RESEARCH, INNOVATION AND TECHNOLOGY SECTOR (R.I.T)

**MEDIUM TERM EXPENDITURE FRAMEWORK
2010/11–2012/13 REPORT**

January 2010

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LIST OF ACRONYMS

ADBM	Analogue-Digital Broadcasting Migration
ADM	Analogue-Digital Migration
ARV	Anti-Retro Viral
BBC	Bacterial Blight of Coffee
BPO	Business Process Outsourcing
BKB	Brand Kenya Board
CBD	Coffee Berry Disease
CBK	Coffee Board of Kenya
CBO	Community Based Organisations
CCK	Communications Commission of Kenya
CHE	Commission for Higher Education
CLR	Coffee Leaf Rust
CMS	Content Management System
CRF	Coffee Research Foundation
DNA	Di-Nucleic Acid
DMS	Disease Monitoring and Survey
DRSRS	Department of Resources Surveys and Remote Sensing
DSU	District Service Unit
DTC	Digital Television Channel
ECN	Educational Communication Network
E-GOVT	E-Government
ENG	Electronic News Gathering
EMACS	Electronic Messaging and Collaboration System
FAO	Food and Agriculture Organisation
FONN	Fibre Optic National Network
FMD	Foot and Mouth Disease
GCCN	Government Common Core Network
GIS	Geographical Information System
GITS	Government Information Technology Services
HELB	Higher Education Loans Board
HIV/AIDS	Human Immuno-Deficiency Virus/Acquired Immuno-Deficiency Syndrome
IAEA	International Atomic Energy Agency
ICT	Information Communication Technology
INTROMID	Institute of Tropical Medicine and Infectious Diseases
IP	Internet Protocol
IPRS	Integrated Population Registration System
ISO	International Standards Organisation
ITU	International Telecommunications Union
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KAPP	Kenya Agricultural Productivity Programme
KARI	Kenya Agricultural Research Institute
KBC	Kenya Broadcasting Corporation
KEFRI	Kenya Forestry Research Institute
KESREF	Kenya Sugar Research Foundation

KEMRI	Kenya Medical Research Institute
KFC	Kenya Film Commission
KFCB	Kenya Film Classification Board
KICC	Kenyatta International Conference Centre
KICTB	Kenya Information Communication Technology Board
KIMC	Kenya Institute of Mass Communication
KIPPRA	Kenya Institute of Public Policy Research and Analysis
KIRDI	Kenya Industrial Research and Development Institute
KMFRI	Kenya Marine and Fisheries Research Institute
KTCIP	Kenya Transparency and Communication Infrastructure Project
KNA	Kenya News Agency
KNBS	Kenya National Bureau of Statistics
KRA	Kenya Revenue Authority
KSB	Kenya Sugar Board
KTDA	Kenya Tea Development Authority
KVDA	Kerio Valley Development Authority
KYBB	Kenya Year Book Board
LAN	local Area Network
MCK	Media Council of Kenya
MIS	Management Information Systems
MoHEST	Ministry of Higher Education, Science and Technology
MOIC	Ministry of Information and Communications
MMU	Multi Media University College Of Kenya
MOU	Memorandum of Understanding
MU	Moi University
MTEF	Medium Term Expenditure Framework
MTP	Medium Term Plan
NCRC	National Crime Research Centre
NCS	National Communications Secretariat
NCS&T	National Council for Science and Technology
NDC	National Data Centre
NOFBI	National Optic Fibre Backbone Infrastructure
NGO	Non-Governmental Organisations
OB	Outside Broadcast
PCK	Postal Corporation of Kenya
PRSP	Poverty Reduction Strategy Paper
PSTN	Public Switched Telephone Network
RIT	Research, Innovation and Technology
RSC	Regional Steering Committee
RWA	Russian Wheat Aphid
SNG	Satellite News Gathering
STI	Science, Technology and Innovations
TIVET	Technical, Industrial, Vocational and Entrepreneurial Training
TIVETA	Technical, Industrial, Vocational and Entrepreneurial Training Authority
TEAMS	The East Africa Marine Systems
TRFK	Tea Research Foundation of Kenya

TTI	Technical training Institutes
UK	United Kingdom
UNIPROM	A drug that inhibits mother to child infection
UPS	Uninterruptible Power Supply
USA	United States of America
WAN	Wide Area Network

EXECUTIVE SUMMARY

The introduction of the Research, Innovation and Technology (RIT) Sector during 2009/10-2011/12 MTEF period marked an important policy decision towards making Kenya knowledge based economy. The Sector's main responsibility is to facilitate the process of acquiring new knowledge in a systematic manner in order to produce and /or improve products and processes. The Sector therefore continues to explore opportunities associated with the convergence of research, innovation and technology to spur economic growth in the country as envisaged in Kenya Vision 2030 (KV30)
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The sector's vision is *"To be the global leader in Research, Innovations and Technology"* while the mission is *"To be the leading driver of the Kenyan economy through Research, Innovations and Technology by generating and promoting innovations, research and technologies".*

The Sector's objectives include; developing and promoting research, innovation and technology for high value products and services; developing modern national ICT infrastructure for sustainable development; developing and strengthening training capacity of higher education institutions; formulating human resource development policies that attract and retain professionals ; strengthening systems for the creation, translation of data, knowledge and dissemination of information and; developing and strengthening policies and capabilities of Sector institutions.

During the 2009/10 financial year the sector was allocated a total of **KES 28,047,000,000** under recurrent and **KES.6, 604,000,000** under development votes against Sector requirements of **KES 51,806,518,747** and **KES 38,947,268,724** respectively. The allocated funds are being used to fund projects and activities under the following programmes in the order of their priority during the 2009/10 Financial Year.
1. Human resource development;
2. ICT infrastructure development;
3. Research and Innovations;
4. Information and Communication services;
5. Data Management and;
6. Development of policy, legal and institutional framework.

Development projects in the RIT sector are an amalgamation of various projects from ICT and ST&I sectors which were on their own during the previous MTEF periods. These projects include national research database, and several strategic collaborations in research, science and technology. In addition, the ST&I sub-sector upgraded several middle level colleges to University colleges. The ICT sub-sector on the other hand, experienced expansion in telecommunication infrastructure, reduction in communication costs and increased access to information and investment in ICT based industries. The enactment of the Kenya Communications Amendment Act 2008 is expected to spur development of e-commerce in the economy. In the period under review the ICT sub-sector also developed several integrated information systems that have tremendously improved public service delivery.

During the current financial year the Sector completed the laying of the under-sea fiber optic cable connecting the Eastern African region to the rest of the world. The sector has also seen

various developments in the research field where an anti-Malaria drug is being tested. The details of past performance of other sub-sectors are outlined in chapter 2 of this Report.

Despite the stated achievements, the Sector has an accumulated recurrent pending bill amounting to KES 2.5Billion mainly due to liquidity problems in the FY 2008/2009 occasioned by a host of shocks including; post election violence , high food and fuel prices, draught and global financial crisis .

To implement the prioritized programmes in FY 2010/11, the Sector required a total of **KES. 84 billion of which 55 and 29 was to finance recurrent and development expenditures respectively. However due to financial constraints, the Sector has been allocated a total of KES 45.5 billion gross, of which KES 32.6 billion and KES 12.9 billion will finance recurrent and development expenditures respectively. This implies a financial deficit of KES 35.1 billion.** The gross amount of **KES** 45.5 billion includes A-I-A totaling **KES 154 million** and indicative Donor funds amounting to **KES. 5.5 billion** Leaving net GOK funding of KES 39.9 billion for both recurrent and development expenditures.

The Sector faces various challenges that affect smooth implementation of the programmes. These include; constraint funding, lags in the MTEF cycle, slow and low adoption of innovations and technologies and implementation of research findings, brain circulation, intellectual property rights and cyber security among others.

In conclusion, the Sector is on track in implementing its programmes for the MTP 2008-2012. However, there is need to increase the Sector funding to enable it effectively implement its prioritized programmes geared towards realization of the Kenya Vision 2030.

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CHAPTER ONE

1.0   INTRODUCTION

1.1   BACKGROUND

Most modern economies hinge their growth strategies on their resources, research, innovation and technological abilities. The introduction of Research, Innovation and Technology (RIT) Sector during 2008/09-2011/12 MTEF period marked an important policy decision geared towards making Kenya knowledge based economy. The Sector has a major responsibility of facilitating the process of acquiring new knowledge in a systematic process in order to produce or improve products and processes. The Sector therefore explores opportunities associated with the convergence of research, innovation and technology to spur economic growth in the country.

The Sector integrates the Science, Technology and Innovation (ST&I) and Information and Communications Technology (ICT) sectors under Kenya Vision 2030 in order to meet the demands for global economic competitiveness, sustainable development and equity concerns. Consequently, developments of necessary scientific infrastructure, technical and entrepreneurial skills are essential pre-requisites for transforming Kenya into a knowledge based economy.

A Knowledge based economy relies heavily on innovations to transform resources into products processes and services. This requires clearly defined and supportive policies, institutional and legal frameworks that effectively address citizens' needs and aspirations.

In order to ensure effective exploitation of knowledge, the government plans to;
- Provide economic and institutional systems with incentives for efficient use of existing knowledge; new knowledge creation; and entrepreneurship;
- Develop an educated and skilled population that can create, share and use knowledge well;
- Develop a dynamic information and communication infrastructure (ICT), that facilitates collection, processing, storage, retrieval and dissemination of information and;
- Establish centres of excellence that tap into the growing stock of global knowledge, assimilate and adapt to local needs, while furthering new knowledge and technologies.

The increasing complexities in the business environment, resource scarcity and the rising customer expectations are causing economic shifts that destabilize world economies. Only countries with RIT capabilities can ensure sustainability and development of their economies. The RIT Sector is therefore expected to bring about socio-economic transformation of the country; foster national prosperity and global competitiveness, enhanced efficiency, sustained growth and promotion of value addition in goods and services.

1.1.1 The RIT Sector

The RIT Sector was borne out of the realization that the country needed to harness talent and other resources that will best position Kenya in the modern world economy. The shift to the knowledge-led economy, the widening digital gap, the need to develop local capacity for research and innovation and the demands for information for growth requires that we review our resource allocation to reflect the new strategic policy direction. The KV30 will be driven by this Sector as it forms the bed rock of the three pillars; Economic, Social and Political.

The RIT Sector is an amalgamation of the two Vision 2030 MTP sectors namely; Science Technology and Innovation (ST&I) and Information Communication Technology (ICT) sectors. The Sector comprises of two ministries, five departments and ten research institutions. The Sector is involved in capacity building and the generation, processing and dissemination of information of economic value. The composition of the RIT is as listed below in alphabetical order.

The two ministries are
- Ministry of Higher Education, Science and Technology (MoHEST) and its affiliated Institutions
- Ministry of Information and Communications (MOIC) and its affiliated institutions

The five Departments are;
- Department of Resource Surveys and Remote Sensing
- Directorate of E-government
- Government Information and Technology Services
- Integrated Population Registration System, Ministry of Immigration and Registration of Persons
- Kenya National Bureau of Statistics

Research institutions are;
- Coffee Research Foundation (CRF)
- Kenya Agricultural Research Institute (KARI)
- Kenya Forestry Research Institute (KEFRI)
- Kenya Institute Of Public Policy Research And Analysis (KIPPRA)
- Kenya Industrial Research And Development Institute (KIRDI)
- Kenya Marine And Fisheries Research Institute (KMFRI)
- Kenya Medical Research Institute (KEMRI)
- Kenya Sugar Research Foundation (KESREF)
- National Crime Research Centre (NCRC)
- Tea Research Foundation of Kenya(TRFK)

The importance of RIT in economic development has been re-emphasized by recent developments in the Sector. The success of mobile telephony, internet business and the ever increasing capability of ICT to transform the economy have a significant import to policy making and financing. The Government will continue to play a facilitative role through development and implementation of policy and regulation aimed at attracting investments within the Sector. The government recognizes information as a resource which must be

generated, collected, organized, secured and preserved to enhance national posterity. The government will continuously implement the national infrastructure programme to spur the growth of ICT services in the country. Currently the government is finalizing the provision of high speed broadband infrastructure targeting all major towns, government social and learning institutions in the country.

Research and training have always gone together. The role of tertiary and university education in particular, and the importance of research as key players in the continued growth and development of our country cannot be over emphasized. It is the priority of the government to create an enabling environment for sharing of ideas, knowledge, technology and resources, as well as developing and strengthening the country's research capacity.

1.2 SECTOR VISION AND MISSION

1.2.1 VISION: *To be the global leader in Research, Innovations and Technology*.

1.2.2 MISSION: *To be the leading driver of the Kenyan economy through Research, Innovations and Technology by generating and promoting innovations, research and technologies.*

1.3 SECTOR STRATEGIC GOALSAND OBJECTIVES

1.3.1 Strategic Goals

In the interim period 2010/11 - 2012/13 the Sector Goals are;

Table 1.3-1Sector Goals

Sector Programme	Goals
Research and Innovations	To create new knowledge and technologies
ICT infrastructure development	To develop modern ICT infrastructure
Human Resource development	To build and strengthen human capacity
Information & Communication Services	To provide quality, equitable and affordable information and communication services countrywide.
Data Management	To develop a comprehensive and reliable national database
Development of Policy, legal & Institutional framework	To formulate, review and implement appropriate policies, legal and institutional frameworks for the Sector

1.3.2 Strategic Objectives

- To develop and promote research, innovation and technologies for high value products and services.
- To develop modern national ICT infrastructure for sustainable development.
- To develop and strengthen training capacity of higher education institutions.
- Strengthen systems for the creation, translation of data, knowledge and dissemination of information.
- To develop and strengthen policies and capabilities of Sector institutions

1.4 SUB-SECTORS AND THEIR MANDATES

1.4.1 Ministry of Higher Education Science and Technology (MoHEST)

Mandate:

To formulate, promote and implement higher education, research, science, technology and innovation policy and strategies.

1.4.2 Ministry of Information and Communications (MOIC)

Mandate:
To formulate and facilitate ICT, Broadcasting and Film Development Policies, Dissemination of Public Information, Development of National Communications Capacity and Infrastructure, Development of the Film Industry and Public Relation Services

1.4.3 Department of Resource Surveys and Remote Sensing (DRSRS)

Mandate:
To collect, store (archive), analyze, update and disseminate data and information on natural resources to facilitate informed decision-making on sustainable management of natural resources with the major aim of supporting development Programmes.

1.4.4 Directorate of E-Government

Mandate:

To facilitate Government online service delivery through emerging information and communication technologies.

1.4.5 Government Information Technology Services (GITS)

Mandate:
To ensure and maintain ICT standards within Government organizations

1.4.6 Integrated Population Registration System -IPRS

Mandate:
To establish, operationalize and maintain an integrated population registration database and key supporting systems for Kenya

1.4.7 Kenya National Bureau of Statistics (KNBS)

Mandate:
Data collection, analysis and production of official statistics, dissemination of results to users and producers and archiving of survey and census data

1.4.8 Coffee Research Foundation (CRF)

Mandate:
To conduct coffee research and such other crops promoting appropriate coffee husbandry throughout Kenya, including productivity, quality, value addition and suitability of land in relation to coffee farming

1.4.9 Kenya Agricultural Research Institute (KARI)

Mandate:
To facilitate the modernization of Agricultural Sector through provision of efficient technologies that improves productivity and promotes investment in Agricultural enterprises and Agribusinesses.

1.4.10 Kenya Forestry Research Institute (KEFRI)

Mandate:
Conduct research in forestry, disseminate research findings, collaborate with other research bodies within and outside Kenya carrying out similar research; and, establish partnership with institutions of higher learning in training and in all other areas of forestry research.

