International standard Airport at Kidimu
- Extend the existing railway (SGR) from Mariakani station to the Shimoni seaport.
- Construction of seaports at Shimoni, Kinondo and Vanga
- Construction of jetty termini at Funzi, Msambweni, Bodo, and Tsunza, Diani Kongo estuary, Mkunguni, Waa/Tiwi and Gazi.

- Introduction of ferry services to serve between Shimoni and Wasini.
- Encourage investment in public water transportation in the proposed route.
- Improving safety in water transport

Strategy 7: Enhancing Efficiency and Safety of Public Transport

The prominent mode of transport in Kwale County is road, but other modes are used to transport people and goods, including air, water, and rail. The efficiency of these modes focuses on reducing travel time, cost of travel, cost of operation and maintenance, and flawless connectivity between modes and places.

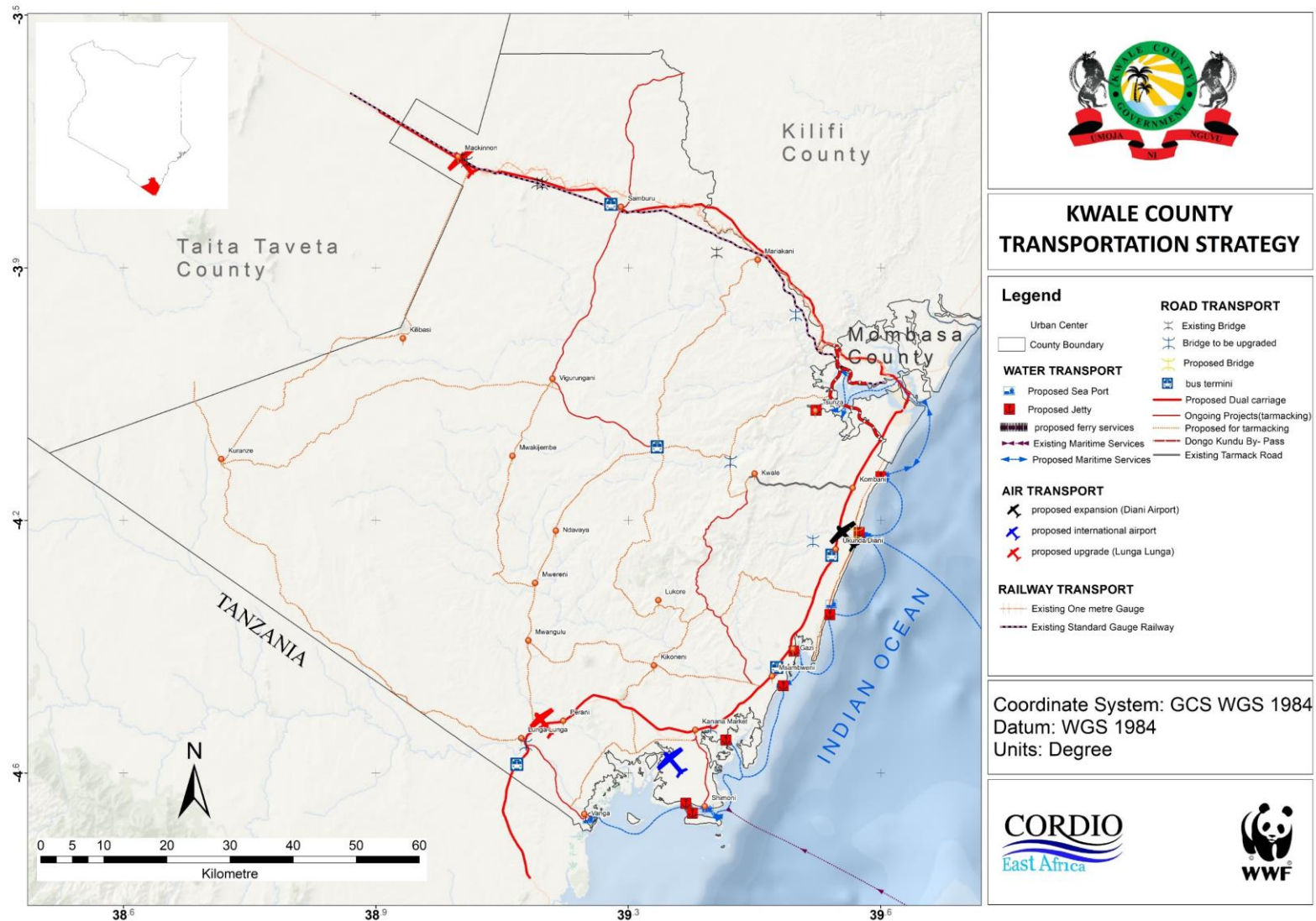
Enhancement of safety and security of modes shall ensure that all traffic means are safe to use and free of hazards to the health and environment of the users and ensure minimum risk of accidents and loss of life.

Key Strategic Interventions

- Establish a County-owned public bus service.
- Establish a County-owned public water transport service.
- Adopt schedules for public service bus operators.
- Designation of official stops and stations for public transport operators.
- Adopt an intelligent traffic management system for Diani and Kwale.
- Incorporate a multi-modal transport system and modernize the existing transport system.
- Set up mechanisms to guard against exploitation of the public transport consumers by the service providers through inflation of fares, harassment etc.

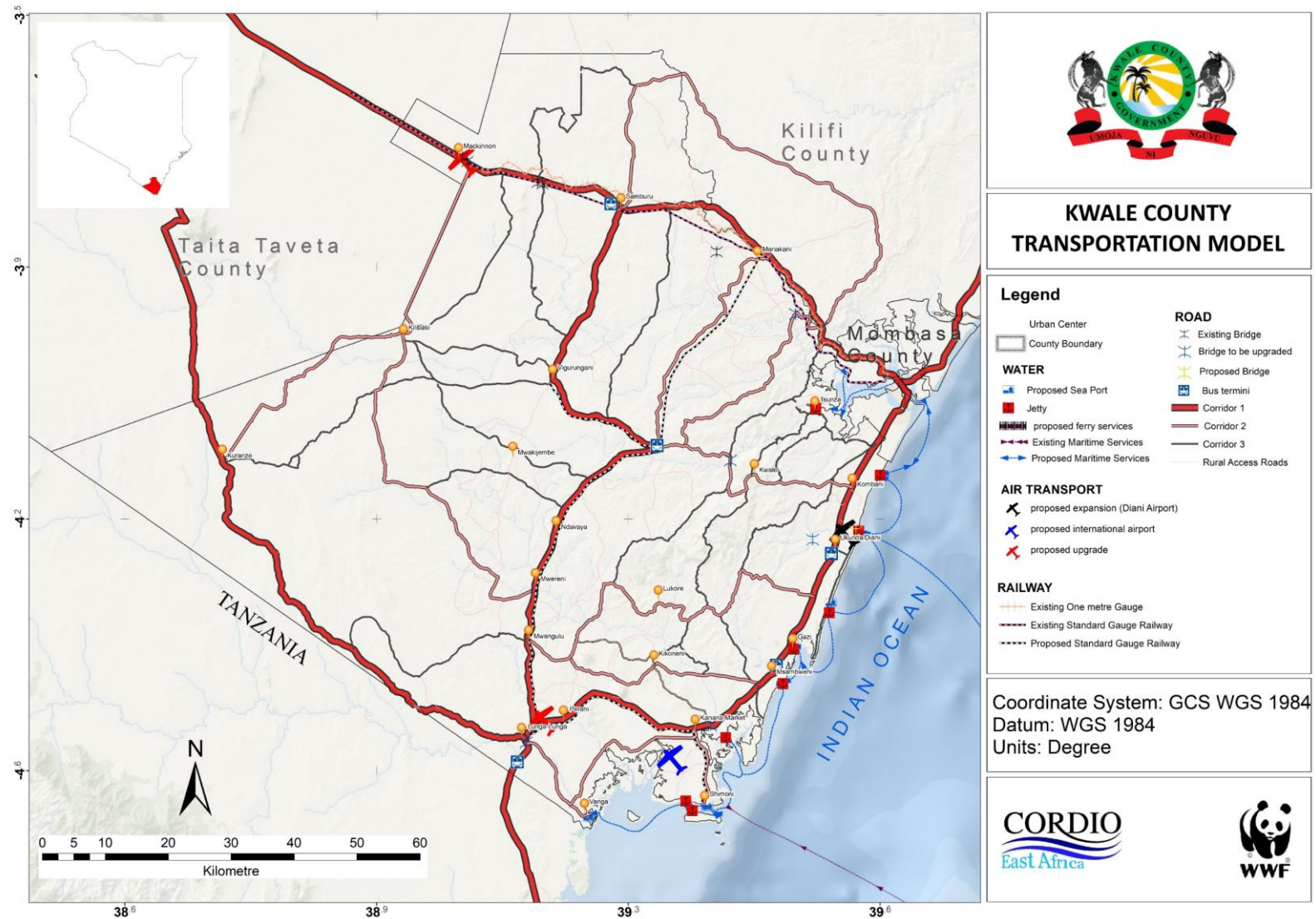
PART IV: PLAN PROPOSALS

Map 55: Proposed Projects



PART IV: PLAN PROPOSALS

Map 56: Transport and Linkages Development Strategy



14.8 Theme 8: Optimization of Potential through Good Governance

Good governance is an instrumental factor required if the milestones in economic growth and development envisioned in this 10-year plan is to be achieved, whereas poor governance could result in immense disappointment of citizens and missed development.

Good governance is evidenced where planning puts the needs of the citizens first; it adopts democratic input in planning and implementation of its plans to ensure synergies are generated between respective stakeholders such as civil society, public and private sectors. It also promotes transparency, integrity and accountability for effective service delivery and a wise investment.

As stipulated in Article 10 and Chapter 6 of the Constitution on integrity, the plan will respond to development challenges experienced in Kwale County following principles of good governance that include:

1. Stakeholders representation and participation through the adoption of the multi-sectoral approach and integrated service delivery will ensure that different sectors use their comparative advantages in mobilization and efficient use of resources to realize the objective of

the spatial plan and reap maximum outcomes.

2. Responsiveness by ensuring prioritization of felt needs of the citizens and implementations of intervention ensuring adherence to CSP road map through clearly defined targets.
3. Promotion of research and innovation for efficiency and effectiveness in implementing the proposed programs and projects.
4. County ownership of the KCSP by the executive who will spearhead the process of rolling out the plan with the involvement of all key stakeholders, including line ministries; County's development partners, private sector, Faith-Based Organisations (FBOs), NGOs and CBOs who will all be required to align their resources towards the envisioned projects and programs for the KCSP 2018 -2028.
5. Promote openness, transparency, accountability, and sound financial management to ensure delivery of programs that support all; children growth and development among the youth, men, and women, rich and the poor, to achieve all-around development. This will attain equity and balanced development.

6. Ensure competence, capacity and ethical conduct during human resource engagement for efficient service delivery.
7. Fulfilment of human rights while respecting cultural diversity and promoting social cohesion.

14.8.1 Challenges

This theme addresses governance challenges as discussed below given various development aspects in public administration and financial management matters that include security; budgeting, revenue generation, expenditure and absorption of budgetary allocation; delivery of social services in relation to talent management, dispute resolution, finance and revenue administration; and political stance that are key in the development and subsequent rolling out of the plan.

1. Institutional Incapacities

These are evidenced in understaffing, inadequate funding, and lack of requisite facilities and equipment that hinder the achievement of set milestones.

2. Inadequate Service Delivery

The level of service delivery in the County is insufficient in education, health and sanitation and infrastructure development.

3. Inadequacies in public expenditure and financial management

negatively impact the implementation of projects.

This could be attributed to low absorption of budgetary allocation and lack of sufficient staff to support project implementation and other essential facilitation.

4. Inadequate Public Engagement

The principle of participation is derived from the fact that people are the ultimate beneficiaries of development and agents of development. In Kwale County, public participation has been promoted through public consultative meetings. However, the participation has not been well structured according to age and gender, promoting the dominance of consultative meetings by men and limiting the participation of women and youth.

5. Poor Plan implementation

There is a lack of/low plan implementation in the County. This can be attributed to inadequate resources and a lack of political will. This is manifest in uncontrolled development, duplication of projects and inequitable development.

6. Inadequate Disaster Response Mechanisms

Low level of disaster preparedness to counter famine in the ASAL areas, fire outbreak and floods in sections of Kinango and Lungu sub-counties

7. Insecurity

Insecurity is a threat to development, majorly destabilizing County's economy. This is evident by incidences of insecurity in the form of burglary in urban areas and banditry within Kuranze, Mbita; incidences of murder have been experienced especially around Ukunda, Bongwe Mabokoni, where there has been robbery against livestock traders along Kwale-Kinango road and youth gangs that terrorize communities.

8. Untapped Talents

Some talents in football, basketball, cooking, music, theatre art and creative art, handicrafts, swimming and deep-sea diving are not nurtured and therefore not beneficial to individuals or the County due to lack of talent exhibition events and talent academies and talent management centres.

9. Cross-cutting issues

- Unemployment
- High poverty level: approximately 70.7% of the population in Kwale County is living below the poverty line at \$1.9 per day, which is higher than the national estimate, which stands at 45.2 %. This is partly attributed to the high unemployment rate and natural factors such as drought and inefficiencies in production systems.

- High (5.5%) HIV/AIDS Prevalence mainly a menace to the youth aged between 15-24 years, women and children born while infected.
- Vulnerable groups: They include the people living with HIV/AIDs, orphans, Persons with Disabilities (PWDs) and the elderly. These groups face limitations in their capacity to be engaged in productive activities and access opportunities. In addition, women are therefore considered vulnerable due to high illiteracy levels, gender inequality in ownership and control of productive family resources.
- Increase in Social Vices such as Drug Abuse/Child Abuse/Extremism and Pornography: This is among the youth or young people who are prone to hard drugs and substances abuse due to negative interactions with tourists, easy access to drugs and other substances, peer pressure, poverty, lack of parental guidance, low enforcement of laws and unemployment among the youth.

14.8.2 Strategies

Strategy 1: Enhancing Capacity for good Governance

The objective of this strategy is to enhance the capacity for governance in the County by

establishing a partnership network on governance comprising of representatives from County government, civil society, private sector, and development agencies, to build a consensus on relevant benchmarks, best practices and codes of conduct, and indicators of good governance and to review progress on achieving better governance in the County.

Key Strategic Interventions

- Conduct stakeholders analysis to determine the roles of respective key stakeholders
- Develop a program of workshops and training courses to enhance understanding of the principles of good governance by civil servants, politicians, civil society, and citizens in general.

Strategy 2: Enhancing Service Delivery

The strategy aims to improve service delivery by emphasizing investment in infrastructure development and ensuring adequate human resources, financing, and facilitation. The strategy also seeks to improve the development prospects of society through equitable development.

Key Strategic Interventions

- Create an independent third-party oversight unit to coordinate and monitor the project and program implementation and service delivery in the County.
- Conduct regular customer surveys and scorecards as a way to enhance

accountability for service delivery and increase participation of the citizens in monitoring project implementation and to their satisfaction on service level;

- Recruit and employ adequate staff and deploy them to the various administrative levels
- Initiate regular County staff capacity building and refresher programmes
- Establish a County Information Management system to facilitate sharing information amongst departments.
- Introduce the Result Based Management System for enhanced performance
- Provide adequate allocation of funding for the planning department and other relevant line ministries and departments for programmes and project's implementation

Strategy 3: Enhance Public Participation

The strategy seeks to integrate the participation of a majority of citizens' participation into its operations by establishing a framework to formalize participation at different levels according to population disaggregation by age and gender. These participatory development processes will instil a wider sense of ownership of the developmental projects.

Key Strategic Interventions

- Plan and organize structured meetings specifically for the women, men, youth and the vulnerable
- Engage civil society in joint forums for intensifying public participation.
- Timely dispatch of required materials to the public through media for an adequate understanding of contents and thus cultivate active participation
- Strengthen the feedback system among stakeholders
- Introduce public notice boards at public places for information dissemination

Strategy 4: Improve Fiscal Management

This strategy seeks to augment local revenue collection, improve absorption capacity and promote efficient utilization of public resources.

Key Strategic Interventions

- Automate local revenue collection
- Update County land valuation roll
- Diversify revenue streams to include waste collection, parking charges, artisanal mining etc
- Claim revenue share from major mining industries (Mining Act, 2016), Shimba Hills National Park and Reserve, Diani-Chale and Kisite Mpunguti Marine Park and Reserve.

Strategy 5: Enhance Disaster Preparedness and Response

The strategy aims at averting disasters through community and institutional

preparedness to minimize the destruction to property and losses of human lives and livestock.

Key Strategic Interventions

- Establish requisite infrastructure for disaster management such as fire stations and substations, rescue boats and dykes.
- Establish a County strategic food reserve.
- Setting up early warning systems and training for disaster preparedness, for example, emergency drills
- Construction of more water pans in ASAL regions, damming of flood-prone rivers, the building of proper drainages
- Relocation of persons living within flood plains

Strategy 6: Curbing Insecurity

The strategy aims to eradicate or deter crime-related practices and behaviours that threaten the peaceful co-existence of people of varied social, economic, political and spiritual cadres in Kwale County.

Key Strategic Interventions

- Map out insecurity prone areas and establish police posts and stations.
- Modernize the terrestrial and marine security and defence installations.
- Strengthening community policing strategies, including the Nyumba Kumi initiative.
- Establish and facilitate programmes to engage the youth, such as sports and

organize them into groups for business and economic empowerment.

- Establish a military defence installation in Kinango Sub County

Strategy 7: Promote Talent Development

The strategy aims to set up structures essential for talent management and

facilitation of exposure to the youth to exploit the talents meaningfully.

Key Strategic Interventions

- Establish a County talent academy.
- Establish a mechanism for talent scouting
- Undertake annual talent exhibition programs



A tropical landscape featuring a body of water in the foreground, reflecting the sky and the dense vegetation on the opposite bank. The vegetation includes several tall palm trees and various other tropical plants. The sky is clear and blue.

PART V

COUNTY SPATIAL DEVELOPMENT FRAMEWORK

KWALE COUNTY SPATIAL FRAMEWORK

The County spatial structure has been developed to balance competing land requirements arising from the need for space to undertake different development activities. The spatial structure responds to the vision of the people and has rationalized the use of land, distribution of people and activities and integration of thematic policies and programs. The framework is a spatial translation of proposed development interventions.

The Kwale County Spatial Structure is an integrated land-use model encompassing all

thematic strategic areas of development to guarantee optimal land utilisation.

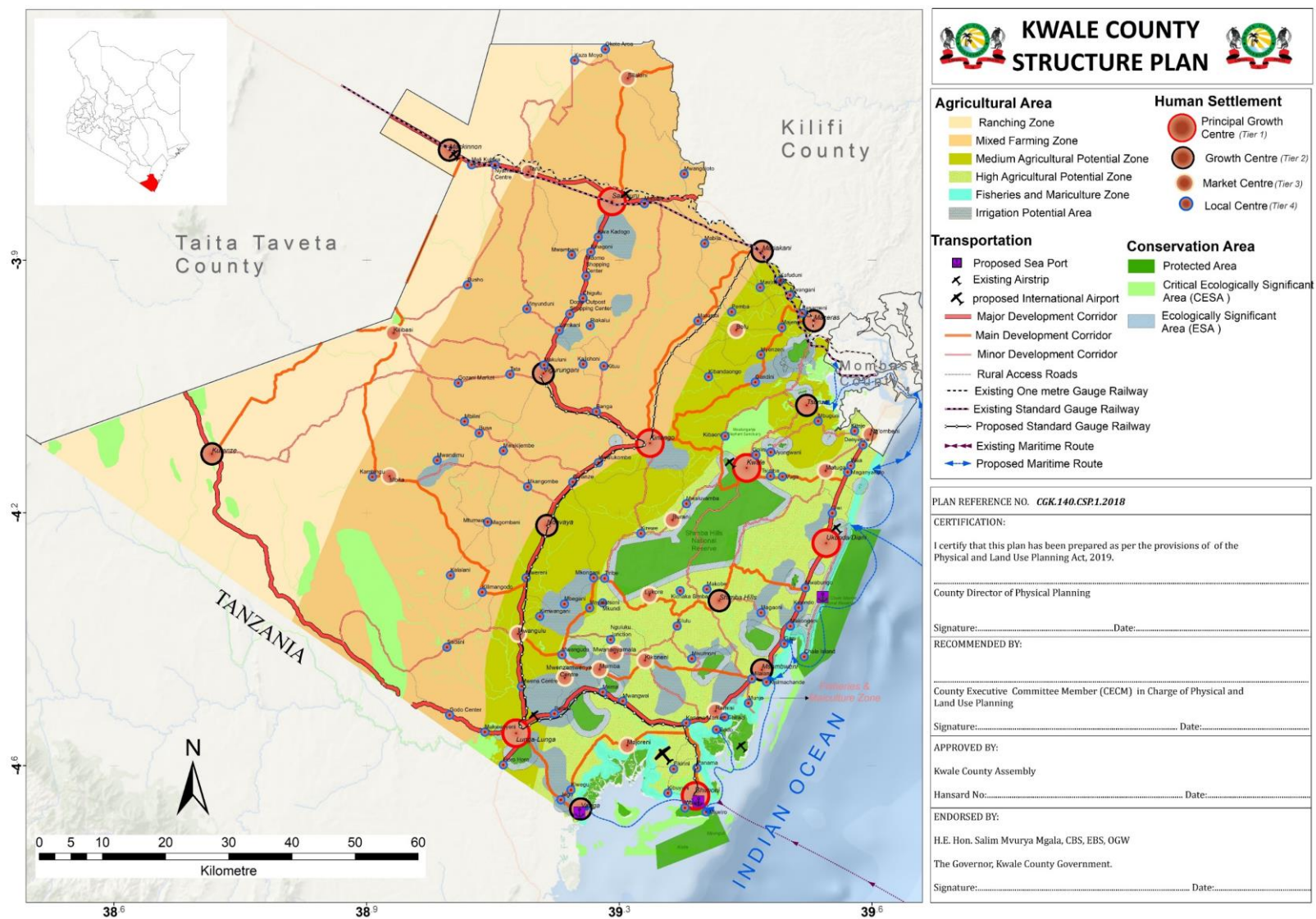
Aside from promoting economic growth, the spatial framework will also address the need for conservation and sustainable use of natural resources, biodiversity enhancement and improving the quality of the physical environment.

The spatial arrangement incorporates policies that will provide a foundation for executing the thematic strategies enumerated in the plan.



