



REPUBLIC OF KENYA

MINISTRY OF TRANSPORT

INTEGRATED NATIONAL TRANSPORT POLICY:

MOVING A WORKING NATION

May 2009

LIST OF ACRONYMS

AGOA	African Growth and Opportunity Act
ATMP	Air Transport Master Plan
AU	African Union
AFI	African and Indian Ocean Region Air Navigation Plan
BASA(s)	Bilateral Air Services Agreement(s)
ASAL(s)	Semi Arid Land (s)
BOO	Build Own and Operate
BOT	Build Operate and Transfer
CBS	Community Based System
C/F	Clearing and Forwarding
CDO	Central Documents Office
CID	Criminal Investigations Department
CIF	Cost of Insurance, and Freight
CNS/ATM	Communication, Navigation Surveillance/Air Traffic Management
COMESA	Common Market for Eastern and Southern Africa
CRS	Computer Reservation System
DCA	Directorate of Civil Aviation
DRC	Democratic Republic of Congo
DSIs	Data Sharing Institutions
EAC	East African Community
EARC	East African Railways Corporation
ECA	Economic Commission for Africa
EEZ	Exclusive Economic Zone
EMCA	Environment Management and Coordination Act
EPZ	Export Processing Zone
ERS	Economic Recovery Strategy for Wealth and Employment Creation 2003-2007
FAA	Federal Aviation Administration
FOB	Free on Board
FTZ	Free Trade Zone
GATS	General Agreement in Trade and Services
GATT	General Agreement in Trade and Tariffs
GBCP	Gravelling, Bridging and Culverting Programme
GDP	Gross Domestic Product
GHGs	Greenhouse Gas emissions
GoK	Government of Kenya
HGV(s)	Heavy Goods Vehicle(s)
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IAPH	International Association of Ports & Harbours
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
ICC	International Chamber of Commerce
ICD(s)	Inland Container Depot(s)
ICT(s)	Information and Communication Technologies
IGAD	Inter-Governmental Authority for Development
IGPCC	Intergovernmental Panel on Climate Change
IMO	International Maritime Organisation
IMT	Intermediate Means of Transport
INCOTERMS	International Commercial Terms

ISPS	International Ship and Port Security Code
ITMP	Integrated Transport Master Plan
IWTMP	Inland Water Transport Master Plan
JIT	Just In Time
JKIA	Jomo Kenyatta International Airport
KAA	Kenya Airports Authority
KAAO	Kenya Association of Air Operators
KATO	Kenya Association of Tour Operators
KCAA	Kenya Civil Aviation Authority
KeNHA	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority
KFSL	Kenya Ferry Services Limited
KMA	Kenya Maritime Authority
KNSL	Kenya National Shipping Line
KPA	Kenya Ports Authority
KPC	Kenya Pipeline Company
KRA	Kenya Revenue Authority
KRB	Kenya Roads Board
KRC	Kenya Railways Corporation
KURA	Kenya Urban Roads Authority
KWS	Kenya Wildlife Services
LATF	Local Authority Transfer Fund
LV	Lake Victoria
MMF	Mass Media Fora
MTA	Metropolitan Transport Authority
MDGs	Millennium Development Goals
MoE	Ministry of Energy
MoF	Ministry of Finance
MoLG	Ministry of Local Government
MoR	Ministry of Roads
MoT	Ministry of Transport
MPD	Metropolitan Police Department
MRP	Minor Roads Programme
MT	Motorised Transport
NaTIS	National Traffic Information System
NAVAIDS	Navigational Aids
NCTTA	Northern Corridor Transit Transport Authority
NEMA	National Environmental Management Authority
NEPAD	New Partnership for African Development
NIC	Newly Industrialised Country
NICs	Newly Industrialised Countries
NMIMTs	Non-Motorized and Intermediate Means of Transport
NMTs	Non-Motorized Means of Transport
NPEP	National Poverty Eradication Plan
NTISS	National Transport Information Support Service
NVOCC	Non-Vessel Operating Common Carrier
OOW	Officer in Charge of the National Watch
OP	Office of the President
PRSP	Poverty Reduction Strategy Paper
PSC	Port State Control
PSO(s)	Public Service Obligation(s)
RARP	Rural Access Roads Programme

RaTMP	Rail Transport Master Plan
RDA	Railway Development Authority
ROA	Railway Operating Agency
RTG	Rubber Tired Gantries
RTMP	Road Transport Master Plan
RVR	Rift Valley Railway
SADC	Southern Africa Development Community
SAR	Search and Rescue
SARP(s)	Standards and Recommended Practices
SARS	Severe Acute Respiratory Syndrome
SIDS	Small Island Developing States
SMME(s)	Small, Medium and Micro Enterprises
SOLAS	Safety of Life at Sea
SSG(s)	Ship to Shore Gantry (s)
STCW	Standards of Training, Certification, and Watch Keeping for Seafarers
SUA	Suppression of Unlawful Acts against ships
TAMS	Total Airport Management System
TEU	Twenty foot Equivalent Unit
TLB	Transport Licensing Board
TRC	Tanzania Railways Corporation
TSP	Total Suspended Particles
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value Added Tax
VOCs	Vehicle Operating Costs
WHO	World Health Organisation
WTO	World Trade Organisation
YD	Yamoussoukro Decision/Declaration

EXECUTIVE SUMMARY

As we commence the implementation of Kenya's Long Term Development Strategy, Vision 2030 after a successful implementation of the "*Economic Recovery Strategy for Wealth and Employment Creation 2003-2007*" (ERS), Kenya is looking to the future with the aim of consolidating, enhancing and sustaining the gains of the ERS. The transport sector is recognized as a key pillar and a critical enabler in the achievement of this strategy. It will be important not only in improving the competitiveness of products from Kenya and the region, but also serve as a significant basis upon which the economic, social and political pillars of this long term development strategy will be built. Further, the sector is expected to remain a key component in tackling such challenges as reduction of poverty by half by the year 2015 and overall improvement in the general welfare of the population.

Given this envisaged economic development and subsequent sustained growth, in the context of changing population and land use patterns, a competitive regional and global economy, strategic nation building considerations and new market development, it is apparent that the task for transport will be highly complex and demanding.

The process leading up to the development of this policy document was conducted in a consultative manner, punctuated with modelling of solutions based on international best practices to bridge the gap between local challenges and planned interventions.

To enable the transport sector effectively play its role in this scenario, the former Minister for Transport, Hon. John N. Michuki, MP, launched the National Transport Policy Committee on 2nd April 2003. Its sole mandate was to formulate an Integrated National Transport Policy. The process was conducted on a consultative basis punctuated with modelling of solutions based on international best practice to bridge the gap between local challenges and planned interventions.

This Policy Paper *on* Integrated National Transport Policy for Kenya *under the theme* "*Moving a Working Nation*", identifies a number of challenges inhibiting the transport sector from performing its role in respect to national, regional and international economies. The key elements on the way forward for the transport sector include

Current and Future Challenges for the Transport Sector

This paper, "**A Report on Integrated National Transport Policy: Moving a Working Nation**", identifies a number of challenges inhibiting the transport sector from performing its facilitative role in respect of national and regional economies.

CHALLENGES BESETTING THE TRANSPORT SECTOR

- Poor Quality of Transport Services
- Inappropriate Modal Split
- Unexploited Regional Role of the Transport System
- Transport System Not Fully Integrated
- Urban Environmental Pollution
- Lack of an Urban/rural Transport Policy
- Institutional Deficiencies
- Inadequate human resource capacity
- Lack of a Vision for the Transport Sector

Addressing these challenges will require that interventions leading to enhanced transport sector performance be pursued. These include integration of transport with national development priorities, increasing investment in transport infrastructure and operations as well as responding to market needs of transport. Other interventions will revolve around the enhancement of transport services and quality, consumer protection, catering for consumers with special needs, ensuring fair competition and integrating information and communication technologies in transport development and operations.

The need to eliminate impediments to non-motorised and intermediate means of transport, enhance transport safety and security, develop and maintain a safe and secure transport system, sustainable utilisation of the environment, integration of transport and land use planning, and appropriate use of weather and climate information as well as development of the requisite human resource capacities are key elements of the way forward for the transport sector.

Foundations for the Comprehensive Transport Sector Reform

To deal with the challenges and demands placed on the transport sector in Kenya, a new strategic direction will have to be cultivated. The vision and mission for this new direction, as well as the strategic objectives are set out in this document and the latter includes: fostering national and regional economic integration and trade facilitation; establishing appropriate institutional systems; developing and maintaining an integrated and coordinated transport system; developing appropriate funding/financing mechanisms; integrating transport and land use planning and management systems; delivering efficient and effective sector operations; enhancing investments in the transport sector; applying ICTs in the transport system; and incorporating environmental protection and resource conservation issues in transport sector activities. In addition, the policy endeavours to ensure enforcement and compliance with sector laws and regulations; develop a national transport information database; enhance public awareness; improve safety and security; develop and promote appropriate human resource capacities in the sector; and facilitate public private partnerships.

VISION AND MISSION FOR THE INTEGRATED NATIONAL TRANSPORT POLICY

VISION

“A world-class integrated transport system responsive to the needs of people and industry”

MISSION

“To develop, operate and maintain an efficient, cost effective, safe, secure and integrated transport system that links the transport policy with other sectoral policies, in order to achieve national and international development objectives in a socially, economically and environmentally sustainable manner”.

HIGHLIGHTS OF THE POLICY PRINCIPLES

- Clarification of the roles of the central and local governments, statutory bodies, non-governmental bodies, and the private sector in the delivery and management of transport infrastructure and services

- User pays and polluter pays principles to facilitate economic efficiency, generation of sufficient revenues to support development, operation and maintenance of transport infrastructure and services, eliminate distortions user choice of transport modes, eliminate to the extent possible externalities in production and consumption e.g. pollution and congestion
- Stakeholder consultation in setting of tariffs and other prices
- Financing of economic infrastructure through user charging or cost recovery from direct users
- Financing of social and strategic infrastructure through subsidisation on a declining basis over time
- Institutionalisation of Regulatory Impact Analysis to enable assessment of regulatory proposals

Establishment of Industry Codes of Conduct and Client Service Charters to enhance service delivery in the transport sector. A key feature of this proposed reorganisation is fidelity to the maxim of separating policy making, regulation and service provision roles in the transport sector. This enables clarification of public and private sector roles. It also enhances avenues for private sector participation, while strengthening the role of the public sector as a facilitator and guarantor of the public interest in the transport sector.

In pricing transport and operations, the policy proposals adopt the **User Pays Principle; Polluter Pays Principle; and Stakeholder Consultation Principle** to deal with the problems of economic inefficiency; inadequate revenues to develop, operate and maintain transport infrastructure and services; and avoid creation of distortions in users' choice of mode of transport; as well as pollution and congestion.

It is recognised that for "economic" infrastructure and operations which provide measurable economic or financial returns, user charging or cost recovery from direct users will be applied as far as possible. Social and strategic infrastructure and operations that cannot be financed through user charges will be financed in a transparent manner through appropriations, grants or subsidies to achieve an equitable distribution of resources, or as an incentives. In the longer term, the GoK will seek a reduction in the subsidisation of transport operations, predicated on a more effective and efficient public transport system being developed.

Given the new role for the public sector, a number of regulatory options are discussed including regulation of specific services provided under contract, regulation of monopolies, regulations of competing operators, and regulation by contract. Also, the need to **Institutionalise Regulatory Impact Analysis** to address, amongst other things, regulatory proposal clarity, risk assessment, impacts of regulation on stakeholders, alternatives to the proposals, enforcement issues and the equity and fairness of each proposal. In addition, they will ensure that monitoring and evaluation of regulatory policy proposals are undertaken on a continuous basis.

The paper also provides for establishment of **Codes of Conduct** to facilitate self-regulation and discipline in the transport industry. To enhance service delivery in the industry, institutions will be required to establish **Client Service Charters** specifying inter alia expected service delivery benchmarks and consumer complaints and redress procedures. Additionally, general measures aimed at improving the human resource and acquiring technology for ensuring sector growth and sustainability are discussed.

ELEMENTS OF THE NEW FRAMEWORK FOR TRANSPORT SECTOR MANAGEMENT

- Establishment of the Directorate of Transport

- Consolidation of Transport Functions under one Ministry, and separation of Policy Making, Regulatory and Service Provision Functions
- Enhancing the Role of the Private Sector in Transport Infrastructure Development and Management
- Integration of Non-Motorised and Intermediate Means of Transport into the Transport Systems
- Consolidation of Urban Public Transport

A New Framework for Transport Sector Management

The analysis shows that the transport sector as currently organised is unable to address the investment, service quality, safety and security needs of the envisaged integrated transport system aimed at setting up Kenya as the transport hub for the East and Central African region amongst other goals. In this regard, the policy proposals in this document envisage a new look transport sector, whose key functions are coalesced into one ministry, under the **Directorate of Transport (DOT)**. The other missing links and institutions whose roles have been enhanced under this policy include **the National Transport Safety Board, the National Transport Research Institute, and the National Transport Information Support Service**.

The other key plank of the policy proposals is that of securing integrated transport infrastructure and service provision. Thus, the envisaged Directorate of Transport is mandated to develop an Integrated Transport Master Plan encompassing all modes. Further, it is anticipated that **Local Transport Plans** based on partnerships between stakeholders take into account local transport needs and linkages with other sectors.

The policy proposals recognise the importance of Non-Motorised and Intermediate Means of Transport in addressing the needs of the poor as well as in promoting the health of the population. In this regard, integration of NMIMTs in the design, development and operation of all modes of transport is recommended. Other measures are proposed to promote the development and use of NMIMT vehicles. The sum total of these measures will be an enhanced role for NMIMTs in urban and rural areas.

PROMOTION OF NMIMTS IN THE TRANSPORT SYSTEM

- Harmonisation of NMIMTs and their concomitant infrastructure into technical, legal and institutional mandates of transport agencies, so that they can effectively play a complementary role to other transport modes.
- Incorporate NMIMTs in the urban and rural road network including provision of incentives to support local manufacture of NMIMT vehicles.
- Provision of appropriate basic road infrastructure, furniture and other amenities including pedestrian crossing, walkways, footbridges and other facilities for NMIMTs.
- Establish appropriate curricular for training NMIMT operators on proper transport infrastructure and proper maintenance of vehicles and to facilitate positive behaviour change on roads.
- Register and regulate NMIMT vehicles and brand animals with local authorities at grass root levels for purposes of identification in case of an accident.
- Establish standards and specifications for NMIMTs, their registration and branding animals used for transport and develop a system for regulating their use.

The need to achieve an appropriate modal balance in the sector is recognised in this document. Thus, measures are proposed to ensure that the most appropriate mode of transport is applied. For instance, the current freight modal share between road and rail transport is targeted for redress in favour of rail transport. The other aspect relates to the modal split between public and private transport in urban areas. The document proposes measures aimed at **“Consolidation of Urban Public Transport”**, through encouraging a shift to high occupancy vehicles amongst other measures.

In light of the poor safety and security record of the transport sector in Kenya, and in the context of global events, policy proposals have been identified to develop sub-sector and transport wide measures to address the issues of transport safety and security. A key intervention of these policy proposals in this regard is the formation of the National Transport Safety Board. Sub-sector measures proposed include the development of a **Comprehensive National Aviation Safety and Security Programme, an Integrated Road Safety and Security Programme**, domestication of the International Ship and Port Security Code amongst others. Other proposals include incorporation of transport research, health aspects of transport, and ICTs into the transport sector to enhance performance of the sector.

Funding of the transport sector has presented a major challenge. The policy proposals in this document envisage a revision of the tax regime to facilitate balanced development of the sector. They also recognise new innovative approaches to fund transport infrastructure development and transport operations such as **Build Own Operate and Transfer Models, Joint Ventures between the Public and Private Sectors**, and **Dedicated Infrastructure Agencies** amongst others. The policy proposes a **“Transport Industry Training Levy”**, to help fund human resource development for the transport sector.

Implementation of the Policy

Key to achieving the vision and mission set out in this paper, is the setting up of an **“Interim Implementation Team”**, comprising the public and private sectors to guide the initial stages of implementing the policy.

It is recognised that stakeholder participation accompanied by leadership from the Ministry of Transport will form a solid foundation for successful implementation of the policy proposals. The time-frame for these proposals is 15 years, with intervening short and medium term phases. The need to continuously monitor and review policy implementation is emphasised as one of the building blocks in implementation.

Benefits of Policy

Successful implementation of the policy proposals contained in this report is expected to yield a number of short, medium and long term benefits.

In the short term it is expected that there will be maximum utilisation of existing facilities, development of a facilitative legal, institutional and regulatory framework for the sector, and efficiency in transport project investment.

In the medium term it is anticipated that the building blocks for integrating transport with the economy, enhancing transport safety and security and expansion of capacity in the transport sector will have been laid.

The long term benefits will see expanded transport sector capacity at all levels, an improved regional and intermodal transport balance, strengthened multi-modalism in the transport sector and application of innovative transport techniques for improved transport sector performance. The sum total of these interventions will be an enhanced transport sector contribution to the economy and the region.

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CHAPTER ONE

OVERVIEW OF THE TRANSPORT SECTOR IN KENYA

1.1 DEFINING THE TRANSPORT SECTOR

1.1.1 An efficient transport system is an important prerequisite for facilitating national and regional integration, promoting trade, economic development, contributing to poverty reduction and wealth creation and the achievement of the objectives of Vision 2030 and beyond. In Kenya, the transport sector consists of the following modes:-

- Road transport
- Rail transport
- Maritime and inland water transport
- Pipeline transport
- Air transport and
- Non-Motorised and Intermediate Means of Transport (NMIMTs).

1.1.2 This policy covers key challenges related to transport infrastructure planning, development and management, legal, institutional and regulatory framework for the sector, safety and security, funding, gender mainstreaming, utilisation of Information and Communication Technology (ICT), and environmental considerations, among others. Its aim is to provide a policy that is conducive to the stimulation of rapid development and efficient management of a safe, widely accessible transport system that responds to modern technological advancement in a rapidly changing and globalized environment.

1.2 A SITUATION ANALYSIS OF THE SECTOR

1.2.1 Kenya's Macro-Economic Setting

1.2.1.1 Kenya's economy recorded high growth rates of real Gross Domestic Product (GDP) averaging 6.6% per annum during the immediate post-independence years (1964-1973) and towards the end of that decade. Deceleration of this growth which started in late 1970s, continued until 2002 when the economy registered a record negative growth rate of 0.2%. During the years 1997-2002 economic growth declined steadily with GDP recording an average annual growth rate of only 0.9%, against a population growth rate of 2.9% per annum. The economy has been on a recovery path since 2003 when real GDP grew by only 0.5% to 6.1 % in 2007, giving rise to an annual growth rate of about 4.3% against a population growth rate of about 2.8% per annum.

1.2.1.2 Among the key factors contributing to the economic decline were poor infrastructure, particularly bad roads, inadequate energy supply, inadequate water supply, a weak institutional framework, weak performance of the major sectors of the economy namely; agricultural and manufacturing sectors, and poor macro-economic management. More recently, about 46.6 % of Kenya's population of 35.5 million people in 2005/06¹ was estimated to be living below the country's poverty line in both rural and urban areas.

1.2.2 Overall Performance of the Transport Sector

Over the period 1960-2000, the transport sector grew at an average annual rate of 5.5% compared to 4.09 % for the overall economy. This increase during the period was due mainly to substantial external resources comprising external borrowing and grants. The

¹ Kenya National Bureau of Statistics, *Basic Report on Wellbeing in Kenya, April 2007*.

sector's contribution to GDP averaged 6.4 % per annum with very little fluctuation. Ideally, this percentage should be around 10% of GDP. During the period 2002-2006 the contribution of transport and storage to GDP fluctuated upwards from 1.6% in 2002 to 7.3% of total GDP in 2006.

1.2.3 Road Transport

1.2.3.1 Historically, the road network was developed as a subsidiary of the railway system up to the time of Kenya's independence in 1963. Railways were developed for the transportation of bulk commodities and passengers over long distances. Roads were used as a link between the railways and the European-owned large scale farming areas. Little or no interest was accorded to rural areas where subsistence farming was practiced by Africans. Since independence, measures taken by the government to develop and maintain roads include:

- Selective bituminization of heavily trafficked trunk and primary roads and upgrading of priority earth roads to gravel standards in the late 1960's and early 1970's;
- Development of Special Purpose Roads to serve specific areas of economic activities e.g. roads serving areas where main cash crops such as tea, coffee, or sugar were grown or roads serving the tourist industry.
- Construction of farm-to-market rural roads under the Rural Access Roads Programme (RARP) from 1974 to 1986. The purpose of the RARP was to provide access to social and administrative facilities, promote agricultural development and create employment opportunities;
- Improvement of low-trafficked secondary and minor roads under the Minor Roads Programme (MRP) from 1986 to link rural access roads to roads of higher classes;
- Improvement of heavily trafficked secondary and minor roads under the Graveling, Bridging and Culverting Programme (GBCP) in the 1970's and 1980's.
- Introduction of public road tolls for road maintenance in 1984/85.
- Introduction of axle load controls in 1986;
- Introduction of the fuel levy and transit tolls for road maintenance in 1994 and spot improvement of non-maintainable road sections using a combination of labour and equipment under the Roads 2000 strategy. This was adopted on realization that available financial resources were inadequate to provide full link improvements in the network.

1.2.3.2 Kenya has about 178,000 km of roads of which 63,290 km are classified while the rest is unclassified. Until recently, the classified roads were under the Ministry of Roads, Public Works and Housing (MoRPWH) while responsibility for unclassified roads fell under the Ministry of Local Government (MoLG), the Kenya Wildlife Service (KWS) and the Forest Department. In July 2007, however, the government created three key institutions to be responsible for the development, and maintenance of international classified roads, urban roads and rural roads, respectively. Recent surveys indicate that about 50% of the road network is in good condition while the balance requires rehabilitation. Funds for development, rehabilitation and maintenance are inadequate. During the period 1998-2008 output in road transport averaged over 30 % of total output per annum. The sector currently accounts for over 93 % of total domestic freight and passenger traffic.

1.2.4 Urban Transport

- 1.2.4.1 Urbanisation in Kenya has been developing rapidly since independence. During the two inter-censal periods (1969-1989) and the (1989-1999), the rate of growth of urban population increased from 8 % in 1980s to over 34 % in 2003 and is projected to reach over 50% by 2020. The population of Nairobi alone has reached about 3.2 million residents (2009)² with a day time population of 4.5 million people. This development has not been met with commensurate growth in urban transport infrastructure and services. In major cities and urban areas, especially in Nairobi, Mombasa, Nakuru, Kisumu and Eldoret, urban transport is still characterized by inadequate supply of public transport (mostly buses and matatus), a large number of cars and Heavy Goods Vehicles (HGVs), heavy traffic congestion during peak hours, and stiff competition for limited road space among motorists, pedestrians and cyclists. Traffic congestion is further manifested in long queues of slow-moving vehicles and long waiting times, particularly in Nairobi and Mombasa. Poor physical planning has led to scarcity of parking space in the CBD, especially in Nairobi.
- 1.2.4.2 Because of the inefficiency of urban transport due to poor infrastructure, transport costs are high for both passengers and goods. The majority of low-income urban workers currently find public transport costly and financially inaccessible and hence meet most of their transport needs through walking and head loading. Some of them, however, risk their lives by utilizing non-motorized and intermediate means of transport (NMIMTs) (especially bicycles, motorcycles and *mikokoteni* for which there is no appropriate infrastructure. Given that about 50 per cent of the country's total GDP is generated in the urban areas, the adverse consequences of the above scenario on worker's efficiency and productivity, fuel consumption, education, health and the environment cannot be over-emphasized.

1.2.5 Non-Motorized and Intermediate Means of Transport (NMIMTs) for Rural and Urban Transport

- 1.2.5.1 Rural areas are major production zones in Kenya, where many national socio-economic activities are based, especially in agriculture, horticulture, livestock farming and fishing amongst other activities. Indeed, the rural areas hold over 65% of Kenya's population of which over 98% do not own their own motor vehicles. It is estimated that 85% of the movements in the rural areas usually take place off the roads (using tracks and paths) to support rural mobility needs between homes and farms, markets, rivers, meeting grounds, schools, dispensaries, churches, local administrative offices and rural homes. The trips are made on through Non-Motorized and Intermediate Means of Transport (NMIMTs) which include walking and head loading, on bicycles, motor cycles, or through animal transport. These journeys facilitate the production of goods and their movement markets and their supply to urban areas. Ideally, inter-urban passenger and freight transport serve rural transport needs. There are therefore peculiar mobility and accessibility needs in respect of rural areas that need to be addressed.
- 1.2.5.2 The government has stated its commitment to the promotion of Intermediate Means of Transport (IMTs) as a strategy for poverty alleviation. It has not, however, vigorously pursued this policy. Considering the critical role NMIMTs could play in the development of rural and urban transport for both passengers and goods, there is a need to revisit this mode and provide guidelines for promoting its development in along with other transport modes. It will be necessary to define ways in which the NMIMT policy

² Kenya National Bureau of Statistics, *Statistical Abstract 2008, Table 9 (e), page 19.*

needs to complement other transport modes in both urban and rural areas, including its importance to gender balance, given that the transport burden is borne mostly by women and girls.

- 1.2.5.3 It is estimated that 40% of Nairobi residents walk to their places of work while only about 4% use bicycles to reach their places of work. Bicycle taxis and (more recently) motor cycle taxis - all popularly known as “Boda Boda” are used to carry both goods and passengers in the smaller towns and in rural areas (where the terrain permits) because they are relatively cheaper to use than formal public transport vehicles. In addition to poor road conditions in the urban areas, there is a lack of other road infrastructural facilities like footpaths for pedestrians, lack of separate lanes for cyclists or Non-Motorized Transport modes (NMIMTs).
- 1.2.5.4 Past experience shows that transport policies have largely supported motorized transport at the expense of non-motorised transport and have denied the poor and disadvantaged benefits inherent in NMIMTs leading to marginalization of NMIMT users in both urban and rural areas.

1.2.6 Railway Transport

- 1.2.6.1 Railway transport is the second most important mode of transport in Kenya, after road transport, for both freight and passenger services. It is suitable for transporting bulky and heavy commodities over long distances. Currently, Rift Valley Railways and Magadi Railways (MR) offer rail transport operations in Kenya with MR operating the line between Konza and Magadi (146 km) on behalf of the Magadi Soda Company Ltd. while Rift Valley Railways (RVR) operate the rest under concession based on leases of locomotives from KRC.
- 1.2.6.2 In the early 1970’s the East African Railways Corporation (EARC), KRC’s predecessor, was the largest public sector enterprise and reputedly one of the best managed. It was the predominant carrier of freight traffic between Mombasa and Nairobi, and almost had a monopoly of long distance traffic into Uganda. Following the collapse (in 1977) of the former East African Community (EAC) under which it operated, each member state became responsible for the railway network and operations within its territory; hence the establishment of KRC in 1978 through an Act of Parliament. It was formed to provide transport services to serve the country and the region. The total railway network currently consists of 2,778 km comprising 1083 km of mainline, 346 km of principle lines, 490 km of minor and branch lines and 859 km of private lines and sidings. Over the last ten years, the railway has not been expanded, with the exception of 38 km of private line.
- 1.2.6.3 KRC has over time experienced financial, technical and operational problems arising from poor corporate governance and inadequate investment. Weaknesses in KRC management within a government-controlled environment became increasingly manifest in the 1980s. Tariffs could not be increased in line with inflation, and asset renewal fell accordingly. Political interference in the appointment and tenure of senior management increased. Salaries and benefits began to fall in real terms. In spite of substantial donor assistance, it became quite clear that, unless management and commercial autonomy was gained KRC would not be able to respond effectively to the increasing road competition. For example, total earnings from rail traffic (both passenger and freight) have grown more slowly than those from roads. Between 2002 and 2007, earnings from both rail passenger and freight traffic grew from KShs. 4,005 million to only KShs. 4,153 million, compared to earnings from road passenger and freight traffic which grew from KSh.101, 899 million to KShs. 221,225 million during

the same period. Thus earnings from total road traffic more than doubled, similar earnings from rail traffic during the same period rose by only 3.7%. This lopsided modal split between road and railway traffic is therefore burdensome to the road network and has serious implications on the cost of road maintenance and road safety, among other issues.

- 1.2.6.4 The late 1980s and early 1990s witnessed donor assistance in an attempt to commercialize the management and operations of KRC. An attempt to implement a performance contract between KRC and the GoK never materialized. While some measure of commercial autonomy was achieved, the effectiveness of KRC management to deliver efficient rail services had declined substantially. KRC's performance over the years also declined due to motive power and rolling stock capacity constraints caused by inadequate funding. As a result, KRC was unable to meet its traffic demand, losing most of its traffic to road transport.
- 1.2.6.5 The GoK and KRC, under a concession agreement, leased the management and operation of railway services to RVR for 25 years and the operation and management of passenger services for 5 years from the Commencement Date of the Concession. This concession has not produced the desired results in terms of improved performance of rail transport and needs a review.

1.2.7 Maritime and Inland Water Transport

- 1.2.7.1 The maritime transport system in Kenya consists of one major seaport, Mombasa and other smaller scheduled ports along the Kenyan coastline (namely, Funzi, Vanga, Shimoni, Kilifi, Malindi, Lamu, Kiunga and Mtwapa). The port of Mombasa which is managed by Kenya Ports Authority (KPA) is one of the modern ports in Africa. It handles all types of ships and cargo services not only for Kenya but also for the Kenyan hinterland and land-locked countries of Uganda, Rwanda, Burundi, Democratic Republic of Congo, Ethiopia, Somalia, Southern Sudan and North-Eastern Tanzania.
- 1.2.7.2 The port has 16 deep-water berths of which three handle containers and 13 deal with conventional cargo. There are two oil jetties for refined and crude oil with a capacity of handling tankers of up to 80,000 DWT. The challenge for the Port of Mombasa is that of attracting and handling increasing traffic within Kenya and from the neighbouring countries as well as international traffic from outside the region. Although KPA rendered satisfactory services over the years, like other parastatals, its efficiency has been hampered by bureaucracy for many years.
- 1.2.7.3 KPA owns and operates Inland Container Depots (ICDs) or "dry ports" at Nairobi, Kisumu and Eldoret, all of which are connected to the port of Mombasa by a special rail service (railtainer) for the transportation of containerised imports and exports. At the moment only Kisumu and Nairobi ICDs are operational.
- 1.2.7.4 **The Kenya National Shipping Line Ltd.**
(KNSL) is owned by the GoK and some private international shareholders. The Line was established under the Companies Act in 1987 to take advantage of the business opportunities offered by the growing Kenyan international sea-borne trade under the provisions of the UNCTAD Code of Conduct for Line Conferences. The Line, which has operated on slot charter basis, has been unable to exploit the business opportunities available due to structural corporate governance and management problems. It is currently dormant.
- 1.2.7.5 As regards inland water transport, Kenya makes the least use of her portion of Lake Victoria, compared to Uganda and Tanzania despite considerable potential for the

country to make use of the relatively low-cost inland water transport to promote trade with Uganda and Tanzania through the port of Kisumu. Despite its potential for tourism in western Kenya, marine transport on Lake Victoria is neglected. Currently Kisumu's port infrastructure is in poor state and needs rehabilitation and maintenance. The same applies to the smaller ports and piers most of which are inoperable due to lack of maintenance.

- 1.2.7.6 Ferry services are currently provided by Kenya Ferry Services (KFS) Ltd. (which provides these services across the Likoni Channel at Likoni and Mtongwe) and KRC which operates ferries on Lake Victoria. The KFS currently operates as a parastatal owned by the GoK and KPA on an 80 %: 20 % shareholding. The services, both at the coast and on Lake Victoria, are governed by outdated laws, inappropriate institutional frameworks, inadequate capital, poor safety standards and lack of third-party insurance.
- 1.2.7.7 The critical importance of inland water transport in the Lake Basin in Kenya is underlined by its strategic link with the multi-modal transport network converging on Kisumu City as a hub from where road, railway, pipeline and air transport have direct connections to other destinations in Kenya and with all countries in the Great Lakes region through Tanzania and Uganda.

1.2.8 Pipeline Transport

- 1.2.8.1 Pipeline transport originally comprising 450 km from Mombasa to Nairobi, was commissioned in 1978. It was intended to reduce road deterioration on the Kenyan section of the Northern Corridor as a complementary mode of transport for transporting petroleum products within Kenya. The westward extension of the pipeline to Kisumu and Eldoret in the early 1990s considerably reduced the need for heavy oil tankers to collect fuel from Mombasa or Nairobi to Uganda and other neighbouring countries. Despite these developments, there is a need to ensure that the pipeline is operated in a manner that enhances the complementarity of its role with that of other modes. Its management as a parastatal by the Kenya Pipeline Co. Ltd (KPC) needs to be reviewed to cater for the needs of the key stakeholders and the public interest. The pipeline's interface with other transport modes such as roads, rail and marine transport, need to be examined with a view to enhancing cargo security and safety, and minimizing incidents of revenue loss through cargo diversion.
- 1.2.8.2 At the regional level, a decision has already been made to extend the pipeline to Kampala. In addition to this the viability of extending the pipeline to Rwanda and Northern Tanzania is being considered. In this regard, economic and commercial implications of the mooted extension of the pipeline need to be examined, along with environmental issues.

1.2.9 Air Transport

- 1.2.9.1 Kenya has a thriving and viable aviation industry which is vital for the country's development through the provision of air transport services and hence facilitation of tourism, and promotion of trade and earning of foreign exchange. Historically, aviation in Kenya and the other EAC states followed British rules and regulations until the East African Common Services Organization (EACSO), the precursor to the EAC, was established in 1963. The three EACSO / EAC member States, Kenya, Uganda and Tanzania, formed one East African Directorate of Civil Aviation, which formulated aviation policy for the region borrowing heavily from the British policy. EAC governments provided aerodromes infrastructure, while the International Civil Aviation

Organisation (ICAO) and the United Nations Development Programme (UNDP) played a big role in the development of human resources and provision of air navigation equipment. When the former EAC collapsed in 1977, each Member State established its own flight information region with its own infrastructure and national airline based on what existed in its territory when the Community collapsed. The first draft Kenyan aviation policy was written in 1978 and its provisional application served the industry well. It was revised in 1999, when new concepts like liberalization, code sharing between airlines and Computer Reservation Systems (CRS) were incorporated.

- 1.2.9.2 After liberalisation of the air transport sub-sector in the 1990s, a need has emerged for the GoK to create an environment conducive to the efficient operation of air transport for passengers and freight. To do this, it has been necessary to accommodate the needs of both domestic and international air operators through the provision of efficient and reliable services at all aerodromes. Aviation policy should also address the problems of safety and security. Other key issues will also include the management of transport and other supporting infrastructure. Similarly, there is a need for human resource development and equipment upgrading to meet industry's obligations nationally, regionally and internationally. The capacity of this sub-sector to compete regionally and internationally for tourist traffic needs strengthening through effective sub-sector co-ordination. Although Kenya Airways was privatized with the majority of its shares owned by KLM Royal Dutch Airlines, it is still operating as Kenya's national carrier.
- 1.2.9.3 Currently, there are about 570 aerodromes in Kenya, of which 156 are public. Of the public aerodromes, nine (9) are currently managed directly by the Kenya Airports Authority (KAA). Most of these aerodromes are financially unviable, resulting in serious problems in their operation and maintenance. These problems are reflected in the lack of comprehensive maintenance management systems, congestion at their terminals buildings, lack of air control systems with own dedicated frequencies, lack of modern functional information systems, unserviceable navigational aids (NAVAIDS), inadequate support services such as water and electricity and inadequate security. Other problems include encroachment of land for expansion, and bird strikes.
- 1.2.9.4 Although Kenya has a draft policy and regulations on the management of manned aerodromes, implementation has been weak, while there is no policy for unmanned aerodromes. There is a need, therefore, to strengthen the development and management of aerodromes and to integrate them with other modes of transport to enhance their economic value.
- 1.2.9.5 The Kenya Meteorological Department was established in 1978 and is charged with the responsibility of providing weather forecasts/climate prediction information to various users, including the transport sector. In respect of the transport sector, such information is for purposes of enhancing public safety, security and achievement of unimpeded transport operations. There is also a need to review the laws and regulations to bring them in line with international conventions or the needs of a modern transport system and to strengthen the enforcement of existing ones to improve efficiency and enhance safety and security.

1.3 LEGAL, INSTITUTIONAL AND REGULATORY FRAMEWORK FOR THE TRANSPORT SECTOR

- 1.3.1 The transport sector is governed by numerous statutes that fall under two broad categories, namely statutes affecting all sectors of the economy and sector-specific legislation. Many of the sector-specific laws are outdated and require urgent review to

facilitate the effective operations of the entities they govern and to enhance harmony in the transport sector. Several transport Parastatals operating under their specific statutes and are also subject to the State Corporations Act. They therefore experience lack of managerial autonomy and depend on decision-making by their respective Ministries and are burdened with bureaucracy.

Relevant laws governing transport will require amendment while substantial privatization needs to be considered for some of the transport Parastatals.

- 1.3.2 The government has been concerned over the fragmented nature of the institutional framework for the transport sector. With regard to road transport, for instance, it is considered that the establishment of the Kenya Roads Board in 2000 and the enactment of the Kenya Roads Act in 2007 which established the Kenya National Highways Authority (KeNHA), the Kenya Urban Roads Authority (KURA) and the Kenya Rural Roads Authority (KeRRA) will go a long way in improving the legal and institutional framework for road development and maintenance.

1.4 FACTORS INFLUENCING DEMAND FOR TRANSPORT INFRASTRUCTURE AND SERVICES

1.4.1 Vision 2030

- 1.4.1.1 The demand for transport infrastructure and services is expected to be influenced by the economic policies to be implemented under Vision 2030, population growth, urbanization, increased volume of trade and productivity both in Kenya and in the neighbouring countries.
- 1.4.1.2 Under the Kenya Vision 2030, the economy's growth is expected to increase from 6.1 % recorded in 2006 to 10 % per annum by 2012/2013 and to sustain that growth rate over the vision horizon. For the economy to achieve those rates of growth, the transport sector will be expected to play an even greater role than it had ever previously done in all key sectors of the economy, namely; agriculture, manufacturing, building and construction, mining and quarrying, tourism, and in the service sectors, including wholesale and retail trade,

1.4.2 Population

- 1.4.2.1 In the early years of independence, Kenya had one of the highest population growth rates in the world at 4.7 % p.a. Through planned interventions such as family planning and the prevalence of HIV/AIDS pandemic, the population growth rate has declined to about 2.2 % p.a. and is projected to stabilise at about 2.5 % p.a. by 2020.
- 1.4.2.2 By 2030, Kenya's population is projected to have reached 62.6 million persons, with the urban areas accounting for 37.2% of this population. In terms of transport, this means that Kenya has to start providing the required urban transport facilities and services to capture the efficiencies necessary for the modern urban centres now.

1.4.3 Regional trade and development

- 1.4.3.1 Increased domestic and international trade will place a considerable demand on the transport system. Trade within the Common Market for Eastern and Southern Africa (COMESA), which currently absorbs about 70 % of Kenya's total exports (2007) and where Kenya is a net exporter, is expected to grow considerably. Similarly, following

efforts to achieve a Customs Union among member States of the East African Community (EAC) and the accession of Rwanda and Burundi as its full members in (2007) trade within the EAC is also expected to increase substantially, given the rising demand for Kenyan goods in these countries as they also make efforts to develop their economies. Both import and export volumes are expected to rise substantially.

1.4.4 Globalization

- 1.4.4.1 International customers of transport are demanding high service levels, while operators are consolidating globally to meet needs of global customers. The design and operation of the transport system therefore demands high transport quality for the industry.
- 1.4.4.2 Spurred by the advent of sophisticated ICTs accompanying transport logistics, global and local manufacturers are increasingly sourcing their products from multiple sources around the world. This, along with other global trends, creates a cycle of increased demand for high precision, flexible, efficient and integrated transport services that promptly deliver not only to domestic factories but also to multiple foreign locations. Demand for high quality modern transport infrastructure and services will rise and Kenya must be in the forefront in meeting these global demands on the transport sector and its transport system must be geared to meet these challenges.

1.4.5 Strategic national considerations

- 1.4.5.1 There are parts of Kenya, which are currently not well served by the transport network. Therefore, in an effort to increase the level of accessibility and mobility within these areas and also to connect such parts to the wider national economy, additional transport infrastructure will need to be built. Demand for high quality modern transport infrastructure and services will rise and Kenya must be in the forefront in meeting these global demands on the transport sector. Kenyan transport system must be geared to meet these challenges.

1.5 CURRENT TRANSPORT SECTOR CHALLENGES

- 1.5.1 Despite the growing demand for transport services, Kenya's transport sector is currently facing numerous challenges and deficiencies which have to be addressed both in the medium term and in the long-run within the context of Vision 2030. Some of these challenges will require addressing even beyond the year 2030. The main features of these challenges include:

1.5.2 Poor Quality of Transport Services:

The transport sector in Kenya is characterised by high costs for passengers and freight, weak public and private institutions, and low levels of investment. Public transport is usually over-crowded and inefficient with unreliable service operations, long waiting times and poor safety and security standards. In freight transport, high cost, long transit times, insecurity of cargo, etc. are some of the common problems. There is an urgent need to revert these trends.

1.5.3 Inappropriate Modal Split:

Following the deterioration in the performance of railway transport, road transport has emerged as the main mode of transport in Kenya for both passengers and freight, due to its advantage in terms of speed, flexibility, and accessibility. This distorted modal split whereby the road network carries more than its fare share of traffic, compared to railway traffic, despite the superior carrying capacity of railway transport for both passengers and goods, has resulted in high road maintenance costs due to a higher rate

of road deterioration. It could limit chances for further road development in areas that have had no roads. There is a critical need therefore to ensure a more balanced modal split between road transport and railway traffic.

1.5.4 Lack of Inter-modal Integration:

In Kenya, each mode of transport operates largely on its own without deliberate logistic linkages between origin and destination involving different transport modes. Integrated system development which has now become a major issue in modern sustainable transport, has particular significance for Kenya given her resource constraints. Reflecting a fundamental change in the traditional way of looking at transport of passengers and freight, a mode is increasingly considered only as a link in the chain from the origin to ultimate destination. Thus, an integrated system providing a seamless transport service is important in facilitating an efficient movement of passengers and freight. Planning and development of transport programmes and projects should therefore be mutually harmonized and synchronized. This lack of harmony has been due to the fragmented institutional framework for the management of the transport sector. Closer inter-modal consultation, coordination and harmony will ensure optimal use of resources and reduce or eliminate duplication.

1.5.6 Weak Adherence to Environment Requirements

Environmental degradation due transport activities such as gaseous emissions, noise pollution, oil spills by various transport modes have not been adequately addressed both in the urban and rural areas. With the growing levels of urbanization, increased motorization and other transport activities, it is necessary to ensure that the transport system is environmentally friendly.

1.5.7 Lack of Urban Transport Policy

Kenya has no urban transport policy yet. As such, there is no clear decision as to which modes of transport and facilities the urban areas should encourage or provide. The Metropolitan Growth Strategy for Nairobi formulated in 1973 with a plan period of 30 years, was never fully implemented. Currently, the City of Nairobi, like most other urban centres lacks an urban development strategy that would serve as a focus for urban transport development. Thus, development of an urban transport policy should aim at developing an integrated, balanced and environmentally sound urban transport system in which all modes efficiently play their roles. Although the proposed Nairobi Metropolitan Region Bus Rapid Transit System and the development of a light rail for Nairobi and its suburbs under Vision 2030 are meant to address this problem for Nairobi, there is a need for an urban policy for all cities, towns and other urban centres in the long term.

1.5.8 Institutional Deficiencies

Transport facilities under public ownership and management generally have weak and ineffective structures. Lack of capacity and shortage of resources seriously undermines their capability for good corporate governance, sound decision making and efficient management. There is a need for increased private sector participation in the transport sector to ensure efficiency in the allocation of resources and to maximize efficiency in the delivery of services.

1.5.9 Lack of Funds for Development and Maintenance

In nearly all transport modes, there is a serious lack of funds for development and maintenance. This is particularly true among Parastatal transport entities and those that depend on limited direct funding from the Exchequer. Again, the involvement of the

private sector participation in the ownership and development of transport could go a long way in mobilizing adequate funding, especially for transport infrastructure and operations. There is a need to ensure adequate funds are available for the development and maintenance of transport infrastructure and operations.

CHAPTER TWO

STRATEGIC DIRECTIONS FOR THE TRANSPORT SECTOR

2.1 INTRODUCTION

In light of the poor state of the existing transport system in Kenya and the clear need for a system that meets challenges and issues arising out of the current transport system this policy has at its core the following vision and mission.

2.1.1 VISION STATEMENT

The vision for the infrastructure sector in line with Vision 2030 is:

“A world-class integrated transport system that is responsive to the needs of people and industry”.

2.3 MISSION STATEMENT

“To develop, operate and maintain an efficient, cost effective, reliable, safe, secure and integrated transport system and link transport policy with other sectors in order to achieve national and regional development aspirations in a socially, economically and environmentally sustainable manner”.

2.4 STRATEGIC OBJECTIVES

The strategic objectives of this Integrated National Transport Policy will be to:

- a. Integrate transport with national and regional socio-economic needs;
- b. Establish appropriate institutional systems for transport sector management, coordination and regulation;
- c. Develop and maintain an integrated and coordinated transport infrastructure for efficient movement of passengers and freight and support disaster management efforts;
- d. Develop appropriate transport sector funding/financing mechanisms;
- e. Integrate transport in land use planning and management;
- f. Deliver efficient and effective sector operations to enhance national productivity;
- g. Enhance investments in the transport sector;
- h. Apply ICT in transport planning, operations and management to enhance sector efficiency;
- i. Facilitate regional integration and trade;
- j. Incorporate environmental protection and resource conservation issues in transport sector activities;
- k. Ensure enforcement and compliance with sector laws and regulations;
- l. Develop a national transport information database for effective transport planning and management;
- m. Promote public awareness through the use of appropriate information to inculcate positive attitude change;
- n. Improve safety and security, reliability and speed in transporting people and goods;
- o. Develop and promote appropriate human resource capacities in the sector; and
- p. Facilitate public private partnerships.

2.5 POLICY PRINCIPLES

To meet these strategic objectives, the government of Kenya (GoK) will be guided by the following broad principles:

2.5.2 Institutional Principles

2.5.2.1 Public policy making is undertaken at various levels of government. As such, transport institutional policy needs to address arrangements for relationships at various levels of government and among various statutory bodies and the private sector.

CENTRAL GOVERNMENT

2.5.2.2 The GoK will continue reducing its direct involvement in operations and services to allow for a more competitive environment. In this regard, the primary role of the GoK will:

- focus on policy and strategy formulation;
- retain its regulatory role to ensure unbiased regulation of safety and quality in general, to regulate market access for transport operators where this is necessary and discourage excessive tariffs in case of monopolies. The shift will affect all levels of government, implying a major restructuring of parastatals in the transport sector;
- facilitate competition, private sector participation and will be the custodian of environmental and social interests;
- intervene in cases of market failure and involve stakeholders in decision-making; and
- maintain its presence in the development and maintenance of transport infrastructure, enforcement of laws and regulations, human resource development, public education as well as transport research and development.

LOCAL GOVERNMENT

2.5.2.3 The GoK is committed to improving governance and service delivery at the local level and this will call for increased responsibilities and greater managerial competence. Some of the reform initiatives at this level will involve improvement of local finances including utilization of Local Authority Transfer Fund (LATF) and cess.

2.5.2.4 Local authorities will, in collaboration with the relevant government agencies and stakeholders, focus on development and management of transport infrastructure as appropriate, implementation of urban policy, development of local transport plans and integrating these with overall urban land use planning, environmental management, enforcement and local traffic management.

PRIVATE SECTOR PARTICIPATION

2.5.2.5 The GoK recognizes that the private sector provides the basis for long-term sustainable economic growth. The private sector will be encouraged to participate in the provision and financing of transport infrastructure and services. In view of this, the process of reducing the role of government in commercial activities will continue, particularly through accelerating the privatization programme in the transport sector under the Privatization Act.

2.5.2.6 In enhancing the level of private sector in the transport sector the government will ensure that a minimum of 30% of the total shareholding in privatised transport entities is reserved to Kenyans.

NON-GOVERNMENT BODIES

2.5.2.7 Various non-governmental bodies play key roles in the Kenyan transport system. These organisations will be encouraged to participate in and lead efforts aimed at creating public awareness on relevant transport issues, consumer protection, transport research and lobbying.

2.5.3 Pricing, Investment and Financing Principles

2.5.3.1 In order to avoid distortions in pricing and users' choice of transport mode and to promote economic efficiency, pricing of transport services in Kenya has remained mostly liberalized along with other prices in the economy. It is expected, however, that pricing should reflect the cost of services rendered or facilities provided (in the case of infrastructure investment) and that pricing will be undertaken on a cost recovery basis, taking into account externalities such as pollution and traffic congestion. Thus investment and pricing are expected to be undertaken in a manner that promotes sustainable development.

2.5.3.2 In view of the above, user charges or cost recovery will be used for "economic" infrastructure (i.e. roads, railways, ports, airports and pipelines). For roads, the government will continue to use the fuel levy and where viable or appropriate, tolls will be applied as a direct user charge. Thus all passenger and freight transport services will be operated on commercial principles. All "economic" infrastructures will therefore be operated without subsidies. The government will, however, encourage stakeholder consultations in pricing and investment decision making.

2.5.3.3 Financing approaches will vary across the whole spectrum of infrastructure and operations. Internal consistency will however be taken into account in financing various infrastructure sectors. Distinction will also be made between infrastructure with tangible economic or financial returns and those that provide social or strategic benefits.

2.5.3.4 The GoK fully recognizes its responsibility to play a leading role in the provision of socially and strategically necessary infrastructure and to ensure the enhancement of mobility and accessibility among all sections of society. It will contribute to the financing of services, which are socially and strategically necessary, in a transparent manner. This will be done through appropriations, grants or subsidies to achieve an equitable distribution of resources. Examples of such investments include provision of transport infrastructure to and promoting public transport in remote parts of the country. At present social services are inaccessible to many people in remote districts and villages, particularly during the wet seasons. The private sector will also be encouraged to be involved in funding these types of investment.

2.5.4 Management, Regulation and Control of operations

2.5.4.1 Certain aspects of management, regulation or control of the transport system usually result in financial income (e.g. charges for vehicle inspections and fines) or in non-monetary benefits (such as reduction of casualties, or preventing abuse of monopoly power through licensing). It is proposed that a more direct linkage be established between the tangible and intangible benefits of these activities and the defraying of costs of such management, regulation or control. This includes the management of the road traffic system to promote safety, security, and a higher level of service. In these cases, a closer relationship between expenditure and the revenue generated (e.g. the revenues from traffic law enforcement, or insurance) should be established.

The GoK will, as far as possible, ensure that revenues generated from the transport sub-sector are ploughed back, although it recognizes that this may not be applicable in all

cases. Where it has to deviate, it will strive to make financing transparent. In all cases of GoK financing the return on investment (whether financial, economic, or social) will have to be transparently justified.

2.5.5 Principles of regulation

2.5.5.1 Regulation is a form of intervention by government, and the intention is to regulate only where it is essential. Different forms of regulation will be applied by the government to ensure that its vision and objectives are realized and desired services provided to consumers. The form of regulation will differ according to circumstances:

- a. **Regulation of specific services provided under contract:** This is the highest form of regulation, in which the authority specifies in detail the service to be provided, and can impose a variety of sanctions if this is not met. This category includes commuter rail services, and tendered public transport services.
- b. **Regulation of monopolies:** The GoK has a role in controlling tariffs, and in setting service and safety standards in transport monopolies such as the aerodromes, ports, road and rail concessions.
- c. **Regulation of operations of competing operators:** The GoK will ensure a level playing fields and regulation for safety, giving service operators as much freedom as possible to provide customer service as demanded in a competitive environment. In the case of freight transport, quality of the service (including safety) and not economic or entry regulation will be the guiding principle. For road-based public passenger transport, the GoK proposes a form of regulated competition, which requires that operators function in a competitive environment, but in a manner that complies with the government objectives.
- d. **Regulation by contract:** This involves establishing a formal contract with an operator to abide by an agreed set of rules. Instead of investigating and proving individual contraventions, regulation and enforcement by GoK involves establishing whether the contract has been adhered to.
- e. **Establishment of Codes of Conduct:** The transport sub-sectors will formulate and enforce codes of conduct supportive and complementary to legislation to enhance self-regulation and discipline in the transport industry.
- f. **Establishment of Client Service Charters:** Each institution involved in the transport sector will develop and institute client service charters, specifying inter alia expected service delivery benchmarks and consumer complaints and redress procedures.

2.5.6 Human Resource Development

2.5.6.1 Considering the fact that the human resource needs of the transport sector are multidisciplinary in nature, neither the public nor the private sector possesses optimal capacity in terms of the people, skills, or technological knowledge, to fully implement this policy framework, manage the system and achieve the vision for transport.

2.5.6.2 GoK will assume some responsibility for capacity enhancement and improving the human resource pool in the transport sector by among other things:

- Developing a National Accreditation System for institutions training transport industry personnel;
- Promoting tertiary education in transport disciplines at Kenyan universities and polytechnics;

- Forging partnerships to provide more scholarships and promoting training and skills development, with relevant institutions; and
- Developing and regulating the necessary curricula for the lower levels of the education system.

2.5.6.3 The GoK, however, does not accept sole responsibility for human resource development, and looks to the private sector to assist in meeting the challenge. It will therefore continue its support for developing “Centres of Excellence” in specific aspects of transport.

2.5.7 Acquisition and Utilization of Transport Technology

2.5.7.1 Currently, Kenya has a relatively lower level of scientific and technological base, compared to many medium income countries. To address this problem, a key component of privatisation efforts will be geared towards achieving appropriate transfer of technology to the transport sector. The GoK will also support research into the development and acquisition of appropriate and innovative technologies to meet present needs, so as to keep pace with the rapid development of transport and information technologies internationally.

CHAPTER THREE

OPTIMAL PLANNING AND DEVELOPMENT OF TRANSPORT

3.1 OPTIMAL SECTOR COORDINATION AND REGULATION

3.1.1 Critical Issues

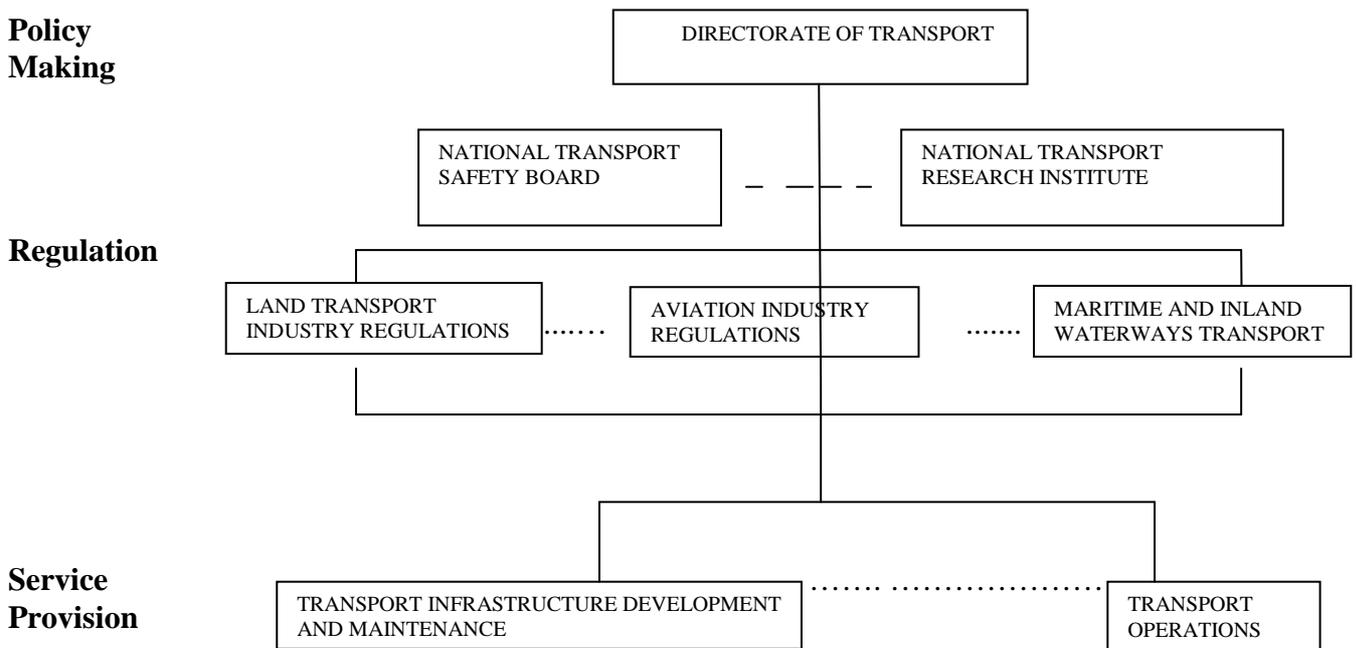
The institutional framework for inter-modal coordination encompasses all transport modes: road transport, intermediate means of transport, rail transport, maritime and inland waterways transport, pipeline and air transport. The current fragmented framework lacks appropriate coordination and has largely been responsible for the poor performance of the sector in the economy.

There is a need, therefore, to integrate and coordinate activities and responsibilities of actors for different transport modes in the sector to harness the various synergies in it. It is also necessary to inject professional skills in the Ministry responsible for transport to enhance its technical capacity in various critical areas. These include transport policy formulation and analysis, policy coordination, planning, development and regulation of infrastructure, operations and services.

3.1.2 Policy

The GoK will establish a Directorate of Transport in the Ministry responsible for Transport as the focal intermodal co-ordinating institution for all transport modes as illustrated in Fig. 1 below to integrate and coordinate planning, develop and manage transport policy, transport infrastructure, services, operations and regulation, research and human resource development for the overall transport sector to meet national and regional mobility and accessibility needs.

Figure 1 Proposed Structure of the Transport Sector



3.2 TRANSPORT INFRASTRUCTURE

3.2.1 Critical Issues

Transport infrastructure in Kenya comprising roads, railways, the pipeline, ports and aerodromes, is inadequate in terms of accessibility condition and is fragmented. Its integration within each mode and among the various modes is weak. In its current state, the transport system is a bottleneck to socio-economic development of the country since its linkages with centres of production, markets and key economic sectors such as agriculture, tourism, industry and mining are weak and inadequate. Socially, it does not yet provide adequate service to the health, education, governance (including access to government services), security and recreation, among others. For regional development, it is necessary that the transport system facilitates the flow of passengers and freight along import and export corridors linking coastal and inland ports to landlocked countries.

Further, most transport activities are concentrated along the Northern Corridor, which connects the seaport of Mombasa to Nairobi, Nakuru, Kisumu and Eldoret and the border towns of Malaba and Busia. This Corridor is Kenya's primary transport artery and provides access through the seaport of Mombasa to the hinterland and to countries in the east and central Africa (Uganda, Rwanda, Burundi, eastern Democratic Republic of Congo (DRC), Southern Sudan and northern Tanzania).