1.4.11 Kenya Institute for Public Policy Research and Analysis (KIPPRA)

Mandate:
Identify and undertake independent and objective Programmes of research and analysis, including macroeconomic, inter-disciplinary and Sectoral studies on topics affecting public policy in areas such as human resource development, social welfare, environment and natural resources, agriculture and rural development, trade and industry, public finance, money and finance, macroeconomic and microeconomic modeling.

1.4.12 Kenya Industrial Research and Development Institute (KIRDI)

Mandate:
To carry out research and development in industrial and allied Technology including: Civil Engineering, Mechanical Engineering, Textile Technology, Electrical Engineering, Mining, Power Resources, Chemical Engineering, Industrial Chemistry, Food Technology, emerging technologies, Ceramics and Clay Technology and to disseminate the research findings to the Kenyan industries and society.

1.4.13 Kenya Marine and Fisheries Research Institute (KMFRI)

Mandate:
To undertake research in marine and freshwater fisheries, aquaculture, environmental and ecological studies; marine research including chemical and physical oceanography, in order to provide scientific data and information for sustainable exploitation, management and conservation of Kenya's fisheries resources and aquatic environment, and contribute to National strategies towards food security, poverty alleviation, and creation of employment

1.4.14 Kenya Medical Research Institute (KEMRI)

Mandate:
To conduct research in human health, in collaboration with institutions of higher learning in training Programmes and other organizations on matters of relevant research and to disseminate and translate research findings for evidence-based policy formulation and implementation.

1.4.15   Kenya Sugar Research Foundations (KESREF)

Mandate:
To generate and disseminate technologies and knowledge, through innovative research, for improved production, processing, value adding and marketing of the Kenyan Sugar while conserving the environment.

1.4.16 National Crime Research Centre (NCRC)

Mandate:
To carry out research into the causes of crime and its prevention and to disseminate research findings to such institutions as the Council may from time to time determine for appropriate action.

1.4.17 Tea Research Foundation (TRF)

Mandate:
To promote research and investigate problems related to tea and such other crops and systems of husbandry as are associated with tea throughout Kenya including the productivity (yield), quality and sustainability of land in relation to tea planting; and matters ancillary thereto.

1.5   AUTONOMOUS AND SEMI - AUTONOMOUS GOVERNMENT AGENCIES
The SAGAS under this Sector are shown in Table 1 below.

Table 1.5-1: Autonomous and Semi Autonomous Government Agencies

	Semi-Autonomous Government Agencies	Parent Ministry
1	Coffee Research Foundation (CRF)	
2	Tea Research Foundation of Kenya (TRFK)	
3	Kenya Sugar Research Foundation (KESREF)	Ministry of Agriculture
4	Kenya Agricultural Research Institute (KARI)	
5	Kenya Forestry Research Institute (KEFRI)	Ministry of Forestry and Wildlife
6	Kenya Marine and Fisheries Research Institute (KMFRI)	Ministry of Fisheries Development
7	Commission for Higher Education (CHE)	
8	Public Universities	
9	Higher Education Loans Board (HELB)	Ministry of Higher Education,
10	National Council for Science and Technology	Science and Technology
11	All Public Technical Training Institutes	
12	Kenya Industrial Research and Development Institute (KIRDI)	Ministry of Industrialisation
13	Kenya Medical Research Institute (KEMRI)	Ministry of Public Health and Sanitation
14	Kenya Broadcasting Corporation (KBC)	
15	Kenya Film Commission (KFC)	
16	Kenya Information Communication Technology Board (KICTB)	
17	Postal Corporation of Kenya	
18	Communication Commission of Kenya (CCK)	
19	National Communication Secretariat (NCS)	
20	Communication Appeals Tribunal	Ministry of Information and
21	Brand Kenya Board	Communications
22	Kenya Year Book Board	
23	The East Africa Marine Systems (TEAMS)	
24	Fibre Optic National Network (FONN)	
25	Gilgil Tele-communication Industries	
26	Kenya Film Classification Board	
27	Media Council of Kenya (MCK)	
28	Kenya Institute of Public Policy Research and Analysis (KIPPRA)	Ministry of Planning, National Development and Vision 2030
29	Kenya National Bureau of Statistics (KNBS)	
30	National Crime Research Centre (NCRC)	State law office

1.6   ROLE OF STAKE HOLDERS

The roles of Sector Stake holders are shown in table 2 below

Table 1.6-1: Role of Sector Stakeholders

Stakeholder	Roles
The Treasury	Programme funding and formulation of financial policies
Government ministries and agencies	Formulation and implementation of Government policies.
Development partners	Provides funds and technical support
The Public	source of data, tax payers, suppliers and consumers of services
NGOs	Supplement the Government in implementation of social programmes
CBOs	Facilitate and mobilise programme implementation and community advocacy
Academic Institutions	Provision of expertise, professionalism, human capacity building and promotion of science, technology and innovation and knowledge transfer of new innovations
International Research Institutions	Collaborative research, collaboration in programme development, policy guidelines, synergies and capacity building
Industry regulators and marketing agencies.	Marketing and Industry regulation
Private sector	Partnering with the Sector in programme development and implementation

CHAPTER TWO

2.0 PERFORMANCE AND ACHIEVEMENTS OF THE SECTOR DURING THE PERIOD 2006/07 – 2008/09

2.1 PERFORMANCE OF PROGRAMMES

The RIT sub-sectors were implementing individual programmes during the period under review since the RIT sector had not been constituted by then. The performance of the programmes is as shown in table 2.1 below.

2.2 Key indicators of the Sector and Sub-Sectors

The Key indicators of the Sector and Sub-sectors are highlighted in table 2.1 below. Major achievements in the Sector include the completion of laying of 5500 KM sub-marine fiber optic cable and Phase I of terrestrial national fibre optic cable network covering 5000KM, the enactment of Kenya Communication Amendment Act 2008, Operationalization of IPRS system, acquisition of remote aerial surveying systems, launching of Kenyan's analogue to digital broadcasting migration plan, privatization of Telkom Kenya Limited, licensing of two GSM operators, zero-rating of ICT equipments, installation of the National Population Register, upgrading of two polytechnics to universities, increase of public university intake from 16,000 to 20,000, operationalization of National Bio-safety Authority, launching of the Governing Council of NCRC, signing of 5 strategic collaborations (MOUs) in research, science and technology and various research findings and innovations.

Table 2.2-1: Performance of Core Programmes and Other Programmes: Key Performance Indicators of Sector and Sub-sector

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
ICT Infrastructure	**MOIC**	The East African Marine Cable System (TEAMS)	Develop and improve ICT Infrastructure	Completion of laying of 5500 km sub-marine fibre optic cable
		National Optic Fibre Backbone Infrastructure (NOFBI)	Develop and improve ICT Infrastructure	Completion of Phase I of construction of terrestrial national fibre optic cable network (5000KM)
	MIOC/KICT BOARD	Business Processes and Outsourcing (BPO)	Create employment through the growth of BPO	Cabinet Memo to establish ICT park approved, Land Identified Kenya ICT Board fully operational, Bandwidth support to BPO operators complete 2,481 dedicated seats created by Nov 2008 3 Marketing campaigns carried out in UK, USA and Canada Draft BPO Strategy developed
	KICT BOARD/ E-GOVT	Kenya Transparency Communication Infrastructure Programme (KTCIP	Improve national/ International connectivity and Bridge the digital divide	Government Ministries and Departments bandwidth requirement established (80MBs) Contract awarded to supply Bandwidth to Universities and Technical colleges Contract awarded to Network KICC Digital Village Training Curriculum developed 5 Research Institutions Identified to conduct the training 500 Youths trained in entrepreneurship skills Universal Access Fund for digital villages disbursement mechanism developed
	MOIC	Public Mass Media establishments'	Enhance capacity Building in ICT	5 Regional Film offices established.

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
		Facilities and Equipment		MOU signed between KIMC and University of Nairobi for degree programme ECN Radio 104.7 MHz station launched. Construction of perimeter wall for men's hostel at KIMC completed Construction of ablution block at KIMC completed. Drilling and equipping of Bore Hole Water supply at KIMC completed Rehabilitation of 5 blocks at KIMC completed. 92% of Radio studios, 20% of TV studios and 47% of photo-journalism studios at KIMC modernized 24 Rural resource centers established,
	E-GOVT/GITS	Local Area Network and Wide Area Network	Enhance information sharing and improve service delivery	Installation of LANs in 68% Government buildings in Nairobi completed Government Common Core Network (GCCN) completed LANs installed in 6 Provinces. Feasibility studies on LANs for districts completed.
	MoHEST	Science and Technology Parks	To nurture and incubate innovation for sustainable development.	Business plan drawn on the establishment of the first S&TP around Nairobi
Information and Communication services		National ICT Policies	Ensure efficient management and regulation of ICT sector.	Liberalized Telecommunications leading to lower telephone cost Introduced Technology Neutral Licensing Regime 4 Bills; ICT Bill, Freedom of Information Bill, Kenya Communication Amendment Bill 2008, Media Bill in the final stages in Parliament
	MOIC			

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
		News and Information services	Enhance Public Access to Information	.20,000 KNA stories 840 Features 100 cinema shows 198,000 rural press publications produced and disseminated per year
		ICT Hardware and software	Provide affordable quality ICT services	Madaraka PC developed and available in the market.
		Analogue-Digital Migration	Ensure smooth transition from Analogue to digital Broadcasting in Kenya	National Taskforce functional
		Positive Government Image	Brand Kenya and Enhance the positive image of the Government	Brand Kenya Board and Kenya Year Book Boards established and operational
		Film Industry Development	Develop, Promote and Regulate the Film Industry	400 local and international Film licenses issued, 40 documentaries on Vision 2030 produced Draft National Film Policy in Place KFCB restructuring report ready for Implementation
	E-GOVT/GITS	E-Government services	Provide efficient and effective internal government communication and information sharing	E-Government strategy revised E-mail addresses have been created for civil servants EMACS Server installation complete
Data Management	KNBS	Statistical Data Management	Coordination and supervision of the National Statistical System Producing High Quality National Statistics	• 28 Statistical Reports Produced; • Kenya National Statistical Systems in place; • Full coverage in cartographic mapping; • Census questionnaire developed and finalized ; • Population and housing census conducted and data capture in progress.
	MIRP	Integrated Population Registration System (IPRS)	Operationalization and Maintenance of the National Population Register	System Design developed. IPRS Draft Bill developed. Draft IPRS Institutional Framework Developed.

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
				National Population Register installed and waiting Commissioning. Installation of LAN at the DRA Headquarters for Automation of Refugee Registration complete Design of the third generation Identification system completed
	DRSRS	Environment and Natural Resource Information management	Promote use of geo-information for planning and decision making for sustainable management of natural resources Promote use of Geographic Information System (GIS), Remote Sensing, Databases and tools for monitoring, mapping and assessment of natural resources to enhance livelihoods	A comprehensive Kenya Atlas on changing environment developed Mapping of Mau complex to establish its current status completed Mapping and inventorying of Nairobi river basin completed Aerial surveys of northern and southern rangelands done Small format vertical aerial photography for crop production on food security done Acquisition of a Cessna 208 grand caravan in progress
	MOIC / E-GOVT	National Data Centre and Disaster Recovery Centre	Improve data storage, security access and recovery	The establishment of the centre at the design stage
Research and Innovations	**MoHEST**	Research Management and Development	To coordinate and harmonize research and development for national development.	A national research data base has been developed. 5 strategic collaborations MOUs in research, science and technology signed.
	KEMRI	Medical Research	To promote research in modern biotechnology and innovations	KEMRI Hepcell kit for diagnosis of infectious hepatitis and the Particle Agglutination (PA) kit for the diagnosis of HIV and the HLA tissue typing techniques for kidney transplants developed Establishment of the Nairobi Cancer Registry and Production Unit for

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
				diagnostic kits
			To define and investigate the incidences and prevalence of diseases and health issues	National disease surveillance and rapid response capacity for major disease outbreaks developed.
			To develop graduates with a high degree of professionalism, innovativeness and motivation.	Graduate School (the Institute of Tropical Medicine and Infectious Diseases – ITROMID) for Masters and PhD training in health sciences established
			To coordinate parasite control activities in the region.	Established 2 global centers for training in the control of parasitic
			To enhance blood safety and infection prevention	HIV1/2 Rapid testing kit KEMCOM, Produced HEPCELL Kit for Hepatitis B & C testing developed
			To improve people's health and health equity in East Africa through more effective use and application of knowledge to strengthen health policy and practice	National Study to Review existing Policy Documents and Identification of upcoming Priority National Health Policy issues in East African Community Partner States conducted:
			To strengthen research infrastructure	Research laboratories established. KEMRI's research stations established in different parts of the country
	KESREF	Sugar research	To generate crop development technologies and innovations for enhancing productivity, value addition and competitiveness of the sugar industry	Released 4 sugarcane varieties Identified 900 promising sugar cane clones Identified 2 sugarcane smut races. Published 4 peered reviewed papers Published 19 technical reports
			To generate economics and biometrics	Promoted and up-scaled 4 newly released sugarcane varieties

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
			technologies that support innovations, promoting and up-scaling technologies and innovations for enhancing productivity, value addition and competitiveness of the sugar industry	Supplied farmers with over 200 tons of treated seed cane of the new sugarcane varieties 115 hectares of healthy seed canes established 26 demonstration plots developed 27 Farmer's Research Group (FRG) registered
			To generate agricultural engineering, milling and processing technologies and innovations for enhancing productivity, value addition and competitiveness of the sugar industry	3 technical reports published on sugarcane irrigation Documented the current sugar processing systems in Kenya.
	Coffee Research Foundation	Technology development and innovation	To improve yield and quality of the resistant selections	4 coffee varieties developed
			To enhance and sustain coffee Productivity	Fertilizer regimes for 5 coffee farming systems across the agro-ecological zone developed
			To study different water placement methods for small holder coffee farmers	Developed coffee multiplication and bio-technology protocols
		Institutional Capacity Building	To understand the impact of external shocks on the viability of the coffee sector	Report on impact assessment produced training system Established
	KARI		To generate and promote technologies and innovations for demand-driven agricultural products	28 new KARI maize varieties licensed to 4 seed companies. 29 crop varieties food crops released 2 groundnuts and 2 banana 1 mango 1 Hydrang and 7 Gladiolus varieties recommended for commercialization Oil-based Foot and Mouth Disease (FMD)

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
				vaccine was formulated in collaboration with SEPPIC of France Improved CBPP vaccine tested in Narok and over 4,000 post-vaccination serum samples tested using Complement Fixation Test for protective ability

Five livestock vaccines, three disease diagnostic kits for detection and monitoring were developed

Development of simple low cost value addition processes for livestock products (milk, meat, skins and honey) under pastoral conditions |
| | | | To develop and promote markets and marketing strategies for agricultural products | 2 farmer training manuals (Small Ruminant Breeding Systems and Small Ruminant Marketing Systems) were developed Indigenous chicken production publications were revised |
| | | | To facilitate and advocate for policy options for enhancing demand-driven agricultural products | Links with private sector, NGOs, CBOs, and IARCs, sub-regional bodies and Universities for technology generation, up-scaling and commercialization of technologies strengthened. Significant contribution to the revised draft of the Kenya Bio-safety Bill and the development of a National Biotechnology Awareness Creation Strategy. |
| | | | To strengthen institutional capacity for implementing agricultural research | 4 screen houses each with a capacity of 25,000 oil palm seedlings constructed

9 forage suitability maps were developed Draft fact sheets on 15 forages were developed to be used together with |

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
				the forage suitability maps. Capacity was built for 11 staff on electronic document management and website design and management.
			To enhance the availability of knowledge, information and technologies on agricultural product.	Crop protection packages for tomatoes, Asian vegetables, snow peas, passion fruit, mango weevil and macadamia (*Phytophthora* and stink bug) were developed Makueni farmers trained in *Aloe Vera* harvesting, processing and marketing 400 micro-propagated seedlings were produced and sold. Seedling sales included 693 mangoes, 547 citrus, 1,142 TC bananas, 1,457 yellow passion and 1,900 paw paws 30 farmers from Bukura were trained on mushroom production at KARI-Kakamega 42 farmers were trained on Banana *Xanthomonas* wilt symptoms, spread and control 21 members of Githabua Murungaru Farmers Group in Nyeri trained on apple management 450 indigenous chicken were made available to farmers for breeding purposes 12 veterinarians trained on delivery of East Coast fever (ECF) immunization in Nyandarua District 77 farmer field schools were completed 268 on-farm demonstrations and field days were staged

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
				254 farmer training workshops were conducted 80 papers published in refereed journals 94 Technical publications published
	Tea Research Foundation	Tea Research	To improve and sustain productivity and quality of tea in smallholder and large estate sub-sectors.	The productivity and quality of tea in smallholder and large estate sectors improved. Adoption levels of the proven tea production and quality technologies improved
			To enhance competitiveness and profitability of Kenyan tea in conformity with international standards	Consistency of black tea quality improved by reducing fluctuations in tea processing and packaging.
			To enhance sustainability of the environment within the tea growing zones.	Technologies for the diversification value addition and branding of tea products availed.
	KIPPRA	Public Policy Research	• To develop capacities in public policy research and analysis and assist the Government in the process of policy formulation and implementation. • To identify and undertake independent and objective programme of research and analysis. • To provide advisory and technical services on public policy issues to the Government and other agencies of the Government • To undertake public policy research relevant to governance and its implications to development. • To communicate the findings and recommendations of	Supported the national planning and development in the production of the Vision 2030 and Medium Term Plan Launched the Kenya Economic Report 2009 in October 2009. Training of 10-12 Young Professionals every year. These are officers drawn mainly from Government ministries and agencies. Distribution of over 30,000 research publication every year to Government ministries, departments, agencies, universities, embassies etc.