PART V: COUNTY SPATIAL DEVELOPMENT FRAMEWORK

Map 57: Kwale County Structure Plan



15.1 General policies

- i. All Development Plans on Land use, sectoral Plans, County Integrated Development Plans, urban plans, and Policies shall conform to the Kwale County Spatial Plan provisions.
- ii. All existing Development Plans shall be reviewed within the first three years of implementation of this plan to comply with its provision.
- iii. Sectoral policies and plans shall be formulated to streamline development activities in the respective sectors within the first five years of implementing the County Spatial Plan.
- iv. Land cover maps shall be prepared every five years to monitor land-use patterns throughout the County.
- v. A land bank database shall be established through the cooperation of the County Government with the Ministry of Land and Physical Planning, National Land Commission and other relevant stakeholders to have information on potential land for investment.
- vi. Urban development plans shall be developed in accordance with the human settlement strategy set out in this plan.
- vii. Environmentally degraded areas shall be rehabilitated with appropriate measures.
- viii. Basic transport, social and physical infrastructure shall be developed to support socio-economic growth and development, focusing on the ward level.
- ix. Continuous sensitization of stakeholders on the provisions of the County Spatial Plan shall be undertaken.

- x. Rural planning shall be undertaken to guide development in rural areas.

15.2 Policies for Agricultural Areas

The Agricultural promotion zone in this plan has been categorized into four main categories: High Potential Crop Farming Zone, Medium Potential Crop Farming Zone, Mixed Farming Zone, and Ranching Zone. Under each category, the primary activities may be promoted alongside other potential investments that may be allowable in that zone depending on the zone's agro-ecological potential. The sub-activities allowed within the main agricultural zones include Irrigation agriculture, Fisheries and Mariculture.

15.2.1 High potential crop production

The high potential crop production zone covers approximately 732.6 square kilometres. It is the area that includes Waa-Ngombeni, Parts of Tsimba-Golini, Kubo-South, Dzombo, Kinondo, Ramisi, Pongwe/Kikoneni and parts of Vanga wards. The area is characterized by a high quantity of annual rainfall and good fertile soils that support high crop production yields. Generally, the area can be the food basket for the County. The growing of high value crops will be highly encouraged and facilitated. Other development activities, including settlement, industrial development, and mining, will be allowed with prior planning and control.

Policy Measures

- i. Conversion of high potential cropland from agricultural use to other uses shall be discouraged.
- ii. Settlements and industrial development shall be clustered to maximize the availability of agricultural land and reduce infrastructure costs.

- iii. Minimum landholding size shall be as determined by County land-use policy.
- iv. Urban planning and development shall accommodate the practice of urban agriculture.
- v. Agricultural activities in wildlife migratory areas shall be discouraged.
- vi. A buffer zone of at least 50m from the natural watercourses and bodies shall be provided.
- vii. Agroforestry practices shall be encouraged and supported
- viii. Biodiversity protection and enhancement shall form part of the agricultural practices.
- ix. Urban growth shall be encouraged within designated urban limits by strict land-use controls.
- x. Land-use change shall be guided by preparing land-use zoning plans and ordinances.
- xi. Stocking of livestock shall be within the carrying capacity.
- xii. The County shall Facilitate Land tenure regularisation and confirmation of land ownership rights
- xiii. Utilization of idle private land shall be encouraged through friendly taxation policies.
- i. Conversion of land use shall be discouraged.
- ii. Structures on industrial sites shall be clustered to maximize agricultural production land and reduce infrastructure costs.
- iii. Uneconomical subdivision of land shall be discouraged.
- iv. Agricultural activities in wildlife migratory areas shall be discouraged.
- v. A buffer zone of at least 50m from the irrigation schemes and the natural watercourses/bodies shall be provided.
- vi. Quarrying and mining activities shall be controlled.
- vii. Feasibility studies for mining shall be undertaken.
- viii. Decommissioned mines shall be rehabilitated.

15.2.3 Mixed Farming Zone

This zone covers approximately 3180.6 square Kilometers. The zone falls under the Coastal Lowland Livestock Zone in the agricultural zone classification and covers parts of Samburu/Chengoni, Mwavumbo, Mackinnon Road, Puma, Ndavaya and Mwereni wards. It shall be promoted for mixed farming (livestock and crop).

Policy Measures

- i. Minimum landholding size shall be as determined by County land-use policy.
- ii. Mining and quarry sites shall be identified and economic viability determined.
- iii. Conservation areas shall be mapped and protected.
- iv. Cultivation of high value crops under irrigation shall be promoted.
- v. A buffer zone of at least 50 metres from natural watercourses or water bodies shall be maintained.

15.2.2 Medium potential crop production

It is characterized based on its agro-ecological characteristics. It covers Kinango, Kasemeni, Vanga, and Mkongani wards, approximately 933.02 square kilometres. The primary crops to be promoted in this zone are coconut, citrus fruits and cassava. Other crops to be promoted alongside these are grains, tubers, pulses, tropical fruits, vegetables and oil crops. This zone is also suitable for irrigation; thus, horticultural crops will be encouraged.

Policy Measures

- vi. The number of livestock shall be regulated.
- vii. Cultivation, rearing of livestock and crop production along wildlife migratory corridors shall be discouraged.
- viii. Agroforestry practices shall be encouraged and supported
- ix. Modern agricultural practices shall be adopted as a means of production

15.2.4 Ranching zone

This zone covers MacKinnon Road, Puma, Ndavaya and Mwereni wards and is about 1798.9 square kilometres. It is mainly shrubland and is currently used for mining, charcoal production, livestock keeping and crop farming.

The zone is marked by a high potential for cashew nuts, cassava, and sisal production. The primary activity to be promoted in this zone will be Ranching alongside mining, cultivation of high value crops in the potential irrigation areas and tourism.

Policy Measures

- i. Stocking levels shall be within the carrying capacity set for each ecological zone.
- ii. Communal grazing shall be encouraged.
- iii. Conservation areas shall be mapped and protected.
- iv. A County land-use policy shall guide land subdivision within the ranching zone.
- v. Environmental sensitive operations such as charcoal production, quarrying, and mining within these areas shall be monitored and controlled.
- vi. Cultivation and crop production along wildlife migratory corridors shall be discouraged.

- vii. Charcoal production shall be discouraged, and alternative energy sources shall be promoted.
- viii. Environmentally degraded areas shall be rehabilitated with appropriate measures.

15.2.5 Irrigation Potential Areas

This zone covers approximately 473.4 square kilometres. Horticultural crops production shall be promoted as a primary activity. In addition, the areas are also suitable for aquaculture and apiculture, which shall be promoted.

Policy Measures

- i. Before establishing a large-scale irrigation scheme, the Environmental Social Impact Assessment shall be carried out.
- ii. Feasibility studies for establishing irrigation schemes and dam construction shall precede the design stage of such projects.
- iii. Irrigation activities shall incorporate sustainable use of water resources.
- iv. Irrigation activities shall not cause pollution or contamination of water resources.

15.2.6 Fisheries and Mariculture

This zone will enhance the economic activities within Kenya's 200nautical miles (nm) Exclusive Economic Zone, 12nm Contiguous Zone and 12nm territorial waters. It includes the mangrove areas along the coastal strip, which have a high potential for Mariculture and cover an approximate area of 118.2 square kilometres.

Policy Measures

- i. Seabed mining shall be guided by international best practices and strictly adhere to environmental

- regulations set out by relevant coast management authorities.
- ii. The state shall ensure that Kenya's EEZ, including its fisheries and mineral resources, are protected from external aggressors.
- iii. Beach development shall start at least 60 metres from the highest watermark.

15.3 Conservation Areas

15.3.1 Protected Areas (PAs)

These are areas under legal protection and take up approximately 534.07 square kilometres. The areas shall be promoted for Eco-tourism, conservation, and recreation as the main activities, like harvesting herbs for treatment. This plan also proposes the inclusion of islands, estuaries and creeks and Indigenous Community Forests and Kayas among protected areas.

a) National Parks and Reserves, Marine National Parks and Reserves and Gazetted Forests

They include Shimba Hills National Park and reserve, Kisite-Mpunguti Marine National Park and reserve, Diani-Chale Marine reserve and all gazetted forests in the County

Policy Measures

- i. All islands, estuaries, creeks and Indigenous Community Forests and Kaya Forest shall be regarded as protected areas.
- ii. Resource extraction from protected areas shall adhere to the provisions of the Management Plans for such areas.
- iii. Human activities within and around PAs shall be guided by the Forest Act, 2016 and Wildlife Conservation and Management Act, 2013.
- iv. Buffers shall be created appropriately between PAs and human settlements.

- v. Nature-based eco-tourism shall only be allowed within a controlled environment.

b) Mangrove Forests

Mangroves serve several invaluable ecosystem functions. They cover approximately 83.5 square kilometres in Gazi, Bodo, Tiwi, Shimoni, Funzi, Vanga, Wasini Island and Chale Island. Mangrove forests shall be conserved and promoted for ecotourism.

Policy Measures

- i. The community-based organisation shall be involved in the management of mangrove forests.
- ii. The exploitation of mangrove forest products and services shall be monitored, regulated and mangrove harvesting shall require a permit from the County Department of Environment.
- iii. Rehabilitation of mangrove forests shall be promoted.
- iv. Nature-based eco-tourism shall only be allowed within a controlled environment.
- v. Mangrove management policy shall be created

c) Islands

Kwale County has 20 islands, mainly Funzi, Wasini, Chale, Vanga, and Mzizima Islands. The islands are critical to the maintenance of ecological balance. They shall be promoted for Island tourism.

Policy Measures

- i. Island infrastructure and management policy shall be developed.
- ii. All islands shall be inventoried.

d) Estuaries and creeks

These are found along the main rivers, Umba, Mweni, Ramisi, Mkurumudzi, Mwachema, Pemba, and Mwache, at their confluence with the Indian Ocean. Fertile soils and a rich aquatic environment characterize the estuaries and creeks. Therefore, they are sensitive areas promoted as ecotourism and conservation areas. Other activities such as Mariculture shall be encouraged.

Land Management Policy

- xi. Management plans for estuaries shall be developed.
- xii. Breeding grounds in River estuaries and creeks including Umba, Mweni, Ramisi, Mkurumudzi, Mwachema, Pemba and Mwache shall be protected gazetted.

e) Indigenous Community Forests and Kayas

The Kayas are the repositories of spiritual beliefs of the Mijikenda community and are seen as the sacred abode of their ancestors. As a direct consequence of this, the biodiversity of the Kayas and forests surrounding them has been sustained. They include Kaya Waa, Kaya Muhaka, Kaya Jogo, Kaya Tiwi, Kaya Kwale, Kaya Lunguma, Kaya Segi, Kaya Likunda, Kaya Diani, Kaya Mtswakara, Kaya Gandini, Kaya Chale, Kaya Dzombo and Kaya Mrima. They shall be promoted for cultural tourism and Eco-tourism.

Land Management Policy

- i. Use of Kaya's shall be limited to extraction of herbal medicine, Eco-tourism and cultural practices.
- ii. Kaya boundaries shall be delineated, mapped and gazetted.
- iii. Indigenous trees and rare plant species shall be conserved.

- iv. The national museum of Kenya shall establish local management committees.

15.3.2 Critical Ecologically Significant Areas (CESA)

These are areas outside the Protected Areas containing the most ecologically important natural assets critical for delivering ecosystem services. They include community reserves and conservancies, critical intact wetlands, riparian areas, beaches and heritage sites. They measure approximately 552.26 square kilometres. They shall be conserved and promoted for tourism, recreation and Clean Development Mechanism (CDM) projects where appropriate.

Land Management Policy**(a) Group and Community Conservancies**

These areas consist of:

- i. Buffer zones and fencing shall be created appropriately between conservancies and human settlements.
- ii. Nature-based eco-tourism shall be sustainably developed and promoted in these areas.
- iii. Ranching shall be promoted.
- iv. Management plans shall be developed.

(b) Wetlands

They consist of:

- i. The wetlands shall be used for sustainable paddy related activities.
- ii. Draining of wetlands shall be prohibited.
- iii. Sustainable aquaculture shall be introduced as integrated agricultural development where appropriate.
- iv. Introduction of invasive/alien species in wetlands shall be prohibited.

(c) Riparian Reserve

- i. Buffers between a minimum of 6m to a maximum of 30m from the highest watermark shall be created in all major rivers.
- ii. Activities in the riparian reserve shall be defined and monitored.
- iii. WRUAs shall be strengthened to policy use of riparian reserves in major rivers.
- iv. The planting of bamboos and other appropriate species shall be promoted.

(d) Beaches

They include beaches in Gazi, Msambweni, Funzi, Wasini, Tiwi and Diani.

- i. A 30m high watermark shall be observed.
- ii. BMUs shall be strengthened to streamline beach operations.
- iii. Sanitation and waste management facilities along the beach shall be provided.
- iv. No barrier walls shall be allowed along the beachfront.
- v. Building heights along the coastal line shall strictly observe the zoning regulations.

(e) Heritage Sites

These sites have been preserved to safeguard the County's culture, history, and heritage and are important historical sites and tourist sites, thus income earners. They include Kongo Mosque, Komboza caves, Shimoni slave caves (Mwanangoto), Gazi ruins (Jumba La Mbaruku), Lwayo Lwa Mulungu, Fikirini caves and Kayas. The County and national governments shall ensure that the sites are rehabilitated,

restored and gazetted. The primary activity to be promoted will be cultural tourism.

Land Management Policy

- i. Heritage sites shall be identified, documented, restored and conserved.
- ii. Heritage tourism shall be promoted.
- iii. Benefit sharing where heritage sites fall on private lands shall be promoted

15.3.3 Ecological Support Areas (ESA)

These are natural and semi-natural supporting areas important for services or ecological infrastructure. They measure approximately 311.1 square kilometres. These areas are wildlife migration and dispersal corridors, Hilltops and hillsides, buffers around protected areas, and coastal buffers. The primary activities to be promoted in these areas shall be Eco-tourism and conservation.

Land Management Policy**(a) Wildlife migration and dispersal corridors**

These areas shall be conserved to protect wildlife and prevent human-wildlife conflict.

- i. The County shall delineate and map all migration corridors.
- ii. Appropriate buffers shall be created between migration sections and areas of human settlement and economic activities.
- iii. The water points will strategically be located in a radius not exceeding 5 kilometres.

(b) Hilltops and hillsides

These include all hilly areas, including but not limited to Dzombo, Mrima, Taru, Kilibasi and Kiluku hills.

Land-use and land management policy

- i. The County shall encourage afforestation programs on hills and hillsides.
- ii. Geological surveys and environmental assessments shall be carried out on hills to assess their vulnerability to geo-hazards.
- iii. Development activities shall be restricted on hilltops and hillsides.
- iv. ESIA shall be conducted before mining and mitigation measures are implemented.

(c) Buffers around protected areas and coastal buffers

- Buffer zone management policy shall be developed to guide establishment and use.

15.4 Human Settlements and Urban Development

The model selected for the development of human settlements is **Selective Dispersal Concentration**. The model provides for a hierarchy of urban areas

Table 51: Human Settlements

| Rank/Level | Proposed centres |
|---------------------------------|---|
| Principal growth centres | Kwale, Ukunda/Diani, Kinango, Samburu, Lunga Lunga |
| Growth centres | Mackinnon, Msambweni, Vanga, Ndavaya, Tsunza, Shimba Hills, Mazeras, Mariakani, Kuranze, Vigurungani, |
| Market centre | Taru, Bofu, Ng'ombeni, Matuga, Ramisi, Majoreni, Menzamwenye, Mamba, Mwananyamala, Burani, Gazi, Matuga, Kikoneni, Tsimba, Lukore, Mwangulu, Silaloni, Mbita, Kilibasi |
| Rural/Local Centres | Kilimangodo, Mwangwei Kibuyuni, ,Jego, Meli Kubwa, Kaza Moyo, Kwa Kadogo, Banga, Kinagoni, Lamkani, Matumbi, Busho, Gandini, Myenzeni, Majengo, Vinyunduni, Mwakijembe, Mwangoloto, Mwangani, Kibandaongo, Mrima, Mwambani, MlolaB, Vuga, Makongeni, Kanana Market, Panama, Fikirini, Mkangombe, Vyongwani, Mbuguni, Kiwegu, Bodo, Munje, Okote Area, Kiteje, Mivumoni, Godo Center, Kambingu, Kimwangani, Kuranze, Mavirivirini, Dzombo, |

Land management policies

- i. Urban growth limits shall be defined.
- ii. Physical and land-use plans shall be developed and implemented.
- iii. Adequate and appropriate infrastructure shall be provided.
- iv. Principal growth and growth centres shall be developed according to the defined function.
- v. Market centres shall be developed according to the defined function.
- vi. Local physical development plans shall be prepared and implemented.

15.5 Transportation

The plan aspires to improve existing transport corridors, opening new corridors, and reinforcing the inter-linkage between the different modes of transport within the County for 10 years. The aspiration is to integrate transport to have reliable, seamless and affordable systems for people, goods and services.

The plan proposes a corridor development and rural access roads covering 4890.7 square kilometres. The corridors shall be optimized and enhanced.

In addition, an efficient and comprehensive transportation system (air, water and rail) and accessibility shall be planned and improved to provide support and connectivity of Kwale County.

Land Management Policies

- i. A minimum of 60-meters road reserve shall be provided for all Major Development Corridors.
- ii. Mombasa Lunga and Mombasa-Mariakani roads shall be developed into a dual carriageway.
- iii. A minimum of 40-60meters road reserve minimum shall be provided for Main Development corridors.
- iv. A minimum of 20-30 meters road reserve minimum shall be provided for Minor Development corridors.
- v. A minimum of 9 meters of road reserve shall be provided for all Rural Access Roads.
- vi. Requisite road infrastructure shall be provided for all development corridors.
- vii. Integration with other transportation modes shall be promoted.
- viii. A 60-meter way leave shall be observed for a railway line.
- ix. Integration with other transportation modes shall be promoted.
- x. Adequate land shall be acquired to expand the Ukunda airstrip and develop an international airport at Kidimu.
- xi. Feasibility studies and acquisition of adequate land shall be undertaken.
- xii. Feasibility studies shall be undertaken for the development of seaports.

ACTION AREA PLANS

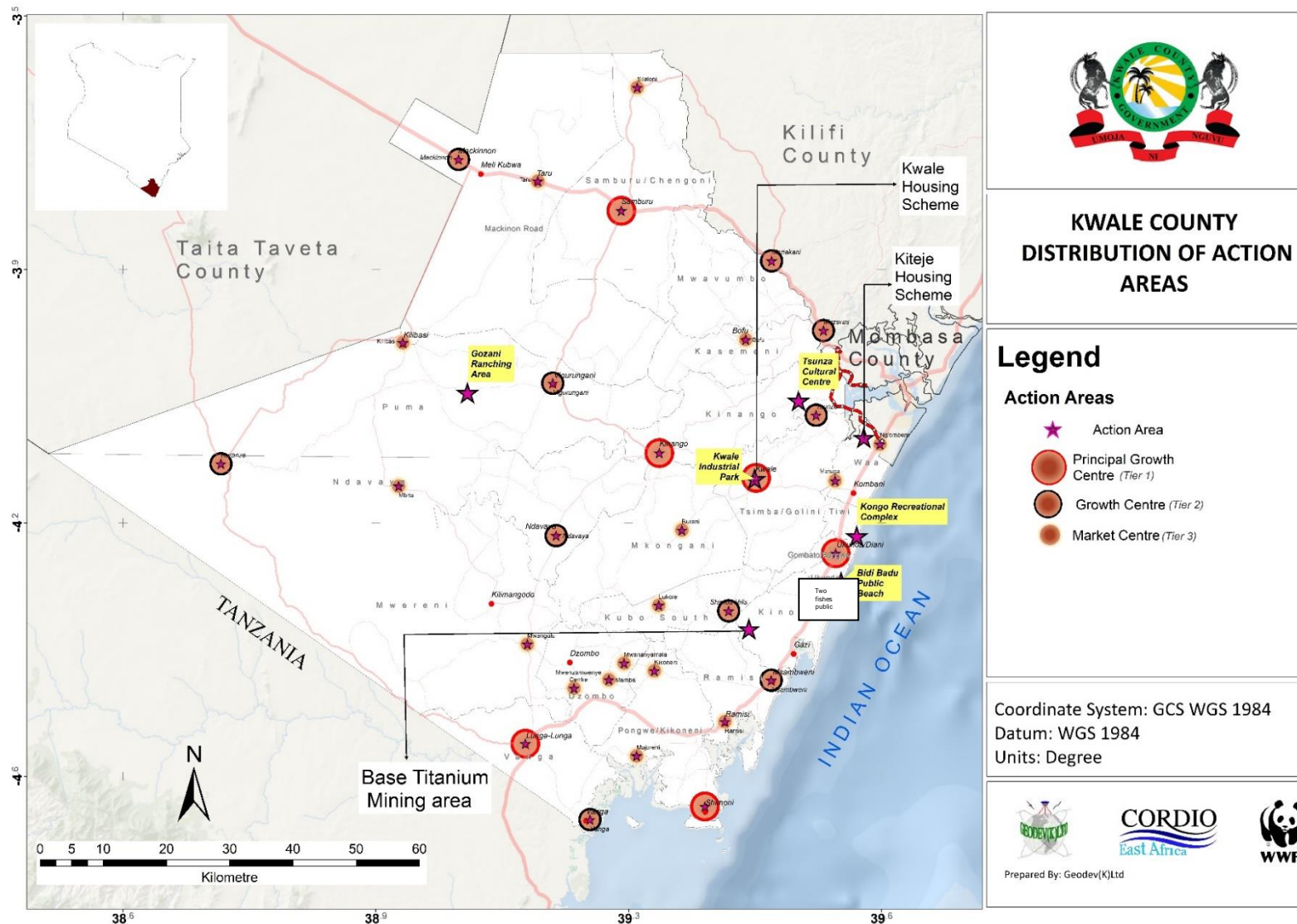
Action area planning is a tool that sets out area-specific visions, planning policies and master plans for key regeneration areas. The action areas selected by this plan are part of a wider development plan. They cover the key development concerns spurring

economic growth, environmental conservation, and sustainable human settlements. The areas were conceived through stakeholders' consultations and agreed upon as demonstration areas of development transformation to achieve the County's vision.

Table 52: Areas for Action Area Planning

| S/No. | Action Areas | Justification of selection. |
|-------|---|---|
| 1. | Kongo Mosque area. | The area is prime for the development of a recreational complex. It hosts the historical mosque and abuts the ocean and Mwachema River. |
| 2. | All proposed principal growth centres, growth centres and market centres. | These centres are 'engines of economic growth. They will attract investment and urbanization, therefore, requiring to be planned. |
| 3. | Seafront (Beach) | Beach tourism is one of the main forms of tourism in Kwale. All beaches require to be planned and developed for economic and conservation purposes. |
| 4. | Tsunza Cultural Centre | Kwale prides itself on diverse culture and heritage. This plan proposes developing an area within Tsunza Resort Town that will preserve and foster knowledge on cultural heritage, foster active participation in cultural activities, and strengthen the tourism sector in the County. |
| 5. | Proposed Industrial parks in Kwale and Ukunda | Kwale County is expected to industrialize. One of the key interventions to realize industrialization is to offer incentives to attract investments. |
| 6. | Base Titanium Post Mining Land-use Plan | Mining is an intensive land-use type with potential socio-economic and environmental impacts over an area. When closure occurs, it should address environmental and safety aspects by restoring the land to productive use. Therefore, the Base Titanium mining area is an area of focus with the objective of productive and sustainable post-mining land-use activities to optimize the land resource and prevent and minimize adverse long-term environmental impacts. The post-mining land-use activities should create a self-sustaining ecosystem that enhances the land's economic value and fosters environmental conservation. |
| 7. | Kiteje Housing Scheme area | The area sits strategically to be developed into a dormitory for the proposed Dongo Kundu Special Economic Zone. |
| 8. | Kwale prison land for a housing scheme. | Kwale Prisons is within the Kwale Municipality. The Prison land is proposed to be redeveloped into a housing scheme while the prison is relocated to the Kasageni area. |
| 9. | Gozani Ranching Area | Ranching is a key component of the agricultural sector in Kwale. Gozani area has been selected to showcase how modern ranching practices are carried out. |

Map 58: Distribution of Action Areas



Out of these areas identified for action planning, a few were selected and modelled as concepts to visualize the agreed upon interventions and guide their implementation. Areas selected for detailed planning and visualization include; Two Fishes Public Beach, Kongo Mosque Recreational Complex, Tsunza Cultural Centre, Kwale Industrial Park and Gozani Ranching Area.