3.2.2 Policy

The GoK will:

- Ensure optimal transport infrastructure is provided to maintain Kenya as an efficient and effective transport hub for the east and central African region. It will be maintained in an integrated, efficient and sustainable manner to promote national goals for socio-economic reconstruction and development;
- Facilitate improvement and extension of transport infrastructure aimed at reducing transport costs and opening up new frontiers for economic development. The development potential and comparative advantage of each mode will be the basis for selection of the type of infrastructure to be provided.
- Develop an Integrated Transport Master Plan (ITMP) encompassing all modes in accordance with Vision 2030 and beyond.

3.3 INTER-MODAL TRANSPORT INFRASTRUCTURE

3.3.1 Critical Issue

There are clear gaps in Kenya's inter-modal infrastructure and the transport logistics chain. These act as constraints to optimal utilisation of the transport systems. It is therefore necessary to ensure inter-modal connectivity among the various transport modes.

Table 1 below illustrates the missing links in Kenya’s transport infrastructure.

Table 1: Missing Links in Kenya’s Transport Infrastructure Network

SUB-SECTOR	MISSING LINKS
Road Transport	<ul style="list-style-type: none"> • Inter-modal Linkages to Airports, Ports, and Rail Transport • Strengthening Links with Ethiopia, Sudan, Uganda and Tanzania • Internal Corridors, Urban Transport Corridors
Rail Transport	<ul style="list-style-type: none"> • Intermodal Linkages to Airports, Ports and Road Transport • Strengthening Regional, Interurban and Intra Urban Infrastructure • Kitale-Juba Link, Athi River – Arusha Link
Maritime and Inland Waters Transport	<ul style="list-style-type: none"> • Strengthening Mombasa Port and Constructing Lamu Port • Strengthening Inland Ports
Pipeline Transport	<ul style="list-style-type: none"> • Inter-modal Facilities • Kisumu/Eldoret –Kampala Link, Kenya-Northern Tanzania Link, Kisumu-Juba Link
Air Transport	<ul style="list-style-type: none"> • Intermodal Facilities especially with Road, Rail, Maritime and Inland Waterways Transport • Strengthening Airports for Cargo Operations • Strengthening Safety and Security Infrastructure

3.3.2 Policy

The GoK will facilitate the development of inter-modal infrastructural facilities aimed at integrating the transport network and improving the transport logistics chain.

CHAPTER FOUR

ROAD TRANSPORT

4.1 Road Transport Infrastructure

4.1.1 Background

The scope of road transport infrastructure comprises the entire road network in Kenya and includes all road facilities upon which road transport operates, whether classified or unclassified, of regional or local importance, public or private, adopted or un-adopted, or otherwise howsoever described. Within this context, the network includes the high traffic interurban, urban, secondary, primary and rural roads. This includes bridges, footpaths, footbridges, traffic lights and terminal facilities (such as parking, modal interchange and amenities among other road transport support facilities). It is important to note that road transport infrastructure represents a significant portion of the government's total financial investment in fixed assets.

The significance of road transport in the national economy is illustrated by the fact that during the period 1998-2008, output in road transport averaged over 30percent of total output annually in the transport and communications sector. This mode accounts for over 93percent of the total internal freight and passenger traffic in the country with the remainder being mainly carried by rail and air. Kenya's road network serves both domestic and regional passenger and freight transport demand. The Northern Corridor is important as a freight transport corridor for both import and exports for the countries in the eastern and central Africa (Eastern Democratic Republic of Congo, Rwanda, Burundi, Southern Sudan and Uganda).

4.1.2 Mission

“To provide an integrated, efficient, reliable, and sustainable road transport infrastructure that meets national and regional passenger and freight transportation goals and supports the government's socio-economic development strategies to promote accessibility to services and the safe movement of people and goods, while being environmentally and economically sustainable”

The desired scenario for road transport infrastructure is to:

- a. Make Kenya the hub for road transport in the East African region;
- b. Promote sustainable economic development by removing constraints on demand in development regionally and provide the catalyst role for private investment;
- c. Be structured to encourage public passenger transport and discourage excessive use of private passenger road transport;
- d. Allow for a seamless inter-modalism through flexibility and interconnectivity with other transport modes
- e. Be financed through a combination of user charges and private/public sector investments;
- f. Provide adequate accessibility together with safety and security within the constraints of social affordability;
- g. Incorporate technological advances, which promote and enhance the role of transport in the economy and in development; and
- h. Be structured to ensure environmental sustainability and internationally accepted standards.

4.1.3 Strategic Objectives

The strategic objectives for road transport infrastructure are to:

- a. Establish sound intermodal co-ordinating structures;
- b. Develop and maintain optimal road infrastructure capable of meeting expectations of Vision 2030;
- c. Foster a sound financial base for road transport infrastructure development;
- d. Promote a diverse and competitive road infrastructure within the limits of available resources;
- e. Promote environmental protection and resource conservation;
- f. Provide increased mobility and improved accessibility to safe and secure road transport services as part of the government's efforts towards poverty reduction and wealth creation; and
- g. Advance human resource development in the provision of road transport infrastructure.

4.2 INSTITUTIONAL FRAMEWORK FOR ROADS SUB-SECTOR COORDINATION

4.2.1 Critical Issues

The responsibility for Roads Infrastructure is vested in the Ministry of Roads after coming into force of the Kenya Roads Act 2007. The Ministry of Roads is responsible for 178,000Km (classified and unclassified roads). With the enactment of the Kenya Roads Act 2007, three new Road Agencies have been established namely: the Kenya National Highways Authority (KeNHA) responsible for Class A, B and C roads; Kenya Rural Roads Authority (KeRRA) responsible for Class D, E and other roads and Kenya Urban Roads Authority (KURA) responsible for urban roads.

The Kenya Roads Board (KRB) is now responsible for financing the maintenance of roads and undertaking technical audits.

The critical challenge is operationalization of the new agencies and capacity building for the subsector to perform optimally. The new agencies should come up with new strategies to address governance issues in the roads sector.

4.2.2 Policy

- a. Appropriate linkages/working mechanisms between the Ministry responsible for Roads, Road Agencies, Kenya Roads Board and Development Partners shall be established within the Roads Sub-Sector to enhance service delivery.
- b. Stakeholders' participation shall be encouraged at all levels where road development, rehabilitation and maintenance is undertaken.
- c. Deliberate efforts will be made to build capacities (both institutional and human) in the Roads Sector, and
- d. Deliberate and sustained effort shall be made to strengthen governance in the Roads Sector.
- e. The Ministry will endeavour to register all road reserves with a view to protecting them from encroachment.

4.2.3 Policy Implementation

The new road agencies will be operationalised and strengthened through capacity building to efficiently oversee and coordinate the development, rehabilitation and maintenance of roads. In addition, the road agencies shall be strengthened and made autonomous to operate on sound commercial principles.

4.3 DEVELOPMENT AND MAINTENANCE OF ROAD TRANSPORT INFRASTRUCTURE TO ENHANCE SERVICE DELIVERY

4.3.1 Critical Issues

There is an urgent need to integrate road transport infrastructure planning with overall economic planning, to take into account the changing local and regional economic activities and population issues. It is also necessary to establish an optimum balance in the development of road infrastructure to achieve a harmonized mutually complementary and competitive road infrastructural development on a sustainable basis. The rate of road deterioration has tended to exceed that of road maintenance/rehabilitation despite the adoption of various road development and maintenance strategies. This situation has been aggravated particularly by inadequate finances, low contractor capacity and poor supervision mechanisms in force.

There is an imbalance in road transport infrastructure development in the country with high a concentration of road infrastructure development along the Mombasa-Nairobi-Malaba transport corridor which primarily used to serve mainly the former white highlands. The Northern, Eastern and Southern Parts of the Country are poorly served by roads, with North Eastern being the worst hit. The Province, which covers approximately 30per cent of the country's land mass, has less than one per cent of its roads network paved. In addition, other regions in the country suffer from poor transport infrastructure conditions. There is a need to embrace "corridor development approach" to improve road conditions to enhance urban and regional linkages, facilitate service delivery and efficient mobility of both people and goods.

Advanced technologies are increasingly playing a major role in the planning, development and management of road transport infrastructure to enhance efficiency and safety in transport worldwide. In Kenya, however, such systems have not been put in place thus hampering integrated and efficient intermodal infrastructure provision. Similarly, there is lack of appropriate information systems for informed decision making for the development and management of road infrastructure. Adherence to standards is key while handling the issue of corruption in contracting process is inadequately tackled.

4.3.2 Policy

- a.** A strategic approach on long term, integrated and sustainable planning and provision of the road transport infrastructure consistent with the needs of the country shall be developed to respond to various regional land use and road transport demand management. The regional harmonization of networks under COMESA, ECA, IGAD, EAC and NEPAD including rules regarding operations of roads shall be pursued through regional arrangements to enhance development and maintenance of roads with greater regional importance.
- b.** Where road transport is identified as the major constraint to the stimulation of economic development, the GoK shall take the lead in establishing necessary road transport infrastructure by promoting the participation of other public and private sector institutions in its development and maintenance in order to facilitate and

accelerate the development process. The corridor development approach shall be adopted where feasible. The main road corridors identified for development and improvement are:

- i. The Northern Corridor which runs from Mombasa at the Coast through Nairobi, Nakuru, Eldoret to Malaba at the Kenya Uganda Border and the Nakuru - Mau Summit through Kericho and Kisumu to Busia at the Kenya Uganda Border.
 - ii. The Great North Road that runs from Namanga at the border with Tanzania, through Nairobi and Isiolo to Moyale.
 - iii. Lamu - Garissa - Wajir to Mandera
 - iv. Tarime - Kisii - Kisumu - Kitale - Lodwar to Kenya - Sudan Border
 - v. Kitale - Endebes swamp - Uganda
 - vi. Isiolo-Kainuk-Uganda border corridor
 - vii. Somalia Border-Lamu-Mombasa-Lunga Lunga corridor
 - viii. Kainuk-South Horr-Marsabit-Moyale corridor
 - ix. Wajir – Isiolo - Mai Mahiu-Sotik-Migori.
 - x. Road transport corridor connecting Lamu to Southern Sudan through Lokichoggio
- c. The development of these corridors and access links will enhance both internal and regional mobility while facilitating the movement of inputs and outputs between production and market centres, particularly to rural areas. It would equally facilitate the accessibility of services especially health, education, markets, administration, water among others in rural areas. In particular, the development and improvement of roads in Northern region and other arid and semi arid lands (ASALs) of the country would facilitate the establishment of livestock based industries and enhance the development of irrigation agriculture in the region.
- d. A comprehensive management information system, based on performance indicators and models that enable the provision of an integrated demand and supply driven road transport infrastructure shall be established. This will ensure economic efficiency and enhance socio-economic impacts of road infrastructure development and maintenance on various aspects of the economy.
- e. On road maintenance, the government shall adopt the most appropriate and efficient contracting methods, which provide for input-based and performance-based contracting for maintenance works. The process will involve private sector participation while reducing current excessive and cumbersome contracting process.
- f. To ensure that the quality for delivery mechanism is kept constant, standards for development and maintenance shall be adhered to with a view to ensuring efficient road transport infrastructure.

4.3.3 Policy Implementation

The Ministry in charge of Roads in collaboration with road agencies shall select and adopt the most appropriate methods for developing and maintaining various categories of roads.

The demand and capacity for national and regional priority road networks shall be identified in such a way that network information decision support systems enable the data to be available to planners, government and private investors at all levels (this will also include planned future extensions). Data requirements for long-term planning of

road transport infrastructure or its maintenance shall be established while long-term infrastructure plans shall be made compatible among all transportation modes, particularly between road and railway infrastructure.

4.4 DEVELOPMENT OF MULTI INSTITUTIONAL FINANCING FOR THE DEVELOPMENT AND MAINTENANCE OF ROADS

4.4.1 CRITICAL ISSUES

The current road infrastructure financing in central government is inadequate, and requires innovative ways for funding infrastructure development and maintenance. It is also fragmented between different Ministries, departments and levels of government, which results in spreading of resources over numerous projects. For example, the Road Maintenance Fuel Levy Fund is under the Kenya Roads Board, the Local Authority Transfer Fund – LATF – is managed by the Ministry of Local Government and Ministry of Finance, National Parks/Reserves Levy is under the Kenya Wildlife Services (KWS) while Tea Cess is managed by Kenya Tea Development Authority (KTDA) and the Sugar Levy is managed by the sugar industries. Other sources of funding are the Central Government allocations through the Exchequer and Donor assistance through the Ministry of Roads. It will not be possible to achieve the mission for road transport infrastructure development and maintenance without additional funding sources.

4.4.2 Policy

- a. The GoK will Consolidate all existing and future road transport infrastructure financing into a single co-ordinating institution.
- b. Road infrastructure maintenance shall be funded through user charges such as the fuel levy and/or investments by the private sector. Allocations from the Exchequer will therefore be made available for road development.
- c. Innovative ways of raising funds such as road concessioning will be considered.
- d. Subject to market discipline, the following funding mechanisms will be explored.
 - i. public ownership and operation by state agencies;
 - ii. public ownership with private operation under Build Operate Transfer (BOT);
 - iii. private ownership and private operation under Build Own Operate (BOO); and
 - iv. joint ventures between the public and private sectors.
 - v. issuance of infrastructure bond to expand revenue base.
- e. Donor funding for road development and rehabilitation will continue to be sought from development partners in the short and medium term.
- f. A climate that encourages private participation in the ownership, planning, financing, construction, maintenance and management of roads shall be created. This will promote shared profit opportunities and risk-taking between the government and the private sector, whenever this is economically feasible and appropriate.
- g. The strategic value of state ownership of infrastructure shall be re-assessed and liberalization introduced where appropriate. Ownership and regulation of road transport infrastructure shall be separated, whether state owned or privatised.

4.4.3 Policy Implementation

The Kenya Roads Board (KRB) shall be mandated to receive and co-ordinate maintenance funding through disbursement of funds to various agencies which are mandated to act on its behalf. The development, rehabilitation and maintenance of each

type of road shall be examined and ranked according to their suitability for cost recovery through user charging and/or investments by the private sector. Criteria determining this suitability should include social, technical suitability and economic viability. Regional perspectives of road infrastructure financing shall be enhanced to facilitate effective road infrastructure development.

A combination of possible sub-category of road infrastructure provision mechanisms will be explored such as:

- social access, requiring government funding or "subsidy";
- roads suitable for indirect user charging, e.g. fuel levies, license fees, tax on fares;
- roads suitable for private sector investment, e.g. toll roads.

Now that rules for public-private sector participation are being developed, the government will intensify the use of private sector in road transport infrastructure development. In order to ensure efficient functioning of the proposed arrangements, principles and guidelines for private sector involvement shall be established with clear guidelines for monitoring and evaluation. The government shall enforce current laws and maintain political stability in order to create a more stable environment for investment. The private sector will be encouraged to impose self-regulation.

4.5 ENVIRONMENTAL PROTECTION AND RESOURCE CONSERVATION RELATING TO TRANSPORT INFRASTRUCTURE

4.5.1 Critical Issues

Sustainable environmental policies have not been adequately incorporated in Kenyan road transport infrastructure management policies resulting in pollution and environmental degradation. Factors such as soil erosion, management of gravel pits and road run-off, noise pollution and gaseous emissions by road motor vehicles have not been adequately addressed.

4.5.2 Policy

For roads to be environmentally acceptable, planning for their development and maintenance shall include environmental impact assessments (EIAs). Issues to be considered are environmental impacts, energy conservation and the transportation of hazardous substances. These shall also cover aspects of conservation and infrastructure building materials.

4.5.3 Policy Implementation

Enforcement of the Environmental Management and Coordination Act of 1999 and the Physical Planning Act, Cap 368 shall be observed to ensure that environmental issues are explicitly part of multiple criteria decision-making systems. Current guidelines on environmental issues shall be expanded to include road transport infrastructure development indicators in environmental management. Linkages with other relevant government and quasi-government agencies concerned with planning and environment shall be strengthened. Collaboration with neighbouring countries on cross border environmental matters will be sought as appropriate.

4.6 ADVANCEMENT OF HUMAN RESOURCE DEVELOPMENT IN THE PROVISION OF TRANSPORT INFRASTRUCTURE

4.6.1 Critical Issues

There is an inadequate professional expertise for the roads sub-sector. Line departments

and parastatals do not seem to be adequately engaged in training; there is a lack of competency recognition and lack of clear career paths. Road transport research in Kenya is not appropriately developed and has been left to grow without an institutional guidance for comprehensive skills nurturing.

4.6.2 Policy

- a. A holistic framework for human resource development, specifically focused on the transport sector shall be developed to include the accreditation of all processes.
- b. Training needs for provision, maintenance and operation in transport shall be identified and quantified, (e.g. skills inventory, new skills required) and matched where applicable with skills provision through avenues such as Research Institutions, Universities and the private sector. The establishment of small enterprises addressing infrastructure provision and maintenance shall be encouraged.

4.6.3 Policy Implementation

As part of the holistic framework for human resource development in the transport sector, the Ministry responsible for Transport shall engage the Ministry in charge of Education, and the Universities and other intermediate training institutions in order to specifically highlight human resource development needs in the road transport sub sector. Mechanisms shall be established for accredited career path.

A National Transport Research Institute shall be established (possibly within a University) to undertake research and build capacity for the sector.

4.7 NON-MOTORIZED AND INTERMEDIATE MEANS OF TRANSPORT POLICY (NMIMTs)

4.7.1 Background

Non-motorized means of transport (NMTs) includes walking, head, shoulder or back loading, the use of wheelbarrows, hand-carts (“mikokoteni”), animal transport (horses, camels, donkeys, mules and oxen as beasts of burden), animal-drawn carriages (such as sledges), bicycles and tricycles to transport passenger and freight. Intermediate means of transport (IMTs) broadly refers to low-cost transport innovations that increase the load carrying capacity beyond head, shoulder or back loading and/or increase travel speeds beyond walking. They include low engine capacity vehicles such as motorcycles and motor tricycles and sidecars or trailers attached to these.

Despite the country’s elaborate road network, the Kenyan rural transport scene is still characterized by walking and head or back loading, mainly by women and children, both along roads, paths and tracks. In the urban areas, public transport is unaffordable to many members of working households, and indeed to many workers and their families, leading to low productivity and the drudgery of walking for most of them. The loads carried by walking persons are usually small, hardly exceeding 40 kg. Distances that can be covered on foot are also short, averaging about 5 km on each trip.

Over the years, road development has focused attention mainly on roads for motorized transport although this has not been matched by increased access to motorized transport mode. In Nairobi, for instance, 60 per cent of the residents meet their daily travel needs by walking while 35 percent travel by public transport (mostly matatus and buses) and only 5percent use private cars. By contrast, between 15-20 percent of Mombasa residents meet their travel needs by walking and 60percent by public transport.

Because of widespread poverty, the use of motor vehicle is generally limited and largely unaffordable to the majority of the low income individuals and households, in both urban and rural areas. In both rural and urban areas, access to NMIMTs is still hampered by many constraints, including lack of appropriate infrastructure and bias against NMIMTs.

The NMIMTs are not fully recognized by law to qualify for the Government's technical and/or financial support. This applies also to NMIMTs infrastructure and attention is mainly focused on motorized transport and its infrastructure. Recognition of NMIMTs, however, is likely to raise several issues, which will need to be addressed. These include; safety, communal biases; lack of an industry producing appropriate vehicles to ensure their availability on a sustainable basis; lack of skills and lack of funds.

4.7.2 Mission

“To reduce rural and urban transport burden and travel time with a view to increasing economic efficiency through widespread use of NMIMTs in Kenya”

4.7.3 Strategic Objectives

The strategic objectives in this area are to:

- a. Incorporate NMIMTs in the national transport policy as part of the government's strategy for wealth creation / poverty reduction strategies;
- b. Encourage the development of NMIMTs along with other transport modes in order to increase accessibility and mobility at household and community levels, in both rural and urban areas, raise productivity in agriculture and other economic activities,
- c. Complement and enhance the impact of motorized and other modes of transport using NMIMTs and thus develop an integrated and seamless transport network at various levels of affordability.
- d. Encourage the development and use of NMIMTs in the country as part of an integrated transport system that meets basic needs of low-income individuals and households.
- e. Increase productivity in agriculture and efficiency in small-scale productive economic activities through increased efficiency of transport at individual and community levels.
- f. Increase accessibility and mobility, especially among people in the lower income groups in both rural and urban areas.
- g. Increase the socio-economic impact of motorized transport through the NMIMTs.

4.7.4 Incorporation of NMIMTs into Transport Policy

4.7.4.1 Critical Issues

Although various forms of NMIMTs are already in use in several parts of the country, little has been done to incorporate them into the road transport network or in the national transport system and indeed into the road transport policy so that they can effectively play a complementary role in the transportation of both passengers and freight. There is a need for their recognition, development, funding and technical support from various government bodies, local authorities, and the private sector. Lack of infrastructure for NMIMTs has led to a situation where the same road space is shared amongst pedestrians, motorized transport and NMIMTs thus compromising safety.

4.7.4.2 Policy

The development of NMIMTs will be legally incorporated into the national transport planning and policy areas as part of the road transport policy in both rural and urban areas.

4.7.5 Gender Balance

4.7.5.1 Critical Issues

Women perform most of the household social and economic activities and bear more than their fair share of the drudgery of walking and head or back loading at household and community levels. It is necessary to enhance gender balance especially in the performance of individual and household-based economic activities. There is an urgent need to “balance the load,” by reducing women’s time spent on transport activities around the village (e.g. fetching water, collecting firewood, trips to market centres, health clinics, grinding mills, and the time spent on harvesting).

Besides improvement of transport at village and household levels through NMIMTs, non-transport interventions that reduce or eliminate the need to travel may also promote gender balance and increase economic productivity (especially in agriculture). Such interventions include increased accessibility to water, electricity and establishment of markets and health centres in readily accessible places.

4.7.5.2 Policy

- a. The development and use of NMIMTs will be actively promoted to enhance gender balance in the performance of social and economic household tasks and to increase women’s time spent on economic and commercial activities.
- b. Gender balance in the access to and use of NMIMTs will be enhanced.
- c. The Government will ensure increased access of households and communities to water and electricity or solar energy, and the location of markets and health centres in areas that are readily accessible to them.

4.7.6 Infrastructure Development and Maintenance

4.7.6.1 Critical Issues

Over the years, facilities for NMIMTs have only been provided alongside or in relation to roads meant for motorized transport. Foot bridges, for instance have been inadequately provided and/or poorly maintained by local authorities or road agencies for pedestrians in both urban and rural areas.

4.7.6.2 Policy

The development and maintenance of infrastructure for NMIMTs will be supported by all local authorities and road agencies. In the urban areas, each local authority or agency will provide and maintain adequate sidewalks and pavements for pedestrians, separate lanes, parking bays, bridges, footpaths, and other facilities for NMIMTs, including ramps for the physically challenged.

4.7.6.3 Policy Implementation

All road agencies shall make provision for NMIMTs facilities in their planning and design programmes, irrespective of the use of those facilities by motorized vehicles.

NMT and IMT infrastructure, including footpaths, foot bridges, and ramps for the physically challenged will be developed and provided in designated roads irrespective of their use by motorized transport and shall be eligible for technical and financial support from the road agencies

4.7.7 Legal, Institutional and Regulatory Framework

4.7.7.1 Critical Issue

NMIMTs are already in use in various parts of the country. No action has been taken to integrate them into the national transport network so that they can effectively play a complementary role to road and other transport modes for both passengers and goods.

4.7.7.2 Policy

Steps will be taken to harmonize the NMIMTs and their concomitant infrastructure into the technical, legal and institutional mandates of existing Road Agencies, Local Authorities and relevant Government Ministries so that they can effectively play a complementary role to other transport modes.

4.7.8 Supply and Use of NMIMTs

4.7.8.1 Critical Issues

For NMIMTs to be available on a sustainable basis, it is necessary to commercialize their regular production/manufacture, based on readily available skills, taking into account appropriateness and suitability of the products and local needs in various parts of Kenya. Most of the existing design and development for the NMIMTs vehicles have been undertaken through the informal Jua Kali sector. Considerable efforts have also been made in this area by non-governmental organizations (NGOs). Commercialization of their production could lower their unit costs and enhance their affordability.

4.7.8.2 Policy

- a. The Government shall support existing efforts to produce /manufacture the NMIMTs.
- b. Further efforts by the private sector aimed at promoting the production and marketing of NMIMTs will be encouraged and supported.
- c. Incentives will be given to small and medium enterprises (SMEs) especially Jua Kali artisans to invest in the development, manufacture and maintenance of NMIMTs.
- d. Support will also be given to tertiary and other training institutions to undertake research on the development of appropriate technology for various types of NMIMTs.
- e. The private sector will be encouraged, especially through the SMEs, and Jua kali artisans, to invest in the production of prototypes of NMIMT vehicles.
- f. Appropriate fiscal incentives will be granted to investors.

4.7.9 Human Resource Development for NMIMT

4.7.9.1 Critical Issues

Although a number of NGOs and the private sector have already developed certain types of NMIMTs, these efforts are still scattered and uncoordinated. Technical knowledge on

the manufacture and use of NMIMTs is therefore scarce and similarly uncoordinated. For the sustainability of the development of NMIMTs, it is necessary to ensure a continuous availability of experts, including engineers and technicians, at various levels for each type of NMIMTs. Most training institutions do not teach skills relevant to NMIMTs.

4.7.9.2 Policy

- a. Training institutions and polytechnics will be assisted to introduce relevant courses and syllabi for training technical personnel to ensure acquisition and dissemination of skills necessary for the development and maintenance of NMIMTs infrastructure.
- b. Public education and awareness on the handling and care of animals used as beasts of burden and in transport will be promoted.

4.7.10 Safety of NMIMTs

4.7.10.1 Critical Issues

At the moment, available road space is shared by both NMIMTs and motorized vehicles leading to traffic congestion and pose a serious danger to road safety. In the urban areas, although many workers can afford NMIMTs such as bicycles, they in many cases fear using them because of the high-risk of accidents under these conditions. They are therefore forced to meet their transport needs through walking. At the moment, most users of NMIMTs are not knowledgeable on the basic traffic laws and regulations. Most local authorities also do not keep a register of NMIMTs or their owners.

4.7.10.2 Policy

- a. All NMIMTs using roads in both urban and rural areas shall be registered with the local authorities at grass root levels for purposes of identification in case of accidents. Animals using roads shall be branded for this purpose.
- b. In order to enhance safety on the roads, users of NMIMTs shall be required to have knowledge of rules governing road use;
- c. Standard technical specifications shall be set for each category of NMIMT, including handcarts, wheelbarrows, bicycles, tricycles and motor cycles.
- d. The possibility of addressing insurance issues relating to NMIMTs will be examined.

4.7.11 Incentives for NMIMT Development

4.7.11.1 Critical Issues

During the initial stages of the development of NMIMTs, it will be necessary for the government to provide various incentives in order to promote their production by the private sector in sufficient numbers to cater for needs of the urban and rural areas.

4.7.11.2 Policy

- a. Fiscal and other incentives will be used by the GoK to make NMIMTs affordable;
- b. Investment incentives shall be given to small scale and Jua Kali artisans to invest in the development, manufacture and maintenance of NMIMTs.

4.7.12 Advocacy

4.7.12.1 Critical Issue

In a number of areas, people are still biased against the NMIMTs and/or their use, especially by women and girls. It is necessary therefore to minimize these biases and to ensure a wider acceptance of NMIMTs at all levels.

4.7.12.2 Policy

Support shall be given to the increased use of NMIMTs. In particular, sensitization programmes/campaigns to remove certain communal biases against the use of NMIMTs by women and girls will be undertaken.

4.7.13 Enforcement

4.7.13.1 Critical Issues

Although provisions of the Traffic Act and by-laws of local authorities recognize the use of certain NMIMTs, enforcement of these by-laws for the benefit of the users or for the benefit of other road users is weak. Enforcement of traffic and other laws has not been strengthened.

4.7.13.2 Policy

- a. All road users, including those using NMIMTs will be required to have knowledge of basic traffic rules.
- b. Enforcement of by-laws on use of NMIMTs shall be enforced by Local Authorities

4.8 ROAD PASSENGER TRANSPORT SERVICES

4.8.1 Background

Besides walking and non-motorized vehicles (mainly bicycles), road transport vehicles (buses, matatus, taxis, motorcycles and private cars) are the primary means of passenger transport in both urban and rural areas. Intercity passenger transport services are mainly provided by buses, matatus, private vehicles and to a lesser extent by air and rail transport.

The Road Passenger Transport Policy covers both public and private passenger movement on roads using buses, matatus, taxi, tour vehicles, light delivery vehicles, private motorcars, Tour vehicles, motorcycles and bicycles as well as walking. This policy looks into the consolidation of institutional, administrative, operation, regulatory, financial and planning aspects of road passenger transport in Kenya at both national and local levels. The policy adopts an integrated approach taking into account support mechanisms such as human resource development, environment, commerce, information, safety and security of road passenger transport.

4.8.2 Mission

“To promote an efficient, coordinated, integrated, affordable, safe, reliable and environmentally friendly road passenger transport services in urban and rural areas to enhance passenger mobility and service accessibility”

4.8.3 Strategic Objectives

The strategic objectives for road passenger transport are to:

- a. Promote spatial integration of motorized and non-motorized road passenger transport needs in urban and rural areas;
- b. Ensure that road passenger transport addresses access and mobility needs and standards to limit travel time and distance in urban and rural areas;
- c. Provide appropriate institutional structures, which facilitate the effective and efficient operations, competition, planning, funding, regulation, permission and law enforcement of the road passenger transport system;
- d. Promote professionalism in road passenger transport operations to encourage more private sector investment;
- e. Promote environmentally sensitive and sustainable energy efficient road passenger transport in urban and rural areas; and
- f. Promote the application of ICT in road passenger transport operations.

4.8.4 Land Use and Spatial Development for Road Passenger Transport

4.8.4.1 Critical Issues

One of the reasons for traffic congestion in urban areas, especially in Nairobi and Mombasa is improper land use and physical planning. Land use planning and development especially in urban areas and road passenger transport development are currently not integrated. This is due to poor coordination of responsibilities for administration, planning and regulation of the various aspects of land use, infrastructure and operations. Physical Planning Departments in most local authorities are usually under-staffed and hence inadequate capacity to undertake physical planning. This situation has given rise to spatially dislocated settlements, urban sprawl, and long travel distances and times. In many cases, land meant for infrastructural development is not secure and is susceptible to illegal allocation to private developers.

In addition, urbanisation in Kenya has been growing rapidly since independence. During the two inter-censal periods (1969 – 1989) and (1989- 1999) the rates of growth of urban population has increased from 8 percent in 1980s to over 34percent in 2003 and is projected to reach over 50percent by 2020. The population of Nairobi alone has reached about 3.0 million residents and a day population of 4.5 million people. This calls for an elaborate urban transport services to serve mobility needs of the population.

Buses, matatus, taxis, motorcycles and non-motorized vehicles provide urban passenger transport services in Kenya. Because of scarcity of buses and matatus, the majority of passenger vehicles on the urban roads are cars which constitute about 45% of all vehicles in the county. Consequently, public passenger transport services are characterised by:

- Over-crowding of passengers in PSVs and long queues of commuters at “termini” during peak hours;
- Irregular operating schedules offered by public transport operators;
- Vehicular congestion arising from poor road space usage by private vehicles, PSVs and NMIMTs;
- Use of low occupancy vehicles by public service vehicle operators and insufficient supply and use of NMIMTs as well as lack of standards in the design and manufacture of NMIMT vehicles; and

- Poor road design e.g. inadequate drop and pick up points, joining of secondary and primary roads.

4.8.4.2 Policy

The following spatial development principles will support passenger transport policy:

- a. Land use development proposals shall be subject to a land use and road passenger transport policy framework within an agreed development planning process;
- b. The effective functioning of cities shall be enhanced through integrated planning of land use, transport infrastructure, transport operations and bulk services;
- c. Establishment of a coordination framework for agencies responsible for the planning and development of road passenger transport infrastructure and services;
- d. Road passenger transport planning shall be carried out in an integrated and comprehensive fashion to link with other modes with a view to enhancing efficient and effective mobility; and
- e. Land earmarked for future road development shall be well secured by issuing title deeds of road reserves to the Ministry responsible for roads.

4.8.4.2 Policy Implementation

Policy actions to be pursued to provide for urban redevelopment geared towards densification and efficient land use shall include:

- a. Establishment of structures, that facilitate integrated planning of infrastructure, operations and land use;
- b. Preparation of integrated land use plans for all urban areas to facilitate the regulation of development at all levels so that development approval is subject to conformity with integrated land use and transport plans;
- c. Land use frameworks, guidelines and policies to channel development, especially infilling, densification, mixed land use along public transport corridors and nodes to contain urban sprawl and sub-urbanisation beyond the urban limits;
- d. Unrestrained car usage shall be contained through the application of policy instruments including strict parking policies (e.g. park and ride systems, development conditions requiring developers to provide for parking for both resident and generated traffic on their premises), access restrictions for private cars, differentiated license fees, road pricing and area licensing. This will enhance traffic demand management and reduce travel time. Traffic flow within CBDs shall equally be improved by optimally using congestion pricing through the introduction of differentiated parking fees that discourages motorists from parking within the CBDs at particular times of the day. Adoption of appropriate road designs that separate fast, slow moving urban, and inter urban traffic through grid separation (flyovers, interchanges) and orthogonal junctions. Optimal pedestrian lanes shall be the norm to reduce conflicts between motorised and non-motorised traffic;
- e. Local authorities shall construct central parking areas for public service vehicles;
- f. Local authorities shall establish and strengthen planning departments and capacity building for planning services; and
- g. Designations of dedicated road passenger transport lanes within local authorities transport plans to facilitate efficient road passenger transport operations and services.

4.8.5 Institutional Framework for Passenger Transport Operations

4.8.5.1 Critical Issues

There is a fragmented and uncoordinated legal and institutional framework for regulation, coordination, development and management of road passenger transport services. The functions of the Transport Licensing Board (TLB), which is supposed to be the industry regulator does not include the provision of road passenger transport services.

The Board neither prepares road passenger transport plans, nor does it formulate standards in the quality of service and vehicle standards and regulations to guide industry operations. The current licensing framework is based on applications, while the supervision of the licensed operators is left to traffic police whose core function does not include this area of operational priority. Further, even though the TLB license fees are derived from the TLB license, its revenues are all remitted to the Exchequer, which is not obliged to allocate the same to the board. The Board is therefore not financially autonomous and relies on central government financing. Similarly, it lacks institutional autonomy in decision making since its decisions are subject to ratification by the central government. While the private sector has shown immense interest and capacity to invest in road passenger transport, there has been lack of clear institutional guidance to foster meaningful long-term investment, especially in large buses.

4.8.5.2 Policy

The current regulating framework (Cap 404) shall be reviewed with a view to enactment of a service and operation management legislation to ensure the road passenger transport services are carried out in a legally organized environment. The institutional framework will distribute functions between the licensing and service authorities in both local and central governments in accordance with capacity and institutional responsibilities to provide a climate that is conducive to private sector investment.

4.8.5.3 Policy Implementation

In accordance with Vision 2030, the Metropolitan Transport Authority (MTA) is to be established for Nairobi City followed by other cities, as appropriate, to manage urban transport issues in the urban areas.

A Metropolitan Police Department (MPD) will be set up to manage urban traffic and inculcate order and discipline in urban traffic countrywide. Both institutions will be staffed and managed by transport experts.

The TLB will be restructured to undertake service and licensing functions and will have the desired financial and institutional autonomy to effectively undertake their mandates countrywide. The central government will be in charge of macro passenger transport policy and standards, planning, transport research and studies, funding of some infrastructure projects in the national interest, international road passenger transport agreements and regulations. Municipal and other local authorities will undertake approval of transport plans, ensuring and, where appropriate, undertaking the planning, design, construction, maintenance and funding of public transport infrastructure, co-ordination of land use and transport planning at all levels.

4.8.6 Framework for Passenger Transport Operations and Management

4.8.6.1 Critical Issues

Optimal operations of public passenger transport are achieved only when adequate infrastructure and proper regulations are in place under competitive conditions. At the institutional level, there is lack of an urban transport authority to comprehensively deal with the problem of urban passenger transport among other related issues. Inadequacy of laws and poor law enforcement have aggravated the already disorganized public transport service operations especially matatus. Traffic regulations are excessively flouted while illegal gangs charge unauthorized fees which inhibit the operations on certain routes by interested industry investors. In general, there is indiscipline in the urban transport passenger operations (e.g. noise pollution from shouting touts and loud music) due to lack of standardization of vehicles and services. In Nairobi and Mombasa, this situation has grown worse with the expiry of the franchise granted to Kenya Bus Services (KBS). This disorganization has also led to shortages of school transport in principal towns and cities. Cartels are also evident in taxi operations to which operators pay exorbitant entry fees before commencing operations.

The development of road infrastructure such as dedicated bus lanes and terminal facilities to support public passenger transport is hampered by poor financial status of local authorities. As a result, infrastructure development has not responded to the increased demand from the rapid growth in vehicle population, especially in cities. Terminal facilities are inadequate, forcing public transport vehicles to use road space as terminal points, thus compounding congestion in cities. Moreover, there is no statutory requirement for licensing public transport vehicles (matatus and buses) on the basis of road passenger transport plans in urban areas leading to unbalanced vehicle supply on certain routes, inefficient and unsafe public transport services.

4.8.6.2 Policy

- a. Establishment of autonomous institutions at the Metropolitan level to manage urban transport needs.
- b. The public road passenger transport system in Kenya shall be based on regulated competition and strict law enforcement
- c. Operation licenses shall be issued on the basis of compliance with traffic safety regulations.
- d. Adequate infrastructure shall be developed to support efficient public transport operations to reduce waiting times, travel times and to enhance road safety.

4.8.6.3 Policy Implementation

To promote competition, the government will review the current arrangements with a view to granting a franchise to a few major transport operators through periodic competitive tenders in order to raise the quality of service in public passenger transport in major cities.

Considering that infrastructure development is essential to the smooth passenger service operations, the central government will be involved in the financing and development of key network components in the national economic interest. Regulation of road passenger transport in Kenya will be in the form of licenses, awarded based on a passenger transport plan where possible and supported by strict law enforcement. All public transport operators will be required to operate on ethical business principles and

will be liable to taxation. The following are the main implications of regulated competition for public transport modes:

Low Capacity Vehicles (Matatu Operations): Regulated competition will mean that the matatu industry will be formalised and measures introduced to improve its economic viability, quality of service, ethics, behaviour and attitudes. They will be licenced to operate only on specific routes, network or transport corridors. Licenses will be granted by the proposed licensing authority (TLB or its equivalent) at the local and national levels on the basis of a route or network determined by (demand) estimated through the Passenger Transport Plans (PTP). Since the private sector has shown considerable capacity and ability to deliver services, the government will promote this initiative to allow for more investments in the sub sector.

To reduce congestion through urban traffic zoning control, all matatus in the urban areas will be outlawed from the central business district (CBDs) and other sites as appropriate. In major urban areas, road transport routes leading to the CBDs will be designated by corridors for the purpose of provision of terminal infrastructure facilities, with each transport corridor providing for its operational requirements. For example, in Nairobi the corridors could be defined to include Jogoo Road, Juja Road, Thika Road, Waiyaki Way, Ngong Road, Mombasa Road, Lang'ata Road and Limuru road Corridors.

Pedestrian facilities inter-linked with these terminal facilities will be developed while intra-city bus operator(s) licensed to facilitate inner city movements and links with the terminal facilities. To facilitate intra-city movements without passing through the CBD, public transport linkages with the terminal facilities will be developed. Acquisition of ample land for these will be a priority in both infrastructure development and urban traffic management.

The ultimate policy intention is that existing low capacity PSV vehicles be progressively phased out in the medium term (five to seven years) by encouraging local entrepreneurs (cooperative societies, financial institutions and local investors) to invest in higher capacity vehicles (buses) with a view to reducing the number of vehicles on the roads while increasing the number of passengers transported. Fiscal and other incentives will be provided to encourage local investors to participate actively in the industry. The motor vehicle department will establish an appropriate standard for urban bus passenger transport.

Bus operations and Future Metro Services: Public transport services shall continue to be provided through privately owned legal entities. The licensing function shall be vested with the TLB or any institution to be entrusted with such functions. Specific efforts shall be made to encourage small, medium and micro enterprises (SMMEs) in the road passenger transport industry. This move will reduce the number of low occupancy vehicles currently congesting the urban routes. Investment incentives will be provided to investors in form of subsidies (for Cities/metropolitan areas), taxes, insurance and credit facilities for financing both new purchases and fleet renewal. To make urban public passenger transport more attractive, the central and local government shall develop priority bus lanes in metropolis already experiencing congestion such as Nairobi and Mombasa to facilitate quicker movement and reduced travel time for public transport users.

Planning shall be based on origin-destination surveys to enhance appropriate planning and development of passenger transport networks. Provision of tramways, bus lanes, commuter rail and metros shall be planned to ultimately meet urban passenger mobility needs. Bus corridors shall be planned and developed for major urban areas to ultimately

give way for future networks for Metro ways. Integrated planning shall be undertaken to ensure a balanced modal split between road passenger transport services and other complementary modes (e.g. railway) through provision of tramway services, commuter rail services and metro/light rail passenger transport services to meet urban mobility needs.

Tour Services and Taxis Operations: Tour and taxi operators shall be licensed by the relevant bodies in conformity with safety and security guidelines to be developed. Operation and regulatory guidelines shall be developed to ensure that service standards are met by operators. Taxis services shall specifically be provided with appropriate guidelines on parking and operations to create an orderly urban environment. Provision of these services will be governed by quality focused standards and guidelines.

4.8.7 Rural Passenger Transport Services

The GoK will:

- coordinate with relevant sectors and communities to establish facilities such as schools, health centres, water, energy, etc. near the population;
- plan rural development programmes, with transport aspects being considered along with other land use, social, economic and cultural factors;
- promote use of non-motorized transport to ferry passengers as an alternative means where motorized vehicles are insufficient; and
- enhance use of water transport for rural areas along the coast, lakes and rivers.
- undertake a study to evaluate how public-private partnerships can be developed to offer regular low cost transport services.

4.8.8 Human Resource Development

4.8.8.1 Critical Issues

Disciplined operations in the passenger transport industry can best be achieved through operator and personnel education to increase ethic levels and discipline in the industry. The above are currently lacking and have led to lack of operational ethic and order.

4.8.8.2 Policy

The government in consultation with the private sector will establish and prioritize programmes to build expertise in the road passenger transport service on a continuous basis. In addition, education and training facilities accessible to all role players shall be established to promote human resource development in road passenger transport.

4.8.9 Environment and Energy Efficiency

4.8.9.1 Critical Issues

Environmental quality is critical and its pollution by traffic will be minimized. Currently, there are inadequate measures to check the damage to environment caused by passenger vehicles in form of gaseous pollution, vibration and noise among others.

4.8.9.2 Policy

The Government will promote the use of more energy efficient and less polluting modes of transport. Greater energy awareness shall be promoted among planners and road users through public awareness programmes and differential fuel prices, etc. Closer co-

operation between relevant government agencies shall be pursued in the implementation of international environmental legislation/agreements such as the Clean Air Initiative (CAI) resolutions.

4.9 ROAD FREIGHT TRANSPORT

4.9.1 Background

Road freight transport embraces domestic and international conveyance of goods by road by heavy goods (commercial) vehicles (HGVs) mainly comprising lorries, trucks, heavy vans, trailers and fuel tankers. In 2007 Kenya had about 117,150 commercial vehicles of this type. The basic requirements for road freight transport include high quality service to customers and (with regard to cost, reliability and timeliness of delivery), a seamless inter-modal operations, optimised use of capacity and management of operations, protection of infrastructure and minimal environmental impact.

Inter-modal transportation is the concept of transporting goods in such a way that all parts and facets of the process, including information exchange, are efficiently linked and coordinated, offering flexibility. It is not just the infrastructure, vehicles, or equipment involved, but the management and operation processes. The true advantage of inter-modalism is the ability to logistically and effectively link two or more modes of transport for the benefit of customers and users. Both information technology and containerisation play an important role in facilitating multi-modalism. An effective freight transport system also requires the harmonization of technical standards and an interface with all concerned stakeholders.

4.9.2 Mission

To facilitate provision of an efficient, safe, reliable, cost-effective, environmentally friendly and fully integrated land freight transport system that adequately meets the needs of all stakeholders in a sustainable manner and supports the Government's socio-economic requirements.

4.9.3 Strategic Objectives

The strategic objectives in road freight transport emanate from the fact that besides her own domestic requirements for this mode of transport, Kenya is also an important transit country within the Northern Corridor for hinterland neighbouring countries, namely, Uganda, Rwanda, Burundi, eastern parts of the Democratic Republic of Congo (DRC), Southern Sudan, Southern Ethiopia, and Northern Tanzania. These objectives are to:

- a.** Facilitate the provision of low-cost high quality and internationally competitive freight services in the Northern Corridor and for all transit and domestic freight traffic;
- b.** Promote the development of a competitive freight transport system providing efficient and reliable services that adequately satisfy the Kenyan domestic requirements and enhances the competitiveness of Kenyan goods on the domestic and external markets;
- c.** Facilitate the provision of low-cost high quality and internationally competitive freight services in the Northern Corridor and for all transit and domestic freight traffic;
- d.** Minimize or eliminate non-tariff barriers in road freight transport movement and achieve the growth of a seamless flow of freight traffic throughout Kenya in

- collaboration with all neighbouring states under various regional and international arrangements;
- e. Promote private sector participation in the provision of road freight services at favourable economic rates of return;
 - f. Promote the adoption and application of freight transport system based on modern information technology in freight transport backed by strong linkages with other transport modes countrywide, regionally and internationally;
 - g. Encourage human resource development in road freight transport;
 - h. Minimize damage to road infrastructure by freight vehicles and damage of freight vehicles by poor road infrastructure and enforcement of laws relating to road freight transport; and
 - i. Manage emerging challenges affecting road freight operators in respect of health, safety, security, gender and environment along transport corridors.

4.10 TRADE AND COMPETITIVENESS

4.10.1 Critical Issues

Kenya as a transit country should develop and maintain an efficient and reliable road freight transport industry that adequately serves domestic and international traffic. Efficient freight transit services ensure low transport costs which in turn not enhance competitiveness of Kenyan goods on the domestic and international markets.

4.10.2 Policy

The GoK will facilitate the establishment of an efficient, competitive, reliable and safe road freight transport industry in Kenya.

4.10.3 Promotion of Private Sector Participation

4.10.3.1 Critical Issues

As one of the most important means of transport in the Northern Corridor, road freight transport is critical to the competitiveness of the port of Mombasa, *ceteris paribus*. The main factors contributing to the high freight costs are poor road conditions in the Corridor leading to high vehicle operating costs. Currently, the industry is dominated by large scale transporters at the expense of small and medium enterprises (SMEs). The quality of service by freight transport is low due to high vehicle operating costs, corruption and exorbitant taxes. In particular, the multiplicity of taxes in freight operations is a disincentive to investment by private sector in this industry.

4.10.3.2 Policy

- a. The GoK will promote the development of a seamless multi-modal transport system that includes road freight transport.
- b. Fiscal incentives will be given to the private sector especially to encourage increased participation by SMEs in freight transport business;
- c. The government will further consolidate and review all taxes paid in respect of freight transport into a few, low and easily collectable taxes.
- d. The GoK will protect the interests of local investors in freight transport against transit transporters.

4.10.4 Non-Tariff Barriers

4.10.4.1 Critical Issues

Several factors non-tariff barriers (NTBs) to trade inhibit the movement of freight traffic along the Northern Corridor and thus raising transport costs. Cumbersome customs procedures have hampered free flow of freight traffic leading to costly delays at the port of Mombasa and at various border points that are reflected in the prices of goods (imports and exports). Such delays are largely caused by physical verification of transit cargo by various governments due to non-application of modern information and communication technology ICT at the border points. In addition, cases of cargo diversion are common in Kenya leading to substantial loss of revenue to the Exchequer and a flooding of the Kenyan market with cheap imports, which threaten the survival of local industries and employment opportunities. Other causes of delay include long waiting times at weigh-bridges, police road blocks, police escorts and corruption.

4.10.4.2 Policy

- a. Administrative and customs procedures will be simplified to enhance speedy cargo delivery.
- b. Modern ICT facilities will be used in the verification of transit cargo.
- c. Cargo verification and inspection will be privatised.
- d. Kenya will harmonise transit cargo arrangements under COMESA, East African Community (EAC) and IGAD.
- e. Elimination of all non-tariff barriers (NTBs) such as roadblocks, weighbridges, corruption and police escorts, etc.

4.10.5 Road Damage and Axle Load Regulation

4.10.5.1 Critical Issues

Overloaded Heavy Goods Vehicles (HGVs) contribute to road destruction. Conversely, the damaged roads adversely affect the operating conditions for both HGVs and other vehicles. Current axle load control measures have not effectively reduced damage to the roads due to corruption and management weaknesses.

There are seven weighbridges operated by the government between Mombasa and Malaba, leading to costly traffic delays that are eventually reflected in the prices of goods. Currently road transport carries more traffic in the Northern Corridor than the railways due to the low level of railway haulage capacity, leading to high road maintenance costs and high vehicle operation costs. In fact railway haulage is safer and less susceptible to the numerous NTBs mentioned above. There is an urgent need therefore to improve the railway freight services. In this regard it may be noted that railways have a lower transport costs per tonne/km than road transport over distances exceeding 400 km.

4.10.5.2 Policy

- a. Axle load regulations will be strictly enforced.
- b. Administrative and other weaknesses such as corruption in law enforcement will be eliminated.
- c. Axle load control operations will be privatised.
- d. Weighbridges will be located only at major sources of freight and exit border points;

- e. Efficiency and capacity of Railway transport operations will be improve through public / private partnerships (PPPs).
- f. Measures will be taken to ensure efficient operation of Kenya Pipeline Co. Ltd. (KPC) to minimize road damage by transit fuel tankers from the neighbouring countries;
- g. Installation of weigh-in-motion equipment together with modernization of existing weighbridges.
- h. Freight transport operators will be sensitized on the need to adhere to axle load regulations.

4.10.6 Safety and Security

Safety and security for freight vehicle operators, vehicles and cargo, especially along the Northern Corridor, are of crucial importance. Police escorts intended to enhance security also delay the movement of cargo, leading to inefficiency in delivery. Poor terms and conditions of employment (casual labour) have compromised safety and security of cargo and road users. Similarly, frequent police checks of freight vehicles to curb cargo diversion also leads to costly delays, which translate eventually into high transport costs. The poor quality of freight vehicles on Kenyan roads has also been aggravated by inadequate vehicle inspection.

4.10.6.1 Policy

- a. Security and safety for local and transit traffic and cargo will be enhanced.
- b. Non-tariff barriers to trade and to the free movement of traffic shall be eliminated.
- c. Improvement of vehicle inspection of all freight vehicles to ensure their road worthiness.
- d. Relevant provisions of labour relations' legislation will be enforced to address the poor terms and conditions of employees in the freight transport industry.

4.10.7 Information, Communication and Technology

4.10.7.1 Critical Issues

One of the factors contributing to the inefficiency and hence high cost of road freight transport is the non-application of information and communication technology (ICT) in its operation. Application and use of ICT has not been appreciated by freight operators at the ports of entry thereby contributing to delays in cargo clearance. Lack of integration of ICT system that is readily accessible to clearing and forwarding agents, importers and exporters to other systems in other countries has heavily contributed to the delays. Use of ICT would reduce or eliminate the need for physical inspections and police escorts and facilitate elimination of incidences of corruption.

4.10.7.2 Policy

- a. ICT based cargo tracking systems shall be introduced and integrated with all other stakeholders system-wide.
- b. The KRA shall enhance ICT in all their operations.
- c. Provision of fiscal incentives in all ICT facilities and services for freight transport.

4.10.8 Road Freight Operators

4.10.8.1 Critical Issues

Liberalization of the road freight industry has resulted in the increase in the number of operators who are inexperienced and lack relevant managerial skills. This has resulted in poor quality of vehicles and operating standards. The consequence of this has been that road transport services have been expensive for consumers resulting in poor vehicle utilisation and hence low returns on investment.

4.10.8.2 Policy

The GoK shall provide an enabling environment to facilitate efficient operations of road freight transport industry.

4.10.8.3 Implementation of Policy

- a. All freight vehicles be subject to undergo regular and compulsory inspection
- b. Pursue a harmonized road freight transport system in the EAC and COMESA sub-regions.
- c. Ensure effective road transport law enforcement and management of cross-border routes.
- d. Establishment of an effective method of resolving disputes quickly and effectively to reduce costs and time spent in judicial discourse thereby benefiting the local economy and the region as a whole.

4.10.9 Road Freight Transport and the Environment

4.10.9.1 Critical Issues

Freight transport contributes significantly to air and noise pollution. There are no effective control measures in transportation of hazardous materials and substances, which result into environmental degradation.

4.10.9.2 Policy

- a. The Government shall ensure strict enforcement of regulations governing the transportation of hazardous materials and substances so as to minimize chances of disasters, such as fires arising from spills of petroleum fuels through road accidents. Effective disaster management measures will also be established to deal with such disasters when they occur.
- b. Address environmental impacts in conjunction with the National Environmental Management Authority (NEMA) and other relevant government agencies.

4.10.10 Road Freight Transport and Health

4.10.10.1 Critical Issues

Road freight transport in the country has been identified as a major cause of road accidents, which result into high health care bill as well as the emotional suffering, occasioned to family members and relatives. The role of freight transportation and the workers in the sector in transmittal of diseases cannot be under estimated.

4.10.2.2 Policy

The Government of Kenya will develop a framework for interventions to reduce the potential and actual negative effects of road transport on health. The intervention shall include integration of health issues in road transport planning, design and operations.

4.11 ROAD TRAFFIC AND SAFETY

4.11.1 Background

"Road traffic" as a focus area of transport policy is concerned with the quality of road vehicles (including motorized and non-motorized vehicles), drivers, operators, pedestrians, road traffic operations, the road environment and interaction in the traffic network. This includes mutual interaction between road users, the road infrastructure, and the road environment.

"Road traffic quality" encompasses traffic safety, traffic discipline (including training), protection of the road infrastructure and the environment, administrative and economic order in road traffic.

The "functional areas of road traffic management" are road traffic control (law enforcement), adjudication of traffic offences, enhancement of road user knowledge, skills and attitudes, incident management, road traffic planning and engineering. This includes transport and traffic planning/engineering, traffic operations management, and road vehicle engineering; and support functions (including traffic legislation, information management, licensing and registration, and road traffic related research and development).

The following is a brief statistical analysis of Kenya's road traffic realities:

Road vehicle statistics: There are approximately 899,000 vehicles registered in the country of which over 38,000 are public service vehicles (matatus) with 7,000 located in Nairobi alone. Annual fuel sales have shown a steady rise from 1,826.3, 2,175.4 and 2,405 metric tons in 1993, 1997 and 2001 respectively.

Traffic safety related statistics: World Health Organization Injury Chart Book statistics show that global annual road accident statistics have increased from 750,000 fatalities and 35 million injuries in 1990s to over 1.194 million fatalities and 60 million injuries in 2002. Worldwide, road accidents are currently the greatest killer of humankind ahead of malaria (1.124 million), measles (0.745 million) and breast cancer (0.479 million).

Traffic safety is a serious problem in this country, with over 13,000 traffic accidents annually (involving approximately 26,000 vehicles) causing 2600 fatalities and over 11,000 serious injury cases. This translates to over 36 accidents and 8 fatalities daily. The number of casualties per crash has also gone up from 1.3 in 1965, 1.8 in 1990 to 2.0 in 2002, while fatalities per 10,000 population during 1985 to 2002 has risen from 7.8 to 10 respectively. In comparison to other countries, deaths per 10,000 vehicles in Kenya 55, Tanzania 136.7, Ethiopia 197, Botswana 41, South Africa 22 and United kingdom 1.6. Further, road km per 1000 population: Kenya 2.3, Tanzania 33 and Ethiopia 0.5. Accidents statistics in Kenya are 30 - 40 times greater than those of highly industrialized countries. Statistics show that road accidents in Kenya is the third cause of death after malaria and HIV/AIDS and present a challenge to overall health status, morbidity, disability and associated health care costs.

Statistics on causes of accidents: Over 85.5percent of accidents are by human error/factors on the part of drivers and motor cyclists (43.6percent), pedestrians (24.8

percent), passengers (4.8percent) and pedal cyclist (10.3 percent). Vehicles cause about 4.8 percent (overload, defective brakes, tyres, steering, lights), while traffic environmental factors (pot holed roads, bends, and slipping roads) account for over 3.0 percent of crushes.

Statistics related to Public Passenger Vehicles: Matatus accounted for the majority of vehicles involved in accidents of over 14.4 percent, 14.3 percent and 11.8 percent in 2005, 2006 and 2007 respectively, followed by buses 9.1percent, 9.9 percent and 9.8 percent finally. Taxis 2.3 percent, 2.5 percent and 3.2 percent in the same years. Matatu and bus accidents combined accounted for 23.4percent, 24.1percent and 21.5percent in 2005, 2006 and 2007 respectively thus almost equalling total annual accidents involving all cars and utility vehicles combined.

When taxis are included, all public passenger vehicle accidents accounted for majority of annual road accident statistics at 25.8percent, 26.6percent and 24.6 percent in 2005, 2006 and 2007 respectively. This shows that public passenger vehicles cause the majority of fatalities. Considering that matatu and bus crashes are almost 3.5 times higher than the rest of other vehicles, it calls for special attention to be paid to road accidents involving public passenger vehicles as a matter of priority. When the year 2007 accidents involving public passenger vehicles are combined with cars and utility vehicles, they accounted for over 55.2 percent of all road accidents in the country. It is, therefore, imperative that whereas public passenger vehicles require the highest priority in mitigation measures to restore safety on our highways, private cars and utility vehicles must be given an equal attention.

Statistics related to economic order in road traffic: The current total annual average cost to the economy of road traffic accidents amounts to KShs. 14 billion, which is approximately 5 per cent of GDP.

Accordingly, there is considerable amount of damage to the major highways and rural road network due to the overloading of vehicles thus raising the cost of road infrastructure maintenance and rehabilitation while lowering economic output for roads in the country. It is also noteworthy that the damage to vehicles caused by poor roads is enormous and costs the economy a lot of foreign exchange in vehicle maintenance. Other costs related to road safety include the losses to the economy arising from vehicle theft.

These selected figures indeed confirm that an unacceptable level of quality is experienced in the road traffic environment, and that serious attention should be paid to the solution of these adverse conditions.

4.11.2 Strategic Objectives

The strategic objectives in road traffic are to fulfil the mission by promoting and implementing efficient, integrated, and co-ordinated road traffic management systems in the country, involving role-players in all functional areas of road traffic management. The aim is to:

- a. Improve road traffic safety
- b. Enhance road traffic discipline
- c. Protect the expensive capital investment in the road system
- d. Enhance administrative and economic order in the field of road traffic and transport

Specific objectives will be set for each of these aims. Performance indicators should be established, and the relevant co-ordinating bodies should monitor the achievement of these objectives.