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
			the Institute's research programmes to the agencies of the Government concerned with the implementation of public policy	
	NCRC	Crime Research	To provide a reliable data base on offenders and selected criminal Offence	National Crime Research governing council launched
	KMFRI	Fisheries Research	To undertake research aimed at increasing fisheries production.	-Draft prawn fishery management plan -Technical reports
			To undertake research aimed at increasing fisheries production	-Availability of second generation tilapia and catfish seed, -A commercial community-based seaweed nursery established at Shimoni in Kenyan South Coast, -A manual for fish farmers
			To enhance productivity of aquatic system.	-Technical reports
			To develop value added products and reduce post-harvest losses.	-Availability of improved fish smoking ovens and solar driers
			To carry out research on methods to improve livelihoods of fisheries dependent communities	Technical reports
			To ensure appropriate archiving of data, developing and disseminating of information products.	Databases and information products.
	KEFRI	Forestry Research	Support farmers with sound management and utilization principles, incentives, information, better germplasm and marketing strategies	3 species recruited, 3 products developed, 2 policy brief produced
			Rehabilitation of five water towers	Report on status of five water towers done, 3 demonstration plots established, A technical report on rates of recovery produced and 00 clients/stakeholder trained on rehabilitation techniques

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
			Bamboo Development	3 products develop, Two publicity forums held , 5 products developed, 10 artisans trained and two guidelines produced
			Conservation and management of Mangroves	One technical report, a guidelines on mangrove extraction, guidelines on rehabilitation and year
			Conservation of Medicinal Plants	An Extraction reports from one forest, two demonstration plots established and monitored, two reports on management and utilization and 10 herbalists trained
			Policy analysis in natural forests conservation and management	A status report done
			To contribute to the harnessing and development of dry land resources by generating technologies to improve woodlands management and conservation, thereby contributing to poverty alleviation at local and national levels	Technical report on characterization developed, 3 technical reports, 2 Communities linked to four traders/marketers, 1 guideline on efficient charcoal processing technologies, report on distribution and impacts of prosopis, 4demonstrations established, A report on traditional woodland management practices, 1 guideline on piloted integrated management approaches, 1 Scientist trained in eco-physiology and tree breeding, Five trial plots established, Report on provenance distribution, five demonstrations with various species planted.
			Undertake genetic improvement of the main plantation species, demonstrate alternative plantation species develop integrated strategies for management of new insect pests and develop end use guideline for	6 species identified and demonstrate, 300 plus trees of 5 species selected and progenies tested, 5 hybrids developed, 10 progeny trials established, germplasm of *P. tecunumanii* , *P. maximinoi* , *Gmelina arborea* and *E. grandis*

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
			plantation species based on wood characterization.	introduced, 2 monitoring reports on status of pests and diseases within and outside Kenya
			Expanding seed sources, improving management and protection, intensifying seed collection especially of indigenous species, improving quality and distribution.	6 seed stands selected., 2 seed orchards established each for : Grevillea, Cypress, P. patula, Vitex and E. grandis, 2 ha of seed woodlots/stands planted by farmers in each of the 5 centers, 6000 kg of seed produced, 5 Seed stores constructed, 10 drying beds constructed, 20 sets of climbing equipment procured, 10 seed information leaflets produced, 2 open days held, 4 Media talks conducted , 8 Foresters and 30 Seed Collectors trained, 5 sets of lab equipment purchased, cold storage equipment replaced at Muguga, routine seed testing undertaken
			To improve dissemination of technologies by developing databases, improving documentation, integrating users needs in research and improving communication with users	Internet services provided at 4 centres, a Computer Server in every Regional Research Centre, database enabled and updated KEFRI website, 30 publications produced, 20 scientists trained, 10 dissemination office, 12 field days and 6 open days held, 1 scientific conference held
			To strengthen synergies and complementariness with various partners in the generation, dissemination and consumption of various information on forestry and allied resources	6 meetings held and 2 MOUs signed
			To handle public relations, consultancy services and intellectual property issues	500 brochures and 3,500 calendars , 1,500 T-Shirts and 100 caps distributed, Four Radio talks held, 2 TV features, and 6 features in print media produced, 5

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
				consultancy services bided, awareness on (IPR), participated in 10 ASK shows
			Strengthen Human Resource Capacity	11 scientists trained, and other 232 support staff trained
			Improve physical facilities	6 office blocks built
Human Resource Development	**MoHEST**	TIVET	To enhance the capacity of institutions to deliver TIVET	4500 students in TTIs and ITs offered Bursaries in 2007/08. Concept paper and Manual on the development of business incubators Developed. Rehabilitation ongoing and at different stages in different TIVET institutions. Kenya and Mombasa polytechnics upgraded to University Status. A bill for the enactment of the TIVETA prepared. Curricula for Electrical and Electronics Engineering, mechanical engineering, building and civil engineering reviewed
Human Resource Development	**MoHEST**	University Education	To expand access to university education	A University Education Strategy developed. 70,000 University Students awarded loans and bursaries in FY 2008/09. Five technical training institutions upgraded to constituent university colleges Increased enrolment to Public Universities from *100,649 to 128,561 in* 2009/2010. One university awarded

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
				charters while another university was granted Letters of Interim Authority 50 degree programmes validated and approved Guidelines for Credit Accumulation and Transfer System drawn for 4 programs
Development and implementation of Policy, Legal and Institutional Frame-work	**MOIC**	ICT and Mass Media Skills development	To build human resource capacity within the ICT Sub-Sector.	KIMC signed MoU with University of Nairobi to offer degree in Mass Media KCCT upgraded to Multi Media University College status.
	MoHEST	STI coordination	To provide a national policy framework and build capacity for integration of Science, Technology and Innovation in priority sectors	A draft Science, Technology and Innovation Policy and Strategy in place A draft National Commission for Science, Technology and Innovation Bill A draft KENREF Bill A draft Kenya National Innovation Agency Bill Business plan drawn on the establishment of the first S&TP around Nairobi Concept paper drawn
	MOIC	Broadcasting reforms	To modernize the exiting transmission network and ensure a smooth migration from analogue to Digital Broadcasting switch-over	12 new transmitting stations in place 85 percent of Kenyans sensitized on Analogue to Digital broadcasting Migration requirements by 2012
		ICT & Media Policy	To ensure efficient Management and regulation of ICT sector	Liberalized Telecommunications leading to lower telephone cost Introduced Technology Neutral Licensing Regime 4 Bills ICT Bill, Freedom of Information Bill, Kenya

PROGRAMME NAME	IMPLEMENTING AGENCY	SUB-PROGRAMMES	OBJECTIVES	ACHIEVEMENTS/ PERFORMANCE INDICATORS
				Communication Amendment Bill 2008, Media Bill drafted

2.3 EXPENDITURE ANALYSIS

2.3.1 ANALYSIS OF RECURRENT EXPENDITURE

During the FY 2008/09 the total recurrent expenditure for the sector was 25.8 billion as indicated in the table 4 below.

Table 2.3.1-1: Analysis of Sector Recurrent Expenditure, FY2006/07–2008/09 (KES Million)

Sub-Sectors	Printed Estimates			Revised Estimates			Actual Expenditure		
	2006/07	2007/08	2008/2009	2006/07	2007/08	2008/2009	2006/07	2007/08	2008/2009
MoHEST	2,606.0	3,610.0	18,828.0	2,808.0	15,875.0	19,335.0	2,743.0	15,716.0	19,084.0
MOIC	731.3	752.1	1,144.2	802.4	840.1	1,235.2	724.6	750.0	1,124.3
DRSRS	114.2	137.6	149.1	109,6	127.8	147.4	114.2	137.6	148.8
E-Government	64.7	63.5	61.4	69.3	70.6	66.4	48.3	59.8	61.0
GITS	505.1	563.7	584.7	0.0	0.0	0.0	505.1	533.7	553.7
IPRS	0.0	298.4	135.2	0.0	0.0	0.0	0.0	219.2	156.8
KNBS	242.78	710	880	255.15	600	1,380.00	216.2	582.5	1,165.20
CRF	222.7	255.2	288.7	222.6	248.2	435.2	231.9	43.7	503.9
KARI	1,370.0	1,600.0	1,750.0	1,370.0	1,650.0	1,750.0	1,469	1,679	1,769
KEFRI	526.6	639.0	639.0	526.6	639.0	639.0	525.0	632.0	639.0
KMFRI	353.1	353.1	352.8	353.1	353.1	352.8	383.4	379.8	377.1
KEMRI	880.0	956.0	993.0	880.0	956.0	993.0	970.0	1,041.0	1,119.0
KIPPRA	164.0	164.0	191.0	164.0	164.0	191.0	157.9	181.2	205.5
KIRDI	211.5	179.4	237.4	0.0	247.8	237.0	211.8	184.9	237.4
KESREF	222.0	233.0	265.0	0.0	0.0	0.0	203.0	213.0	258.0
NCRC	0.0	0.0	9.8	0.0	0.0	7.1	0.0	0.0	5.4
TRF	329.3	355.3	230.0	151.4	120.8	132.0	151.4	120.8	132.0
Total Recurrent	**8,543.3**	**10,870.3**	**26,739.3**	**7,602.6**	**21,892.4**	**26,901.1**	**8,654.8**	**22,474.2**	**27,540.1**

2.3.2 Analysis of Sector Development Expenditure

During the FY 2008/09 the total development expenditure for the sector was 1.1 billion as indicated in the table 4 above. This development expenditure constituted only 4.1 percent of the total allocation to the Sector

Table 2.3.2-1: Analysis of Sector Development Expenditure

Sub-Sectors	Printed Estimates			Revised Estimates			Actual Expenditure		
	2006/07	2007/08	2008/2009	2006/07	2007/08	2008/2009	2006/07	2007/08	2008/2009
MoHEST	72.0	1,163.0	3,812.0	101.0	1,164.0	3,386.0	72.0	985.0	3,234.0
MOIC	1,770.0	3,188.0	2,517.6	2,070.0	3,783.2	2,017.6	229.7	1,607.5	1,426.2
DRSRS	62.0	126.4	182.0	46.2	56.4	182.3	62.0	126.4	182.3
E-GOVERMENT	105.0	80.0	2,867.8	73.2	74.7	2,867.8	88.9	39.4	1,510.7
GITS	100.0	140.0	410.6	100.0	140.0	410.6	100.0	628.7	410.6
IPRS	0.0	45.0	141.0	0.0	45.0	141.0	0.0	0.0	121.0
KNBS	397.3	278.0	700.5	287.7	517.3	558.8	270.2	133.4	271.0
CRF	3.0	18.2	13.2	3.0	18.2	149.0	2.0	4.1	88.3
KARI	1,865.5	2,261.8	1,120.8	1,865.5	1,607.2	695.2	1,420	1,382	1,401
KEFRI	52.8	77.5	46.6	52.8	77.5	16.0	54.5	84.3	16.0
KMFRI	5.0	40.0	126.5	5.0	126.5	115.8	5.0	40.0	50.8
KEMRI	0.0	150.0	150.0	150.0	75.0	150.0	0.0	206.0	319.0
KIPPRA	9.0	8.9	13.6	9.0	8.9	13.6	1.6	10.3	13.6
KIRDI	42.0	39.0	270.0	0.0	50.9	286.0	30.7	42.7	238.5
KESREF	318.0	174.0	118.0	0.0	0.0	0.0	42.0	158.0	113.0
NCRC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TRF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Development	**4801.6**	**7,789.80**	**12,490.20**	**4763.4**	**7,744.80**	**10,989.70**	**2,378.60**	**5,447.80**	**9,396.00**
Total Expenditure	**13,344.9**	**18,660.1**	**39,229.5**	**12,366.0**	**29,637.2**	**37,890.8**	**11,033.4**	**27,922.0**	**13,344.9**

Rec. as % of Total	64.0	58.3	68.2	61.5	73.9	71.0	78.4	80.5	64.0
Dev as % of Total	36.0	41.7	31.8	38.5	26.1	29.0	21.6	19.5	36.0

2.4 ANALYSIS OF DEVELOPMENT EXPENDITURE

During the FY 2008/09 the total development expenditure for the sector was **7.995**billion as indicated in the table 4 above. This development expenditure constituted only 23.7 percent of the total allocation to the Sector.

2.4.1   ANALYSIS OF EXTERNALY FUNDED PROGRAMMES

The Sector received a total of 2.3 billion for externally funded projects to meet recurrent expenditure and 1.3 billion to meet development needs of the Sub-Sectors during the FY 2008/09. Tables 2.3.3 and 2.3.4 below shows the breakdown of the expenditure for externally funded programmes. The percentage expenditure on recurrent is 65% while development is 35 percent.