16.1 Action Area 1: Proposed Two Fishes Public Beach

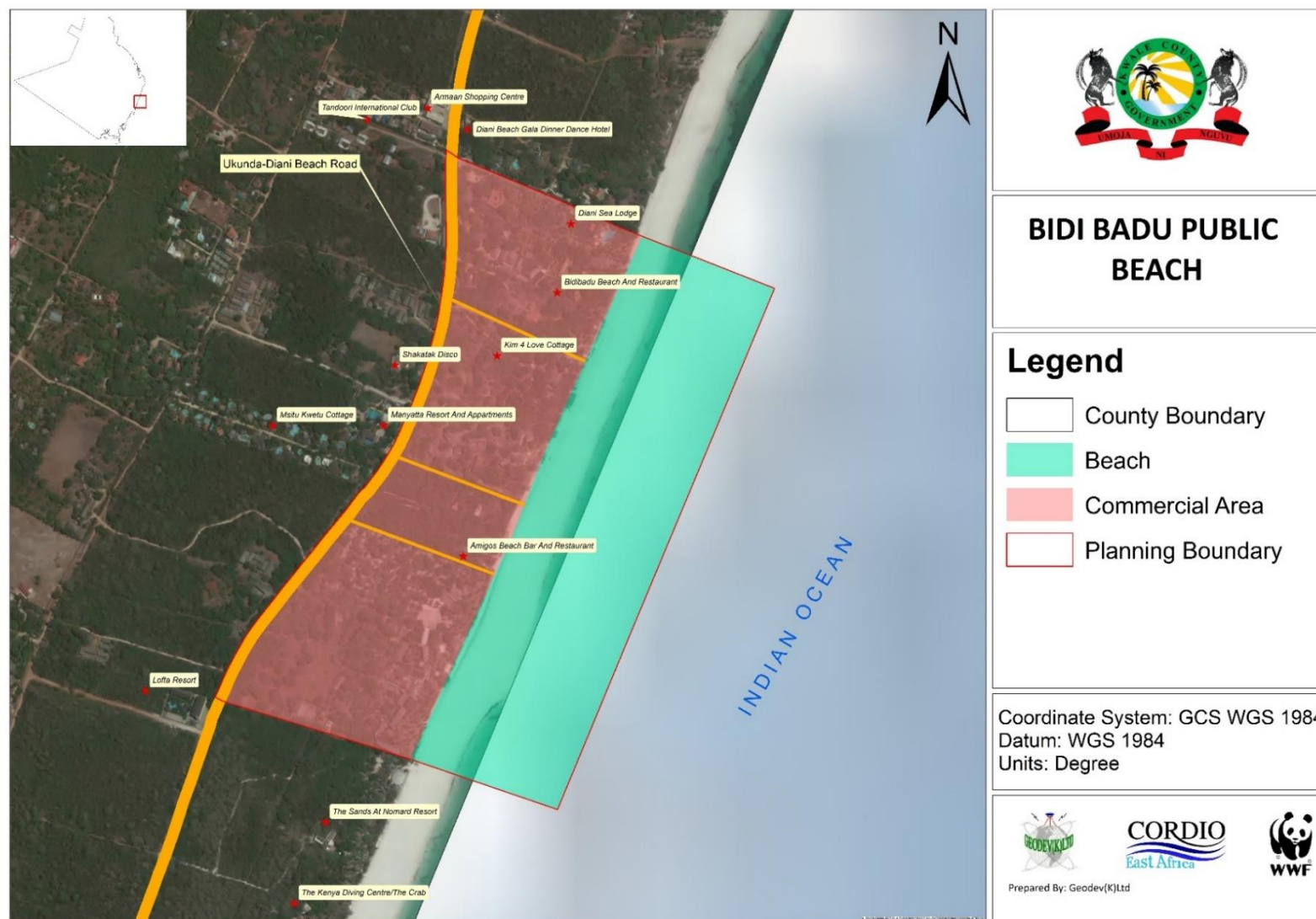
The proposed Two Fishes beach is a one kilometre stretch of pristine white fine sandy beach between Diani Sea lodge and the Sands at Nomad Resort. The site is ideal for beach tourism activities such as onshore water sports, basking, picnicking and

photography. The development targets the riparian land along this stretch as a pilot project for improvement as a public beach along Diani.

Successes of this pilot will later be replicated along the full stretch of 17 kilometres. The project will entail a paved trail along the property boundaries and installing street infrastructure and landscaping, including lights and furniture, waste collection bins and public sanitation facilities. A public motor vehicle parking lot will be acquired from the adjoining properties. A jetty that will also incorporate beach surveillance infrastructure will be developed onshore.



Map 59: Existing Land-use along the beach



16.1.1 Objectives

The project aims to strengthen beach tourism while conserving the environment.

Table 53: An analysis of the project objectives and Interventions

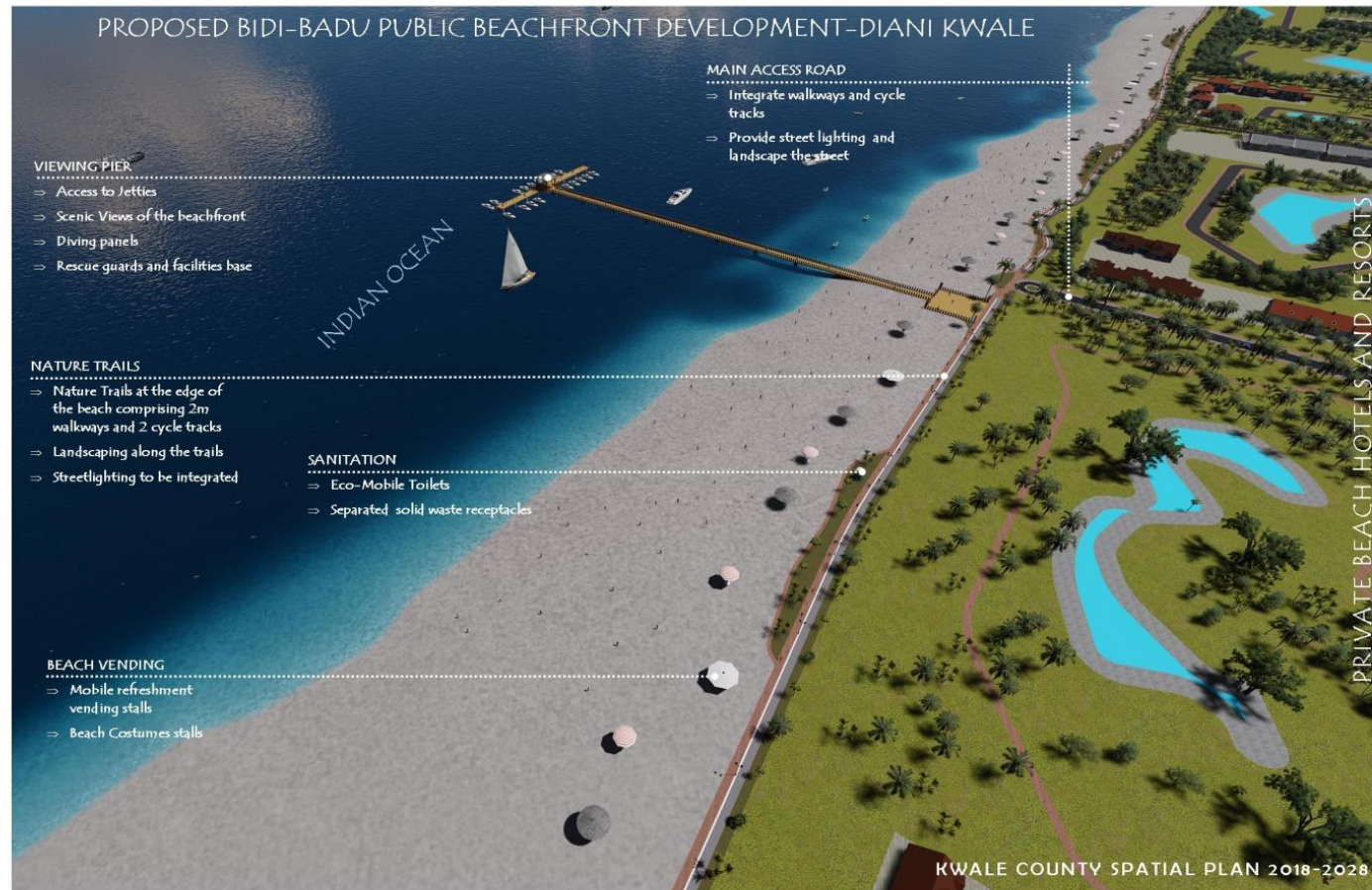
| Objectives | Challenges | Actions |
|--|---|---|
| i. To maximize the utilization of beach space. | <ul style="list-style-type: none"> Encroachment of the public beach reserve by private hotels and similar establishments. Lack of a well-defined public Beach boundary. Underutilization of the beach as a source of livelihood. | <ul style="list-style-type: none"> Map the beach reserve and define the public beach boundary. Reclaim the beach reserve of 60 Metres along Diani Public Beach and coastline. |
| ii. To enhance the cleanliness of the public beach and its adjoining areas. | <ul style="list-style-type: none"> Lack of waste receptacles along the coastline. Lack of public sanitation facilities | <ul style="list-style-type: none"> Provide skips and litter bins along the beachfront, access road and within the nature trail. Construct public toilets and washroom facilities along the beachfront. Landscaping and beautification of the proposed walking trail. Develop a waste disposal system to clear solid waste gathered through the bins and skips. |
| iii. To support livelihood sources through beach activities by the local people. | <ul style="list-style-type: none"> Lack of structures to integrate small scale businesses with beach activities. | <ul style="list-style-type: none"> Designate spots to undertake business during the day using movable sheds. |
| iv. To provide the complementary infrastructure that supports beach activities. | <ul style="list-style-type: none"> Narrow beach road and access roads. Lack of NMT provisions along the beach access road. Insecurity and poor road safety along the beach access road. | <ul style="list-style-type: none"> Expansion of Diani Beach Road and access roads to a minimum width of 9m. Develop walkways and cycleways to complement existing rental bike-share infrastructure. Provide adequate pedestrian crossing facilities, i.e. zebra crossing with traffic lights and street lights at strategic points. Provide adequate parking for beach users Introduce a 100m pier to act as a jetty for motorboats. |
| v. To encourage locals to visit the beach. | <ul style="list-style-type: none"> Encroachment of access roads Privatization of beach fronts by hotel owners. Lack of beach infrastructure, e.g. lights and street furniture, to cater to the common mwanaichi. | <ul style="list-style-type: none"> Establish a walking trail along the beachfront and install outdoor furniture. Introduce motorsport tourism along the beach. Establish a coast guard command and control station and viewpoint at the pier. |

| | | |
|--|---|---|
| | | <ul style="list-style-type: none"> ▪ Introduce stations for coast guards, lifeguards and beach management units. |
| <p>vi. To enhance the aesthetic value of Diani Beach.</p> | <ul style="list-style-type: none"> ▪ Lack of well-landscaped transport corridor and access roads. ▪ The riparian reserve is not well defined on the ground. ▪ Lack of beach infrastructure, e.g. lights, street furniture. ▪ Lack of solid waste disposal facilities. | <ul style="list-style-type: none"> ▪ Landscape and beautify beach access roads. ▪ Establish clear and separate motorized and non-motorized lanes along the access roads. ▪ Landscape and seascape the beachfront and integrate it with nature trail. |

16.1.2 Recommendations

Proposed Two Fishes Public Beach stretches to a length of one kilometre. The nature trail measures 370m along its width and is bordered by Diani Beach Road and Sandy Beach. The sandy beach is approx. 45m in width, with the water sports zone extending 230m into the sea.

Map 60: Two Fishes Beach Front



16.1.2.1 Projects and programs

Plate 6: Two Fishes impressions

Plate o-1: Beach Tourism



Installation of beach furniture and sport infrastructure: beach chairs; umbrellas; volleyball equipment, along the sandy stretch.

It measures 1km in length against a shifting coastline along its width (approx. 45m)

The beach access road will be upgraded to tarmac standard and expanded to 9m width. It is paralleled on each side by 1.5m wide pedestrian and cycle lane that feeds pedestrian tourists into the nature trail walkway, cycle lane at the front edge of the beachfront and ultimately the beach.

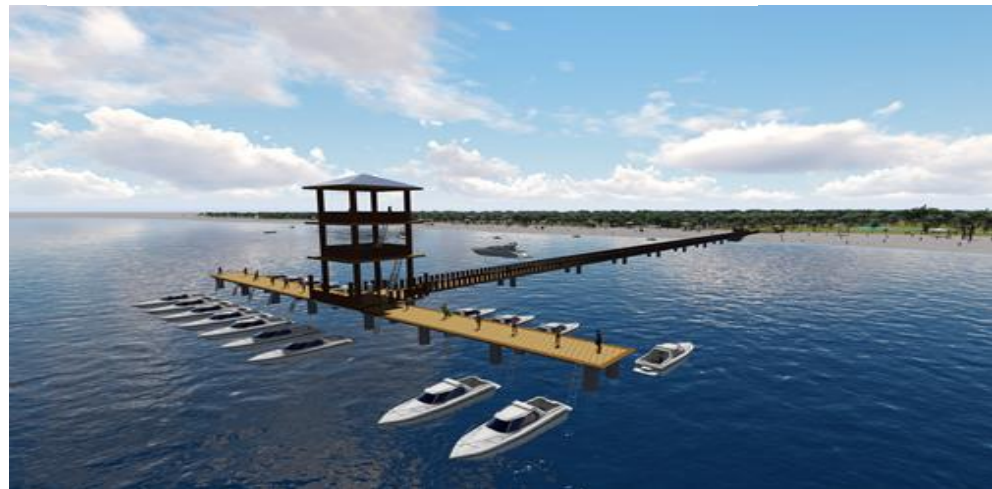
Plate o-2: Two Fishes Access Road



Plate o-3: Nature Trail



Plate o-4: Water Sport Infrastructure



16.2 Action Area: 2 Proposed Kongo Recreational Complex.

The proposed Kongo Recreational complex is located at the northern part of the Diani Beach overlooking the Indian Ocean within Kongo village. The 34 hectares area is strategically located within a rich biodiversity shoreline. The Kongo beach is a tourist attraction site within the proposed public recreational complex. There is also the presence of a historical site referred to as Kongo mosque, believed to be the oldest mosque in East Africa that was built and used by the early Arab merchants for prayers in the 14th century and the Kaya Tiwi, a cultural heritage site and a sacred area to the community. The area also hosts the Mwachema Estuary and significantly huge baobab trees.

The area is linked by Diani Beach Road that is tarmacked and well fitted with a streetlight; the access road to the complex is in earth conditions.

Map 61: Proposed Kongo Recreational Complex



16.2.1 Objectives

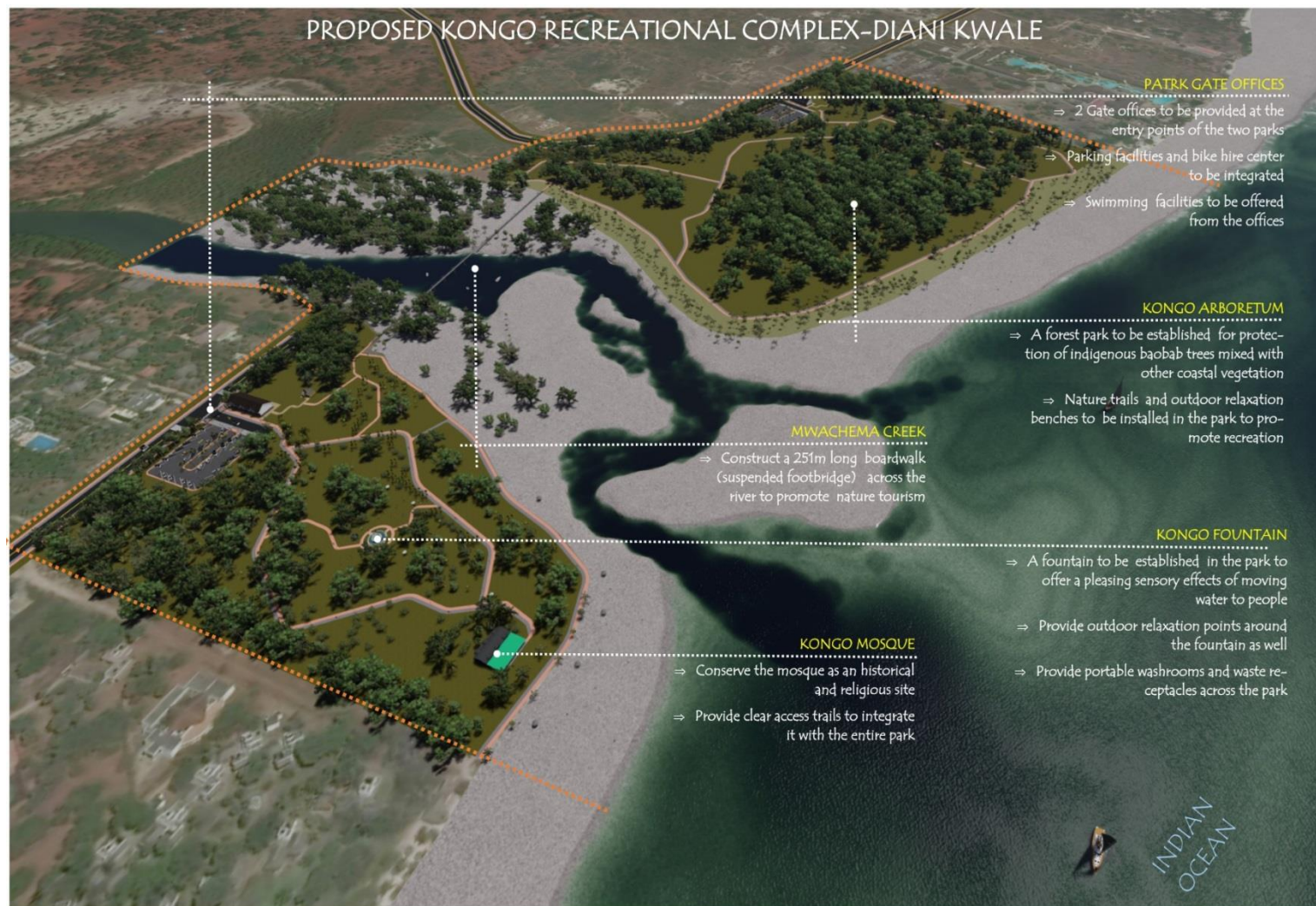
The project's main objective is to promote environmental conservation for recreational purposes by protecting natural biodiversity and cultural heritage sites and areas.

Table 54: An analysis of the project objectives and Interventions

| Objectives | Challenges | Actions |
|---|--|--|
| <ul style="list-style-type: none"> Creation of a leisure area. | <ul style="list-style-type: none"> Poor link road. Lack of sanitary facilities. Lack of a well-defined boundary lack of recreational facilities within the complex | <ul style="list-style-type: none"> Improve the Kongo access road and walkways linking the area to the Diani beach road. Establishment of a management unit for the complex. Provision of safety measures. Improve aesthetic appeal through landscaping and seascape. Installation of complimentary street furniture and a boardwalk. Map and define the proposed public park boundary |
| <ul style="list-style-type: none"> Promote environmental conservation. | <ul style="list-style-type: none"> Liquid and solid waste Pollution Lack of public sanitation facilities. Degradation and encroachment of the Kaya Tiwi Forest | <ul style="list-style-type: none"> Undertake environmental management and monitoring plan to ensure compliance with the environmental laws Provide proper sanitation facilities. Provision of adequate solid waste collection infrastructure such as litter bins. Tree planting to increase forest cover within the kaya forest. Periodic cleaning and maintenance of the beach area. Reclamation of the encroached land within the complex. |
| <ul style="list-style-type: none"> Promote and appreciate the cultural heritage of the resident in the area. | <ul style="list-style-type: none"> Cultural heritage and tourism sites have not been fully exploited as attraction sites. | <ul style="list-style-type: none"> Gazette the area as a tourist attraction site. Renovation and maintenance of the Kongo historical mosque |

16.2.2 Recommendations

Map 62: 3D View of the Planned Kongo Recreational Complex

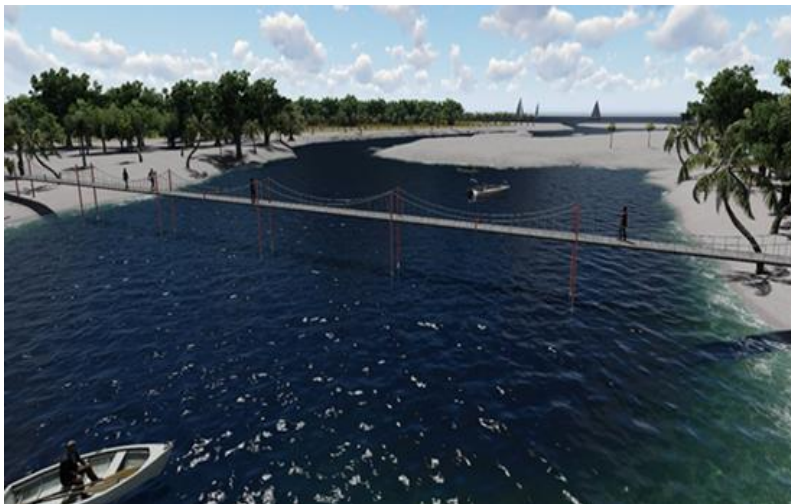


16.2.2.1 Projects and programs

Plate 7: Kongo Recreational Complex Access Road and Management Block



Plate 8: BoardWalk View and Arboretum



16.3 Action Area 3: Proposed Industrial Parks

This plan proposes the establishment of two industrial parks to trigger investment in industrial development. The two parks are intended to provide a model for agglomeration of industrial activities that incorporate a full livelihood system whereby the industrial activities are integrated with other uses such as housing, social amenities, commercial facilities and other infrastructures.