The general policy areas of funding, and the functional areas of traffic control, adjudication of traffic offences, the enhancement of road user knowledge, skills, and attitudes, and information management, have been identified as the key policy areas in traffic management.

4.11.3 Institutional Framework for Road Traffic Safety

4.11.3.1 Critical Issues

Currently, there is lack of an appropriate institutional framework for traffic safety coordination and management in Kenya. Traffic control (law enforcement) is identified as a traffic management priority, due to a severe breakdown in discipline on the roads, which in turn leads to unsafe conditions, damage to the road infrastructure, etc. Lack of discipline can only be rectified through strong proactive and reactive control actions. The effectiveness of the traffic control function must be improved substantially.

4.11.3.2 Policy

- a. The GoK will establish an appropriate institutional framework for the coordination and management of road traffic safety.
- b. Institutions dealing with road traffic will be harmonised, streamlined and strengthened
- c. The level of professionalism in traffic control and safety standards will be enhanced to improve road safety and levels of service on traffic control
- d. Traffic control resources will be enhanced and utilized optimally, with emphasis on efficiency, productivity and accountability.
- e. Special emphasis will be given to engender voluntary compliance by road users with the law;
- f. Traffic control and safety management will be enhanced through modernization, additional traffic personnel and equipment.

4.11.3.3 Policy Implementation

A National Transport Safety Board will be created to take charge of the coordination and management of traffic safety activities in Kenya;

- a. Optimal resource utilisation in traffic control will inter alia be achieved through: the implementation of appropriate management models, extensive utilisation of traffic information systems; setting and evaluating traffic control standards on regional, national and international levels; the identification of critical offences on these levels;
- b. Other measures will include, the establishment of systems and procedures to report the achievement of standards to the relevant co-ordinating bodies, the development of internationally, nationally, and regionally coordinated road traffic control programmes to address critical offences and the introduction of an accreditation system for traffic authorities related to the level of service rendered by traffic departments;

- c. Programmes for controlling over-speeding, alcohol levels and drugs related offences, as well as overloading of vehicles will receive special attention
- d. A national performance incentive scheme for traffic authorities, with performance incentives linked to the achievement of certain preset standards and targets, will be introduced under the auspices of the appropriate consultative structure;
- e. The level of professionalism of traffic officers will be increased inter alia through the introduction of a traffic academy for advanced training of traffic officers of the tertiary level; the continuous re-evaluation of training standards; the improvement of career development of traffic officers and their conditions of employment; and the introduction of a professional body responsible for maintaining standards and a professional code of practice;
- f. In order to empower the traffic departments to exercise their functions effectively, the function of investigating road traffic accidents and traffic control services will be declared "essential and emergency services" in terms of the relevant legislation. The provision of traffic control services on a 24-hour basis will be introduced, and traffic control resources be increased to provide for this extension of services. Relevant provisions of labour relations' legislation will be reviewed to accommodate these changes.

4.11.4 Funding of Road Safety

4.11.4.1 Critical Issues

Inadequate funding is one of the most fundamental problems of road traffic management in Kenya. Various initiatives aimed at improving the road safety situation have been hatched from time to time but end up fizzling out due to inconsistency and lack of sustainable financing mechanisms. Although motor vehicle imports are subject to a road safety levy, the application of such funds to road safety initiatives has not been actualised.

The availability of funds is incongruent with the importance and priority that should be attached to road safety and traffic management. Historically, emphasis in funding was heavily biased towards the provision and maintenance of the road infrastructure, rather than road safety. This bias needs to be rectified.

4.11.4.2 Policy

- a. A fully balanced funding policy in road traffic will be introduced. Spending priorities shall continuously be re-evaluated in view of traffic quality related road user needs, the adverse economic impact of inadequate levels of road traffic management, and the expected benefits of increased spending on traffic management.
- b. Additional funding strategies and sources for traffic management will be investigated, developed and introduced to ensure availability of adequate resources for road safety. These will include the government, the private sector (including insurance firms, vehicle manufacturers/assemblers, and oil companies, among others) and development partners.

4.11.4.3 Policy Implementation

The respective roles and responsibilities of national, local governments and road agencies in financing traffic management will be clearly demarcated.

4.11.5 Administration and Adjudication of Traffic Regulations

4.11.5.1 Critical Issues

Existing deterrent measures are inadequate and do not serve the purpose, while loopholes exist in punitive judgements delivered by the adjudication authority. There is a general delay in adjudication of traffic offences in law courts due to poor co-ordination between traffic control and the adjudication function. These problems, including corruption, are perceived to contribute to lack of respect for traffic law among many transport operators. Innovative and realistic solutions to these problems require that legal principles be honoured without compromising the effectiveness of traffic control.

4.11.5.2 Policy

- a. More deterrent measures will be instituted against traffic offenders;
- b. Certain traffic offences will be identified and decriminalised. Traffic officers will be empowered to enforce traffic penalties as prescribed by law. This will make the process of adjudicating traffic offences brief, strict and decisive, and will assist in restoring respect for the law and road safety;
- c. The large percentage of traffic prosecutions instituted by traffic departments that are never finalized, or are only finalized after an extensive period usually at an excessive cost, will be solved by decriminalizing certain traffic offences.
- d. In respect of non-decriminalized offences, the judiciary will be encouraged to offer expedited adjudication of the cases.

4.11.5.3 Policy Implementation

- a. In order to achieve improved order on the roads, the Traffic Act (Cap 403) will be amended to provide for stiffer penalties consistent with current and future socio-economic conditions and to make traffic laws easier to implement and more cost-effective;
- b. The feasibility of decriminalizing other traffic offences except reckless and dangerous driving will be investigated;
- c. The need to establish joint Traffic and Judiciary Committees and specialized traffic courts to facilitate speedy dealing with traffic offences will be explored;
- d. An appropriate rate of blood or breath alcohol and drug level will be developed and made applicable to all motorists with a compulsory suspension of the license after a second conviction for an offence related to alcohol and other drugs.

4.11.5.4 Handling Public Service Vehicle (PSV):

- a. PSV drivers and conductors convicted for a third time will have their licenses suspended or cancelled from operating a public passenger vehicle as may be appropriate.
- b. Networking with the print and electronic media will be enhanced to facilitate publicity for road safety and traffic offences

4.11.5.5 International harmonization of road traffic policy: National road traffic policy will be harmonized with regional and international standards particularly those of the United Nations.

4.11.6 Improvement of road User Knowledge, Skills and Attitudes

4.11.6.1 Critical Issues

A solution to road traffic problems can only be reached if the need to focus on the human aspects of road traffic is fully recognized. Improvement of road user knowledge, skills and attitudes as a road traffic management function should receive high priority in view of the extreme importance of this function in achieving acceptable levels of road traffic quality.

4.11.6.2 Policy

- a. All categories of road users will continuously be exposed to a purposeful programme aimed at enhancing their knowledge, skills and attitudes, at promoting their voluntary compliance with the law, and at developing community ownership and participation in enhancing road traffic quality. Road user knowledge, skills and attitudes will be enhanced through a comprehensive approach, including formal education, non-formal education and informal education where media such as radio, television, posters, pamphlets, etc, are used.
- b. Traffic authorities will coordinate and monitor driver training and license acquisition of driving licences to ensure that training standards are not compromised;
- c. Traffic control (law enforcement) programmes will be supported by well researched promotional and motivational programmes, so as to: create the necessary public understanding of their responsibilities, public understanding of the reasons for the existence of the law, public acceptance and support for their control activities; to increase public awareness of the control programmes; and to enhance the effectiveness of the programmes.
- d. Adequate resources will be made available for the enhancement of road user knowledge, skills and attitudes.

4.11.6.3 Policy Implementation

- a. Formal road user training will be enhanced, in co-operation with the national and local departments of education;
- b. Non-formal traffic safety education and training programmes, aimed at all categories of road users, will be developed;
- c. Informal road user education, which mainly involves communicating with the road users through the mass media, will be undertaken at the national level, and through other levels of government, to reflect local realities and needs;
- d. Road traffic authorities will be encouraged to create community liaison for the purpose of determining the true road user needs regarding the provision of road traffic management services, to bring their management plans in line with the needs of the community, and to secure public support for road traffic programmes and projects.
- e. Driver training will be enhanced by reviewing the current curricula and developing appropriate curricula.
- f. All possible avenues for securing necessary funds (including involvement of the mass media in promoting road user awareness in road traffic safety and other ways of involving the private sector) will be explored. The mass media, the motor and insurance industries, as well as other relevant industries will be made partners

responsible in creating an environment which is supportive of the aims of traffic management.

4.11.7 Road Traffic Administration and Information Systems

4.11.7.1 Critical Issues

Road traffic management information systems in Kenya are currently inadequate. In order to manage road traffic matters effectively and efficiently, up-to-date and reliable information on vehicles, their owners, accidents, offences, and convictions, among others is required. Information management through a National Traffic Information System (NaTIS) and other supporting systems requires to be developed and utilised. There is also a need to institutionalise collection, storage, retrieval and analysis of traffic data.

4.11.7.2 Policy

- a. The National Traffic Information System (NaTIS) will be developed and made fully operational. This will enable traffic authorities to exercise proper road user control, which is an essential prerequisite for discipline, order and safety on the roads.
- b. Standardized databases for road traffic aspects not covered by the NaTIS will also be made available to the relevant authorities. Traffic information required for planning, monitoring and control purposes, will be collected, analysed and stored by the management at all levels (local, provincial and national) according to their functions and needs.
- c. An institutional home for NaTIS shall be identified and relevant data sharing institutions identified for inclusion in the programme.

4.11.7.3 Policy Implementation

The proposed NaTIS should be installed and commissioned as soon as possible. NaTIS should institutionally be housed by the Registrar of Motor Vehicles while key NaTIS - Data Sharing Institutions (NaTIS-DSIs) will be connected to and have access to relevant data at all times. The Departments to be connected with the NaTIS will include:

- Registrar of Motor Vehicles
- Ministry of Transport
- Traffic Police Department
- Motor Vehicle Inspection Unit
- Customs and Excise Department
- Association of Kenya Insurance
- Transport Licensing Board (TLB)
- Local Authorities
- Registrar of Persons
- The Judiciary
- All road agencies

4.11.8 Incident Management

4.11.8.1 Critical Issues

Incident management, which includes the provision of medical care and rescue services after accidents have occurred and appropriate transportation of hazardous substances

adds to overall improvement of road transport safety in general. Currently, there are inadequate and un-coordinated incident management plans in the country.

4.11.8.1 Policy

- a. Incident management will be improved. Roads, traffic, and medical authorities will be compelled to develop, implement and operate incident management plans, aimed at improving effectiveness, efficiency and response times.
- b. Guidelines for the contents of an incident management plan will be developed. Specific attention will be given to the procedures for the management of incidents where hazardous substances are involved.
- c. Co-ordination and co-operation among various parties concerned with providing road traffic related emergency services will be improved and training for incident management developed.

4.11.9 Road Safety Through Planning, Engineering and Vehicle Inspection

4.11.9.1 Critical Issues

Road safety policy should underscore the importance of transport planning, traffic engineering, operations management and improved vehicle conditions. These should be considered during the planning, design, construction, maintenance and evaluation phases of road improvement.

4.11.9.2 Policy

- a. Safety issues will be integrated in the provision of public passenger transport, NMIMTs and roadside amenities. National guidelines on these and other relevant aspects will be developed.
- b. Uniform guidelines for traffic engineering control devices such as traffic signals, road signs and road markings and their evaluation through annual audits will be developed to enhance road traffic quality and the orderly flow of traffic at acceptable levels of service. These guidelines will take into account international best practices in road safety.
- c. The GoK will undertake periodic review of vehicle standards and enforce compliance through random and periodic vehicle inspection. The GoK will review the provision of vehicle inspection services currently offered by the Department of Motor Vehicle Inspection Services with a view to privatizing the services to make them widely accessible and efficiently managed. The Department will, however, remain to perform a regulatory role.

CHAPTER 5

RAILWAY TRANSPORT

5.1 BACKGROUND

Railway network in Kenya comprises a one-metre gauge total track of 2,765 km owned by Kenya Railways Corporation (KRC). The track runs across the southern part of the country from port of Mombasa on the Indian Ocean sea front to Malaba at the border with Uganda. The network has principal branch lines connecting Kisumu on Lake Victoria, Nanyuki and Nyahururu from the mainline at Nakuru, Gilgil and Nairobi respectively and has direct links with the port of Mombasa, the road network and the inland container depots. In addition to the track, railway assets in Kenya include land, infrastructure, rolling stock, wagon ferries and maintenance equipment and a large workshop. The workshop which was originally designed to cater for the maintenance needs of all railways in the former East African Community is located in Nairobi and is used by for rehabilitation and repair of locomotives and rolling stock. KRC also operates marine services on Lake Victoria and currently owns vessels operating there, including Kenya's only wagon ferry on the Lake, Uhuru.

Magadi Railways, a subsidiary of Magadi Soda Co. Ltd., owns and operates 146 km of the railway truck under a 25-year lease agreement with the government, for the exports of its soda ash from Konza to Mombasa. From November 1, 2006 the Kenya Government and KRC concessioned the management and operations of railway services to Rift Valley Railways (RVR). Under this agreement, freight services were conceded for a period of 25 years while the passenger services were conceded for five (5) years from the Concession Commencement Date.

Freight services are offered on almost all routes for both domestic and regional markets while passenger services are provided three times a week in the up and down direction between Nairobi and Mombasa and between Nairobi and Kisumu and once a week between Nairobi and Nanyuki. Current business levels and operations at the railways have not been able to fully utilise the excess capacity of the workshop.

5.1.1 Mission

The mission in railway transport sub-sector is to provide efficient, reliable, safe and secure railway transport services that are integrated with national and regional railway, road, water, pipeline and air transport services for the transportation of goods and passengers on a sustainable and competitive basis.

5.1.2 Strategic Objectives

This policy covers issues related to railway infrastructure planning, development, maintenance, management, operations, legal, institutional and regulatory frameworks. It also covers issues related to railway safety and security, funding, human resources, environment and energy and related matters. Its aim is to create an enabling framework that will improve in the short run the quality and efficiency of railway transport and the development of a modern, efficient, high capacity and quality railway transport system in the medium term. In doing this, railway transport must provide a service that complements other modes of transport and meets the needs of the people and the industry in a sustainable manner. The policy is expected to facilitate the development of a modern and expanded railway system that will be capable of facilitating development in the country and the region and contribute to the creation of wealth and employment.

5.1.3 Guiding Policy Principles

The development of the railway policy was guided by the following principles:-

- a. The connectivity and interdependency of the railway system nationally and regionally;
- b. Promotion of trade in the region, the sharing of resources and seamless operation across borders by the railways in the region;
- c. Establishment of an appropriate framework within which all modes of transport can effectively compete;
- d. Appropriate allocation of the roles of the Government and private sector commensurate to attracting investment including private sector participation and promotion of growth;
- e. Optimal development, maintenance and utilisation of railway infrastructure;
- f. Promotion of fair and even competition;
- g. Promotion of railway safety and security;
- h. Ensuring smooth cross-border operations;
- i. Ensuring consumer satisfaction through a wider choice and protection;
- j. Promoting the protection of the environment and improvement of energy efficiency in the sub sector; and
- k. Ensuring that human resource for railway operations is developed and retained.

Railway transport is the most suitable mode for haulage of goods over long distances on land, i.e. beyond 4000 km. The performance of railway transport has over the years declined considerably due to lack of investment among other factors and hence the restructuring and concessioning of its management and operations. GOK through the KRC will closely monitor the concessionaire to meet the obligations and targets set in the concession contract. The challenges and constraints facing the railways are:

- a. Stiff competition from road and pipeline transport;
- b. Tax policies that result in the railways subsidising road transport which is its major competitor through payment of the road maintenance fuel levy;
- c. An unreliable and aging infrastructure and rolling stock particularly the single track, bridges, telecommunication, signalling and other facilities;
- d. Lack of investment by the Government, KRC and the Concessionaire.

The above problems have resulted in poor operational and financial performance in the sub-sector.

The GoK will ensure that the railway capacity is developed and exploited fully. The following key policy areas and critical issues will be addressed.

5.2 LEGAL, INSTITUTIONAL AND REGULATORY FRAMEWORK

5.2.1 Critical Issue

KRC was incorporated in 1978 by an Act of Parliament to provide rail and inland waterways transport services to serve the country and the region. KRC is a Government owned enterprise regulated under the Kenya Railways Corporations Act, Cap 397 and the State Corporations Act. The Kenya Railways (Amendment) Act 2005 made it possible for the KRC Board to enter into a concession agreement for the provision of railway transport services.

The legal and institutional environment in which KRC operates is not conducive for flexibility in decision making. For instance it receives directions from various government agencies, including the Office of the President, the Treasury, the Ministry of Transport and the Inspectorate of State Corporations. It has to obtain approvals for financing of major capital works and procurement. In addition, the Government appoints its Board of Directors without necessarily having due regard to relevance of qualifications and experience or competence of the appointees. The Board is not autonomous and its decisions are still subject to government review and approvals. There is therefore,

- Need for a review of the KRC and State Corporations Acts to reduce or eliminate restrictive regulations that do not allow fast response to changes in the market environment.
- Need to establish a policy that allows institutions to streamline business processes and to respond effectively to market changes.

5.2.1.1 Policy

The Government will review the KRC and State Corporations Acts to facilitate managerial autonomy for KRC and flexibility in decision making.

5.2.2 Legal Framework

5.2.2.1 Critical Issues

The KRC Act which governs the operations of the railways was amended vide the Kenya Railways (amendment) Act 2005 to make it possible for the KRC Board to enter into a concession agreement for the provision of railway transport services. The Act is, however, silent on the participation of the private sector in the development and operation of railways. It is also restrictive and does not allow KRC adequate flexibility to respond to market changes. It is therefore necessary,

- to review the KRC Act to streamline its operations and to enable optimal utilisation of resources.
- to develop a coordination and legal framework governing the participation of the government and private sector in the development of the infrastructure and the operation of the railway. This is in line with plans to develop new standard gauge railways networks to serve and connect the country and the region.
- To provide for an enabling environment that allows private sector participation in rail transport.

5.2.2.2 Policy

The Government will establish a legal framework that allows the participation of both government and private sector in development of new infrastructure and subsequent management and operation of the railways.

5.2.3 Regulatory Framework

5.2.3.1 Critical Issues

Although the Concession Agreement between GoK, KRC and RVR mandates KRC or railway safety regulator (if one is established) to act as the safety regulator for the railway concession this provision does not cover the regulation of the existing railway operators like Magadi Soda Company railway operations or new entrants.

There is therefore a need for clear regulatory criteria with well-established standards related to the industry to facilitate harmonisation of standards with other railways in the region in order to ensure the effective use of resources and operation across borders.

5.2.3.2 Policy

The Government will establish an independent regulator for the railway sub-sector

5.3 INFRASTRUCTURE DEVELOPMENT AND FINANCING

The railway system consists of a single meter gauge track running on the Southern part of the country and connecting Uganda to the sea port of Mombasa. There are branch lines connecting the mainline to Nanyuki, Nyahururu, Solai, Kitale, Kisumu and Taveta. The network is not well integrated with major urban centres within the country and other neighbouring countries. The current railway track is old and unreliable. It has sharp curves and high gradient in certain sections that limit train speeds and haulage. The telecommunication and signalling systems used for train operations are also old and unreliable. The current infrastructure in its present state cannot be expected to fully provide effective services to industry and people and to contribute to national and regional economic development.

For many years, KRC had not undertaken any major development either through rehabilitation and upgrading of its infrastructure, construction of new lines or modernization. Indeed, it had accumulated a substantial backlog of investments in both rehabilitation and upgrading of its infrastructure. This informs the rationale behind the concessioning of KRC operations to private operator with a provision of investment by the concessionaire of at least US\$. 5 million per financial year in providing services.

The track, besides being operated as a single line, has not been extended despite its limited coverage. Considering substantial changes that have occurred in land use and in the location of economic activities since the construction of various lines, it is necessary to review the origin-destination points system-wide to realign them to fit the current socio-economic and commercial needs, taking into account developments in the roads sector. In this regard, it will be of critical importance to ensure efficient mutual complementarities with all existing modes. The development of infrastructure will inevitably require the participation of the private sector.

The existing railway infrastructure is over 100 years old. Its technology is also outdated while the economic lifetime for most of its existing infrastructure, locomotives, rolling stock and equipment will expire in the next 10 to 20 years. Most other railways in the world of this generation, or younger have embraced modern technology and undergone tremendous changes, including the adoption of the standard gauge railway systems, in order to meet the critical challenges posed by increased developments in production, trade and tourism. The government must therefore immediately take a holistic longer term view of the railway system and start preparing for the modern new railway now, given that world-wide, this transport mode has proved to be the most-cost-effective for bulk freight and passengers over long and short distances, besides being also the most environmentally-friendly.

Under the First Medium Term Plan (2008-2012), a railway line will be constructed between the Nairobi Railway Station and Jomo Kenyatta International Airport (JKIA) to provide light rail services to about 150,000 passengers. This will be an important inter-modal linkage between railway, road and air transport for both domestic commuters and tourists.

KRC also plans to develop a “Golf City” within Nairobi through joint venture. The project provides for the construction of metropolitan rail termini connecting the facility with JKIA and the rest of the city. [Note: This project is not in the Medium Term Plan or in the Kenya Vision 2030].

5.3.1 Critical Issues

- Need to promote multi modal transport through integration of railway systems with other transport modes.
- Need to improve the current infrastructure facilities.
- Need to construct new modern standard gauge railway networks linking the port of Mombasa and the proposed port of Lamu to the neighbouring countries.[Not in vision 2030].
- Need to closely monitor the railway concession to ensure the concessionaire meets the minimum investment set in the agreement
- The funding of railways infrastructure is expensive and the Government may not have adequate funds for railway infrastructure development.

5.3.1.1 Policy

GoK will:

- a. Spearhead infrastructure provision and development.
- b. Continue to monitor the implementation of the Concession Agreement to ensure that the anticipated objectives are achieved.
- c. Facilitate the construction of a railway line connecting the Central Business District to JKIA.
- d. Initiate a long-term railway development programme aimed at phasing out the present railway system and replacing it with a modern railway network system that is well spread across the country in order to exploit unutilised resources and achieve balanced regional development.
- e. Finance Railways infrastructure development
- f. Encourage private sector investment in railway development and rehabilitation on a competitive basis.
- g. Utilise the land along the track to generate more revenue.

5.4 RAILWAY OPERATIONS

The railway services in the country are provided by a private operator (RVR) and Magadi Soda Company whose services are limited to transporting its own products. Freight services constitute about 80per cent of railway operations. About 75 per cent of the traffic transported is local while the rest is transit traffic to Uganda and other countries in the region. The Railway Operator (RVR) provides inter-city passenger services and urban commuter services in Nairobi. The demand for intercity railway passenger services is expected to grow and expand in the future as the railway infrastructure is modernised and as its competitive advantage against the road is improved. The fares charged for economy class are adjusted with approval from KRC and MOT.

5.4.1 Critical Issues

- The freight and passenger services offered in the country do not fully meet the demand by the industry and the public. The freight services offered do not provide “just-in-time” (JIT) services as required by the industry.

- Operational performance is affected by poor infrastructure and rolling stock
- Weak enforcement of operational regulations and procedures.
- Need to ensure that operations are well integrated with other transport modes.
- Need to ensure that operations are spread in the country in order to improve the quality of life and achieve regional development.
- Need to provide an efficient passenger railway services especially in urban areas that are accessible to all.

5.4.2 Policy

GoK will:

- a. Ensure that public service obligations (PSOs) offered where necessary are compensated for. This is to ensure that railway operations do not lead to undue losses for the operator(s).
- b. Ensure that freight charges and passenger fares charged by railway operators are competitive.
- c. Provide railway infrastructure for mass rapid transport in Nairobi and its environs, undertake and implement feasibility studies for the provision of similar services in other local authorities and urban centres.
- d. Ensure that railway infrastructure and rolling stock are maintained at levels capable of supporting effective operations and the national economy. The distribution of traffic among modes shall be improved to ensure the optimum utilisation of resources for the benefit of the economy.

5.5 LAND USE PLANNING AND MANAGEMENT

KRC has lost a substantial portion of its original land through land sales and encroachment by private developers. The land disposed of has in many cases been developed to cater for non-railway related business and without taking into consideration future requirements of the railways. Considering the critical need to ensure adequate land is reserved for further development of KRC's infrastructure, it is important that the requirement for adequate land should be identified early. It is also important that KRC's existing land is protected from further encroachment.

Physical planning in both rural and urban areas should take cognizance of the need for an integrated inter-modal transport system for both passenger and freights where railway transport plays an important role. Considerable changes have also occurred in land use since the railway line was built and these have affected the operation of certain lines and branches. It is therefore necessary that economic activities are generated and expanded in these areas to ensure that railways continue to provide commercial services along such lines and routes with a view to ensuring their long-term sustainability.

5.5.1 Critical Issues

- Loss of railway operational land to private land developers;
- Encroachment on railway land reserve /corridor.
- Identification and reservation of land for the future expansion of the railways.
- Changes in land use pattern.

5.5.2 Policy

GoK will:

- a. Ensure that adequate land for future development and operations is identified and reserved.
- b. Ensure that existing land belonging to KRC is protected from further encroachment whereas the illegally lost land is repossessed.
- c. Acquire additional land for development and expansion of railways infrastructure taking into account the planned modernization programme, demographic changes and changes in industrial and agricultural production and other economic activities.
- d. Ensure that Nairobi and other major urban centres, such as Mombasa Nakuru, Kisumu and Eldoret incorporate in their development plans the need for the construction of railway networks for the operation of urban and peri-urban commuter trains.

5.6 INFORMATION AND COMMUNICATION TECHNOLOGY

5.6.1 Critical Issues

Due to technological advancement, infrastructure maintenance and operations of modern railway transport systems are increasingly relying on ICT. The track maintenance methods currently in use in KRC, though labour-intensive, are out-dated.

The introduction of the rail tracker in the management of operations by KRC, however, is an important development in the use of ICT. Although it is a customer-friendly system that enables customers connected to the system to follow the movement of their consignments from their offices the rail tracker has not been integrated with other transport modes.

5.6.2 Policy

GoK will:

- a. Ensure that ICT in railway transport is integrated with ICT of other transport modes such as road and marine transport.
- b. Encourage railway operators to utilise ICT.
- c. Increase the use of ICT in other areas of operations and in the maintenance of infrastructure.

5.7 SAFETY

Railway operations for both passengers and freight have in the past been affected by several accidents which are attributed to infrastructure and equipment defects, poor loading, poor marshalling of trains and human error although KRC had very well developed guidelines, standards, and operational procedures that were expected to be adhered to in order to avoid accidents. Moreover, the railway transport has no independent Safety Regulator. Under the concession agreement with RVR, however, the concessionaire is expected to submit a safety management plan, in accordance with good industry practice and laws of Kenya to KRC or the Railway Safety Regulator (when appointed), for approval. KRC or the Railway Safety Regulator will be expected to conduct at least one annual audit to ensure compliance.

5.7.1 Critical Issues

- Need for rehabilitation of infrastructure and rolling stock through investment as set

out in the concession agreement;

- There is a need for the development and implementation of an effective safety management system which establishes and maintains safe operating, rehabilitation and maintenance standards and procedures and ensures that safety-critical and safety related positions are occupied by qualified, trained and experienced persons;
- It is necessary to ensure that all safety related maintenance and operation information is available to persons involved to ensure safe operations.
- Need to establish an independent railway regulator.

5.7.2 Policy

The GoK will:

- a. Strengthen KRC or establish an independent railway safety regulator to licence and monitor railway operators regarding their state of safety;
- b. Ensure that infrastructure facilities and rolling stock are well maintained;
- c. Ensure that rail operators offer continuous training on safe train operations to their safety-critical staff.

5.8 ESTABLISHMENT OF A LEVEL PLAYING GROUND

5.8.1 Critical Issues

Although railway transport services compete with road services, rail operators continue to be charged the Road Maintenance Fuel Levy along with other fuel consumers, thus subsidizing their competitor. The unique position where rail operators maintain their own infrastructures whereas road transport operators do not, needs to be addressed. It is expected that until railway networks are electrified, the rail operators will continue to be among the largest consumers of fuel oil. It is therefore necessary to allow the modes to compete fairly.

In addition, import duties in the transport sector should take into account the need to develop a fair competition for all transport modes. Customs duties on imported railway spares, for instance, are currently higher than those charged on completely knocked down (CKD) kits for assembling buses locally, thus placing railway transport at a competitive disadvantage.

Currently, there are independent and uncoordinated plans in the transport sector and funding of the various modes. This anomaly should be addressed.

5.8.2 Policy

GoK will:

- a. Harmonize fiscal policies to avoid subsidization of one mode of transport by another in order to encourage fair competition;
- b. Integrate transport planning under the proposed department of transport to ensure that all the modes of transport are considered fairly.

5.9 HUMAN RESOURCE DEVELOPMENT

5.9.1 Critical Issues

Success in the implementation of policies herein, including rehabilitation and

modernization of railway infrastructure and the installation of information and communication technology system-wide, will require a skilled and highly trained cadre of workers. The Railway Training Institute will be used for improving railway related skills. It, however, needs to be provided with modern training equipment and facilities. The contents of its courses should be aligned to the current and future requirements of the rail business and operations. Priority should also be given to human resource development at all levels to ensure efficient operation, management and service delivery under competitive conditions.

5.9.2 Policy

GoK will:

- a.** Facilitate the acquisition, development and retention of quality human resources in all aspects of railway operation and management;.
- b.** Ensure that Railway Training Institute offers courses that are essential to railway operations;
- c.** Ensure the provision of adequate equipment and facilities for the Railway Training Institute.

5.10 REGIONAL AND INTERNATIONAL INTEGRATION

5.10.1 Critical Issues

Kenya's close linkage with land-locked neighbouring countries makes it inevitable for its transport facilities to be closely harmonized with those of the region in order to ensure the development of an efficient, integrated and seamless regional and international transport network since the prosperity of the economies of these mostly landlocked countries is highly dependent on an efficient transport system. Although Kenya is currently linked to Uganda and Tanzania by rail, it is not linked by rail to Sudan, Ethiopia and Somali. The country stands to gain in the long term if its railway network is linked with the networks of Ethiopia and Sudan.

This would provide alternative routes to the sea for imports and exports, open up the unexploited parts of the country and operate trains jointly and share railway resources with neighbouring countries.

5.10.2 Policy

GoK will:

- a.** Ensure close collaboration is maintained with railway organizations in the neighbouring countries in the Eastern and the Horn of Africa on issues relating to construction of new railways, technology compatibility and harmonization of equipment, inter-operability and interconnectivity, maintenance, information technology and administrative procedures;
- b.** Ensure that procedures for operations and transportation of both passengers and freight are harmonized in consultation with the agreements under the East African Community, IGAD and COMESA and under other international agreements;
- c.** Pursue possibilities of merging operations across borders with a view to achieving economies of scale and a seamless service.
- d.** Make interface agreements with neighbouring countries to allow for seamless operations.

5.11 ENVIRONMENTAL AND ENERGY ISSUES

5.11.1 Critical Issues

Railways operations contribute to the damage and pollution of the environment through borrowing of murrum and ballast, leakage of oil, accidents during transportation and through disposal of wastes from workshops and maintenance depots. In addition, noise and vibrations generated during operations contribute to environmental pollution while the use of diesel motive power also contributes to air pollution.

The change from diesel motive power to electric powered locomotives can result in considerable reduction or elimination of air pollution. The use of electric powered locomotives and the improved performance of the railway operations are expected to lead to more shippers diverting their cargo from the road to rail transportation. This will in turn reduce road damage and carnage as well as reduce the country's oil import bill thus saving foreign exchange. In order to make railway transport environmentally friendly and ensure that its operations meet the environmental standards set by the National Environment and Management Authority (NEMA) long term planning of energy should take into account the need for electrification of the railway.

5.11.2 Policy

GoK will:

- a.** Ensure that Railway Operator(s) strictly adhere to national environmental standards;
- b.** Pursue construction of electrified standard gauge networks;
- c.** Long term plans for energy should take into account the need to electrify the railway network.

CHAPTER SIX

MARITIME TRANSPORT

6.1 BACKGROUND

Maritime transport plays a significant role in the social and economic development of Kenya. In view of the fact that over 95 percent of Kenya's international trade is conveyed by sea, maritime transport continues to play a pivotal role in the development of the national economy since maritime transport is the most economical mode of transport especially for bulky goods. This mode of transport enhances the competitiveness of Kenya's exports in the international markets and helps attract foreign direct investment to the country. An efficient and affordable maritime transport will support increased economic activities as envisaged in Kenya's Vision 2030, Kenya's long-term national planning and development strategy. Developments in the maritime sector have to be in tandem with this Vision. Indeed, the Government of Kenya acknowledges that the poor performance of the maritime sector is a major impediment to the competitiveness of the country's exports and of its products in liberalized domestic market.

This policy addresses maritime transport issues relating to economic principles, international trade, domestic participation, ship financing, ownership and registration, commercial maritime support services, shipping operations, ports, safety of life and property at sea, training, certification and employment of seafarers, prevention and control of marine pollution, search and rescue services, security of ships and port facilities and the institutional and regulatory framework.

6.2 MISSION

“To promote an efficient safe, secure, and environmentally sound maritime transport system that supports the integration of the global network of the maritime supply chain, expansion of the productive capacity of the economy and the improvement of the quality of life and well being of Kenyans”

6.3 INFRASTRUCTURE

Key components of Kenya's maritime transport system currently comprise one major seaport, Mombasa, and other smaller scheduled ports along the 650-km coastline between Somalia and Tanzania, ferry services in Mombasa, one container depot in Mombasa, three inland container depots (ICDs) in Nairobi, Kisumu and Eldoret and inland water transport on Lake Victoria. Kenya also has a shipping line, the Kenya National Shipping Line (KNSL) which is currently non-operational. Mombasa and all other minor ports on the Indian Ocean seafront and their infrastructure are managed by the Kenya Ports Authority (KPA). The port of Mombasa handles all types of ships and cargo, and serves Kenya and other countries: Uganda, Rwanda, Burundi, Democratic Republic of Congo, Ethiopia, Southern Sudan, north-eastern Tanzania and Somalia. Altogether, these countries account for 27 per cent of the annual total cargo throughput at the port. The other ports under the jurisdiction of KPA are Funzi, Vanga, Shimoni, Kilifi, Malindi, Lamu, Kiunga and Mtwapa. Except for Lamu, most of these ports have no developed infrastructure and are used for handling fishing boats and as such have no significant commercial value.

Mombasa port has 16 deep-water berths with a maximum dredged depth of 11 metres and with total quay length of 3,004 meters. Three of these berths handle containers and 13 handle conventional cargo. The port also has quays, berths, jetties, container

stacking yards, goods sheds, warehouses, lighthouses, buoys and administrative buildings. There are two oil jetties for refined and crude oil with a capacity of handling tankers of up to 80,000 DWT. The port's has an annual capacity to handle 22 million tonnes while actual cargo handled averages 16 million tonnes annually.

The three Inland Container Depots (ICDs) located in Nairobi, Kisumu and Eldoret are connected to the port by a special rail service known as Railtainer which is run by the railway operator, Rift Valley Railways (RVR) Currently only Nairobi and Kisumu ICDs are operational while Eldoret which was put up in 1995 is yet to open for business.

The Kenya National Shipping Line Ltd. (KNSL) is owned by the GoK and some private international shareholders. The Line was established under the Companies Act in order to take advantage of the business opportunities offered by the growing Kenya international sea-borne trade under the provisions of the United Nations Conference on Trade and Development (UNCTAD) Code of Conduct for Line Conferences.

Ferry services are mainly provided by two agencies, the Kenya Ferry Services (KFS) Ltd. and the Kenya Railways Corporation (KRC). The KFS, an autonomous company owned by the GoK, provides these services across the Likoni Channel at Likoni and Mtongwe. The KRC offers ferry services on Lake Victoria.

Inland water services on Lake Victoria were previously provided by Kenya Railways Corporation (KRC). Since November 1st 2006, however, they are now provided by RVR.

6.4 OBJECTIVES

To realize this mission the Government will pursue the following objectives:-

- a. Develop the maritime transport sector in support of the economy in general and Kenya's international trade in particular;
- b. Develop the port of Mombasa as a main gateway to Kenya and the hinterland serving the Great Lakes region;
- c. Develop the port of Lamu as an alternative commercial port with emphasis on developing links to Sudan, Ethiopia and Somalia (second transport corridor).
- d. Develop a Free Trade zone at Dongo Kundu
- e. Restructure the Kenya National Shipping Line as a national carrier
- f. Enhance the legal framework within which to ensure safety and security of life and property, the prevention and control of pollution of the sea and of the inland waters
- g. Promote public/private partnerships in maritime transport operations and infrastructure development
- h. Develop an awareness of maritime transport issues in Kenya amongst the policy makers, the stakeholders and the general public.
- i. Ensure provision of globally competitive, quality maritime education and training for seafarers and other workers in the maritime industry.
- j. Strengthen the framework for the co-ordination of activities of service providers in line with the established policies, rules and regulations targeting among others code of conduct, cost and quality of services.
- k. Enact and expedite the implementation of the Merchant Shipping Bill, 2008
- l. Ratify and domesticate international and regional conventions, agreements and protocols

- m. To strengthen the Kenya Maritime Authority and Kenya Ferry Services to fully deliver their mandates.
- n. Develop and enhance cruise tourism
- o. To promote the appropriate use of Incoterms by Kenyan shippers in a way that will give Kenya maximum economic benefits in the international maritime transport industry

6.5 LEGAL, REGULATORY AND INSTITUTIONAL FRAMEWORK

The Kenya Maritime Authority (KMA) was established by the GoK in 2004 for the purpose of strengthening Maritime Administration in Kenya. The State Corporations Act, KMA Act. 2006, Merchant Shipping Act (1967), Environment Management and Coordination Act (EMCA) and Maritime Security Regulations provide the necessary legal framework within which KMA operates. The setting up of KMA transferred the responsibility of shipping concerns from Kenya Ports Authority (KPA) to KMA.

The mandate of KMA as provided for in KMA Act 2006 is to co-ordinate and oversee maritime affairs in the country which includes ensuring safety of life at sea, security of ships and port facilities and the protection of marine environment for the socio-economic benefit of stakeholders. KMA operations are currently largely funded by the GoK since avenues for generating its own revenue are limited.

Kenya Ports Authority was established by an Act of Parliament on 20th January 1978, after the collapse of East African Community. Kenya Ports Authority operates under KPA (Amendment Act) and the State Corporation Act. KPA is mandated to develop and manage the scheduled seaports along the coastline.

The port plays a crucial and strategic role in the facilitation of sea borne trade both for Kenya and other hinterland countries along the Northern Corridor which include Uganda, Rwanda, Democratic Republic of Congo, Southern Sudan Burundi and Northern Tanzania. These countries contribute to 27 per cent of the annual total cargo throughput at the port.

The port has an annual capacity of 22 million tonnes throughput while the cargo handled averages 16 million tonnes. The port registered a total cargo throughput of 15.9 million tons in 2007 and 16.41 million tons in 2008 representing an increase of 2.8 per cent. Container traffic which has experienced dramatic upsurge over the last decade registered a growth of 5.2 per cent from 585,367 TEUs in 2007 to 615,733 TEUs in 2008. Liquid bulk tonnage increased by 0.2 per cent from 5.64 million tons in 2007 to 5.63 million tons in 2008.

6.5.1 Critical Issues

- a. The maritime sector has been operating for a long time without a well coordinated structure. Whereas there have been various legislations governing activities in the sector, there has not been adequate harmonization and overlap is common. The current institutional framework in the sector is not well defined with regard to interrelationships of the various government agencies.
- b. The principal maritime legislation is the Merchant Shipping Bill 2008 that will replace the Merchant Shipping Act 1967(Cap 389). This Bill provides for the registration and licensing of Kenyan Ships, regulation proprietary interests in ships, training and the terms of engagement of masters and seafarers and matters ancillary thereto; it also provides for the prevention of collisions, the safety of navigation, the

safety of cargo; carriage of bulk and dangerous cargoes; the prevention of pollution; maritime security; liability of ship-owners and others, inquiries and investigations into marine casualties and makes provision for the control, regulation and orderly development of merchant shipping and related services; generally to consolidate the law relating to shipping and for connected purposes. The revised bill should be in compliance with current IMO International conventions, protocols, agreements and other standards.

- c. Lack of institutional capacity is the biggest impediment to delivery of regulatory services in the sector. The main challenge facing the Kenya Maritime Authority is the development of appropriate capacity and management framework to deliver on its mission.
- d. The Kenya Railways Act places the responsibility of the development of inland waterways transport to the Corporation. However, some aspects of KRC Act do not sufficiently support the needs of inland waterway including co-ordination and other technical maritime aspects. In addition, Kenya Maritime Authority Act 2006 gives the overall responsibility of regulating, coordinating, and supervising the maritime and inland waterways affairs are under the custody of KMA while the Lake Victoria Transport Act 2007 regulates the management of transport in Lake Victoria.
- e. Kenya is party to 25 out of the 59 international maritime conventions emanating from and deposited with the IMO, and more than 13 conventions/ recommendations under International Labour Organisation (ILO), that have a bearing on seafarers. These conventions and recommendations require that Kenya creates national legislation for their implementation. Kenya is also a signatory to the United Nations Convention on the Law of the Sea (UNCLOS) 1982. UNCLOS encompasses all aspects of the uses of the ocean and establishes a comprehensive legal framework for the regulation of all ocean space.
- f. Despite having ratified crucial international conventions, domestication of the same into Kenyan Laws proceeds at a very slow pace. This coupled with lack of updated legal instruments in tune with modern challenges and development has resulted in loss in millions of dollars to Kenya in foregone opportunities in maritime trade among others. This has also led to Kenya's inability to meet its international legal obligations as required by international agreements owing to the inappropriate legal instruments for the administration of trade and operations apart from hampering full development of Kenya's maritime transport industry.
- g. KPA Act currently does not provide adequate provisions to enable KPA to operate commercially and respond to the dynamic market demands. The Act also has no appropriate provisions to encourage privatization of port services. The Act hence needs to be reviewed and harmonized with the other related Acts like the State Corporations Act so as to provide corporate flexibility to cope with the changes in the maritime transport scene.
- h. The KPA Act mandates KPA to manage and operate the seaports along the Kenyan coastline. This therefore excludes ports on inland waterways like Kisumu on Lake Victoria. On the other hand the Kenya Railways Act bestows the responsibility of management and operation of all the inland waterways ports to the Corporation. This includes the strategic port of Kisumu on Lake Victoria which is a strategic part of the Northern Corridor transport system and also provides an important link to the port of Mwanza in Tanzania.
- i. Over the years the port infrastructure has deteriorated leading to loss of business at the port of Kisumu. This is due to the fact that KRC does not possess the institutional capacity for the specialized disciplines of port operations and

maintenance which KPA possesses. The situation has impacted negatively to the development of maritime transport industry at Kisumu and Lake Victoria.

- j. The Kenya National Shipping Line was set up in 1987 as a joint venture between Kenya Ports Authority and strategic partners to take advantage of the UNCTAD Code for Liner Conferences which stipulates that 40 percent of international sea-borne trade generated by a member country should be carried by a National Shipping Line. This was meant to promote developing countries to participate in the international carriage of seaborne trade in order to spur their economic development. The Line currently operates on slot charter arrangement as a Non-Vessel Operating Common Carrier (NVOCC).
- k. KNSL as a national carrier is largely dormant due to legal, governance and operational problems and has not lived up to expectations due to unclear ownership and weak management.

6.5.2 Policy

GoK shall:

- a. Review existing maritime legislation to incorporate international and regional conventions, protocols, instruments and agreements on a continuous basis.
- b. Expedite the domestication of ratified international conventions and development and implementation of their respective local regulations.
- c. Review KMA Act and other relevant legislations to strengthen Kenya Maritime Authority to enable it to fully carry out its regulatory functions such as commercial maritime services.
- d. Expedite enactment and implementation of the Merchant Shipping Bill 2008
- e. Amend the KPA Act as appropriate and pass over the administration and management of all ports including those on inland waterways to KPA.
- f. Review the KPA Act with a view to enacting legislation which will enable the Authority to operate more commercially and independently and further facilitate the transformation of the port to landlord status.
- g. Restructure, revamp and review the Kenya National Shipping Line with a view to ensuring increased participation by the private sector and preferably by Kenyan investors.
- h. Enhance capacity in the shipping and maritime department responsible for review and implementation of the maritime transport policy.

6.6 ADMIRALTY JURISDICTION

6.6.1 Critical Issue

Kenya lacks an appropriate comprehensive local legislation for the adjudication of maritime claims. The Judicature Act, Cap 8 of the Laws of Kenya imports English law into Kenyan courts. Litigants and Judges are often thrown into a quandary while trying to keep up with the ever-changing procedures and provisions of Admiralty law in England. Some of these changes have no relevance to Kenyan court processes but have to be applied nonetheless, making the process of litigation unpredictable.

6.6.2 Policy

The GoK shall enact appropriate comprehensive local legislation to be applied in the adjudication of maritime claims and thus restore confidence in the country's maritime industry.

6.7 PORTS INFRASTRUCTURE

6.7.1 Critical Issue

- The port's entrance approach channel is shallow thus restricting entry of large ships such as post- Panamax vessels. There is a need for the port to accommodate all types of ships, including post-Panamax vessels.
- The existing container terminal was designed to handle a throughput of 250,000 TEUs per annum through three berths i.e. 16, 17 and 18. The terminal has since surpassed this capacity as evidenced by the fact that in 2008 a total of 605,000 TEUs were handled through the terminal. This growth in container traffic has put a strain on the existing facilities and compounded the congestion. A second container terminal is being developed by KPA at the port of Mombasa which will have an additional throughput of 1.2 million TEUs. The proposed development of the port of Lamu as a second commercial port in Kenya, however, will enhance the country's capability to service the region's seaborne trade. Lamu is endowed with deep natural waters and adequate space which will facilitate the handling of larger vessels and more traffic. The project is aimed at creating a second transport corridor emanating from Lamu to serve Southern Sudan, Ethiopia and Somalia and will include the construction of a standard gauge railway line and a modern highway from the port to the hinterland. This will alleviate the growing pressure on space and capacity available at the port of Mombasa. Feasibility studies indicate that development of the port at Lamu and its supporting infrastructure will stimulate economic activities in Lamu and its environs to the benefit of the local communities.
- The port of Mombasa has not fully exploited its position as a logistics centre which can be used to support the development of industry and the export trade, although it has adequate room for the development of export processing and assembly facilities to support free port services, all of which would add value to the operations of KPA. Although land has over the years been set aside at Dongo Kundu in the south-western part of the port for the development of a Free Trade Zone with the accompanying transport infrastructure, the GoK has been slow in implementing this project.
- The three Inland ICDs owned and operated by KPA at Nairobi, Kisumu and Eldoret were set up to ease congestion at the port; bring services closer to the hinterland and to customers in the neighbouring countries and to divert bulky cargo from road to railway, taking advantage of inter-modal transportation. These ICDs which are rail-served and connected to the Mombasa container terminal by rail have not performed well and hence have not been able to live up to their objective of diverting cargo from road to rail. This has been due to poor railway service by Kenya Railways, and more recently, RVR.
- The port of Mombasa lacks purpose-built cruise ship reception facilities which are essential for attracting more cruise ships and contribute to the development of cruise tourism in Kenya despite the fact that this is one of the fastest growing forms of tourism in the world. Kenya must endeavour to tap this business by ensuring the port has adequate facilities.

6.7.2 Policy

GoK shall:

- a. Develop Dongo Kundu area as a Free Trade Zone (FTZ). This will transform the port to an international logistics centre generating incremental traffic in terms of shipping and creating employment.
- b. Expedite plans to construct the second container terminal facility at the port of Mombasa to cater for the growing business in container traffic and introduce public private participation in its operation and management.
- c. Expedite plans to construct a new port at Lamu
- d. Develop Cruise ship reception facilities at the port to promote cruise tourism.
- e. Promote development and use of ICDs by revamping railway transport services

6.8 SHIP FINANCING AND REGISTRATION

6.8.1 Critical Issues

The efficiency, cost and suitability of ship registration, manning legislation and administrative procedures are critical issues that ship owners evaluate in choosing an appropriate register under which to operate their vessels. In addition fiscal allowances and incentives accorded by the country's tax regime are also important considerations.

In Kenya the current customs taxation regime in both import duty and Value Added Tax as well as trade taxes is prohibitive to shipping companies wishing to register their vessels in Kenya. In addition, administrative legislation and operational procedures are both bureaucratic and cumbersome and act as a barrier to attracting vessel registration on the Kenyan register. The above considerations do not encourage the registration of ships nationally. Tax burdens are prohibitively heavy while the register is a closed one and the legislation is inadequate.

6.8.2 Policy

The GoK shall expedite enactment of Merchant Shipping Bill 2008, in order to institute and implement regulations/legislation that streamline and simplify vessel ownership registration procedures.

6.9 PORT OPERATIONS AND ADMINISTRATION

6.9.1 Critical Issues

Over the years the port of Mombasa has been beleaguered by inefficient cargo clearance processes causing delays and rendering the port expensive and uncompetitive. This scenario caused by cumbersome documentation and cargo clearance procedures has contributed to the high costs of maritime transport logistics along the Northern Corridor and increased the cost of doing business in Kenya and the region as a whole. The situation has also contributed to an average cargo dwell time of 12 days at the port an aspect which also contributes to the perennial congestion at the port.

Although Kenya Revenue Authority (KRA) and KPA have introduced computerized systems in their operations the delays are still prevalent due to lack of complete integration between the two systems and the fact that the other clearance agencies are not integrated. The solution to this has been identified as the introduction of a single window electronic platform which will enable electronic lodging and processing of cargo clearance documentation and integration of relevant GoK agencies and other stakeholders involved in the process. The system will reduce cargo dwell time to a maximum of 3 days at the port.

Port operations are also hampered by lengthy customs procedures which otherwise are not conducive for attracting business at the port of Mombasa. A case in point is the lengthy processes subjected to transshipment cargo. There is a huge potential for growth of the business which is essentially a port- to- port business. Containerized transshipment cargo is received at the port and is picked by other vessels for onward shipment to their final destination. Existing customs procedures for this traffic has impeded the growth of the traffic over the years.

Cumbersome and expensive Customs procedures have also increased the cost of transit traffic passing through the port and hence hampered the growth in this traffic. The port of Mombasa competes with the port of Dar es Salaam for transit traffic to Uganda, Rwanda, and Burundi and Eastern part of Democratic Republic of Congo (DRC). It is important therefore to introduce policies which will help Mombasa to maintain the lead in this business.

Efforts by KPA to serve the port's hinterland efficiently have been hampered by the poor off-take of cargo from the port by the railway operator. Despite efforts to run dedicated container trains the operator has not been able to provide the optimal level of service and capacity.

The road infrastructure is also not adequate to service the level of traffic demand emanating from the port. The poor transport infrastructure has contributed to delays in cargo off-take from the port. This is due to poor turnaround of railway wagons and trucks along the northern corridor route. There is need therefore for transport infrastructure to be in tandem with port development in order to cope with the ever growing port traffic.

6.9.2 Policy

The GoK shall:

- a. Expedite the implementation of the Port Community Based System
- b. Ensure timely upgrading of the infrastructure emanating from the port to the hinterland in order to cope with increasing traffic from the port
- c. Liaise with the Governments of the neighbouring countries to ensure upgrading of the infrastructure in those countries in order to cope with the increasing traffic from the port
- d. Streamline customs procedures at the port to encourage business growth at the port.

6.10 PORT REFORM

6.10.1 Critical issues

Currently KPA plays the roles of both a landlord and a service provider at the port of Mombasa. Apart from managing the port KPA also provides stevedoring and shore handling services. To some extent this dual role has contributed to inefficiencies in port operations. There is therefore the need to inculcate efficiency in port operations by transforming the port into a landlord port in order to facilitate the involvement of the private sector in port operations such as stevedoring, storage, and shore handling activities. The involvement of private sector in the crucial cargo handling activities will enable quick decision making by eradicating bureaucracy and political interference in

crucial issues like equipment acquisition and engender discipline in port operations. This is the trend in ports administration world over.

Further KPA will privatise the stevedoring, storage and shore handling of conventional cargo operations followed by the container handling operations with priority given to companies with majority Kenyan shareholding through a transparent public bidding process. This will be done by outsourcing through licensing, leasing, concession and build operate and transfer arrangements (BOT) where appropriate hence making KPA a Landlord Port Authority.

6.10.2 Policy

GoK shall:

- a. Transform the port into a landlord port status and promote regulated private sector participation in stevedoring, storage and shore handling operations at the port
- b. KPA will be restructured through private sector participation in stevedoring, shore handling of conventional cargo operations, container handling operations; companies with majority Kenyan shareholding will be selected to participate in this process through a transparent public bidding process, i.e. through appropriate provisions of the Privatization Act.
- c. Ensure that revenues derived from port operations are dedicated to the improvement of port infrastructure.

6.11 GREENHOUSE GAS EMISSIONS (GHGs)-MARINE AND INLAND WATERWAYS AIR POLLUTION

6.11.1 Critical Issues

Global climate change is caused by the accumulation of greenhouse gases in the lower atmosphere. The global concentration of these gases is increasing, mainly due to human activities, such as combustion of fossil fuels (which release carbon dioxide) and deforestation (because forests remove carbon from the atmosphere). The atmospheric concentration of carbon dioxide, the main greenhouse gas, has increased by 30 per cent since pre-industrial times. Climate change will pose an enormous threat and challenge for human life in particular for populations in Africa and Small Island Developing States (SIDS) being probably the hardest hit. In the light of compelling scientific evidence and potential economic, social and environmental losses that may be caused by climate change, the cost of doing nothing about this problem now will have dire consequences in the long run. The international maritime transport as the backbone of a world international trade is a significant contributor to this climate change which could lead to factors such as rising sea levels, extreme weather events and rising temperatures.

The linkage of maritime transport with global trade, climatic change phenomenon, global economic and financial systems highlight the importance for the maritime transport industry in addressing the climate change challenge both in terms of mitigation and adaptation. There is an existing international regulatory framework set up to deal with climate change, namely the United Nations Framework Convention on Climate Change (UNFCCC) and the subsequent Protocol, adopted in Kyoto in 1997. The Kyoto Protocol establishes legally binding commitment for the reduction of four greenhouse gases (carbon dioxide, methane, nitrous oxide, sulphur hexafluoride), and two groups of gases (hydrofluorocarbons and perfluorocarbons) as well as general commitments for all member countries. As at 2008, 183 countries /parties had ratified the protocol. The

developed countries are legally bound to reduce their GHGs emissions to at least 5% below 1990 levels by 2008-2012.

In 9th to 11th July 2008, Scientists, lawmakers and businessmen and officials from more than 50 ports in 35 member countries of International Association of Ports & Harbours (IAPH) convened a meeting in Rotterdam, Netherlands and adopted a deliberate plan to cut CO2 emissions from activities in port operations and ships sailing in global waters. Kenya was represented at this meeting.

The participants were looking at regulatory and technological ways of reducing their contribution to global warming. Technical alterations, including the use of hydrodynamics in propellers, could reduce CO2 emissions by up to 30 percent on new ships and 20 percent on older ones.

International Maritime Organization is also working hard on setting greenhouse gas emission targets for the shipping industry to come into effect by February 2010. The UNCTAD Expert meeting on Trade and Facilitation held from 16th to 18th February 2009 also deliberated on greenhouse gas emissions and the climate change. About 80 ports were invited to sign the World Ports Climate Declaration once completed.

The Kenya maritime transport sector as part of the global maritime industry also contributes to the greenhouse gas emissions especially through combustion of fossil fuels which emit carbon dioxide. Ports operations, port and shipping services are significant contributors of green house gas emissions. The GHGs emissions produced by cargo handling equipments, trucks, trains whose engines burn fossil fuels have an impact on the climate change.

Kenya being a non-annex 1(developing countries) member, under the Kyoto Protocol is not bound by specific targets for greenhouse gas emissions, but it has a shared responsibility in the reduction of greenhouse gas emissions in an effort to prevent anthropogenic climate change (climate change due to human activities) and to ensure sustainable economic development.

6.11.2 Policy

The GoK shall:

- a.** Set the minimum targets (thresholds) to reduce greenhouse gas emissions and enhance clean air policy.
- b.** Put in place various technical, operational, regulatory and market-based mitigation measures (National climate change plan).
- c.** Undertake studies to ascertain the vulnerability of the maritime industry by the impact of climate change and develop better understanding of this phenomenon
- d.** Forge closer cooperation with scientists and engineers, industry, international organizations to ensure that up to date relevant information on climate change impacts and adaptation measures is available, widely disseminated and taken into account by policy makers, transportation planners and development strategists.
- e.** Promote national awareness, knowledge sharing education and information dissemination on climate change.

- f. Introduce climate change in the curricula for primary, secondary schools, and tertiary and university institutions. .
- g. Enhance capacity building and ensure that the country is better prepared to cope with the various effects of climatic change.
- h. Explore ways in which further financial resources may be generated as part of any mitigation efforts in relation to maritime transport and ensure that any proceeds are reinvested within the industry in particular for the study of impacts and for the purposes of effective adaptation.
- i. Develop and enforce strict regulations/legislations to ensure all vessels sailing within our waters comply with set standards.
- j. Encourage use of renewable fuels in the maritime transport industry.
- k. Ratify, domesticate and implement all relevant international/regional conventions/protocols and agreements relating to climate change.
- l. Put measures to initiate green ports in Kenya.

6.12 FERRY TRANSPORT

Kenya Ferry Services Ltd is a state corporation, registered as a private company under the companies Act Cap 486 Laws of Kenya came into being in November 1989 after the Government took over the operation of the ferry services from the former operators Kenya Bus Services Ltd. In the takeover arrangements all the ferry crafts were bought out at a price of KSh. 10.5 million. In 1990 the Government bought four new ferries at a cost of KSh. 376 million to add on to the existing fleet. Thereafter through financial contributions from KPA and the Exchequer the company sustained its operations.

In 1998 the Government vide National Assembly Sessional Paper No.3 formalized the ownership of the company by transforming the contributions of both the Government and KPA into equity. Share capital increased from the initial KSh. 2 million to KSh. 500 million with 80 per cent owned by the Government and 20 per cent by KPA.

6.12.1 Critical Issues

- a. Kenya Ferry Services Ltd (KFS) offers ferry services across Likoni and Mtongwe channels on a 24-hour basis carrying passengers and vehicles from the North Coast to the South Coast and vice versa with vehicles being charged a small fee. Currently, the Ferries carry an average of 57.3 million passengers and 1.1million vehicles in a year. This number is expected to increase significantly by the year 2021 due to projected increase in population.
- b. The ferry service operates a fleet of five ferries. Some of the existing ferries are over 30 years and are unable to cope with increased demand for ferry services and therefore need urgent replacement. In addition, the costs of maintenance of these ferries are high.
- c. KFS faces a major challenge in providing a reliable service to meet the ever increasing demands for safe ferry services as a result of ageing and inadequate ferry vessels.
- d. There has been rapid increase of passengers with limited corresponding infrastructural capacity. The ramps at Likoni channel cannot support landing of two ferries simultaneously.
- e. The Company faces security challenges due to threats of terrorism and the vulnerability of the ferry service operations.