Table 2.4.1-1: Analysis of Recurrent externally funded programmes

Sub-Sectors	Revised Estimates			Actual Expenditure		
	2006/07	2007/08	2008/2009	2006/07	2007/08	2008/2009
MoHEST	0.0	0.0	0.0	0.0	0.0	0.0
MOIC	0.0	0.0	0.0	0.0	0.0	0.0
DRSRS	0.0	0.0	0.0	0.0	0.0	0.0
E-GOVERNMENT	0.0	0.0	0.0	0.0	0.0	0.0
GITS	0.0	0.0	0.0	0.0	0.0	0.0
IPRS	0.0	0.0	0.0	0.0	0.0	0.0
KNBS	0	0	0	0	0	0
CRF	0.0	0.0	0.0	0.0	0.0	0.0
KARI	0.0	0.0	0.0	0.0	0.0	0.0
KEFRI	0.0	0.0	0.0	0.0	0.0	0.0
KMFRI	0.0	0.0	0.0	0.0	0.0	0.0
KEMRI	1,528.8	2,369.0	2,275.9	1,528.8	2,369.0	2,275.9
KIPPRA	0.0	0.0	0.0	0.0	0.0	0.0
KIRDI	0.0	0.0	0.0	0.0	0.0	0.0
KESREF	0.0	0.0	0.0	0.0	0.0	0.0
NCRC	0.0	0.0	0.0	0.0	0.0	0.0
TRFK	0.0	0.0	0.0	0.0	0.0	0.0
Total Recurrent	**1,528.8**	**2,369.0**	**2,275.9**	**1,528.8**	**2,369.0**	**2,275.9**

Table 2.4.1-2 Analysis of Development externally funded programmes

Sub-Sectors	Revised Estimates			Actual Expenditure		
	2006/07	2007/08	2008/2009	2006/07	2007/08	2008/2009
MoHEST	0.0	0.0	0.0	0.0	0.0	0.0
MOIC	1,795.0	947.9	1,947.9	712.9	350.0	0.0
DRSRS	0.0	0.0	0.0	0.0	0.0	0.0
E-GOVERNMENT	0.0	0.0	0.0	0.0	0.0	0.0
GITS	0.0	0.0	0.0	0.0	0.0	0.0
IPRS	0.0	0.0	0.0	0.0	0.0	0.0
KNBS	40.0	52.3	82.3	0	195.61	94.85
CRF	0.0	0.0	0.0	0.0	0.0	0.0
KARI	1,634.9	1,359.20	467.20	1,202.90	1,297.7	429.94
KEFRI	0.0	0.0	0.0	0.0	0.0	0.0
KMFRI	0.0	86.5	86.5	36.5	24.6	50.2
KEMRI	0.0	0.0	0.0	803.4	443.0	1,176.5
KIPPRA	0.0	0.0	0.0	0.0	0.0	0.0
KIRDI	0.0	0.0	0.0	0.0	0.0	0.0
KESREF	0.0	0.0	0.0	0.0	0.0	0.0
NCRC	0.0	0.0	0.0	0.0	0.0	0.0
TRFK	0.0	0.0	0.0	0.0	0.0	0.0
Total Development	**3,469.9**	**2,445.9**	**2,583.9**	**2,755.7**	**2,310.91**	**1,751.49**
Total Recurrent	**1,528.8**	**2,369.0**	**2,275.9**	**1,528.8**	**2,369.0**	**2,275.9**
Total Expenditure	**4,958.70**	**4,762.60**	**4,777.50**	**4,284.50**	**4,484.30**	**3,932.54**
Dev as % of Total	69.2	50.3	52.4	64.3	47.2	42.1
Rec. as % of Total	30.8	49.7	47.6	35.7	52.8	57.9

2.5 REVIEW OF PENDING BILLS

The Sector has accumulated recurrent pending bills amounting to 3.1Billion due to lack of liquidity in the FY 2008/2009. These pending bills include non remittance to pension schemes, personal claims, statutory deductions, unpaid tax, utilities and creditors. The Sector has no development pending bills.

2.5.1   RECURRENT PENDING BILLS

Table 2.4.1.1 below shows the summary of the Sector recurrent pending bills. The following is an analysis of the recurrent pending bills by sub sector.

Table 2.5.1-1Summary of Sector pending bills

Sub-Sectors	Due to lack of Liquidity			Due to lack of Provision		
	2006/07	2007/08	2008/09	2006/07	2007/08	2008/09
MoHEST			570.0			
MOIC			798.6			
DRSRS			16.1			
E-Govt			0			
GITS			0			
IPRS			0			
KNBS			0			
CRF			78.8			
KARI			749.7			
KEFRI			0			
KMFRI			59.2			
KEMRI			797.8			
KIPPRA			0			
KIRDI			0			
KESREF			0			
NCRC			0			
TRF			25.4			
TOTAL			**3,095.6**			

2.5.1.1 MoHEST

The Ministry's total pending bills as at 30th June 2009 amounted to KES 492 million from the universities. This is 31% decline from the previous amount of KES 713 million in the FY 2007/08.

2.5.1.2 MOIC

The Ministry has pending Bills totaling to KES. 22.9Million whereas Kenya Broadcasting Corporation has its pending bills totaling KES. 775.7Million as outlined in the table below.

Table 2.5.1.2-1: Summary of MoIC pending bills

	2008/2009				2008/2009			
	Due to lack of Liquidity				Due to lack of Provision			
	DI&PC	KIMC	KFC	KBC	DI&PC	KIMC	KFC	KBC
					0	0	0	0
Tax	0	0	0	315.9	0	0	0	0
Telephone	0	0	0	322.6	0	0	0	0
Electricity	0	6.3	0	0	0	0	0	0

Water	0	0	0	0	0	0	0	0
Personal Claims	2.2	0	14.4	137.2	0	0	0	0
TOTAL	**2.2**	**6.3**	**14.4**	**775.7**	**0**	**0**	**0**	0
Total Ministry	22.9							
Total KBC	775.7							
Grand Total	**798.6**							

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2.5.1.3 KEMRI

The institute has accumulated a pending bill of KES 797,723,422. An actuarial valuation of staff pension scheme showed an underpayment of KES 30,723,422 in the financial year 2007/2008. The institute further owes the pension scheme a total of KES 767 million. The institute has therefore requested the government to bail it out by injecting a total of KES 797,723,422 to save the staff pension scheme from collapse.

2.5.1.4 KARI

The Institute has outstanding pending bills totaling to KES 749,682,021.90 since the year 2000 and relating to the period between 1994 – 2000 when the flow of funds both from Donors and Government was irregular and intermittent. The Institute has been making efforts to have the bills paid through seeking funds from the Government, Internal savings and from Internal Revenues.

All liabilities including statutory deductions are paid strictly on a monthly basis and no further accumulation has occurred. In addition to clearing monthly dues KARI has, through cost cutting, reduced the balances indicated above and in some cases completely removed some categories like NSSF staff deductions from the list of pending bills. However, as the Institute was clearing the NSSF staff deductions, the outstanding amount of NSSF was being charged interest and penalties which amounted to KES 200 million by 2008/09. This explains why the pending bills have increased between 2007/08 and 2008/09 although the Institute has tried to clear some of those past bills.

Pending bill on Pension represents mostly the employer's contribution to the Pension scheme, which was not factored into budget when KARI staff moved from the GOK pension to KARI's own pension scheme. For the last three years, the Institute has been paying Pension Scheme KES. 10 million on monthly basis as a way of reducing the outstanding commitment. It is expected that by the end of 2010/2011 FY the Pension outstanding bills will have been cleared.

2.5.1.5 COFFEE

The coffee Research Foundation has pending bills amounting to KES 78,767,000 as follows;
(a) Statutory dues (Tax on staff emoluments, penalties, Pension contributions) as a result of the levy payable to CRF not paid by Kenya Planters Cooperative Union as a marketing agent from 2004
(b) Outstanding dues to staff (current and retrenched) after retrenchment in 2002 due to non - payment of coffee proceeds by Coffee Board of Kenya in 2002 when it was sole marketing agent

2.5.1.6 TEA

The Tea Research Foundation currently has pending bills totaling to KES 25,382,553. The pending bills have accrued because of nonpayment to the suppliers, electricity, telephone and personal claims. The bills have accumulated due to insufficient funding of research activities.

2.5.1.7 KMFRI

The pending bills of the institute emanated from unpaid salary increment to staff, outstanding land rates and creditors as follows;

- Unpaid salary increments for staff in Job Group "C" to "N" amounting to KES.57, 000,000. The Civil Service was awarded a salary increase of 16% two years ago but our Institute has not been given funds to implement the same.
- Unpaid salaries to staff in Job Groups 'A' to 'N' based on 16% and 21% salary awards to Government employees in 2007/08 and 2008/09 financial years.
- Pending payment of land rates due to the Mombasa Municipal Council.
- Outstanding payment to suppliers of goods and services e.g. KES.2.2 million is required to pay a consultant who conducted surveys on customer satisfaction, employ satisfaction, work environment and drug and substance abuse as required by Performance Contracting.

2.5.1.8 DRSRS

The total recurrent pending bills of KES 16,023,345.45 accrued from unpaid bills for water, telephone and creditors.

2.5.2   DEVELOPMENT PENDING BILLS

The Sector has no development pending bills.

3.0 MEDIUM TERM PRIORITIES AND FINANCIAL PLAN

The RIT medium term priorities of harnessing best human resources, reduction of communication costs and improving productivity through research will be achieved through implementation of 6 programmes and 47 sub-programmes as enumerated below.

3.1 PRIORITIZATION OF PROGRAMMES AND SUB-PROGRAMMES

During the 2010/11 - 2012/13 MTEF period, the Sector will implement the following programmes.

1 Development of policy, legal and institutional framework
2 Information and Communication services
3 Research and Innovations
4 ICT infrastructure development
5 Human resource development
6 Data Management

These programmes will be supported by forty three Sub Programmes as indicated in section 3.1.4 below. The Programmes and Sub Programmes have been prioritized using the following criteria

1 **Linkage of the programme/sub programme with Vision 2030 Objectives;** the programme is consistent with the strategic objectives for achieving the Vision 2030 and is directly linked to one or more of the Vision 2030 objectives or flagship project.

2 **Degree of addressing Core Poverty; programme/sub programme** is a direct intervention to core poverty reduction as outlined in the criteria for selection of core poverty interventions.

3 **Degree to which the programme/sub programme is addressing the objectives of the Sector/ Core mandate of the Ministry/department;** programme is consistent with the strategic objectives of the Sector or Core mandate of the Ministry/department.

4 **Expected output or results from a programme/sub programme;** the programme demonstrates its ability to achieve the Vision 2030 strategic objectives through the expected output.

5 **Linkage with other Programmes; programme/sub programme** has direct linkages (forward and backward) with other programmes

6 **Sustainability of the programme; programme/sub programme** demonstrates high level of sustainability. Among the factors considered include, human capacity, future costs of implementation and source of funding.

7 **Cost Effectiveness;** The **programme/sub programme** is the most cost effective in comparison with the other competing programmes i.e. the programme is able to achieve *the intended objectives at minimum cost possible*.

Scoring Method
- All the above 7 criteria carry an equal score of 1 mark.
- A programme that meets the above 7 criteria scores 7 marks
- Degree to which the programme meets criteria is awarded 0.25, 0.5, 0.75 or 1marks

Table 3.1-1: Prioritization of programmes and sub-programmes

		Criteria/Score								
		1	**2**	**3**	**4**	**5**	**6**	**7**	**Score**	**Rank**
1	Development of policy, legal and institutional framework	1.00	0.50	1.00	1.00	1.00	1.00	1.00	6.5	**1**
2	Information and Communication services	1.00	0.75	1.00	1.00	1.00	0.75	0.75	6.25	**2**
3	Research and Innovations	1.00	1.00	1.00	1.00	1.00	0.50	0.5	6	**3**
4	ICT infrastructure development	1.00	1.00	1.00	1.00	1.00	0.5	0.25	5.75	**4**
5	Human resource development	1.00	1.0	1.00	1.00	1.00	0.25	0.25	5.5	**5**
6	Data Management	1.00	0.75	1.00	1.00	1.00	0.50	0.25	5.5	**5**

3.1.1   PROGRAMMES AND THEIR OBJECTIVES

Table 3.1.1-1: Sector programmes and their objectives

	PROGRAMME NAME	OBJECTIVE
1	Development of policy, legal and institutional framework	To formulate, review and implement appropriate policies, legal and institutional frameworks
2	Information and Communication services	To collect ,collate and disseminate credible information to promote knowledge based society
3	Research and Innovations	To develop and promote research, innovation and technology development for high value products and services
4	ICT infrastructure development	To ensure the availability of accessible, efficient, reliable and affordable ICT services in Kenya
5	Human resource development	To build and strengthen human capacity
6	Data Management	Strengthen systems for the creation, translation of data, knowledge and dissemination of information.

3.1.2   Programmes, Sub-Programmes, Expected Outcomes, Outputs and Key Performance Indicators for the Sector

In this section, the report highlights key outputs and performance indicators for the Sector while the outputs and outcomes of the subprograms are attached as appendix 1 of this report.

Table 3.1.2-1: Programmes Outputs and Key Performance Indicators

Programmes		Indicators	Key outputs		Projected Outputs	
			2009/10	**2010/11**	**2011/12**	**2012/13**
1	**Development of Policy, Legal and Institutional Framework**	• RIT Policies and regulatory frameworks	6	4	5	3
2	**Information and Communication Services**	• No. of BPO jobs created	1,000	2,100	3,720	5,000
		• No. of documentaries produced	84	96	100	112

		• No. KNA stories disseminated	26,000	28,700	29,100	31,300
		• No. of news features produced	980	1,300	1,450	1,680
		• No. of rural publications produced	210,000	243,000	256,000	273,000
		• No. of News Gathering Vehicles acquired	-	96	78	82
		• No. Cinema shows shown	122	136	154	178
		• No. of Films shot in Kenya	315	365	380	394
		• No. of Mass Media personnel hired	-	223	296	312
		• No. of Mass Media diplomas awarded	790	790	860	1030
3.	Research and Innovations	• No. of new technologies developed	146	182	176	186
		• No. of new products developed	35	40	43	48
		• No. of Research publications made	211	200	221	220
		• No. of dissemination forums held	125	130	130	130
4	ICT Infrastructure Development	• Kilometers of Fiber cable laid across the land and under sea	5,500	500	500	500
		• No. of government offices LANs & WANs installed	50	30	30	30
		• No. of Digital Villages created	30	60	100	100
		• Acres of ICT Park land acquired	5000	-	-	-
		• BPO Centres	-	2	4	5
		• National Data Centre				
		• HABARI House	-	1	-	-
		• 600 capacity students' hostel	-	1	-	-
		• Ultra modern students kitchen	-	-	1	-
		• Film Archive	-	1	-	-
		• Ultra Modern Printing Press	-	1	-	-
		• ENG Systems	22	106	114	110
		• SNG Systems	-	6	3	2
		• Digital Television Broadcast systems	1	3	3	4
		• Digital Television News only Channel	-	1	-	-
		• Non-Linear Audio-Visual Editing systems	2	12	10	6
		• Film Preview Laboratories	-	3	3	2
		• Digital Television Training Channel	-	1	-	-
		• OB Van	-	-	1	1

5	**Human Resource Development**	• No of students absorbed by Public Universities	17,000	18,000	19,000	19,000
		• No of students admitted in Tertiary Institutions	36,000	40,000	45,000	45,000
6	**Data Management**	• Integrated Population Information applications	75%	90%	95%	98%
		• Statistical Reports	34	36	36	38
		• % of Kenyan Land with land use/cover reports and maps	20	50	80	100%

3.1.3   Programmes by Order of Ranking

3.1.3.1 Development of policy, legal and institutional framework
3.1.3.2 Information and Communication Services
3.1.3.3 Research and Innovations
3.1.3.4 ICT infrastructure development
3.1.3.5 Human resource development
3.1.3.6 Data Management

3.1.4   Programmes and Sub-Programmes

3.1.4.1 Development of Policy, Legal and Institutional Frame-work

3.1.4.1.1   ST&I Coordination
3.1.4.1.2   ICT and Media Policy
3.1.4.1.3   Public Policy
3.1.4.1.4   Sector Monitoring and Evaluation Frame-work

3.1.4.2 Information and Communication Services

3.1.4.2.1   E-Government Services
3.1.4.2.2   News and Information Services
3.1.4.2.3   Film Services
3.1.4.2.4   BPO and ICT services
3.1.4.2.5   Brand Kenya Initiative
3.1.4.2.6   Kenya Yearbook Initiative
3.1.4.2.7   Universal Postal Union

3.1.4.3 Research and Innovation

3.1.4.3.1   Medical Research
3.1.4.3.2   Industrial Research
3.1.4.3.3   Agricultural Research
3.1.4.3.4   Forestry Research
3.1.4.3.5   Sugar Research
3.1.4.3.6   Crime Research

3.1.4.3.7   Tea Research
3.1.4.3.8   Coffee Research
3.1.4.3.9   Marine and Fisheries Research
3.1.4.3.10 Public Policy Research
3.1.4.3.11 Media Research
3.1.4.3.12 ST&I Research (MoHEST)

3.1.4.4 ICT Infrastructure Development

3.1.4.4.1   Business Process Outsourcing (BPO)
3.1.4.4.2   Analogue to Digital Migration (ADM)
3.1.4.4.3   The East African Marine Cable System (TEAMS)
3.1.4.4.4   National Optic Fibre Backhaul Initiative (NOFBI)
3.1.4.4.5   Kenya Transparency Communication Infrastructure Programme
3.1.4.4.6   Rural Telecommunications Infrastructure (RTI).
3.1.4.4.7   Public Mass Media Establishments' Facilities and Equipment.
3.1.4.4.8   LANs and WANs.
3.1.4.4.9   Government Tele-Presence.
3.1.4.4.10 (PSTN) – (IP) Switch Over
3.1.4.4.11 Science and Technology Parks.