The two parks have been proposed within the Diani/Ukunda Municipality and Kwale Municipality. Each Park has been designed to cover an area of at least 50 hectares in a planned environment. These Industrial parks combine a mix of production, transportation, and warehousing facilities in the same area to ensure that the parks benefit from the existing infrastructure such as water supply, electricity connectivity, and transport modes. The Industrial complexes are structured to bring together complementary services and features that will benefit the companies. These parks create an environment that fosters innovation and collaboration between the government and the private sector.

The parks will consist of the following

- **Basic Facilities:** water supply, solid waste management facilities, sewage facilities, power distribution lines and telecommunication network.
- **Processing zones** for the Heavy and Light industries.
- **Industrial Amenities:** fire station, industrial training institutes, research centres, industrial canteens, offices of industries, parking lots and modern mechanized warehouses.
- **Support Amenities:** school & colleges (industrial training institutes)) clinics, police station, health centres, sports complex, recreation centre and shops.
- **Commercial facilities:** hotel or service apartment, super-markets, shopping malls, restaurants, banks, showrooms and fuel stations.

16.3.1 Objectives

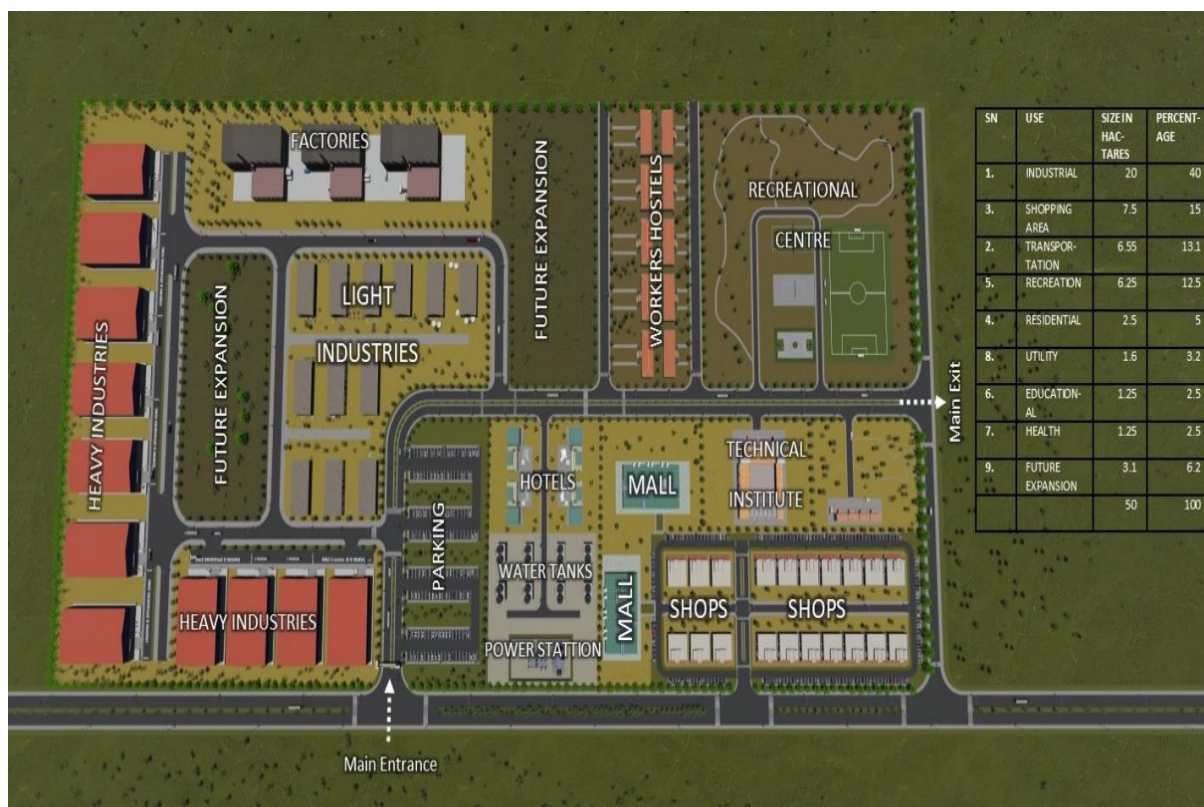
The main objective of this action area plan is to create an enabling environment for the County to industrialize through the promotion of collaboration between the County government and private sector to ensure economic development.

Table 55: An analysis of the project objectives and Interventions

| Objectives | Challenges | Actions |
|---|---|--|
| To attract investors in setting up investments in the County. | <ul style="list-style-type: none"> High taxation rate, Unreliable support services such as electricity, water. Lack of incentives to attract investors. Lack of infrastructure to support investment in industries. | <ul style="list-style-type: none"> Increase budget allocation for the industrial sector by the County government. Tax reliefs and incentives to investors setting up industries. Marketing of the municipalities as industrial zones. Improve infrastructure and amenities to these parks. Carry out zoning, plan and design an industrial park |
| Intensification of industrial activities | <ul style="list-style-type: none"> Lack of defined industrial zones in the County. | <ul style="list-style-type: none"> Designate and plan areas for industrial park development. Put up supporting infrastructure for the industrial zones. |
| Create Employment opportunities. | <ul style="list-style-type: none"> Low investment in industries High rate of unemployment Inadequately skilled labour Low technology uptake | <ul style="list-style-type: none"> Provide incentives for setting up industries, e.g., land. Setting up of vocational training institutes. Promote value addition of products. |

16.3.2 Recommendations

Plate 9: Proposed Layout Model for Kwale and Diani Industrial Park.



16.3.2.1 Projects and programs

Plate 10: Entrance to the industrial park



Plate 11: Light industry



Plate 12: support infrastructure



Plate 13: Heavy Industry

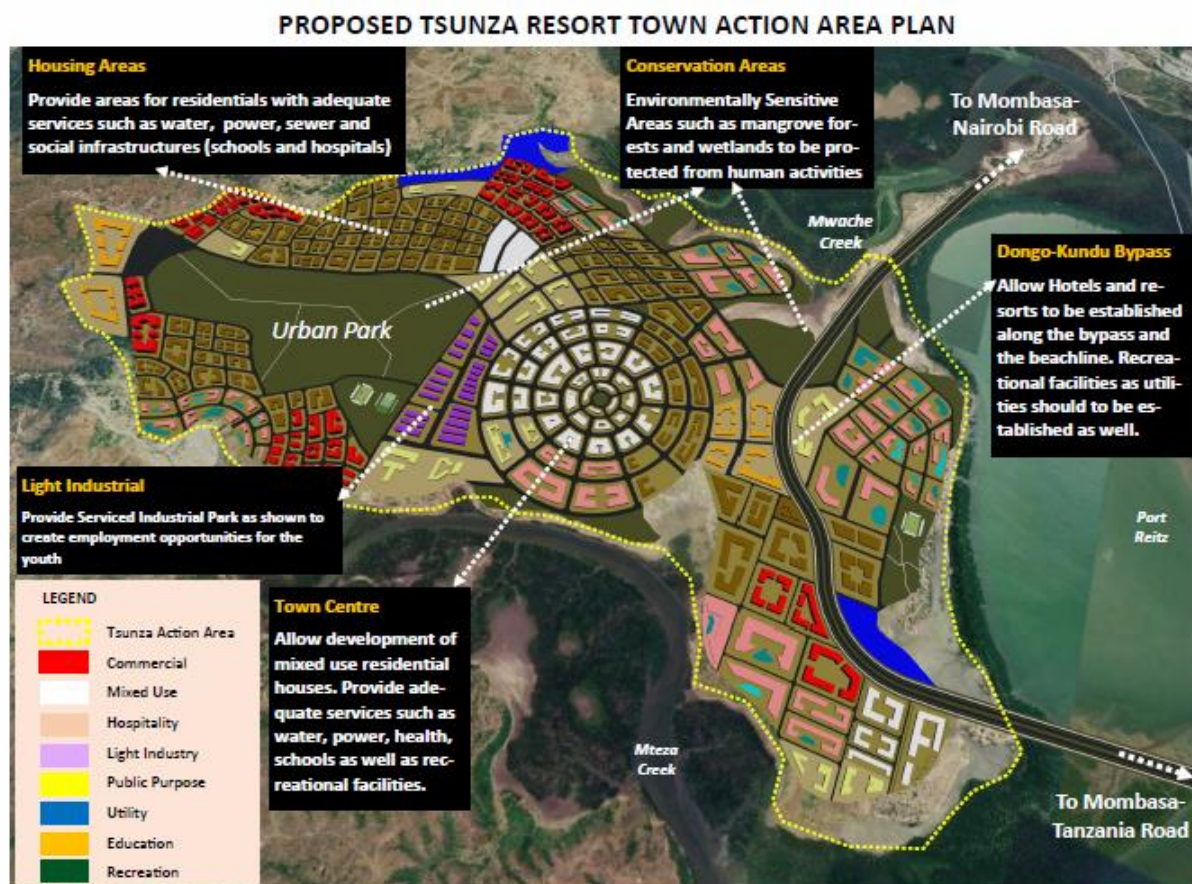


16.4 Action Area 4: Proposed Tsunza Resort Town: Cultural Centre Action Area Plan

Tsunza Cultural village has been proposed to add value to the resort function of Tsunza town. The Town is anticipated to be a destination of leisure and pleasure with activities such as vacationing, holiday making, cultural exhibition, eco-tourism, water and motorsports, and beaches

Map 63: Project Location

strolling. The cultural village has been proposed to enhance cultural tourism within the resort town. The proposed centre will be developed within an initial area covering 1 hectare. Provided in the draft Tsunza resort development plan. The centre will offer a platform to showcase the socio-cultural diversity and heritage of the local people to build the local economy and market Tsunza as a global resort destination.



16.4.1 Objective

The main objective is to preserve and add value to the local culture and heritage by making it a source of livelihood and income.

Table 56: An analysis of the project objectives and Interventions

| Objectives | Challenges | Actions |
|---|---|--|
| <ul style="list-style-type: none"> Preserve and foster an understanding of the local culture and heritage by providing a mechanism for the perpetual transfer of knowledge and practices on local culture. | <ul style="list-style-type: none"> There is a threat of cultural erosion. Low research on local culture and heritage Poor marketing of cultural heritage products. | <ul style="list-style-type: none"> Establish a museum and document all local languages, tools and artefacts, customs, practices, cultural and heritage aspects. Establish an art-and-craft-based training institute and host training courses in the centre's skill development. Facilitate the formulation of cultural heritage societies for marketing and skill development. Offer translation and interpretation services for international conferences held in the region. Establish a cultural research unit and a multi-media library at the centre. |
| <ul style="list-style-type: none"> To provide a supportive environment and infrastructure for local people to showcase their culture and heritage locally and internationally. | <ul style="list-style-type: none"> Inadequate cultural tourism infrastructure Inadequate tourism facilities | <ul style="list-style-type: none"> Establish traditional villages and cultural homesteads encompassing all local communities in Kwale County. Establish a vantage-point restaurant dealing in ethnic, cultural foods and community-specific specialities to take advantage of the beautiful creek and mangrove scenery. Establish a cottage product market at the centre. Establish a conference facility at the cultural centre. |

16.4.2 Recommendations

Plate 14: Proposed Cultural Villages

PROPOSED TSUNZA CULTURAL CENTRE

1. MAIN ACCESS

A 15m wide access road to be provided to integrate the centre with the town

2. PARKING FACILITY

Provide car and bicycle park at immediately after the entrance.

3. VILLAGES OF KWALE

Erect models of traditional huts of the main tribes residing in Kwale County i.e. Digo, Kamba, Maasai, Swahili, Somali and Kikuyu

4. CULTURAL CENTRE

Provide a block comprising of a cultural centre to host cultural activities artefact market and a museum for conservation of traditional facilities

5. HOTEL AND CONFERENCE FACILITIES

Establish a restaurant to offer traditional drinks and foods. A conference facility to host different kinds of meetings

6. TRAINING INSTITUTE AND LIBRARY

Establish a training institution and a library to enhance cultural research and development

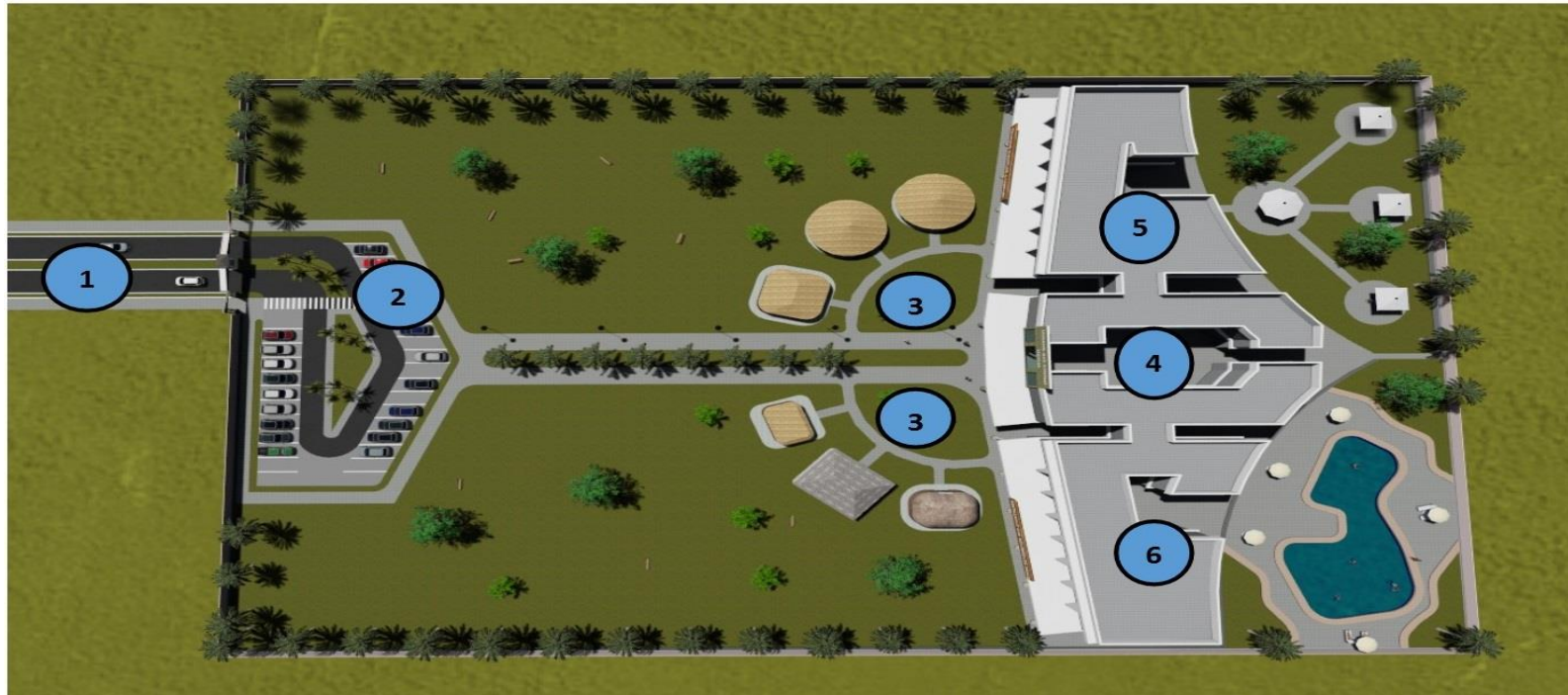


Plate 15: museum and Artefact Market and Training institute and library



Plate 16: community villages and Restaurant and Conference Halls



16.5 Base Titanium Post Mining Land-use Plan

16.5.1 Post Mining Land Use

Where minerals have been exploited, the areas must be rehabilitated fully and signed off following guidance through the National Environmental Management Authority (NEMA). Given the land-use changes associated with mining, any Post Mining Land Use needs to be planned for, economically viable and environmentally sustainable.

Post mining land must create opportunities to encourage the development of sustainable activities that meet global

Table 57: Criteria for Preferring Post Mining Land Use

| No. | Criteria | Elements |
|-----|--|---|
| 1. | Will the future land use activities secure solid County and National interest and support? | <ul style="list-style-type: none"> i. Address sectors of County or national interest ii. Create material and sustainable income streams for local and national governments iii. Fit with the national narrative of vision 2030 and the Sustainable Development Goals iv. Preference for export potential v. Big employer |
| 2. | Does the community welcome the land use activities? | <ul style="list-style-type: none"> i. Compliment, add or enhance existing livelihood programs ii. Enhance food security and livelihoods in the region iii. Demonstrate safe and sustainable use of rehabilitated land iv. Support local businesses |
| 3. | Are the proposed activities economically sustainable and timely? | <ul style="list-style-type: none"> i. Markets identified and robust ii. Technical and delivery risk is manageable iii. High margins of return iv. Preference to initiatives with earlier net returns and lucrative v. Ability to attract requisite investment and funding through sustainable and robust business models vi. The activities enhance downstream processing |
| 4. | Can the new activities create sustainable local and national employment? | <ul style="list-style-type: none"> i. They create immediate and future jobs ii. They provide an opportunity for capacity building and skill development to increase local, national and regional skills as a basis for long-term growth |
| 5. | Do the proposed activities present an opportunity to restore the land and enhance biodiversity to provide nature-based solutions? | <ul style="list-style-type: none"> i. Endorsed by local government stakeholders ii. Adopting global standards and benchmarks iii. Economically self-sufficient |
| 6. | Can the post-mining activities optimize the use of existing assets and infrastructure? | <ul style="list-style-type: none"> i. Proximity to essential services and infrastructure ii. Proximity to transport hubs, including seaports, railways and airports iii. Accessibility to human settlements |
| 7. | Do these activities support the application of locally available technologies and innovation? | <ul style="list-style-type: none"> i. Adoption of existing technologies ii. Enhance incubation and knowledge development |

standards and are beneficial and agreeable to key stakeholders, particularly to the people of Kwale and Kenya.

The ultimate objective of post-mining land use and land reclamation is to identify suitable alternate land uses to which mined land could be utilized.

16.5.2 Criteria for Post Mining Land Use

The following criteria are important to consider to ensure that the future land use of mined areas within Kwale is well thought out. The following are global criteria adopted as an example for Post Mining Land Use.

16.5.3 Potential Post Mining Land Use for the Base Titanium Mines

Below is a table showing potential post-mining land uses.

Table 58: Potential Post Mining Land Uses

| Area/ Domain | Description | Area potential |
|---|---|---|
| Mined areas | Include areas where the soil has been removed to extract minerals. Such areas should be rehabilitated using appropriate rehabilitation techniques. | Potential exists for agriculture and commercial forestry, including sustainable woodlots such as bamboo. |
| Unmined buffer zones and areas left aside for conservation | These are areas around the mine pits left as buffer zones to protect the environment (air, water, and noise). These areas also have sub-sets of both natural and modified habitats and include areas with high biodiversity value required to survive critically endangered species such as trees (<i>Uvaria puguensis</i> , <i>Gigasiphon macrosiphon</i>), frogs such as <i>Shimba Hills Reed Frog</i> (<i>Hyperolius rubrovermiculatus</i>), among others. | These areas should be left as conservation areas and protected as such. |
| Infrastructure: | These include existing facilities such as roads, powerlines, water pipelines, dams/ silt traps and buildings. | These could have various uses, including extending service provision to the local community, such as power and water supply for domestic and commercial use. The buildings can be used as training facilities. |
| Tailing's impoundments and Storage Facilities (TSF): | These are areas used for mineral waste storage. | These areas must be monitored post-mining to ensure that their use conforms to international best mining safety standards. This area has potential for water catchment, brick production, sustainable woodlots such as bamboo and eucalyptus and conservation (elevated wetlands). |

Plate 17: Example of rehabilitation success that enhances post-mining land uses.



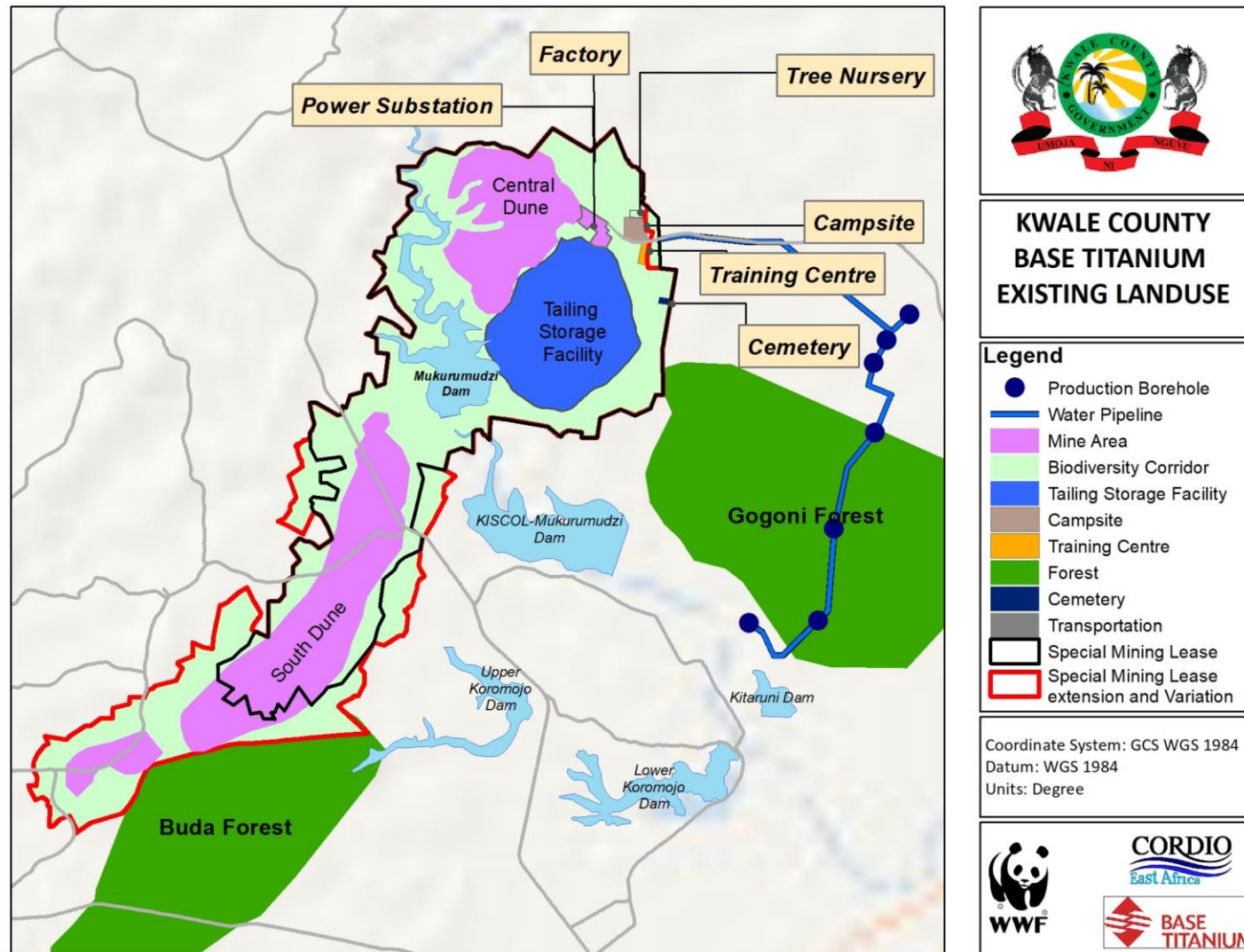
Plate 18: Example of an area undergoing rehabilitation. Right: The same area 6 months after rehabilitation



Plate 19: Agricultural trials with great success in the variety of food crops produced.