- f. KFS is a state corporation providing this essential social service, and hence does not levy any charges to passengers, nor does it charge commercial rates to vehicular traffic. The Government compensates the corporation for the business opportunity loss; in an agreement contained in a memorandum of understanding between KFS and the parent Ministry of Transport. That MOU subsists to year 2010. The Ferries Act gives the Minister in charge of Transport the responsibility to regulate charges for vehicles.
- g. The subsidies provided by the Government are inadequate to sustain the operations of KFS. To reduce dependence on the Exchequer, KFS plans to divest into Cruise ferry services along coastal and inland waterways where there is a great potential. This will involve acquisition of cruise ships and floating hotels network on the Indian Ocean to promote tourist activities. KFS also intends to operate a wider Ferry service at the coastal and inland waterways.

6.12.2 Policy

GoK shall:

- a. Develop a legal framework under an act of parliament to transform KFS to an autonomous corporation
- b. Expand and modernize KFS infrastructure to keep pace with the ever growing demand and expedite replacement of the ageing Ferries
- c. Compensate KFS for the free services to passengers and the subsidized tariff for commercial rates on vehicular traffic.
- d. Ensure adequate and safe infrastructure to support the operations of ferry services;
- e. Develop the Dongo Kundu bypass to the South Coast and the Miritini/Shanzu bypass to the North Coast and a permanent crossing across the Likoni Channel.
- f. Strengthen the security measures at the coastal and inland waters for safe and secure ferry operations.

6.13 COMMERCIAL MARITIME SERVICES

6.13.1 Critical Issues

- a. The value chain in maritime transport starts with the building of ships. Shipyards are therefore, the springboard for the commercialization of maritime transport since they are used to build and repair, convert and service vessels that operate in the maritime transport system.
- b. Developing, maintaining, upgrading and strengthening ship repair capabilities in Kenya is of strategic importance because it helps ensure a high degree of transport safety and environmental protection. Investment in shipyards also contributes to lowering costs of ship operations and therefore helps to attract ships to ports with shipbuilding facilities. Industrial support to develop this sector is necessary now and in the future. Along with this support should be a coordinated approach to sector engagement and development agenda setting.
- c. Involvement of Kenyans in the lucrative commercial maritime services such as international sea transport, shipping agency, coastal shipping, clearing and forwarding, security services, ship chandling, ship repairs, marine insurance, seafarers' recruitment agencies and bunkering is very minimal. Many Kenyans are at the periphery of the mainstream maritime transport logistics supply chain. Foreign companies have dominated many investments in the maritime industry. There is low level domestic participation in the industry and particularly in provision of maritime transport services. The marine resources in Kenya have also not been fully exploited.

- d. Incoterms are a set of three codes which represent the different ways international shipments may be organized. They allow sellers and buyers from different cultures and legal systems to decide at what point the ownership and paying for freight, insurance, customs, costs transfer from one to the other. Incoterms were produced by Paris based International Chamber of Commerce (ICC) which has set up strict definitions for each Incoterm. To ensure the latest version is being used, shipping contracts should refer to INCOTERMS 2000.
- e. The most commonly used Incoterms in Kenya are CIF (Cost, Insurance & Freight) for imports which entail the seller paying for insurance and freight from port of departure to port of destination and FOB (Free On Board) for exports which implies that the buyer pays and arranges for insurance and shipment from the port of loading to the port of discharge. As a result of this practice the country loses foreign currency, revenue via taxes on transport and insurance, employment opportunities for its citizens. The development of the local transport and insurance sectors is also adversely affected.
- f. The maritime transport industry in Kenya is characterized by proliferation and duplication of charges/surcharges levied by maritime transport service providers on cargo owners which render our exports uncompetitive in international markets and imports unaffordable by Kenyan consumers. This also renders the cost of doing business in Kenya unnecessarily exorbitant.
- g. Kenya lacks comprehensive commercial maritime policies to address various emerging issues and global shipping trends which are of national economical significance. GoK will provide an enabling environment for the promotion of maritime transport in Kenya

6.13.2 Policy

The GoK shall:

- a. Facilitate the development and growth of shipbuilding and repairs industry as part of the industrialization programme of the maritime sector.
- b. Promote the appropriate use of Internal Commercial Shipment Terms (Incoterms) by Kenyan shippers through creating awareness among Kenyan shippers.
- c. Promote domestic participation in maritime socio-economic activities with a view to enhance returns from the sector.
- d. Enact legislation/regulations to curb anti-trust practices or any other unfair maritime trade practices that distort the market.
- e. Establish mechanisms to support local investments in the maritime industry.
- f. Encourage both the public and private sector to plan, coordinate and implement programs towards building, sustaining and enhancing public interest in maritime affairs and issues related to sustainable development.

6.14 MARITIME SAFETY AND SECURITY

6.14.1 Critical Issues

- a. Security in maritime transport is essential for creating an enabling environment for increased investment and economic growth in the industry.
- b. The aftermath of the September 11, 2001 terrorist attacks in the United States, has precipitated a heightened security awareness worldwide which culminated in two United Nations Resolutions; Security Council Resolution 1373 (2001) and IMO Assembly Resolution A.924 (22) calling for redoubling of efforts to prevent and suppress terrorist acts and adoption of procedures to prevent such acts on maritime

- interests especially in ports and ships. There is slow pace in domestication and implementation of relevant international conventions on maritime security in Kenya.
- c. Additional constraints in this area arise from the lack of specialized maritime security corps, inadequacy in coordination between concerned agencies, non-existence of a maritime security policy, inadequate sea and air transport facilities for security personnel, inadequate tools and equipment, including telecommunications and information technology, lack of essential skills in research in international crime and other security issues, inadequate patrol of both the territorial waters and Exclusive Economic Zone, inadequate liaison with international security agencies for exchange of data, criminal profiles and other general information
 - d. The International Ship and Port Facility Security (ISPS) Code and the Amendments to Chapter 11 of SOLAS Convention, have introduced significant maritime security considerations which no port state can afford to ignore. There is urgent need for the country to incorporate in its national legislation the various IMO Security Resolutions and recommendations as well as the suppression of unlawful Acts against the safety of maritime navigation of 1988 (SUA) Convention in order to ensure that Kenyan exports are accepted into the USA and other countries in future. UN Security resolutions 1814, 1816, 1836, 1838, 1846 and 1851 have been passed to address the increased incidents of piracy and armed robbery at the Gulf of Eden.
 - e. KMA undertakes Port State Control and Flag State implementation hence the need to develop comprehensive programs for effective implementation. In addition, the Authority will also have to take a leading role in ensuring compliance with security requirements provided in amendments of Safety of Life at Sea (SOLAS-74) Convention (Chapter XI -2 and ISPS Code).
 - f. Under the International Convention for the Safety of Life at Sea (SOLAS), 1974 as amended and the International Conventions on the Maritime Search and Rescue, 1979, Kenya is required to receive, acknowledge and relay notifications of distress; co-ordinate Search and Rescue (SAR) responses and conduct SAR operations. The communication system will help curb the increasing incidences of piracy and armed robbery by enabling urgent relay of attacks to facilitate quick response by the surveillance forces. The communication facilities are inadequate hence the need to establish an effective system of response to life threatening incidences at sea and inland waters.
 - g. There are inadequate regulatory services to oversee safety and security matters on Lake Victoria. Incidents of banditry and other illegal activities have been reported as the major security challenges. Further, the maritime police units have a strong presence at the Port of Mombasa while inland waterways lack adequate security arrangements.
 - h. Concerns on marine environment relate to water pollution from ship operational wastes, urban and industrial wastes, degradation of water quality from increased use of pesticides and fertilizers, deforestation, soil erosion and desertification
 - i. The protection of the marine environment and living resources is very important to Kenya's economy as she relies heavily on tourism and fisheries both of which would be adversely affected by any oil/chemical pollution incident on her shores or inland waters. Kenya also relies almost exclusively on shipping for her imports and exports.

6.14.2 Policy

The GoK shall:

- a. Strengthen the existing Regional Search and Rescue Coordination Centre and expedite establishment of other search and rescue centres such as at the Lake Victoria.
- b. Enhance the capacity of KMA and establish an effective maritime safety and security in Kenya.
- c. Incorporate the KMA as the lead agency in the maritime sector marine related land development approval process
- d. Expedite enactment of appropriate legislation to deal with maritime security, prevention, reduction and control of marine pollution as well as liability and compensation for pollution damage of the sea or other waters.
- e. Enhance National Maritime Security Committee to coordinate and advise the GoK on maritime security issues as well as liaise with the national security arms of GoK.
- f. Encourage the use of modern surveillance equipment at the ports.
- g. Strengthen the Maritime Police Unit and enhance its operational capacity in coastal and inland waters and procure patrol boats to raise its operational capacity
- h. Strengthen community-policing groups along the coastal and lake points by co-opting representatives from the local community and stakeholders where necessary.

6.15 HUMAN RESOURCE DEVELOPMENT, MANAGEMENT AND RESEARCH

6.15.1 Critical Issue

- a. A well-trained pool of maritime and inland transport personnel is an asset to effective management and utilization of marine and inland water transport resources for increased productivity.
- b. Current costs of training maritime personnel are too high and this has resulted in limited human resource development for maritime sub-sector experts such as seaworthiness surveyors, accident investigators, trainers, examiners, engineers and pilots among others
- c. The Institutions that offer maritime training are inadequately regulated in terms of their creation and the curricula. In addition they lack a comprehensive maritime training curriculum; an appropriate accreditation system for maritime experts locally to facilitate the growth of training institutions in an organized manner; and adequate training equipment locally resulting in trainees seeking training opportunities in other countries. Funding for maritime training is inadequate. Attraction and retention of trained human resource is a problem.
- d. Bandari College in Mombasa is the only credible institution in the country that teaches some aspects of seafaring. These courses do not meet the requirements of the international conventions hence, the country has a shortage of senior cadres like captains, chief mates, officer in-charge of national watch radio operator, chief engineer, and officer in-charge of engine watch as well as ship surveyors, pilots, naval architects, marine engineers, hydrographers and cartographers among others. This has impacted negatively on the growth of the maritime transport industry.
- e. At the moment Kenya is not in the white list and is forced to send her seafarers for training in Dar es salaam, Tanzania. This arrangement is a drain on meagre national resources.
- f. Most IMO member countries have aligned their training programmes to the requirements of STCW 95 as amended while acquiring positions on the white list. Kenya is in the process of putting procedures in place for compliance to the requirements of STCW convention. A compliance/evaluation report and relevant framework have been developed by the GoK to be presented to the IMO for consideration for White-listing.

- g. The lack of registered Kenyan vessels has resulted in a shortage of qualified seafarers in Kenya necessitating employment of foreigners in manning of commercial shipping. The country also lacks a maritime education policy, accreditation of maritime training institutions and a maritime examining body.
- h. Kenya, however, has incorporated STCW'95 Convention as amended into the Merchant Shipping Bill 2008. This convention contains new provisions, including among others, the introduction of certain minimum training requirements for seafarers, their assessment and certification.
- i. Kenya has not invested in scientific research and technological innovations in the maritime transport industry in order to provide the foundation for future socio-economic growth, development and sustainability. There is potential for contribution of science based innovation and evidence-based policy making to achieve sustainable development in the maritime transport industry.
- j. The objective of research will be inter alia to identify and map the trends in international shipping in order to design suitable national policies to guide the country towards viable future maritime transport investments.

6.15.2 Policy

GoK shall:

- a. Develop an appropriate policy on maritime education and training in line with best international practices in the industry.
- b. Introduce research programmes that are geared towards the development of maritime industry in Kenya

CHAPTER SEVEN

INLAND WATER TRANSPORT

7.1 BACKGROUND

Kenya has many lakes and rivers with varying degrees of navigability. The potential for water transport for both passengers and goods on most of these lakes and rivers has not been fully exploited; yet inland water transport is a key component of intermodalism which can provide a means of coping with congestion of the road infrastructure and of tackling air pollution. Lake Victoria (LV), the largest lake in Africa which Kenya shares with Tanzania and Uganda, is the only surface water body with significant transport activities in the country. This is so despite the fact that in some areas water bodies separate different parts of the same community where by the people are forced to use the rivers and lakes as a means of transport.

Kenya Railways Corporation(KRC) and its predecessors (East African Railways and Harbours and the East African Railways Corporation) have been operating marine services on the Lake on a continuous basis since 1907, i.e. soon after the Mombasa-Kisumu railway line reached Kisumu in 1901.

This policy focuses on the marine services provided by KRC and rail operator (RVR), and informal transport activities relating to fishing, passenger and freight transport. Its scope includes:

- The marine transport infrastructure, including port facilities, piers, quays, buildings and storage facilities in various ports and depots along the Lake Victoria shore such as Kendu Bay, Kowuor(Homa Lime), Homa Bay, Mbita Point, Mohuru Bay,Karungu,mfangano and Asembo Bay; passenger and freight services on the Lake in Kenya and within the East African Region and beyond;
- Multi-modal transport arising from the interface of water, railway, and road transport;
- Safety and security of inland water transport;
- Economic/development opportunities based on lake transport.
- Protection of the environment

Although LV is strategically located at the convergence of two major transport corridors in the East African region, namely, the Northern Corridor and the Central Corridor, the potential of its marine transport has not been fully exploited. The former Corridor links land-locked countries in the Great Lakes Region with the port of Mombasa through Kenya, while the latter links the same countries with the port of Dar es Salaam through Tanzania. Both Corridors are of great importance to the land-locked countries namely, Uganda, Rwanda, Burundi, Southern Sudan and the eastern parts of the Democratic Republic of Congo (DRC).

The Kenyan portion of Lake Victoria (LV), consists mainly of the Nyanza Gulf. It is the smallest compared to the portion in Tanzania (the largest) and the portion in Uganda. Transport modes in this part of the Lake and its environs (i.e. the lake basin) serve both Nyanza and Western Provinces

The densely populated Lake basin has a high agricultural potential, currently dominated by the production of sugar cane, maize, sorghum beans, sisal among others. Considerable potential for growing cotton, groundnuts and rice, which once thrived in the region, is yet

to be exploited. Fishing on the Lake and livestock farming are among the most important economic activities in the region.

The critical importance of inland water transport in the Lake Basin in Kenya is underlined by its link with the multi-modal transport network converging on Kisumu City as a hub from where road, railway, pipeline and air transport have direct connections to other destinations in Kenya and with all countries in the Great Lakes region through Tanzania and Uganda. This convergence is supported by the existence of a littoral road belt around the whole of the lake in East Africa connecting the various ports in Kenya, Uganda and Tanzania. Thus, through lake transport, Kisumu is linked to several ports around the Lake namely: Musoma, Mwanza, Bukoba and Kemono Bay in Tanzania, and to Port Bell and Jinja in Uganda. This strategic position gives navigation on the Lake a major role in serving the basin within the EAC region.

7.1.1 Mission

The mission for the inland water transport policy is to provide efficient, reliable, safe and secure inland water transport services for both passengers and goods as part of a seamless, integrated multi-modal transport system.

7.1.2 Strategic Objectives

The strategic objectives in the area of inland water transport are to:

- a.** Promote the development of a vibrant inland water transport on LV by developing a seamless integrated multi-modal transport system in the Northern Corridor to facilitate Kenya's trade with the EAC partner states and with the land-locked countries in the Great Lakes region;
- b.** Promote the exploitation of the full potential of the Lake Basin in Kenya and its resources in agriculture, industry and tourism as part of the GoK's long term development strategy as envisaged in Vision 2030.
- c.** Develop inland water transport for the exploitation of marine resources on Kenyan lakes (including LV, Turkana and Naivasha) and on rivers (such as Athi, Tana, Yala and Nzoia rivers).
- d.** Promote the efficient use of inland water transport in providing a cheap transport mode for the movement of passengers and goods within the Nyanza Gulf of the Lake Basin in order to stimulate domestic and international trade;
- e.** Encourage investment in the provision of water transport services in Kenya's lakes and rivers;
- f.** Increase the tourist potential in the Lake Basin and in all other inland water bodies through inland marine transport;
- g.** Promote private sector participation in the provision of inland water transport services;
- h.** Promote the development of human resources in the area of inland marine transport;
- i.** Ensure safety of passengers and goods on Lake Victoria and in other inland waters;
- j.** Promote environmental safety in the management of inland water transport; and
- k.** Explore the potential for developing new water transport services in Kenya's lakes and rivers, including the possibility of building canals.

7.2 NAVIGABILITY OF LAKES AND RIVERS IN KENYA

7.2.1 Critical Issues

Since colonial days, the focus on inland water transport has remained only on Lake Victoria. Hydrographic survey is underway at ports located in Lake Victoria under the Lake Victoria Basin Commission and East Africa Community. Little, if any, has been done to determine the navigability of other lakes and rivers such as Lakes Turkana and Naivasha or rivers Tana, Athi, Yala and Nzoia, among others. Safety of transportation thereon in the course of exploitation of their natural resources such as fishing based on traditional technology has not been addressed, despite the frequent use of traditional technologies and equipment and the inherent dangers posed by them.

7.2.2 Policy

- a.** GoK shall determine the navigability of major lakes and rivers in the country with a view to promoting the use of inland water transport and enhance their safety.
- b.** Considering the critical importance of commercial use of LV for both passenger and freight transport as well as for tourism, GoK shall ensure that all littoral modes of transport (i.e. road, pipeline and railway transport) are planned in a coordinated manner to enhance their mutual complementarities.

7.3 LEGAL AND REGULATORY FRAMEWORK

7.3.1 Critical Issues

Until the collapse of the former EAC in 1977, inland water transport on LV was regulated by the East African Inland Water Transport Act of 1958 (later amended by Act No. 4 of 1970) and the East African Railways Corporation (EARC) Act (Cap. 18 of the Laws of the East African Community). These laws dealt with survey, vessel registration, life saving equipment, vessel loading and construction, rules of navigation and navigation equipment. They also introduced detailed requirements for certificates of vessel seaworthiness and registration, made mandatory provisions for life saving equipment to be carried on board, and for distress and signalling equipment, among other safety measures.

After the collapse of the EAC, Kenya, along with Uganda and Tanzania, incorporated respective Railways Corporations under respective statutory provisions. However, none of the countries incorporated the East African Inland Water Transport Act and regulations in its national laws. This created a void therefore, on the critical issues of safety of life, navigation, survey and on requirements for vessel registration and insurance.

Prior to November 1, 2006, KRC was both an operator and regulator of inland water transport, since the Act vests the authority to manage and control inland waterways and ports in it. Since then the railway operator (RVR) has taken over the operations of wagon ferries in LV whereas Kenya Railways retains the Mandate to develop and manage inland waterways.

7.3.2 Policy

- a.** GOK shall review the KRC Act in order to harmonise it with KMA Act regarding security and Regulation. In doing this, due reference will be given to the vision and mission of EAC.
- b.** The provisions of Lake Victoria Transport Act(EAC) and its regulations, especially those relating to Lake survey, seaworthiness and registration requirements for

vessels, vessel registration and safety, shall be incorporated into national legislation extended to cover other lakes and updated to reflect the latest position;

- c. Water transport services on LV and on other inland waters in Kenya shall be de-linked from the operations and management of Kenya Railways Corporation/Railway operators.

7.4 INFRASTRUCTURE

7.4.1 Critical Issues

Inland water transport infrastructure on LV comprises port facilities at Kisumu and in the other ancillary ports. At Kisumu, the port infrastructure includes:

- A 260m long main cargo quay equipped with four berths and two marginal wharves;
- A cargo shed (go-down) covering a total area of 4,000 square feet, with a rail each side;
- A passenger quay (of 100m. in length);
- An 18m wide platform (terminal) for wagon ferries with a span bridge measuring 28m. which links the rail wagon ferries to the land-based railway system; it serves both local and international marine vessels;
- A total fenced area of measuring 6,400 sq. m. allocated to shipyard activities;
- A repair workshop;
- One dredging equipment is not in working condition for some time;
- Two slipways measuring 100m and 60m each;
- An oil jetty (built in 1949) for oil exports;
- A dry dock measuring 217m Long, 100m wide, and 5m deep; and
- An administration building and customs warehouses.

A railway network for manoeuvres and wagon shunting occupies the rest of the area. Eighteen lines totalling 4,200m of track in the port area are linked to the adjacent railway Kisumu station which further connects them to the main Kisumu-Nakuru line whose maximum capacity is 400 conventional wagons.

The port is about 100 years and has old equipment though considered to be in good working condition. Its workshop and dockyard facilities provided for the maintenance of all vessels in East Africa until 1977. It is, however, currently under-utilized and no longer serves vessels from Uganda and Tanzania since both countries have established similar and, in a number of cases, more efficient infrastructure at Kemono Bay, Mwanza and Bukoba ports in Tanzania, and at Port Bell in Uganda.

The oil terminal operated by the Kenya Pipeline Company Limited and served by the oil jetty, is located 12km away from the port, making the transfer of fuel between the two terminals cumbersome. These challenges are being addressed by Kenya Pipeline Corporation under Capacity enhancement programmes.

Kisumu port is connected to several local piers with small go-downs along the Nyanza Gulf which include Kendu Bay, Homa Bay, Homa Lime, Kowuor, Homa Bay, and Asembo Bay. Some of these facilities and assets require maintenance and rehabilitation.

It is acknowledged that competition from road transport has contributed partly to the decline in inland transport. Littoral roads around the Nyanza Gulf in Kenya are undergoing repairs and reconstruction.

There is lack of coordinated planning of all littoral transport modes to enhance their complementarities.

Good roads around the Lake would enhance consumer choices and promote inter-modal connectivity amongst roads, railway and inland water transport for the transportation of goods and passengers.

As part of its mandate to develop its assets, KRC intends to develop lake view Resort city. This resort project will be located on land measuring 20 acres within Kisumu city and lying on the shores of Lake Victoria. This facility will be served by a standard gauge railway network connecting it to Kisumu airport and other parts of the city.

7.4.2 Policy

GoK shall:

- a. Ensure that the maintenance and rehabilitation of port infrastructure and facilities in Kisumu and at piers along LV is undertaken as required.
- b. Explore the possibility of identifying more points to be designated and developed as ports and piers for development along the shores of LV and along other inland waters;
- c. Promote the participation of the private sector in the maintenance, rehabilitation and development of infrastructure and in the operation of inland water transport services.
- d. Ensure extension of the pipeline to Kisumu port to facilitate the discharge and loading of petroleum products.
- e. Ensure all littoral roads around LV are improved in tandem with other modes of transport in an integrated manner and on a sustainable basis to ensure continuous multi-modal complementarities and connectivity. In particular, all access roads that connect the main littoral roads to the piers with the main roads shall be properly maintained; this shall apply to all roads connected to other inland waters.
- f. Ensure the implementation of KRC Lake View Resort City project.

7.5 INLAND WATER TRANSPORT SERVICE OPERATIONS

7.5.1 Critical Issues

Inland waterways transport operations are presently low key due to low investment in vessels. Most of the vessels which used to ply Lake Victoria have either broken down or been surveyed and disposed of.

The largest vessel owned by KRC is the MV Uhuru, a wagon ferry with a cargo capacity of 1,200 tonnes (equivalent to 22 wagons). This vessel was conceded to the railway operator (RVR) and is currently non operational. It has been difficult to rehabilitate the vessel to Lloyds specifications due to its age and other factors. In addition, the Concession Agreement requires that the Wagon ferries comprised in the conceded assets shall be rehabilitated so as to comply with classified Lloyds registry 100A1 class specification. The Railway operator has sought the amendment to the particular clause in the agreement to facilitate the licensing and insuring MV Uhuru.

Kenya is a net exporter to most of the countries in the Great Lakes region, with most of this export trade taking place through road transport. Inland water transport plays a negligible role in this trade, largely due to the poor multi-modal coordination and the poor condition of railway transport. In addition the port of Kisumu which is part of the Northern Corridor transport system needs to be efficiently operated.

Maritime transport on LV is currently dominated by Tanzanian registered vessels due to unfavourable registration conditions in Kenya.

Another constraint to inland water transport is the low capacity of the Nakuru-Kisumu railway track which makes port of Kisumu route less attractive for transit to Uganda and other land-locked countries. The track branching from Nakuru to Kisumu, though an important route connecting Kenya to both Tanzania and Uganda via water transport on Lake Victoria can only support low axle loads. The branch line's gross tonnage is limited to a maximum haulage by an 87 Class locomotive whose traction capacity is only 480 tonnes or 37 twenty-foot equivalent units (TEUs).

With a ruling gradient of 2.2 per cent and a low poundage of track (only 60 pounds rails per yard), haulage capacity on this line compares unfavourably with those of Nairobi-Mombasa, Nairobi-Nakuru, Nakuru-Eldoret or Eldoret-Malaba lines which can accommodate all classes of locomotives (including the powerful Classes 92 and 93) with a maximum tonnage of 760 - 1,000 tonnes (65 TEUs) on each of these routes. Though parts of the branchline (Nakuru-Mau summit) section have been upgraded, the remaining Mau Summit /Kisumu section requires upgrading.

In recent years, the growth of the hyacinth weed on LV has considerably affected vessel movements on the lake and even clogged ports and piers. Efforts by GoK to clear the weed have not yielded positive results.

7.5.2 Policy

GoK shall:

- a. Promote development of inland water transport on LV in order to divert cargo from road to rail and marine transport.
- b. Promote private sector participation in operations of vessels on LV and other inland waters.
- c. Implement the provisions of the reviewed Merchant Shipping Bill 2008 on open ship registry.
- d. Ensure that the proposed amendment of the concession agreement regarding maintenance of wagon ferries to comply with Lloyd's registry 100A1class specification is executed expeditiously.
- e. Upgrade the Mau Summit-Kisumu rail section to enable high capacity locomotives to ply the Nakuru-Kisumu branch line.
- f. Ensure the planned standard railway gauge track (Nakuru-Kisumu) takes into account the critical importance of integrating railway and inland waterways transport with other modes of transport, in the context of promoting Kenyan trade within the Great Lakes region.
- g. Spearhead efforts to eradicate the water hyacinth menace in LV.

7.6 SAFETY AND ENVIRONMENTAL ISSUES

7.6.1 Critical Issues

Maritime safety measures on LV were not strictly enforced in the past thus resulting in high number of accidents in the lake. It is also apparent that navigational aids, communications and safety equipment in most vessels and on land are inadequate and in poor condition.

The lake will soon have up-to-date hydrographical charts on completion of the on-going survey. There is need to provide shore to sea communication for control of vessel traffic and emergency response and also shore line navigational aids. Another factor is the lack of up-to-date meteorological information for the navigators.

There is an urgent need for KMA to establish and enhance capacity of search and rescue operations on the Lake in collaboration with Uganda and Tanzania.

Water hyacinth is both an environmental and navigational menace that requires concerted efforts to clear in a sustainable manner.

7.6.2 Policy

- a. GoK shall ensure safety laws for all marine transport are reviewed and enforced on LV as well as in all inland waters
- b. Though the Merchant Shipping Act and other relevant laws relating to marine safety have been updated following the establishment of KMA, GoK shall ensure that the same is applicable to transport on all inland waters.
- c. GoK shall establish an Inland Water Police Unit attached to KMA and allocate it with adequate resources to ensure policing of the LV and other inland waters.
- d. GoK in collaboration with the EAC shall ensure that safety regulations on LV are harmonized and enforced by national marine agencies;
- e. GoK shall ensure that transportation of petroleum products through LV is subject to the same standards, regulations and laws applicable under established international conventions for ocean-going vessels.
- f. GoK shall ensure that environmental laws applicable to ships in the oceans shall also be applicable to vessels on LV, e.g. laws and regulations relating to disposal of effluents, oils and other wastes.
- g. GoK shall ensure that the problem of water hyacinth is addressed within aegis of the EAC, both as an environmental hazard and as a transport problem.
- h. GoK shall enhance the capacity of search and rescue unit within KMA.
- i. GoK shall in collaboration with Uganda and Tanzania ensure that there is adequate meteorological information for safe operations of transport in Lake Victoria.

7.7 INLAND WATERS AND TOURISM

7.7.1 Critical Issues

An efficient and safe inland water transport on LV that is also properly integrated with all other modes can be an important catalyst to the opening up of Western Kenya as an important tourist circuit. Already the Lake and its shores are attracting tourist activities in a number of areas. These include pleasure fishing and bird watching on the sandy beaches of Mfang'ano, Rusinga and Takawiri Islands. Tourists from Masai Mara often fly to these places, attracted by the beautiful physical features. Other attractions include the Oyamo beach, the legendary "Kit Mikayi", Simbi Nyaima, among others that could be developed. With an integrated multi-modal transport system in place, even the possibility of investment in a floating hotel on the lake or a cruise ship plying various ports in Kenya, or within East Africa, would no longer be a myth but a real investment possibility.

The proposed development of Lake View Resort City will comprise of three and five star hotels. The project benefits will include the transformation of Kisumu city as a destination of choice for both leisure and conference tourism.

7.7.2 Policy

GoK shall ensure that the development of water transport on Lake Victoria and its environs is undertaken in collaboration with stakeholders in the tourism industry.

7.8 HUMAN RESOURCE DEVELOPMENT

7.8.1 Critical Issues

KRC has a Marine Training School at Kisumu which is currently non-operational. The GoK should consider retaining this as part of its contribution to the development of human resources in the area of inland marine transport services.

There is a need for the marine services section in Kisumu to be strengthened and manned by highly qualified and adequately motivated personnel operating within a commercially oriented environment that provides services in accordance with the needs of the customers. Such an environment favours private sector management.

7.8.2 Policy

The GoK shall rehabilitate, upgrade and retain the marine training school in Kisumu and ensure that its courses are recognised internationally.

7.9 EAC INITIATIVES

7.9.1 Critical Issues

The Lake Victoria Transport Act is intended to create a comprehensive and modern legal regime for shipping on the lake on matters relating to safety, vessel and personnel registration, search and rescue, vessel construction standards, pollution control and mitigation, carriage of dangerous goods, training of seafarers, wreck and salvage, insurance, certification, survey and related matters on LV. The Act also takes into account the development of international shipping law through conventions and similar multilateral instruments. The capacity to implement and enforce Lake Victoria Transport Act needs to be enhanced.

7.9.2 Policy

GoK shall:

- a. Enhance the capacity to implement the LV transport Act.
- b. Implement this Act along with other initiatives in the transport sector such as the East African Road Network Project and the East African Civil Aviation Project.

CHAPTER EIGHT

PIPELINE TRANSPORT

8.1 BACKGROUND

This chapter reviews the existing pipeline transport system with regard to its role in transportation of petroleum products and recommends policy intervention strategies that will improve pipeline service while at the same time integrating the pipeline transport system to the National Transport Policy. Specific areas that are reviewed include legal and regulatory framework, infrastructure planning and development, operational efficiency, safety and security, ownership and financing, environment standards and capacity building.

The pipeline system currently consists of 450 Km pipeline running from the port of Mombasa to Nairobi (Line 1) which was commissioned in 1978. Kenya Pipeline Company (KPC) Limited was incorporated on 6th September 1973 under the Companies Act (CAP 486) Laws of Kenya and commenced commercial operations in 1978. The Western Kenya Pipeline System was commissioned in 1994 and it comprises 325 Km pipeline from Nairobi to Eldoret (Line 2) and 121 Km pipeline from Sinendet to Kisumu (Line 3) making a total of 896 Km.

The Company is 100percent owned by the Government of Kenya. The main objective of setting up KPC and constructing the Pipeline System was to ensure efficient, reliable, safe and cost effective means of transporting petroleum products from Mombasa to the hinterland. In pursuit of this objective, the Company constructed a pipeline system for the transportation, storage and distribution of white petroleum products.

KPC's clients are the Oil Marketing Companies who import refined petroleum products and refine crude oil at the Kenya Petroleum Refineries Ltd. The refined products handled by the Company are:

- a) Unleaded Motor Gasoline (Premium Grade)
- b) Unleaded Motor Gasoline (Regular Grade)
- c) Automotive Gas Oil (Diesel)
- d) Illuminating Kerosene
- e) Jet A-1 (Aviation Turbine fuel)

KPC provides the following Services to the Oil Marketing Companies: receipt and storage of imported petroleum Products at Kipevu Oil Storage Facility ; transportation and Storage of Petroleum Products to KPC depots at Nairobi, Nakuru, Eldoret and Kisumu; transferring of petroleum products from KPC Nairobi Terminal Depot to Oil Marketers' depots in Nairobi; truck loading of products at Nakuru, Eldoret and Kisumu, and rail loading at Eldoret; fuelling of aircrafts through the hydrant system at Moi and Jomo Kenyatta International Airports; back loading refined petroleum products from KOSF to ships and Laboratory testing services for quality certification of refined petroleum products.

KPC is currently undertaking key projects in line with its strategic objectives and goals of the first medium term plan of Vision 2030. The projects include capacity enhancement of the pipeline, extension of the pipeline to Uganda and the construction of storage and distribution facilities for LPG products in Nairobi and Mombasa.

8.1.1 Mission

To provide an efficient, safe, reliable, cost effective means of pipeline transport, storage, distribution, infrastructure development and operations for refined petroleum products in Kenya and internationally, with a view to minimising road damage and satisfying the needs of shareholders and customers in an economically and environmentally sustainable manner.

8.1.2 Strategic Objectives

The strategic objective of pipeline transportation is to enhance service delivery to ensure that pipeline mode of transport is the economically preferred mode of transporting petroleum products within and outside Kenya.

The specific strategic objectives will be to:

- a. Provide and maintain adequate infrastructure for an efficient and sustainable pipeline transport network that is competitive within the country and internationally.
- b. Ensure safety of life, property and the environment;
- c. Ensure security for pipeline infrastructure to enhance reliability;
- d. Encourage private sector participation in the provision of pipeline infrastructure and in the operation of services;
- e. Minimize road damage by heavy goods vehicles carrying refined petroleum products by transporting these products through pipeline up to the delivery depots;
- f. Develop local capacity for design, supervision, execution and maintenance of the pipeline and ancillary facilities through human resource development;
- g. Ensure that the full potential for Kenya's pipeline transport system is developed and exploited for petroleum and other products to promote the achievement of the country's development objectives; and,
- h. Encourage the utilization of ICTs in product monitoring and management.

8.1.3 Policy

GoK shall ensure that pipeline transport capacity is adequate and competitive through the formulation and implementation of policies to improve pipeline infrastructure planning, development and operations.

8.2 ROLE OF PIPELINE TRANSPORT IN THE NATIONAL ECONOMY

Petroleum fuel oils account for 80 per cent of commercial energy in the country thus improved access to petroleum products through a well-integrated national transport system is important for economic development. The pipeline transport system plays a significant role in the country's economy since it transports an average of 87 per cent of petroleum products demanded in the region annually. The main export products destinations are Uganda, Rwanda, Northern Tanzania and Burundi.

The impact of the transport sector on the overall performance of the economy cannot be over emphasized. The transport sector in the country consumes about two-thirds of all petroleum fuels imported into the country. Petroleum imports account for 20 per cent of the country's import bill.

The GoK's overall objectives of setting up the company was to provide the economy with the most efficient, reliable, safe and least cost means of transporting petroleum products from Mombasa to the hinterland. The company was mandated to:

1. To build a pipeline for the conveyance of petroleum or petroleum products from Mombasa to Nairobi, to account of their company or for the account of others and any other pipeline in East Africa as the company may determine.
2. To own, manage or operate such pipelines and any other pipelines (whether or not built by the company) and all ancillary pumping, storage and other facilities and such other planned equipment and installations, movable and immovable, as the company may consider desirable and to manufacture, construct, maintain or modify any of the same
3. To market, process, treat and deal with petroleum products and other products and goods that may conveniently be dealt in by the company and to provide transport and other distribution facilities, outlets and services in connection therewith.

The pipeline transport system has contributed towards minimising revenue losses by GoK through petroleum fuel dumping and by reducing the number of trucks that used to lift petroleum products from Mombasa to the hinterland.

8.2.1 Critical Issues

The need to ensure adequate and reliable supply of petroleum products for all sectors of the economy, enhancement of energy conservation and efficiency, and ensuring that the GoK does not lose revenue through diversion of petroleum products meant for the export market.

8.2.2 Policy

GoK shall:

- a. Facilitate the expansion of the pipeline system within the country and internationally as found to be economically feasible to match growing energy demand and retaining competitiveness of the sub sector
- b. Develop and enforce energy saving measures that will focus on energy conservation and efficiency.
- c. Institute measures that will discourage fuel transportation by road in areas already served by the pipeline.

8.3 LEGAL, REGULATORY AND INSTITUTIONAL FRAMEWORK

Kenya Pipeline Company Ltd (KPC) is the institution responsible for the management and operation of the only oil pipeline transport system in Kenya. It is a limited company and was incorporated under the Companies Act, Cap 486 the Laws of Kenya. KPC also functions as a State Parastatal within the context of the State Corporations Act that governs the operations of all Parastatals.

The Sessional Paper No.4 of 2004 on Energy provides the policy framework upon which cost-effective, affordable and adequate quality energy services would be made available to the domestic economy on a sustainable basis over the period 2004-2023. Regulation for the Petroleum Industry is provided for under the Energy Act 2006 that established the Energy Regulatory Commission. Under clause 5(a) (ii) The Energy Regulatory Commission (ERC) is required to regulate the importation, exportation, transportation, refining, storage and sale of petroleum and petroleum products.

8.3.1 Critical Issues

The need to develop, review and harmonize relevant legislations for the sub sector. The operation of the company under the Ministry of Energy has apparently overshadowed the critical importance of its transport responsibilities

8.3.2 Policy

GoK shall:

- a. Enact appropriate legislation that will govern the development and operation of the pipeline transport system.
- b. Streamline the operations of KPC with a view to ensuring that it operates in the most efficient manner.

8.4 STREAMLINING PIPELINE OPERATIONS TO ENHANCE EFFICIENCY IN SERVICE DELIVERY

8.4.1 Critical Issues

Although the extension of the pipeline to Kisumu, Nakuru and Eldoret was intended to reduce the number of vehicles transporting petroleum fuels from Mombasa to the hinterland the realised reduction has not been significant. Real benefits of pipeline transport hinge on its ability to offer least-cost transportation of fuel and its ability to attract traffic (tankers) away from roads. This is because pipeline transportation is a faster and more economical mode for transportation of petroleum fuels than road or rail. To achieve this, efforts must be made to ensure the efficient operation of the pipeline. It must therefore operate on a cost-effective and efficient basis. The fact that companies still find it cheaper to transport petroleum fuels from Mombasa by road reflects a pricing discrepancy that needs to be resolved, given that the cost of pipeline transport ought to be lower than that of road transport.

Several factors have led to the above scenario:

- a. The mandatory requirement by KPC to new oil companies to maintain minimum stock levels equivalent to 2,400 m³ has limited the pipeline's access to most small oil companies. Many of these small companies have ended up transporting their fuels by road from Mombasa.
- b. Incompatibility of common user facilities at KPC terminals with other modes of transport (road and railway). The differentials between prices of petroleum fuels in the country are attributed mainly to the existence of common-user truck loading facilities. Parts of the country where KPC terminals have put up these common user facilities have been observed to have lower consumer prices. In Nairobi, for instance, prices are higher than Western Kenya (Nakuru, Kisumu and Eldoret) despite the additional transport costs due to the existence of common user truck loading facilities in these areas.
- c. Lack of a tariff review policy. The pipeline tariff also contributes to the overall price of petroleum products in the country. Cost effective operations of the pipeline will therefore result in lower consumer prices for petroleum products and affect economic productivity through lowering costs.

8.4.2 Policy

GoK shall:

- a. Implement the provision of gazette notice No. 43 and 44 dated April 2008, by the Minister for Energy which issued a new regulation No. 12 in the Energy Act directing that strategic stock be procured by NOCK and maintained in the facilities of KPC on behalf of the GoK.
- b. Ensure that the KPC tariffs are competitive.
- c. Ensure development of common user facilities that are convenient and compatible to all modes of transport.

- d. Streamline the operations of KPC with a view to ensuring that it operates in the most efficient manner.

8.5 INTEGRATING PIPELINE INFRASTRUCTURE DEVELOPMENT WITH NATIONAL TRANSPORT DEVELOPMENT GOALS

8.5.1 Critical Issues

The pipeline mode of transportation plays an important role in minimising road damage and carnage by diverting oil transportation from road to pipeline. Currently, a higher percentage of oil tankers which previously collected fuel from Mombasa or Nairobi, have been covering a much shorter distance as export fuel is now lifted from Kisumu and Eldoret. For instance, fuel tankers have been saved from travelling 831 km between Mombasa and Kisumu and, instead, cover only the 315 km between Kisumu and Kampala. However the 96 km distance between Kisumu and Busia is yet to be covered by the pipeline.

Pipeline Maintenance and Rehabilitation: The Mombasa – Nairobi segment of the pipeline was commissioned in 1978 while the extension to Eldoret and Kisumu through Nakuru were commissioned in 1992 and 1994 respectively. The aging infrastructure is therefore a challenge in realising optimum operations of the pipeline. Pipeline equipment are specialised and expensive and have to be procured from overseas and sometimes lead to delayed deliveries.

Land use planning and management: The land and Way leave acquisition is done on need basis and where necessary compulsory acquisition is done by the GoK. The entire process is long and slows the pace of project implementation.

Infrastructure planning and Development: There is also need to extend pipeline services to areas that still depend on road transport for transportation of petroleum products within and outside the country. Plans are at an advanced stage to extend the pipeline to Uganda and beyond. Currently, pipeline transportation does not cover Liquid Petroleum Gases (LPG), fuel oils (FO) and industrial diesel oil (IDO).

The design of the loading facilities at both Kisumu and Eldoret depots are incompatible with the configuration of railway wagons, leading to relatively lower intakes by the railway wagons than could be achieved by their available capacity. The gradient of the railway line leading to the Eldoret depot permits the loading of only 2 wagons at a go, although KPC's loading capacity is 20 wagons at a go. It appears that the planning and design of the location of the depots did not take into account the gradient problem and the configuration of railway wagons.

8.5.2 Policy

GoK shall:

- a. Ensure Pipeline integrity and rehabilitation on a continuous basis.
- b. Ensure the integration of pipeline transport mode with other modes, particularly railway and road transport and their ancillary facilities
- c. Streamline procedures for way leave acquisition for pipeline infrastructure development.

8.6 PIPELINE OWNERSHIP AND FINANCING

8.6.1 Critical Issues

The Kenya Pipeline Co. Ltd. (KPC) is 100 percent owned by GoK. This arrangement impacts on its efficiency and management. The financing of pipeline maintenance, development and expansion has been through a combination of internal KPC funding and borrowing. All routine preventive plant maintenance programmes are financed from internal resources. Capacity improvement and diversifications are funded through a combination of internal and external sources.

8.6.2 Policy

The GoK shall encourage private sector participation in pipeline ownership and operation in accordance with the provisions of the Privatisation legislation.

8.7 PIPELINE SAFETY AND SECURITY

8.7.1 Critical Issues

Although KPC has enjoyed a considerable amount of security in its operations and of its assets, there have been few cases of vandalism where attempts have been made to puncture the pipeline and loss of petroleum fuels. KPC allocates substantial financial resources to enhance security of the pipeline.

Strict adherence to minimum standards on health, environment and safety are critical in pipeline development and operation. The operational procedures in place presently are based on international standards in which product safety both to users and the environment are guaranteed. These procedures have enabled the company to be awarded international quality awards.

Mushrooming of informal settlements along the pipeline way leave is posing a danger to the pipeline, inhabitants and the environment.

8.7.2 Policy

- a. The GoK shall re-enforce security of the pipeline installations.
- b. Energy Regulatory Commission (ERC) shall set standards for safety of the pipeline transport system and ensure compliance with those standards.
- c. The GoK shall secure the pipeline way leave from human encroachment.

8.8 INFORMATION COMMUNICATION AND TECHNOLOGY (ICT)

8.8.1 Critical Issues

The operations of the entire pipeline and storage systems are driven by the information and communication technology (ICT). The entire pipeline system is centrally controlled through Supervisory Control and Data Acquisition (SCADA) system. The SCADA control system enables online supervisory control of all operational parameters from a central point with minimum human intervention. The company is currently implementing the System Application Products (SAP) for the purposes of enhancing overall company businesses processes.

8.8.2 Policy

- a. The GoK shall strengthen and upgrade the existing ICT capacity with a view to ensuring integration with other transport modes.

- b. The management of information systems shall be integrated with pipeline operations in order to ease monitoring of operations, management of finances and improve service delivery to users of pipeline transport system.

8.9 HUMAN RESOURCE DEVELOPMENT

8.9.1 Critical Issues

Given the dynamics in applicable pipeline technologies, there is a fully-fledged training section charged with the responsibility of ensuring that the human resource is adequately equipped to meet the current and future challenges of the industry. The Company's intention to be an e- organisation calls for special emphasis on human resource training for which the company has made adequate provision. The challenge is to attract and retain highly trained and competent manpower to meet the challenges of the industry.

8.9.2 Policy

The GoK shall develop policies which will enhance capacity building within the pipeline industry.

8.10 RESEARCH AND DEVELOPMENT (R&D)

8.10.1 Critical Issues

Unlike developed countries which are leaders in research and development in petroleum industry our local research potential is yet to be fully exploited. The current challenge is inadequate collaboration with local universities, R & D institutions and the pipeline transport industry in research and training

8.10.2 Policy

The GoK shall strengthen R&D in pipeline transport and encourage development of centres of excellence in the sector.

CHAPTER NINE

AVIATION

9.1 BACKGROUND

This policy covers issues related to: aviation infrastructure planning, development and management of air navigation services; legal, institutional and regulatory frameworks; air commerce; aviation safety and security; aviation port health, aviation financing and related matters amongst others.

The aviation industry has two main functions, namely: facilitating the movement of goods and people; and expediting other economic activities. In Kenya, domestic aviation serves the tourism industry by facilitating movement of tourists to and from tourist sites such as the Mara, Mount Kenya, Tsavo, Malindi, parts of the Kenyan coast, Western Kenya and the Lake Turkana Region. Air passenger services are currently offered to and from Nairobi, Mombasa, Kisumu, Eldoret, Malindi, Lokichoggio, Lamu, Ukunda, Wajir and Masai Mara amongst other destinations. Other services offered by the aviation industry to the economy include transportation of perishable agricultural products, including horticultural products, fish and fish products, livestock products, provision of medical services to remote areas, emergency evacuation for medical and disaster relief purposes, aerial spraying of farms, aerial surveying, photography and mapping. Domestic air transport offers potential opportunities for direct export trade in agricultural and livestock products to other countries through minimization of transport times and costs.

The principal policy objective is to create an enabling framework that will nurture the development of a safe, efficient and affordable air transport system, whilst keeping at the leading edge of technological advancement in a rapidly changing and globalised environment.

9.1.1 Mission

“To provide efficient, safe, secure, reliable, affordable and fully integrated aviation infrastructure and services that meet the needs of local, regional, and international passenger and freight transport in order to achieve national development objectives in an economical and environmentally sustainable manner”.

9.1.2 Guiding Policy Principles

In identifying the critical issues affecting the aviation industry and its relation to an integrated national transport policy, key policy principles guiding the formulation of aviation policy are:

- a. Kenya is a signatory to the Chicago Convention of 1944 and its Annexes;
- b. Appropriate allocation of roles between the government, private sector and civil society commensurate to attracting investment, promoting growth and facilitating private sector participation in the aviation sector;
- c. Promoting aviation safety and security;
- d. Optimal development, maintenance and utilisation of air transport infrastructure;
- e. Promoting fair competition;
- f. Ensuring consumer satisfaction and protection;
- g. Development and retention of human resources in the sub-sector;
- h. Formulation of clear dispute resolution arrangements;

- i. Improving the environment;
- j. Promoting local participation in the industry to boost national investment; and
- k. Observing strict enforcement of regulatory mechanisms to enhance industry order and discipline.

9.2 AVIATION INFRASTRUCTURE

Air transport infrastructure consist of airports and their facilities, air navigation facilities, aircraft, passenger and freight related services, supportive information and communication technology and meteorological facilities.

Out of approximately 570³ aerodromes in Kenya, only ten are manned and managed under the Kenya Airports Authority (KAA), namely Jomo Kenyatta, Moi, Eldoret, Kisumu, Wilson, Malindi,Wajir, Lamu, Ukunda and Lokichoggio. The rest are maintained by KAA on agency basis and generally and generally lack adequate navigation equipment due to low allocation of budgetary resources. KAA is currently undertaking a capacity upgrade project to address the congestion problems at Jomo Kenyatta International Airport (JKIA). In addition, the Authority is undertaking an Airports System Master Plan Study. The aviation industry worldwide is increasingly adopting new strategies to match industry requirements with emerging economic trends. One of these strategies is the adoption of hub and spoke operations by airlines. This allows large numbers of different flights to arrive and depart from airports almost simultaneously. In view of the foregoing, it is important that JKIA remains a competitive and efficient hub for it to maintain its position as the hub of choice in region.

Most of the Air Navigation Infrastructure in the country is located in the three international airports namely; Jomo Kenyatta, Moi and Eldoret and the three domestic airports, Kisumu, Malindi and Wilson while other facilities like radar systems and others are located at strategic sites in various parts of the country. In general, the current air navigation facilities have been installed in conformity with the African and Indian Ocean Region (AFI) Air Navigation Plan. However, in order to conform with the ICAO Global Plan on the implementation of CNS/ATM Systems, Kenya needs to develop and implement satellite based Air Navigation Infrastructure, which relies on digital communication technologies.

Although Kenya has one of the best Air Navigation infrastructure in the region, the quality and efficiency of services provided has not been commensurate with the quality of infrastructure.

9.2.1 Critical Issues

- At the moment some of the critical air transport infrastructure e.g. the control towers and buildings housing radar stations are not in a satisfactory state of repair and hence require rehabilitation.
- The linkage between air transport infrastructure and the need for emergency medical aid and/or disaster management is largely missing. In many of the well-equipped hospitals, there is lack of adequate landing facilities for emergency medical evacuation operations.
- ICTs are central to the enhanced efficiency and cost effectiveness in the development, operation and management of aerodromes and other related facilities in the aviation industry. Kenya's aviation industry has not fully benefited from the potentials offered by ICTs in improving security and quality of service. In terms of technological capabilities, there is need for the existing systems to accommodate technological advancements.

- Roads, electric power supply, Information Communication Technology, water and sanitation services at Kenya's aerodromes require to be improved through appropriate planning.
- Worldwide, airports have acted as magnets for the development of other value-adding investments such as hotels, sport facilities, industrial parks, business parks and shopping centres, among others. Kenya's airports need to put in place appropriate mechanisms to exploit these business opportunities.
- There is lack of sufficient and effective linkages between airports and other transport modes, in particular railways and ports. Roads that serve airports, for instance, need to be improved to provide optimal linkages between the airports and other centres of economic activities.
- Human encroachment on land reserved for future development of airports jeopardises the potential development of the country's airports into reputable, safe and secure destinations for air travel and has to be checked.
- There is need to ensure that airports countrywide provide the requisite services to retain Kenya as the hub of choice in the region.
- Current terrestrial based CNS/ATM system infrastructure does not fully meet air traffic operational requirements in accordance with Africa and Indian Ocean (AFI) plan, which is hampered by inadequate funding, among other factors.
- Inadequate well-trained maintenance personnel
- Vandalism of vital air navigation installations
- Most of the aerodromes, particularly the unmanned ones generally lack adequate navigation equipment and maintenance.
- Although KAA is currently undertaking a capacity upgrading programme for JKIA, given the projected growth in traffic volumes, the airport will soon become saturated and hence will not have adequate land for expansion in the long run.

9.2.2 Policy

GoK shall:

- a. Modernise and fully integrate air transport infrastructure to maintain Kenya as the preferred aviation and commercial hub in the East, Central and Southern African Region.
- b. Enhance safety and expedite flow of air traffic in a cost effective manner.
- c. Facilitate public and private sector participation in infrastructure development in the aviation industry;
- d. Repossess all illegally acquired aerodrome land;
- e. Ensure proper maintenance, equipment and manning of minor aerodromes;
- f. Develop and maintain a satellite based CNS/ATM system to meet present and future air traffic operational requirements
- g. Ensure that air navigation installations are properly guarded from acts of vandalism.
- h. Ensure that there is adequate well trained personnel for the aviation industry
- i. Identify an alternative site away from the existing airport with adequate land for the construction of a second international airport to serve the capital city.

9.3 INTEGRATING AVIATION SERVICES WITH THE NATIONAL ECONOMY

9.3.1 Critical Issues

- Currently aviation transport infrastructure is not well linked to other transport modes and because of this it does not fully facilitate trade. It does not also adequately foster growth of the agricultural industry, support tourism, or facilitate manufacturing industry.
- Certain areas, particularly the northern and eastern parts of Kenya, are inadequately served by air transport.
- The pre-export logistics are uncoordinated and lack adequate cold storage facilities.
- Aviation infrastructure and services to handle passenger, freight, mail and cargo are inadequate at most airports.

9.3.2 Policy

GoK shall:

- a. Develop and maintain strategic aviation infrastructure and services to all parts of the country
- b. Ensure the development of aviation infrastructure is in tandem with the technological advancement.
- c. Ensure aviation policy implementation achieves integration and increased accessibility of all transport modes serving airports and productive areas of the economy.
- d. Promote coordinated pre-export logistics and develop adequate cold storage facilities.

9.4 MANAGEMENT OF AIRPORTS

There are approximately 570 aerodromes currently in Kenya; of which 156 are public and only ten (10) are managed directly by Kenya Airports Authority.

Worldwide, airport operators are increasingly shifting from their reliance on aeronautical charges to finance the development and management of airport infrastructure. Studies have shown that this shift has been accompanied by a change in the ownership and control of airport infrastructure from government to the private sector. Presently, KAA has non-aeronautical income accounting for approximately 35percent of its total revenues, reflecting unexploited potential from the non-aeronautical side of its business activities.

9.4.1 Critical Issues

- Most aerodromes are financially unviable and this manifests itself in difficulties seen in terms of their operation and maintenance.
- Kenya's aerodromes rely heavily on aeronautical and other user charges to finance development and management of airport infrastructure and services.
- Airport management is still not fully autonomous in making key operational, financial and investment decisions, such as determination of user tariffs.
- Most of the minor aerodromes are considered to be economically unviable. This manifests itself in the serious problems seen in terms of their operation and maintenance.

In addition, a number of the major aerodromes are affected by some safety, security and operational issues as listed below:

- Bird Strikes
- Lack of comprehensive maintenance management systems
- Congestion at terminal buildings
- Encroachment of land for airport expansion
- Lack of up-to-date functional information systems (for weather, flight, etc.)
- Lack of adequate support services and their back-ups e.g. lack of water
- Security and safety Concerns
- Serviceability of ground NAVAIDS not fully complying with the required standards.

9.4.2 Policy

GoK shall:

- a. Promote private sector participation in the development, operation, ownership and management of aerodromes.
- b. Ensure improved operational, commercial and financial performance of aerodromes
- c. Ensure the minor aerodromes which are economically unviable but critical are provided with sufficient funding for development, maintenance and management.
- d. Promote non-aeronautical sources of revenue for airport infrastructure development and maintenance.
- e. Provide KAA with the requisite autonomy in the determination of user tariffs.
- f. Ensure that land reserved for airport expansion is safeguarded from land encroachment by issuance of title deeds to KAA.
- g. Ensure that incidences of bird strikes at airports are minimized through regulating land use in and around airports.
- h. Ensure safety and security of airports through compliance with ICAO SARPs

9.5 AVIATION SAFETY

The Kenya Civil Aviation Authority (KCAA) is the entity charged with the responsibility of ensuring the required flight safety and surveillance in the country. In order to execute this mandate effectively KCAA requires adequate well trained personnel, technical guidance materials and adequate funding. Funding for the Authority is sourced from revenue generated principally from air navigation services and aviation fees which are inadequate to allow it to fully discharge its stated mandate.

9.5.1 Critical Issues

- Frequent safety audits done by ICAO have noted flight safety related deficiencies which Kenya needs to address to ensure that its flight safety standards are in conformity with ICAO Standards and Recommended Practises (SARPs) as contained in Annexes 1, 6, and 8 associated guidance material and good aeronautical practices
- KCAA continues to face challenges in executing its mandate, occasioned by: lack of adequate qualified and well trained technical personnel; inadequate funding; inadequate national regulatory provisions, among others
- Kenya's aviation safety standards are also compromised by lack of adequate facilities, and irregularities by some air operators such as under-logging of hours and under-pricing.

9.5.2 Policy

GoK shall:

- a. Ensure conformity of Kenya's Flight Safety Standards to ICAO SARPs and internationally recognized standards.
- b. Ensure that KCAA is adequately funded in order to train and attract qualified personnel and to acquire and maintain the required facilities.
- c. Ensure regular reviews of the country's Air Navigation Regulations are undertaken in order to keep them in conformity with ICAO SARPs;
- d. Develop a system to conduct surveillance and supervision of designated flight examiners, certification and supervision of aviation training schools and approval of training courses;
- e. Ensure continuous review of the regulatory provisions governing licensing.
- f. Enhance the ability to conduct satisfactory levels of operation surveillance which has been occasioned by inter alia lack of adequate qualified staff.
- g. Ensure adequate provision of proper equipment, regulatory and information system tools to enhance flight safety.
- h. Enhance the level of continuing airworthiness surveillance and oversight of commercial air transport operators as well as other domestic air operators and aircraft maintenance organisations
- i. Ensure the existing legislation is revised from time to time to keep it abreast with changes taking place in the industry in compliance with ICAO Standards.

9.6 AIRSPACE MANAGEMENT

Management of airspace and airspace capacity forms one of the most critical components in proper utilization of airspace as a resource in the aviation industry. Airspace management includes partitioning of the airspace for civilian and non-civilian traffic and other users of air space, as well as air traffic management.

Currently, a large portion of Kenyan airspace is dedicated to full-time use by the military. Portions of the country's airspace which are out of bounds fall into three categories namely; prohibited, restricted and danger areas. According to ICAO, these areas constitute "deficiencies" in Kenya's airspace. Discussions with the military authorities with a view to reducing this imbalance or allowing civilian utilisation of such airspace, when it is inactive have not been successful. Consequently, the mechanisms for allocating Kenyan airspace tend to deny users their optimum flight paths/profiles forcing them to divert and use less economic routes/paths resulting in delays or longer flight times.

Such diversions have some cost implications for air operators. While there have been no studies documenting the level of significance of such diversions, available information from stakeholders indicates that air operators would prefer more efficient arrangements in this regard. In addition to the cost implications, such diversions potentially can negatively affect search and rescue arrangements as well as national disaster preparedness. Although there is a Civil-Military Coordination Committee on air space use, there is need to strengthen its effectiveness with a view to minimising the economic consequences of the imbalance.