3.1.4.5 Human Resource Development

3.1.4.5.1   University Education
3.1.4.5.2   Human Resource Skills development and Quality Assurance (MoHEST)
3.1.4.5.3   TIVET
3.1.4.5.4   ITROMID
3.1.4.5.5   ESACIPAC
3.1.4.5.6   ICT and Mass Media Skills

3.1.4.6 Data Management

3.1.4.6.1   National Statistical Systems
3.1.4.6.2   IPRS
3.1.4.6.3   National Data Centre

3.2 ANALYSIS OF RESOURCE REQUIREMENTS BY:

3.2.1   SECTOR:

The RIT Sector requires KES **83,979Million** in the 2010/11, KES **86,119 Million** for 2011/12 and KES **88,051Million** for 2012/13 financial year. These resources will enable the Sector live up to its mandate as envisaged in the Kenya Vision 2030.

Table 3.2.1-1Sector Requirements (KES. Millions)

RIT SECTOR	Gross Estimates		Projected Estimates	
	2009/10	2010/11	2011/12	2012/13
TOTAL	54,151	83,979	86,119	88,051

3.2.2 Resource Requirements by Sub-Sectors

Table 3.2.2-1 Gross Resource Requirements by Sub-Sectors (KES. Millions)

Sub-Sectors	Gross Estimates		Projected Estimates	
	2009/10	**2010/11**	**2011/12**	**2012/13**
Ministry Of Higher Education Science And Technology	25,662	41,624	43,276	44,044
Ministry Of Information And Communications	4,561	17,771	17,511	17,370
Department Of Resource Survey And Remote Sensing	336	551	592	346
Directorate of E - Government	1,371	217	212	219
Government Information Technology Services	3,162	2,667	2,106	2,106
Integrated Population Registration System	524	628	440	409
Kenya National Bureau Of Statistics	7,742	1376	1445	1573
Coffee Research Foundation	679	398	422	474
Kenya Agricultural Research Institute	2,773	5,499	5,439	5,719
Kenya Forestry Research Institute	753	989	1068	1153
Kenya Marine And Fisheries Research Institute	495	1021	1391	1531
Kenya Medical Research Institute	4,335	8,674	9,281	9,973
Kenya Institute Of Public Policy Research And Analysis	265	351	369	353
Kenya Industrial Research And Development Institute	524	633	790	989
Kenya Sugar Research Foundation	587	851	977	887
National Crime Research Centre	40	102	122	172
Tea Research Foundation	342	627	678	733
TOTAL	**54,151**	**83,979**	**86,119**	**88,051**

3.2.3 INDICATIVE DONOR COMMITMENT FOR THE MTEF PERIOD 2010/11-2012/13

During the financial year 2010/2011, the sector has an indicative donor commitment of KES.10.3 Billion an increase of 95% over the previous year's commitment of KES.5.3 Billion. In the financial year 2011/2012 and 2012/2013, it is projected at KES.8.6 Billion and KES.8.1 Billion respectively. This is shown on table 15 below

Table 3.2.2-2 Indicative Donor Commitments

AGENCY	Estimates 2009/10	Estimates 2010/11	Projected Estimates 2011/12	Projected Estimates 2012/13
Ministry of Higher Education Science And Technology	113.4	4235.9	4235.9	4235.9
Ministry Of Information And Communications	1,114	4,314	1,966	872
Department Of Resource Surveys And Remote Sensing	-	-	-	-
Directorate of E – Government	--	-	-	-
Government Information Technology Services	-	-	-	-
Integrated Population Registration System	-	-	-	-
Kenya National Bureau Of Statistics	40.0	82.26	82.26	82.26
Coffee Research Foundation	212	28	-	-
Kenya Agricultural Research Institute	496	1,996	2,185	2,316
Kenya Forestry Research Institute	30	31	32	32
Kenya Marine And Fisheries Research Institute	87	3	-	-
Kenya Medical Research Institute (KEMRI)*	3,100	3,867	4,330	4,850
Kenya Institute Of Public Policy Research And Analysis	11	55.6	36.1	36.1
Kenya Industrial Research And Development Institute	-	-	-	-
Kenya Sugar Research Foundation	-	-	-	-
National Crime Research Centre	-	-	-	-
Tea Research Foundation	239	-	-	-
GROSS EXTERNAL FUNDS	**5,442.4**	14,612.76	**12,867.26**	**12,424.26**

*This is donor AIA not reflected in printed estimates

RECURRENT RESOURCE REQUIREMENT BY SUB-SECTORS

Table 3.2.2-3below shows the Net Recurrent Resource Requirement by the sub-sectors

SUB-SECTORS	Estimates		Projected Estimates	
	2009/10	2010/11	2011/12	2012/13
Ministry Of Higher Education Science And Technology	21,616	34,437	35,561	36,323
Ministry Of Information And Communications	1,292	3,762.8	4,717.6	5,085.6
Department Of Resource Surveys And Remote Sensing	159	243	256	262
Directorate of E – Government	68	112	101	104
Government Information Technology Services	352	387	426	426
Integrated Population Registration System	96	126	138	152
Kenya National Bureau Of Statistics	609	670	737	837
Coffee Research Foundation	599	362	384	431
Kenya Agricultural Research Institute	2,026	3,215	2,904	3,003
Kenya Forestry Research Institute	709	768	830	896
Kenya Marine And Fisheries Research Institute	364	769	800	880
Kenya Medical Research Institute (KEMRI)	4,260	8,674	9,281	9,973
Kenya Institute Of Public Policy Research And Analysis	225	244	261	276
Kenya Industrial Research And Development Institute	270	309	401	522
Kenya Sugar Research Foundation	412	596	737	847
National Crime Research Centre	19	51	66	100
Tea Research Foundation	326	598	646	698
Gross Recurrent Requirement	33,402	55,323.8	58,246.6	60,815.6
A-I-A	11,833.6	14,988.6	15,030.6	15,106.6
Net Recurrent requirement	**21,568.4**	**40,335.2**	**43,216**	**45,709**

DEVELOPMENT RESOURCE REQUIREMENT BY SUB-SECTORS

Table 3.2.2-4 below shows Gross Development Resource Requirement by the sub-sectors

Table 3.2.2-5 Gross Development Resource Requirement by the Sub-sectors

SUB-SECTORS	Estimates		Projected Estimates	
	2009/10	2010/11	2011/12	2012/13
Ministry Of Higher Education Science And Technology	4,046	7,187	7,715	7,721
Ministry Of Information And Communications	3,269	14,008.2	12,793.4	12,284.4
Department Of Resource Surveys And Remote Sensing	177	308	336	84
Directorate of E – Government	1,303	105	111	115
Government Information Technology Services	2,810	2,280	1,680	1,680
Integrated Population Registration System	428	502	302	257
Kenya National Bureau Of Statistics	7,133	706	708	736
Coffee Research Foundation	80	36	38	43
Kenya Agricultural Research Institute	747	2,284	2,535	2,716
Kenya Forestry Research Institute	44	221	238	257
Kenya Marine And Fisheries Research Institute	131	252	591	651
Kenya Medical Research Institute (KEMRI)	75	621	285	311
Kenya Institute Of Public Policy Research And Analysis	40	107	108	77
Kenya Industrial Research And Development Institute	254	324	389	467
Kenya Sugar Research Foundation	175	255	240	40
National Crime Research Centre	21	51	56	72
Tea Research Foundation	16	29	32	35
Gross Development Requirement	**20,749**	**29,276.2**	**28,157.4**	**27,546.4**
EXTERNAL FUNDS	**5,442.4**	14,612.8	**12,867.3**	**12,424.3**
Net Development requirement	**15,306.6**	**14,663.4**	**15,290.1**	**15,122.1**

RESOURCE REQUIREMENT BY AUTONOMOUS AND SEMI AUTONOMOUS GOVERNMENT AGENCIES

Resource requirement by the Semi Autonomous Government Agencies for the MTEF period are as indicated on the tables.

RESOURCE REQUIREMENT BY SAGASS   (KES. MILLIONS)

Ministry of Higher Education Science and Technology

National Council for Science and Technology

Table 3.2.2-6: Resource requirement by SAGAs

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	48,875,236	219,938,562	224,337,333	228,824,080
Other Recurrent	82,117,500	118,081,770	288,167,591	288,167,591
Capital Expenditures	74,150,000	250,000,000	250,000,000	250,000,000
Total Expenditures	**205,142,736**	**588,020,332**	**762,504,925**	**766,991,671**
Sources of Funds				
Internally generated	1,250,000	1,250,000	1,250,000	1,250,000
Donor	-	-	-	-
Exchequer	203,892,736	586,770,332	761,254,925	765,741,671
Others	-	-	-	-
Total budget	**205,142,736**	**588,020,332**	**762,504,925**	**766,991,671**

Higher Education Loans Board				
	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	56,000,000	65,000,000	67,000,000	71,000,000
Other Recurrent (Loans)	3,201,000,000	5,435,000,000	5,433,000,000	5,429,000,000
Capital Expenditure	50,000,000	350,000,000	350,000,000	350,000,000
Total Expenditure	3,307,000,000	5,850,000,000	5,850,000,000	5,850,000,000
Sources of Funds				
Internally generated	1,773,000,000	1,773,000,000	1,773,000,000	1,773,000,000
Donor				
Exchequer	1,534,000,000	4,077,000,000	4,077,000,000	4,077,000,000
Others				

Total budget	**3,307,000,000**			**5,850,000,000**
		5,850,000,000	**5,850,000,000**	

Commission for Higher Education				
	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	130,200,000	139,300,000	139,300,000	139,300,000
Other Recurrent	55,800,000	58,700,000	58,700,000	58,700,000
Capital Expenditure				
Total Expenditure	186,000,000	198,000,000	198,000,000	198,000,000
Sources of Funds				
Internally generated				
Donor				
Exchequer	186,000,000	198,000,000	198,000,000	198,000,000
Others				
Total budget	186000000	198000000	198000000	198000000

University of Nairobi				
	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	4,684,944,840	5,016,204,436	5,165,151,456	5,423,009,236
Other Recurrent	1,939,421,209	1,600,000,000	1,602,839,000	1,640,085,200
Capital Expenditure	60,000,000	160,000,000	160,000,000	160,000,000
Total Expenditure	6,684,366,049	6,776,204,436	6,927,990,456	7,223,094,436
Sources of Funds				
Internally generated	2,471,204,436	2,471,204,436	2,471,204,436	2,471,204,436
Donor				
Exchequer	4,160,000,000	4,305,000,000	4,456,786,000	4,751,890,000
Others				
Total budget	6,631,204,436	6,776,204,436	6,927,990,436	7,223,094,436

Maseno University				
	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	1,071,628,000	1,090,901,400	1,100,341,870	1,152,341,363

Other Recurrent	298,213,000	329,940,000	360,500,000	370,500,000
Capital Expenditure	60,000,000	160,000,000	160,000,000	160,000,000
Total Expenditure	1,429,841,000	1,580,841,400	1,620,841,870	1,682,841,363
Sources of Funds				
Internally generated	394,841,000	394,841,400	434,841,870	494,841,363
Donor				
Exchequer	1,035,000,000	1,186,000,000	1,186,000,000	1,186,000,000
Others				
Total budget	**1,429,841,000**	**1,580,841,400**	**1,620,841,870**	**1,680,841,363**

Moi University

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	2,977,796,058	3,090,192,000	3,090,192,000	3,090,192,000
Other Recurrent	929,695,942	940,300,000	940,300,000	940,300,000
Capital Expenditure	365,000,000	365,000,000	365,000,000	365,000,000
Total Expenditure	**4,272,492,000**	**4,395,492,000**	**4,395,492,000**	**4,395,492,000**
Sources of Funds				
Internally generated	1,550,492,000	1,550,492,000	1,550,492,000	1,550,492,000
Donor				
Exchequer	2,722,000,000	2,845,000,000	2,845,000,000	2,845,000,000
Others				
Total budget	**4,272,492,000**	**4,395,492,000**	**4,395,492,000**	**4,395,492,000**

Masinde Muliro University Of Science & Technology

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	648,916,000	673,434,000	673,434,000	673,434,000
Other Recurrent	152,000,000	162,000,000	162,000,000	162,000,000
Capital Expenditure	110,000,000	160,000,000	160,000,000	160,000,000
Total Expenditure	**910,916,000**	**995,434,000**	**995,434,000**	**995,434,000**
Sources of Funds				
Internally generated	167,434,000	167,434,000	167,434,000	167,434,000

Donor				
Exchequer	746,000,000	828,000,000	828,000,000	828,000,000
Others				
Total budget	**913,434,000**	**995,434,000**	**995,434,000**	**995,434,000**

Egerton University

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	2,095,519,000	2,200,294,950	2,200,294,950	2,200,735,009
Other Recurrent	848,000,000	852,225,000	842,209,302	851,783,991
Capital Expenditure	60,000,000	160,000,000	160,000,000	160,000,000
Total Expenditure	**3,003,519,000**	**3,212,519,950**	**3,202,504,252**	**3,212,519,000**
Sources of Funds				
Internally generated	765,519,000	765,519,000	765,519,000	765,519,000
Donor				
Exchequer	2,238,000,000	2,447,000,000	2,447,000,000	2,447,000,000
Others				
Total budget	**3,003,519,000**	**3,212,519,000**	**3,212,519,000**	**3,212,519,000**

Jomo Kenyatta University Of Agriculture & Technology

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	1,787,124,032	1,792,485,404	1,792,488,989	1,792,668,238
Other Recurrent	678,522,050	718,460,678	718,157,093	718,018,856
Capital Expenditure	65,000,000	160,000,000	160,000,000	160,000,000
Total Expenditure	**2,530,646,082**	**2,670,946,082**	**2,670,646,082**	**2,670,687,094**
Sources of Funds				
Internally generated	980,046,959	980,046,959	980,046,959	980,046,959
Donor				
Exchequer	1,530,599,123	1,690,599,123	1,690,599,123	1,690,599,123
Others				
Total budget	**2,510,646,082**	**2,670,646,082**	**2,670,646,082**	**2,670,646,082**
Kenyatta University				