Map 64: Base Titanium Mining Site Existing Land Use



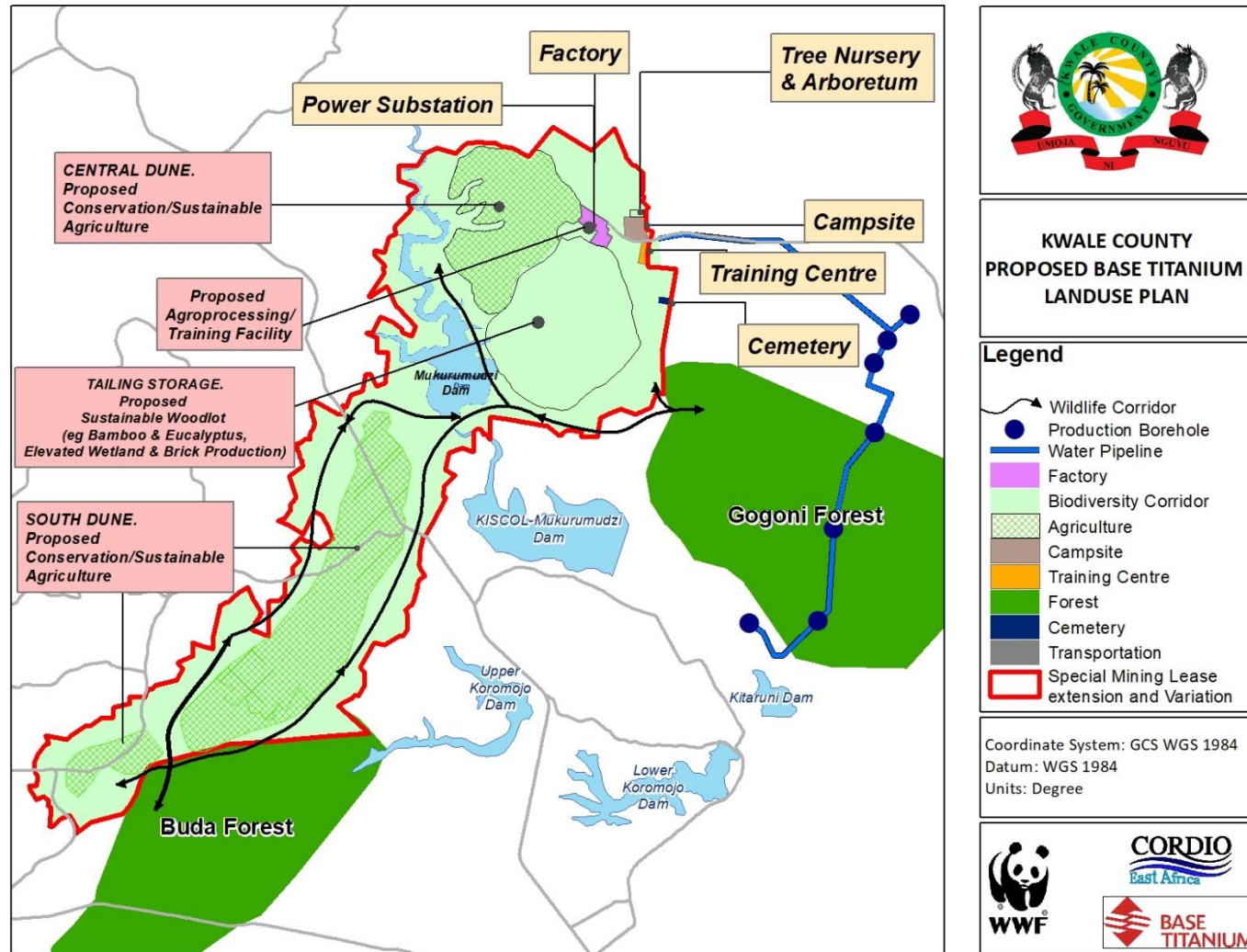
16.5.4 Overall objective

To promote a sustainable and safe environment post-mining.

16.5.5 Recommendations

| Objective | Strategy | Actions |
|--|---|---|
| To ensure an overall positive environmental impact is realised. | Promoting biodiversity management and conservation | <ol style="list-style-type: none"> 1. Define the geo-scope of the mining area through a survey. 2. Delineate the conservation areas. 3. Formulate multipartite conservation agreements with the relevant institutions. 4. Undertake conservation interventions, e.g. tree planting, wetland management. 5. Undertake biodiversity monitoring through transect surveys and production of the annual status of biodiversity reports. |
| To ensure a safe post-mining area | Implementing best practices for safety and risk management. | <ol style="list-style-type: none"> 1. Demarcate the risk areas. 2. Fence off the risk areas where necessary 3. Erect proper signage of the risk areas. 4. Community awareness initiatives on risk areas. 5. Conduct bi-annual water quality assessments 6. Conduct annual structural integrity audits (dam safety, TSF and buildings) |
| To promote viable socio-economic development | Generate economic value and improve social welfare. | <ol style="list-style-type: none"> 1. Define the different zones in the mining area as per their potential uses. 2. Promote tourism activities in the area. 3. Investigate and implement potential agribusiness opportunities (plantation farming, commercial forestry etc.). 4. Investigate and implement the industrial potential (brick making, agro-processing, clay products etc.). 5. Retain the buildings and offices for activities such as training and social welfare. |

Map 65: Post Mining Land Use Plan for Base Titanium Mine



PART VI

PLAN IMPLEMENTATION



PLAN IMPLEMENTATION STRATEGY

17.1 Institutional Arrangement for Implementation

The implementation of this plan will involve multiple actors derived from the private sector, National Government Ministries and Agencies, County departments, Municipal boards, non-Governmental development partners and Community Based Organizations (CBOs). The success of the County spatial plan to guide the transformation and actualization of the vision has to be built on building strong and long-term partnerships in the implementation of projects and programs identified in the plan. The Implementation of the development policies projects and programs identified in the plan will be undertaken through respective County departments, municipal boards, national government ministries and agencies, non-governmental development partners, CBOs, and civil society groups.

The County Executive will play a critical role in managing the implementation of the development projects and programs identified in the plan. The County Executive consisting of the County Governor, Deputy Governor, all County Executive Committee Members and the County Secretary Government, will be responsible for mobilizing resources for the implementation of the plan and will also coordinate implementation efforts by all the stakeholders. For effective implementation of the plan, there shall be a **County Spatial Plan Implementation Oversight Committee**, which shall comprise Chief Officers from all County Departments. The County secretary is the chairperson and the Chief Officer

responsible for Physical and Land-use Planning, the secretary for the committee.

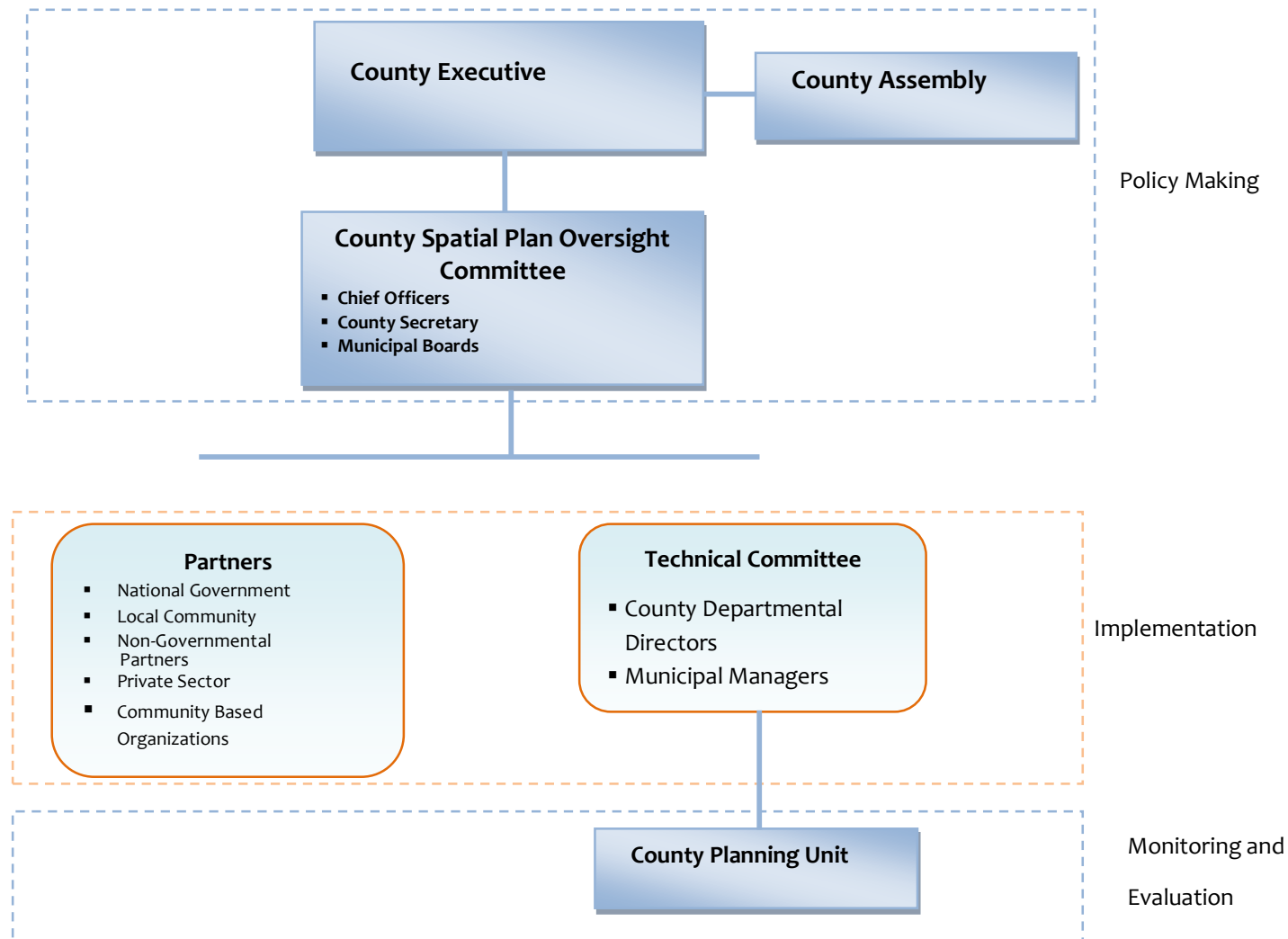
The County Assembly, on the other hand, will play an oversight role over the implementation process and will ensure timely financing of the proposed projects and programmes.

A Technical Implementation Committee consisting of directors from the various County departments and the municipal managers shall provide technical support to the various implementing agencies and departments. The County director of physical planning shall exercise technical leadership and chair the committee. The director will be required to prepare an Annual State of Implementation report to appraise the status of conformity of County projects' implementation with the County Spatial Plan. Such report shall be addressed to the County Spatial Plan Implementation Oversight Committee.

The County Planning Unit shall be responsible for tracking implementation progress and ensuring that projects, programs, and policies contained in the plan are reflected in the County Integrated Development Plans, Annual Development Plans, and the Annual Budgets. This committee shall be chaired by the County director responsible for physical and land use planning.

The Public holds the greatest stake if the plan's implementation is successful. Consistent public sensitization and involvement will therefore be emphasized throughout the implementation process. Members of the public will be sensitized on the projects and programs outlined in the plan and how they can participate in the implementation process of the County spatial plan.

Figure 6: CSP Implementation Framework



17.2 Implementation Framework

The proposed interventions in the plan are categorized into rapid results initiatives, short term, medium-term and long term projects/programs. Rapid results initiatives in this plan will be the projects/programs to be executed within the first year of implementation. Short-term projects will be implemented between the first and third years, while medium-term plans will be implemented between the first and sixth. Long term plans will take ten years or longer to implement. The phasing of implementation accompanied by the respective actors has been classified according to the eight (8) development pillars supporting the vision.

Table 59: implementation matrices

Theme 1: Enhancing Agricultural Productivity for Food Security and Income Generation

| Project/Program Key strategic interventions | Time Frame | | | | | | | | | | Main Actors | |
|--|--------------------------------|----------------------------------|---|---|-----------------------------------|---|---|------------------------|---|---|-------------|---|
| | Rapid result initiatives | Short Term (2019- 2021) | | | Medium Term (2022- 2024) | | | Long Term (2025-28) | | | | |
| | 1 year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Delineation of growth centres. | | | | | | | | | | | | National Government, County Government, municipality boards, Town committees, public, County assembly |
| Carry out land suitability assessment per crop | | | | | | | | | | | | National Government, County Government, FAO, NDMA National Government. |
| Develop land and crop suitability maps | | | | | | | | | | | | County Government, Local community FAO NDMA, National Government |
| Land-use zoning by potential and suitability | | | | | | | | | | | | County Government, Local community, National Government |
| Undertake rural planning with emphasis on areas with greater agricultural potential. | | | | | | | | | | | | County Government, local community. |
| Training farmers on sustainable agricultural practices. | | | | | | | | | | | | National Government, County Government, Private Partner. |
| Develop policies to regulate land subdivision in agricultural areas | | | | | | | | | | | | County Government |
| Adopt measures to discourage deforestation. | | | | | | | | | | | | County Government, KFS, Local community, Non state actors, |
| Decentralize extension services to village unit levels. | | | | | | | | | | | | County Department of Agriculture |

PART VI: PLAN IMPLEMENTATION

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PART VI: PLAN IMPLEMENTATION

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|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| 'futswe/mtsafwe', cowpeas, hare lettuce ('mchunga') under irrigation agriculture. | | | | | | | | | | | | | |
| Promote the growing of drought resistant crops and improve livestock breeds. • | | | | | | | | | | | | | County Department. of Agriculture, Local community, NGO's, NDMA, FAO, KALRO, Non-Governmental development partners, National Government, ILRI. |
| Promote commercial fodder production. | | | | | | | | | | | | | National Government, County Department. of Agriculture, FAO, KALRO, Local community, non-Government |
| Introduction of cage fishing and inland aquaculture. | | | | | | | | | | | | | County Department. of Agriculture, National Government, KEMFRI, Local community. |
| Upscale the practice of apiculture. | | | | | | | | | | | | | County Department. of Agriculture and fisheries, Local community National Government, Non-Government development partners, |
| Mapping of potential irrigation areas | | | | | | | | | | | | | County Department. Of Agriculture, Of Environment. & Natural Resources, National Government, Local community. |
| Development of dams along rivers Umba, Pemba, Mambome, Mwena and Ramisi; and upgrading of dams along Mkurumudzi River and Mkanda Dam | | | | | | | | | | | | | County Government, Irrigation Board, water resources authority National Government, Non-Governmental development partners, Local community, NLC, FAO |
| Establish irrigation schemes within Mwache and Nyalani, and along Umba and Ramisi rivers | | | | | | | | | | | | | County Government, Irrigation Board, water resources authority National Government, Non-Governmental development partners, Local community, NLC |
| Encourage and support school gardening programs | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, School heads, Ministry of Education. |
| Modernization of irrigation infrastructure | | | | | | | | | | | | | County Government, Irrigation Board, water resources authority National Government, Non-Governmental development partners, FAO, Local community, NLC |
| Promote afforestation and planting of leguminous trees and plants In Kinango and Lunga Lunga sub-counties using appropriate species • | | | | | | | | | | | | | County Government, National Government KFS, NON-Governmental development partners, Local community. |
| Afforestation in riparian areas along Ramisi, Mwache, Umba, Mwena, Wachema, Mkurumudzi, pemba and Marere Rivers. | | | | | | | | | | | | | County Government, National Government-, KFS, Local community |

PART VI: PLAN IMPLEMENTATION

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| Restoration of mangrove forests as fish habitats in Tsunza, Gazi, Shimoni, Vanga, Bodo and Msambweni. | | | | | | | | | | | | | | | | | | County Government National Government, Non-Governmental partners Community Based Organisation, KFS, KEMFRI, Local community. |
| Conservation and Restoration of catchment areas of the major rivers | | | | | | | | | | | | | | | | | | County Government. |
| Promote rice and tuber farming in Vanga, Kanana, Ramisi, Mshiu, Mwangwei, Dzombo and Lunga Lunga. | | | | | | | | | | | | | | | | | | County Government, National Government, FAO, KALRO, NDMA, Local community, Non-Governmental development partners |
| Prescribe appropriate farm carrying capacity per acre for livestock | | | | | | | | | | | | | | | | | | County Government, FAO, National Government, local community, KFS, KWS, KALRO. NEMA. Geology Department, ILRI |
| Promote the use of appropriate food preservation methods. | | | | | | | | | | | | | | | | | | County Government, National Government, FAO, KALRO, Non-Governmental development partners, Local Community. |
| Establish a County strategic food reserve and decentralized food collection centres at the Sub-County level. | | | | | | | | | | | | | | | | | | County Government, National Government, Local community, NCPB, FAO, Non-Governmental development partners |
| Establish food processing centres: fish at Shimoni and Vanga, cereals at Dzombo, fruits at Shimba Hills, meat processing at Kinango, a tannery at Vigurungani, rice milling at Mwangwei, coconut at Msambweni, cashew nut at Kwale. Sunflower and cotton ginnery at Kinango | | | | | | | | | | | | | | | | | | County Government, National Government, Local community, FAO, Non-Governmental development partners, EPZA, Kenya Investment Authority, KIRDI, KITI, ICDC |
| Promote Public-Private Partnerships in value addition | | | | | | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, Local Community, |
| Modernize husbandry practices through artificial insemination, greenhouses, and precision agriculture technology. | | | | | | | | | | | | | | | | | | County Department. of Agriculture, National Government, KALRO, FAO, ILRI, Non-Governmental development partners, Local community. |
| Adopt research in pest and disease control | | | | | | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, ICIPE, KALRO, FAO, Local community. |
| Improve road connectivity networks. | | | | | | | | | | | | | | | | | | County Government. National Government, KENHA, KERRA, KURA, NEMA, KFS, Kenya National Innovation Agencies,(KNIA) Non-Governmental development partners. |

PART VI: PLAN IMPLEMENTATION

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| Promote consumption of locally- produced products | | | | | | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners. KEBS, FAO, Local community. |
| Develop strategic wholesale markets for fresh produce at Kombani, Msambweni | | | | | | | | | | | | | | | | | | County Government, Non-Governmental development partners. Local community. |
| Support farmers to form cooperatives to facilitate pricing and marketing of produce | | | | | | | | | | | | | | | | | | County Government. Local community. |
| Provide adequate and appropriate infrastructure for the expansion of existing livestock auction centres at; Mwangulu, Kinango and Mwakijembe | | | | | | | | | | | | | | | | | | County Government. National Government Non-Governmental development partners. Local community. |
| Establish fish markets at Vanga, Shimoni, Msambweni, Gazi and Kombani | | | | | | | | | | | | | | | | | | County Government. National Government Non-Governmental development partners, KEMFRI. Local community. |
| Hold annual trade fairs to showcase products produced in Kwale County at Makongeni | | | | | | | | | | | | | | | | | | County Government. National Government Non-Governmental development partners . ASK ,ADC,AFC,NLC,KALRO,FAO,ICIPE,ILRI, Local community. |
| Promote partnerships and joint ventures in the production and marketing of local products to regional and international markets | | | | | | | | | | | | | | | | | | National Government, County Government. Non-Governmental development partners. Kenya Investment Authority, Local community |
| Promote value addition, product differentiation and branding to enable venturing into new markets | | | | | | | | | | | | | | | | | | National Government, County Government. Non-Governmental development partners. Kenya Investment Authority, Local community. |
| Provide measures to regulate tariffs for products | | | | | | | | | | | | | | | | | | National Government, County Government. Non-Governmental development partners, Competition Authority, KEBS, |
| Encourage farmers to take up cover against risks through insurance | | | | | | | | | | | | | | | | | | County Government. National Government, Capital Investment authority, IRA, Local banks, Local community. |

PART VI: PLAN IMPLEMENTATION

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| Tax reliefs and subsidies in farm inputs to reduce the cost of production | | | | | | | | | | | | | | | | | | National Government, County Government, National Treasury, KRA, Non-Governmental development Partners, Local community. |
| Establish a farmers' credit financing fund | | | | | | | | | | | | | | | | | | County Government. National Treasury. Agricultural Finance Cooperation (AFC) |
| Capacity building through training of farmers on agri-business | | | | | | | | | | | | | | | | | | National Government, County Government, National Treasury, Youth Fund, FAO, KALRO, KIRDI, Non-Governmental development Partners, Local community. |
| Formulation of an agri-business policy for the County | | | | | | | | | | | | | | | | | | County Government, Non-Governmental development Partners, FAO, Local community. |
| Support access to agricultural inputs such as machinery, seed and fertilizers | | | | | | | | | | | | | | | | | | National Government, County Government, Non-Governmental development Partners, AFC, FAO.KALRO, Kenya Seed Company. |

Theme 2: Environmental Conservation and Sustainable Development

| Project/ Program Key strategic interventions | Time Frame | | | | | | | | | | Actors | |
|---|---------------------------|------------------------|---|---|-------------------------|---|---|-----------------------|---|---|--------|---|
| | Rapid Results Initiative. | Short Term (2019-2021) | | | Medium Term (2022-2024) | | | Long Term (2025-2028) | | | | |
| | 1 year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | 10 |
| Supporting the communities to establish community forests | | | | | | | | | | | | County Government, National Government Non-Governmental Development Partners Local Community, KFS, |
| Establish County-owned tree nurseries and forestry demonstration centres at the ward level. | | | | | | | | | | | | National Government-KFS, County Government, Non-Governmental Development Partners, CBO’s, Local community. |
| Integrate community and private woodlots within the County and national government forestry programmes. | | | | | | | | | | | | National Government-KFS, County Government, KEFRI, KFS, CBO’s, Local Community Non-Governmental Development Partners. |
| Support schools with facilities for rainwater harvesting for the establishment of tree nurseries and tree planting. | | | | | | | | | | | | National Government-KFS, County Government, KEFRI, Local Community, Head of Schools, NEMA, NDMA, Non-Governmental Development Partners |
| Establish a reward system for community tree planting. | | | | | | | | | | | | National Government-KFS, County Government, KEFRI KFS, CBO’s, Local Community Non-Governmental Development Partners. |
| Support communities to undertake afforestation using fruit trees | | | | | | | | | | | | National Government-KFS, County Government, KEFRI, KFS, CBO’s, Local Community Non-Governmental Development Partners, FAO. |
| Sensitize and support communities in establishing carbon offset schemes (Clean development mechanism) in each ward. | | | | | | | | | | | | National Government-KFS, County Government, KEFRI, KFS, CBO’s, Local Community Non-Governmental Development Partners |
| Integrate community participation in the management of forests. | | | | | | | | | | | | County Government, National Government Non-Governmental Development Partners Local Community, KFS. |
| Train and support the community on alternative energy sources to charcoal and wood fuel. | | | | | | | | | | | | National Government-KFS, County Government, KEFRI, KFS, CBO’s, Local Community Non-Governmental Development Partners, Rural Electrification and Renewable Energy Cooperation (REREC). |
| Establish Payment Ecosystem Services (PES) for communities abutting forest ecosystems. | | | | | | | | | | | | County Government, National Government, Non-Governmental Development Partners, KFS KEFRI, CBO’s, Local Community, Community Forests Associations (CFA) |
| Mainstream afforestation in celebrating all County, national and international holidays and events. | | | | | | | | | | | | County Government, National Government, Non-Governmental Development Partners, KFS KEFRI, CBO’s, Local Community, Community Forests Associations (CFA), |