Besides using Kenya's airspace for civilian and military purposes, the use of this national asset for space exploration and other scientific purpose is recognised. In this regard, the San Marco Space Station at Malindi, which is used by the European Space Agency,

through the University of Rome and the National Aeronautical and Space Administration (NASA) of the USA, is a facility that needs to be exploited for the economic well being of the Kenyan public.

9.6.1 Critical Issues

- There is lack of requisite managerial and operational capacity to oversee optimal airspace utilisation. Large portions of the airspace are prohibited, restricted or declared danger areas for civilian use making it cost inefficient to users.
- Economic potential of outer airspace has not been fully exploited through participation in airspace programmes.

9.6.2 Policy

GoK shall:

- a. Formulate a comprehensive airspace planning and management policy to ensure an optimal utilization of airspace between civil and military operations
- b. Formulate a comprehensive outer space planning and management policy to ensure effective utilization outer space.

9.7 AIRCRAFT ACCIDENT INVESTIGATIONS

With the formation of KCAA in year 2002, the function of investigating aircraft accidents was moved from the former DCA to the Ministry of Transport as a Department. The sole purpose of conducting accident investigation is prevention of future similar accidents. In order to do this, the accident investigation entity has to be properly manned, equipped and facilitated within an independent atmosphere. This needs to be done in accordance with the ICAO Standards and Recommended Practices as stipulated in Annex 13.

Accident investigation is a resource intensive activity which does not generate revenue worldwide. The benefits that accrue from prevention of accidents and loss of human life and property, justify the expenses involved despite the lack of revenue. In effect, accident investigation and prevention pays for itself indirectly.

Due to high demand for resources, most countries are unable to meet the required standards and ICAO has made recommendations for a regional approach to accident investigation for States.

A recent audit by ICAO in the region indicates that none of the countries in the region is close to meeting the International Standards. The biggest shortcomings identified by the Audit were in regard to independence of the accident investigation entity, facilitation, human resource and regulations.

9.7.1 Critical Issues

Lack of an operational independent accident investigation and prevention entity by virtue of being part of the mainstream civil service. This leads to failure to attract and retain experienced and qualified staff, inadequate funding and poor facilitation. As a result there is lack of effective accident investigation and follow-up of implementation of safety recommendations. Regional approach in accident investigation in order to maximize the use of the available resources.

9.7.2 Policy

The GoK shall:

- a. Establish an Independent National Aircraft Accident Investigation entity.
- b. Pursue regional cooperation in accident investigation in order to better harness the resources available within the region.
- c. Develop regulations governing accident investigations in accordance with Annex 13 to the ICAO Convention and establish a mechanism for ensuring regular amendments to keep abreast of international standards and practices.

9.8 AVIATION SAFETY

KAA coordinates the overall aviation security at airports and this function is undertaken through the Security Department of the Authority, with the State Security providing the necessary backup. The current arrangement is that the State Police provide this service through Kenya Airports Police Unit (KAPU) who however is not directly accountable to the management of the Airports Authority. KCAA is responsible for regulating aviation security in accordance with ICAO Annex 17. Other stakeholders are involved through committees.

Currently, the country is working with other EAC member states with a view of harmonizing regulations governing aviation security.

The events of September 11, 2001 in USA and the terrorist attacks in Kenya in 1998 coupled with other continuous threats, starkly brought to the fore the need to improve aviation security standards in the country.

9.8.1 Critical Issues

- The current aviation security arrangements at the airports are not ideal since the airport management has no direct control over the State Police who provide backup to the Authority's own security personnel.
- Lack of adequate coordination between KCAA, KAA and Central Government security agencies as well as challenges occasioned by terrorist attacks have exposed weaknesses in the country's aviation security system.
- The security lapses as brought out by the September 11 events resulted in a failure or a perceived failure to secure aircraft, passengers and freight from threats on the ground and in flight. In addition, they have adversely affected Kenya's quest for FAA Category I classifications.
- Inadequate security arrangements to deter incidences of vandalism of air navigation installations are major issues of concern.

9.8.2 Policy

GoK shall:

- a. Put in place the necessary arrangements to ensure the management of the Airports Authority has the requisite oversight for all the security personnel serving the airports.
- b. Ensure adequate security for air navigation installations, enhancement and harmonisation of aviation security systems in accordance with ICAO annex 17.
- c. Ensure that passengers, aircraft personnel, luggage, cargo and aircraft are secured, both on the ground and while in flight and

- d. Ensure all air navigation installations are secured from intruders.

9.9 SEARCH AND RESCUE

KCAA is the designated Authority responsible for coordinating search and rescue services in the country. The main search and rescue coordination centre is located at JKIA, while the sub-centre is located at Mombasa. The two centres require to be fully equipped so that they can be in position to effectively respond to search and rescue operations. Both ICAO and IMO have jointly developed a common SAR manual to cater for Aeronautical and Maritime SAR. A joint centre has been proposed to be located at Mombasa and it will be named Eastern Africa Rescue Coordination Centre.

9.9.1 Critical Issues

- Lack of requisite operational capacity hampers efficient delivery of aeronautical search and rescue services at the national and regional levels.
- A proper framework for facilitating coordination between aeronautical and maritime search and rescue operations is lacking.

9.9.2 Policy

GoK shall:

- a. Develop a proper framework to facilitate coordination between aeronautical and maritime search and rescue operations.
- b. Ensure adequate equipment and maintenance of search and rescue centres.

9.10 BIOLOGICAL, CHEMICAL AND OTHER FORMS OF THREATS TO CONSUMER AND NATIONAL HEALTH

Port health refers to diseases handled by the Ministry of Health, which has its own personnel at the manned aerodromes. The Ministry of Health works closely with the World Health Organisation in monitoring communicable and contagious diseases, so as to take necessary actions, e.g. vaccinations, quarantines or banning of flights to/from affected countries, to contain or stem the spread of such diseases.

Disinfection of aircraft landing or departing from Kenya is done randomly bearing in mind ICAO and country of destination requirements, regarding the type of disinfectant and its effects on passengers, aircraft frames and its electronic components.

Plant and animal health are handled through the ministries responsible for agriculture and livestock, which have units at the major international airports. The Kenya Plant Health Inspection Service (KEPHIS) is primarily responsible for ensuring the health of agricultural produce entering/leaving the country.

9.10.1 Critical Issues

- Lack of adequately equipped and trained personnel to deal with port health, matters related to dangerous pests, diseases and noxious weeds, and international garbage.
- There is inadequate human, plant and animal quarantine and other facilities like incinerators at the airports to meet requisite international standards.
- With respect to plant and pest control services, there is lack of sufficient public awareness of the dangers of importing pests, disease and noxious weeds
- There is a shortage of personnel to effectively police trade in dangerous plants.

- There is inadequate capacity to deal with international garbage and lack of adherence to regulations on importing plants by airlines
- There is ineffective enforcement of disinfection procedures for aircraft landing in Kenya from other origins.

9.10.2 Policy

GoK shall:

- a. Ensure there is adequate human, plant and animal quarantine and other facilities like incinerators to meet requisite international standards.
- b. Ensure the personnel dealing with dangerous pests, diseases and noxious weeds, and international garbage are adequately equipped and trained.
- c. Promote public awareness regarding the dangers of importing pests, disease and noxious weeds
- d. Ensure strict enforcement of regulations regarding importation of plants by airlines.
- e. Ensure effective implementation of disinfection procedures against biological, chemical and other threats to consumer and national health transported to Kenyan aerodromes.

9.11 LAND USE WITHIN AND AROUND AERODROMES

KAA is responsible for land use planning within the airports but has limited control over the utilization of land outside its jurisdiction. KAA is currently undertaking an Airports System Master Plan with a view of determining future requirements for the development of a coordinated airports system network. KAA is also working closely with local authorities with respect to land use outside the airports with a view to avoiding undue conflicts.

9.11.1 Critical Issues

- Uncoordinated and conflicting land use arrangements around aerodromes which endanger aviation safety and security as well as compromise aerodrome viability.
- A number of aerodromes have faced encroachments by human settlements, high rise buildings and unplanned commercial activities.

9.11.2 Policy

GoK shall:

- a. Ensure enforcement of land use planning regulations in and around airports
- b. Repossess aerodrome land which has been encroached on and ensure developments and commercial activities around the airports strictly adhere to laid down by-laws and regulations.
- c. Secure and reserve land for future expansion of aerodromes.

9.12 AIR COMMERCE

Air transport industry continues to play a critical role in the country's economy by facilitating the transportation of both passengers and freight and aerial work. The sector has greatly supported the key foreign exchange earning sectors of the economy namely; tourism and agriculture. Tourism, which depends largely on aviation, is closely linked to many productive sectors (including agriculture, manufacturing and service sectors) with considerable impact on employment generation, wealth creation and poverty alleviation.

Worldwide, air transport has prompted a number of industries to increase their global markets by introducing “just-in-time” production and distribution techniques. The globalisation of production and markets has contributed to considerable improvement in the use of resources worldwide. Today, fruits, vegetables, fresh-cut flowers, fish, meat, dairy products and many perishable products are transported from remote corners of the world to consumer markets. This important shift has occurred largely due to advances in air transport of which Kenya’s aviation industry, producers and consumers must take advantage.

Because of its relatively high cost, air transport is more economical in the transportation of high-value cargo than low value cargo. For transportation of the latter category of goods (comprising mainly bulky perishable commodities such as horticultural products) to be economical via airfreight, prices in the export markets need to be competitive and profit margins attractive enough to stimulate bulk production and bulk haulage. Air transport has therefore, strengthened the linkages among various sectors of the economy and the exploitation of the full economic potential of this sector will go a long way in meeting the Government's development objectives enunciated in vision 2030.

9.12.1 Critical Issues

The positive role played by the aviation sector is constrained by several factors, including:

- High cost of other transport modes such as road transport, due to poor condition of the roads, especially in the farming areas;
- High tariffs on cargo (despite the exemption of air cargo carriers from import duty on jet fuel and fuel oil under Legal Notice No. 229 of August 1992);
- Heavy subsidies of agricultural products by European governments in their countries, thus rendering Kenyan and other exports to those markets uncompetitive;
- The collapse or weakening of the relevant cooperatives in the country leading to weak bargaining power of small-scale farmers. Low value added in the bulk of the exports;
- Uncoordinated pre-export logistics, including lack of cold storage for perishable goods and lack of integrated transport modes;
- Licensing of irregular ad hoc ("pirate") cargo operators who often under-cut regular scheduled air cargo transporters leading to higher tariffs.
- High cost of jet fuel which has been worsened by the credit crisis in international financial markets.

9.12.2 Policy

GoK shall:

- a. Ensure integration of air transport sector with other transport modes to facilitate a seamless multi-modal transport network.
- b. Formulate procedures for authorising ad hoc cargo operators to avoid unfair competition and safeguard the interests of licensed scheduled air cargo operators.
- c. Promote agro-processing of agricultural products through further local processing in order to increase value-added.
- d. Pursue the development of each airport into a logistical hub through the development of productive and commercial activities as well as logistics that could be linked to main airports in the country with a view to enhancing their economic viability.

- e. Ensure traffic trends for both cargo and passengers are done and analysed on a regular basis to provide a source of investment information.
- f. Ensure liberalization of air transport within COMESA under COMESA Legal Notice No. 2 of 1999 and in the African region through the provisions of the Yamoussoukro Decision (YD) to promote fair competition.
- g. Implement where appropriate the recommendations of the 5th Worldwide Air Transport Conference of 2003.
- h. Continue to pursue the elimination of subsidies by the European Union (EU) and other developed countries through bilateral and multilateral channels and other fora, including the World Trade Organization (WTO).

9.13 LIBERALIZATION

Kenya has actively participated in regional and sub-regional economic blocs for the development of more open markets and has embraced the principles of Liberalization. These issues have been implemented with some measure of success at both multilateral and bilateral levels.

Key aviation guidelines on liberalization have been and will continue to be derived from the basic arrangements under the East African Community (EAC) Agreement, COMESA Legal Notice No. 2 of 1999, the Yamoussoukro Decision of 1999 and existing BASAs and under the recommendation of ICAO on the new Air Services Agreement (ASA) text.

In order to safeguard Kenya's interest, future air service agreements must be based on the principles of equal opportunity and reciprocity. For third country agreements consideration must be taken of the existing regional and sub-regional agreements to avoid conflicts with regional economic blocs such as COMESA, EAC, and the African Union.

9.13.1 Critical Issues

- The domestic market lacks an effective regulatory framework for ensuring a level playing field for all operators.
- Existing competition laws are not suitable for the exigencies of the aviation sector.

9.13.2 Policy

GoK shall:

- a. Ensure that Kenya's national interests are catered for in regional, sub-regional and international air service negotiations and agreements within the context of liberalization
- b. Ensure that the provision of air services between Kenya and other States is governed by the principles of equal opportunity and mutual reciprocity.
- c. Ensure a gradual, orderly and progressive liberalisation, taking into account the high technical and economic investment in the industry.
- d. Continue to support the policy of avoidance of double taxation for Kenyan designated airlines.
- e. Ensure that there is a proper balance between protection of national interests and the need to encourage foreign investment.

9.14 SCHEDULED AND NON-SCHEDULED AIR SERVICES

At the end of 2002 the Kenya Civil Aviation Authority (KCAA) was formed, the Civil Aviation Board (CAB) was abolished and the air licensing of non-scheduled air services functions taken over by KCAA. At the same time the Department of Air Transport at the

Ministry of Transport was formed to advise the Minister-in-charge (the Aeronautical Authority) on aviation policy, International conventions, bilateral and multilateral air services and other aviation related matters. For Scheduled Air Services, Kenya has embraced multi-designation approach and has now designated several Kenyan air carriers for different markets and routes.

9.14.1 Critical Issues

- Although multi-designation has promoted development among Kenyan air carriers, and enhanced their contribution to the industry, there is a need to distinguish between the ownership of airlines requiring designation and those not seeking designation. In line with the international norms with respect to ownership of designated airlines, there is need to retain substantial ownership and control of airlines designated as a national carrier in Kenya in the hands of the citizens.
- There is inadequate local participation in the airline industry through partnership with foreign investors.
- The local industry is currently dominated by non-scheduled flights, which do not provide optimal services to various part of the country.

9.14.2 Policy

GoK shall:

- a. Ensure continued multiple-designation of Kenyan airlines, to serve regional and international routes under the relevant bilateral or multilateral air services agreements.
- b. Ensure qualifications for airline designation are based on the merits of each case and also formulate both the criteria for designation and withdrawal of airline designation taking into cognisance the existing regional arrangements such as EAC, COMESA, and Yamoussoukro Decision
- c. Ensure the criteria for licensing of air services is strictly adhered to.
- d. Formulate modalities for the issuance of short term permits to ensure the operations of long term carriers are not subjected to unfair competition.
- e. Develop criteria to govern long term wet leasing of aircraft in order to utilize available local expertise.
- f. Support unscheduled domestic charter operations to enable them to grow into domestic scheduled operations with a view to enhancing industry efficiency and optimal support to other sectors of the economy.
- g. Ensure continuous review of the regulations governing licensing of air operators with a view to keeping them in tandem with the development in international aviation.

9.15 MARKET SHARING AND ACCESS

Modalities for market access are arrangements between or among airlines, which to some extent merge their commercial operations. They include alliances, franchising, code-sharing and other cooperative arrangements. International and domestic carriers have increasingly adopted various forms of market access and airline co-operation in marketing in order to adapt to the new trends in the air transport industry, and enhance their competitiveness in the aviation industry.

Under code-sharing arrangement, the operators (airlines) link some of their operations such as technical and flight operations, sales (ticketing), marketing and (subject to approval from the relevant competition authorities) pricing. Code sharing may be likened to a 'tactical' arrangement, very often focused on a specific route or market. Since it involves a high level of integration, between/amongst the participating partners, it is, in effect, a "strategic alliance" which does not necessarily involve shareholding participation.

Kenya has adopted a cautious approach to this arrangement and continues to deal with it at bilateral levels where both Kenyan and foreign aeronautical authorities recognize the concept in principle. Respective aviation authorities then invite the airlines to apply for approval. The operating carrier is required to have the necessary traffic rights. While code sharing has assisted the country in expanding market access and increasing tourism, concern has been raised that it is and could be used to circumvent BASAs with negative consequences on the local air transport industry.

Franchising is a relatively new phenomenon in the African region and as a commercial arrangement. On the basis of discussions held amongst aviation authorities and the stakeholders on the benefits of this arrangement, Kenya has provisionally approved guidelines for franchising. These include domestic franchises, sub-regional franchise agreements and agreements between Kenyan carriers and international carriers on different markets.

All other types of alliances between Kenyan carriers and non-Kenyan carriers are encouraged especially where they promote the development of capacity among local carriers to access various markets and increase foreign investment into the country, particularly in the aviation sub-sector.

9.15.1 Critical Issues

- While code-sharing has assisted Kenya in increasing market access including tourism, concerns have been raised that it is and could be used to circumvent the provisions of BASAs. There is no clear policy to define how airlines compete in the domestic market under franchising.
- There is a conflict between franchising and regional arrangements such as EAC and COMESA.

9.15.2 Policy

GoK shall:

- a. Ensure that all code sharing agreements negotiated at bilateral and multilateral platforms provide for adequate reciprocity and safeguard the national interests in terms of economic gains.
- b. Ensure third party sharing arrangements are made in accordance with BASA principles so long as they do not conflict with domestic, regional and sub-regional agreements and provided they contain clearly defined potential benefits to Kenya.
- c. Encourage Intra-African and Intra-COMESA code-sharing arrangements and those made with airlines within the East African Community (EAC), so long as they do not undermine, respectively, rules of competition under the YD and under COMESA Legal Notice No. 2 and similar arrangements under the EAC Agreement.

- d. Ensure there are no restrictions on code sharing arrangements among Kenyan airlines so long as they are beneficial to the parties and to the country's economy and do not infringe on Kenyan competition laws.
- e. Ensure all guiding principles governing all franchise agreements are similar to those for code sharing in respect of domestic, EAC, regional and international markets and that they are in line with existing agreements/policies with potential benefits accruing to the national economy.
- f. Promote the development of airline alliances that add value to the air transport industry and the national economy.

9.16 PRICING AND TARIFFS

The Government policy on airline tariffs for scheduled international air transport services is greatly influenced by decisions at international fora. These include mainly the recommendations of the International Civil Aviation Organization (ICAO) and the tariffs developed at the International Air Transport Association (IATA) Tariff Conferences.

Fares and rates applicable to scheduled air services to and from Kenya are initially developed at IATA conferences and then forwarded to the Government for possible approval. Considering the international character of civil aviation and the need to interline between companies, it is felt that coordination in the establishment of international fares and rates is essential, and should thus be encouraged.

Developments elsewhere in particular, the USA and Europe cannot be ignored, and Kenya must be prepared for the possibility that the traditional worldwide IATA Tariff Coordination machinery could be phased out in due course. For the time being, however, the Government supports efforts to safeguard IATA machinery to determine tariffs for transportation from Kenya. Domestic stakeholders support deregulation of charter rates and tariffs which are guided by market forces. Their preference in both international and domestic tariffs regime is for filed tariffs with maximum and minimum fares (banding) responding to the market forces in order to protect the consumer and stabilise the airline market

9.16.1 Critical Issues

- While air transport has been liberalized, the fares charged do not reflect cost of operations.
- Tariffs charged are not based on ICAO recommended user charges cost recovery guidelines.
- A tariff band with maximum and minimum levels within which operators can compete is lacking.

9.16.2 Policy

GoK shall:

- a. Continue to support the integrity of the IATA Tariff Coordination machinery and the guidelines formulated under the auspices of Africa Airlines Transport Association (AFRAA).
- b. Support effective participation of carriers licensed in the country in airline forums on pricing.
- c. Ensure Local Charter prices and domestic airfares are regulated through a defined tariff band.

- d. Ensure the recommended maximum and minimum tariffs are filed with the Aeronautical Authority.
- e. Ensure tariffs are harmonized to reflect both economic and social costs of services.
- f. Ensure that aeronautical fees and charges (tariffs) levied on air operators are based on the ICAO guidelines on user charges and cost recovery.

9.17 COMPETITION SAFEGUARDS

In Kenya regulation of competition is the responsibility of the Monopolies and Prices Commissioner who administers the Restrictive Trade Practices, Monopolies and Price Control Act of 1989 (Cap. 504) for all commercial activities. Following the approval of Competition Rules and Regulations, member states of COMESA, SADC, EAC and African Union have adopted these set of rules and regulations for implementation as basis for promoting fair competition and ensuring elimination of restrictive business practises.

Although the Restrictive Trade Practices, Monopolies and Price Control Act of 1989, Cap. 504, should apply to these issues, it appears that the aviation sector needs special attention.

The Civil Aviation Act Cap. 394 established an appeals tribunal to hear complaints from parties aggrieved by the decision of the licensing authority.

9.17.1 Critical Issues

Competition and dispute resolution mechanisms in aviation are not clearly or separately defined.

9.17.2 Policy

GoK shall:

- a. Ensure that the applicable Unified COMESA Competition rules and Regulations are adopted and domesticated.
- b. Review Cap.504 to provide for expeditious mechanism for dispute resolution and address aviation related issues.
- c. Implement appropriate safeguards to ensure fair competition and a dispute resolution mechanism through COMESA, SADC and EAC Competition rules.

9.18 WTO PROVISIONS ON GATS

The World Trade Organization (WTO) / General Agreement on Trade in Services (GATS) Air Transport article cover Computer Reservations System (CRS) ground handling, aircraft maintenance and traffic rights. In this context, there have been two significant developments during the past few years. Firstly, ICAO has developed a revised Code of Conduct for the Regulation and Operation of Computer Reservations Systems. Secondly, CRS are included in the Air Transport Annex to the WTO's GATS.

CRS was one of the service sub-sectors covered in Kenya's schedule of initial specific commitments for trade in services under the auspices of the General Agreement on Trade and Tariffs (GATT) and (in 1992) under WTO. In that schedule, Kenya was committed to the liberalisation of the CRS.

9.18.1 Critical Issues

- As the WTO continues to handle worldwide matters on trade, it is not clear who should handle matters touching on air transport issues

- There are no clear consumer interest safeguards in the process of implementing WTO's requirements under GATS.

9.18.2 Policy

GoK shall:

- a. Ensure liberalization of the CRS continue to be implemented taking into cognizance the appropriate consumer interest safeguards.
- b. Ensure matters touching on air transport issues are handled by ICAO in the process of implementation of CRS

9.19 COMMISSION PAID TO TRAVEL AGENTS

The issue of Commissions to travel agents has been discussed at various meetings and no conclusive decision has been made. The government having accepted liberalisation as a concept, it becomes difficult to envisage regulating an arrangement that is purely commercial. Its position, however, is that as much as possible; no airline should sell its own tickets. This will ensure that Kenyans have the opportunity to benefit from both local and international air transport business

9.19.1 Critical Issues

- Travel agents are demanding to be engaged by the airlines in the ticketing process yet it is difficult for GoK to regulate an arrangement that is commercial.
- There is no clear forum for acceptable and amicable resolution of such conflicts without unfairly infringing upon the rights/interests of the various stakeholders.

9.19.2 Policy

GoK shall encourage Kenya Association of Travel Agents (KATA) and Board of Airline Representatives (BAR) to hold regular consultations on this matter and come up with amicable solutions, taking into account the benefits and value to the national economy and consumer interests.

9.20 AIR CARGO AND MAIL

Studies show that more than 40 percent of world trade is carried on board freighter aircraft and in the lower decks of passenger jets. Worldwide, the air cargo industry is worth **US\$ 200** billion a year. Growing at 6.5 percent per annum, air cargo is expanding much faster than the growth of passenger business. It is therefore clear, that air cargo and mail are the areas of the industry that need careful attention.

Kenya depends largely on air for transportation of horticultural produce and other goods to overseas markets. In addition to this very important segment of the economy, there is a need to exploit the potential available in the development of high value low weight products for foreign markets to take advantage of low production costs in Kenya. For instance currently the miraa / khat trade is run by cartels and its transportation by air is becoming unpopular. It can however post economic gains to farmers and air operators if streamlined

9.20.1 Critical Issues

- HCDA is undertaking a diminishing advisory and marketing role to small scale farmers who play a significant role in production and export of agricultural produce particularly horticulture
- Existing capacity to handle cargo particularly horticulture is inadequate

- Interests of licensed scheduled carriers are not adequately safeguarded

9.20.2 Policy

GoK shall:

- a. Promote Kenya's airports into logistic hubs through provision of all requisite facilities and services.
- b. Strengthen HCDA to offer advisory and marketing services to farmers and also strengthen farmer's co-operative movements.
- c. Provide the necessary facilities and services for enabling transportation of khat (miraa) through the airports from its sources to markets.

9.21 HUMAN RESOURCE DEVELOPMENT

If Kenya is to achieve and sustain international performance levels in aviation, and secure the future growth in the industry, it is important that appropriate and quality training be provided at reasonable costs. Such training must take into account rapidly evolving technological patterns in the industry.

9.21.1 Critical Issues

- Current costs of training aviation personnel are too high and this has resulted in limited human resource development for aviation sub-sector experts such as airworthiness inspectors, accident investigators, trainers, examiners, air traffic controllers and pilots among others
- The Institutions that offer aviation training are inadequately regulated in terms of their creation and the curricula. In addition they lack a comprehensive aviation training curriculum; an appropriate accreditation system for aviation experts locally to facilitate the growth of training institutions in an organized manner; and adequate training equipment locally resulting in trainees seeking training opportunities in other countries. None of these institutions have their curricula certified by KCAA as required, bringing into question the quality and competence of the personnel that they train.
- Funding for aviation training is inadequate.
- Attraction and retention of trained human resource is a problem.
- Inadequate licensing, approval and regulation of training schools and an emerging human resource generation gap in aviation.

9.21.2 Policy

GoK shall:

- a. Facilitate the training at affordable costs, curricula development approval and certification of aviation training institutions and personnel.
- b. Provide adequate resources to train qualified personnel in all cadres.
- c. Ensure attraction and retention of experts in aviation industry.

9.22 MITIGATING ENVIRONMENTAL EFFECTS OF AVIATION

Aircraft noise and other emissions beyond acceptable levels, and aircraft engine emissions are emerging as major challenges at Kenyan aerodromes. This situation is compounded by human settlement encroachment on airport land; uncontrolled disposal of waste including abandoned and written off aircraft at aerodromes.

9.22.1 Critical Issues

- Aircraft noise and other environmental pollution are becoming major challenges in the Kenyan aviation industry
- Uncontrolled disposal of waste, including abandoned equipment is also a major hindrance to the growth of the industry

9.22.2 Policy

GoK shall:

- a. Ensure compliance with ICAO minimum SARPs and applicable national laws in respect to environmental protection.
- b. Enforce the disposal of abandoned and written off aircraft and related aircraft waste within aerodromes.
- c. Ensure reduction of the negative effects of the aviation industry on the environment.

9.23 SERVICE DELIVERY IN THE AVIATION INDUSTRY

The Government has in recent past put mechanisms to improve productivity and customer service delivery at airports under the performing contracting arrangements. In turn the corporations charged with providing facilities and regulatory services such as KAA and KCAA have entered into service level agreements with third parties to ensure this is achieved.

9.23.1 Critical Issues

- The services offered at the airports by different organizations are not properly coordinated due to lack of uniformity of standards and objectives
- Lack of internationally acceptable service delivery levels at airports by customs, immigration, police, ground handlers, airport management, among others.
- Although each airport has a facilitation committee which reports to the national committee on problems at the airports, the recommendations from facilitation committee is mainly advisory and therefore lacks enforcement mechanism.
- Enforcement of National Facilitation Committee recommendations is slow or lacking.

9.23.2 Policy

GoK shall:

- a. Develop an Airport Standards Unit to ensure maintenance and upholding of defined operational as well as other standards at Kenyan airports.
- b. Ensure recommendations of the National Facilitation Committee are properly enforced and,
- c. Benchmark and ensure services in the aviation industry meet international standards.

9.24 INSTITUTIONAL FRAMEWORK

Currently, three main different institutions perform aviation functions as follows:

The Ministry of Transport performs the primary functions of policy formulation and advisory, approval of tariffs, international conventions, bilateral air services agreements and multilateral and regional agreements.

Kenya Civil Aviation Authority performs the task of air services licensing, technical / safety regulation, provision of air navigation services and training.

Kenya Airports Authority is responsible for aerodrome development, operations and management.

9.24.1 Critical Issues

- The institutional management of the aviation industry lacks efficiency and separation of powers.
- Currently the Kenya Civil Aviation Authority (KCAA) performs the role of the industry regulator and service provider, thus resulting in possible conflicts of interest.
- There is lack of clear responsibility for operation and maintenance of minor aerodromes. Further, aerodrome operators lack authority to coordinate security matters at aerodromes.

9.24.2 Policy

GoK shall:

- a. Develop an appropriate institutional framework that clearly delineates the functions of policy making, regulatory and service provision in the aviation sector.
- b. Facilitate the development and implementation of service charter for the entire aviation industry.
- c. Ensure that a framework for interagency is established to enhance wider participation by industry players for purposes of enhancing consultations to facilitate growth.

9.25 LEGAL AND REGULATORY FRAMEWORK

The aviation sub sector is one of the most regulated transport modes. By its nature, the legal and regulatory framework governing the operation and management of the sub sector, including the provision of services largely emanates from international conventions, which are ultimately adopted and refined through national legislation.

The Chicago Convention of 1944, which established the International Civil Aviation Organization (ICAO), forms the basis for the establishment of regulations and institutions governing the orderly development and operation of international aviation. The Convention, which has been ratified by over 180 countries including Kenya, provides guidelines and standards for, inter alia, navigational aids, technical characteristics of aerodromes, aircraft certification, licensing of pilots and other specialized personnel, market access, safety supervision, and tariff guidelines for both airlines and airports. Recently, environmental issues have been incorporated into ICAOs mandate.

At the African (Regional) level the Yamoussoukro Decision of 1999 provides for the gradual liberalization of scheduled and non-scheduled Intra – African air transport services. In addition, Kenya has fully implemented provisions of the COMESA legal notice No. 2 of 1999 in relation to aviation matters within the COMESA region.

Kenya is a signatory to the Chicago Convention of 1944 and has subsequently adopted its major provisions in form of national legislation and subsidiary legislation.

The primary governing statutes and the detailed subsidiary legislation and regulations need to be brought in tandem with current developments as enunciated through ICAO Standards and Recommendation Practices (SARPs).

9.25.1 Critical Issues

- Cap. 394 and Cap. 395 are not harmonized in respect of aerodrome licensing, regulation, inspection.
- The State Corporations Act is a constraint to the operational and financial autonomy of both KCAA and KAA
- There is uncertainty over the ownership and control of unmanned aerodromes.
- Some of the Air Services Agreements so far negotiated have restrictions imposed by bilateral partners, thus limiting opportunities for Kenyan airlines and constraining aviation industry growth.
- Inadequate domestication and implementation of international conventions and agreements to which Kenya has been signatory
- The responsibilities of the MOT, KCAA and KAA, as already defined indicate an overlap of responsibilities and functions that inhibit the effectiveness of the regulatory functions of the key aviation institutions, KAA and KCAA, resulting in potential conflict of interests
- Some aspects of the legal framework are not in conformity with international trends.
- Failure to domesticate certain international treaties has resulted in limited application of key aviation conventions
- A clear criteria for designation of airlines is lacking

9.25.2 Policy

GoK shall:

- a. Develop an appropriate legal and regulatory framework supportive of a modern, safe and secure aviation industry.
- b. Continuously Review and update the Civil Aviation Acts to bring them in line with the changes that have taken place in the aviation industry, and reflect international standards.
- c. Ensure restrictive air services agreements are continuously identified and reviewed.

9.26 FUNDING FRAMEWORK TO SUPPORT AVIATION INDUSTRY GROWTH

The Kenya Airports Authority funds its activities from aeronautical and landside fees collected from users, passenger service charge (at \$20 and Kshs.300/= per departing international and domestic passenger respectively). On the other hand KCAA finances its activities principally through revenue derived from navigation services and aviation fees. In respect of air operators, funding is mainly done through external sources. Such funding is dependent on a thorough analysis of the borrower's ability to pay, volume and consistency of receivables, route network, current and planned fleet size etc. Amounts required for pre-delivery deposits are colossal and air operators usually need external funding together with a guarantor. It is common practice to fund spares and training internally. Spares may also be acquired through lease from pools. Training costs are, to some extent, usually inclusive in the aircraft purchase agreement and this should assist in the reduction of overall spending. Other capital items, such as hangars, may require much higher amounts than is available in reserves, but can be funded locally although domestic interest rates are usually exorbitant.

Some disadvantages include high interest rates chargeable to African states compared to other borrowers mainly resulting from risk factors, especially country risks of sources of receivables, and ability to convert to hard currency.

Funding framework to support aviation industry growth should address development, operation and maintenance of air transport infrastructure, human resource development

and retention, and acquisition of aviation equipment amongst others. Related to this is the issue of how the non-commercially viable, but strategically important aerodromes will be funded.

Worldwide, air transport infrastructure financing is the domain of central government. Aerodromes are viewed as strategic socio-economic and defence facilities. Aviation infrastructure financing, in most cases, does not attract private sector participation due to low rates of return, or in most instances the non-economic nature of some of the investments that are undertaken to meet social needs of citizens.

9.26.1 Critical Issues

- The existing financing framework for airport infrastructure development and maintenance in Kenya is generally ad hoc and does not fully provide an optimum mechanism for supporting the infrastructure needs of the industry. Similarly, financing of the industry regulator has not been institutionalized to establish a sustainable and autonomous entity.
- Inadequate aviation infrastructure and services and maintenance thereof coupled with need for enhanced safety, security, consumer comfort, and human resource development have created a gap, which the existing funding framework is unable to meet on a sustainable basis. This situation has been constrained by inelasticity of traditional aeronautical sources of funding.
- Airline operators are constrained by the high interest rate regime locally, high country risk rating, and the huge capital outlays required to finance their operations. Local insurance companies have inadequate capacity to provide insurance cover for a number of aviation operations.

9.26.2 Policy

GoK shall:

- a. Pursue optimal utilisation of existing sources and facilitate application of alternative funding avenues for provision of aviation infrastructure and services.
- b. Facilitate air operators registered in Kenya access off-shore insurance in cases where the local insurance companies have inadequate capacity to meet the required insurance cover
- c. Negotiate with other bilateral partners with a view to finalizing Air Taxation Agreements to eliminate double taxation for Kenyan airlines in order to enhance their competitiveness.
- d. Facilitate development of human resource capacity for assessing insurance claims for the industry.

CHAPTER TEN

INFORMATION AND COMMUNICATION TECHNOLOGIES FOR TRANSPORT

10.1 ICTS AND TRANSPORT

10.1.1 Critical Issue

By and large, Kenya's transport sector lacks integrated ICT systems capable of providing data access and sharing of services amongst all modes. Application of ICT in the transport sector is still limited in a number of ways, ranging from the level of technology used to non-application of ICT in transport operations. In maritime and inland waterways operations are still largely manual. There is limited application of ICTs in aviation. Except for the introduction of the rail tracker for freight traffic which is not connected to many customers or to other transport modes, the communication system in railway transport had collapsed due to obsolete technology. The road transport sub sector is still lacking freight tracking facilities while traffic information management is predominantly manual leading to poor data management, inadequate service levels and poor enforcement.

10.1.2 Policy

The GoK in conjunction with the private sector will establish intermodal ICT systems for efficient development and management of the transport sector.

10.2 ROAD TRANSPORT

10.2.1 Critical Issue

Although use is made of ICTs in road planning, design and monitoring the systems should be strengthened to cater for integration of different road networks, roads with other modes and economic activities. There is a need to introduce ICTs in tracking freight movement along the main road corridors to avoid dumping of transit goods into the local market. It is also necessary to use ICTs (weigh-in-motion) in axle load control to reduce traffic congestion at weighbridge stations. Other areas where ICTs will be required or which require strengthening include:

- Registration and licensing of vehicles
- Regulation of traffic-by-traffic signals.
- Monitoring of road traffic offenders and accidents.
- Web based information on the conditions of roads
- Establishing global positioning systems for road transport

10.2.2 Policy

The GoK will:

- establish a comprehensive management information system, based on performance indicators and models that enable the provision of an integrated demand and supply driven road transport infrastructure. This will ensure economic efficiency and enhance socio-economic impacts of road infrastructure development and maintenance on various aspects of the economy.
- install a National Traffic Information System (NaTIS) to enable traffic authorities exercise proper road user control, which is an essential prerequisite for discipline, order

and safety on the roads and establish an institutional home for NaTIS and relevant data sharing institutions identified for inclusion in the programme.

- standardise databases for road traffic aspects not covered by the NaTIS and make this available to the relevant authorities. Traffic information required for planning, monitoring and control purposes, should be available to management at all levels (local, provincial and national) according to their functions and needs.
- introduction new generation driving license (smart card driving license) log books, and identity cards linked to the NaTIS.
- develop appropriate training for implementers of ICTs.
- integrate national and regional ICT systems.

10.3 RAIL TRANSPORT

10.3.1 Critical Issues

Modern rail transport systems are relatively more ICT intensive. In Kenya, track maintenance methods currently in use are labour intensive due to lack of modern equipment. The telecommunications systems consist of underground cables and overhead copper wires most of which are frequently vandalized. As a result, communication has become unreliable and KRC has resorted to using telephone facilities in most places. The transfer of information is done mainly through trains, telephone calls and by e-mail where these are available. Most of the processes are still undertaken using paper work, which is transferred to central places for entry into the computer. This compromises data quality and as information may be lost or manipulated. Furthermore, these systems make it difficult for management to monitor the transactions taking place within the Corporation. Operations have been improved by use of the rail tracker system, which is used to monitor the movement of wagons and consignments. However, the system is not fully integrated with other railway systems and with other modes.

10.3.2 Policy

The GoK in conjunction with the private sector will facilitate the adoption of appropriate ICT systems for rail transport development and operations. These must be compatible to ensure full benefits by all stakeholders.

10.4 MARITIME TRANSPORT

10.4.1 Critical Issues

Procedures required to clear cargo through Mombasa are complex, cumbersome time consuming and expensive. The long cargo dwell times reduce the effective capacity of stacking yards and contribute to the overall level of congestion. A major obstacle to improvement in container and other cargo clear once time is the reliance on paper rather than computer based system. To benefit fully from ICT systems, compatible computer systems would need to be installed linking all stakeholders.

10.4.2 Policy

The GoK will ensure the installation of an integrated ICT system for the improved tracking and clearance of cargo through Kenyan ports to domestic, regional and international destinations.

10.5 INLAND WATERWAYS

10.5.1 Critical Issues

Use of ICTs in inland waterways is very limited. Operations on inland waterways and its ports are currently done manually with little or no ICT component. There is need to introduce the use of ICTs in port operations and the tracking of vessels while in inland waterways.

10.5.2 Policy

The GoK will ensure increased use of ICT in port operations and services on inland waterways.

10.6 PIPELINE TRANSPORT

10.6.1 Critical Issues

The operations of the entire pipeline and storage systems are driven by the ICT. The entire pipeline system is centrally controlled through a system that enables online supervisory control of all operational parameters from a central point with minimum human intervention.

10.6.2 Policy

The GoK will:

- a. Ensure strengthening and upgrading of existing ICT capacity to support pipeline operations and ensure integration with other transport modes.
- b. Facilitate integration of management information systems with pipeline operations in order to ensure ease in monitoring of operations, management of finances and improve service delivery to users of pipeline transport system.

10.7 AVIATION

10.7.1 Critical issues

ICTs are central to the enhanced efficiency and cost effectiveness in the development, operation and management of aerodromes as well as air navigation services. The Kenyan aviation industry has begun appreciating and benefiting from the potentials offered by ICTs in improving safety, security and quality of service. The implementation process however needs to be expedited. Automation of weather report dissemination for air traffic is necessary at all airports. Installation and operationalisation of the aeronautical communication, CNS/ATM, Global Navigation Satellite System (GNSS) are key in the management of the aviation sector.

10.7.2 Policy

The GoK will:

- ensure CNS/ATM systems are implemented accommodating modern technological advancements.
- in conjunction with stakeholders install Total Airport Management Systems (TAMs) at the main international airports.

CHAPTER ELEVEN

TRANSPORT RESEARCH AND DEVELOPMENT

11.1 TRANSPORT AND RESEARCH

11.1.1 Critical Issues

Transport research is required to inform not only policy formulation, but also in monitoring and evaluation of the various intervention strategies. It is therefore necessary to undertake research on the outcomes of the intervention strategies, the impact of transport on the economy and environment, transport safety and security, land use and transport, people attitudes and behaviour patterns in relation to transport, industry and transport, transport logistics, modernization of public transport amongst other issues. In Kenya, there is lack of a focal point to facilitate such research. In addition, there is need for dissemination of research findings to the relevant stakeholders.

11.1.2 Policy

The GoK will establish a National Transport Research Institute (NATRI) to undertake research into aspects of transport and encompass all modes and will further provide appropriate incentives for the private sector to invest in transport research and development

11.2 ROAD TRANSPORT

11.2.1 Critical Issues

Transport by its nature is ever changing and requires organized research to be carried out on a continuous basis. This will facilitate in development of a data bank from which trends in the sector can be monitored and projected. Areas, which require research to be carried out, among others, are:

- cost-effectiveness/benefits of transport sector interventions including master plans;
- available road building materials and how they behave under different climatic conditions and loading;
- how available local materials can be improved to meet set standards and specifications of road building and maintenance;
- traffic movement trends in the rural and urban areas and how they can adequately be served by transport;
- trends in road safety situation to show what types of interventions are required;
- incorporation of NMIMTs including infrastructure options, vehicles, laws, institutions and regulations; and
- relationship between transport and socio-economic development to guide in determining when and how to intervene, etc.

11.2.2 Policy

The GoK will transfer transport related operations of the Materials Research and Testing Branch of the MoR to the proposed National Transport Research Institute (NATRI).

11.3 RAIL TRANSPORT

11.3.1 Critical Issues

To achieve safe and effective rail service delivery, there is need to undertake research to support the development of a sustainable rail transport system. Railways currently do not have research facilities the materials, equipment and operations and for studying human behaviour.

11.3.1 Policy

The GoK will establish a NATRI with a specific rail transport research mandate.

11.4 MARITIME TRANSPORT

11.4.1 Critical Issue

Development of the maritime transport industry in Kenya has been hampered by lack of research and development systems. Lack of a specialised institution in the maritime industry has resulted in the loss of many development opportunities. Research and development is an important component of any modern maritime transport industry and further complements the preservation of the marine environment.

11.4.2 Policy

The GoK will facilitate the formation of a NATRI with a specific maritime research mandate to undertake research and to advice on maritime issues.

11.5 INLAND WATERWAYS TRANSPORT

11.5.1 Critical Issue

Inland waterways transport system requires research on appropriate infrastructure and operational systems. Research is also required to undertake hydrographic and survey studies to develop charts that can be used for operations on the lake.

11.5.2 Policy

The GoK will facilitate the formation of a NATRI with a specific maritime research mandate to undertake research and to advice on maritime issues.

11.6 PIPELINE TRANSPORT

11.6.1 Critical Issue

Kenya lacks a pipeline related research facilities and relies mainly on external research findings.

11.6.2 Policy

The GoK will facilitate the formulation of NATRI with a specific pipeline transport mandate.

11.7 AVIATION

11.7.1 Critical Issue

Effective operation and management of the aviation industry, including the formulation of policy requires adequate statistical data and information which is currently lacking.

11.7.2 Policy

The GoK will cause research to be undertaken in respect of air transport under the auspices of the proposed NATRI.

CHAPTER TWELVE

HUMAN RESOURCE DEVELOPMENT FOR THE TRANSPORT SECTOR

12.1 HUMAN RESOURCE FOR SUSTAINABLE TRANSPORT

12.1.1 Critical Issues

The envisaged integrated transport system will require a diverse multi-disciplinary and multi-skilled human resource to implement and sustain it. These will be required to man the integrated institutions, undertake research and operate the envisaged diversified and integrated transport services. There is inadequate sector-specific professional expertise in the transport industry.

12.1.2 Policy

The GoK in conjunction with relevant stakeholders in the private sector and with the support from development partners will develop the relevant human resource required to develop a sustainable transport system for Kenya.

12.2 ROAD TRANSPORT

12.2.1 Critical Issues

There is inadequate professional expertise and recognition of appropriate human resource for most career lines in the road sub-sector. Road transport research in Kenya is not appropriately developed and has been left to grow without institutional guidance. The GoK no longer recruits professionals on a regular basis and there is a danger of creating a vacuum in the very near future.

Discipline in the operation of road passenger transport can best be achieved through education of operators, drivers and conductors to enhance quality of service delivery in the industry. Currently, tenets to enhance quality are lacking leading to poor levels of service in public transport. Operational ethics and order are also lacking.

A number of NGOs and the private sector have already developed various types of NMIMTs on a small-scale basis. These efforts are fragmented and uncoordinated, and the knowledge on their manufacture is scarce. Most training institutions do not teach skills relevant to NMIMTs and there are therefore no standards for their manufacture.

12.2.2 Policy

The GoK will:

- a. promote development of relevant personnel in the road transport sector and set a code of ethics to be followed by all stakeholders in the sector.
- b. introduce relevant courses for technical and other personnel in the design, development and maintenance of NMIMT vehicles and facilities

12.3 RAIL TRANSPORT

12.3.1 Critical Issues

The Railway Training Institute (RTI) is used for imparting railway related skills. The course content and training curriculum should also be changed to reflect the changing demands in the industry. It also needs to be renovated and equipped with modern training equipment given that the facilities and equipment at the RTI are inadequate. In

addition, KRC has been unable to attract and retain quality skilled staff due to uncompetitive terms and this has partly contributed to the poor performance of the railways.

12.3.2 Policy

The GoK will:

- facilitate the development of human resources in all aspects of railway operation and management.
- facilitate restructuring of the RTI to focus on the provision of courses that are essential to the core activities of rail transport and transform it into a “Centre of Excellence”.

12.4 MARITIME TRANSPORT

12.4.1 Critical Issues

Kenya lacks a comprehensive maritime education policy. Consequently the country lacks a prescribed, appropriate and relevant curricular. The KPA-owned and managed Bandari College conducts internal training on KPA operations and maritime courses. The training of merchant navy officers as required under STCW are not catered for anywhere in the country. The conventions related to STCW are currently in a bill form hence domestication has not been fully completed.

There is need to fully equip and accredit the Bandari College and also establish an examination board.

Practical sea time on a ship is compulsory in maritime training and the lack of locally registered sea vessels has compounded the problem, since Kenya has to solicit assistance from foreign registered ships.

12.4.2 Policy

The GoK through the Ministries in charge of transport and education will formulate a comprehensive maritime education policy including curricular, training institutions and the administration and certification of examinations.

12.5 INLAND WATERWAYS TRANSPORT

12.5.1 Critical Issues

The Marine Training School in Kisumu is poorly equipped and is in its current state is incapable of training marine officers to work in inland waterways. The curriculum also needs to be well developed to cater for the needs of a modern inland waterways transport system.

12.5.2 Policy

The GoK will ensure that human resources related to inland waterways transport is developed and retained.

12.6 PIPELINE TRANSPORT

12.6.1 Critical Issues

The safe operations of the pipeline in a cost effective manner requires the availability of strategic personnel to match the expected international standards of service delivery by

consumers and the nation. Currently, this specialised training is largely undertaken outside the country as there are no such opportunities locally.

12.6.2 Policy

The GoK will develop and retain local capacity for design, supervision, execution, and maintenance of pipeline and ancillary facilities and introduce relevant training in local institutions.

12.7 AVIATION

12.7.1 Critical Issues

- If Kenya is to achieve and sustain international performance levels in aviation, and secure the future growth of this rapidly growing industry, it is important that appropriate and quality training be provided at reasonable costs. Such training must take into account rapidly evolving technological patterns in the industry. Current costs of training aviation personnel are too high for ordinary Kenyans to afford. This has resulted to limited human resource development of aviation sub-sector experts such as inspectors, accident investigators, trainers, assessors and pilots, among others. Lack of aviation training curriculum and an appropriate accreditation system for aviation experts locally inhibits growth of training institutions in an organized manner. There are a limited number of aviation training institutions with adequate training equipment resulting to trainees seeking training opportunities elsewhere. These are primarily located in Nairobi and whilst they may be licensed to operate as training institutions, none of them has their curricula certified by KCAA as required, thus compromising the quality and competence of the personnel that they train.
- The industry is currently affected by low employee remuneration and de-Kenyanisation of the aviation industry. In addition, there is an emerging generational gap, whereby young personnel are entering the profession at much slower rates than the older personnel are phasing out. The fields of training that require urgent consideration are pilot training, aircraft maintenance, air traffic control and management, flight operations, air safety, and air transport logistics and management

13.7.2 Policy

The GoK in conjunction with aviation industry stakeholders will facilitate training of required personnel.

CHAPTER THIRTEEN

FUNDING FRAMEWORK TO SUPPORT TRANSPORT INDUSTRY GROWTH

13.1 FUNDING FOR TRANSPORT INFRASTRUCTURE DEVELOPMENT AND MANAGEMENT

13.1.1 Critical Issue

The current sources for funding transport infrastructure development are mainly from the central government through tax revenues and borrowing from bilateral and multilateral lenders as well as user charges. In general, current funding levels are inadequate to finance new infrastructure and maintenance and rehabilitation of existing infrastructure.

Further, the existing status of infrastructure ownership, management and control is predominantly vested in the GoK and its agencies. Over time, this has occasioned an imbalance in the supply of infrastructure and the services thereof and limited modal choice to the consumer. Previous GoK policies considered transport infrastructure as strategic and thus emphasized GoK ownership.

13.1.2 Policy

13.1.2.1 General Funding Policy

The GoK will:

- review the legal, regulatory and institutional framework for the transport sector to include appropriate incentives to facilitate private sector participation in development and management of transport infrastructure and services.
- explore the following mechanisms for raising funds for transport infrastructure development and management, namely: public ownership, development, rehabilitation and maintenance of infrastructure by dedicated infrastructure agencies; public ownership and private operation under Build Own Operate Transfer (BOOT) or its various variants; private ownership and private operation under Build, Own, Operate and Transfer (BOO), joint ventures between the public and private sectors.
- continue sourcing funds for infrastructure development and rehabilitation in the short and medium term to leverage private sector participation in transport infrastructure development and management.
- develop guiding criteria on how funding for transport infrastructure required for non-economic reasons and hence requiring some form of GoK subvention will be undertaken. In all cases, the overriding concern will be to reduce the level of subventions so required in the medium and long-term.

13.1.2.2 Sector Specific Funding Policy

The GoK will in addition utilise a number of other sector specific funding mechanisms to fund development and management, namely:

Road Transport

- infrastructure will be developed and managed through GoK budgetary resources as well as private sector participation. As far as possible, road infrastructure maintenance will be funded through user charges, fuel levy and parking and other fees that may accrue. Other resources obtained from the exchequer, local authorities, development partners, and public/private sector partnerships will be applied to new road development

- in liaison with stakeholders, the GoK will mobilise additional funding through new strategies to ensure availability of adequate resources for road safety

Rail Transport

- infrastructure will be developed and managed through budgetary resources, fuel taxation, passenger fares and freight tariffs, concession contract fees and private sector participation.

Maritime Transport

- infrastructure will be developed and managed through budgetary resources, port tariffs, user charges and private sector participation.

Air Transport

- infrastructure will be developed and managed through budgetary resources, user charges revenue and private sector participation.
- where there are concessionaires, maintenance will be undertaken through concessionaire revenue.

Pipeline Transport

- infrastructure will be developed and managed through budgetary resources, user charges revenue and private sector participation
- where there are concessionaires, maintenance will be undertaken through concessionaire revenue.

13.2 FUNDING FOR TRANSPORT HUMAN RESOURCE DEVELOPMENT

13.2.1 Critical Issues

A diversified, well remunerated and multi-disciplinary human resource is required for the effective development and management of the envisaged integrated national transport system. Currently, there are inadequate numbers of the required personnel. There is therefore a need for combined efforts by both the public and private sectors to develop this important resource.

13.2.2 Policy

The GoK will:

- ensure autonomy of existing transport training institutions to enable them to more effectively attract funding and their curriculum to address the needs of an integrated transport system
- establish a Transport Industry Training Levy to support training of transport industry personnel

CHAPTER FOURTEEN

LAND USE PLANNING AND MITIGATION OF ENVIRONMENTAL EFFECTS OF TRANSPORT

14.1 INTEGRATING LAND USE PLANNING WITH TRANSPORT ACTIVITY

14.1.1 Critical Issues

Land use planning plays a vital role in reconciling conflicts in land use development from various competing interests ranging from transport, housing, commercial, and agriculture uses amongst others. Uncontrolled development especially in major urban centres has led to high urban densities, urban sprawl, inadequate access to transport especially by the urban poor, long travel times and high transport and infrastructure provision costs. Currently, a number of urban areas like Nairobi, Mombasa, Kisumu, Nakuru, Nyeri and Embu lack strategic structure plans to scope long-term transport infrastructure needs and consequently reserve land for the same. Within urban and rural areas, poor land administration and governance challenges have led to encroachment of land reserved for transport infrastructure development. There is therefore a need to establish appropriate land use planning mechanisms that protect long term transport infrastructure and service needs of the Kenyan economy.

14.1.2 Policy

The GoK will ensure development and implementation of local transport plans that are fully integrated with urban and regional land use plans to reduce travel times, distances and costs.

14.2 INTEGRATING ENVIRONMENT AND TRANSPORT

14.2.1 Critical Issues

Kenya has not adequately incorporated environmental policies in transport infrastructure development, management and operations. The construction of infrastructure and maintenance of transport systems affect the environment through destruction of flora and fauna, displacement of human settlements and animal habitats, separation of animal herds and negative changes in environmental aesthetics.

14.2.2 Policy

The GoK will:

- ensure that development of transport infrastructure causes minimum damage by incorporating environmental impact assessments as a key requirement in transport projects and implementing mitigation measures.
- promote the use of efficient and less polluting modes of transport and encourage non-transport interventions to mitigate the adverse environmental effects of transport.
- domesticate international conventions on efficient and less polluting fuels.

14.3 ROAD TRANSPORT

14.3.1 Critical Issues

ROAD TRANSPORT INFRASTRUCTURE

Sustainable environmental policies have not been adequately incorporated in Kenya road infrastructure management policies resulting in environmental degradation.

Environmental impacts during road infrastructure construction and maintenance, such as soil erosion, reinstatement of gravel pits, and visual intrusions have not been taken into consideration. Laws relating to environmental issues have not been effectively enforced.

ROAD TRANSPORT OPERATIONS

Traffic congestion in cities and towns contribute highly to air and noise pollution. Washing of vehicles within the neighbourhood of natural watercourses is common resulting to water pollution. No measures exist to determine the damage caused to the environment because of gaseous, vibration, noise, and water pollution.

14.3.2 Policy

ROAD TRANSPORT INFRASTRUCTURE

A comprehensive regulatory and enforcement mechanism will be put in place to make it mandatory that environmental protection is taken into account during design, development, rehabilitation and maintenance of road transport infrastructure. Environmental impact assessments will be made mandatory before commencement of any road development and rehabilitation projects and the identified impacts mitigated. Furthermore, the GoK will ensure that road building materials are used in the most optimal way and are conserved.

ROAD TRANSPORT OPERATIONS

The GoK will:

- promote the use of high quality and environmentally friendly fuels.
- domesticate international agreements on road transport fuels.
- ensure regular inspection of motor vehicles to ensure control of noxious gaseous emissions, noise and effluent disposals into the environment.
- consider telecommuting⁴ as an alternative means of transport in the long term particularly within urban areas.

14.4 RAIL TRANSPORT

14.4.1 Critical Issue

RAIL TRANSPORT INFRASTRUCTURE

Kenya has not adequately incorporated environmental issues in the development and maintenance of rail infrastructure, with rail construction adversely affecting the environment.

RAIL TRANSPORT OPERATIONS

Railways operations contribute to pollution of the environment through spillage of cargo in accidents and by waste from equipment maintenance depots. In addition, noise and vibrations generated during operations also constitute environmental pollution. Use of diesel locomotive power also contributes to air pollution. The change from diesel locomotive power to electric powered locomotives can result to considerable reduction or

⁴ Telecommuting is the use of telecommunications technology to replace traditional forms of commuting. Employees work all or part of the time outside the traditional office at remote work locations, which may include the home. The work goes to the worker, rather than the worker to the work. People work where they are the most effective. Telecommuting helps workers and employers deal with important issues such employee morale and productivity, work/family balance, environmental quality, traffic congestion, facilities usage, use of remotely-located experts, and employment of people with temporary or permanent disabilities (Source: <http://www.sacramento-tma.org/telework.html#Definition%20of%20Telecommuting> on 06/06/2004).

elimination of air pollution. The use of electric powered locomotives and the improved performance of the railways operations will lead to more shippers diverting their cargo from the road to rail transport. The shift of cargo from road to rail will in turn reduce road damage and carnage as well as reduce the country's oil import bill thus saving foreign exchange. There is therefore a need to:

- promote rail transport, which is friendly to the environment.
- ensure that railway operations meet the environmental standards set by the National Environmental and Management Authority (NEMA).
- ensure that energy issues are considered in long term transport planning.

14.4.2 Policy

The GoK will:

- ensure that Railway Operator(s) strictly adhere to national environmental standards.
- replace diesel motive power with electric propulsion.

14.5 MARITIME TRANSPORT

14.5.1 Critical Issues

Kenya's territorial seas border one of the world's busiest tanker vessel routes in the transport of oil from the Middle East. Further to this, the waters are subject to dumping of waste generated in operation of the ships, as well as the ever present risk of oil spills from accidents at sea. Pollution of the sea can also arise from dumping on land and in rivers. Despite all these dangers Kenya lacks the legal and institutional frameworks to handle oil spill disaster and their consequences that would be catastrophic to tourism, fisheries and other economic uses of the ocean.

14.5.2 Policy

The GoK will:

- establish a legal, institutional and regulatory framework for maritime pollution.
- domesticate and implement international conventions, agreements and protocols on maritime pollution.

14.6 INLAND WATERWAYS

14.6.1 Critical Issues

Inland Waterways are likely to be affected by environmental issues related to waste from rivers, oil spills, industrial wastes and waste arising from vessel operations. Despite the foregoing, the country lacks an effective oil spill contingency plan and neither does it have a compensatory regime for oil and other disasters.

14.6.2 Policy

The GoK will:

- establish a legal, institutional and regulatory framework on maritime pollution.
- adopt and implement regional treaties on maritime pollution in internal waterways.

14.7 PIPELINE TRANSPORT

14.7.1 Critical Issues

Though the pipeline transport system is the most environmentally sound mode of moving petroleum fuels, there are risks associated with spillages and fires, both natural and man

made with severe environmental consequences. The country lacks adequate contingency plans to deal with such risks and the consequences thereof.

14.7.2 Policy

The GoK will ensure pipeline development and operations are safe and conform to American Petroleum Institute (API), IP, or equivalent international standards and establish a competent oversight agency to ensure that these standards are adhered to.