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	3,211,979,000	3,308,338,370	3,308,371,453	3,324,913,311
Other Recurrent	1,000,217,792	1,033,428,630	1,033,395,547	1,016,853,689
Capital Expenditure	120,000,000	160,000,000	160,000,000	160,000,000
Total Expenditure	**4,332,196,792**	**4,501,767,000**	**4,501,767,000**	**4,501,767,000**
Sources of Funds				
Internally generated	1,602,767,000	1,602,767,000	1,602,767,000	1,602,767,000
Donor				
Exchequer	2,729,429,762	2,899,000,000	2,899,000,000	2,899,000,000
Others				
Total budget	**4,332,196,762**	**4,501,767,000**	**4,501,767,000**	**4,501,767,000**

Chuka University College

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	195,789,620	293,684,430	293,687,367	295,155,804
Other Recurrent	44,377,999	275,000,000	275,000,000	275,000,000
Capital Expenditure	150,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**390,167,619**	**818,684,430**	**818,687,367**	**820,155,804**
Sources of Funds				
Internally generated	-	67,000,000	67,000,000	67,000,000
Donor				
Exchequer	390,167,619	751,684,430	751,684,430	751,684,430
Others				
Total budget	**390,167,619**	**818,684,430**	**818,684,430**	**818,684,430**

Kimathi University college

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	168,987,650	253,481,475	253,484,010	254,751,430
Other Recurrent	84,589,432	275,000,000	275,000,000	275,000,000
Capital Expenditure	200,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**453,577,082**	**778,481,475**	**778,484,010**	**779,751,430**
Sources of Funds				

	2009/10	2010/11	2011/12	2012/13
Internally generated	-	78,000,000	78,000,000	78,000,000
Donor				
Exchequer	453,577,082	700,481,475	700,484,010	701,751,430
Others				
Total budget	**453,577,082**	**778,481,475**	**778,484,010**	**779,751,430**

Meru university College

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	164,765,890	247,148,835	247,151,306	248,387,063
Other Recurrent	45,234,110	275,000,000	275,000,000	275,000,000
Capital Expenditure	185,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**395,000,000**	**772,148,835**	**772,151,306**	**773,387,063**
Sources of Funds				
Internally generated		55,000,000	55,000,000	55,000,000
Donor				
Exchequer	395,000,000	717,148,835	717,151,306	718,387,063
Others				
Total budget	**395,000,000**	**772,148,835**	**772,151,306**	**773,387,063**

South Eastern University college

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	143,765,900	244,402,030	244,404,474	245,626,496
Other Recurrent	92,992,270	275,000,000	275,000,000	275,000,000
Capital Expenditure	157,500,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**394,258,170**	**769,402,030**	**769,404,474**	**770,626,496**
Sources of Funds				
Internally generated		45,000,000	45,000,000	45,000,000
Donor				
Exchequer	394,258,170	724,402,030	724,404,474	725,626,496
Others				
Total budget	**394,258,170**	**769,402,030**	**769,404,474**	**770,626,496**

Narok University College

	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	198,580,765	258,154,995	258,157,576	259,448,364
Other Recurrent	12,213,461	275,000,000	275,000,000	275,000,000
Capital Expenditure	220,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**430,794,226**	**783,154,995**	**783,157,576**	**784,448,364**
Sources of Funds				
Internally generated		55,000,000	55,000,000	55,000,000
Donor				
Exchequer	430,794,226	728,154,995	728,157,576	729,448,364
Others				
Total budget	**430,794,226**	**783,154,995**	**783,157,576**	**784,448,364**

Pwani University College

	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	157,890,654	236,835,981	236,838,349	238,022,541
Other Recurrent	68,865,199	275,000,000	275,000,000	275,000,000
Capital Expenditure	120,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**346,755,853**	**761,835,981**	**761,838,349**	**763,022,541**
Sources of Funds				
Internally generated	-	70,000,000	70,000,000	70,000,000
Donor				
Exchequer	346,755,853	691,835,981	691,838,349	693,022,541
Others				
Total budget	**346,755,853**	**761,835,981**	**761,838,349**	**763,022,541**

Bondo University College

	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	45,678,900	182,715,600	182,717,427	183,631,014
Other Recurrent	54,321,100	275,000,000	275,000,000	275,000,000
Capital Expenditure	130,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**230,000,000**	**707,715,600**	**707,717,427**	**708,631,014**

Sources of Funds				
Internally generated		55,000,000	55,000,000	55,000,000
Donor				
Exchequer	230,000,000	652,715,600	652,717,427	653,631,014
Others				
Total budget	**230,000,000**	**707,715,600**	**707,717,427**	**708,631,014**

Kisii University college

Category of expenditure	Estimates	Resource Requirement		
	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	165,786,954	248,680,431	248,682,918	249,926,332
Other Recurrent	50,268,574	275,000,000	275,000,000	275,000,000
Capital Expenditure	160,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**376,055,528**	**773,680,431**	**773,682,918**	**774,926,332**
Sources of Funds				
Internally generated		65,000,000	65,000,000	65,000,000
Donor				
Exchequer	376,055,528	708,680,431	708,682,918	709,926,332
Others				
Total budget	**376,055,528**	**773,680,431**	**773,682,918**	**774,926,332**

Kabianga University College

Category of expenditure	Estimates	Resource Requirement		
	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	156,745,890	235,118,835	235,121,186	236,296,792
Other Recurrent	38,062,528	275,000,000	275,000,000	275,000,000
Capital Expenditure	190,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**384,808,418**	**760,118,835**	**760,121,186**	**761,296,792**
Sources of Funds				
Internally generated		56,000,000	56,000,000	56,000,000
Donor				
Exchequer	384,808,418	704,118,835	704,121,186	705,296,792
Others				
Total budget	**384,808,418**	**760,118,835**	**760,121,186**	**761,296,792**

Kenya polytechnic University College				
	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	627,543,670	646,369,980	646,376,444	649,608,326
Other Recurrent	21,924,180	275,000,000	275,000,000	275,000,000
Capital Expenditure	40,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**689,467,850**	**1,171,369,980**	**1,171,376,444**	**1,174,608,326**
Sources of Funds				
Internally generated	120,000,000	120,000,000	120,000,000	120,000,000
Donor				
Exchequer	569,467,850	1,051,369,980	1,051,376,444	1,054,608,326
Others				
Total budget	**689,467,850**	**1,171,369,980**	**1,171,376,444**	**1,174,608,326**
Mombasa polytechnic University College				
	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	456,789,654	470,493,344	470,498,049	472,850,539
Other Recurrent	89,854,575	275,000,000	275,000,000	275,000,000
Capital Expenditure	40,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**586,644,229**	**995,493,344**	**995,498,049**	**997,850,539**
Sources of Funds				
Internally generated	140,000,000	140,000,000	140,000,000	140,000,000
Donor				
Exchequer	446,644,229	855,493,344	855,498,049	857,850,539
Others				
Total budget	**586,644,229**	**995,493,344**	**995,498,049**	**997,850,539**
Kenya technical teachers College				
	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	86,890,000	89,496,700	89,497,595	89,945,083

Other Recurrent	61,110,000	75,000,000	75,000,000	75,000,000
Capital Expenditure	20,000,000	150,000,000	150,000,000	150,000,000
Total Expenditure	**168,000,000**	**314,496,700**	**314,497,595**	**314,945,083**
Sources of Funds				
Internally generated	48,000,000	48,000,000	48,000,000	48,000,000
Donor				
Exchequer	120,000,000	266,496,700	266,497,595	266,945,083
Others				
Total budget	**168,000,000**	**314,496,700**	**314,497,595**	**314,945,083**

Eldoret Polytechnic				
	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	84,499,820	87,034,815	87,035,685	87,470,863
Other Recurrent	39,500,180	75,000,000	75,000,000	75,000,000
Capital Expenditure	120,000,000	150,000,000	150,000,000	150,000,000
Total Expenditure	**244,000,000**	**312,034,815**	**312,035,685**	**312,470,863**
Sources of Funds				
Internally generated	34,000,000	34,000,000	34,000,000	34,000,000
Donor				
Exchequer	210,000,000	278,034,815	278,035,685	278,470,863
Others				
Total budget	**244,000,000**	**312,034,815**	**312,035,685**	**312,470,863**

Institutes of Technology				
	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	360,000,000	370,800,000	370,803,708	372,657,727
Other Recurrent	165,000,000	375,000,000	375,000,000	375,000,000
Capital Expenditure	140,000,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**665,000,000**	**995,800,000**	**995,803,708**	**997,657,727**
Sources of Funds				
Internally generated	375,000,000	375,000,000	375,000,000	375,000,000
Donor				
Exchequer	290,000,000	620,800,000	620,803,708	622,657,727

Others				
Total budget	**665,000,000**	**995,800,000**	**995,803,708**	**997,657,727**

Kisumu Polytechnic

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	54,678,900	56,319,267	56,319,830	56,601,429
Other Recurrent	47,321,100	75,000,000	75,000,000	75,000,000
Capital Expenditure	60,000,000	150,000,000	150,000,000	150,000,000
Total Expenditure	**162,000,000**	**281,319,267**	**281,319,830**	**281,601,429**
Sources of Funds				
Internally generated	32,000,000	32,000,000	32,000,000	32,000,000
Donor				
Exchequer	130,000,000	249,319,267	249,319,830	249,601,429
Others				
Total budget	**162,000,000**	**281,319,267**	**281,319,830**	**281,601,429**

Biosafety Authority

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	41,456,789	78,767,899	78,768,687	79,162,530
Other Recurrent	8,543,211	175,000,000	175,000,000	175,000,000
Capital Expenditure				
Total Expenditure	**50,000,000**	**253,767,899**	**253,768,687**	**254,162,530**
Sources of Funds				
Internally generated				
Donor				
Exchequer	50,000,000	253,767,899	253,768,687	254,162,530
Others				
Total budget	**50,000,000**	**253,767,899**	**253,768,687**	**254,162,530**

Technical Training Institutes

	Estimates	Resource Requirement		
Category of expenditure	**2009/10**	**2010/11**	**2011/12**	**2012/13**
Compensation to Employees	698,000,000	1,047,000,000	1,047,010,470	1,052,245,522
Other Recurrent	197,000,000	575,000,000	575,000,000	575,000,000

Capital Expenditure				
	280,000,000	4,080,000,000	4,080,000,000	3,547,754,478
Total Expenditure	**1,175,000,000**	**5,702,000,000**	**5,702,010,470**	**5,175,000,000**
Sources of Funds				
Internally generated	475,000,000	475,000,000	475,000,000	475,000,000
Donor (China $ ADB)		4,227,000,000	4,227,000,000	3,700,000,000
Exchequer	700,000,000	1,000,000,000	1,000,000,000	1,000,000,000
Others				
Total budget	**1,175,000,000**	**5,702,000,000**	**5,702,000,000**	**5,175,000,000**
Multimedia University College				

	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees	118,765,875	178,148,813	178,150,594	179,041,347
Other Recurrent	11,234,125	275,000,000	275,000,000	275,000,000
Capital Expenditure	113,350,000	250,000,000	250,000,000	250,000,000
Total Expenditure	**243,350,000**	**703,148,813**	**703,150,594**	**704,041,347**
Sources of Funds				
Internally generated		75,000,000	75,000,000	75,000,000
Donor				
Exchequer	243,350,000	628,148,813	628,150,594	629,041,347
Others				
Total budget	**243,350,000**	**703,148,813**	**703,150,594**	**704,041,347**
Laikipia University College				

	Estimates	Resource Requirement		
Category of expenditure	2009/10	2010/11	2011/12	2012/13
Compensation to Employees		285,980,567	285,983,427	287,413,344
Other Recurrent		275,000,000	275,000,000	275,000,000
Capital Expenditure		250,000,000	250,000,000	250,000,000
Total Expenditure		**810,980,567**	**810,983,427**	**812,413,344**
Sources of Funds				
Internally generated		65,000,000	65,000,000	65,000,000
Donor				
Exchequer		745,980,567	745,983,427	747,413,344

Others				
Total budget	**-**	**810,980,567**	**810,983,427**	**812,413,344**

Ministry of Information and Communication
Table 3.2.2-7: Resource requirements by MoIC & SAGAs

	2009/10	2010/11	2011/12	2012/13
Kenya ICT Board	1,315	3,464	1,894	846
Kenya Film Classification Board	71	176	186	183
Kenya Film Commission	87	133	146	167
Kenya Broadcasting Corporation	0	2,641	5,081	3,629
Brand Kenya Board	147	594	1,359	1,428
Kenya Year Book Board	41	191	151	125
National Communications Secretariat	65	88	77	80
Communications Appeals Tribunal	10.0	12.3	12.6	13.3
Media Council of Kenya	-	204.7	219.3	233.8
TOTAL	**1,736**	**7,504**	**9,125.9**	**6,705.1**

Department of Resource Survey and Remote Sensing

	2009/10	2010/11	2011/12	2012/13
Regional Centre for Mapping Resources For Development (RCMRD)	14	14	14	14
TOTAL	**14**	**14**	**14**	**14**

3.2.3 Resource Requirements by Programmes and Sub Programmes

Tables 3.2.3.1 below outline resource requirement by programmes and sub-programmes in order of priority.

Table 3.2.3-1: Development and Implementation of Policy, Legal and Institutional Frame-work

	Sub Programme Name	KES. Millions			
		Printed Estimates 2009/10	Estimates 2010/11	Projected Estimates	
				2011/12	2012/13
1	MoHEST STI coordination	263	311	348	424
2	ICT & Media Policy (MOIC)	442.5	506.8	572.6	594.7
3	Sector Monitoring & Evaluation Framework (KEMRI)	0	26	29	33
	TOTAL	**705.5**	**843.8**	**949.6**	**1051.7**

Table 3.2.3-2 Information and Communication Services

	Sub Programme Name	(KES. Millions)			
		Printed Estimates 2009/10	Estimates 2010/11	Projected Estimates	
				2011/12	2012/13
1	E-government services (EGOV)	57	62	84.2	86.5
2	News & Information Services	261.2	1,147.3	1,270.8	1,330.7
3	Film Services	219.6	481.6	558.7	746.6
4	BPO and ICT Services	80.0	111.1	130.9	153.5
5	Brand Kenya Initiative	147	594.1	1358.8	1427.7
6	Kenya Year Book Initiative	20.0	190.6	151.4	124.9
7	Universal Postal Union	-	15.8	9.3	9.8
	TOTAL	**727.8**	**2,540.5**	**3,479.9**	**3,793.2**

Table 3.2.3-3 Research and innovations

	Sub Programme Name	(KES. Millions)			
		Printed Estimates 2009/10	Estimates 2010/11	Projected Estimates	
				2011/12	2012/13
1	Medical Research	4,335	8,318	8,905	9,552
2	Industrial Research	524	633	790	988
3	Agricultural Research	2,773	5,499	5,439	5,719
4	Forestry Research	719	954	1,032	1,118
5	Sugar Research	324	581	702	612
6	Crime Research	39.3	1,01.1	1,21.3	1,72.6
7	Tea Research	342	627	678	733
8	Coffee Research	679	398	422	474
9	Marine & Fisheries Research	495	1,021	1,391	1,531
10	Public Policy Research	265	351	369	353
11	Media Research (MOIC)	0	16.9	21.7	34.3
12	STI Research (MoHEST)	79.6	99.6	92.5	93.6
	TOTAL	**10,574.9**	**18,500.6**	**19,864.5**	**21,281.5**