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| Incorporate afforestation clauses when leasing government land | | | | | | | | | | | | | | | | | | | National Government, County Government, NLC, KFS, local community |
| Identify and restore degraded community forests. | | | | | | | | | | | | | | | | | | | National Government-KFS, County Government, National Government, Non-Governmental Development Partners, KFS KEFRI, CBO's, Local Community, Community Forests Associations (CFA), KWS |
| Prepare and implement management plans for the Shimba Hills water tower and river catchment areas | | | | | | | | | | | | | | | | | | | County Government, National Government, NEMA, KFS, WRA, NLC, Local community, KWS, NDMA |
| Rehabilitate river catchments and erosion-prone areas by planting indigenous tree species such as bamboo. | | | | | | | | | | | | | | | | | | | County Government, National Government, NEMA, KFS, WRA, NLC, Local community, KEFRI. |
| Establish green belts as buffers for dams and water pans. | | | | | | | | | | | | | | | | | | | County Government, National Government, NEMA, KFS, WRA, NLC, Local community, KEFRI. |
| Incorporate greening and tree planting in the development approval | | | | | | | | | | | | | | | | | | | County Government, National Government, NEMA, KFS, NLC, Local community KEFRI |
| De-silt affected rivers, dams and water pans including, River Ramisi, Mwachema, Uмба, Pemba and Mkurumudzi. | | | | | | | | | | | | | | | | | | | National Government, County Government, WRA, NEMA, Non-Governmental development partners, Local community. |
| Train farmers on appropriate farming practices along slopes and areas abutting rivers, dams and water pans. | | | | | | | | | | | | | | | | | | | National Government, County Government water resource authority, NEMA, Non-Governmental development partners, Local community, FAO, KALRO |
| Securing existing community forests | | | | | | | | | | | | | | | | | | | National Government, County Government, KFS, Local community, NEMA |
| Establish development control measures for areas with groundwater resources. | | | | | | | | | | | | | | | | | | | National Government, County Government, Water resources authority, Kwale water and sewerage company, NEMA |
| Monitoring of activities within Shimba hills water tower and river catchment areas through appropriate zoning and enforcement | | | | | | | | | | | | | | | | | | | National Government, County Government, Kenya water towers agency, Kenya water resource authority KFS, KWS, NEMA |
| Greening of urban areas through planting flowers, grasses and trees on allocated green spaces. | | | | | | | | | | | | | | | | | | | National Government, County Government, Town committees, Municipalities, Local community, Non-governmental development partners. |
| Establish arboreta in Diani-Ukunda, Nyumba sita in Msambweni and Kwale town. | | | | | | | | | | | | | | | | | | | National Government, County Government, KFS, ICRAF, local community, Non-governmental development partners municipalities, NEMA. |
| Mainstreaming Kaya forests into the County's forestry conservation programs | | | | | | | | | | | | | | | | | | | County Government, NEMA, KFS, Local community |
| Develop a County solid waste management plan. | | | | | | | | | | | | | | | | | | | National Government, County Government, NEMA, Municipalities Non-governmental development partners, local community, |
| Incorporate waste management as a consideration in renewing business licensing and permits. | | | | | | | | | | | | | | | | | | | The national government, the County government, NEMA. |

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| Support formation of youth groups at ward level and provide them with equipment and infrastructure to collect and dispose of waste from the household level. | | | | | | | | | | | | | | | | | | | National Government, County Government, Youth fund, NITA, Non-governmental development partners. |
| Develop policies on economic instruments including taxes, fines, Extended Producer Responsibility (EPR) and incentives for solid waste management. | | | | | | | | | | | | | | | | | | | The National government, County Government, KRA, NEMA, Local community, Non-governmental development partners. |
| Sensitize the community and promote simple waste reduction, recycling, and reuse technology. | | | | | | | | | | | | | | | | | | | The National government, County Government, NEMA Non-governmental development partners, Local community. |
| Designate and acquire at least one solid waste disposal site in each of the four Sub-County. | | | | | | | | | | | | | | | | | | | County Government, Local Community, NEMA, NLC |
| Partner with Non-governmental development partners to construct and operate sanitary landfills within their acquired solid waste dumping site through Public-Private Partnerships (PPPs) at each sub-County. | | | | | | | | | | | | | | | | | | | The National government, County Government, Local Community, NEMA, NLC, Non-Governmental development partners. |
| Formulate a strategy for electronic waste disposal | | | | | | | | | | | | | | | | | | | The National Government, County Government, Local Community, NEMA, NLC, Non-Governmental development partners. |
| Establish a waste processing facility at Mwabungu dumpsite through Public-Private Partnership (PPP). | | | | | | | | | | | | | | | | | | | The national government, County Government, Local Community, NEMA, NLC, Non-Governmental development partners. |
| Partner with Non-governmental development partners to construct and operate sanitary landfills through Public-Private Partnerships (PPPs) at each sub-County. | | | | | | | | | | | | | | | | | | | The National Government, County Government, Local Community, NEMA, NLC, Non-Governmental development partners. |
| Design and construct sewer reticulation system for all urban areas | | | | | | | | | | | | | | | | | | | National Government, County government, municipalities, non-governmental development partners |
| Encourage the development of Communal Septic Sites (CSS) in rural areas | | | | | | | | | | | | | | | | | | | National Government, County government, non-governmental development partners, local communities |
| Avail seedlings of indigenous tree species to be planted in areas prone to erosion | | | | | | | | | | | | | | | | | | | National Government, County government, KEFRI, KFS, KALRO, FAO |
| Educate farmers on appropriate farming practices along slopes and within areas abutting rivers | | | | | | | | | | | | | | | | | | | National Government, County government, KFS, KALRO, FAO, NEMA, Non-Governmental development partners. |

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| Promote sustainable rice and tubers cultivation in wetlands and floodplains | | | | | | | | | | | | | | | | | | | National Government, County Government, NIB, non-governmental development partners, KALRO, FAO, NDMA, NEMA, WRA |
| Monitor and audit all artisanal and large-scale mining areas in the County for Environmental compliance | | | | | | | | | | | | | | | | | | | National Government, County government, NEMA |
| Restoration of degraded mining areas | | | | | | | | | | | | | | | | | | | National Government, County Government, NEMA, Non-governmental development partners, local community |
| Provide sanitary facilities along public beaches in the County | | | | | | | | | | | | | | | | | | | County Government, NEMA, Non-governmental development partners. |
| Provide adequate litter bins along public beaches | | | | | | | | | | | | | | | | | | | County Government, NEMA, Non-governmental development partners, Kenya Association of Hoteliers and Caterers |
| Carry out periodic beach clean-up exercises | | | | | | | | | | | | | | | | | | | National Government, County Government, Kenya Association of Hoteliers and Caterers, Local Community, non-governmental development partners, Municipalities |
| Regulate building and development along the coastal line through zoning and the adoption of appropriate zoning standards. | | | | | | | | | | | | | | | | | | | National Government, County Government, NEMA |
| Open all beach access roads and repossess all grabbed public beaches. | | | | | | | | | | | | | | | | | | | National Government, County Government, NLC, KURA |
| Establish appropriate beach riparian reserves and sustain applicable buffers and setbacks | | | | | | | | | | | | | | | | | | | National Government, County Government, NEMA, Local Community, NLC |
| Control human activities within ecologically sensitive Marine Protected Areas (MPAs) in the County | | | | | | | | | | | | | | | | | | | National Government, County Government, Kenya Fisheries, KWS, NEMA, Local community, KEMFRI, Non-governmental development partners. |
| Explore and gazette all coastal islands, including the inhabited islands within the County | | | | | | | | | | | | | | | | | | | National Government, County government, local community |
| Conserve and maintain deltas and estuaries by designating them as conservation areas | | | | | | | | | | | | | | | | | | | National Government, County Government, NEMA, KFS |
| Planting of trees along with riparian areas | | | | | | | | | | | | | | | | | | | National Government, County Government, KFS, NEMA, Local community, Nongovernmental development partners., |
| Preservation and restoration of archaeological sites including Kongo mosque, Jumba la Mbaruku etc. | | | | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-governmental development partners, Local Community, NEMA, Tourism Regulatory Authority |

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| Establish urban parks at the Mwachema estuary and Msambweni and arboreta at Diani/Ukunda, Nyumba sita in Msambweni, Kanana, Kinarini in Kwale town, and Gaz | | | | | | | | | | | | | | | | | | County Government, Municipalities, KFS, Local Community, Non-governmental development partners. |
| Develop and implement a wetland management plan | | | | | | | | | | | | | | | | | | National Government, County Government, NEMA, NDMA, Local community, non-governmental development partners. |
| Develop a County Environmental policy. | | | | | | | | | | | | | | | | | | National government, County Government, NEMA, KWA, KFS, Water Resource, NDMA, Local Community, Nongovernmental development partners |
| Constitute an Environmental management unit comprised of relevant state and County departments, private sector and civil society. | | | | | | | | | | | | | | | | | | National Government-NEMA, County Government, NDMA, KFS, KWS, KEMFRI, KEFRI, Non-governmental development partners |
| Build the capacity of the Environment enforcement unit. | | | | | | | | | | | | | | | | | | The National government, County Government, NEMA, KWA, KFS, Water Resource, NDMA, Local Community, Non-governmental development partners |
| Prepare a marine resources management plan. | | | | | | | | | | | | | | | | | | National Government, NEMA, KEMFRI, Kenya Marine Authority, Kenya Fisheries, County Government, non-governmental development partners, local community |
| Install warning signs against wanton littering near beach areas | | | | | | | | | | | | | | | | | | County Government, NEMA, non-governmental development partners, local community |
| Review and implement zoning regulations to control development along the coastline. | | | | | | | | | | | | | | | | | | County Government, NEMA, National Government, Non-governmental development partners, local community, Tourism Regulatory Authority. |
| Restore mangrove forest in areas of Gazi, Msambweni, Bodo, Vanga, Funzi, Wasini and Tsunza | | | | | | | | | | | | | | | | | | National Government, County Government, NEMA, KEMFRI, KEFRI, KFS, Local community, Non-governmental development partners |
| Designate mangroves on Sii Island as a seed bank. | | | | | | | | | | | | | | | | | | National Government, County Department. Environment. & Natural Resources, Non-Governmental Organisation, Local community. |
| Prepare Natural Resource Management Plans for; Diani- Chale Marine Reserve, Kisite Mpunguti National Marine Park and Reserve, and Shimba Hills National Park and Reserve. | | | | | | | | | | | | | | | | | | National Government, County Government, NEMA, KWS, KEMFRI, KEFRI, KFS, Local community, non-governmental development partners, Coast Development Authority, Water Resource, Kenya Coast Guard, KMA |
| Develop a benefit-sharing policy for County Natural Resources | | | | | | | | | | | | | | | | | | National Government-KEMFRI, County Government, Non-Governmental Organisation, Local community, NEMA, KWS, KEMFRI, KEFRI, KFS, Coast Development Authority(CDA). |
| Formulate a County policy against deforestation. | | | | | | | | | | | | | | | | | | National Government-KEMFRI, County Government, KFS, NDMA, Non-Governmental development partners, Local Community |
| Raise awareness among the communities on Environmental social-economic importance. | | | | | | | | | | | | | | | | | | National Government, County Government, Non-Governmental development partners, Local Communities, NEMA, KFS |

Theme 3: Promoting Investment in Tourism, Industrialization, Trade and Commerce

| Project/Program Key strategic interventions | Time Frame | | | | | | | | | | Actors | |
|---|--------------------------------------|----------------------------------|---|---|-----------------------------------|---|---|---------------------------------|---|---|--------|--|
| | Rapid response Initiative s | Short Term (2019- 2021) | | | Medium Term (2022- 2024) | | | Long Term (2025- 2028) | | | | |
| | | 1 year. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Strengthening Existing Forms of Tourism | | | | | | | | | | | | |
| Enhance marketing through branding and promoting tourist destinations | | | | | | | | | | | | National government- KWS, County Government, Kenya Tourism Board, Local community, Non-Governmental Developmental organization, National Museums of Kenya, Tourism Regulatory Authority, Communication Authority of Kenya, Brand Kenya Board, Municipalities |
| Restore, rehabilitate and document cultural-historical sites and buildings, including Kongo Mosque, Komboza caves, Shimoni slave caves (Mwanangoto), Gazi ruins (Jumba La Mbaruku), Lwayo Lwa Mulungu, Fikirini caves and Kayas | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board.Tourism Regulatory Authority |
| Conservation of natural environment through the establishment of animal sanctuaries for breeding of the endangered species, the establishment of the boardwalk at Tsunza, designating hiking and picnic sites in Shimba Hills National Park and Golini Cliffs | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, KEFRI, Tourism Regulatory Authority, NEMA, KFS, KWS, KEMFRI, KMA, CBOs |
| Enhance coordination and cooperation between the different agencies, authorities and organizations concerned with tourism at all levels. | | | | | | | | | | | | National govt- KWS, County Government, Kenya Tourism Board, Kenya Coast Tourist Association, Non-Governmental developmental partners, local community, Coast Development Authority, Kenya Coast Guard, Tourism Regulatory Authority, Kenya Maritime Authority, Kenya Tourism Development Cooperation, NEMA |
| Operationalize Diani-Chale marine reserve through community management. | | | | | | | | | | | | County Government, National government- KWS, Non-Governmental Developmental partners, Kenya Tourism Board, Local Community, KEMFRI, CBOs, Kenya Coast Guard, NEMA, KMA, Kenya Fisheries Services |
| Upgrade existing transport infrastructure linking tourism sites | | | | | | | | | | | | County Government, National govt- KWS, Non-Governmental Developmental partners, KURA, KERRA, KENHA, Kenya Railways, Local Community, Kenya Airports Authority, Kenya Ports Authority, Kenya Maritime Authority, Kenya Ferry Services, Kenya Tourism Board, Kenya Civil Aviation |

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| Plan and develop Diani and Tsunza as resort cities. | | | | | | | | | | | | | | | | | | National govt., County Government, Non-Governmental Development partners, NLC, Kenya Tourism Board, local community, Kenya Coast Guard, Kenya Tourism Development Cooperation, KENHA, KURA, KERRA, Kenya Airport Authority, Kenya ferry, Kenya Port Authority, Kenya SEZ Authority |
| Improve tourism support infrastructure, including ICT, waste management infrastructure, water supply and electricity | | | | | | | | | | | | | | | | | | National govt., County Government, WRA, KPLC, REREC, Non-Governmental developmental partners, NEMA, Communications Authority of Kenya, local community, Kenya Tourism Authority, KWAASCO, KETRACO |
| Protect, preserve and develop infrastructure for Katsimbalwena viewpoint, Munyu war caves, Chinduni, Maji moto, skeleton pillars, Mwaluganje elephant sanctuary, Lwayo la Mungu, Luvundoni park. | | | | | | | | | | | | | | | | | | County Government, National govt- KWS, KFS, Non-Governmental Developmental partners, Kenya Tourism Board, Local Community, NEMA, National Museums of Kenya, |
| Sustain capacity building and training for beach operators | | | | | | | | | | | | | | | | | | County Government, National Government, NITA, Kenya coast guard, Non-Governmental Development Partners, local community, Tourism Regulatory Authority, Kenya Association of Hotelier and Caterer, Municipality |
| Offer incentives for the development of MICE facilities and integrate them with other forms of tourism | | | | | | | | | | | | | | | | | | County Government, National govt- KRA, Non-Governmental Developmental partners, Kenya Tourism Board, Local Community, National Museums of Kenya, Kenya Investment Authority, NLC, KWS |
| Develop an international-standard stadium within Kinango Sub County | | | | | | | | | | | | | | | | | | County Government, National govt, Non-Governmental Developmental partners, Kenya Tourism Board, Local Community, NLC, |
| Hold annual sporting events | | | | | | | | | | | | | | | | | | County Government, Non-governmental Development partners, National Government, Kenya Coast Guide, KMA, NITA, Kenya Tourism Board, |
| Establish a sports academy within Matuga Sub County | | | | | | | | | | | | | | | | | | County Government, Non-governmental Development partners, national government, NITA, |
| Develop an archery range and camping site at Kuranze and a motorsport circuit at Matuga. | | | | | | | | | | | | | | | | | | County Government, Non-governmental Development partners, national government, NLC, Kenya Archery Association, |
| Introduce beach and water sports. | | | | | | | | | | | | | | | | | | National govt, Kenya Coast guard, County Government, local community, Non-Governmental Developmental Partners, Kenya Maritime Authority, Tourism Regulatory Authority, |
| Research maritime tourism development. | | | | | | | | | | | | | | | | | | National govt, Kenya Coast guard, County Government, local community, Kenya Maritime Authority, KEMFRI, Kenya Fisheries, Kenya Tourism Board, Tourism Regulatory Authority |

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| Conserve the County's biodiversity as a basis for research tourism. | | | | | | | | | | | | | | | | County Government, National govt- KWS, Non-Governmental Developmental partners, Kenya Tourism Board, Local Community, KEMFRI |
| Partner with research institutions to promote education and research Tourism. | | | | | | | | | | | | | | | | County Government, National govt- KWS, Non-Governmental Developmental partners, Kenya Tourism Board, Local Community, KEMFRI. |
| Plan, develop and promote Ndavaya as a Knowledge and Research Town. | | | | | | | | | | | | | | | | County Government, local community |
| Initiate knowledge and education exchange programs. | | | | | | | | | | | | | | | | County Government, National govt, Non-Governmental Developmental partners, Kenya Tourism Board, Local Community, NITA |
| Establish a museum and County cultural Centre in Tsunza resort town. | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Establish community cultural villages in Matuga, Lunga Lunga, Kinango and Msambweni sub counties. | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Promote homestay visits as an alternative to hotels. | | | | | | | | | | | | | | | | County Government, local community, National Museums of Kenya, National Government, |
| Hold annual cultural tourism events | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Document and preserve culture and heritage. | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Build capacity for communities to participate in both domestic and community tourism | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Organize and hold international and local investment forums, tourism fairs and exhibitions. | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Establish a County Tourism Promotion Unit | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local |

PART VI: PLAN IMPLEMENTATION

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| | | | | | | | | | | | | community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Carry out awareness campaigns and offer incentivized tourism packages for domestic tourism. | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Conduct international investment promotion projects to invite foreign investors to invest in Kwale's tourism sector | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Upgrade the standards of hotels, resorts and other MICE facilities in the County | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority, KEBS, Kenya Association of Hoteliers ad Caterers, |
| Train the local people and impart knowledge and awareness on the opportunities in MICE as a form of tourism | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development agencies, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority, NITA, |
| Market Kwale County as an excellent destination for motorsports and leisure sports (beach and water sports) | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development partners, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority, Kenya Maritime Authority, Kenya Ferry Services, Coast Guard Services |
| Promote investment in the development of sports infrastructure | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development partners, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Develop a-standard stadium at Lunga Lunga | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development partners, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Tourism Regulatory Authority |
| Enhance the quality of the marine environment through conservation activities | | | | | | | | | | | | National Government, County Government, Non-Governmental Development Partners, KEMFRI, NEMA, KMA, Local Community. |
| Market Kwale County's marine, terrestrial and cultural resources as potential areas for education and research tourism | | | | | | | | | | | | National govt., County Government of Kwale, Non-Governmental Development Partners, KEMFRI, KEFRI, Tourism Regulatory Board, KFS local community. |
| Conserve the County's biodiversity, ecologically sensitive areas and other natural environmental resources | | | | | | | | | | | | National Government, County Government, Non-Governmental Development Partners, KEMFRI, KFS, NEMA, KMA, Local Community. |

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| Publicize and showcase the research opportunities available within Kwale County. | | | | | | | | | | | | | | | | | | | National govt., County Government of Kwale, Non-Governmental Development Partners, KEMFRI, KEFRI, Tourism Regulatory Board, KFS, local community. |
| Promote Ndavaya as an Education and Research Town. | | | | | | | | | | | | | | | | | | | National govt., County Government of Kwale, Non-Governmental Development Partners, KEMFRI, KEFRI, KFS, KEMRI, Center for Traditional Medicine and Drug Research, local community. |
| Promote knowledge and education exchange programs | | | | | | | | | | | | | | | | | | | National govt., County Government of Kwale, Non-Governmental Development Partners, KEMFRI, KEFRI, KFS, KEMRI, Center for Traditional Medicine and Drug Research, Vocational Training Institutions, Universities and Higher Education Institutions in Kenta, NITA, local community. |
| Restoration of Kongo Mosque as a World Heritage Site. | | | | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental development partners, local community, Kenya Coast Tourist Association, Kenya Tourism Board, Diani Municipal Board, NEMA. |
| | | | | | | | | | | | | | | | | | | | |
| Establish a County cultural Centre in Tsunza. | | | | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, National Library Services, Non-Governmental Partners, Local Community. |
| Establish community cultural villages in Matuga, Lunga Lunga, Kinango and Msambweni sub counties | | | | | | | | | | | | | | | | | | | National Government, County Government, National Museums of Kenya, Non-Governmental Partners, Local Community. |
| The twinning of urban areas in Kwale with cities in other parts of the world | | | | | | | | | | | | | | | | | | | National Government, County Government, Municipalities Boards, Non-Governmental Development Partners. |
| Undertake County geological surveys to establish mineral resource distribution and economic viability. | | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners. |
| Enhance social and environmental safeguard mechanisms for people affected by mining activities. | | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA. |
| Recruitment of relevant officers to monitor the mining sector within the County | | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA. |
| Promote value addition in mining. | | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA. |