14.8 AVIATION

14.8.1 Critical Issues

In respect of aviation and the environment, the two main areas of concern are aircraft noise and aircraft gaseous engine emissions.

Aircraft noise emanates from aircraft, apron pushback trucks and auxiliary power units. Aircraft engine emissions include gaseous emissions of nitrogen oxides, carbon monoxide and unburned hydrocarbons. The spillage and engine emission operating phases are during: take-off, climb, descent, approach and taxi/ground idle. Currently, Kenyan aerodromes do not have instruments for measuring noise levels. There is also a need to introduce procedures for abatement and assessment of noise levels.

14.8.2 Policy

The GoK will ensure compliance with ICAO minimum standards and recommended practices (SARPs) in respect of environmental protection and strengthen the KCAA and KAA to enable them carry out their environmental protection mandate.

14.9 INTEGRATING AIR TRANSPORT WITH LAND USE PLANNING

14.9.1 Critical issues

Encroachment by human settlements and other activities of land reserved for aerodrome expansion and future development is eroding the prime value of Kenya Airports. In addition to the above, such encroachment compromising safety and security standards at the aerodromes thus the need to check it. This scenario has been aggravated by lack of functional planning review mechanisms between relevant government departments and airport authorities

14.9.2 Policy

The GoK will:

- retain a framework for periodic review planning for all development in and around aerodromes in Kenya.
- ensure that any existing encroachments around aerodromes are stood over in public interest, where appropriate.

14.10 SPATIAL PLANNING FOR DEVELOPING URBAN MASS TRANSIT SYSTEMS

14.10.1 Critical issues

Land use planning and development especially in urban areas and in transport infrastructure development is currently not integrated. This is due to poor coordination of responsibilities for administration, planning and regulation of the various aspects of land use, infrastructure development and transport operations. Moreover, the majority of local authorities lack planning departments within their establishments. Those with planning

departments are understaffed. This situation has contributed to spatially dislocated settlements, urban sprawl, high cost of transport, and long and congested commuting distances and times.

14.10.2 Policy

The GoK will ensure harmonisation and integration of land use policies with transport policy.

14.11 LAND USE PLANNING AND MANAGEMENT FOR FUTURE TRANSPORT NEEDS

14.11.1 Critical Issues

KRC has lost a substantial portion of its original land through sales and encroachment by private developers. Although some of the land was disposed of to pay off retrenched workers, the value of the sales did not result into full compensation of the retrenched employees. Considering the critical need to ensure adequate land for further development of KRC's infrastructure, it is important that its requirement for adequate land should be identified early. It is also important that KRC's existing land should be protected from future encroachment.

Physical planning in both rural and urban areas should also take into account the need for an integrated inter-modal transport system for both passenger and freight where railway transport also plays an important role. Changes in land use that have occurred since the railway line was built have rendered operation of certain lines and branches uneconomical. It is therefore necessary to re-evaluate how economic activities could be generated along such lines and routes with a view to ensuring their long-term sustainable viability.

14.11.2 Policy

The GoK will:

- ensure that existing railway land is protected from any further encroachment and that non-operational land will be developed by KRC in partnership with the private sector and be operated on a commercial basis.
- ensure that major urban centres such as Nairobi, Mombasa and Kisumu incorporate in their development plans the need for the construction of light urban commuter trains in future.
- ensure that traffic management plans are prepared and implemented and special pedestrian and cyclist facilities will be provided.

CHAPTER FIFTEEN

HEALTH AND THE TRANSPORT SECTOR

15.1 TRANSPORT AND HEALTH

15.1.1 Critical Issue

Transport offers a route for the transmission of disease in which transport workers are major potential transmitters and victims of various diseases. Transport related accidents are a major cause of health problems. Although the transport industry provides quick delivery of patients and drugs to health institutions, it has negative linkages to the health status of people. Therefore, in the Kenyan context there is a need to develop a clear understanding of the nature of linkages between the health and transport.

15.1.2 Policy

The GoK will cause research to be undertaken to determine the nature and extent of the linkages between transport and health and a framework for intervention to reduce the potential and actual negative effects of transport on health be developed through adoption of best practice approaches in dealing with transport health matters.

15.2 ROAD TRANSPORT

15.2.1 Critical Issues

Health challenges in respect of road transport are several. Firstly, is the high rate of road accidents and the implications this has on the health care bill as well as on the emotional suffering occasioned to family members. Secondly the health effects of environmental pollution are severe and are seen more in the medium and long term. Thirdly the role of the transport network and workers in the transport sector in transmission of disease cannot be underestimated. The major challenge in this regard is the lack of sufficient knowledge of the nature and extent of the linkages between the road transport sector and transmission of disease to enable formulation of effective intervention strategies.

15.2.2 Policy

The GoK will:

- cause research to be undertaken to determine the nature and extent of the linkages between road transport and health and develop a framework for intervention to reduce the potential and actual negative effects of road transport on health.
- eliminate use of leaded gasoline and high sulphur content diesel.
- through the National Aids Control Council (NACC) develop a multi-sectoral and multi-faceted framework to combat the spread of HIV/Aids pandemic especially to and by long distance truck drivers.

15.3 RAIL TRANSPORT

15.3.1 Critical Issue

Rail transport activities generate high levels of noise and vibrations during the movement of trains and in the workshops. Emissions from trains result in air pollution that affect the health of the people living along the railway lines. Waste disposal methods from moving trains are unhygienic and can serve to transmit diseases to staff working on the track. Enforcement of public health regulations in this regard is weak.

15.3.2 Policy

The GoK will cause research to be undertaken to determine the nature and extent of the linkages between rail transport and health and develop a framework for intervention to reduce the potential and actual negative effects of rail transport on health.

15.4 MARITIME TRANSPORT

15.4.1 Critical Issue

The GoK's role in port health and environment is to ensure that national and international health and environmental requirements are adhered to at all seaports in Kenya. Currently, the Kenyan seaports and in particular the port of Mombasa are inadequately equipped in terms of facilities and personnel to ensure implementation of the required regulations. Recently, a ships waste management handling facility was put up at the Port of Mombasa under private management. The operations of this facility (East African Waste Management Project – EAM Project) have however, been hampered by lack of proper legal framework. In addition, there are a multiplicity of Acts and Regulations which govern health and environmental matters which have overlapping roles of various designated bodies. Examples of these are the Merchant Shipping Act the KPA Act, the East Africa Harbours Regulations, the Public Health Act, the Local Government Act and Factories Act. These affect coordination of effective implementation of health regulations. There is therefore need to harmonise the various statutes which govern port health matters; provide, train and equip personnel to deal with port health matters; enforcement of the requirement for vessels to carry certificates on good health of their plant and animal products/cargo; domesticate the provisions of the MARPOL 73/78 Convention; and also provide quarantine facilities at the seaports and create public awareness on dangers of importing pests, diseases and invasive species.

15.4.2 Policy

The GoK will:

- ensure that port health at sea ports are well equipped with personnel and relevant facilities and institutionalise continuous training to strengthen human resource capacity.
- enact an updated Merchant Shipping Act to regulate health related issues.
- equip and strengthen port authorities to effectively handle plants, animals and hazardous materials through use of Hazardous Materials Identification Systems.
- Enhance the capacity Kenya Maritime Authority as the lead agency on matters pertaining to health and environment at seaports.
- Develop a multi-sectoral and multi-faceted framework to combat the spread of HIV-Aids pandemic.

15.5 INLAND WATERWAYS TRANSPORT

15.5.1 Critical Issue

Inland ports are currently poorly equipped to handle health related matters.

15.5.2 Policy

The GoK will:

- develop capacity of inland water ports and landing beaches to handle health related issues.
- develop a multi-sectoral and multi-faceted framework to combat the spread of HIV-Aids pandemic.

15.6 PIPELINE TRANSPORT

15.6.1 Critical Issue

Though pipeline transport is generally perceived to be safe in terms of its health implications, there are significant dangers that affect personnel at the fuel loading areas arising from fumes. These fuels contain higher levels of lead and sulphur than is internationally accepted.

15.6.2 Policy

The GoK will:

- enforce the Factories and Other Places of Work Act to ensure the safety and health of personnel at loading points and other places.
- ensure that fuel specifications adhere to internationally accepted norms

15.7 AVIATION

15.7.1 Critical Issue

Currently Kenyan aerodromes are inadequately equipped in terms of facilities and personnel to deal with human, animal, and plant related health matters. In addition and with respect to plant and pest control services, there is lack of sufficient public awareness of the dangers of importing pests, disease and noxious weeds. There is shortage of personnel to effectively police trade in dangerous plants, inadequate capacity to deal with garbage and lack of adherence to regulations on importing plants by airlines. Similarly, not all aircraft operating into Kenya are disinfected at points of departure. Further, the main gateways experience poor hygiene due to congestion of catering and sanitary facilities. There is therefore a need to:

- provide adequately equipped and trained personnel to deal with port health matters
- provide adequately equipped and trained personnel to deal with matters related to dangerous pests, diseases and noxious weeds
- create public awareness of the dangers of importing pests, diseases and noxious weeds
- ensure certification of the good health of plant and animal products/cargo into and out of Kenya
- create capacity to deal with garbage
- create adequate human, plant and animal quarantine facilities that meet international standards at Kenyan aerodromes

15.7.2 Policy

The GoK will ensure that biological, chemical and other threats to consumer and national health transported through Kenyan aerodromes which have potential to spread within and outside Kenya, are adequately dealt with.

CHAPTER SIXTEEN

INTEGRATING TRANSPORT SERVICES WITH THE NATIONAL AND REGIONAL ECONOMY

16.1 POLICY INTEGRATION OF TRANSPORT INFRASTRUCTURE AND SERVICES

16.1.1 Critical Issue

The objective of integrating transport with the national economy involves not only implementing an ambitious programme of transport policy measures proposed in this policy but also taking consistent measures at the national or local level in the context of other policies. There will be need to ensure that transport policy is consistently linked to economic policy, budget and fiscal policy, competition policy, urban and land-use planning policy, urban transport policy in major urban centres, social and education policy, as well as transport research policy.

16.1.2 Policy

The GoK will

- ensure that there is policy consistency and integration between transport and other sectoral policies to ensure that the transport sector serves the economy adequately.
- develop and regularly update an Integrated Transport Master Plan (ITMP) covering both rural and urban areas, the society at large and all transport modes
- strengthen the implementation and monitoring mechanisms in respect of regional transport agreements under COMESA, EAC, and other bilateral and multilateral agreements.

16.2 ROAD TRANSPORT

16.2.1 Critical Issues

The need for providing and maintaining an operational road infrastructure in an integrated, efficient, reliable and sustainable manner has been recognized. The development of infrastructure in this way is geared to strengthening national and regional trade among other national socio-economic aspirations.

16.2.1 Policy

The GoK will:

- develop and regularly update a Road Transport Sector Master Plan (RTMP) covering both rural and urban areas and integrate it to other transport modes
- ensure national transport infrastructure inventories are regularly undertaken to facilitate planning for development of a road network supportive of national and regional trade.
- strengthen implementation and monitoring mechanisms of transport agreements under COMESA, EAC, Northern Corridor Agreement and other bilateral agreements.
- strengthen the implementation and monitoring mechanisms in respect of regional transport agreements under COMESA, EAC, and other bilateral and multilateral agreements.

16.3 RAIL TRANSPORT

16.3.1 Critical Issues

Rail transport is the main transport of bulky goods. It has however lost a lot of traffic to the road due to operational and technical constraints. In order to improve the economy, railway should be improved and integrated with other modes of transport. The improvement of the maritime sector and the reduction of road damage will highly depend on an efficient modern railway. The benefits that will accrue to the economy as a result of an efficient modern railway are enormous. The Government needs to invest more on railways to provide a cost-effective rail transport and to save road damage, reduce accidents and achieve financial savings as rail infrastructure lasts longer than other land surface infrastructure. Rail transport is not well integrated nationally and internationally. There is need to develop infrastructure and operations that serve all the parts of the country and connect to neighbouring countries. There is also need to improve the utilization of railways to cater for the tourism industry. Integration with agriculture and other areas of the economy is based on the traditional products and is not supportive of horticulture among other recent economic activities.

16.3.2 Policy

The GoK will cause a Rail Transport Master Plan (RaTMP) as part of the ITMP to be developed, implemented and regularly updated, covering both rural and urban areas and integrating it with all transport modes and supportive of national and regional trade.

16.4 MARITIME TRANSPORT

16.4.1 Critical Issues

Maritime transport encompasses transportation by sea and accounts for 90 per cent of international trade. This mode facilitates inter-modal links to the hinterland countries to and from the port of Mombasa. It has fundamental advantages vis-à-vis other modes of transport since it caters mostly for the conveyance of bulky shipments. Largely however, maritime transport is a global phenomenon which operates in a competitive international environment and is subject to uneconomic pressures from foreign competitors. The competitiveness of the country's exports and processing of imports are highly influenced by the performance of maritime industry. Maritime facilities act as a nucleus around which other economic activities are established and operated. Imports through maritime transport include raw materials for industry and inputs for agriculture. The port of Mombasa in addition offers a unique Safari/Cruise product, which is arguably unvalued internationally. There is need to ensure that cruise ship facilities are established and well-connected to other modes of transport. The performance of the Maritime industry is dependent on the land surface transport modes that feed it. It therefore needs to be well integrated with road, rail and even air transport. There is also need to improve the current corridors and develop new ones to open up and exploit the other parts of the country. Integration is constrained by poor infrastructure and the existence of non-tariff barriers.

16.4.2 Policy

The GoK will cause a Maritime Transport Master Plan (MTMP) as part of the ITMP to be developed, implemented and regularly updated and integrate it with other transport modes to support national and regional trade.

16.5 INLAND WATERWAYS

16.5.1 Critical Issues

Inland waterways were well integrated in the earlier days than they are now. Integration with other modes has deteriorated over the years and is not capable of effectively supporting economic activities in the region. There is need to integrate inland waterway transport with agriculture, tourism, fishing and other economic activities.

16.5.2 Policy

The GoK will develop an integrated Inland Waterways Transport Master Plan (IWTMP) as part of the ITMP that will ensure the prioritization of infrastructure development and service provision.

16.6 PIPELINE TRANSPORT

16.6.1 Critical Issue

Transportation of petroleum in a cost-efficient matter is crucial to the national economy. High fuel prices impact negatively on the overall economy through inflationary effects and unreliable supplies of energy, including petroleum products and can negatively impact economic development efforts. In addition, fuel transportation to the neighbouring countries is a major contributor to foreign exchange for the country. Pipeline development and operations should therefore ensure the country's competitiveness in fuel supply to the region.

16.6.2 Policy

The GoK will ensure pipeline operations are competitive to facilitate affordable fuel prices and ensure that the country has adequate supplies of energy.

16.7 AVIATION

16.7.1 Critical Issue

Generally, there is a weak linkage between aviation and other transport modes in Kenya. This further weakens the integration of aviation with other key sectors of the economy. The following challenges should be addressed:

- promote multi-modal transport to integrate aviation with other transport services.
- facilitate trade, both internally and externally, to enhance mobility, efficiency, reliability and cost effectiveness of Kenyan cargo into the world market.
- foster growth of the agricultural industry, through linking production zones with potential markets to expand exports of horticultural and other Kenyan produce .
- providing competitive, safe, efficient and reliable access to Kenyan tourist sites.
- strengthen manufacturing by providing efficient, safe and reliable means of transporting inputs to production centres and finished products to markets in a cost effective manner to enhance the competitiveness of Kenyan products internally and externally.

16.7.2 Policy

The GoK will develop and implement an Air Transport Master Plan (ATMP) as part of the ITMP that will facilitate development and maintenance of strategic aviation infrastructure and services to remote parts of the country and promote tourism, agriculture, manufacturing and trade.

market new policy prescriptions. If this opportunity is lost it may take a long time to generate similar enthusiasm.

- 17.2.3 The problem with policy formulation is that there are always alternatives. Not everyone is likely to be satisfied with the proposed policy. The perception and attitudes of different interested or affected parties may not coincide. This problem was addressed by sharing views and prescriptions with the shareholders.
- 17.2.4 However, although the actions proposed herein have been categorized as short, medium and long term, there was no time at policy formulation stage to allow for prioritization of the actions in each category. The impression created is that all short term actions will be implemented simultaneously followed by medium-term and long-term actions in that order. However, this is not the case and actions in every category should be prioritized.
- 17.2.5 Policies have associated benefits and costs. As such they have differential impact on different persons or groups. An important problem in policy formulation process is to define clearly the policy beneficiaries. It is important that the difference between intended and unintended beneficiaries of a policy is articulated. Thus, there is need for policy impact assessment which, for lack of time, was not done during policy formulation.
- 17.2.6 In a nutshell the policy formulation process can be considered to be optimal only if it meets a set of necessary and sufficient conditions. The necessary conditions include the existence of a policy analysis process; a system for evaluation and monitoring the policy; availability of adequate, accurate and timely information, a policy marketing system; the capability of all actors to understand the policy; resources to implement the policy; stakeholder participation, cooperation consensus, commitment and ownership. These conditions will remain absent until the institutions proposed herein are established.
- 17.2.7 The establishment of the institutions will require approvals by the Cabinet and the enactment or amendment of Acts of Parliament. This may take sometime with the result that vital valuable time will be wasted. It is therefore proposed that an Interim Implementation Group will hand over its tasks to the proposed institutions when established.

17.3 POLICY MONITORING AND EVALUATION

- 17.3.1 Policy formulation process can be said to be successful only when the policies are implemented, to achieve the desired results. Policy implementation imposes serious demands on data, information and reporting systems to determine the extent to which established targets and objectives are being met and whether the aspirations of the people in terms of their welfare are being adequately addressed. Therefore a monitoring and evaluation system must be established in a responsible institution that is capable of identifying policy performance targets and monitoring indicators and modalities.
- 17.3.2 Performance targets have been identified in the matrices presented herein. However, there is need to identify where the transportation is in terms of these indicators. That is, baseline studies require to be undertaken to establish the situation currently. It will also be necessary to develop performance indicators to facilitate the following questions to be answered: What is to be achieved? Why, how and when it is to be achieved? This will provide the answer to how far the country has moved towards the targets and if there is no adequate movement towards the target: why this is happening.

APPENDIX

GLOSSARY OF TERMS

Concession: Is the authority and contract to operate a road, rail line, or network at an agreed price. It could be awarded to either the public or private sector.

Contract: Is an agreement between an authority and an operator regarding the delivery of a service at an agreed price.

Critical Issue: An issue arises in a national, district or local community when there are conflicting goals and objectives (desires or perceptions) within the community.

Framework: Is an outline or skeleton which provided the structure and form around which a plan or policy or strategy is constructed.

Integrated Plans: Plans which encompass a system which includes land use, spatial development, infrastructure, services and the finance thereof.

Intermodal Transportation: Is the concept of transporting freight in such a way that all the parts and facets of the transportation process, including information exchange, are efficiently linked and coordinated, offering flexibility, irrespective of the particular transport mode or modes used. It is not just the infrastructure, vehicles, rolling stock or equipment involved, but the management and operation processes. The true advantage of Intermodalism is the ability to logistically and effectively link two or more modes of transportation for the benefit of customers and users.

Land Passenger Transport Planning: Is a comprehensive and integrated process for generating a plan relating to the regulation and management of transport infrastructure (roads, rail, stations, terminals and public transport facilities) and for regulating public transport operations/services and the use of infrastructure by both operators of public transport and private travellers. Because of the spatial relationship between human and economic activities, resulting in the demand for travel, it is essential that an integrated passenger transport plan should be developed in the context of a land use plan which is supportive of efficient land passenger transport.

Land Passenger Transport: Is a generic term which describes the movement of people by land-based travel modes, including movement by Motorised and non-motorised modes, and on foot. It encompasses both urban and rural passenger travel, for any purpose, by both private and public travel modes.

Logistics: Is the process of planning, implementing, and controlling the efficient, cost-effective flow and storage of raw materials, in-process inventory, finished goods, and related information from point of origin to point of consumption for the purpose of conforming to customer requirements.

Passenger Transport: Is a generic term which describes the movement of people by any travel mode, including movement by motorised and non-motorised modes, and on foot. It encompasses inter-city, urban and rural passenger travel, for any purpose, by air, sea and over land and by both private and public travel modes.

Permission: The authority to operate a public transport route or network without subsidy.

Plans and Planning: A plan is a product of the process of planning which is an organized method by which things are to be done. In the transport context, a plan is a vision of the desired future condition, a set of objectives to achieve the vision, policies to regulate the transport system, strategies, actions and projects to implement the plan and a financial statement and budget.

Policy Goal: A goal is an idealized end-state of the system or a desired direction of the evolution of the system.

Policy Objective: An objective is a target, the attainment of which will help towards reaching a stated goal.

Policy Recommendation: Is an adopted framework or basis for the action needed to overcome identified problems and achieve stated goals and objectives.

Public Transport: Is the conveyance of people or freight for reward by any travel mode whether car, metered taxi, minibus-taxi, bus, tram and light and heavy rail.

Seamless Transport Services: A user-friendly service from origin to destination which is not disrupted by time-consuming or costly transfers between uncoordinated modes or carriers, or by compliance with non-integrated formalities at border crossings.

Strategy: A strategy is a plan or programme of action to be taken in terms of a policy. Such action may often take the form of a series of projects.

Vision: A vision is a commonly-shared foresight of future conditions.

Airport Operator: Generally refers to the entity responsible for provision and maintenance of airport infrastructure and the provision of essential services including passenger search and perimeter security, fire fighting and cleaning and maintenance of passenger terminal areas. They also allocate space and resources to airlines and commercial concessionaires.

CHAPTER EIGHTEEN

TRANSPORT SUBSECTOR IMPLEMENTATION MATRICES

ROAD TRANSPORT INTERVENTIONS

ROAD INFRASTRUCTURE					
Policy Intervention Area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
Institutional/ coordination framework	<p>Strengthening of road agencies and capacity building in the roads sub-sector;</p> <p>Coordination of roads sub-sector development and maintenance</p> <p>Dilapidated infrastructure;</p> <p>High cost of road development and maintenance because of corruption.</p> <p>Overseeing policy and regulatory standards in the sub-sector</p>	<p>The GoK shall establish an appropriate linkages/working mechanism between the Ministry responsible for roads, road agencies, KRB and development partners within the road sub-sector to enhance service delivery</p> <p>Stakeholder participation shall be encouraged at all levels where road development, rehabilitation and maintenance is being undertaken</p> <p>Deliberate efforts shall be made to build capacities (both institutional and human) in the roads sector</p> <p>Further, the GoK shall put in place mechanisms to address governance problems in roads sector.</p>	Strengthened institutional framework and coordination of road development and maintenance operating under clear and transparent frameworks.	<ul style="list-style-type: none"> • Establish and strengthen road agencies • Establish an optimal number of road agencies. • Build capacities in the roads sub-sector. • Involve stakeholders at all levels of road infrastructure development and maintenance. 	<ul style="list-style-type: none"> • Road network in good condition • Autonomous road agencies responsible for financing, development and maintenance of all roads in the country • Construction and maintenance costs per km reduced.
Development and maintenance	Road development and maintenance has not been in line with the economic and social needs of the country, land use demands, and for optimal national and regional integration. This has caused the following	The GoK shall establish an appropriate long-term and strategic approach mechanism that facilitates provision of road transport infrastructure and takes into consideration all important social and economic factors nationally and regionally.	National and regional social and economic factors are considered in road infrastructure development and maintenance.	<ul style="list-style-type: none"> • Adopt and develop the regional and national corridors through corridor development approach. • Develop and implement a Road Investment/Master Plan. • Establish a comprehensive road 	<ul style="list-style-type: none"> • Objective selection and prioritisation criteria developed. • Existing and proposed road network information available.

	problems: social and economic exclusion of some parts of the country; and high transport costs.			management information system. <ul style="list-style-type: none"> Build capacity in the road sector 	<ul style="list-style-type: none"> A network that serves regional and national social and economic needs.
Funding	Road infrastructure is in poor state as funding is inadequate. Infrastructure financing is dependent on central government resources, which are inadequate, fragmented and arbitrarily allocated. Furthermore, mechanisms for innovative ways of funding (private sector) have not been explored.	The GoK shall explore all feasible financing mechanisms, and ensure that all road finances are consolidated and disbursed from one institution.	Sustainable and adequate funds are available for road infrastructure construction, rehabilitation and maintenance.	<ul style="list-style-type: none"> Review and restructure KRB Act to efficiently manage road maintenance funds. Identify additional funding sources Encourage private sector participation in road infrastructure financing. 	<ul style="list-style-type: none"> Road network in good condition. Private sector investments in road infrastructure.
Environmental protection and resource conservation	Sustainable environmental policies have not been adequately incorporated into Kenya road infrastructure management policies resulting in environmental degradation. For example, environmental impacts during road infrastructure construction and maintenance, such as soil erosion, reinstatement of gravel pits, and visual intrusions have not been adequately addressed.	The GoK shall ensure that Environmental Impact Assessments (EIAs) are carried out for all road infrastructure development and maintenance, and mitigation measures put in place to address identified impacts. Furthermore, the GoK shall ensure that road building materials are used in the most optimal way, and are conserved.	Impacts to the environment from road infrastructure development and maintenance are minimized and materials for road construction conserved.	<ul style="list-style-type: none"> Enforce the EMCA of 1999, and Physical Planning Act Cap 368 at all stages of road infrastructure development and management. Review and strengthen existing environmental laws. Collaborate with neighbouring countries on cross border environmental matters. Enhance capacities of institutions to enforce the Act 	<ul style="list-style-type: none"> Reduced environmental impacts from road infrastructure provision and operation. Better utilization of road building materials.

NON-MOTORISED AND INTERMEDIATE MEANS OF TRANSPORT (NMIMT'S)

Policy Intervention Area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
Legal, Institutional & Regulatory	No action has been taken to integrate NMIMTs into the national transport network. Their complimentary role to other	The GoK shall take deliberate steps to ensure that the institutional, legal, and technical requirements of NMIMTs are in the mandates of all existing Road	Integration of NMIMT facilities in transport infrastructure development and maintenance.	<ul style="list-style-type: none"> Incorporate the design of NMIMT's facilities in the rural and urban road design and maintenance manuals. 	<ul style="list-style-type: none"> Integrated NMIMTs infrastructure into the national transport system.

Framework	modes of transport is therefore not fully realized.	Agencies.			<ul style="list-style-type: none"> NMIMT facilities constructed and maintained.
Supply And Use Of NMIMT'S	<p>Insufficient use and supply of NMIMT's.</p> <p>Lack of standards in the design and development of NMIMT's vehicles.</p> <p>High accident rates for NMIMTs.</p>	<p>The GoK shall encourage the supply and use of NMIMTs, especially among the poor, through all possible ways, including offering incentives to investors in the NMIMT vehicles.</p> <p>Promote the production and use of NMIMT's.</p> <p>Develop design standards for NMIMT's vehicles and facilities.</p> <p>Facilitate training of relevant experts in the design and development of NMIMT vehicles and facilities.</p>	Make NMIMT modes easily accessible and create a conducive environment for their use.	<ul style="list-style-type: none"> Give incentives to SME's especially the Jua Kali artisans to invest in the development, manufacture and maintenance of NMIMT's. Give support to tertiary and other training institutions to undertake research and development of appropriate technology of various types of NMIMT's. Encourage private sector to invest production of NMIMT's vehicles through fiscal incentives. Provide safe infrastructure facilities to support their use. 	<ul style="list-style-type: none"> Standards and specifications manual for NMIMT's available. Trained NMIMT's professionals. Reduction in the cost of purchase of NMIMTs. Drop in traffic accidents involving NMIMTs. Increased supply and use of NMIMTs. More employment in the supply and use of NMIMTs.
Safety	<p>Shared use of road space by both NMIMT's and MT results into serious danger to road users.</p> <p>Lack of adequate road use knowledge by NMIMT's users.</p> <p>Lack of NMIMT's vehicle inventory by local authorities.</p>	The GoK shall ensure that there is a legal and regulatory framework to address safety issues for NMIMT's.	Safety of NMIMT's is ensured.	<ul style="list-style-type: none"> Register all NMIMT's using road facilities. Train NMIMT's users to ensure compliance with traffic rules and regulations. Develop standards technical specifications for each category of NMIMT's. Install pedestrians actuated traffic lights at NMIMT/MT junctions in urban areas. Develop regulations governing 1 NMIMT's. 	<ul style="list-style-type: none"> Reduced traffic accidents/fatalities among NMIMT users.

Gender Balance	Women, especially in poor rural and informal urban settlements, spend a lot of time walking in search of basic needs, leaving them with very little time to engage in viable commercial and economic activities. Goods are transported by back and head loading, as they have no access to other modes of transport.	The GoK shall create a conducive environment for the development and use of NMIMTs, especially among women, and ensure that there is increased access by low income households and communities to basic needs.	NMIMTs are accessible to women and less time is spent in the search for basic needs.	<ul style="list-style-type: none"> • Bring basic needs closer to the rural poor and informal urban settlements. • Encourage the supply and use of NMIMTs through infrastructure provision and credit schemes. 	<ul style="list-style-type: none"> • Less time spent by low income households in meeting their basic needs. • Numbers and usage of NMIMTs increase among low income (poor) households.
PUBLIC ROAD PASSENGER TRANSPORT					
Policy Intervention Area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
Land Use and Spatial Development	Land use planning and development is not integrated with passenger transport. There is also poor enforcement of development control. These issues lead to urban sprawl, high transport costs, congestion, and isolation of the low income from services.	The GoK shall establish structures and strategies, which facilitate integrated planning and development of infrastructure, transport operations and land use in a coordinated manner.	Transport infrastructure and operations are integrated with land use.	<ul style="list-style-type: none"> • Repossess and revert all illegally acquired land for roads infrastructure to the Ministry responsible for roads. • Preserve and secure adequate land for future transport infrastructure development by issuing title deeds of road reserves to Ministry responsible for roads. • Institute processes of preparation, adoption, and implementation of integrated land use and transport planning. • Optimize land use and transport services by allocating high-density residential areas along major transport corridors. • Decentralize through 	<ul style="list-style-type: none"> • Reduced transportation costs. • Reduced travel time and congestion. • Transport infrastructure and services that is well linked with passenger transport needs. • Minimize environmental pollution.

				incentives land development to satellite and neighbouring towns and cities.	
Institutional Framework	Fragmented and uncoordinated legal and institutional framework for regulation, coordination, development and management of road passenger transport services. The Acts to regulate operations are inadequate, disorganized passenger transport operations, poor enforcement of regulations, and lack of clear institutional guidelines to foster private sector participation.	The GoK shall establish appropriate institutional and regulatory frameworks to coordinate and harmonize management and provision of passenger transport services. In this regard, the institution will ensure that all transport services provided operate in a legally organized environment.	Effective and efficient institutions with regulatory mandate in place to manage the provision of passenger transport services.	<ul style="list-style-type: none"> • Establish Metropolitan Transport Authority (MTA) to handle intra-urban regulatory issues (except licensing) in major urban areas and management of urban transport services. • An autonomous Metropolitan Police (recruited by MTA; trained, accredited and regulated by the (MTA) to enforce the Traffic Act in urban centres. • Review the Transport Licensing Act (cap 404) to enable the licensing authority (TLB) undertake licensing of all vehicles, and regulate rural and inter-city transport services, in conjunction with the MTA. 	<ul style="list-style-type: none"> • Efficient transport services. • Effective enforcement of Licensing/Traffic Act. • Reduction in accident rates. • Autonomous licensing and regulatory authorities.

Passenger Transport Operations and Management.	<p>The existing problems in the urban PSV industry include uncontrolled competition; cartels; flouting of traffic regulations; insecurity; indiscipline; high traffic accidents; poor management by owners; environmental pollution; congestion; inappropriate vehicle capacities and maintenance conditions, no provision for people with special needs. The existing legal and regulatory framework and the institutions responsible for the operation and management of passenger transport are insufficiently equipped to implement effective mechanisms to address these existing transport problems.</p>	<p>The GoK shall establish an independent institution at the metropolitan level (MTA) to manage urban passenger transport services, operations and development of infrastructure. Such an institution will be responsible for ensuring that there is regulated competition, safety and security, comfort and standardization of PSVs.</p>	<p>Increased use of mass public transport by all citizens.</p>	<ul style="list-style-type: none"> • Reorganize transport service providers to enable competitive allocation of routes. • Promote, through fiscal incentives, the purchase and use of high occupancy PT vehicles and deliberately discourage the use of private vehicles once PT is efficient. • Provide infrastructure to support public transport e.g. bus lanes, and facilities for pedestrians and passengers. • Redesign traffic flows from the inefficient radial to the more efficient concentric flows. • Encourage the use of other modes of transport, eg light rail, trams, NMIMTs, etc. • Review various statutes to provide for people with special needs in PT. 	<ul style="list-style-type: none"> • Increased use of PT vehicles. • Improved quantity and quality in PT provision. • Reduced congestion and travel time. • High occupancy vehicles are used in urban areas. • Reliable PT available.
	<p>Public transport termini have attracted most unemployed youths, who have created insecurity, fear, harassment, and hindrance to the smooth operations of public transport.</p>	<p>The GoK, in conjunction with local authorities, shall facilitate public-private partnership in the development and management of all public transport termini.</p>	<p>Create an orderly and safe environment at all termini.</p>	<ul style="list-style-type: none"> • Local Authorities to provide a framework for development and management of public service termini by the private sector. • Enforce a regulatory standard requirement for all public transport service operators (drivers, conductors, etc). 	<ul style="list-style-type: none"> • Terminals partially managed by private investors. • Clear identification of service providers. • Safe and secure terminals.

	Taxi operations are not well regulated in terms of operator competence, ownership, safety and security, charging, and vehicle standards. This has led to low use of taxis for public transport.	The GoK shall ensure that taxi operations are undertaken within a regulated environment, and in an orderly manner.	Taxis complement other PT vehicles in the provision of transport services, especially in urban areas.	<ul style="list-style-type: none"> • Taxi operations regulated by the MTAs/Local authorities. • Facilitate formation of private taxi companies through tax incentives and entrepreneurial development. • Standardize taxi vehicle and introduce metering. • Develop vetting and licensing requirements for drivers and vehicles. 	<ul style="list-style-type: none"> • Increased use of taxis. • Well-regulated, safe and secure taxi services.
Human Resource Development	All aspects of public transport services are characterized by a general lack of professionalism. In addition there is insufficient capacity in terms of numbers and types of personnel to effectively deliver public transport services.	The GoK shall set public transport service standards that must be met by all service providers.	PSVs operated in a professional manner in line with set service standards.	<ul style="list-style-type: none"> • Establish, in conjunction with stakeholders, education and training facilities for promotion of human resource development. • Develop appropriate PT service standards. • Enforce adherence to set standards. 	<ul style="list-style-type: none"> • Trained professionals operate PSVs. • Appropriate service standards available. • Reliable public transport service.
Environment and Energy efficiency	There are inadequate measures in place to check the damage to the environment caused by public passenger transport vehicles. Many PSVs are old, poorly maintained, and emit poisonous gases, noise and vibration into the environment.	The GoK shall put measures in place to encourage the use of more energy efficient and less polluting modes of public transport.	Pollution from PSVs reduced and energy consumption in the provision of passenger transport services reduced.	<ul style="list-style-type: none"> • Give incentives to PSVs owners to encourage the purchase of newer vehicles, which use clean fuels. • Initiate a scheme of fleet renewal in conjunction with vehicle manufacturers and PSV owners. • Public awareness campaigns for professionals in the provision of PSV facilities, and the general public. • Implement international environmental legislation/agreements e.g. the Clean Air Initiative resolutions that commit African countries to adopting less polluting 	<ul style="list-style-type: none"> • Less polluting PSVs are in use. • Clean fuels are used. • Cleaner environment.

				fuels.	
Mobility and Accessibility to Infrastructure and Services in Rural and Inter-Urban	People in rural areas are confronted with many transport problems, which hinder their access to basic services and economic opportunities. Some of the problems are: complete lack of/poor state of transport infrastructure and services; poor connections between main origins and destinations of trips; and lack of supply of the modes they use.	The GoK shall establish a framework to strengthen inter-urban transport, and to reduce the excessive mobility burden (cost of transport) of rural people in accessing transport infrastructure and services.	Accessibility and mobility of rural people increased.	<ul style="list-style-type: none"> Undertake a national transport survey to develop guidelines and a framework of principles for rural and inter-city transport policy. Use transport and non-transport interventions to provide access and also reduce cost of transport. 	<ul style="list-style-type: none"> Increased access and mobility of rural people. Reduced cost of transport to rural communities. Enhanced economic activities between the rural and urban centres.

ROAD TRAFFIC MANAGEMENT

Policy Intervention Area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
Institutional Framework	Lack of an appropriate institutional framework for traffic safety coordination and management. There are numerous bodies dealing with road safety operations leading to overwrapping responsibilities resulting in inefficiency, high traffic accident rates and corruption in road traffic management.	The GoK shall establish an appropriate institutional framework for road traffic safety coordination and management.	Road traffic well managed and road safety issues addressed in a coordinated manner that ensures the safety of persons and goods.	<ul style="list-style-type: none"> Create an autonomous Transport Management & Safety Authority (TMA). 	<ul style="list-style-type: none"> Authority that coordinates and management of traffic safety exists. Reduced traffic accidents. Reduced corruption incidences.
Funding	Lack of a properly coordinated mechanism for raising and managing road safety funds.	The GoK, in liaison with stakeholders, shall mobilize additional funding, through new strategies, to ensure availability of adequate financial resources for road safety.	Dedicated funds are available for road safety interventions and managed by the proposed TMA	<ul style="list-style-type: none"> Create dedicated road safety funds in road infrastructure development and maintenance. Encourage private sector participation. Consolidate and explore new 	<ul style="list-style-type: none"> Reduction in road traffic accidents. Reduction in accident related injuries and losses (life, property, vehicles, etc).

				funding sources, e.g. insurance levy, licences, fines, vehicle inspection fees etc.	<ul style="list-style-type: none"> • Savings in accident related costs.
Administrati on & adjudication of traffic regulations	Inadequate administration and adjudication of traffic offences leading to general disregard of traffic laws.	The GoK shall put in place an appropriate legal framework for the efficient and effective administration and adjudication of traffic regulations. The judiciary will be encouraged to offer expedited adjudication of traffic cases.	The Traffic Act is enforced and obeyed. Expedient adjudication of traffic offences	<ul style="list-style-type: none"> • Amend the Traffic Act, and other laws, to allow for expeditious adjudication of offences, establishment of traffic courts, and more severe deterrent measures. • Allow for the creation of localized divisions of traffic police for urban areas, within the MTA establishment. • Train, re-train and motivate traffic police officers. • Review speed limits to conform to road functions, uses and local environment. • Encourage community policing. • Enforce the Traffic Act (e.g. wearing of seat belts and ban of alcohol, drugs etc) 	<ul style="list-style-type: none"> • Metropolitan Police in urban areas. • Well-trained traffic police. • Efficient administration, quick adjudication of traffic offences and reduction of backlog of traffic cases. • Reduced traffic accidents.
Road user knowledge, skills & attitudes	Public ignorant of proper use of roads. Public ignorance of their rights under the law	The GoK, in conjunction with stakeholders, shall promote formal and informal education to ensure that all road users comply with the Traffic Act, and other traffic regulations.	Change of attitude and behaviour in road use, leading to "voluntary" compliance with the Traffic Act.	<ul style="list-style-type: none"> • Formal and Non-formal education for all. • Encourage public-private partnerships in public education and give incentives for good road use. • Encourage user participation in road projects and safety programmes. 	<ul style="list-style-type: none"> • Knowledgeable community in proper road use. • Sense of ownership and "voluntary" compliance by the public.

	Driver knowledge on traffic rules and regulations (Traffic Act), road safety, first aid, etc. inadequate.		Compulsory compliance to the Traffic Act and road safety requirements by all road users.	<ul style="list-style-type: none"> • Formal education for examiners, instructors and prospective drivers. • Develop curriculum for driving schools. • Review criteria for driving schools. • Privatised driver testing. • Periodically retest drivers. • Review qualifications and establish special training of PSV drivers/crew. 	<ul style="list-style-type: none"> • Competent examiners, instructors, and drivers. • Testing mechanism that is transparent in all parts of the country. • Improved Road Safety
Road traffic management information systems	There is insufficient and unreliable data for the efficient and effective traffic administration and adjudication. Fake documentation.	The GoK shall develop, implement, and maintain road traffic management information systems.	An appropriate traffic database for effective traffic management is established.	<ul style="list-style-type: none"> • Establish National Transport Information System (NaTIS) at the National Transport & Safety Authority (NTS&A). • Make available to NaTIS, other standardized databases for traffic related issues. • Computerize and interlink all the NaTIS Departments. • Computerize driver and vehicle information. 	<ul style="list-style-type: none"> • Comprehensive traffic database. • Enhanced coordination and sharing of traffic information. • Indicators can be correlated in time. • Improved road traffic management.
Incident management	Inadequate and un-coordinated incident management activities and plans, leading to increased mortality rates and loss of property.	The GoK shall establish a coordinated and efficient incident management system.	An appropriate data base for effective traffic management is established to enable the effective and efficient road traffic management.	<ul style="list-style-type: none"> • Operationalise the National Road Safety Council. • Provide roadside incident management centres. • Set-up back-up emergency evacuation units (ambulances, police, fire engine, breakdown etc). • Public awareness, education and involvement in incident management. 	<ul style="list-style-type: none"> • Public are better equipped to handle road traffic rescue operations. • Reduced mortality rates and damage to property due to road traffic accidents.

Road safety in planning and engineering	Inadequate considerations to road safety issues in planning, design development, and operation of road infrastructure and services.	The GoK shall put in place procedures to ensure that road safety issues are fully incorporated in road infrastructure planning, design, development and operation.	Road safety issues are fully incorporated in road infrastructure planning, design, development and operation.	<ul style="list-style-type: none"> • Road safety to be a compulsory subject in road engineering and land use planning at University and tertiary education institutes. Review design manuals to incorporate innovative ways to ensure safe driving and consideration of people with special needs. • Ensure strict conformity to design guidelines in the provision of traffic engineering control devices (signals, road signs, and road markings). • Carry out periodic Technical Audits, on aspects relevant to road safety, for existing roads and before new roads are built. 	<ul style="list-style-type: none"> • Professionals are available to effectively address road safety matters at all stages of road infrastructure provision, operations and service provision. • Innovative ways of reducing accidents in design manuals, and people with special needs are comfortable and safe when using the roads.
Political will in road safety	Lack of political good will to support road safety initiatives.	The GoK shall use all possible means available to it to bring on board all politicians in its fight against road carnage.	Road safety is recognized as a public health problem and a government responsibility.	<ul style="list-style-type: none"> • Sensitise politicians and the public on the gravity of the road safety problem, and their responsibilities. • Make road safety a development issue in political campaigns. 	<ul style="list-style-type: none"> • Road safety is recognized as a public health issue. • Well funded and coordinated road safety programs.
Vehicle standards and specifications	There are numerous makes and models of vehicles with various specifications leading to early scrapping of vehicles due to lack of spare parts, PSV and other commercial vehicles causing accidents, damage and premature road infrastructure failures due to overloading.	The GoK shall develop and strictly enforce vehicle standards and specifications to ensure that vehicles are safe and conform to their intended functions. In addition, the GoK shall ensure that heavy commercial vehicle size configurations are safe to use on Kenyan roads.	Vehicles are suitable for their intended uses and are in roadworthy condition.	<ul style="list-style-type: none"> • Establish and enforce standards and specifications of vehicles for all vehicle categories according to their use. • Mandatory regular inspection of all vehicles before licensing. • Privatised vehicle inspection services and have the Motor Vehicle Inspection Unit (MVIU) as the industry's 	<ul style="list-style-type: none"> • Emphasized standards and specifications of the vehicles on Kenyan roads. • Improved comfort for passengers in PSVs. • Reduced number of road accidents. • Phasing out the unroadworthy vehicles

				regulator. <ul style="list-style-type: none"> Regional harmonization of vehicle standards. 	
ROAD FREIGHT TRANSPORT					
Policy intervention area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
Efficiency, trade & competitiveness	Kenya has an inefficient and unreliable freight transport that does not adequately serve national and international freight needs. This has led to uncompetitive Kenyan goods in the national and international markets due to high transport costs, and weak trade linkages with the rest of the world.	The GoK shall provide a conducive environment to encourage road freight transport.	Enhance transport efficiency and trade competitiveness thereby making Kenya the transport hub in the region.	<ul style="list-style-type: none"> Encourage financial institutions to offer favourable credit facilities to SMEs. Government will review taxes with a view to encouraging SME's participation. 	<ul style="list-style-type: none"> Efficient and reliable road freight transport system resulting into increased transit freight. Competitive Kenyan goods in the domestic and international markets. Increased participation of SMEs. Lower transport costs.
Increased private sector investment	At the moment there is a multiplicity of taxes that are a disincentive to investment, and do not adequately encourage private sector participation in freight transport. The freight industry is also dominated by large companies operating heavy commercial vehicles, which are a cause of premature road deterioration.	The GoK shall consolidate all taxes paid in respect to freight and its transport, into a few and easily collectable taxes. In addition, the GoK shall promote the investment by local investors in freight transport.	Enhance greater participation of the SMEs in the road freight transport.	<ul style="list-style-type: none"> Establish easier tax collection system. Review tax regime with a view to encouraging wider participation particularly by SME's in the road freight transport industry. Encourage financial institutions to offer favourable credit facilities to SMEs. 	<ul style="list-style-type: none"> Favourable tax regimes. Wider participation by private sector, particularly SMEs.

Non-tariff barriers & cargo diversion	Cumbersome customs procedures have led to delays at international borders and ports and consequent increase of prices of goods. Goods are physically checked because there are no modern inspection equipments. There has also been the problem of transit cargo diversion leading to huge losses in revenue, cheap imports killing the Kenyan industries, and loss of employment.	The GoK shall endeavour to make the movement of road freight more efficient through the removal of all non-tariff barriers, and efficient cargo verification.	Reduce delay and eliminate cargo diversion.	<ul style="list-style-type: none"> • Simplify administrative and customs procedures for cargo. • Acquire and use modern scanning equipment and ICT facilities. • Comply with regional and international treaties on freight transport (EAC; COMESA; IGAD; etc). • Privatised cargo verification. • Train custom officers on customer relations. 	<ul style="list-style-type: none"> • More efficient custom procedures. • Reduced cargo diversion.
Road damage and axle load regulation	Overloaded Heavy Goods Vehicles are one of the main causes of road damage in Kenya. Enforcement of axle load limits has not been effective and is a cause of delays on Kenyan roads.	The GoK shall establish an optimum axle load limit, in consideration with regional limits, and ensure strict adherence to axle load limits.	Minimize damage to Kenya's road network.	<ul style="list-style-type: none"> • Strictly enforce axle load regulations by addressing corruption. • Privatised weighbridges, after thorough consultations with stakeholders, through leasing or private ownership and operation. • Optimise the split of cargo between road, rail and pipeline. • 	<ul style="list-style-type: none"> • Increased economic life of the road network. • Modal shift of cargo to rail water and pipeline. • Reduced cases of overloading. • Minimized delays at weighbridges.
Safety and security	Drivers, vehicles and cargo operate in an insecure and unsafe road environment, which has necessitated the provision of police escort. Police escort not only directly increases transport costs, but also contribute to delays.	The GoK shall enhance adequate safety and security along Kenyan roads.	Ensure safety and security of road users, especially freight, along the roads.	<ul style="list-style-type: none"> • Enhance highway patrols. • Introduce surveillance cameras and ICT tracking systems. • Increase emergency cell phone lines. • Enhanced vehicle inspections. • Enforcement of labour laws. 	<ul style="list-style-type: none"> • Improved safety and security along the roads. • Reduce the drain on the economy due to compensation costs. • Reduced insurance premiums. • Reduce court cases and expenses. • Reduced transport costs and delays.

Information communication technology (ICT)	Lack of application of appropriate ICT systems for freight transport industry contributing to delays in cargo clearance.	The GoK shall promote the use of ICT systems in the freight industry.	To increase efficiency in the freight industry thereby making Kenya the transport hub in the region.	<ul style="list-style-type: none"> Provision of fiscal incentives in all ICT facilities and services for freight transport. (zero rating) 	<ul style="list-style-type: none"> Optimised efficiency in the operation and management of freight transport. Monitoring systems will be in place.
Environmental impact	Lack of effective control measures in transportation of hazardous materials and substances.	The GoK shall ensure strict control and enforcement of regulations governing transportation of hazardous materials and substances.	Minimize possible and existing negative environmental impact caused by transportation of hazardous materials and substances.	<ul style="list-style-type: none"> Strictly enforce the National Environmental Management and Coordination Act (NEMCA) and other Acts governing transportation of hazardous materials and substances. 	<ul style="list-style-type: none"> Minimised environmental disasters. Lower risks and accidents due to transportation of hazardous and dangerous materials.
Transport and health	High health lease bill due to high accident rates. Emotional sufferings. Transmittal of diseases.	The GoK shall develop a framework for interventions to reduce the potential and actual negative effects of road transport on health.	Minimize negative impacts on health by road transport.	<ul style="list-style-type: none"> Ease congestion in public service vehicles system. Provide efficient health services in the road transport sector. Create public awareness and education to road users. Use of lead free and low sulphur fuels. Use of appropriate gadget to minimize negative healthy impact resulting from harmful vehicle emissions. 	<ul style="list-style-type: none"> Low rate of spread of communicable diseases. Reduction in health and socio costs related to road transport.

ROADS SUB-SECTOR PAPER: ROAD INFRASTRUCTURE

Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
Institutional framework				3) Good governance principles in place to curb corruption. 4) Professional ethics are enforced among professionals involved in road development and	

				maintenance. 5)	
Development and maintenance	4) Train and engage small-scale indigenous local contractors (IM). 5) Encourage SME's to develop appropriate tools and equipment for labour intensive road works (IM). 6) Contract out periodic and routine maintenance (ST). 7) Develop long-term performance based maintenance contracts (ST). 8) Undertake NMIMT Audits in road infrastructure design, construction and maintenance (Continuous). 9) Ensure that infrastructure facilities cater for the physically and mentally challenged. (IM)	Ministry responsible for Roads, Planning, and Lands, KRB, Road Agencies, and Local Government.	4) Reduction in vehicle operating costs. 5) Reduced cost of maintenance. 6) Increased involvement of small-scale indigenous contractors in road development and maintenance. 7) Improved standards of living, especially for rural communities.	4) Contract records of road agencies kept at KRB. 5) Records of road development and maintenance unit costs at KRB.	
Funding		Ministry responsible for Roads, Planning, and Lands, KRB, Road Agencies, and Local Government	Reduction in road funding gap.	Concession documents. Increased budgetary allocation.	Political goodwill. Positive response from the private sector. Positive economic growth.
Environmental protection and resource conservation	Strict enforcement of EMCA by NEMA (Continuous)	Ministry of Natural Resources Office of the President Agencies.	1) Reduction in environmental related diseases 2) Reduced environmental degradation.	Environment Impact Analysis Reports at NEMA.	Political goodwill. Public awareness.
ROADS SUB-SECTOR PAPER: NON-MOTORISED AND INTERMEDIATE MEANS OF TRANSPORT (NMIMT'S)					
Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions

Legal, institutional & regulatory framework	Review rural road design and maintenance manuals to incorporate NMIMT's (IM). Finalise urban road design manual (IM). Review the relevant Road Agencies statutes to give clear mandates on NMIMT's (IM). Register all NMIMT's using road facilities (IM).	Ministry of Roads and Public Works, Local Government, Local Authorities, Road Agencies, AG, & KRB.	Road agencies implementing NMIMT facilities.	Revised design manuals, statutes.	
Supply and Use of NMIMT's	Create a revolving fund to encourage supply of NMIMT vehicles (ST). Remove all taxes on NMIMT vehicles (ST). Develop standards and specifications for NMIMT vehicles (ST). Allocate funds for research (IM). Tax holiday for manufacturers of NMIMT vehicles (IM). Insure all NMIMT vehicles (IM).	Ministry of Finance, Labour and Human resource, CBS, Kenya Bureau of Standards, and Universities.	Increased supply and use of NMIMT vehicles. Local industries for manufacture of NMIMT vehicles available. NMIMT facilities constructed.	NMIMT Census report at the CBS.	Sustainable funding for revolving fund available.
Safety	Develop and implement training curriculum for NMIMT users (ST). Institutionalise training of NMIMT users (MT/LT). Enforce NMIMT vehicle standards (MT). Install NMIMT actuated traffic lights, in urban areas (IM). Provide appropriate bridges, tunnels, and other crossing facilities for NMIMTs (IM). Install facilities to allow for the safe use of roads by the disabled. (IM).	Ministry of Labour, Education, OP, Local Authorities, Kenya Bureau of Standards.	Reduced number of accidents and fatalities involving NMIMTs	Police and court records.	Political will.

Gender Balance	Increase budgetary allocation for water supply, health, education, and energy. (MT/LT) Ensure that the provision and use of NMIMTs vehicles and facilities are gender compliant.	Ministries responsible for Water, Health, Energy, Education, and Finance. Women organisations.	Increased use of NMIMT by women.	Economic survey reports. Statistical abstract.	Change of attitude among women.
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ROADS SUB-SECTOR PAPER: PUBLIC ROAD PASSENGER TRANSPORT					
Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
Land Use and Spatial Development	Repossess all illegally allocated land for road transport (IM). Develop integrated land use and transport master plans and acquire the necessary road corridors (MT). Issue title deeds of reserves and land for future development to the Ministry responsible for roads (ST). The GoK regulates redevelopment of low-density residential areas near central urban areas into high-density residential areas (MT/LT). Provide basic infrastructure services and security in satellite towns (IM/ST/MT).	Ministry of Lands, Local Government, Roads, Public Works and Housing, Planning and National Development, OP, and Finance.	Reduced overall transport costs. Reduced overall transport demand.	Regular road transportation study reports at the Local Authority level.	Control of land development is effective.
Institutional Framework	Undertake a study to create and operationalise MTA's, the Metropolitan Police, and review the TLB Act (IM).	Local Government, Transport, PSV operators, OP, and AG.	Establishment of MTA and MP.	Act of establishment.	Political good will for change in transport service provision.

ROADS SUB-SECTOR PAPER: PUBLIC ROAD PASSENGER TRANSPORT

Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
<p>Passenger Transport Operations and Management.</p>	<p>Develop passenger transport plans (IM). Develop service standards, and performance contracts (ST). Institute capacity building in PSV operations (IM). Lower taxation to favour the ownership and use of high occupancy vehicles (IM). Design and develop bus-lanes, terminal facilities, bus stops, and NMT facilities (MT). Construct by-passes, ring roads, and missing links in congested cities and towns (LT). Undertake long-term transport studies for cities to explore possibilities in mass transit systems (MT/LT). Implement infrastructure and vehicle standards (ST). Develop standards for school transport vehicles (ST). Lower taxation for school transport vehicles (IM).</p>	<p>Responsible Government agencies, development partners, and private sector.</p>	<p>Modal split shift from personal transport to public transport.</p>	<p>Regular transport study reports available at the MTA and local authorities.</p>	<p>Sustained funding of passenger transport service provision.</p>
	<p>Identify, pending the Transport Master Plan, termini locations and preserve/acquire the land (IM). Develop a legal framework for the involvement of the private sector (IM). Develop termini service standards and identification requirements for all public transport providers (IM).</p>	<p>Local Government, Local Authorities, AG, MoT, and private sectors</p>	<p>Improved security. Reduced congestion. Reduced environmental pollution (noise). Increased quality of service, and passenger comfort.</p>	<p>Regular appraisal reports available at the Local Authority. Consumer surveys by private consumer organisations.</p>	<p>Political good will necessary at the local authority level. Public support.</p>

ROADS SUB-SECTOR PAPER: PUBLIC ROAD PASSENGER TRANSPORT

Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
	Review taxi operations by-laws and register all taxi vehicles (IM). Develop suitable financing schemes (lease/hire purchase) for taxi operators (ST). Develop and enforce taxi vehicle and driver standards (IM).	Local Government, local authorities, AG, MoT, and private sectors.	Increase in the market share of taxis for public transport service provision.	1) Transport study reports and statistics available at the local authority, NaTIS, and MTA's.	Competition within the taxi industry reduces tariffs.
Human Resource Development	Develop curriculum for PSV operators (drivers, conductors, managers, and owners) (IM). Strengthen and expand existing institutions/colleges for training of PSV personnel (ST)	MoT, Local Government, Ministry of Education, and the private sector.	Trained professionals at all levels of PSV operations.	Graduate records at the training colleges/institutions.	Public support. Private sector participation.
Environment and Energy efficiency	Explore financing mechanisms for the purchase of PSVs (IM). Develop and enforce appropriate environmental standards for all vehicles (ST). Establish optimal age limit for PSVs, based on energy use and environmental pollution levels (ST). Undertake public awareness campaigns. (IM/Continuous). Implement the Clean Air Initiative resolutions that commit African Countries to adopting less polluting fuels by 2005.	MoT, NEMA, OP, and Information	Reduction in per capita incidence of respiratory diseases. Increase in newer vehicles used as PSVs. Increased use of cleaner fuels. Reduction of the fuel budget by PSVs.	Environmental Assessment Reports at NEMA.	Change of public attitude. Private sector and financial institutions are interested in PSV fleet renewal.
Mobility and Accessibility to Infra and Services in Rural and	Undertake national transport survey (IM/Regularly). Identify and provide the transport (e.g. infrastructure) and non-transport interventions (basic services) (MT).	MoT, Local Government, relevant Gvt service ministries.	Reduced travel time to basic services. Increased number of trips per	National Transport Survey reports available at MoT.	Adequate funding for interventions.

ROADS SUB-SECTOR PAPER: PUBLIC ROAD PASSENGER TRANSPORT					
Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
Inter-Urban			household.		
ROADS SUB-SECTOR PAPER: ROAD TRAFFIC MANAGEMENT					
Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
Institutional Framework	Establish an Act of Parliament for the creation of National Road Transport Management and Safety Authority (NRTM&S) (IM). Operationalise the Authority (IM). Link NRTM&S with the MTA (IM)	MoT, AG, Local Government, OP (Kenya Police)	Formation of the NRTM&S Authority. NRTM&S Authority operational.	Act of establishment of the NRTM&S Authority.	Sustained sources funding. Good governance at the Authority.
Funding	Provide the legal instruments to allow the creation of a dedicated road safety fund in a special account. Solicit funds from the private sector. Mobilize and channel all road safety levies into a road safety account.	MOT, AG, Min of Finance Development partners and private sector	Establishment of a dedicated fund in a special account Increased sources of funding.	Legal instruments in place	Private sector participation.
Administration & adjudication of traffic regulations	Amend the traffic Act (IM) Establish the Metropolitan Police (IM) Train in new law enforcement techniques, retrain, and motivate traffic police officers. (IM) Enforce the wearing of seat belts in all vehicle categories (IM). Enforce the law against drinking alcohol and other intoxicating drugs while driving. (IM). Establish traffic courts and more severe deterrent measures (IM). Equip Police to enable them enforce the	MOT, AG, Local Govt, OP	Fewer pending traffic offences in court. Visibility of police presence in enforcement of the Act.	Court and Police records. Initial increase in number of offenders in the short term, and later a decrease.	Police enforces the Act indiscriminately.