Table 3.2.3-4 ICT Infrastructure

	Sub Programme Name	(KES. Millions)			
		Printed Estimates 2009/10	Estimates 2010/11	Projected Estimates	
				2011/12	2012/13
1	BPO/ICT Park	800	700.2	1,200.4	2,200.7
2	Analogue-Digital Migration	-	2,986.3	2,738.6	2,867.2
3	TEAMS	-	764.6	843.7	967.3
4	NOFBI	-	2,542.5	1,553.7	1,022.3
5	KTCIP	1,120	3,464.4	1,894.1	845.8
6	Rural Telecom Infrastructure	4.2	950.3	192.6	167.4
7	Public Mass Media Establishments' Facilities and Equipment(MOIC)	65.3	2,287.6	3,936.6	3,830.6
	Public Mass Media Establishments' Facilities and Equipment(KEMRI))	-	198	222	249
8	LANs & WANs (MOIC)	14	63.0	51.8	48.7
9	LANs & WANs (E-Government)	1252	139	109.3	111.5
10	Government Tele-Presence	-	37.9	68.9	60.2
11	PSTN_IP Switch Over	-	110.7	123.4	117.9
	TOTAL	**3,255.5**	**14,244.5**	**12,935.1**	**12,488.6**

Table 3.2.3-5 Human Resource Development

	Sub Programme Name	(KES. Millions)			
		Printed Estimates 2009/10	Estimates 2010/11	Projected Estimates	
				2011/12	2012/13
1	University Education(MoHEST)	17,853	22,904	23,862	23,866
2	Human Resource Skills development and quality Assurance (MoHEST)	5,918	12,327	12,877	13,482
3	TIVET(MoHEST)	1,549	5,983	6,097	6,179
4	ITROMID(KEMRI)	-	107	120	135
5	ESACIPAC(KEMRI)	-	25	4,973	5,570
6	ICT & Mass Media Skills(EGOV)	62	16	18.5	20
7	ICT & Mass Media Skills(MOIC)	121.7	698.6	643.4	663.4
	TOTAL	**25,503.7**	**42,060.6**	**48,590.9**	**49,915.4**

Table 3.2.3-6 Data Management

	Sub Programme Name	KES. Millions			
		Printed Estimates 2009/10	Estimates 2010/11	Projected Estimates	
				2011/12	2012/13
1	IPRS	524	628	440	409
2	National Data Centre & Disaster Recovery Centre (MOIC)	-	100.7	189.6	156.3
3	Data Centre & Disaster Recovery Site (GITS)	3,162	2,667	2,106	2,106
4	Statistical data management	7,742	1,376	1,445	1,573
	TOTAL	**11,428**	**4,771.7**	**4,180.6**	**4,244.3**

3.2.4   Sector Resource Requirements by: (Economic Classification: KES. Millions)

	Economic classification	Estimates		Projections	
		2009/10	**2010/11**	**2011/12**	**2012/13**
1	**Current expenditure**				
	Compensation to Employees	6,307.4	8,760.5	8,808.2	9,361.9
	Use of Goods and Services	5,543.1	11,467.2	13,509.2	15,330.9
	Current Transfers to Govt. Agencies	21,078.5	34,518.1	35,314.2	35,445.8
	Other Current	473	578	615	677
	Gross Total Current Expenditure	**33,402**	**55,323.8**	**58,246.6**	**60,815.6**
	A in A	11,833.6	14,988.6	15,030.6	15,106.6
	Net Total Current Expenditure	**21,568.4**	**40,335.2**	**43,216**	**45,709**
2	**Capital Expenditure**				
	Acquisition of Non Financial Assets	8,352.5	17,222.1	14,893.7	16,832.4
	Capital transfer to Govt. Agencies	4,680.5	10,932.1	11,756.7	9,207
	Other Developments	7,716	1,122	1,507	1,507
	Gross Total Capital Expenditure	**20,749**	**29,276.2**	**28,157.4**	**27,546.4**
	Indicative Donor Commitments	**5,442.4**	14,612.**8**	**12,867.3**	**12,424.3**
	Net Total Capital Expenditure	**15,306.6**	**14,663.4**	**15,290.1**	**15,122.1**
	Net Total expenditure by Sector	**36,875**	**54,998.6**	**58,506.1**	**60,831.1**

3.3 ANALYSIS OF RESOURCE REQUIREMENTS VERSUS ALLOCATION BY: SUB-SECTORS

The table below shows resource requirement of the sector by sub-sectors.

Table 3.2.4-1 Sector resource requirements versus allocation

RIT SECTOR	2009/10 Approved Estimates	2010/11 Recurrent Requirement	2010 / 2011 ALLOCATION		
			Recurrent	Development	Total
Ministry Of Higher Education Science And Technology (MoHEST)	25,236	34,437	22,804	4,200	27,004
Ministry Of Information And Communications (MoIC)	2,316	3,763	2,553	1,427	3,980
Department Of Resource Survey And Remote Sensing (DRSRS)	229	243	178	70	248
Directorate of E– Government (E-Govt)	143	112	113	70	183
Government Information Technology Secretariat (GITS)	604	387	301	230	531
Integrated Population Registration System (IPRS)	489	126	136	300	436
Kenya National Bureau Of Statistics (KNBS)	899	670	641	200	841
Coffee Research Foundation (CRF)	14	362	46	-	46
Kenya Agricultural Research Institute (KARI)	2,057	3,215	1,984	239	2,223
Kenya Forestry Research Institute (KEFRI)	725	768	857	41	898
Kenya Marine And Fisheries Research Institute (KEMFRI)	364	769	468	40	508
Kenya Medical Research Institute (KEMRI)	1,100	8,674	1,685	248	1,933
Kenya Institute Of Public Policy Research And Analysis (KIPPRA)	127	244	105	40	145
Kenya Industrial Research And Development Institute (KIRDI)	520	309	347	180	527
Kenya Sugar Research Foundation (KESREF)	88	596	158	100	258
National Crime Research Centre (NCRC)	39	51	26	20	46
Tea Research (TRKF) Foundation	10	598	47	30	77
Gross Recurrent Requirement	**34,960**	**55,324**	**32,450**	**7,435**	**39,885**
A-I-A	11,834	14,989	1092	13,897	14,989
TOTAL	**46,794**	**70,312**	**33,542**	**21,332**	**54,874**

Table 3.2.4-2 Recurrent requirement versus allocation

RIT SECTOR	2010/11 Recurrent Requirement	2010/2011 Recurrent Allocation
Ministry Of Higher Education Science And Technology (MoHEST)	34,437	22,804
Ministry Of Information And Communications (MoIC)	3,763	2,553
Department Of Resource Survey And Remote Sensing (DRSRS)	243	178
Directorate of E– Government (E-Govt)	112	113
Government Information Technology Secretariat (GITS)	387	301
Integrated Population Registration System (IPRS)	126	136
Kenya National Bureau Of Statistics (KNBS)	670	641
Coffee Research Foundation (CRF)	362	46
Kenya Agricultural Research Institute (KARI)	3,215	1,984
Kenya Forestry Research Institute (KEFRI)	768	857
Kenya Marine And Fisheries Research Institute (KEMFRI)	769	468
Kenya Medical Research Institute (KEMRI)	8,674	1,685
Kenya Institute Of Public Policy Research And Analysis (KIPPRA)	244	105
Kenya Industrial Research And Development Institute (KIRDI)	309	347
Kenya Sugar Research Foundation (KESREF)	596	158
National Crime Research Centre (NCRC)	51	26
Tea Research (TRKF) Foundation	598	47
TOTAL	**55,324**	**32,450**

Table 3.2.4-3 Development requirement versus allocation

RIT SECTOR	2010/11 Requirement	2010/2011 Development Allocation
Ministry Of Higher Education Science And Technology (MoHEST)	7,187	4,200
Ministry Of Information And Communications (MoIC)	14,008.20	1,427
Department Of Resource Survey And Remote Sensing (DRSRS)	308	70
Directorate of E– Government (E-Govt)	105	70
Government Information Technology Secretariat (GITS)	2,280	230
Integrated Population Registration System (IPRS)	502	300
Kenya National Bureau Of Statistics (KNBS)	706	200
Coffee Research Foundation (CRF)	36	-
Kenya Agricultural Research Institute (KARI)	2,284	239
Kenya Forestry Research Institute (KEFRI)	221	41
Kenya Marine And Fisheries Research Institute (KEMFRI)	252	40
Kenya Medical Research Institute (KEMRI)	621	248
Kenya Institute Of Public Policy Research And Analysis (KIPPRA)	107	40
Kenya Industrial Research And Development Institute (KIRDI)	324	180
Kenya Sugar Research Foundation (KESREF)	255	100
National Crime Research Centre (NCRC)	51	20
Tea Research (TRKF) Foundation	29	30
Total	**29,276**	**7,435**

CHAPTER FOUR

4 CROSS - SECTOR LINKAGES

4.0 Introduction:

The RIT sector provides avenues where information, Research findings and Innovations are exchanged using appropriate technologies to foster national development. The RIT sector has a direct linkage to all other sectors and is therefore crucial for their operations. New technologies and innovations have led to increased production, cost reduction and improved efficiency in service delivery in all sectors of the economy.

4.1 Agriculture and rural development sector

The rapid growth and high performance of the ministries of Agriculture, Livestock Development and Fisheries heavily relies on research by the Kenya Agricultural Research Institute, Kenya Marine and Fisheries Research Institute, Kenya Forestry Research Institute, Kenya Sugar Research Foundation, Tea Research Foundation and Coffee Research Foundation which are key members of the RIT Sector. On the other hand, the Forestry and Wildlife sub-sectors of the Agriculture and Rural Development Sector heavily rely on and benefit from collaborations with the Department of Resource Survey and Remote Sensing. The ongoing international and national connectivity will open up rural areas to the rest of the world. The planned establishment of digital villages will offer employment to the rural people as well as facilitate the rolling out of e-government services. The planned digitization of Lands registry will result in improved efficiency in the Ministry of Land and Cooperative development. The RIT sector will also rely on the Ministry of Lands as its key enabler for the development of Business Processes Out-sourcing.

4.2 Tourism, Trade and Industry Sector

Innovations in the RIT Sector will boost the Kenyan industries by making available locally, most industrial spare parts and ICT parts /software at affordable prices. The development of ICT infrastructure will lead to reduced cost of doing business. The Kenya Communication Amendment Act 2008 is expected to spur the growth of e-commerce in the economy. By exploiting the liberalized airwaves and high- tech information systems, the Trade and Tourism sub-sectors can prosper through media marketing. Their collaboration with RIT in the areas of film services, information and communication services will be beneficial to them. Information exchange between RIT and the Tourism, Trade and Industry Sector makes it possible to effectively market Kenya as a leading tourism, industrial and research destination.

The planned works of Brand Kenya are expected to change the country's image internationally hence further boost Tourism and local investments.
The role of higher education and Industrial research in Trade and industry cannot be over emphasized. The Institutions of higher learning have been providing expected skills to all sectors and will continue linking skills development with actual requirements of the market. The Sector is pursuing the development of science and technology parks which are expected to spur the growth of trade and industry and the use of local materials.

4.3   Physical Infrastructure Sector

Key Processes in this sector especially roads and buildings designs; can greatly be enhanced by employing relevant ICT software for their design works. The Physical Infrastructure Sector benefits from linkages with the RIT Sector by incorporating research findings on use of local materials.

The e-weather forecasting using modern satellite technology is now a possibility. A new e-transport network analysis by the DRSRS has enabled the provision of Sector services efficiently.

4.4   Governance, Justice, Law and Order Sector

The RIT sector is key to efficiency in Public service delivery. The GJLOS relies on the RIT sector for the implementation of government services and provision of security by providing the required population data and communication infrastructure. T he implementation of the integrated population registration system which will house a national population register and the operationalization of the national crime research will enable the GJLOS sector to safe guard the country from infiltration of criminals from outside the country. Further, the automation of the company registry, court registry, and integrated financial management Information System (IFMIS) will improve service delivery and revolutionize government transactions.

4.5   Public Administration Sector (PAS)

The RIT Sector serves the public administration sector through the provision of national information, statistics, and policy advice. The RIT sector is also the official government mouth piece where government development policies are communicated to the citizens through print and electronic media. The sector also provides both human resources and capacity building services for the sector. In return the RIT sector, like other sectors relies on the PAS for security. Improved communication, harnessing of development information and prioritized national human resource capacity development efforts of the RIT Sector contribute to the general improvement of public administration in the country.

4.6   National Security

The world has witnessed an upsurge in cyber crime and other technology related crime .The RIT sector is a key enabler to the maintenance of national security since it provides communication and other security equipment to combat crime. The national readiness to combat new and emerging crime will rely on RIT Sector for prevention and vigilance. Towards this the Sector will work closely with national security agencies for prompt identification of trends of crime.

4.7   Macro Working Group Sector

The RIT Sector links with the Macro Working Group Sector in all areas of finance and budget ceiling setting. RIT Sector will also rely on the Macro working Group Sector for

technical advice on prioritization of programmes and projects. For effective communication, the Macro Working group in turn relies on the modern technologies availed by RIT.

4.8   Environment, Water and Sanitation Sector

The provision of accurate environmental survey information is in the ambit of the RIT sector. Agricultural research will help in water conservation and general usage especially where irrigation is applied.

4.9   Special Programmes Sector

Accurate information on Gender imbalance, vulnerable groups, Youth talents and viable areas of investment for wealth creation will be critical for proper planning in the Special Programmes Sector. Video documentaries and news highlights on the areas of need will easily be availed by RIT. Data and historical information on whichever group will be readily availed through RIT Sector.

4.10   Human Resource Development

A healthy human resource is key in all sectors. The RIT Sector provides research, innovation and technology information on health and human resource development. RIT provides human resource to serve in all sectors of the economy.

4.11   Private Sector
The RIT Sector will link with Private Sector in programme implementation. Key Sector programmes are funded through Public Private Partnership (PPP) initiatives.

CHAPTER FIVE

5   EMERGING ISSUES AND CHALLENGES

The following are emerging issues and challenges in the RIT Sector;

5.1   Emerging Issues.
- Analog to Digital migration
- Cyber and IT crime
- Under utilization of available and new technologies.
- Poor perception and appreciation by Policy makers and Public on tangible returns on investment committed to Research.
- Need to keep pace with Technological advancements by Research and Training Institutions
- Need to establish a specialized fund for research, innovation and new technological Developments.
- Duplication and overlapping institutional mandates.
- High rate of upgrading middle level & technical colleges into Universities.
- Non incorporation of ICTs in buildings at design stage
- Insufficient understanding of PBB by SWG members.

5.2   Challenges

The RIT Sector faces various challenges some of which include;
- Lack of definite Policy on Institutional and Legal Framework on research
- Export of skills to other economies owing to differences in reward schemes.
- Optimization of resource utilization
- Over dependence on donor funding.
- Poor linkages for technology transfer.
- Poor sensitization of policy makers and public in general on the benefits of research, innovations and emerging technologies
- Lack of strategies and policies to promote commercialization of local research Findings and new technologies
- Lack of awareness and implementation of intellectual property rights
- Poor implementation of policies and strategies to bridge the rural-urban digital divide
- Low interest by the youth in embracing ST&I
- Non existence of National Research Trust Fund.
- Need to establish a National Science Journal
- Need to develop a comprehensive national remuneration policy for research scientists.
- Need to establish a national database for research scientists and skills
- High cost of investment in Research and Development
- As with all Sectors, HIV&AIDS is a concern in the Sector.
- Skills mismatch between knowledge institutions and market demand
- Low investment in research innovation and technology

CHAPTER SIX

6 CONCLUSION

Kenya Vision 2030 recognizes that there is urgent need to shift Kenya to a knowledge based economy, and the only way is to confront challenges of global competitiveness for national prosperity. The growth of the RIT sector will make it possible for Kenya to harness in a coordinated manner the best possible human capital, research technology and innovation to position the country in a modern world economy.