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| Locate agro-processing plants within the agricultural zones: <ul style="list-style-type: none"> Coconut industry at Msambweni Cashewnut in Kwale Cereal processing in Dzombo Cassava in Kinango Rice processing in Mwangwei Fruit processing in Shimba Hills Cotton ginnery in Kinondo | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, Kenya Association of Manufacturers, NITA, NCPB, SEZ Authority, KEBS |
| Establish industrial processing plants for; <ul style="list-style-type: none"> Fish processing at Kibuyuni and Vanga. Meat processing at Kinango | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, Kenya Association of Manufacturers, NITA, NCPB, SEZ Authority, KEBS |
| Providing technical and financial support for industrialization. | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, Kenya Association of Manufacturers, NITA, NCPB, SEZ Authority, KEBS |
| Establish a tannery at Vigurungani. | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, Kenya Association of Manufacturers, NITA, SEZ Authority, KEBS |
| Formation of co-operatives to mobilize technical and financial support, training and marketing for the members | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, Kenya Association of Manufacturers, NITA, NCPB, SEZ Authority, KEBS |
| Encourage investment in cottage industries in areas of residence. | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, Kenya Industrial Estates. |
| Develop standards for the cottage industry products. | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, Kenya Industrial EstatesKenya Industrial Property Institute(KIPI), Kenya National Chamber of Commerce and Industry, Kenya Export Promotion and Branding Agency (KEPBA), KEBS. |
| Sensitize players in the sector on intellectual rights and enforce regulation on the same. | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, Kenya Industrial Property Institute(KIPI), Kenya National Chamber of Commerce and Industry, Kenya Export Promotion and Branding Agency(KEPBA), KEBS. |

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| Market the County's cottage industry both locally and internationally. | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA SEZA, Kenya Export Promotion and Branding Agency. |
| Develop appropriate infrastructure that supports industrial development, including electricity, roads, railways, water supplies, waste management systems, housing and Information Communication Technology systems in all areas earmarked for industrial development. | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, KETRACO, KURA, KERRA. KeNHA, KPLC, Kenya Industrial Estates, Communications Authority of Kenya, Municipality Boards, National Housing Corporation, Kenya Railways, Coast Development Authority, KWAWASCO, REREC, NLC. |
| Set up a Special Economic Zone (SEZ) at Kiteje and Samburu. | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, KETRACO, KURA, KERRA. KeNHA, KPLC, Kenya Industrial Estates, Communications Authority of Kenya, Municipality Boards, National Housing Corporation, Kenya Railways, Coast Development Authority, KWAWASCO, REREC, NLC |
| Establish warehouse facilities areas at Perani and Shimoni. | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, NLC, National Construction Authority, KWAWASCO, KPLC, Kenya Industrial Estates (KIE). |
| Establish industrial parks in Kwale and Ukunda/Diani municipalities. | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, NLC, National Construction Authority, KWAWASCO, KPLC, Kenya Industrial Estates(KIE). |
| Plan and develop Kinango, Samburu and Shimba Hills as industrial towns. | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, KPLC, Kenya Industrial Estates, NLC, National Construction Authority. |
| Establish Export Processing Zones (EPZ) at Lunga Lunga. | | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, Special Economic Zone Authority(SEZA), EPZA, Kenya Industrial Estates, Kenya Export Promotion and Branding Agency. |

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| Provide a scholarship for industrial technical-oriented training. | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NITA, Kenya Industrial Estates, HELB. |
| Forge partnership with National Industrial Training Authority (NITA) to train the County's human resources. | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NITA, Kenya Industrial Estates, HELB. |
| Encourage partnerships in industrial development | | | | | | | | | | | | | | | | | National Government, County Government, Local Community, Non-Governmental Development Partners, NEMA, KPLC, Kenya Industrial Estates, NLC, National Construction Authority. |
| Seek Foreign Direct Investments (FDI). | | | | | | | | | | | | | | | | | County Government, National Government, National Treasury, Non-Governmental Development Partners, Kenya Investment Authority, Capital Investment Authority. |
| Organize and facilitate County industrial development forums. | | | | | | | | | | | | | | | | | County Government, National Government, National Treasury, Non-Governmental Development Partners, Kenya Investment Authority, Capital Investment Authority, Kenya Industrial Estate, EPZA, SEZA. |
| Organization and registration of informal ventures as SMEs. | | | | | | | | | | | | | | | | | County Government, National Government, National Treasury, Non-Governmental Development Partners, Kenya Investment Authority, Capital Investment Authority, Local Community. |
| Introduce a technology-based trade information platform to consolidate information for the traders about the market to encourage direct trading | | | | | | | | | | | | | | | | | County Government, National Government, Financial Institutions, Non-Governmental Development Partners, Local Community, Communications Authority of Kenya. |
| Create a one-stop-shop information centre on investment opportunities in trade and commerce within the County. | | | | | | | | | | | | | | | | | County Government, National Government, Financial Institutions, Non-Governmental Development Partners, Local Community, Communications Authority of Kenya, Kenya National Chamber of Commerce and Industry. |
| Training traders and entrepreneurs on efficient trading and commercial methods and practices. | | | | | | | | | | | | | | | | | County Government, National Government, Financial Institutions, Non-Governmental Development Partners, NITA, Kenya National Chambers of Commerce and Industry, Kenya Association of Manufacturers, Local Community. |

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| Encouraging youth initiatives in different wards to impart knowledge and skills for carrying out business. | | | | | | | | | | | | | | | | | | County Government, National Government, Financial Institutions, Non-Governmental Development Partners, Youth Fund, NITA, Vocational Training Institutions, Local Community. |
| Facilitate issuance of title deeds to act as collateral to access credit facilities. | | | | | | | | | | | | | | | | | | County Government, National Government, Financial Institutions, Non-Governmental Development Partners, Local Community, Financial Institutions. |
| Initiate programs to provide incentives to investors and entrepreneurs across the County, such as: o Advice on tax-efficient investment, o Reducing license fees and, o Tax exemptions. | | | | | | | | | | | | | | | | | | County Government, National Government, Financial Institutions, Non-Governmental Development Partners, KRA, Local Community. |

Theme 4: Optimizing the Potential of Marine Resources and Blue Economy

| Project/Program Key strategic interventions | Time Frame | | | | | | | | | | Actors | |
|---|----------------------------------|------------------------------|---|---|-----------------------------------|---|---|---------------------------------|---|---|--------|--|
| | Rapid response Initiatives | Short Term (2019-2021) | | | Medium Term (2022- 2024) | | | Long Term (2025- 2028) | | | | |
| | | 1 year. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | 9 |
| Prepare an integrated marine spatial plan | | | | | | | | | | | | County Government, National government. , Non-Governmental development partners. KMA, KEMFRI, NEMA, KEFRI, Local community. |
| Organize Beach Management Units (BMU) into co-operatives. | | | | | | | | | | | | County Government, National government. , Non-Governmental development partners, KEMFRI, NEMA, CBOs, Local community. |
| Build partnerships to acquire high-capacity fish storage facilities through Public-Private Partnership. | | | | | | | | | | | | County Government, National government. , Non-Governmental development partners. KMA, KEMFRI, NEMA, KEFRI, Local community. |
| Train fishermen on appropriate fishing skills, safety and technology. | | | | | | | | | | | | County Government, National government. , Non-Governmental development partners CBOs, KEMFRI, NITA, Local Community, Kenya Fisheries Service. |
| Enhance maritime safety and security through regular patrols. | | | | | | | | | | | | County Government, National government. , Non-Governmental development partners CBOs, KEMFRI, KMA, Coast guard. |
| Loan high capacity boats and equipment to fishing co-operatives to venture into deep sea fishing. | | | | | | | | | | | | County Government, National government, Non-Governmental development partners. KMA, Local Community |
| Strengthening the enforcement of fishing and maritime laws. | | | | | | | | | | | | County Government, National government, Non-Governmental development partners. KMA, NEMA, Kenya Fisheries Service. Local Community |
| Establishment of a hatchery within Kisite-Mpunguti Marine Reserve | | | | | | | | | | | | County Government, National government, Non-Governmental development partners. KMA, NEMA, KWS, KEMFRI, Kenya Fisheries Service.Local Community |

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| Provide existing seaweed farmers with techniques to increase production, value addition, and marketing. | | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners.,NEMA, KEMFRI, FAO, Kenya Fisheries Service. Local Community, |
| Promote partnership building for mariculture between communities, research institutions and private organizations. | | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners, NEMA, KEMFRI, FAO, Kenya Fisheries Service. Local Community, |
| Popularize mariculture through sensitization and training. | | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners. KMA, NEMA, KWS, KEMFRI, NITA, Kenya Fisheries Service.Local Community |
| Establish nurseries for mangrove at Gazi and seaweed at Kibuyuni. | | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners, NEMA, KEMFRI, Local Community, |
| Offer incentives to investors interested in water transport. | | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners.KRA, KMA |
| Support local communities to invest in public water transport in the proposed route. | | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners, KMA, KPA, Kenya Ferry Services, Local Community, |
| Integrate on-shore activities along the tourism circuit by designating strategic landing sites where other tourism packages are showcased. | | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners, Tourism Regulatory Authority, KMA, Local Community, |
| Install adequate navigation aides. | | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners KMA, KPA, Local Community, |
| Build partnerships and co-operation with Mombasa, Kilifi, Lamu County governments, Kenya Ports Authority, Kenya Maritime Authority, KEMFRI and other stakeholders in promoting the circuit. | | | | | | | | | | | | | | | | | | | National government, Kwale County Government, Mombasa County Government, Kilifi County Government, Lamu County Government, Non-Governmental development partners KMA, Tourism Regulatory Authority, KPA, Local Community, |
| Market the Kwale maritime tourism circuit as a world tourism destination. | | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners KMA, Tourism Regulatory Authority, Local Community, |

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| Offer incentives to facilitate licensing for operation along the circuit. | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners, KRA, KMA, KPA Tourism Regulatory Authority, Local Community. |
| Maintaining environmental cleanliness and aesthetics along the beachline through on-shore greening and beach cleaning programs | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners, NEMA, KMA, Tourism Regulatory Authority, Local Community. |
| Undertake feasibility studies on offshore and onshore wind and tidal energy viability. | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners, KPLC, Ministry of Energy, KPLC, KENGEN, REREC, Kenya Metrological Society(KMS), NEMA, KMA, KMS, Local Community. |
| Build a partnership between the National Government and County Government of Kwale to develop offshore and onshore wind and tidal energy | | | | | | | | | | | | | | | | | | County Government, National government, Non-Governmental development partners, KPLC, Ministry of Energy, KPLC, KENGEN, REREC, Kenya Metrological Society(KMS), NEMA, KMA, KMS, Local Community. |

Theme 5: Enhancing the quality of life through effective service delivery

| Project/Program / Key strategic interventions | Time Frame | | | | | | | | | | Actors | |
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| | Rapid results Initiatives | Short Term (2019-2021) | | | Medium Term (2022- 2025) | | | Long Term (2025- 2028) | | | | |
| | 1Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Augmentation of Tiwi water scheme to serve Tiwi and Ukunda/Diani | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water Resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-Governmental development partners, local community, |
| Increase abstraction from Msambweni aquifer and augment Msambweni Water Supply Scheme. | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-Governmental development partners, local community, |
| Expand Water Supply Scheme coverage | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-Governmental development partners, local community |
| Rehabilitation and augmentation of Ukunda Water Supply and Lunga Lunga Water Supply | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-Governmental development partners, local community |
| Construction of dams; Mwakalanga Dam, Dziweni Dzitegemee Dam, Kizingo Dam, and Mwache Dam for the supply of water for domestic, livestock and irrigation | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-Governmental development partners, local community |
| The County government support construction of water pans and the drilling of boreholes. | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-Governmental development partners, local community |
| Laying a distribution network to support the Mkanda-Dzombo mainline via Dzombo Water Supply Distribution Network | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-Governmental development partners, local community |

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| Improve water supply to all public institutions | | | | | | | | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), NEMA, Non-Governmental development partners, local community, |
| Promote the use of alternative sources of energy for domestic use. | | | | | | | | | | | | | | | | | | | County government, National government, NEMA, KPLC, REREC, Non-Governmental development partners, Local Community. |
| Desalination of Sea Water through Public-Private Partnerships | | | | | | | | | | | | | | | | | | | County government, National government, Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-Governmental development partners, local community, |
| Offer incentives for Water Service Providers | | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, local community, |
| Support community-managed water supply projects | | | | | | | | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-Governmental development partners, local community, |
| Augment the County's water supply capacity by developing the requisite infrastructure for water storage, abstraction, treatment and supply. | | | | | | | | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-governmental development Partners |
| Provision of water tanks in public institutions for rainwater storage. | | | | | | | | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-governmental development Partners, Local community. |
| Public awareness creation on rainwater harvesting techniques and technologies. | | | | | | | | | | | | | | | | | | | County government, National government, Coast Water development Agencies(CDA), Water resource Authority, Kwale Water and Sewerage Company(KWAWASCO), NEMA, Non-governmental development Partners, Local community, |
| Formulate building by-law for urban areas requiring the installation of rainwater harvesting facilities as a prerequisite for approval | | | | | | | | | | | | | | | | | | | County government, National government. |
| Establishment of solar energy production farm in Kinango Sub-County. | | | | | | | | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, KPLC, REREC, KENGEN, Local community, |
| Prepare and adopt an energy master plan. | | | | | | | | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, KPLC, REREC, KENGEN, KETRACO, Renewable Energy Portal, NLC, Local community. |

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| Undertake County energy resource mapping. | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, KPLC, REREC, KENGEN, KETRACO, Renewable Energy Portal, NLC, Local community |
| Prepare and adopt a County energy policy | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, KPLC, REREC, KENGEN, KETRACO, Renewable Energy Portal, NLC, Local community |
| Establish solar-fed mini-grids. | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, KPLC, REREC, KENGEN, Local community, |
| Carry out a feasibility study to develop onshore and offshore wind energy projects. | | | | | | | | | | | | County government, National government NEMA, Non-Governmental development partners, KPLC, REREC, KENGEN, Local community, |
| Seek partnership with the National Government and other development partners to develop offshore and onshore wind energy | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, local community, |
| Promote Liquefied Petroleum Gas and other alternative energy sources like Bio-gas for domestic use. | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, Local community. |
| Expedite the implementation of the Last Mile Project in the County. | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, KPLC, REREC, Local community. |
| Extending electricity supply to underserved areas in the County. | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, KPLC, REREC, NEMA Local community, |
| Provision of electricity to all public institutions. | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, KPLC, REREC, KENGEN, Local community, |
| Promote the use of energy-saving <i>jikos</i> . | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, NITA, KPLC, REREC, Local community, |
| Establish community briquettes making schemes at ward level. | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, NITA, Local community, |
| Support development of institutional and household biogas production plants. | | | | | | | | | | | | County government, National government, NEMA, Non-Governmental development partners, NITA, Local community, |

PART VI: PLAN IMPLEMENTATION

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| Establish community-based ward level ICT centres | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Communication Authority, CBOs, Local community, |
| Install necessary facilities such as LAN, MAN and WAN to cover County Offices, Sub-County/Ward office and County headquarter. | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Communication Authority, Local community. |
| Establish a Central Data Unit in Kwale Town for the County government. | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Communication Authority, Local community, |
| Training and capacity building for the County staff on ICT. | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Communication Authority, NITA. |
| Organize annual County ICT innovation competitions | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Communication Authority. |
| Seek partnership for investment in the development of sewerage systems in urban areas. | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NEMA, KWAWASCO, Local community, Municipality Boards. |
| Construction of modern ablution blocks in urban areas through partnerships with Local Communities | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NEMA, KWAWASCO, Local Community. |
| Carry out feasibility studies for the establishment of treatment plant(s) in the County | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NEMA, |
| Develop a standard incinerator with energy recovery facilities | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NEMA. Local community, |
| Locate solid waste collection points at strategic locations in the major urban areas. | | | | | | | | | | | | | | | | | County depts. of ENV. & NR, Roads & public works |
| Awareness Creation on the need to maintain a Clean and Healthy Environment. | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NEMA. Local community. |
| Engage youth groups and Community-Based Organizations (CBO) in waste collection. | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NEMA. CBOs, Local community. |
| Construct additional primary schools in Ndavaya, Puma and Mwereni wards. | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. Local community. |

PART VI: PLAN IMPLEMENTATION

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| Establishment of 54 new secondary schools within the County. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. Local community. |
| Setting up of learning infrastructure for learners with special needs. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. |
| Fill the staff deficit in learning institutions. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. |
| Promote education research through the construction of community libraries in each ward. | | | | | | | | | | | | | | | | | | County government, National government, Kenya National Library Service. Non-Governmental development partners. |
| Increase coverage of school feeding programs in pre-primary and primary schools. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. FAO. |
| Initiate Education mentorship programs. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. Local community. |
| Undertake sustained sensitization and awareness on the need for formal training and education. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. Local community. |
| Upgrading infrastructure in the existing schools | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. KPLC, NEMA, Local community. |
| Funding Education through bursaries | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. |
| Construct a Teacher's Training College at Bang'a | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. KPLC, NEMA Local community. |
| Mainstream ICT in all levels of education | | | | | | | | | | | | | | | | | | County government, Non-Governmental development partners. |
| Support cooperate social responsibility investment Programs in education. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. |
| Revision and development of market-driven curriculum for vocational training centres | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NITA. |
| Establishment of a County technical and vocational education and training (TVET) centre of excellence | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NITA |
| Liaise with universities in Kenya and abroad to develop research centres and campuses within the County to offer training in marine studies, agriculture and mining. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. |

PART VI: PLAN IMPLEMENTATION

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| Establish internship and apprenticeship programs for TVET graduates. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NITA |
| Support religious education initiatives within the County. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Religious institutions, Local Community |
| Sensitization of citizens to ensure that they enrol to NHIF health cover to increase insurance coverage. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, WHO, |
| Prepare and adopt policies to Enhance health insurance coverage for the poor. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NHIF |
| Establishing more public health centres within the County to ensure easy accessibility. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners |
| Recruit more community health workers to administer health services at the village levels. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners. |
| Partner with health providers to develop free medical checkups and screening camps and stations program. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local Community. |
| Create awareness on HIV/AIDS prevention and other infectious diseases such as TB, Covid 19 and Cholera. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, NHIF, Local Community. |
| Undertaking public campaigns aimed at improving public nutrition and sanitation. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, |
| Enhance immunization to reduce infant and child mortality | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, KEMRI, Local Community. |
| Prepare and adopt policies for promoting home-based health care | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Incentivize private investment in health care | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Increase public spending on healthcare | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Establish Specialized Medical facilities for Cancer and Urology at Magandia. | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, KEMRI, Higher Learning Institutions, Local community. |
| Support healthcare initiatives by Non-Governmental Organizations (NGOs) | | | | | | | | | | | | | | | | | | County government, National government, Non-Governmental development partners, KEMRI, Local community. |

PART VI: PLAN IMPLEMENTATION

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| Facilitate land ownership documents for the health facilities that lack title deeds. | | | | | | | | | | | | County government, National government, NLC, Non-Governmental development partners, Local community. |
| Continuous Capacity Building for Health Workforce by developing and implementing employee capacity building programs | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Offer more medical scholarships for advanced medicine to medics in the County. | | | | | | | | | | | | County government, National government, Non-Governmental development partners, KEMRI, Higher Learning Institutions, Local community. |
| Train more specialized doctors. | | | | | | | | | | | | County government, National government, Non-Governmental development partners, KEMRI, Local community. |
| Acquire more mobile clinics to serve remote areas. | | | | | | | | | | | | County government, National government, Non-Governmental development partners, KEMRI, Local community. |
| Recognize and nurture talents through talent academies, annual games and sports. | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Designate public Parks around Kongo estuary and at Msambweni Referral Hospital. | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Renovate Kwale Cultural Centre amphitheatre. | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Install fire hydrants in major urban centres of Diani-Ukunda, Msambweni, Kinango and Lunga Lunga | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Build fire station in Diani Municipality and sub-stations in other major urban centres in Kwale, Msambweni, Kinango, Lunga Lunga, and Samburu | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Create fire breaks within County forests | | | | | | | | | | | | County government, National government, KFS, KWS Non-Governmental development partners, Local community. |
| Carry out periodic fire emergency drills | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |
| Prepare and adopt policies for fire and emergency response in all public areas. | | | | | | | | | | | | County government, National government, Non-Governmental development partners, Local community. |

Theme 6: Creating a system of Liveable human settlements and urban development

| Project/ Key strategic interventions | Time Frame | | | | | | | | | | | Actors | |
|---|--------------------------------|---------------------------|---|---|-----------------------------------|---|---|--------------------------|---|---|---|--------|---|
| | Rapid Results Initiative | Short Term (2019-2021) | | | Medium Term (2022- 2024) | | | Long-Term (2025-2028) | | | | | |
| | | 1 Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | 10 |
| Identify and classify urban areas | | | | | | | | | | | | | County Government National Government, Local Community. |
| Prepare and implement urban development plans for principal urban centres, growth centres and Market centres | | | | | | | | | | | | | County Government National Government, Local Community. |
| Provide Infrastructure and Services proportionate to the level of the urban area and its functions. | | | | | | | | | | | | | County Government National Government, Non-Governmental development partners, Municipalities, Local Community. |
| Development of the following strategic urban growth centres <ul style="list-style-type: none">Samburu, Kinango and Shimba Hills as Industrial towns,Ndavaya, as an Education town,Tsunza and Diani/Ukunda as resort towns,Mazeras and Mariakani as border townsMackinnon and Lunga Lunga as gateway towns,Vanga and Shimoni as port towns,Kuranze as a new town | | | | | | | | | | | | | County Government National Government, Non-Governmental development partners, Municipalities, Local Community. |
| Formulate a County urban development policy. | | | | | | | | | | | | | County Government National Government, Non-Governmental development partners, Municipalities, Local Community. |
| Establish management committees for growth centres. | | | | | | | | | | | | | County Government National Government, Non-Governmental development partners, Municipalities, Local Community. |
| Conduct periodical training and capacity building to the appointed administrators. | | | | | | | | | | | | | County Government National Government, Non-Governmental development partners, Municipalities, Local Community. |
| Undertake public sensitization on the need and benefits of clustered settlements. | | | | | | | | | | | | | County Government National Government, Non-Governmental development partners, Municipalities, Local Community. |
| Provide basic infrastructure and services to the local centres | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, Municipalities, Local Community. |
| Develop a County housing policy. | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, National Housing Cooperation, Municipalities, Local Community. |

PART VI: PLAN IMPLEMENTATION

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| Plan Kiteje as a special housing area to support the Dongo-Kundu SEZ | | | | | | | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, National Housing Cooperation, Municipalities, Local Community. |
| Upgrade existing Kwale Housing scheme | | | | | | | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, National Housing Cooperation, Municipalities, Local Community. |
| Set aside and service land for County housing schemes in principal growth centres. | | | | | | | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, National Housing Cooperation, NCA, Municipalities, Local Community. |
| Establish an Appropriate Building Materials and Technology (ABMT) Center in Kwale. | | | | | | | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, National Housing Cooperation, NCA, Municipalities, Local Community. |
| Promote building and construction training courses within the vocational institutions | | | | | | | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, National Housing Cooperation, NCA, NITA, Municipalities, Local Community. |
| Offer incentives for investors seeking Investment in housing development. | | | | | | | | | | | | | | | | | | | County Government, National Government, Non-Governmental development partners, National Housing Cooperation, KRA, Municipalities, Local Community. |