ROADS SUB-SECTOR PAPER: PUBLIC ROAD PASSENGER TRANSPORT

Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
	Act in an unpredictable, but efficient manner. (IM).				
Road user knowledge, skills & attitudes	<p>Develop a curriculum for formal education (IM).</p> <p>Develop programmes for non-formal education (IM).</p> <p>Make NRTM&S Authority be the coordinating body for all road user knowledge programmes (ST).</p> <p>Identify and sensitise private sector organisations and any interested parties to help in public education on road use (IM).</p> <p>Identify user groups and draw up clear guidelines for participation in road projects (IM).</p>	Private sector, Ministry of information, Education, NRTM&S Authority, Local Government, Insurance companies.	Better road use and reduction in accidents. Increased compliance with the Act.	Accident statistics. Monitoring and evaluation reports at the NRTM&S Authority.	Change of attitudes of road users. There is adequate access to modes of communications. Private sector support.

ROADS SUB-SECTOR PAPER: PUBLIC ROAD PASSENGER TRANSPORT

Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
	<p>Review the Traffic Act to set qualifications for instructors and examiners (IM). Develop curriculum for drivers, instructors and examiners (IM). Review the Driving Schools Act. (IM). Privatised driver testing and periodically (say, every 5years) test licensed drivers (IM). Make the NRTM&S Authority the body responsible for examining drivers (MT). Develop curriculum for advanced training of PSV drivers (IM). Develop minimum qualification requirements (age, years after first licensing, etc) for PSV drivers (IM). Make the TLB responsible for licensing after interviewing the prospective PSV driver (IM).</p>	<p>NRTM&S Authority, KIE, OP (Police), MoT, TLB, Private sector.</p>			
Road traffic management information systems	<p>Establish National Transport Information System (NaTIS) at the NRTM&S.</p>	<p>Ministries of Transport, Finance, Planning, and OP</p>	Operational NaTIS	Traffic data available at the NRTM&S.	<p>Political good will. Sustainable funding. Human resources.</p>
Incident management	<p>Set up mobile rescue centres along the major corridors, especially near black spots. Equip the evacuation units with ambulances, police, fire engines, and breakdown services). Provide emergency telecommunications facilities along the major highways. Develop public awareness campaign</p>	<p>Ministries of Information, Health, Transport, and Education, and the private sector.</p>	Rescue centres in operation.	<p>Statistical from the rescue centres. Budgetary allocation to the rescue centres.</p>	<p>Good governance at the rescue centres. The public is well-informed, and are pro-active in rescue services. Private sector participation.</p>

ROADS SUB-SECTOR PAPER: PUBLIC ROAD PASSENGER TRANSPORT					
Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
	programmes and undertake awareness campaigns.				
Road safety in planning and engineering	Develop curriculum for University and other tertiary institutes. Carry out research on existing roads (dangerous locations) with a view of getting the relationships between accidents and road design. Pilot works on possible countermeasures. Review other countries' design manuals. Enforce strict compliance with professional ethics. Develop manual for Road Safety Audit, and appoint independent auditors whenever necessary.	Ministries of Transport, Education (Universities), Roads, NRTM&S Authority.	Graduates are trained in roads safety planning and engineering. Design manuals contain road safety measures. Road traffic engineering control and safety devices are constructed.	Curriculum of Universities and tertiary institutions. Road Safety Audit Reports.	Public do not vandalise road safety control devices. Funding for road safety is not diverted to pavement construction.
Political will in road safety	Carry out road safety seminars/campaigns.	Political parties, MoT, OP, and Local Government.	Road safety statements by politicians increase. Public demonstrations for improvement of road safety.	Media coverage.	Political support.
Vehicle standards and specifications	Develop and enforce vehicle standards and specifications. Amend the Traffic Act to allow for the inspection of all vehicles before licensing by the private sector. Amend Traffic Act to make the MVIU a regulator.	Ministries of Transport, OP, AG, Kenya Bureau of Standards.	Newly registered vehicles comply with the standards.	Registration documents.	Private sector is interested in vehicle inspection.

ROADS SUB-SECTOR PAPER: PUBLIC ROAD PASSENGER TRANSPORT					
Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
ROADS SUB-SECTOR PAPER: ROAD FREIGHT TRANSPORT					
Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
Increased SME's participation in freight transport.	Encourage SME's to form corporate entities. Train SME's in corporate management practices. Reduce taxes on Completely Knocked Down (CKD's) for two axle freight vehicle parts.	Ministries of Finance, and Cooperatives.	Increase in the number of two axle freight vehicles.	Vehicle registration records at the Registrar of Motor vehicles.	Willingness by the SME's to form corporate entities. Financial institutions are willing to finance SME's. SME's manage freight transport efficiently.
Non-tariff barriers & cargo diversion	Acquire and use modern scanning equipment and ICT facilities. Domesticate regional and international treaties and agreements. Privatise cargo verification.	Ministries of Finance, Trade, OP, and Foreign Affairs.	Reduced delay. Reduced cargo diversion.	Border and Port records.	Good governance. Funding.
Road damage and axle load regulation	Address corruption. Privatise weighbridges, in consultation with stakeholders. Enforce axle load weighing at source. Build modern capacity of rail and pipeline freight transport to make them more efficient. Reduce taxes on Completely Knocked Down (CKD's) for two axle freight vehicle parts	Ministries of Roads, MoT, Finance, and OP.	Less road maintenance cost. Increase in the number of double axle freight vehicles. Increase in freight tonnage by rail and pipeline modes.	1) Border and port records.	Good governance. Private sector participation and involvement.
Safety and security	Introduce surveillance cameras and ICT tracking systems (IM). Increase highway patrols (IM). Increase cell phone emergency lines	Ministries of Transport, OP, and Private sector.	Reduced delays. Reduced cases of freight theft.	Police highway crime records	Sustained funding. Vandalism of equipment.

ROADS SUB-SECTOR PAPER: PUBLIC ROAD PASSENGER TRANSPORT					
Policy Intervention Area	Actions to be taken and time frame	Responsibilities	Indicators of success	Means of verification	Important Assumptions
	(IM). Public education to stop vandalism of equipment.				
Information Communication Technology (ICT)	Draw-up necessary instruments to address taxation of ICT equipment.	Ministries of Finance and Transport.	Increase in numbers and use of ICT in the freight industry.	Import records at CBS.	Acceptance of ICT among the freight transporters.
Environmental impact	Educate freight transport drivers on the transportation and handling of dangerous cargo. Enforce modern methods of transportation of hazardous materials. Public education on hazardous materials transported by roads.	Ministries of Transport, Environment, and OP.	Knowledgeable freight vehicle operators and the public on hazardous materials.	Environmental Assessment reports at NEMA. Police records.	Public support. Trained drivers engaged in dangerous freight transport.

RAIL TRANSPORT INTERVENTIONS

Policy Intervention Area	1 Critical Issues	2 Policy	3 Policy Objectives	4 Strategy	5 Expected Outputs
Institutional Framework	Currently the KRC operates under a multiplicity of statutes eg. The KRC Act, and the State Corporations Act and a number of GoK Ministries (MoT, MoF, & OP). This creates governance overlaps, and occasionally undermines efficiency.	The GoK shall ensure adherence to modern corporate governance principles by KRC GOK/KRC shall ensure adherence by railway operator to contractual obligations	Efficiency and accountability in the management of KRC. Efficient delivery of services by railway operators	1) Ensure autonomy of the board and make it accountable for their commissions and omissions in the execution of their mandate. 2) Reduce the excessive control by the Acts and encourage a more facilitative legal framework. 3) Strengthen internal control and audit systems in the KRC.	Corporation objectives are achieved.

Policy Intervention Area	1 Critical Issues	2 Policy	3 Policy Objectives	4 Strategy	5 Expected Outputs
				4) Enact Regulatory Act	
Legal Framework	The KRC Act is silent on issues of independence regulation, except in setting tariffs. The legal framework is silent on the role of the private sector. in the development of new infrastructure	The GoK shall establish a legal framework that ensures development management and operation of the railways.	Ensure independence in the management and operation of railways to achieve efficiency. Ensure the development of the standard gauge infrastructure	Review KRC Act to establish operational and financial autonomy and to allow for private sector participation. Review the State Corporations' Act to provide for flexibility and faster response to market changes.	Well structured legal framework that allows railways to develop new infrastructure and operate efficiently.
Regulatory Framework	Current institutional framework combines development and regulation under one institution therefore need for creation of independent regulator for the railway industry	The GoK shall enact appropriate legislation to establish an autonomous regulator independent of the service provider and KRC.	Ensure that railway services are operated efficiently and are effectively regulated.	Review KRC Act to allow for the establishment of an independent regulator to cover the entire railway industry.	Well structured and regulated railway industry that enhances trade and investment by both public and private sector.
Infrastructure development and financing.	The GoK has not developed new railway infrastructure for a long time. The responsibility of developing railway infrastructure and network has been relegated to KRC by the GoK without providing KRC with adequate finances (as rail development and maintenance is very expensive) This has resulted in stagnation in the expansion of the network and upgrading of the existing network. The rail track is old, non-electric, single track meter gauge, unreliable, and outdated. Poor signalling and telecommunications facilities The current railway has accumulated substantial backlog of investment in	a. The GoK shall initiate a railway development programme aimed at phasing out the present railway system and replacing it with a modern double track, standard gauge railway network. b. GoK shall encourage private sector participation in the development and maintenance of railway infrastructure including the development of new rail networks	Ensure optimal investment in the development of a modern efficient railway network that is capable of supporting long term economic development in the country and the region.	Ensure coordination of the development of the modern railways.	Well developed modern railways that are integrated nationally and regionally.

Policy Intervention Area	1 Critical Issues	2 Policy	3 Policy Objectives	4 Strategy	5 Expected Outputs
	rehabilitation and maintenance. Inadequate integration with other modes. f) Limited geographical coverage of the railway network both in urban and rural areas.				
Railway Operations	Freight, long distance passenger and urban commuter services are not well integrated with other modes transport. The poor provision of services and the lack of integration with other modes do not fully meet the demands of the customers. The transport policy of the GoK has not favoured railway operations, and is heavily biased in favour of other modes. There is lack adequate capacity for railway transportation	GoK shall pursue policies that encourage the development standard gauge railway networks and increased use of railways for the transportation of both bulky goods and passengers.	Have efficient and competitive rail transport services.	a. Develop new rail network with wide geographical coverage and deliberately encourage use of railway transportation of bulky goods and passengers. b. Encourage the participation of the private sector in the operation of railway services.	a. Well integrated railway networks and operations that are efficient and customer focussed Increased transportation of traffic by railways Diversion of heavy traffic to rail
Land Use Planning and Management	Operational land for future expansion has been lost due to encroachment, irregular land acquisition and poor enforcement of relevant laws. There is need to make provision of land for future expansion. Changes in land use patterns necessitate lifting the rail line and construction of new lines to meet new demands.	GoK shall ensure that there is adequate land reserved for the future development and expansion of the railways networks	Ensure that rail services are provided and are accessible to the majority of the Kenyans.	a. Reposes operational railway land that has been acquired illegally by private developers. Protect the existing railway land by acquisition title deeds. Acquire more land required for the expansion of the railways.	Adequate land for future expansion and modernization of railway infrastructure in the country.
Information and Communications Technology	Inadequate utilisation of ICTs	The GoK shall encourage KRC and other railways operators to develop information systems that are integrated both internally and with other modes.	Ensure efficiency through effective monitoring of operations and finances and to improve customer service.	Expand the Rail tracker train operation information system. Implement comprehensive integrated information and communication technology systems	A well integrated rail transport information system that is able to facilitate efficient monitoring and operation of services

Policy Intervention Area	1 Critical Issues	2 Policy	3 Policy Objectives	4 Strategy	5 Expected Outputs
Safety and Security	The current legal framework does not provide for an independent statutory safety oversight pertaining to railway transport. Vandalism and pilferage of infrastructure and freight	GoK shall pursue policies that improve the safety and security of railway operations.	Ensure that safety of operations is improved and that loss of life and property is minimised. Ensure rail infrastructure is secured	a. Provide for independent safety regulation. b) Ensure maintenance of infrastructure and rolling stock to meet maintenance and safety standards and good industry practices c) Enhancing of human resource capacity on safety and environmental protection d. Provide for improved security.	Safe and secure rail operations. Protected and conserved environment Preferred mode of transport
Competition and Complimentarity among modes of transport	a. Unfair competition among modes b. Inadequate complimentarity between rail and other modes. c)The burden of fuel levy on railways operations and revenues	GoK shall pursue policies that encourage integrated development and operation of all modes of transport based on their merits.	Ensure that intermodal traffic distribution among modes is sustainable and facilitates the country to efficiently achieve its goals.	a. Provide for a legal framework that encourages fair competition among the modes. Provide for integrated transport planning within the Department of Transport c. Exempt railway operators from paying fuel levy	Healthy competition among the modes and achievement of synergies of synergies in the transport sector.
Human Resource Development	a) availability of competent staff to run railway operations b) acquisition of appropriate facilities and equipments for training personnel for the industry	GoK shall encourage and promote the development of human resource to manage and operate railways.	To provide skilled manpower for the management and sustainability of railway operations.	a. Improve the facilities and equipment at the Railway Training Institute. b. Create a conducive environment and improve terms and conditions of service to attract and retain skilled manpower. c. Develop courses that are relevant to the core activities of the railway transport.	Adequate human resource capacity for the railways sub-sector.
National, Regional and international Integration	Inadequate integration of railways nationally and regionally	GoK shall pursue policies that result to expanded national and regional integration of railway infrastructure and operations	Promote the attainment of railway linkages both nationally and regionally.	a. Construct well integrated railway networks b. Ensure seamless rail operations across borders. c. ensure inter operatorability and compatibility of railway operations	Well integrated and compatible national and regional railway operations for the country and the region.

Policy Intervention Area	1	2	3	4	5
	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
Environment and energy issues	a) Inadequate safety and environmental regulations b) Inadequate enforcement of environmental standards c) There is no policy integration between transport, energy, and economy.	GoK shall pursue policies that result to the preservation of sustainable quality environment	Ensure that railway operators contribute to the preservation and mitigate against environmental degradation. Ensure efficient utilisation of energy resources.	a. Adhere to environmental standards b. Convert diesel motive power to electric propulsion in railway transport.	Quality environment and efficient utilization of energy.

Policy Intervention Area	6	7	8	9	10	11
	Actions to be taken	Time frame	Responsibilities	Indicators of success	Means of verification	Important assumptions
Institutional framework	Propose to AGs areas of review of the KRC act	ST/MT	KRC MOT AGs	Completed review work	Quarterly Progress Report on Review	GoK good will
Legal Framework	Propose to AGs areas that require amendments	ST/MT	KRC MOT AGs.	Completed review work	Quarterly Progress Report on Review	GoK goodwill
Regulatory Framework	Review the act to provide for independent regulator	ST/MT	KRC MOT AG's	An independent regulator	Quarterly Progress report on the Review of KRC Act	GoK goodwill

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
Infrastructure development and financing.	Undertake technical feasibility studies Encourage public private partnerships (PPPs) in railway infrastructure development GoK to budget for railway infrastructure development. Construction of a new standard gauge railway network.	ST/MT ST MT	KRC GoK GoK KRC	Completed studies Construction of new rail lines Allocated funds in the Annual GoK Budget Participation by private sector	Reports on the progress of the studies Amounts allocated for Railway funding	GoK interest and funding GoK interest and Funding Regional interest Private sector participation
Railway Operations	a) Provide funds in case of step-in. b) Monitor the concession. c) Enter into partnerships	ST LT/ MT/ MT	KRC, GoK KRC, GoK GoK, KRC	Allocated funds Targets met by operators Entered partnerships Level of competitiveness. Working partnerships with other modes.		Investor confidence/interest GoK ability to fund Sustainability of private operations
Land use Planning and Management	a) Acquire title deeds for all land. b) Survey and set aside land for future development.	ST/MT ST/MT	KRC GoK, KRC	Amount of land with title deeds. Amount of newly acquired corridors for future rail development	Number of titles for land. Titles acquired for land set aside.	GoK good will
ICT	a) Expand the rail tracker. b) Purchase and install new hardware and software. c) Network the information system.	ST ST/MT ST/MT	KRC KRC KRC	Increased stations using rail trackers. Number of new hardware and software installed. Number of workstations (computers) connected to each other.	Use of rail trucker. Use of new equipment by staff. Number of staff	KRC and rail operators ability to finance the investment.

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
					able to use the established network.	
National, Regional and international integration.	a) Construct new standard gauge railway network parallel to the existing network. b) Construct new standard gauge network from the port of Lamu to link it to Nairobi and the regions north of Kenya.	MT/LT MT/LT	GoK. GoK.	Length of new lines.	Approved and completed lines.	GoK and private sector ability to finance the projects.
Environmental and Energy issues.	Enforcement of environmental standards set in the concession agreement. NEMA enforces current regulations. Electrify the rail system.	MT/LT ST MT/LT.	GoK/KRC/RO. MENR/NEMA GoK.	Contractual environmental standards met Adherence to regulations. Length of rail system electrified.	Acceptable environmental standards along corridors and built up environment Approved completed electrified lines.	Regulators ability to develop standards. NEMA ability to enforce. GoK ability to finance.
Safety and security.	a) Ensure rail operators submit safety management plans to KRC/Independent regulator for approval b) Review safety standards. c) Set up a safety regulator.	ST ST ST/MT	KRC/IR/RO KRC GoK	Submitted safety management plan and number of safety audits by KRC. Number of safety standards reviewed. Establishment of a regulator.	Submitted audit management plan New standards set. Number of safety audits undertaken.	Compliance by rail operator GoK goodwill.
Competition and complementarity among	a) Exempt Rail operators from paying fuel levy. b) Ensure DOT undertakes integrated	ST ST	GoK./ GoK.	Non-payment of fuel levy. Production of integrated	Gazettement to exempt Rail operators.	GoK goodwill.

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
modes of transport	transport planning. c) Enter into agreements and partnerships among modes.	ST/MT	GoK/KRC.	transport plan. Number of agreements entered into	Transport plan document. Agreements and contracts	GoK support. Willingness of MoT and transport players.
Human Resource	Develop human resources for the rail industry Equip RTI and workshops.	RT ST/MT	GoK/KRC	Number of Personnel trained. Number of new machines and equipment purchased.	Number of people certificated. Installed and utilized machines and equipment.	RTI ability to finance the purchases and installation of new equipment.

MARITIME TRANSPORT INTERVENTIONS

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
Institutional Framework	The maritime sector has been operating for a long time without a well coordinated structure. Whereas there have been various legislations governing activities in the sector, there has not been adequate harmonization and overlap is common. The current institutional framework in the sector is not well defined with regard to interrelationships of the various government agencies. Lack of institutional capacity is the biggest impediment to delivery of	The GoK shall spearhead harmonization of institutional and legal frameworks of the various agencies The GoK shall expedite transfer of the regulatory and supervisory functions of inland waterways to KMA The GoK shall strengthen capacity development of KMA.	To promote the development of an efficient and productive Kenyan maritime transport industry and ensure safety and protection of the marine environment.	To support and finance development and expansion of the institutions. To ensure capacity development is given priority.	Growth of the maritime industry in a Safe and clean marine environment. Harmonised frameworks within the institutions. Improved institutional capacity

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
	<p>regulatory services in the sector. The main challenge facing the Authority is the development of appropriate capacity and management framework to deliver on its mission.</p> <p>KRC Act cannot fully serve the needs of inland water ways including co-ordination. KMA is mandated under the KMA ACT 2006 to regulate, co-ordinate, and supervise the maritime and inland waterways affairs</p>				
Legal Framework	<p>Inadequate legal regime due to slow pace of ratification, domestication and subsequent implementation of regional international conventions, protocols and agreements</p> <p>Slow pace in enactment of Bills</p> <p>Lack of an enabling maritime policy to allow for a sustainable and prudent exploitation of marine resources</p> <p>KNSL as a national carrier has not lived up to expectations due to unclear ownership and weak management with no capability to rejuvenate its operations</p>	<p>The GoK shall review existing maritime legislation to incorporate international and regional conventions, protocols, instruments and agreements as need arises</p> <p>GoK shall expedite enactment of the Bills</p> <p>The GoK shall review the KMA Act and other legislations within which KMA operates in order to strengthen KMA to enable it fully carry out its regulatory/legal functions</p> <p>The GoK shall streamline ownership and shareholding of KNSL and improve its capacity</p>	<p>To ratify domesticate and implement relevant international and regional conventions, protocols and agreements</p> <p>To empower KMA to deliver its mandate</p> <p>Finalize enactment of Merchant Shipping Bill 2008</p> <p>To resuscitate the Line as a National carrier</p>	<p>a) Speed up the enactment of the proposed maritime Acts. b) Put in place a mechanism that shall speed up the process of ratification and domestication of modern international maritime legal instruments.</p> <p>Staff the shipping and maritime affairs department within the MoT with relevant professionals.</p> <p>Review ownership and management structures of KNSL</p>	<p>Appropriate and timely legal framework.</p> <p>Improved maritime safety, security, maritime education and training, service delivery and domestic participation in the maritime industry.</p>

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
					A vibrant and profitable National carrier
Regulatory Framework	There is an inadequate regulatory framework which has lead to the poor enforcement of Acts, inefficiencies and loss of business.	The GoK shall expedite development of regulations from the maritime related Acts and their implementation	An efficient, competitive, and safe maritime industry pursuing environmentally sound practices.	<ul style="list-style-type: none"> a) Speed up the enactment of the proposed maritime Acts. b) Update maritime standards to meet the domestic and international standards. c) Put in place regulations and standards Institute and implement regulations/legislations from the Merchant Shipping Bill 2008 on marine pollution prevention and control	Well-structured and regulated maritime industry that enhances trade and investment. Improved safety/protection of marine environment Appropriate and timely regulatory framework
Admiralty Jurisdiction	There is no specialised admiralty division dealing with maritime matters in the high court of Kenya. In addition, Kenya has not developed respective rules and procedures for the administration of maritime laws. This has led to dispensation of justice in maritime matters that do not consider domestic conditions, and may be injurious to our national interest.	The GoK shall enact appropriate domestic legislation to be applied in the adjudication of maritime claims and restore confidence in the country's maritime industry.	Enhance the exercise of admiralty jurisdiction to facilitate admiralty proceedings to meet the changing circumstances of the nation.	<ul style="list-style-type: none"> a) Establish an admiralty division of the High Court to have jurisdiction on all maritime matters. b) Formulate the rules and procedures in consultation with the Chief Justice. 	Judges, Admiralty Court, Rules and procedures.

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
Ship Ownership, Registration And Operation	<p>a) The Kenyan legal, administrative and other requirements for registration of vessels are currently cumbersome as it involves the Ministry of Finance, KIA, MoT, and others. It is therefore costly and bureaucratic. This discourages both domestic ownership of ships and international investment in maritime industry.</p> <p>b) Lack of incentives to encourage ship owners operate and register ships in Kenya.</p>	The GoK shall institute favourable regulations from the Merchant Shipping Bill 2008 to streamline and simplify registration procedures for vessel	Promote investments in ownership of vessels and enhance the country's competitive advantage	<p>a) Provide licensing and registration of vessels.</p> <p>b) Develop a regulatory/legislation mechanism from the Merchant Shipping Bill 2008</p>	Growth in shipping business.
Open Ship Registry	Implementation of an open ship register	The GoK shall expedite institutional and implementation of an open ship registry from the Merchant Shipping Bill 2008 to encourage human capacity development in maritime industry and take economic advantage of vast maritime business.	To generate foreign exchange and enable Kenyans to effectively participate in the maritime industry.	<p>a) Institute regulations to operate an open ship registry.</p> <p>b) Encourage domestic ownership of vessels through financial incentives.</p>	<p>a) Retention of foreign exchange.</p> <p>b) Sustainable source of trained seamen available.</p> <p>c) Increase of revenue</p>
Port Reforms Institutional Framework	Currently KPA performs the roles of both port operator and manager. It is necessary to separate the two roles in order to create efficiency and allow for private sector participation in port operations particularly, as regards to stevedoring, storage and shore handling activities at the port. This will leave KPA to operate as the landlord authority performing the roles of port development, marketing, environmental protection, harbour management, pilotage and training.	The GoK will transform KPA to a landlord Authority status and introduce regulated private sector participation in port operations at the port of Mombasa.	An institutional framework that creates efficiency and supports growth and development of the port of Mombasa.	Transform KPA into a landlord port Authority.	a) KPA will become a landlord port authority institution to regulate service provision at the port

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
Cruise Ship Terminal Facility	Lack of purpose built cruise ship terminal facility at the port of Mombasa has had a negative effect in the promotion of Mombasa as a cruise ship hub. Development of such a facility would attract cruise ships to be home-ported in Mombasa for Indian Ocean cruises and use Mombasa as a sea/air hub port.	The GoK shall develop a modern cruise ship reception facility at the port of Mombasa	To have a dedicated cruise ship reception facilities at the port of Mombasa which will help attract cruise ship traffic and promote cruise ship tourism in Kenya.	Develop a cruise ship terminal at the port of Mombasa	Modern and appropriate cruise ship terminal
Lengthy cargo documentation and clearance procedures	The lengthy bureaucratic and largely manual documentation procedures at the port cause delays in cargo clearance from the port. The computerised systems introduced by KPA and KRA have not eased the problem because other government agencies at the port are still using manual procedures	The GoK shall implement a single window port community based system which will be an electronic platform for processing cargo clearance documentation at the port, JKIA and border posts. The system will integrate all stakeholder systems electronically	To have three day maximum cargo dwell time at the port and thus turn around space at the port faster thereby easing the perennial congestion and lowering logistics costs	Expedite the implementation of the single window port community based system	Faster cargo clearance from the port.
Development of an alternative port at Lamu	The port's container terminal has exceeded the planned capacity of 250,000 TEUS per annum. A second container terminal is being developed at the port but this will not satisfy the growing traffic throughput for Kenya and the neighbouring countries in the long run. For strategic and safety reasons there is a need for a second port in Kenya to serve as an alternative to Mombasa.	The GoK will expedite the development of a second commercial port at Lamu	To develop a second deep water seaport at Lamu in order to ease the pressure on the port of Mombasa and also serve Southern Sudan, Ethiopia and Somalia.	Develop the second port at Lamu	Ease pressure on the port of Mombasa, open up economic development of Lamu and its environs and capture transit traffic business from the neighbouring countries.

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
Development of Free Trade Zone at the port of Mombasa	The port of Mombasa has unexploited potential of serving as a regional logistics centre which can be used to support the development of industry and the export trade in the form of Free Trade Zone. Adequate land is available and has been set aside for this purpose at the Dongo Kundu area on the southern part of the port	The GoK will expedite the development of a Free Trade Zone at Dongo Kundu	To provide investments in the form of export processing and assembly facilities which will support free port services all of which will add value to the operations at the port	Develop Dongo Kundu Free Trade Zone facilities	Transform the port of Mombasa to a logistics centre, create employment, and generate income for the port and the country.
Atmospheric Pollution	<p>The global concentration of Greenhouse gases is increasing, mainly due to human activities, such as combustion of fossil fuels (which release carbon dioxide) and deforestation (because forests remove carbon from the atmosphere).</p> <p>The atmospheric concentration of carbon dioxide, the main greenhouse gas, has increased by 30% since preindustrial times.</p> <p>Climate change could lead to factors such as rising sea levels, extreme weather events and rising temperatures.</p> <p>Ports operations, industrial activities and transport services are the greatest contributors of Green house gas emissions. Use of cargo handling equipments, trucks, trains whose engines burn fossil fuels have a</p>	<p>GoK being a party to the Kyoto Protocol shall set out targets(thresholds) with a specified time frame to reduce their greenhouse gas emissions by a specific percentage at a specific period</p> <p>GoK shall put in place various technical, operational, regulatory and market-based mitigation measures.</p> <p>The GoK's Planning for the already predicted impacts shall be pursued without delay (national climate change plan).</p> <p>GoK shall develop adequate mechanism of monitoring and reporting emissions in the country and enhance atmospheric pollution data collection by setting up atmospheric pollution monitoring</p>	Reduction of greenhouse gas emissions (GHGs) in an effort to prevent anthropogenic climate change (climate change due to human activities) and to ensure economic development and sustainability.	<ul style="list-style-type: none"> • To improve performance of fossil fuel combustion engines of vessels, trucks, trains, cargo handling equipments in order to reduce emission of carbon dioxide. • Adapting use of new technologies designed to reduce greenhouse gas emissions. • Ban use of ageing trucks, vessels, trains and cargo handling equipments. • Put a limit on the maximum of age of vehicles/trucks permitted on our roads. 	<p>Reduction of greenhouse gas emissions to a sustainable level.</p> <p>Efficient and effective Meteorological Department</p>

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
	bearing on the climate change.	<p>stations in the country.</p> <p>GoK shall fund studies to improve the understanding of potential climate change impacts for the transport sector especially for ports and transport infrastructure in coastal/maritime zones and develop appropriate adaptation responses.</p> <p>GoK shall fund Studies on the vulnerability of the maritime industry to the impacts of climate change. The availability of information on climate variability and change both at the global and regional scales would be beneficial. Efforts to develop a system to provide such information shall be encouraged and supported.</p> <p>GoK shall forge closer cooperation with scientists and engineers, industry, international organizations to ensure that up to date relevant information on climate change impacts and adaptation measures is available, widely disseminated and taken into account by policy makers, transportation planners and development strategists.</p> <p>GoK shall promote awareness raising, knowledge sharing, education and information dissemination. To pursue the</p>		<ul style="list-style-type: none"> • Proper and regular maintenance of trucks, trains and cargo handling equipments. • Use of renewable fuels. • Use of energy efficient vehicles/trucks, trains, port machineries/equipments • Monitor maintenance of vehicles/trucks, trains, vessels, and cargo handling equipments. 	

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
		<p>possibility of including a compulsory subject on climate change in the curricula for schools, tertiary and university institutions.</p> <p>GoK shall fund a study to assess the costs of climate change impacts on ports and transport logistics supply chains and its implications on trade and development.</p> <p>GoK shall seek financial and technical assistance from its international/regional development partners in order to enhance capacity building and ensure that the country is better prepared to cope with the various effects of climatic change.</p> <p>GoK shall explore ways in which further financial resources may be generated as part of any mitigation efforts in relation to maritime transport and ensure that any proceeds are reinvested within the industry in particular for the study of impacts and for the purposes of effective adaptation.</p> <p>GoK shall develop strict regulations/legislations to ban use of ageing vehicles/trucks on our country's roads and to ensure all vessels sailing within our jurisdiction</p>			

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
		<p>reduce their speeds.</p> <p>GoK shall encourage use of renewable fuels in the maritime transport industry.</p> <p>GoK shall ratify, domesticate and implement all relevant international/regional conventions/protocols and agreements relating to climate change.</p> <p>GoK shall put measures to initiate green ports in Kenya.</p> <p>GoK shall strengthen institutions dealing on environmental pollution e.g. NEMA, KMA, Meteorological Department, and Climate Change Coordination Authority</p>			
Enhancing Maritime Safety and Security	<p>Maritime security in Kenya has been hampered by:</p> <p>1) Non-domestication of SUA convention as well as the various IMO and UN resolutions on security.</p> <p>2) Lack of adequate coordination between the various security agencies</p> <p>3) This lapse in security make Ships incur higher insurance cost which they pass on-to consumers.</p>	<p>The GoK shall ensure enhancement of maritime security. GoK shall put in place the necessary legal framework for the implementation of SUA convention</p> <p>Expedite enactment of appropriate legislation relating to the prevention, reduction and control of marine pollution as well as liability and compensation for pollution damage of the sea or other waters by dumping of wastes and matters from</p>	<p>Enhanced and sustained security and preparedness at and around Kenyan ports and within jurisdiction</p> <p>Enhanced and sustained maritime safety at the coastal and inland waterways</p>	<p>To develop marine pollution prevention measures</p> <p>To create public awareness on preservation of marine environment</p> <p>Develop a Comprehensive National Maritime Security Programme.</p> <p>Establish a National Maritime Training Programme.</p> <p>Establish a framework for the</p>	<p>a) Enhanced maritime security.</p> <p>b) Dedicated maritime security organs.</p> <p>c)Harmony in maritime security systems and organs</p> <p>d) maritime safety improved</p> <p>e) marine environment protected</p> <p>f) improved search and rescue services</p> <p>g)developed navigational aids and new ferries on the lake</p>

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
	<p>4) non-existent of a national maritime security policy</p> <p>5) in adequate sea and air transport facilities</p> <p>6) in adequate patrol of both the territorial and EEZ</p> <p>7) Threat of piracy and armed robbery.</p> <p>8)threat of terrorism within our territorial waters and EEZ</p> <p>There are inadequate regulatory services to oversee safety and security matters on Lake Victoria. Incidents of banditry and other illegal activities have been reported as the major security challenges.</p> <p>In addition, lack of navigational aids and mapping of the Lake contributes to poor safety.</p> <p>There is little public awareness on marine environmental pollution and prevention at the coastal and inland waterways.</p> <p>Inadequate capacity of Regional and national Search and Rescue Coordination Centres.</p> <p>Ensure continuous training of staff to ensure adequate capacity.</p>	<p>ships especially from the existing IMO and other international and regional agreements and shall continuously domesticate IMO and other international agreements relating to marine environmental protection.</p> <p>The GoK shall strengthen and adequately equip the search and rescue services at KMA</p> <p>GoK shall review all lands adjacent to coastal and inland waters necessary for safe navigation and, where appropriate, recommend compulsory acquisition in line with the Act and Section 2 of the Physical Planning Act (Cap 286)</p> <p>GoK shall Incorporate maritime authority as the lead agency in the maritime sector land development approval process</p> <p>GoK shall carry out a complete hydrographical survey in order to update the echo sounding and install navigational aids at Lake Victoria and other inland waters.</p> <p>Strengthen the Regional and national Search and Rescue Coordination Centres.</p>		<p>training and retraining of personnel and the provision and maintaining of proper equipment and facilities.</p> <p>Clarify the Legal, Institutional and Regulatory framework in relation to maritime security to bring</p> <p>Port security operations under the control of port management authorities to strengthen coordination and skills development for port security staff.</p> <p>To provide cheap inland water transport</p> <p>Implement 100% screening of all passengers and freight.</p> <p>KMA enhance security audits at the Port of Mombasa.</p> <p>Enhance public awareness on marine environmental pollution and protection</p> <p>Enhance maritime safety and protection of marine environment</p> <p>Enhance regional and national search and rescue services</p> <p>GoK shall finance construction of</p>	

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
	Enhance the capacity of KMA to ensure maritime safety in Kenya	<p>Ensure continuous training of staff to ensure adequate capacity. enhance the capacity of maritime safety</p> <p>GoK shall domesticate other ratified international conventions relating to maritime security</p> <p>GoK shall strengthen capacity of KMA in order to carry out its mandate of coordination of maritime security in Kenya.</p> <p>GoK shall promote public awareness campaigns on oil pollution to ensure greater protection of our coastal and inland waterways for socio-economic development and a sustainable environment. This will to instil a culture of collective responsibility among Kenyans.</p> <p>GoK shall establish a Coast Guard service</p>		navigational aids and mapping of Lake Victoria	
Human Resource Development	<p>a) There is no policy on maritime education and training.</p> <p>b) Few Kenyan seafarers are certified to work in international vessels owing to lack of a domestic accredited maritime institution.</p> <p>c) Kenya is still not white listed</p> <p>d) Lack of ownership of Kenyan</p>	<p>The GoK shall formulate appropriate policy on maritime education and training in line with STCW Convention and best international practices</p> <p>The GoK shall amend the international labour legislation in collaboration with stakeholders to give greater protection to seafarers</p>	<p>Develop an adequate and well-trained human resource to enable the development and growth of the maritime industry.</p> <p>Promote Kenya National Shipping</p>	<p>a) Establish a maritime education board</p> <p>b) As a priority, Bandari College should link up with an internationally accredited maritime training institution, to allow for the certification of Kenyan seafarers.</p> <p>c) Facilitate the establishment of institutions to meet international</p>	<p>a) Internationally certified seamen.</p> <p>b) Accredited maritime training institutions.</p> <p>c) White listing of the country</p> <p>d) Availability of Vessel</p>

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
	vessels by the KNSL	<p>GoK shall establish a self funding maritime education board responsible for the establishment, development and promotion of marine and maritime education in Kenya</p> <p>GoK shall Upgrade Bandari College into a maritime training institute offering middle level courses for various cadres in the maritime industry, including the STCW'95 requirements.</p> <p>The GoK shall Introduce curriculum on specialized maritime subjects in schools, tertiary and University institutions in Kenya.</p> <p>The GoK shall establish a specialized research and development unit on maritime affairs at the training institutions.</p> <p>GoK shall purchase a vessel to for training of seagoing personnel.</p> <p>The GoK shall encourage accreditation of other reputable regional and international maritime training institutions.</p> <p>The GoK shall Promote, facilitate and recognize the formation of maritime professional bodies.</p>	Line as a national carrier through public/private partnership in order to participate in the international maritime transport sector and to act as a training facility for seagoing Kenyan trainees.	standards STCW 1995. d) Fast track compliance with STCW requirements	

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
Health And Environmental Protection	<p>A sea port can be an entry point for diseases like SARS, HIV for drugs, for guns and illegal arms and can also be exit points for the same and diseases like malaria and cholera.</p> <p>The port is not equipped to control this phenomenon in terms of staff, rules and procedures or equipment.</p>	<p>The GoK shall ensure that biological, chemical and other threats to consumer and national health transported to Kenyan ports and having potential to spread within and without Kenya are adequately dealt with.</p> <p>The GoK shall do a market research to establish the feasibility and competitiveness of an envisaged policy vis a vis that of our competitors or alternative investment.</p>	<p>Offer coordinated health regulatory framework to ensure efficient maritime services.</p>	<p>Equip Port Health with adequate personnel and equipment and institutionalise continuous training to strengthen human resource capacity and response procedures.</p> <p>Equip the animal health section with adequate personnel and equipment and institutionalise continuous training to strengthen human resource capacity and response procedures.</p>	<p>Reduced disease epidemics</p> <p>Reduced illegal trafficking of arms and other contrabands</p> <p>Reduced incidents of marine pollution</p>
Research & Development	<p>Kenya does not have a specialised institute to carry out research in the maritime industry. Kenya has missed many development opportunities.</p> <p>In adequate research, development and innovation capacity</p>	<p>The GoK shall facilitate the formation of a maritime research institute to research and advice in the formulation of maritime policy.</p> <p>The GoK shall initiate and provide support to programmes that research on the development of international maritime transport industry in order to design suitable national policies to guide the country towards viable future maritime transport investments</p>	<p>Develop maritime industry and exploit its potentials.</p>	<p>License and set-up a research institution to train maritime personnel to meet international standards.</p>	<p>a) Enhanced human resource capacity.</p> <p>b) Formulation of well researched and integrated maritime policies.</p> <p>c) Reliable data and knowledge base.</p>
Ferry Transport	<p>Ageing and in adequate ferries</p> <p>Increase of passengers and Limited infrastructural capacity</p> <p>inadequate subsidies</p> <p>The ramps at Likoni channel cannot support landing of two ferries simultaneously.</p>	<p>GoK shall develop a legal framework under an act of parliament to transform KFSL to an autonomous corporation</p> <p>GoK shall continue to review, expand and modernize KFS infrastructure to keep pace with the ever growing demand.</p>	<p>Allow for more trade and enhance efficiency and reliability of ferries</p>	<p>Divesting into Cruise ferry services along the Eastern Africa Coastal region where there is a great potential. This shall involve acquisition of cruise ships and floating hotels network on the Indian Ocean to promote tourist activities.</p> <p>Operating a wider Ferry service at</p>	<p>Reliable ferry service</p> <p>Increased revenue</p> <p>Increased efficiency and competitiveness</p> <p>Increased business</p> <p>Kenya Ferry Services Act</p>

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
	<p>Lack of adequate legal framework</p> <p>Prone to insecurity due to threats of terrorism and vulnerability of ferry operation services</p>	<p>GoK shall expedite for the replacement of the ageing Ferries</p> <p>GoK shall adequately compensate KFS since it provides Ferry services to passengers without any charges and does not levy commercial rates on vehicular traffic.</p> <p>GoK shall purchase cruise ferries to enable KFS to operate cruise ferry services and floating hotels along the coastal and inland waterways.</p> <p>GoK will ensure adequate and safe infrastructure to support the operations of ferry services; develop the Dongo Kundu Bypass to the South Coast and the Miritini/Shanzu bypass to the North Coast and consider development of a permanent crossing across the Likoni Channel. GoK shall strengthen the security measures at the coastal and inland waters for safe and secure ferry operations.</p>		<p>the coastal and inland waterways.</p> <p>Expansion of the ramp approach infrastructure including vehicle lanes, walk ways, development of public vehicles terminal, construction of pedestrian shelters, retail business stalls and ablution.</p> <p>Improvement of its maintenance workshops in order to meet international safety standards</p> <p>To strengthen security measures to counter possible threats and help to enhance control on pedestrian and vehicular traffic</p>	
Commercial Maritime Services	<p>In adequate ship building and repair capacity</p> <p>Minimal involvement of Kenyans in the domestic maritime industry</p> <p>In appropriate use of Incoterms leading to loss of government revenue, loss of foreign exchange, loss of profit,</p>	<p>The GoK shall adopt a deliberate policy of facilitating the development and growth of shipbuilding and repairs industry as part of the industrialization programme of the maritime sector.</p> <p>GoK shall promote domestic</p>	To provide an enabling regulatory environment for the promotion of maritime transport services in Kenya	Development of a framework from Merchant Shipping Bill 2008 for private/public sector participation in the provision of internationally recognized maritime and transport logistics maritime regulations shall be developed and institutional capacity created for enforcement	<p>A vibrant shipbuilding and repair industry</p> <p>Savings in foreign exchange</p> <p>Improved balance of payment</p> <p>Growth of the maritime industry</p>

Policy Intervention Area	Critical Issues	Policy	Policy Objectives	Strategy	Expected Outputs
	<p>slow growth of insurance and transport industries, loss of employment opportunities</p> <p>High maritime transportation costs due to proliferation/duplication of shipping charges/surcharges</p> <p>Many Kenyans are at the periphery of the mainstream maritime transport logistics supply chain. Foreigners have dominated many investments the maritime industry.</p> <p>Kenya lacks comprehensive commercial maritime policies to address various emerging issues and global shipping trends which are of economical significance to the country's national sustainable development.</p>	<p>participation in the maritime transport industry</p> <p>The GoK shall make a deliberate effort to promote the appropriate use of International Commercial Shipment Terms (Incoterms) by Kenyan shippers.</p> <p>The GoK shall promote national participation in maritime socio-economic activities with a view to enhance returns from the sector.</p> <p>The GoK shall put in place relevant legislation/regulations to curb anti-trust practices in the maritime transport industry</p> <p>GoK shall carry out a study to assess the economic viability of introducing cargo reservation and cabotage policies in Kenya</p> <p>GoK shall support development of other policies relating to the maritime transport industry such as commercial maritime policies and shall implement them.</p>		<p>and monitoring</p> <p>Provide a framework for the co-ordination of activities of service providers in line with the established policies, rules and regulations targeting among others code of conduct, cost and quality of services</p> <p>Develop an awareness of maritime transport issues in Kenya amongst the stakeholders and the general public.</p> <p>The GoK shall establish a maritime fund to support investments in the maritime sector</p> <p>Develop policies relating to maritime industry such as commercial maritime policies</p>	<p>Increase of Government's revenue</p> <p>Increase in employment opportunities</p> <p>Increase of profits and reduced costs of maritime transport services</p> <p>Improved awareness on maximization of economic benefits in the maritime industry.</p> <p>Improved regulatory environment</p> <p>Improved domestic investments</p> <p>Policies developed</p>

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
Institutional framework	<p>a) transfer of regulatory and supervisory functions of inland water ways from KRC to KMA</p> <p>b) Amend the KPA Act to define the roles i.e. of landlord status, service provision and the regulator</p>	<p>ST</p> <p>ST</p> <p>ST</p> <p>ST</p>	MoT, AG KPA, KRC, KMA and RVR	<p>A well regulated maritime industry that keeps pace with international and regional agreements.</p> <p>Issues of security and safety coordinated.</p>	<p>Reviewed KMA Act and merchant Shipping Act 2008</p> <p>Reviewed KPA act</p>	Availability of funding.
Legal framework	<p>a) lobby for enactment of pending maritime Acts in parliament</p> <p>b) Staff the shipping and maritime affairs department of MOT with relevant professionals officers.</p> <p>c) Ratify agreements and domesticate them.</p> <p>d) Amend KPA act to provide for a regulator, service provider and the landlord status.</p> <p>c) draft maritime policies</p>	<p>ST</p> <p>MT</p> <p>MT</p> <p>MT</p>	MOT, KMA and A.G	<p>Enacted maritime laws.</p> <p>Improved maritime sector performance</p>	<p>A restructured KPA</p> <p>Maritime policies</p>	<p>Availability of funds.</p> <p>Availability of trained staff.</p> <p>Parliament passing the Acts</p>

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
Regulatory framework.	a) Draft regulations from the Merchant Shipping Bill 2008 and KMA Act. b) Identify and budget for funding.	ST	MOT, KMA and AG	Enhanced port state control for safety and security. Enhanced/reg ulated commercial maritime services	High record of sea worth vessels Less spillage of oil on the coast line Cleaner environment and less accidents Improved economic returns	Availability of funds to buy equipments
Admiralty jurisdiction	a) Enact the admiralty Act. b) Establish a maritime court. c) Recruit maritime judges.	MT	MoT, AG and CJ	Faster and fair dispensed maritime disputes	The admiralty Act and maritime courts. Established procedures for use.	Availability of maritime lawyers and political goodwill.
Ship ownership, registration and operation	a) Review the current registration procedures with a view to shortening the process for efficiency, and cost cutting b) Develop a criteria for approval by treasury to provide tax incentives to ship owners registering in Kenya i.e. in VAT exemption in fuel use and telecommunication services or other incentives to encourage domestic ownership of vessels and operation c) Draft regulations for control of ship operation to provide competitive advantage to domestic players vis-à-vis foreigners	MT	MOT, KMA, MOF	More investment in shipping business. Faster registration of vessels and business. More Kenyan's owning vessels	Increased ships register. Written procedures for ship registration and business. A favourable tax incentive gazetted by the minister.	Political goodwill

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
Open ship registry	a)) Develop and implement regulations for use in the registration of foreign vessels. b) Evolve a policy of carriage of Kenya's exports and imports by national flag.	MT	MoT, KMA, AG, MoF	More ships flying the national flag	Increased register of foreign vessels. Investment in ship ownership and registration Merchant Shipping Act with related regulations. Policy regarding carriage of Kenya's tonnage.	Political goodwill
Port Reforms Institutional Framework	Enact the privatization Act to give way for private port operators to provide competition and efficiency	M/T	MOT/MOF/KPA	More port operators providing cost effective services established.	More registered business ownership due to increased efficiency	Political goodwill
Cruise Ship Terminal Facility	Develop a cruise ship terminal at the port of Mombasa	L/T	MOT/MOF/KPA	Increased trade in passengers	Growth of cruise tourism and related industries Dedicated terminal for passengers	Availability of funds Political goodwill
Lengthy cargo documentation and clearance procedures	Develop and implement a single window port community based system	M/T	MOT/MOPS/MOF/KPA	To have 3 day maximum cargo dwell time	Faster cargo clearance from the port Port Community based system in place	Availability of funds
Development of an alternative port at Lamu	Plan and do a feasibility study to Establish Lamu port as an alternative port	L/T	MOT/MOF/KPA	Develop a 2nd port	A second port operating at Lamu	Political good will Availability of funds

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
	Develop the second port at Lamu					
Development of Free Trade Zone at the port of Mombasa	Carry out a feasibility study Identify and gazette land for EPZ and free trade area	L/T	MOT/MOF/KPA	More investment in EPZ and free trade area	Gazetted areas for EPZ and free trade zone	Availability of funds Political good will
Atmospheric Pollution	<ul style="list-style-type: none"> • Create awareness on GHGs • Empower the Meteorological department • Adapting use of new technologies designed to reduce greenhouse gas emissions. • Ban use of ageing trucks, vessels, trains and cargo handling equipments. • Put a limit on the maximum of age of vehicles/trucks permitted on our roads. • exploit other renewable fuels (energy efficient fuels) • Monitor maintenance of vehicles/trucks, trains, vessels, and cargo handling equipments. • develop mechanism of monitoring, reporting emissions and data 	<p>M/L T</p> <p>L/T</p> <p>L/T</p> <p>L/T</p> <p>L/T</p> <p>MT/LT</p> <p>MT/LT</p> <p>M/T</p>	MOT/KMA/KPA/ME T. DEPT./NEMA	<p>Safe and more efficient maritime transport System</p> <p>Reduced greenhouse gas emissions (Co2)</p>	<p>Scientific/Experimental reports shall confirm the measurement of the greenhouse gas emissions reduced.</p> <p>An efficient and effective Meteorological department</p> <p>Developed clean air policy</p> <p>Developed regulations</p> <p>Developed national climate change</p>	Availability of funds and professional experts

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
	<ul style="list-style-type: none"> collection • Set up atmospheric pollution monitoring stations in the country. • Develop clean air policy Develop a national climate plan	S/T S/T M/T M/T				
Enhancing maritime safety and security	Develop a comprehensive security programme under the framework of SUA convention and others in coordination with other arms of government. Monitoring of the ports and our territorial waters. To develop marine pollution prevention measures Organize publicity campaigns on preservation of marine environment Provide facilities at the existing Regional Search and Rescue Coordination Centre and at Lake Victoria Recruitment and training of search and rescue at Kisumu Recruit and train and equip surveyors of vessels and small vessel inspectors Carry out a hydrographical survey and develop navigational aids and	MT ST/MT/LT M/T ST/MT M/T S/T S/T S/T	MOT,KMA, OP, KPA MOT/KMA MOT/KMA	Reduced incidents of insecurity Improved security of ships and ports facility Improved maritime safety Marine environment protected Cheap inland transport	IMO security audits Records of reported security incidences Records of reported incidents developed navigational aids	Domestication of IMO security laws. Trained personnel and equipment. Political goodwill. Availability of funds IMO maritime safety laws IMO Marine pollution laws

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
	mapping of the Lake Victoria and other inland waters identify and budget for funding initiate procurement process	S/T S/T S/T				
Human resource development.	a) Identify areas that need specially trained personnel b) Identify institutions to undertake training. c) Identify and allocate funding within a well drawn programme of training. c) Identify people and train	ST S/T S/T	MoT, MOF, MOE	Well-executed maritime policy decisions. A coordinated and efficient maritime sector.	Increased number trained maritime personnel. Increased number of institutions offering basic maritime certificate, diplomas and degrees.	a) Availability of funds. b) Qualified personnel to do the training.
Health and Environmental Issues	a) Train port health workers and equip them. b) Create quarantine for the infected. c) Develop procedures for application to ships when they call at port. c) Enact regulations to deal with marine pollution under the international conventions.	ST	MoT, MoH	a) Reduced incidences of suspected diseases a contra band goods entering or leaving the port. b) Reduced incidences of marine pollution.	a) Quarantine area developed. - Marine pollution regulation. - Regulations and procedures for port use inspections. - List of number of personnel and equipments. - Record of maritime accidents.	Availability of funds. Availability of trained personnel.
Research and Development.	a) Identify key areas of research. b) Recruitment and deployment. c) Identify a venue for the institution	MT	MoT, MOF, MOE.	a) Well researched policies and recommendations	a) Research papers on various policy options.	Availability of funds and personnel.

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
	d) Purchase of equipments and materials.					
Ferry Transport	a)procurement of new ferries b)development of infrastructure c)implementation of security and safety measures	MT ST	MOT, MOF and KFS	Availability of the new Ferries Improved infrastructure Reduced incidents of insecurity	Increased number of ferries and passengers Security and safety audit reports	Availability of funds
Commercial Maritime Services	a)carry out awareness workshops on incoterms, domestic investment opportunities and other relevant issues in the maritime transport industry b)carry out comprehensive studies on maritime transport costs and use of Incoterms in Kenya c)draft and implement regulations/code of conduct from the Merchant Shipping Bill 2008 relating to maritime service providers d) develop commercial maritime policies d) Identify and budget for funding	ST S/T S/T M/T	MOT/KMA	Increase of appropriate use of Incoterms Reduced complaints on maritime transport costs Improved investments in the maritime industry	Regulations on maritime service providers Commercial policy developed	Availability of funds

INLAND WATERS TRANSPORT INTERVENTIONS

Policy Intervention Area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
Institutional Framework	Currently the Inland Waters Transport industry is characterized by lack of integrated policy covering regulatory, and service provision There is need for independent regulation of operations of inland waterways.	1) The GoK shall establish an appropriate institutional framework that includes the Management of Inland Ports within the overall national ports management framework. 2) The GoK shall within this framework separate policy making, regulatory, and services provision roles in the Inland Waterways.	An institutional framework that supports the growth and development of the Inland Waters Transport Industry, and protection of the lakes environment.	<ol style="list-style-type: none"> 1) Strengthen KMA capacity to enhance regulation of lake maritime activities 2) Consolidate Inland Water Ports under the National Ports Authority (KPA) as the landlord port Authority. 3) Establish the Inland Waters Division of the Coast Guard. 4) Establish specialised security units recruited by the Inland Ports division, trained, accredited, and overseen by the Kenya Police. 	1) Establishment of appropriate Institutional framework for Inland Water ports development, service provision and industry regulation.
Corporate Governance	Currently the KRC operates under a multiplicity of statutes, e.g., KPC Act, and State Corporations Act, and a number of GoK ministries (MoT, OP, MoF). Due to poor coordination among these bodies, there are numerous governance overlaps. Furthermore, some operational aspects of the KRC Act are outdated and can no longer serve the needs of inland ports as part on an integrated transport industry.	The GoK shall ensure adherence to modern corporate governance principles through institutional restructuring in inland water transport.	Efficiency and accountability in the management of Corporate companies.	<ol style="list-style-type: none"> 1) Make the Board of directors managing the inland Water Transport accountable for their commissions and omissions in the execution of their mandate. 2) Reduce the control mentality and encourage a facilitative legal framework. 3) Strengthen internal control and audit systems in inland water transport establishments. 4) Provide for, in the proposed regulatory Act, a framework for empowering the Auditor (borrow the parts of section 26, 27, & 28 of the Banking Act Cap 488). adherence to modern corporate governance principles 	The Corporate company objectives are achieved.

Policy Intervention Area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
Legal Framework	Lack of adequate capacity to implement and enforce the Lake Victoria Transport Act under EAC, and the reviewed merchant shipping Act.	The GoK shall establish an Inland Water Transport unit, staffed with relevant professionals, within the Ministry responsible for Transport.	To ensure there is a dedicated Unit within the Ministry responsible for Transport, which ensures a coordinated and well-managed maritime industry.	1) Restructure the Ministry's departments to allow for the Unit, and operationalise the Unit. 2) Staff the Unit with legal professionals, among other relevant experts. 3) Speed up the implementation and enforcement of Inland Waters legislation	Modern and appropriate legal frameworks.
Regulatory Framework	1) Inadequate regulation of operation in inland waters. 2) Inadequate capacity to comprehensively ensure safety, security and protection of the environment.	The GoK shall strengthen implementation and enforcement of National, regional and international instruments and legislations..	An efficient, competitive, and safe Inland Waters Transport industry pursuing environmentally sound practices.	1)Continuously update Inland Waters Standards to meet the local and international standards 2)Speed up the implementation and enforcement of Inland Waters legislation	Well-structured and regulated Inland Waters Transport industry that enhances trade and investment locally and regionally.
			The safety of persons and goods and a clean environment on Kenyan territorial waters.		Modern and appropriate legal frameworks.
Admiralty Jurisdiction	There is no specialised admiralty division dealing with inland waters matters in the high court of Kenya. In addition, Kenya has not developed respective rules and procedures for the administration of inland waters laws. This has led to dispensation of justice in inland water matters that do not consider local conditions, and may be injurious to our national interest.	The GoK shall enact admiralty legislation and respective rules and procedures for the dispensation of inland waters disputes.	Enhance the exercise of admiralty jurisdiction to facilitate admiralty proceedings to meet the changing circumstances of the nation.	Establish an admiralty division of the High Court with a bench in Kisumu to have jurisdiction on all inland waters matters. Formulate the rules and procedures in consultation with the Chief Justice.	1) Judges, Admiralty Court, Rules and procedures.

Policy Intervention Area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
Ship Ownership, Registration And Operation	The Kenyan legal, administrative, and other requirements for registration of vessels are currently cumbersome as the Ministry of Finance, KIA, MoT, and others are players. It is therefore costly and bureaucratic and discourages both local ownership of ships and international investment in Inland Waters Transport Industry. c) Liberalisation of shipping services was not complimented with adequate regulatory structure.	a) The GoK shall amend the Inland Waters Act to streamline and simplify registration procedures along with those of the amended frameworks for the Maritime Industry. b) GoK shall provide a regulatory regime that encourages competition but at the same time creating a comparative advantage to the local businessman.	a) Promote investments in vessels and growth in Inland Waters Transport industry b) Competitive shipping services that provides a comparative advantage to the local businessman.	1) Provide licensing (vessel and business) provisions within the Inland Waters Act and the Maritime Regulatory Act. b) Establish a regulatory mechanism.	1) Growth in shipping business.
Open Ship Registry	Currently the Inland Waters Act does not facilitate an open ship registry thus retarding the potential of local investment in Inland waters ships.	The GoK shall enact laws to facilitate an open ship registry to encourage human capacity development in Inland waters industry and take economic advantage of associated business.	Kenyans are able to effectively participate in the inland waters industry.	1) Operate an open ship registry. 2) Encourage local ownership of vessels through financial incentives. 3) Allow for local private investment in vessel ownership. 4) Competitively encourage investment in inland waters ships ownership and operations.	1) Enhancing growth of local ship industry
Inland Ports Administration And Operations	The rail way operator provides wagon ferry services in the port of Kisumu KRC is currently mandated to develop and manage inland water ways. There is need to involve private sector in the development of inland water infrastructure as this will encourage competition and investment.	The GoK shall pursue policies that ensure competition in the operations of inland ports and piers. The GoK shall amend and review the necessary statutes in order to harmonize the operations.	a) Have efficient and competitive inland ports services in the region. b) Promote safety operations.	1) Allow for private sector participation (commercialise) in the development and provision of inland port services. 2) Review the KRC Act and restructure the inland ports status to place it under the management of Kenya Ports Authority. 3) Put the inland water operations under the maritime regulatory authority for regulation and enforcement.	1) Increased tonnage (revenue base) at the ports. 2) Wealth and employment created. 3) Increased efficiency and competitiveness. 4) Reduced number of accidents.