Theme 7: Strengthening Linkages through Seamless Transport and Infrastructure

| Project/Programme Key strategic interventions | Time Frame | | | | | | | | | | | | Actors |
|--|--------------------------------|---------------------------|---|---|-----------------------------------|---|---|--------------------------|---|---|---|----|--|
| | Rapid results initiative | Short Term (2019-2021) | | | Medium Term (2022- 2024) | | | Long-Term (2025-2028) | | | | | |
| | | 1 year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Dualling of Mombasa – Lungalunga (A7) Highway to efficiently serve the proposed seaports and airports. | | | | | | | | | | | | | National govt ,County government. – KeNHA, KURA,NLC, NEMA, Non-Governmental development partners |
| Upgrading to standard all-weather roads <ul style="list-style-type: none">Mariakani-Kinango- Ndavaya-LungaLungaLungaLunga-Godo-KuranzeKuranze-Kilibasi-MackinonKuranze-Nyango-VigurunganiKwale-Kinango | | | | | | | | | | | | | National govt., County government - KeRRA –KeNHA-KURA, NEMA-Non-Governmental development partners |
| Carry out periodic road surveys and maintain a database for the County roads. | | | | | | | | | | | | | County Government |
| Improve road furniture, including bridges, traffic calming facilities, road signage, designated pedestrian walkways and crossings in main roads. | | | | | | | | | | | | | National govt. -KeNHA, KeRRA, KURA, NEMA, NTSA, County government, Non-Governmental development partners |
| Completion of Funzi Causeway. | | | | | | | | | | | | | National Government, County government, NEMA, KMA, KeRRA, NLC |
| Upgrading of bridges at Ramisi, Marere, Mwachande, Uмба and Mwache. | | | | | | | | | | | | | National govt, County Government, WRA, NEMA, KENHA, KERRA |

PART VI: PLAN IMPLEMENTATION

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| Expand and improve Diani Airport | | | | | | | | | | | | | | | | | | | National Government, County Government, NLC, -KAA, Local Community, Tourism Regulatory Authority, Non-governmental development partners |
| Improvement of existing private airstrip at Kwale and Funzi through Public-Private Partnership. | | | | | | | | | | | | | | | | | | | National Government, County Government. -KAA NLC, Local Community, Tourism Regulatory Authority, Non-governmental development partners |
| Upgrading and completion of shelly beach-Pungu to Chale island beach road | | | | | | | | | | | | | | | | | | | National Government, County government of Mombasa, County Government of Kwale, NLC, Non-governmental development partners, KERRA, KURA |
| Operationalize and upgrade Perani and Mackinon airstrips. | | | | | | | | | | | | | | | | | | | National Government, County Government. KAA NLC, Local Community, Tourism Regulatory Authority, Non-governmental development partners |
| Upgrading of Wasini and Shimoni Jetty | | | | | | | | | | | | | | | | | | | National govt.- KPA, County Government, KMA, Non-Governmental Development partners, KRA |
| Introduction of maritime transport routes along the Indian Ocean to serve the following nodal points: Shimoni, Wasini, Tsunza, Vanga, Funzi and Msambweni | | | | | | | | | | | | | | | | | | | National govt. KPA, County Government, KMA, Coast Guard Services, Non-governmental development partners, Local Community |
| Preparation of Kwale County Integrated Transport Master Plan | | | | | | | | | | | | | | | | | | | National Government, County Government works, KAA, Kenya Railways, KPA, KeNHA, KeRRA, KURRA, KRA, Kenya Ferry, Local Community, Non-Governmental development partners, Municipality Boards |
| Designate boda-boda and tuk-tuk shades, biking lanes and pedestrian walkways. | | | | | | | | | | | | | | | | | | | National Government, County Government, Non-government development partners, NLC, KENHA, KERRA, KURA, Local Community |
| Construct four bus terminal facilities at Mariakani, Kinango, Lunga Lunga and Ukunda. | | | | | | | | | | | | | | | | | | | National Government, County Government, Non-government development partners, NLC, KENHA, KERRA, KURA, Local Community |
| Adopt joint planning and stakeholder participation in planning and designing transport infrastructural development projects. | | | | | | | | | | | | | | | | | | | National Government, County Government, Non-government development partners, NLC, KENHA, KERRA, KURA, Local Community |

PART VI: PLAN IMPLEMENTATION

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| Development of a County integrated transport information management system (CITIMS). | | | | | | | | | | | | | | | | | National Government, County Government, Non-government development partners, NLC, KENHA, NTSA, KERRA, KURA, Local Community, Kenya Ferry, KMA, Kenya Railways, KAA |
| Undertake Environmental and Social Impact Assessments for transport infrastructure developments and implement all the proposed mitigation measures in the Environmental Management Plans. | | | | | | | | | | | | | | | | | National Government, County Government, NEMA |
| Preparation of resettlement action plans for infrastructural development, which requires relocation of people. | | | | | | | | | | | | | | | | | National Government, County Government, NLC, Local Community, Non-governmental development partners |
| undertaking appropriate zoning and set land use standards for all urban centres | | | | | | | | | | | | | | | | | National Government, NEMA, County Government, Municipality Boards, Local Community |
| adopt pre-planned development approach to implementation of projects | | | | | | | | | | | | | | | | | National Government, County Government, KAA, KRC, KPA, KeNHA, KeRRA, KURA. |
| Demarcation of transport corridors with permanent markers/beacons | | | | | | | | | | | | | | | | | National Government, County Government, KAA, KRC, KPA, KeNHA, KeRRA, KURA, NLC, Local Community. |
| Continuous public sensitisation on the existing laws and policies relating to construction. | | | | | | | | | | | | | | | | | National Government, County Government, KAA, KRC, KPA, KeNHA, KeRRA, KURA, Local Community |
| Allocate adequate space for NMT when reserving land for roads development | | | | | | | | | | | | | | | | | National govt, County Government, NLC, KERRA, KURA, KENHA |
| Undertake urban greening | | | | | | | | | | | | | | | | | County Government, Municipality, Non-governmental Development partners, Local Community |
| Encourage partnership between the County and private developers in the improvement of NMT. | | | | | | | | | | | | | | | | | National Government, County Government, Non-governmental development partners, Local Community |
| Incorporate urban design in transport planning | | | | | | | | | | | | | | | | | County Government, Kwale and Diani Municipal Boards, KURA, KERRA, KENHA, Non-governmental development partners. |
| Construction of new bridge at Kongo | | | | | | | | | | | | | | | | | National Government, County Government, KeRRA, KENHA |
| | | | | | | | | | | | | | | | | | National Government, County Government, KeRRA, Local Community |

PART VI: PLAN IMPLEMENTATION

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Theme 8: Optimizing the County's Potential through Good Governance

| Project/Program Key strategic interventions | Time Frame | | | | | | | | | | | Actors |
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| | Rapid results initiative. | Short Term (2019- 2021) | | | Medium Term (2022- 2024) | | | Long Term (2025-2028) | | | | |
| | 1 Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Conduct stakeholder’s analysis to determine the roles of respective key stakeholders in the County’s projects and programs. | | | | | | | | | | | | County government, Local Community, National Government |
| Develop a program of workshops and training courses to enhance understanding of principles of good governance by civil servants, politicians, civil society and citizens in general. | | | | | | | | | | | | County government, Local Community, National Government |
| Constitute a Steering Committee (SC) which will play the role of inter-sectoral coordination | | | | | | | | | | | | County government, National Government |
| Conduct regular customer surveys and scorecards in service delivery in monitoring project implementation. | | | | | | | | | | | | County government, Local Community, National Government |
| Recruit adequate staff and deploy them to the various administrative levels. | | | | | | | | | | | | County Government |
| Initiate regular County staff capacity building and refresher programmes | | | | | | | | | | | | County Government, Kenya School of Government, Non-Governmental Development Partners |
| Establish a County Information Management system to facilitate sharing information amongst departments. | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, |
| Introduce a Result Based appraisal System for County Government Human resources to encourage better performance. | | | | | | | | | | | | County Government |
| Automate the service delivery systems, including revenue collection, planning and development approvals, single business permits, trade licenses, and tender application, among others. | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, |
| Engage civil society in joint forums for intensifying public participation. | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Local Community |

PART VI: PLAN IMPLEMENTATION

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| Enhance timely information dissemination to improve participation of the public in the preparation of public policies and programmes | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, local community, Local Media |
| Strengthen feedback mechanisms on service delivery to gauge customer satisfaction. | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community |
| Introduce public notice boards at public places for information dissemination | | | | | | | | | | | | | | | | | | | County Government, Municipality Boards |
| Update County land valuation roll. | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community NLC |
| Review of County Finance Act to include more revenue streams from Natural resources in the County to diversify income, i.e. from major mining industries. | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community |
| Preparation of service delivery charters | | | | | | | | | | | | | | | | | | | County Government, Municipality Boards |
| Diversify County revenue streams through deliberate investments | | | | | | | | | | | | | | | | | | | County Government, National Government |
| Establish a disaster management unit. | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community, Kenya Meteorological Services, Kenya Red Cross |
| Set up early warning systems and training for disaster preparedness. | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community Kenya Meteorological Services, Kenya Red Cross |
| Construct water pans in ASAL regions and dam flood-prone rivers. | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community, NDMA, NEMA |
| Map out insecurity prone areas and establish police posts and stations. | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community, |
| Strengthen community policing strategies, including the Nyumba Kumi initiative. | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community |
| Establish and facilitate programs to engage the youth, such as sports and organize them into groups for business and economic empowerment. | | | | | | | | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community |
| Partner with National Government in establishing a military defence installation in Kinango Sub County. | | | | | | | | | | | | | | | | | | | County Government, National Government, Local Community, NLC, -KDF |

PART VI: PLAN IMPLEMENTATION

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|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Develop a policy to regulate land use around military installations. | | | | | | | | | | | | County Government, National Government, Local Community, NLC, -KDF |
| Establish a Coast Guard station at Shimoni. | | | | | | | | | | | | County Government, National Government, Local Community, NLC -,Kenya Coast Guard,-KDF |
| Designate and equip guidance and counselling department in all schools. | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local CommunityHead of Schools, Religious Institutions |
| Establish a County talent academy. | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community |
| Undertake annual talent exhibition programs to identify and nurture talents. | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community |
| Establish centres for the elderly to interact with their peers in each ward. | | | | | | | | | | | | County Government, Non-Governmental Development Partners, National Government, Municipality Boards, Local Community |

17.3 Capital Investment Plan (CIP)

17.3.1 Background

The capital investment plan incorporates anticipated long term public infrastructure, which are capital intensive and require a specific financing approach to implement. Projects identified in the capital investment plan are large-scale and will incur a large investment cost. Such projects usually require good planning and attention than what is required to implement normal projects.

The outcome of actualizing capital investment projects is expected to trigger transformation in various development sectors in the County. Capital Investment projects will be vital to enhancing the economy's future performance and cushioning it against unpredictable and unforeseen risks. The projects will considerably influence social transformation, progress, and balanced regional growth.

The plan includes planned investments in essential infrastructure in Transport, agriculture, industrialization, Health, Water and Sanitation, Tourism, Energy, ICT and Housing, to be implemented by the County Government and National Government and National Government agencies. Some projects in these key priority areas will be implemented, not directly through public exchequer financing, but will form a pipeline for Public-Private Partnership engagements.

17.3.2 Key Sectors of Investment

The plan highlights the following capital investments projects for implementation.

Table 60: Capital Investment Projects

| Sector | Project |
|----------------------------------|--|
| Industrialization | <ul style="list-style-type: none"> Establishment of Samburu SEZ and Shimoni SEZ Exclusive Economic Zone at Lunga Lunga ICT hub within the Diani Industrial Park |
| Water and Sanitation | Construct of dams along the Uмба River, Design and construction of sewerage system for Kwale and Ukunda/Diani Desalination of Sea Water at Msambweni |
| Energy | Setting up of a Solar Farm at Kinango Sub County |
| Transportation | Tarmacking of Kuranze -Kilibasi- Mackinnon transport corridor (71.44Km) Tarmacking of Lunga Lunga-Mwangulu-Mwereni-Ndavaya-Kinango transport corridor (55. 64 Km) Tarmacking of Lunga Lunga - Kuranze transport corridor (78 Km) Tarmacking of Mwereni – Kilibasi transport corridor (64. 26 Km) Tarmacking of Kinango- Mkongani- Shimba Hills – Magaoni – Gazi (68.3 Km) Establishment of Kidimu airport |
| Health | A specialized medical facility of excellence in cancer and urology at Msambweni. Upgrading of KMTC in Msambweni to a medical university. |
| Housing | Upgrade existing Kwale Housing scheme Re-develop the white house as a Housing scheme at Diani |
| Agriculture and Fisheries | Establish irrigation scheme at Uмба River Cassava processing plant at Ndavaya Meat processing at Kinango Tannery at Vigurungani Fish processing at Shimoni The coconut processing plant at Msambweni |
| Tourism | Tsunza Resort Town MICE facility at Waa Two Fishes Public Beach International Stadium at Kinango |

- **Source of Costing:** The cost estimates for the CIPs are based on unit rates built up from basic principles based on market prices for the various material items and worked components as applicable. The unit rates developed in the build-up exercise were compared to recent rates derived from construction contracts of similar nature carried out in the respective project areas. The cost may therefore vary over time. Reference was also made to the following documents:
 1. “Current Construction Costs in Kenya” as prepared by the Institute of Quantity Surveyors of Kenya and published in the “The Quantity Surveyors” Magazine.
 2. “Current Construction Costs Handbook” published by the Cost Planning Unit of the Quantity and Contracts Department of the Ministry of Public Works.
 3. “Case Study 16 - Construction Financing in Africa’s Affordable Housing- Detailed costings for Kenya, November 2019” published by Centre for Affordable Housing Finance in Africa.

Table 61: Capital Investment Projects costing

| Project | Component Project | Unit | Number of Units | Estimated Cost | Financing Options |
|--|---|------------|-----------------|---------------------------------|---|
| Establishment of Samburu SEZ and Shimoni SEZ | SEZ | | 2 | 2*20,000,000,000=40,000,000,000 | <ul style="list-style-type: none"> National government County government PPP |
| Construction of dams | Umba Dam | | 1 | 35,000,000,000 | <ul style="list-style-type: none"> National government County government |
| Design and construction of sewerage system (Trunk) | Kwale | Meters | 6700 | 236,657,400 | <ul style="list-style-type: none"> County Government Donors |
| | Diani | Meters | 16000 | 565,152,000 | <ul style="list-style-type: none"> County Government Donors |
| Setting up of a Solar Farm at Kinango Sub County. | Solar farm | | 100 Ha | 15, 000,000,000 | <ul style="list-style-type: none"> National Government Donors |
| Tarmacking of Roads | Kuranze -Kilibasi-Mackinnon | Kilometres | 71.44Km | 5,000,800,000 | <ul style="list-style-type: none"> National Government Conditional Grants |
| | Lunga Lunga-Mwangulu-Mwereni-Ndavaya-Kinango | Kilometres | 55. 64Km | 3,894,800,000 | <ul style="list-style-type: none"> National Government |
| | Lunga Lunga - Kuranze | Kilometres | 78 | 5,460,000,000 | <ul style="list-style-type: none"> National Government |
| | Mwereni – Kilibasi | Kilometres | 64.26 | 4,498,200,000 | <ul style="list-style-type: none"> National Government |
| | Kinango- Mkongani-Shimba Hills – Magaoni – Gazi | Kilometres | 68.3 | 4,781,000,000 | <ul style="list-style-type: none"> National Government |
| Set up a specialized medical facility of excellence in cancer and urology at Msambweni | | | | 10,000,000,000 | <ul style="list-style-type: none"> National Government County Government Donor Funding |
| Upgrade existing Kwale Housing scheme | | | 5,000@2,000,000 | 10,000,000,000 | <ul style="list-style-type: none"> Public- Private Partnership |
| Upgrading of KMTC in Msambweni to a medical university. | | | | 2,000,000,000 | <ul style="list-style-type: none"> National Government County Government Donor Funding |

PART VI: PLAN IMPLEMENTATION

| | | | | | |
|---|------|--|--|----------------|---|
| Re-generation of white house neighbourhood in Diani as a Housing scheme | | | | 3,000,000,000 | <ul style="list-style-type: none"> • Public- Private Partnership |
| Establish irrigation schemes | Umba | | | 7, 650,090,000 | <ul style="list-style-type: none"> • National Government • County Government • PPP |
| Cassava processing plant at Ndavaya | | | | 700,000,000 | <ul style="list-style-type: none"> • National Government • County Government • PPP |
| Meat and tannery processing at Vigurungani | | | | 1000,000,000 | <ul style="list-style-type: none"> • National Government • County Government • PPP |
| Fish processing at Shimoni | | | | 2,000,000,000 | <ul style="list-style-type: none"> • National Government • County Government • PPP |
| The coconut processing plant at Msambweni | | | | 500,000,000 | <ul style="list-style-type: none"> • National Government • County Government • PPP |
| Tsunza Resort Town | | | | 15,000,000,000 | <ul style="list-style-type: none"> • National Government • County Government • PPP |
| MICE facility at Waa | | | | 2,000,000,000 | <ul style="list-style-type: none"> • National Government • County Government • PPP |
| Development of Two Fishes and Kongo Public Beaches recreational areas | | | | 6,000,000,000 | <ul style="list-style-type: none"> • National Government • County Government • PPP |
| Development of International Stadium at Kinango | | | | 5,000,000,000 | <ul style="list-style-type: none"> • National Government • County Government • PPP |

17.3.3 Financing the Plan

Implementing the capital investment projects and other projects/ programs identified in the plan will be cost-intensive. The budgetary room for public investment is within tight limits due to the limited allocation from exchequer financing coupled with policy backed budgetary caps and spending ceilings. There is a need to diversify the sources of financing to actualize the plan.

17.2.1 Regular Exchequer Financing

These will be resources derived from the consolidated and equalization funds' revenue share. It forms the primary source of finance for implementing development projects at the County.

17.2.2 Loans and Grants

Development loans and grants from external sources may be used to fund large scale development projects. These loans could be secured or unsecured. On the other hand, grants may come as financial awards from development partners to the County to form additional sources for furthering investments in projects.

17.2.3 Mobilizing private capital through incentives

This mechanism will involve convincing private investors and organizations to mobilize capital and take part in the actualization of some of the projects and programs identified in the plan by enticing the investors with fiscal measures such as tax reliefs and exemptions, tax breaks, government fee subsidies, as well as tariff reduction. Non-fiscal measures such as offering land for investment, access to raw material, offering skilled labour, infrastructure assistance, regulatory concessions and simplified regulatory procedures, subsidized infrastructure may be applied as inducements for investments.

17.2.4 Equity through Public-Private Partnerships

Public-Private Partnerships will play a significant role in offsetting financial shortfalls and injecting monetary support and expertise in implementing development projects and programs. This will require the County Government to enter into partnership agreements with Private development partners and institutions to address challenges in implementation by using their unique competencies.

17.2.5 User Financed Models

This approach will raise funds for implementing the plan by imposing fees on certain public investments/services. The County may use funds generated from existing investments to supplement the resources required to implement proposed projects.

17.2.6 Donations

These funds may be granted to the county to implement the proposed projects and programmes. The aid may come from country-based organizations, institutions or external donations from foreign individual organizations or countries.

17.2.7 Bonds

These are mid to long term obligations issued by the government for purchase by the investors. The National Treasury has developed a borrowing framework that allows the County Government to access the issuance of bonds at the Nairobi Security Exchange. The County Government can raise funds for key infrastructure projects through this finance method.

17.2.8 Alteration of Budgets

Budgetary alterations involve moving funds allocated to more priority areas of investments. Funds released from such alterations may finance the priority public projects and programs.

17.2.9 Improved Revenue collection

Revenue sources within the County include property taxes, service charges, and entertainment tax. Maximizing collection from these revenue sources can contribute to financing the development project and programs.

17.2.10 Insurance Claim

The County Government can claim insurance from insured assets and the monies used to fund its public projects.

17.2.11 Foreign Direct Investment

Attracting foreign direct investment by creating an enabling environment for investors to invest in development projects directly can significantly boost funding development projects in the County. With foreign direct investment, the County is likely to receive capital investment to propel growth and development using the underutilized assets and other untapped opportunities.

17.2.12 Formal Guarantees

Through the national government, the county may use its available assets as security to obtain funding for major infrastructural projects from external lenders/financial institutions.

17.4 Monitoring, Evaluation and Learning (MEL) Framework

17.4.1 Overview

Kwale County Spatial Plan is a 10 year plan prepared to fulfil the Kenyan Constitution 2010 that requires all Counties to prepare and implement the County Spatial Plans (CSPs) amongst other plans. The plan provides a general description for future land use in the county to achieve economic prosperity and balanced development through sustainable utilization of available resources.

The KCSP is multi-sectoral and therefore brings together various sectors/ actors within County Government and private sector realm. They include relevant National and County Government Ministries and departments, civil society, and financing institutions. Following the diversity of the stakeholders, there is a need for coordinated follow up on the progress of the plan implementation process within the entire planning period.

17.4.2 Purpose of monitoring

The monitoring of the plan implementation is to provide the County, NGOs and other relevant stakeholders with feedback on implementation progress and identify problems and successes as early as possible to allow timely adjustment of implementation arrangements. In addition, M & E will oversee that the CSP is implemented as designed and approved to realize set objectives.

17.4.3 Scope of Monitoring and Evaluation Plan

Plan Monitoring and Evaluation will be done at 3 levels:

- Regular monitoring
- Mid-term review
- End Term evaluation

Areas relating to the effectiveness of KCSP implementation include the physical progress of land Zoning and uses, environmental preservation and conservation, economic development through tourism development and industrialization and infrastructural development.

17.4.4 Monitoring

The monitoring and evaluation of the KCSP have been designed as a key component to enable reflection on achievements, encountered predicaments, learnt lessons and apply in the entire planning period.

Kwale County Government will lead the execution and follow up of the plan implementation process. The County will institute a steering Committee (SC) that shall comprise representatives from all County Government Departmental sectors. Other relevant stakeholders from the Private

sector institutions shall be included while the Planning unit will be responsible for overall coordination of the rolling out of the Kwale County Spatial Plan.

The SC will convene annual planning meetings to review and assess the plan implementation progress of works. In addition, the committee will receive annual monitoring reports to fast track KCSP operationalization and implementation progress status, discuss issues raised during regular monitoring, and confirm the efficiency and effectiveness of the strategic interventions.

17.4.5 Evaluation

An evaluation will be undertaken at midterm and upon the completion of the plan implementation timeframe after 5 years and 10 years, respectively. The evaluation will ensure compliance to legal and policy guidelines, implementation process, project financing and impacts of the strategic interventions after 10 years of plan implementation. However, a midterm review of KCSP will be undertaken 5 years after implementing the plan. The County will engage a consultant to review and evaluate spatial plan implementation.

The monitoring and evaluation process will use diversified methods to collect qualitative and quantitative information. The methods will include observation, review of monitoring reports, in-depth interviews, Focused Group Discussion (FGDs) and economic survey with a selected sample of the beneficiary population.

17.4.6 Reporting

Annual monitoring reports will be prepared and submitted to the SC and respective departmental heads. However, regular monitoring biannual briefs will be prepared for implementation updates. On the other hand, Mid-term and end-term evaluation reports will be prepared and submitted to the County through the SC at 5 and 10 years of implementation.

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