Policy Intervention Area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
Inland Ports Infrastructure	The existing Port of Kisumu requires rehabilitation and upgrading. The Piers located at various sites of Lake Victoria are in a dilapidated state and neglect. This has led to a continued decline for both passenger and cargo services on Kenyan waters locally and regionally.	The GoK shall increase the capacity of Inland Waters Transport Industry through appropriate development and maintenance of inland ports infrastructure and related equipment.	Allow for more trade and enhance efficiency and reliability of the inland ports and piers.	1) Develop and maintain the Kisumu Port and other related piers within the inland waters region to handle current and future inland waters transport challenges.	1) Increased business at Kenyan inland ports. 2) Reliable inland port services.
Enhancing Inland Waters Security	Inland Waters Security in Kenya has been hampered by: 1) non domestication of SUA convention as well as the various IMO and UN resolutions on security. 2) Lack of adequate coordination between central GoK security agencies with KRC, KPA, KFSL, as well as local and global terrorist actions. These lapses have exposed the country's inland waters and tourism industries to security risk.	The GoK shall ensure enhancement of inland waters security.	Enhanced and sustained inland waters security and preparedness at and around Kenyan inland ports.	Develop a comprehensive inland waters security program. Establish a framework for the training and the retraining of sea going personnel and the provision of appropriate facilities and equipment.	Enhanced inland water security Dedicated maritime security organs.
Human Resource Development	Lack of prescribed, appropriate, and relevant curricula, high training costs, approval regulation of training institutions, and an emerging generation gap in inland waters. 1) There is no policy on inland waters education and training. 2) Few Kenyan seamen are certified to work in vessels owing to lack of appropriate local accredited maritime institution.	The GoK in conjunction with maritime/inland waters industry stakeholders shall facilitate the training of required personnel.	Develop an adequate and well trained human resource to enable the development and growth of the inland waters industry.	1) Establish a maritime/inland waters education board within the framework of the Regulator. 2) As a priority, Bandari College and other institutions specialized in inland waters should link up with internationally accredited maritime training institutions, to allow for the certification of Kenyan seamen. 3) Facilitate the establishment of institutions to meet international standards (STCW 1995).	1) Internationally certified seamen 2) accredited maritime/inland waters training institutions.
Health And Environmental Protection	a) A lake port can be an entry point for diseases like SARS, HIV for drugs, for guns and illegal arms and can also be exit points for the same and diseases like malaria and cholera. The port is not equipped to control this phenomenon in terms of staff, rules	The GoK shall ensure that biological, chemical and other threats to consumer and national health transported to Kenyan coast and having potential to spread within and without Kenya are adequately	Offer coordinated health regulatory framework to ensure efficient inland waters services.	Equip Port Health or equivalent bodies with adequate personnel and equipment and institutionalise continuous training to strengthen human resource capacity and response procedures. Equip KEPHIS with adequate personnel and equipment and institutionalise continuous	Enhanced capacity to deal with port health matters related to dangerous pests diseases and noxious weeds and international garbage.

Policy Intervention Area	Critical Issues	Policy	Policy Objective	Strategy	Expected Outputs
	and procedures or equipment. b) Raw Sewage emptying directly into the lake. c) Movement of vehicles from one lake to another may carry spores such as hyacinth	dealt with.		training to strengthen human resource capacity and response procedures. Equip animal health section with adequate personnel and equipment and institutionalise continuous training to strengthen human resource capacity and response procedures.	
Research & Development	Kenya does not have a specialised institute to carry out research in the inland waters industry. Kenya has missed many development opportunities.	The GoK shall facilitate the formation of a inland waters research institute to research and advice in the formulation of inland waters policy.	Develop inland waters industry and exploit its potentials.	License and set-up a research institution to train inland waters personnel to meet international standards.	1) Enhanced human resource capacity 2) Formulation of well researched and integrated inland waters policies 3) Reliable data and knowledge base.
Safety	Unchecked accidents occurring in the inland waterways. Lack of navigational aids, updated charts and communication equipments	The GoK shall ensure that navigational charts and communication equipment are availed/improved. Safety standards will be developed and enforced	To promote safety of lives, marine environment and cargo.	a). Operationalize KMA search and rescue functions b). Establish a disaster management plan. c). Develop navigational charts and aids, and improve ship shore communication d).Develop safety standards . e). Operationalise the East African Transport Legislation	Enhanced safety of life and cargo, and environment.

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
Institutional framework	a. Amend the KRC and KPA acts to allow for transfer the functions of development of lake ports to the national authority (KPA). b. Bring the regulation function under MRA c. GoK to take over the policy function.	ST/MT	MoT	A coordinated inland waterways service operating under clear legal and institutional framework.	An operating KMA, which is in charge of inland waterways for regulation. A National Ports Authority taking charge of port development and regulating service providers	GoK goodwill
Corporate governance	a. Harmonize the various acts and create a facilitative framework. b. Audit the board decisions to ensure	ST/MT	MoT, AG,	<ul style="list-style-type: none"> Efficient and cost effective services. Profit making 	<ul style="list-style-type: none"> Few audit queries. Few complaints from customers Records of higher integrity 	<ul style="list-style-type: none"> Embracement of good corporate governance at all levels

	6	7	8	9	10	11
Policy Intervention Area	Actions to be taken	Time frame	Responsibilities	Indicators of success	Means of verification	Important assumptions
	<p>accountability and responsibility.</p> <p>c. Review the current audit system to ensure that they provide efficient audit processes.</p>		MoF, OP, PM	corporations		
Legal framework	<p>a. Operationalise the KMA Act t</p> <p>b. Review the KRC act to provide for a service provider and a regulator.</p>	ST	MoT/AG	<ul style="list-style-type: none"> A well regulated inland waterways that keeps pace with national and regional requirements 	<ul style="list-style-type: none"> Presence of KMA: Review KPA and KRC act. 	<ul style="list-style-type: none"> Availability of funds GoK goodwill Availability of Experts in the marine industry
Regulatory framework	<p>a. Operationalise the KMA Act</p> <p>b. Revise the KPA act to take over the development of ports.</p> <p>c. Enact the inland waterways bill.</p>	ST	MoT, A.G	<ul style="list-style-type: none"> A well regulated inland waterways that keeps pace with national and regional requirements 	<ul style="list-style-type: none"> Presence of KMA Review KPA and KRC act. 	<ul style="list-style-type: none"> Availability of funds GoK goodwill Availability of Experts in the marine industry
Admiralty jurisdiction	<p>a. Enact the admiralty bill.</p> <p>b. Establish a maritime court Kisumu.</p> <p>c) Recruit maritime judges.</p>	ST/MT	AG and CJ	<ul style="list-style-type: none"> Faster and fair dispensation of maritime claims 	<ul style="list-style-type: none"> The adjudicator act Established courts 	<ul style="list-style-type: none"> Availability of maritime lawyers and political goodwill
Ship ownership registration and operation	<p>a. Review the current registration procedures with a view to shortening the process for efficiency, and cost cutting</p> <p>b. Develop a criteria for approval by treasury to provide tax incentives to ship owners registering in Kenya i.e. in VAT exemption in fuel use and telecommunication services or other</p> <p>c) Draft regulations for control of ship operation to provide competitive advantage to locals vis-à-vis foreigners</p>	MT/ST	MOT, MOF	<ul style="list-style-type: none"> More investment in shipping services in the inland waterways Faster registration of vessels and business More Kenyan's owning vessels 	<ul style="list-style-type: none"> An enlarged ship register Written procedures for ship registration and business A favourable tax incentive gazetted by the minister 	<ul style="list-style-type: none"> Political goodwill Investor confidence
Open ship registry	<p>a. Operationalize the MSA Act to create the open registry regime.</p> <p>b. Evolve a policy of carriage of Kenya's exports and imports by national flag.</p> <p>c) Develop regulations for use in the registration of foreign vessels.</p>	MT/ST	MoT, MoF	<ul style="list-style-type: none"> More ships flying the national flag 	<ul style="list-style-type: none"> Increased register of foreign vessels Investment in ship ownership and registration Merchant shipping act with related regulations Policy regarding carriage of Kenya's tonnage 	<ul style="list-style-type: none"> Political goodwill Investor confidence

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
Inland Port administration and operations	<ul style="list-style-type: none"> a. Enact the privatization bill to give way for private port operators to provide competition and efficiency b. Review KPA act to create a regulator, service provider and a custodian of (developer) of ports. c. Draw a programme of investment in service related industries i.e. EPZ and free port business and sell the programme to investors 	ST	MOT, MOF	<ul style="list-style-type: none"> • More port operators providing cost effective services established. • Restructured KPA Act to provide for regulators and service provision • More service related industries established. 	<ul style="list-style-type: none"> • More registered business ownership due to increased efficiency • More port players. • More business in maritime related services 	Political goodwill
Inland Port infrastructure	<ul style="list-style-type: none"> a. Formulate the policy framework. b. Review the, KPA and KRC Acts and operationalize the KMA Act c. Provide for development funds in the budget. d. Provide for PPPs in infrastructure development 	MT	MOT, KPA, KRC, MOF, Private investors.	<ul style="list-style-type: none"> • Developed inland ports • Increased volumes of passenger and freight moved • More investment in EPZ and free trade area • Safe and more efficient ferries 	<ul style="list-style-type: none"> • Dedicated terminals for passengers and freight • Gazetted areas for EPZ and free trade zone • Developed inland ports 	<ul style="list-style-type: none"> Availability of funds Political good will Investor confidence
Inland waters, safety and security	<ul style="list-style-type: none"> a. Operationalize KMA's search and rescue units. b. KMA to co-ordinate security matters in inland ports. 	ST	MoT	<ul style="list-style-type: none"> • Safe operations • Less incidents of piracy and pilferage of goods in inland waterways 	<ul style="list-style-type: none"> • An established unit to deal with security and SARs • Low record of reported incidences • Enhanced safety of operations 	Availability of both finances and personnel
Human resource development	<ul style="list-style-type: none"> a. Identify areas that need specially trained personnel b. Identify institutions to undertake training. c. Identify and allocate funding within a well-drawn programme of training. d. Identify people and train 	ST	MoT, MOF, MOE, MOPS	<ul style="list-style-type: none"> • Well-executed maritime policy decisions. • A coordinated and efficient maritime sector 	<ul style="list-style-type: none"> • Increased number trained maritime personnel. • Increased number of institutions offering basic maritime certificate, diplomas and degrees • Developed curriculum 	<ul style="list-style-type: none"> a) Availability of funds b) Qualified personnel to do the training
Health and Environmental Issues	<ul style="list-style-type: none"> a. Train port health workers and equip them. b. Create quarantine for the infected. c. Develop procedures for application to ships when they call at port. d. Enact regulations to deal with marine 	ST/MT	MoT, MoH,	<ul style="list-style-type: none"> • Reduced incidences of suspected diseases and contra band goods entering or leaving the port 	<ul style="list-style-type: none"> • Quarantine area developed. • Marine pollution regulation • Regulations and procedures for port use inspections. • List of number of personnel and 	<ul style="list-style-type: none"> • Availability of funds • Availability of trained personnel

Policy Intervention Area	6 Actions to be taken	7 Time frame	8 Responsibilities	9 Indicators of success	10 Means of verification	11 Important assumptions
	pollution under the international conventions.		NEMA	<ul style="list-style-type: none"> Reduced incidences of marine pollution 	equipments <ul style="list-style-type: none"> Record of maritime accidents 	
Research and Development	a. Identify key areas of research. b. Recruitment and deployment c. Identify a venue for the institution d. Purchase of equipments and materials.	MT	MoT, MOF, MOE.	<ul style="list-style-type: none"> Well researched policies and recommendations 	<ul style="list-style-type: none"> Research papers on various policy options. 	<ul style="list-style-type: none"> Availability of funds and personnel

PIPELINE TRANSPORT INTERVENTIONS

Implementation Matrix for the Pipeline Sub-Sector					
Policy Intervention Area	1 Critical Issues	2 Policy	3 Policy Objectives	4 Strategy	5 Expected Outputs
Institutional Framework	Currently the KPC Ltd operates under a multiplicity of statutes eg. The Companies Act, and the State Corporations Act and a number of GoK Ministries (MoE, MoF, & OP). This creates governance overlaps, and occasionally undermines efficiency	The GoK shall ensure adherence to modern corporate governance principles. Harmonise relevant legislations	Efficiency and accountability in the management of KPC Ltd.	1) Make the Board accountable for their commissions and omissions in the execution of their mandate. 2) Reduce the control mentality and encourage a facilitative legal framework. 3) Strengthen internal control and audit systems in the KPC Ltd.	Company's strategic objectives are achieved
Coordination structure	a) The operation of the KPC Ltd under the Ministry of Energy has overshadowed the critical importance of its transportation responsibilities and functions.	The GoK shall institute measures to provide for coordination and linkage between the petroleum industry and Transport sector in harmonious manner. The GoK shall ensure that the pipeline system is managed in the most efficient manner	Ensure an efficient pipeline transport system that will result in competitive tariffs Ensure optimal development of the pipeline system that is well integrated with other transport modes.	Establish of coordination committees Integrate planning and development of pipeline transport with other transport modes	Efficient pipeline transport system

Implementation Matrix for the Pipeline Sub-Sector					
Policy Intervention Area	1 Critical Issues	2 Policy	3 Policy Objectives	4 Strategy	5 Expected Outputs
Legal Framework	There is need to review the energy Act 2006 to see whether it meets the expectation of the Industry.	The GoK shall ensure the review of the legislation.	Ensure adequate legislation to govern pipeline transport system	Develop ,Enact and Review laws on pipeline transport system	Harmony in the industry
Pipeline Infrastructure (Planning, development and financing)	There is poor co-ordination and integration in planning and development of the pipeline with other transportation modes. The current research is inadequate to exploit new opportunities and address new challenges. There is need to expand the fuel types transported via pipeline to include liquefied petroleum gas, fuel oil and industrial diesel oil.	<p>The GoK shall:</p> <p>Encourage investment on the core functions of the pipeline transport system so as to ensure that the pipeline keeps Phase with National and Regional demand growth.</p> <p>Encourage public sector participation in the development and management of pipeline industry in particular the financing of capacity enhancement of the pipeline.</p> <p>Undertake economic feasibility studies on pipeline extension within Kenya and the Region and explore the possibility of expanding the types of fuel transported via pipeline</p> <p>Ensure integration of pipeline transport system with other modes of transport in development planning ensure regular maintenance and rehabilitation of the pipeline</p> <p>Ensure common user facilities in pipeline terminals not already installed with such facilities</p> <p>Ensure regular maintenance and rehabilitation of the pipeline system.</p>	<p>Ensure optimal investment in the pipeline transport system that will</p> <p>a. Result in safe operation of the pipeline at competitive tariffs</p> <p>b. Meet expanding regional demand in an economically viable and environmentally sustainable manner</p> <p>Integrate with other transport modes</p>	<p>Establish strong coordination that will lead to strong linkages between pipeline development and planning and the national development agenda.</p> <p>Develop a comprehensive investment programme on investment required for expansion and maintenance.</p> <p>Introduce private sector participation</p>	Seamless transportation of the petroleum products in the country and the region

Implementation Matrix for the Pipeline Sub-Sector					
Policy Intervention Area	1 Critical Issues	2 Policy	3 Policy Objectives	4 Strategy	5 Expected Outputs
		Encourage the financing of pipeline development through internal and external funding mechanisms.			
Pipeline Operations	<p>a) Minimum mandatory stock holding requirement for a period 20 days is restrictive to oil marketers and impacts negatively on product supply in the market.</p> <p>b) The Information and Communication Technology system used in the pipeline system is dynamic and requires constant upgrading and review.</p> <p>c) limited common user and loading facilities at KPC depots</p>	<p>a. The GoK shall ensure tariff charged by the pipeline system is competitive and cost effective</p> <p>b. The GoK shall explore alternative ways of storing strategic petroleum reserves</p> <p>c. GoK shall ensure pipeline development is closely linked with other modes of transport</p> <p>d. The GoK shall introduce private sector participation in pipeline operations</p> <p>e. The GoK shall encourage the application of appropriate ICT to the industry.</p>	<p>a. Integrate all transport modes to optimise national transportation</p> <p>b. Encourage private sector participation investment in the industry.</p> <p>c. Ensure pipeline operations are abreast with international operations on ICT</p>	<p>Explore the possibility of National oil corporation (NOCK) holding strategic stock.</p> <p>Allow for private sector participation</p> <p>Continuous upgrading of ICT to enhance efficiency.</p>	<p>Increased pipeline efficiency and competitiveness</p> <p>Diversified utilisation of pipeline facilities.</p>
Safety and Security	<p>There is no legal framework that specifically and adequately addresses safety and security of pipeline transport. For instance, serious safety offences, such as puncturing of the pipeline are not adequately punished.</p>	<p>GoK shall develop policy guidelines for disaster preparedness and management for pipeline transport</p>	<p>Enhance safety and security in the sector</p>	<p>ERC and other relevant agencies to monitor standards and compliance</p>	<p>Safe, secure and reliable pipeline network</p>
Human Resources Development	<p>Inadequate development of human resource capacity to keep abreast with international standards, trends and challenges of industry</p>	<p>a. The GoK shall establish a research institution.</p> <p>b. The GoK shall encourage training and capacity development for the pipeline industry.</p>	<p>To ensure human resource development is in line with international standards</p>		
Research and Development	<p>Kenya does not have a specialised institute to carry out research in pipeline transport..</p>	<p>The GoK shall develop policy guidelines that encourage Research and Development in pipeline transport</p>	<p>Promote collaborations in research and development</p>	<p>Allocation of adequate resources to research and development</p>	<p>Appropriate research findings and innovations</p>

Implementation Matrix for the Pipeline Sub-Sector					
Policy Intervention Area	1 Critical Issues	2 Policy	3 Policy Objectives	4 Strategy	5 Expected Outputs
Environmental Protection and Conservation.	Transportation and storage of petroleum products impacts on the operating physical environment.	The GoK shall formulate policies that ensures that the transportation, handling and storage of petroleum products takes enhance environmental protection and conservation	Ensure environmental protection and conservation arising from pipeline operations.	a. Establish appropriate law on environmental protection and conservation. b. Establish adequate and appropriate institutional framework to handle oil spillages/leakages.	Environmental conservation and protection.

POLICY INTERVENTION AREA	TASK	TIME FRAME	LEAD AGENCY	OTHERS INVOLVED	INDICATORS OF SUCCESS	MEANS OF VERIFICATION	ASSUMPTIONS
Optimal Planning for Development and Maintenance of Transport Infrastructure	Create a coordination framework between pipeline planning and development with other modes of transport. Undertake feasibility Studies, and where economically viability, extend products being transported and stored by KPC, in particular LPG import handling and storage.	Short Term Short Term Short Term Continuous	MoT MoE KPC	MOF MOR MoLG	Study of LPG import handling and distribution facilities. Construction of common user truck loading facilities in Mombasa. Adequate pipeline capacity Pipeline operations that match international standards.		Availability of funds
Optimal Planning and Provision of Transport Services	Planning for alternative options for the storage of strategic petroleum product reserves. Integrate pipeline operations with oil marketing companies and other modes of transport. Construct loading and common user facilities at more depots Undertake regular maintenance	Three years	MoT MoE KPC	KRC MOF Oil Companies	Removal of pipeline minimum stockholding. Modernised ICT system that is linked to other transport modes and oil companies. Number of shut downs		
Enhancing	Development of policy guidelines and	Short term	KPC	OP	Enactment of legislation.	Rules and	Enacted legislation

POLICY INTERVENTION AREA	TASK	TIME FRAME	LEAD AGENCY	OTHERS INVOLVED	INDICATORS OF SUCCESS	MEANS OF VERIFICATION	ASSUMPTIONS
Transport Safety and Security	legislations to enhance safety and security. Monitor of compliance	Continuous	MoE ERC	MOR	Reduction in incidences of puncturing	regulations	will be enforced
Competition and Complementarity Between Different Transport Modes	Review pipeline tariff. Integrate pipeline development with other modes of transport. Discourage road transportation through levies and axle limitations.	Short term Continuous	MoT MoE KPC	MOF MoR	Existence of an efficient railway system. Number of road transporters where pipeline is covered. Low pipeline tariff.		
Human Resource Development for the Transport Sector	Train and retain competent personnel for the industry. Introduce training programmes on pipeline transport in the local institutions.	Continuous	KPC Universities	Professional Institutions Min. Of Ed.	Number of trained personnel. Courses introduced on pipeline transport	Number of skilled personnel.	KPC has adequate fund for training
Mitigating Environmental Effects of Transport	Establishment of adequate waste disposal management and oil spill facilities. Preparation of operating manuals. Legislation of sale of cleaner fuels.	Continuous	KPC NEMA	MOF MOE&NR MORPW&H MOE AG	Manuals available and in use. More polluting fuels are more expensive. Legal and regulatory system in place	Adequate handling of oil spill and disposal	
Health and the Pipeline transport	Inadequate regulations on the sale of cleaner fuels and Impacts on Health	Short term	MOE MOE MOL KPC ERC	MOE MOH AG	Publication of regulations	Implementation of the regulation	Priority will be given to the formulation of the guidelines
Integrating Transport Services with the National Economy	Develop and implement policies that promote fuel transportation by pipeline. Develop and implement policies that encourage fuel exports via pipeline. Promote fuel conservation measures and efficiency.	Continuous	MoE KPC MoT ERC	MOF MOP&ND MORPW&H	Number of road transporters where pipeline is covered. Fuel exports		
Information and Communication	Regular Upgrade of pipeline Information and Communication Technology system to meet ever changing trends in the industry.	Three Years	KPC	MORPW&H, MOE, MOF MOF,	Upgraded ICTs in place and operational		

POLICY INTERVENTION AREA	TASK	TIME FRAME	LEAD AGENCY	OTHERS INVOLVED	INDICATORS OF SUCCESS	MEANS OF VERIFICATION	ASSUMPTIONS
n Technologies for Transport					Adopted ICTs in place and operational		
Transport Research and Development	Establishment of a specialised institute/centre of excellence to carry out research in pipeline industry	Long term	KPC Universities	MOT MOE MOF	Operational Transport Research Institute available at MORPW&H		
Legal, Institutional, and Regulatory Framework for Transport	Enactment of appropriate legal framework. Development of a strong internal audit team. Provide a framework to encourage private sector participation Provide guidelines that create harmony among industry players	Short term	MoE MoT&C AG MoF ERC	MORPW&H OP MORPW&H AG	Enactment of legislation. Number of trained internal auditors. Preparation of operating procedures. Corruption eradicated. Establishment of a regulatory body. Percentage of Private ownership		Pipeline transport planning and development will be under Ministry of Transport and Communication and energy matters Ministry of Energy.
Funding Framework to Support Transport Industry Growth	Develop funding framework mechanisms to finance pipeline capacity enhancement projects. including the importation of specialised equipments	Continuous	KPC	MOF MoE	Report on projects and financing modalities		Availability of funds

AVIATION INTERVENTIONS

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
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Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
Integrating Aviation Services with the National Economy	<p>Aviation transport infrastructure is not well linked to other transport modes and because of this it ineffectually facilitates internal and external trade, does not adequately foster growth of the agricultural industry, support tourism, or facilitate strengthening of manufacturing. In addition, there is:</p> <p>High cost of other transport modes and poor intermodal linkages; Uncoordinated pre-export logistics, including lack of cold storage facilities; Existing ground capacity to handle passenger, freight, mail and cargo, is inadequate at most airports;</p>	<p>The GoK shall develop and maintain strategic aviation infrastructure and services to all parts of the country.</p>	<ul style="list-style-type: none"> • Ensure aviation fully supports other sectors of the national economy. • Ensure aviation facilitates national integration and supports demands for emergency and strategic interventions 	<ul style="list-style-type: none"> • Integrate planning and development of air transport infrastructure with other sectors of the economy • Integrate planning and development of air transport infrastructure to enhance optimal linkage with other transport modes 	<ul style="list-style-type: none"> • Integration of aviation with other sectors of the economy • Integration of air transport infrastructure with other transport modes • Increased accessibility and demand for air transport services
		<p>The GoK shall ensure integration and increased accessibility of all transport modes linking airports and production areas.</p>	<ul style="list-style-type: none"> • Facilitate easy travel and communication • Increase competitiveness of Kenyan produce 	<ul style="list-style-type: none"> • Transform airports into logistics hubs for productive and commercial activities • Strengthen bargaining position of producers and provide pre-export logistics. • Develop a subsidy framework to enable scheduled operations to remote ports of Kenya. 	<ul style="list-style-type: none"> • Increased cargo flights • Reduced freight costs
Strengthening Aviation Infrastructure	<p>Lack of sufficient attention to: Development of appropriate passenger, freight, mail and aircraft support infrastructure; application of ICTs in aviation industry operations and activities; Encroachment of aerodrome development land; and Upgrading of aerodrome infrastructure and services to meet required capacity. Infrastructure has failed to meet growth and development needs of the aviation industry.</p>	<ul style="list-style-type: none"> • The GoK shall promote the public and private sector to develop infrastructure to meet the growth and development needs for a modern and thriving industry. • The GoK shall repossess all illegally acquired land. • The GoK shall ensure proper maintenance of all aerodromes. 	<ul style="list-style-type: none"> • Modernise and fully integrate air transport infrastructure to maintain Kenya as the preferred aviation and commercial hub in the East, Central and Southern Africa Region. • To improve the condition of all aerodromes. 	<ul style="list-style-type: none"> • Develop and manage air transport infrastructure to meet minimum ICAO standards • Develop Total Airport Management Systems at the aerodromes • Enforce and strengthen mechanisms that support efficient and effective control of land around airports • Actively encourage investment in non-aviation businesses at and around airports to enhance their attractiveness and viability e.g. 	<ul style="list-style-type: none"> • Kenya as the preferred aviation and commercial hub in the East, Central and Southern African Region for both travel and cargo • Increased business investment in and around airports. • Improved air transport in the country and linkage to other modes of

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
	<p>Poor maintenance of aerodromes.</p> <p>Current terrestrial based CNS/ATM system infrastructure does not meet air traffic operational requirements in accordance with Africa and Indian ocean (AFI) plan</p>	<ul style="list-style-type: none"> GoK shall develop and maintain a satellite based CNS/ATM system to meet present and future air traffic operational requirements. 	<ul style="list-style-type: none"> To enhance access of air transport services in remote parts of the country. To develop well-maintained aerodromes that will act as strategic landing points, alternative landing points and evacuation points. To enhance safety and expedite flow of air traffic in a cost effective manner. 	<p>transit hotels, leisure parks, conference facilities etc.</p> <ul style="list-style-type: none"> Create Free Commercial Zones around selected aerodromes Adopt airport cities concept in developing Kenyan airports. GoK to appoint public and/or private agents to and maintain all aerodromes. Develop and implement national CNS/ATM plan. Develop appropriate legal and institutional framework to facilitate application of CNS/ATM technology. 	<p>transport.</p> <ul style="list-style-type: none"> Improved safety and security. Improved response to emergencies and disaster. Air traffic which is responsive to operational requirements in an efficient and cost effective manner.
Streamlining Airport Management	<p>Most aerodromes are financially unviable and this manifests itself in the serious management problems seen in terms of their operation and maintenance. Kenyan airports rely heavily on aeronautical and other user charges to finance development and management of aerodrome and services. In addition, airport management is still not fully autonomous in making operational, financial and investment decisions</p>	<p>The GoK shall encourage greater public and private sector participation in the operation, ownership and management of aerodromes.</p>	<ul style="list-style-type: none"> Improved operational, commercial and financial performance of aerodromes 	<ul style="list-style-type: none"> Develop a Comprehensive National Aerodromes Certifications System to facilitate effective designation, licensing and regulation of airports in Kenya Review the KAA Act to facilitate private sector participation in airport operations and management of financially and commercially viable airports Implement measures to control movement of birds around airports and on flight paths 	<ul style="list-style-type: none"> Increased demand for airport services by existing and new air operators Increased utilisation of non-aviation businesses around airports

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
Aviation Safety	Kenya's aviation safety standards are characterised by a number of deficiencies inter alia inadequate air navigation regulations, lack of adequate well-qualified technical personnel, lack of adequate facilities, and indiscipline by air operators.	The GoK shall ensure conformity of Kenya's Flight Safety Standards to ICAO standards and recommended practises (SARPs).	<ul style="list-style-type: none"> • Ensure that Kenyan airspace and airports are safe and secure 	<ul style="list-style-type: none"> • Re-organize KCAA in accordance with international standards to improve delivery of services • Decentralize provision of flight safety services via satellite offices. • Review regulatory provisions related to licensing of aviation personnel to conform with ICAO SARPs • Review aircraft operations regulatory provisions to conform to ICAO Annex 6 • Review regulatory provisions related to aircraft airworthiness in Kenya to conform with ICAO Annex 8 • Pursue a regional flight safety oversight institutional framework in collaboration with ICAO to harness regional synergies and share costs while integrating national flight safety • Provide KCAA with adequate resources (human and financial) to facilitate its regulatory mandate. • Develop Code of Conduct to address industry indiscipline. 	<ul style="list-style-type: none"> • Enhanced aviation safety • Achieve and maintain ICAO SARPs related to aviation safety • Achieve and retain FAA-IASA Category I status • Achieve financial and operational autonomy for the KCAA • KCAA becomes the agency for regional flight safety oversight • Improved aviation industry discipline
Airspace Management	Lack of requisite managerial and operational capacity to oversee optimal airspace utilisation. Some portions of the airspace are prohibited, restricted or danger areas and fences not available for civilian use making it cost	The GoK shall formulate a Comprehensive Airspace Planning and Management Policy.	<ul style="list-style-type: none"> • Ensure optimal utilisation of airspace between the civilian and military users. 	<ul style="list-style-type: none"> • Strengthen Civil-Military coordination committee • Develop a clear policy on the use of outer airspace • Develop human resource capacity in airspace planning and management 	<ul style="list-style-type: none"> • Efficient airspace utilisation • Reduced flight unit costs

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
	inefficient to users. Economic potential of outer airspace has not been fully exploited through participation in airspace programmes				
Aircraft Accident Investigation	Lack of an operational independent aircraft accident and incidents investigations entity established in accordance with ICAO SARPs, resulting in lack of accident reports and their filing.	The GoK shall operationalise an Independent National Air Accident Investigation body responsible for air accident investigations nationally.	<ul style="list-style-type: none"> • Ensure transparent, independent, professional and expeditious investigation of aviation accidents and incidents 	<ul style="list-style-type: none"> • Operationalise the Independent National Air Accident and Incident Investigation function • Recruit, equip and retain personnel • Provide adequate funding to the Independent National Air Accident Investigation body 	<ul style="list-style-type: none"> • Expeditious and effective investigations of accidents and incidents whenever they happen • Unbiased feedback information & suggestions on remedial action
Enhancing Aviation Security	<p>Lack of adequate coordination between KCAA, KAA and Central Government security agencies as well as global and local terrorist actions have exposed weaknesses in the country's aviation security system. These lapses have resulted in a failure or a perceived failure to secure both passenger and freight from threats at the airports and in flight. In addition, they have adversely affected Kenya's quest for FAA Category I and ICAO classification.</p> <p>Incidences of vandalism of air navigation installation</p>	<p>The GoK shall ensure enhancement and harmonisation of aviation security systems in accordance to ICAO annex 17</p> <p>The GoK shall strengthen security at air navigation installations.</p>	<ul style="list-style-type: none"> • Ensure enhanced and sustained aviation security and preparedness at and around Kenyan airports and within Kenyan airspace. • To secure installations 	<ul style="list-style-type: none"> • Develop a Comprehensive National Civil Aviation Security Programme • Establish a National Aviation Security Training Programme • Establish a framework for the training and retraining of personnel and the provision and maintaining of proper equipment and facilities • Clarify the Legal, Institutional and Regulatory framework in relation to aviation security to bring airport security operations under the control of airport management authorities to strengthen coordination and skills development for airport security staff. • Form specialized Aviation Police. 	<ul style="list-style-type: none"> • Enhanced aviation security • Dedicated aviation security organs • Harmony in aviation security systems and organs • Empower managers of airport as the coordinators of security matters at airports • Achieve and maintain ICAO SARPs related to aviation safety • Achieve and retain FAA-IASA Category I status. • Interruption of

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
				<ul style="list-style-type: none"> • Implement effective screening of all passengers and freight • Institute audit procedures for key security systems and procedures • Enhance public awareness of their role in ensuring aviation security. • Provide twenty-four hours security surveillance at installations. 	services will be minimised
Search and Rescue	Inadequate operational capacity to deliver efficient aeronautical search and rescue services at national and regional levels as well as co-ordination between aeronautical, maritime, and military search and rescue	The GoK shall ensure proper equipment and maintenance of search and rescue centres as well pursue effective national and regional coordination of the same.	- Ensure availability of effective aeronautical search and rescue capabilities commensurate with national, regional and international obligations	<ul style="list-style-type: none"> • Search and Rescue (SAR) Centres be equipped with required facilities • Develop appropriate institutional and legal framework to guide SAR operations at local and regional levels. • Develop guiding protocols and procedures to facilitate effective coordination of SAR activities • Retention and continuous training of staff to ensure adequate SAR capacity at all relevant agencies • Facilitate quick cross-border responses to accidents and disasters, cutting down on protocols and bureaucracies • Develop framework for sharing SAR resources 	<ul style="list-style-type: none"> • National capability for SAR at the national, regional and international levels developed
Enhancing Checks against Biological, Chemical and Other Forms of Threats to Consumer and	Insufficient equipment and trained personnel to deal with port health, matters related to dangerous pests, diseases and noxious weeds, and international garbage. In addition, there are inadequate human, plant and animal quarantine facilities at	The GoK shall ensure that biological, chemical and other threats to consumer and national health transported to Kenyan aerodromes and having potential to spread within and without Kenya are	- Ensure availability of effective capacity to deal with port health matters, dangerous pests, diseases, noxious weeds, and international garbage to acceptable international	<ul style="list-style-type: none"> • Equip Port Health with adequate personnel and equipment and institutionalise continuous training to strengthen human resource capacity and response procedures. • Equip KEPHIS with adequate 	<ul style="list-style-type: none"> • Enhanced capacity to deal with port health, matters related to dangerous pests, diseases and noxious weeds, and international

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
National Health	our airports that meet international standards	adequately dealt with.	standards	<p>personnel and equipment and institutionalise continuous training to strengthen human resource capacity and response procedures.</p> <ul style="list-style-type: none"> • Equip animal health section with adequate personnel and equipment and institutionalise continuous training to strengthen human resource capacity and response procedures. 	garbage.
Streamlining Land Use Within and Around Aerodromes	Uncoordinated and conflicting land use around aerodromes thus endangering aviation safety and security as well as compromising aerodrome viability	The GoK shall ensure enforcement of land use planning regulations around airports	<ul style="list-style-type: none"> • Ensure aviation safety, security and expansion of aerodromes are not compromised 	<ul style="list-style-type: none"> • Enforce development control measures within and around airports in consultation with KCAA and KAA 	<ul style="list-style-type: none"> • Improved coordination of land use planning and management around airports • Enhanced aviation safety and security
Liberalisation of air transport	limited local participation in international airline operation use of market access tools to circumvent BASAs and regional obligations and also endanger fair competition; fares and tariffs charged do not reflect costs of operation; Lack of a clear position by the GoK	The GoK shall ensure provision of air services between Kenya and other States is governed by principles of equal opportunity and mutual reciprocity to advance national interests	<ul style="list-style-type: none"> • Enhance linkages between Kenya and other states • Facilitate market access for Kenyan airlines • Enhance aviation activities in the country 	<ul style="list-style-type: none"> • Fully support and implement EAC, COMESA and YD provisions • Continually negotiate with partner states in respect of Air Service Agreements 	<ul style="list-style-type: none"> • Increased market access by Kenyan airlines • Increased linkages to other states • Strengthening JKIA as the premier hub in the region

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
	on whether air transport liberalisation matters should be under ICAO or the WTO; Lack of market access to domestic airlines to provide transport services to tourists.	The GoK shall continue multiple designation of qualifying Kenyan airlines and cautiously encourage airline cooperative ventures	<ul style="list-style-type: none"> • Maximise opportunities in the local marketplace • Increase consumer choice • Facilitate competitiveness of the Kenyan airline industry by creating a wide spread and reliable network of domestic air services to tourist destinations. • Facilitate transfer of skills to local aviation industry and encourage domestic entrepreneurs in the industry 	<ul style="list-style-type: none"> • The aeronautical authority will deal with cooperative market arrangements e.g code sharing, franchising, alliances etc. within BASAs • Domestic cooperative arrangements should be encouraged, so long as they benefit involved parties and the economy and do not infringe on competition laws. 	<ul style="list-style-type: none"> • Enhanced access by Kenyan airlines to external markets • Achieve fair competition and market access to the airline market
		The GoK shall provide market access for airlines to provide competitive air services to tourists	<ul style="list-style-type: none"> • Improve accessibility to tourist and other economically viable areas 	<ul style="list-style-type: none"> • Continue to maintain airstrips, tourist and other economically viable areas 	<ul style="list-style-type: none"> • More airlines hence improved air transport services
		The GoK shall support the retention of air transport liberalisation issues under ICAO	<ul style="list-style-type: none"> • Facilitate gradual liberalisation taking into account the technical aspects of aviation 	<ul style="list-style-type: none"> • Lobby for ICAOs retention of air transport liberalisation issues by seeking compromise between ministry of transport and communication and ministry of trade. 	<ul style="list-style-type: none"> • Achieve liberalisation without compromising the national interest
Licensing	uncoordinated licensing of ad hoc cargo operators; Irregular licensing of travel agents lack of objective, uniform and	The GoK shall formulate clear criteria and transparent procedures for licensing scheduled and non-scheduled	<ul style="list-style-type: none"> • Ensure fair competition and discourage unqualified 	<ul style="list-style-type: none"> • Detail criteria for licensing and designation of both scheduled and non-scheduled airlines • Strict compliance with licensing 	<ul style="list-style-type: none"> • Streamlined and transparent licensing and designation criteria and

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
	transparent licensing criteria and procedures; negative effect of wet leases on the operations of domestic operators;	airlines The GoK shall effect the transfer of licensing of travel agents to MOT	operators • facilitate Kenyan citizens participate in air transport • Support growth of unscheduled domestic charters into scheduled operations	and designation criteria and procedures • Discourage long-term wet leasing of aircraft • Develop an incentive framework to enable scheduled operations to remote parts of Kenya	procedures • Local participation in aviation
Air Cargo operations	weakening of the cooperative movement; weakening of small-scale farmer umbrella bodies especially HCDA;	The GoK shall facilitate the small scale farmer through pre-export logistics.	• Increase air cargo supply from small scale farmers.	• Strengthen small scale farmer umbrella bodies to limit exploitative behaviour of middlemen • Revamping of the HCDA; • Expand ground handling cargo services	• Increased cargo and cargo flights
Fares and Tariffs (Passengers and cargo)	Looming phasing out of the IATA Tariff coordination mechanism Fares and tariffs charged do not necessarily reflect costs of operation; Predatory fares and tariffs	The GoK shall continue supporting the integrity of the IATA Tariff Coordination machinery and establishment of an Africa Air Tariff Conference and ensure that tariffs reflect operating costs	• Ensure elimination of predatory pricing, unfair competition, or exploitation of consumers	• Encourage Kenyan carriers to participate in airline fora on pricing. • International airfares and cargo rates from Kenya, domestic air fares and local charter prices will be regulated by establishing bands of maximum and minimum fares and rates based on filed tariffs. • Harmonise tariffs to reflect cost of services locally and within the region	• Stability and Viability in the Market Place • Strengthen the airline market
Commissions to Travel Agents	Disputes between airlines and travel agents regarding applicable commissions.	The GoK shall encourage regular consultations between representatives of travel agents and airlines on matters affecting mutual and consumer interest	• Facilitate mutual and beneficial coexistence of travel agents and airlines in cognisance of benefits to the national economy	• Establishment of a forum for mutual consultations and consensus between airlines and travel agents	• Stability and harmony in the industry • Easier access to ticket sales points in the country

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives and consumers	4 Strategy	5 Expected Outputs
Human Resource Development	Lack of prescribed, appropriate and relevant curricula, high training costs, inadequate licensing, approval and regulation of training schools and an emerging human resource generational gap in aviation	The GoK in conjunction with aviation industry stakeholders shall facilitate the training of the required personnel	<ul style="list-style-type: none"> Facilitate development of an adequate and well trained human resource to enable industry development and growth 	<ul style="list-style-type: none"> KCAA in liaison with MoT will develop the East African School of Aviation into a “Centre of Excellence” in aviation training and gradually delink itself from the institution MoT, KCAA, KAA and other stakeholders undertake a standardized curriculum development and accreditation system for training various levels of expertise in aviation All aviation training schools to get KCAA certification as required by ICAO Incentives to lower training costs Establish a Training Levy for the aviation industry 	<ul style="list-style-type: none"> Development and retention of adequate human resource base Eliminate generation gap Reduced training costs EASA established as a “Centre of Excellence” in aviation training Elimination of sub-standard training institutions Well trained aviation personnel
Environmental issues	<ul style="list-style-type: none"> Aircraft noise and other emissions beyond acceptable levels, and aircraft engine emissions are emerging as challenges at Kenyan aerodromes. This situation is compounded by human settlement encroachment of airport land. Uncontrolled disposal of waste including abandoned and unused aircraft at aerodromes 	The GoK shall ensure compliance with ICAO minimum SARPs and applicable national laws in respect of environmental protection The GoK will enforce disposal of abandoned aircraft and waste disposal	<ul style="list-style-type: none"> Ensure reduction of the negative effects of the aviation industry on the environment To enhance a clean, safe and secure environment within airport operation area 	<ul style="list-style-type: none"> KCAA and KAA will develop and institute environmental monitoring mechanisms to ensure compliance with ICAO standards Air operators comply with local and international regulations governing air, ground and water pollution Enforce land use plans around airports KAA in conjunction with KCAA to be empowered to dispose such aircraft and waste. 	<ul style="list-style-type: none"> Mitigation of environmental effects of aviation
Service Delivery in the Aviation Industry	Lack of internationally acceptable service delivery standards at airports by customs, immigration, police, ground handlers, airport	The GoK in conjunction with all stakeholders shall implement delivery of internationally acceptable	<ul style="list-style-type: none"> Ensure delivery of quality services in the industry 	<ul style="list-style-type: none"> Development of Client Service Charters by all relevant institutions and agencies Training of human resource 	<ul style="list-style-type: none"> Internationally acceptable standards of service delivery Passenger comfort

Policy Intervention Area	1	2	3	4	5
	Critical Issues	Policy Statements	Policy Objectives	Strategy	Expected Outputs
	management etc.	standards of service in aviation industry.		<p>personnel on customer service delivery</p> <ul style="list-style-type: none"> • Establish Airports Standards Unit • Development of ethics and code of conducts for the industry. 	and satisfaction
Legal and Regulatory Framework	<p>Some aspects of the legal framework are not in conformity with international trends as well as failure to domesticate certain international treaties, has limited application of key aviation conventions. Further, there is lack of harmony between the Civil Aviation Act and the KAA Act. Moreover, the State Corporations Act constrains the operational and financial autonomy of the KAA and the KCAA.</p> <p>Inadequate licensing, designation and certification criteria and application. In addition some of the current BASAs are restrictive and constrain industry growth.</p> <p>Lack of a comprehensive, expeditious, independent dispute resolution mechanism to arbitrate between policymakers, regulators, service providers and consumers</p> <p>Lack of framework for ensuring fair competition and dispute resolution</p>	<p>The GoK shall ensure the development of a legal and regulatory framework supportive of a modern, safe, secure and thriving aviation industry</p> <p>GoK shall ensure fair competition and expeditious dispute resolution in aviation</p>	<ul style="list-style-type: none"> • Establishment of a legal and regulatory framework supportive of a modern, safe, secure and thriving aviation industry • Facilitate fair competition and industry harmony 	<ul style="list-style-type: none"> • Domesticate ratified international conventions • Harmonise the Civil Aviation and KAA Acts • Disapply the State Corporations Act to grant operational and financial autonomy to the KCAA and the KAA • Periodic review of the civil aviation regulations to conform to current ICAO SARPs • Institute and uniformly apply objective and transparent criteria and processes • Proactive identification and review of restrictive BASAs to advance national interest • Develop an Airport Standards Unit to ensure maintenance and upholding of defined operational as well as other standards • Establish independent dispute resolution mechanisms to arbitrate between policymakers, regulators, service providers and consumers 	<ul style="list-style-type: none"> • Updated, modernised and harmonised legal framework • Operational and financial autonomy for the KCAA and KAA • Clarified and mutually supportive mandates for the KCAA and KAA • Enhanced service delivery • Aviation Industry growth
Institutional Framework	Lack of clear separation of policy making, regulatory and service provision functions. In addition, there is lack of clear responsibility for operation and maintenance of minor aerodromes. Further,	The GoK shall ensure the development of an institutional framework that clearly delineates policy making, regulatory and service provision roles in the	<ul style="list-style-type: none"> • To develop an effective and efficient institutional framework fostering service 	<ul style="list-style-type: none"> • Review the Civil Aviation and KAA Acts to separate regulation and service provision • Assignment of operation and maintenance of unmanned airstrips to capable authorities 	<ul style="list-style-type: none"> • Streamlined and orderly institutional framework enhancing safety, security and service delivery in an

Policy Intervention Area	1 Critical Issues	2 Policy Statements	3 Policy Objectives	4 Strategy	5 Expected Outputs
	aerodrome operators lack authority to coordinate security matters at aerodromes	aviation sector	delivery in a sustainable manner	<ul style="list-style-type: none"> Strengthen interagency coordination mechanisms envisaged under ICAO SARPS Re-engineer business processes policy making, regulatory, and service provision levels to ensure expeditiously service delivery Apply COMESA, SADC and EAC Competition Rules and Regulations Empower KAA as the agency responsible for security matters at major airports 	<p>efficient and effective manner</p> <ul style="list-style-type: none"> Harmony in the market place.
Funding Framework To Support Aviation Industry Growth	<p>Inadequate aviation infrastructure and services and the maintenance thereof coupled with an emerging need for enhanced safety, security, consumer comfort, and human resource development have created a gap that the existing funding framework is unable to meet on a sustainable basis. This situation has been constrained by inelasticity of traditional aeronautical sources.</p> <ul style="list-style-type: none"> Airline operators are also constrained by the high interest rate regime locally, high country risk rating, and the huge capital outlays required to finance their operations. Local insurance companies have inadequate capacity to provide insurance cover for a number of aviation operations. 	The GoK shall pursue efficient utilisation of existing sources and facilitate application of alternative funding avenues for provision of aviation infrastructure and services	<ul style="list-style-type: none"> Facilitate sustainable funding framework for the aviation industry growth. 	<ul style="list-style-type: none"> Ensure all revenue raised in aviation is applied for development of aviation infrastructure and services Pursue private sector participation and ownership in the management of aerodromes Fund the infrastructure, operations and management of the strategic aerodromes Provide the KCAA with sufficient funding to enable them effect their mandate to internationally acceptable standards Aggressively pursue and participate in international programmes supportive of development of the sector Provide support to the aviation industry in the event of major emergencies e.g. War Risk Insurance Cancellation 	<ul style="list-style-type: none"> Sustainable funding for aviation industry growth
Aviation statistics	Lack of adequate timely and	The GoK shall establish a	• To develop a	• Harmonise aviation data	• Comprehensive and

Policy Intervention Area	1	2	3	4	5
Policy Intervention Area	Critical Issues	Policy Statements	Policy Objectives	Strategy	Expected Outputs
	reliable statistical data for planning and policy formation.	central planning unit that will handle collection and compilation of aviation statistics including conducting research in aviation industry.	databank of aviation statistics that is accurate, timely, reliable and accessible to users	collection instruments <ul style="list-style-type: none"> • Apply the statistics ACT cap112 in enforcing supply of air traffic data. • Encourage data sharing 	up to date aviation data base

Policy Intervention Area	6	7.		9	10	11
Policy Intervention Area	Actions to be taken	Time Frame	Responsibilities	Indicators of success	Means of verification	Important assumptions
Integrating Aviation Services with the National Economy	a) Build, expand, extend roads and railway to major airports b) Establish industrial, commercial and leisure parks within the vicinity of major airports. c) Strengthening produces co-operatives at all levels. d) Increase value added into the product through increased domestic processing	MT/L T ST/M T ST ST	a) Ministry of PW, MoT, Kenya railways, local authorities and Municipalities. b) Ministry of Trade local authorities and private sector.	a) Efficient integration of roads and railway transport with major airports. b) Kenyan airports being major centers of commercial and industrial activities	a) Increased volume of road and railway passengers and freight to/from the from the airports through data. b) Trade data	a) Availability of funding and political goodwill. b) Favourable condition on entry and exit. Competitiveness of Kenyan goods and services.
	a) Build, rehabilitate, maintain the runway terminal buildings and ancillary facilities. b) Modernize, build maintain and manage air navigation facilities.	ST MT LT ST MT LT	KCAA, MoT, Min Of Finance	Completion of physical facilities	Certificate of completion attainment of ICAO standards.	a) Availability of funds. b) Efficiency of implementing agencies.
Strengthening Aviation Infrastructure	a) Progressively replace the existing ground based air navigation system with the CNS/ATM system in accordance with ICAO implementation for the AFI region. b) Review the civil aviation act and the institutional framework of KCAA. c) GoK to provide budgetary	ST MT LT	MoT, KCAA, KAA, Air operators, aviation stakeholders MoT, KCAA and AG chambers. MOF, MoT, KAA,	Full adoption of the CNS/ATM system. Legislation of the revised civil aviation Act.	ICAO audit reports. An amended civil aviation Act.	Availability of funding and availability of qualified manpower. Political goodwill and sustained financing.

Policy Intervention Area	6	7.		9	10	11
	Actions to be taken	Time Frame	Responsibilities	Indicators of success	Means of verification	Important assumptions
	allocation for maintenance of minor aerodromes. d) Encourage private sector participation in maintenance of minor aerodromes.	ST I ST I MT	KWS, Local authorities and municipalities. Private sector.	Increase in traffic in minor aerodromes. Increased number of aerodromes.	Aeronautical information public. (AIP). Statistics of passenger and freight traffic.	Availability of funding. Interest of private sector participants. Local authorities/ municipalities and KWS have the required capacity to maintain the aerodromes.
Streamlining airport management.	a) Implement ICAO SARPs on aerodrome certification. b) Undertake feasibility study on private sector participation in air port operations and management c) Strengthen implementation of the relevant regulations on control of bird movements and habitation d) Strengthen implementation of by-laws regulating certain businesses around the airports.	ST ST ST ST	KCAA KAA KAA, KCAA, MENR, Local authorities, KWS, in conjunction with museums of Kenya KAA, KCAA, Local authorities.	Conformity of aerodrome certification systems with ICAO SARPs Adoption of the recommendations of the feasibility study report by the Government. Reduced incidences of bird strikes around airports. Reduced incidences of bird strikes	ICAO audit reports Feasibility study reports Data on incidence of bird strike Data on incidences of bird strike.	a) The relevant institutions have required capacity to implement ICAO SARPs b) Availability of funds to finance study c) Competence of the firm conducting the study. Compliance with regulations and by laws by concerned agencies.
Aviation Safety	a) Provide adequate funding to KCAA and ensure that the resources are efficiently utilized. b) To ensure high standards of service delivery are maintained in a sustainable manner. c) Industry experts to develop code of conduct enforcement procedures. d) Establish flight safety surveillance	ST ST ST ST ST	GoK. MoT, KCAA MoT and Industry stakeholders. MoT KCAA. MoT, A.G Chambers,	High Standards of aviation safety.	ICAO Audit report Annual reports	Availability of adequate funding. Availability of qualified and motivated manpower.

Policy Intervention Area	6	7.		9	10	11
	Actions to be taken	Time Frame	Responsibilities	Indicators of success	Means of verification	Important assumptions
	officers in designated offices. e) Ensure continuous compliance with flight safety regulation		KCAA.			
Airspace Management	a) Convene regular consultative meetings between the civil and military experts to discuss optimal use of the air space. b) Ensure optimal utilization of Kenya's airspace. c) Undertake a study on use of outer space to be used as the basis for the formulation of an outer space policy. d) Develop and implement a training programme on space planning and management.	ST ST MT MT MT	MoT, KCAA, DoD, OP MoT, KCAA, DoD MoT, OP MoT, OP	a) Reduction of existing, restricted, prohibited and danger airspace for the civilian users. b) Increased utilization of the restricted, prohibited and danger airspace by the civilian users.	Air traffic data and airspace utilization charts.	a) Cooperation by all concerned. b) Decisions made will be consistently implemented. c) Civil military coordination committee is mandated to make appropriate decisions.
Air Accident Investigation	a) Activate race aircraft accident investigation unit. b) Recruit qualified personnel c) Prepare budget to finance race operations of race department. d) Ensure that air accident investigation reports are well filed and released to the public.	I & C	MoT DPM			
Enhancing Aviation Security	a) Continuous review the national civil aviation security programme. b) Ensure effective implementation of decisions of the national civil aviation committee. c) Ensure continuous compliance with civil aviation security regulations. d	I & C I & C I & C I	MoT, KAA, AG, OP, KP. MoT, KAA, AG, OP, KP. MoT, KAA, AG, OP, KP.	a) Conformity to ICAO aviation standards on aviation security. B) Attainment of FAA, IASA category of ranking.	ICAO audit report certifying that the standards have been complied with. Authorization of scheduled air services between the USA and the Kenyan government.	a) Cooperation between various security agencies. b) Political goodwill. c) Availability of political goodwill. SAME AS a, b, c ABOVE.

Policy Intervention Area	6	7.		9	10	11
	Actions to be taken	Time Frame	Responsibilities	Indicators of success	Means of verification	Important assumptions
	<p>f) Establish an aviation security oversight agency.</p> <p>g) Continuous compliance with ICAO annex 17 on aviation security.</p> <p>h) Integrate and co-ordinate the national civil aviation security programmes with those of national security programme.</p> <p>i) Sensitize the public on their role and responsibility of maintaining security.</p> <p>j) Ensure involvement of the local security organs, where the installations are located</p>	<p>ST</p> <p>I & C</p> <p>I & C</p> <p>I & C</p> <p>I</p>	<p>MoT, KAA, AG, OP, KP.</p> <p>KCAA, KAA, MoT.</p> <p>KCAA, KAA,</p> <p>KAA, KCAA, KP</p> <p>Relevant district security committees. KCAA</p>	<p>Reduced incidences of vandalism of air navigation installations.</p>	<p>Inspection reports.</p>	<p>Cooperation of district security committee.</p>
Search and Rescue	<p>a) Provide sufficient funds for equipping SARs operations.</p> <p>b) Enact regulations to empower SAR coordinators to enable them mobilise resources internally and within the region</p>	<p>ST & C</p>	<p>GoK, MoT, KCAA, OP, DoD, KPA, EAC, ICAO.</p>	<p>a) Efficient coordination of SAR incidences.</p> <p>b) Availability of trained personnel.</p>	<p>a) Protocols and regulations being in place.</p> <p>b) Active SARs response centers.</p>	<p>a) Availability of funds.</p> <p>b) Co-operation between relevant agencies locally and within the region.</p>
Enhancing Checks against Biological, Chemical and Other Forms of Threats to Consumer and National Health	<p>Provide sufficient funds for equipment and capacity building.</p>	<p>ST & C</p>	<p>GoK, MoH, KEPHIS, Ministry of Agriculture, Ministry of livestock development.</p>	<p>a) Enhanced capacity to handle biological, chemical and other forms of threats to consumer and natural health.</p> <p>b) Availability of sufficient equipment and quarantine facilities at Kenyan aerodromes.</p>	<p>Personnel/assets register.</p>	<p>Availability of funds.</p>

Policy Intervention Area	6	7.		9	10	11
	Actions to be taken	Time Frame	Responsibilities	Indicators of success	Means of verification	Important assumptions
				c) Availability of trained personnel.		
Streamlining Land Use Within and Around Aerodromes	<p>a) Enforcement and implementation of existing laws and regulations on land use and planning around aerodromes</p> <p>b) KCAA and KAA to be involved in all decisions regarding land use and physical planning in and around aerodromes.</p> <p>c) Corrective action to address the existing infringements of current regulations and laws on land use and planning around airports.</p> <p>d) Undertake a national airports systems master plan</p>	<p>ST & C</p> <p>ST & C</p> <p>ST & C</p> <p>ST</p>	GoK, KAA, KCAA, Local authorities, Ministry of lands	<p>Coordinated land use and planning around aerodromes.</p> <p>An updated master plan</p>	Inclusion of KCAA and KAA in decision in land use planning	<p>Demolition of structures infringing on laws and regulation on land use planning.</p> <p>Repossession of illegally acquired airport land.</p> <p>Political goodwill and co-operation.</p> <p>Sufficient funding</p>
Liberalization of air transport.	<p>Implementation of YD, EAC, COMESA air transport provisions by the member states.</p> <p>Publication of guidelines on operation of ITCs that fully incorporate local operators.</p> <p>Better coordination between Ministry of Trade, MoT, and ICAO/WTO air transport issues.</p>	I & C	<p>MoT, Ministry of Trade,.</p> <p>MoT, KATO, Ministry of Tourism, KAAO, Ministry of Trade</p>	<p>More liberalized air transport within the region and continent.</p> <p>Elimination of monopoly</p> <p>Clear GoK position on ICAO/WTO based on national interests.</p>	<p>Number of liberalized BASA's.</p> <p>Published guidelines.</p> <p>Number of operators in ITC operations.</p>	<p>A growing air travel industry.</p> <p>Capacity of local operators to provide services.</p>
Licensing	<p>a) KCAA in continuous consultation with stakeholders develop a licensing criterion for all categories of air operations.</p> <p>b) Review the relevant sections of the civil aviation act to reflect changes in the licensing criterion.</p>	<p>I & C</p> <p>ST</p>	<p>KCAA, MoT, Stakeholders.</p> <p>MoT, KCAA, AG. Chambers.</p>	A licensing criterion more responsive to industry needs	A documented criterion on licensing	<p>Availability of trained manpower.</p> <p>Goodwill and cooperation of stakeholders</p>

Policy Intervention Area	6	7. Time Frame	Responsibilities	9	10	11
	Actions to be taken			Indicators of success	Means of verification	Important assumptions
	c)					
Air Cargo	<p>Study to determine cargo tariff differentials between Kenya and other countries.</p> <p>Establish a consultative forum between HCDA cargo operations and MoT.</p>	I & C	MoT, KAA, HCDA and air cargo operations.	<p>Competitive air cargo tariffs</p> <p>Increased cargo volumes.</p>	Export air cargo statistics	<p>Competent manpower</p> <p>Cooperation and goodwill from players</p>
Fares and Tariffs	<p>Collection and analysis of market data.</p> <p>Enforcement of tariff bands</p> <p>Develop capacity to collect, analyse information and to enforce compliance</p> <p>Consider where appropriate a means of encouraging scheduled operations to remote areas.</p> <p>Develop tariffs that are based on the cost of operations</p>	I & C	MoT, KCAA, KAA	<p>Compliance with tariff bands.</p> <p>Elimination of predatory pricing.</p> <p>Stable airline industry</p> <p>Financial self sufficiency</p>	Stable air line prices	<p>Availability of capacity to collect and analyse statistics.</p> <p>Availability of capacity to police and enforce compliance</p>