In order to achieve the objectives of the sector, it is important to adequately fund the sector by creating a capital venture fund, national research trust fund, address partnership coordination and relationships and optimize resource allocations. In addition, there is urgent need to develop a strong national research and innovation policy, strictly implement intellectual and property rights law; create a comprehensive national remuneration policy for research scientists.

If the above recommendations are addressed, Kenya's economy will achieve the 10% annual GDP growth as envisaged in the Vision 2030, making Kenya a prosperous nation with a high quality of life.

The RIT sector receives about half of the actual funds it requires, with the big portion being allocated to PE. There is need to review the Sector ceilings upward to facilitate its growth.

CHAPTER SEVEN

7 RECOMMENDATIONS

As stated in the Vision 2030, this sector is the driver of the whole economy. Consequently, the Sector recommends the implementation of the following;

- Development of policy, institutional and legal framework to stimulate growth of the
- Sector
- Creation of National Commission for Science, Technology and Innovation to institutionalize the sector.
- Building capacities to increase the national pool of skills and talents in research, innovation and technology
- Increased funding for RIT sector
- Create a National Research Trust Fund.
- Carry out awareness campaigns to improve appreciation of the benefits of RIT and intellectual property rights.
- Launch a Scientific Journals and other related publications to improve dissemination
- and application of research findings
- Launch Capital Venture Fund to finance sector investment
- Improve "Brain circulation"
- Optimize resource utilization
- Reduce donor funding dependence
- Improve linkages and develop a national network model for extension services.
- Carry out awareness campaigns to improve interest by the youth in embracing STI
- Create a comprehensive and harmonized scheme of service which will establish a national database for research scientists.
- Formulation and Implementation of policy on disaster preparedness
- Incorporation of ICTs in building designs
- RIT Sector Working Group members be trained on Programme Based Budgeting (PBB)
- Revised (Supplementary) budgets be released early preferably by February

REFERENCES

1.0 Treasury Circular No. 17/2009 of August 2009
2.0 Kenya Vision 2030 (2007 Edition)
3.0 Kenya Vision 2030- First Medium Term Plan 2008-2012
4.0 2008/09 Indicative Programme Based Budget (December 2008 Edition)
5.0 sub sectors Strategic Plan 2008-2012
6.0 Science , technology and innovation Sector Medium term Plan 2008-2012

APPENDICES

Appendix I: Expected Outcomes, Outputs and Key Performance indicators for Sub Sectors

(i) Ministry of Higher Education Science and Technology

TIVET Programme	Expected Outcome/s	Key Performance Indicator/s	Remarks
TIVET bursaries	equity, increased access and retention in TIVET institutions	% increase in enrolment % increase in completion rates Number of beneficiaries	3,000 needy students have benefited from KES 25 Million
Rehabilitation of Technical Institutions	Rehabilitate 10% of the facilities Replacement of obsolete equipment and facilities Quality of training facilities Increased student enrolment	Quantity of equipment replaced Number of facilities rehabilitated Number of building rehabilitated % increase in enrolment upon rehabilitation	About 10% of the facilities have been rehabilitated at a cost of KES 400 Million and enrolment has increased in the rehabilitated institutions
Establishment of Centres of Excellence	Enhanced training quality and relevance Attraction of more students	% increase in enrolment % increase in graduates absorbed by industry	11 identified, some funds disbursed More students enrolled
Establishment of Industrial Incubators	Increased business opportunities Inventions and innovations	% increase in business opportunities No. of inventions and innovators	Guidelines developed, KES 36 Million set aside
ICT	Distant Learning Increased computer literacy levels IT skills training Increased adoption/diffusion of ICT in production processes	No. of Computer laboratories No. of students enrolled in e-learning No. of e-learning programmes	10 computer labs earmarked, KES 10 Million set aside
Capacity Building	All requisite staff in-post	No. of officers recruited and trained	Establishment of DQAS is at an advanced stage, technical staff recruitment on-going, schemes of service developed, 50% staff trained
Upgrading of Mombasa and Kenya Polytechnics	Offer degree courses	No. of degree programmes offered Equipment of laboratories and workshops	Been upgraded and two labs equipped

TIVET Programme	Expected Outcome/s	Key Performance Indicator/s	Remarks
Rehabilitation of Kisumu National Polytechnic	Increased enrolment Replacement of obsolete equipment and facilities Quality of training facilities	Quantity of equipment replaced Number of facilities rehabilitated Number of building rehabilitated % increase in enrolment upon rehabilitation	Over 50% rehabilitation of the tuition block will be done by the end of this financial year. KES 62 Million required for completion
Upgrading Eight Technical Training Institutes into National Polytechnic Status	Increased enrolment to middle-level programmes Increase the number of National Polytechnics	No. of technical institutions upgraded	8 institutions identified and guidelines developed, KES 80 Million set aside. KES 500 Million required to upgrade the 8
Kenya Technical Teachers College Hall	Completion of the building	% completion	25% completion.
Construction and equipment of Libraries	17 libraries constructed and equipped Accessibility to relevant educational material	% increase in sitting capacities % completed and equipped libraries	7 already On-going. The Ministry targets 17
2. Research Development	Expected Outcome/s	Key Performance Indicator/s	Remarks
ST&I Governance Framework	Harmonized Legal and Regulatory Framework for ST&I Establishment of a Presidential Advisory Commission on Science, Technology and Innovation Establishment National Commission on Science, Technology and Innovation Guidelines on a National Observatory on Ethics and Values in ST&I	ST&I Bill A Framework for the establishment of the Presidential Advisory Commission on ST&I A Framework for the establishment National Commission on Science, Technology and Innovation % completion	
ST&I Human Resource Development & Assessment	An Audit of Science, Engineering and Technology human resource status and requirement ST&I human resource requirements study Priorities and Strategies for ST&I Human Resource Development	Audit report Human resource requirement study report	
ST&I Education and Training	ST&I Education and Training Needs Report	% completion of report	

TIVET Programme	Expected Outcome/s	Key Performance Indicator/s	Remarks
Science, Technology and Innovation Infrastructure	Mechanisms for establishment of Science and Technology Parks and Industrial Incubators	A Framework for Science and Technology Parks and Industrial Incubators	
National Research & Development	Priority and strategic R&D linkages and collaborations. Strengthened Existing Research and Development Linkages and Collaborations Promotion of Research for Development	No. of linkages & collaborations No. existing R&D linkages and collaborations reviewed No. of patents and % no. of applications received for Research Endowment fund consideration	
Technology Development, Transfer and Diffusion	Enhancement of Technological Capability and Capacity of SMEs	A Framework for establishment of a National Technology Transfer and Acquisition Office	
ST&I Public Communication and Advocacy	Enhanced Public Awareness on ST&I issues	% participation in national ST&I initiatives	
ST&I Performance Management Impact Assessment	Assessment of impacts of national ST&I initiatives	A Performance Framework for Public Science, Engineering and Technology Institutions An Online Web-based Performance Score Card A framework for a Biannual ST&I/Review	
3. Quality Assurance & Standards Programme	Expected Outcome/s	Key Performance Indicator/s	Remarks
Curriculum Development	Enhanced subject-based content mastery and pedagogical skills	Improved pass-rates	
Curriculum Implementation	Improved quality monitoring and technical teacher support	Improved technical teacher retention rates and succession management	
Curriculum Evaluation	Utilization and dissemination of results of action research on quality technical education	Curricula that are responsive to labour market needs	

(ii) Ministry of Information and Communications (MOIC)

Programme 1: Information and Communication services
Outcome: A well developed knowledge based society for wealth and employment creation

Sub-Programme/Projects	Key Outputs	Outcomes	Key Performance Indicators
Public Policy issues	4 ICT related policies to be reviewed/ formulated 4 M&E Reports per year	Increased ICT GDP Contribution Well regulated ICT Sector Efficient Service Delivery	No of policies reviewed, repealed and or formulated. No of Monitoring & evaluation reports
	Kenya Migrates to Digital TV Broadcasting by 2012.	Improved TV signal Reception,	No. of TV stations migrating to digital broadcasting.
News and Information services	36000 news stories and features distributed to the media.	Well informed Citizens/Visitors	No of news stories and features distributed to the media.
Film Industry i. *Film production and Facilitation Services*	80 film, video documentary and Newsreels produced and disseminated. 300 film licenses issued	Improved filming Business environment	No. of film, video documentary and Newsreels produced and disseminated, No. of film licenses issued.
i. *Film Censorship, Broadcast And Internet Regulatory Services*	100% Video/cinema establishments registered 100% film classified	Well regulated film industry	No of registered establishments, No. of Films classified, No. Of Cinema/video shops, No. of venders sensitized
i. *Promotion and Marketing of Filming*	4 Major films shot in Kenya	Increased Incomes to Kenyans	No. of Major films shot in Kenya
ICT and Mass Media Skills	790 graduates every year	Increased ICT Talent Pool	No of graduates.
	25% of staff trained every year	Improved service delivery	% of staff trained
HIV/AIDS Mainstreaming	8 Workshops held, 10. peer educators trained, IEC material produced	Improved service delivery	No of Workshops held, No. peer educators trained, No of brochures on HIV/AIDS produced and distributed
Brand Kenya Initiative	Improved Kenyan Image	Branded Kenya	Brand Kenya Board Operational.
Kenya Yearbook	One Yearbook published	Well informed Citizens/Visitors	Kenya year Book published
BPO and ICT Services	7,500 BPO Jobs Created % of ICT Contribution to GDP 5 BPO Suppliers in ICT Park	Improved Incomes to Kenyans	No Of jobs Created Proportion ICT Contribution to GDP No. of BPO Suppliers
Universal Postal Services	UPU chairman of Council of administration Office Operationalized, UPU Midterm strategy conference held.	Increased Universal access to ICTs	Successful hosting of UPU Midterm Strategy conference in 2010
Media Research	6 technology Reports	Well informed Citizens	No. of Reports

Programme 2: ICT Infrastructure Output: Enhanced universal access to reliable and affordable ICT services in Kenya.			
Sub-Programme/Projects	Key Outputs	Outcomes	Key Performance Indicators
The East African Marine Cable System (TEAMS)	Landing station operationalized TEAMS Linked to NOFBI	Increased Universal access to ICTs	Landing station Operational
National Optic Fibre Network Backhaul Initiative (NOFBI),	500Km of Terrestrial Fibre Optic Cable constructed	Increased Universal access to ICTs	No of KMs Covered by Terrestrial Fibre Optic Cable
Kenya Transparency Communication Infrastructure Programme (KTCIP)	50 institutions connected with bandwidth	Increased Universal access to ICTs	No of institutions connected with bandwidth
	210 Digital Villages established at constituency level	Increased Universal access to ICTs	No of Digital villages established
Business Processes and Outsourcing (BPO)	One ICT Park Established	Improved Incomes	ICT Park in place
Mobile Computer Laboratories	210 Mobile Computer laboratories provided to constituencies	Increased Universal access to ICTs	No. of constituencies with Mobile Computer laboratories
Rural Telecommunications Infrastructure	200 telecommunication base stations established.	Increased Universal access to ICTs	No. of telecommunication base established (TELKOM Kenya)

Programme 2: ICT Infrastructure Output: Enhanced universal access to reliable and affordable ICT services in Kenya.			
Sub-Programme/Projects	**Key Outputs**	**Outcomes**	**Key Performance Indicators**
Public Mass Media establishments' Facilities and Equipment	8 rural press units rehabilitated 2 Film Training studio refurbished with Modern equipments 1 modern film archive 1 sound studio constructed 1 multipurpose hall and modern kitchen constructed 600 Capacity Hostel Constructed 3 film field offices fully equipped 68 audio visual systems modernized 76 Field Press offices rehabilitated 1 ultra modern Inside Kenya Today Publication printing press 12 rural press units modernised 210 ENG systems and 24 SNG Systems for 2012 General Elections 1 HABARI House constructed and furnished 256 News Coverage Vehicles 53 New district information offices constructed and furnished 40 Public Relation units equipped 80 public viewing and listening centres established	Improved working environment, Improved Quality in Mass training	No of equipments procured, no of facilities rehabilitated and constructed.
National film Preview Laboratories	8 national film Preview Laboratories	Classified Films/Videos for Kenyan market	No. National film Preview Laboratories
Department LANs/WANs	3 departments networked	Increased e-government services	No. of department networked
National Data Centre & Disaster recovery	One National Data Centre established & Disaster recovery Constructed.	Growth in ICT services	One National Data Centre in place
Analogue Digital Migration	KBC TV Broadcast systems Migrated, 76 KNA signal feeds digitalized 1 digital KNA News only TV	Smooth Country Migrates from analogue to Digital by 2012	TV digital Broadcasts by 2015

Programme 2: ICT Infrastructure Output: Enhanced universal access to reliable and affordable ICT services in Kenya.			
Sub-Programme/Projects	Key Outputs	Outcomes	Key Performance Indicators
	Channel operationalized KIMC Studios Digitalized ADBM Strategy fully implemented 1 Digital TV Training Channel operationalized		
Government Tele-Presence	40 Government Ministries equipped with Video conferencing systems.	Reduce government spending on Travels	No. of Ministries with Video Conferencing facilities

(iii) Kenya Medical Research Institute (KEMRI)

Programme 1: Research Outcome: Reduction in disease burden		
Name of Sub programme	Key outputs	Key performance Indicators
Infectious Diseases	Scientific Publications	No. of products patented/commercialized/ No. of innovations/No. of publications/No. of partnerships
Parasitic Diseases	Scientific Publications	No. of products patented/commercialized/ No. of innovations/No. of publications/No. of partnerships
Biotechnology	Scientific Publications	No. of innovations/No. of vaccines, drugs, diagnostic tools developed/No. of publications/No. of partnerships
Public Health	Scientific Publications	No. of disease prevention models/No. of publications/No. of partnerships
Programme 2: Training Outcome: Skilled manpower		
ITROMID	Courses offered	No. of persons trained/No. of courses developed
ESACIPAC	Partnerships/networks established	No. of persons trained/No. of courses developed/No. of institutions/No. of participating countries
Industrial attachment	Appropriate skills acquired	No. of students served
Programme 3: Services Outcome: Improved quality of human health		
Specialized diagnostics	Range of diagnostics	No. of diagnostics test
Prevention, Treatment & care	Scope of conditions covered	No. of patients covered; No. of institutions/No. of targeted populations
Hazardous waste management	Safe disposal of hazardous waste	No. of institution served/tonnage of waste handled
HIV work place	Prevention programmes established	No. of Institutions served/No. of policy documents developed
Food handlers	Improved hygiene	No. of institutions/individuals served
Clinical care	High quality care	No. of clients served/No. of conditions managed
Consultancy	National/international Recognition	No. of consultancies undertaken
Outbreak investigation	Control of disease outbreak	No. of outbreaks investigated
Community outreach	Communities served	No. of outreaches conducted

Programme 4: Production Outcome: Blood safety		
Diagnostic kits	Licensed kits	No. of diagnostic kits produced
Diagnostic reagents	Approved reagents	No. of packs/sets produced
Disinfectants	Approved disinfectants	Volume produced

(iv) Kenya National Bureau of Statistics

<mark>Submit your table please</mark>

(v) Kenya Agricultural Research Institute

1.0 Development and Promotion of Integrated Crops Product Value Chains

Goal/Impact
A vibrant commercially – oriented agricultural sector propelled by science, technology and innovation.

Purpose/Outcome
Crops knowledge, information and technologies that respond to client's demands and opportunities generated and promoted.

Purpose/Outcome Indicators by 2012
1.1 20 technologies and innovations for demand-driven crops product value chains generated and promoted.
1.2 10 markets and marketing strategies for crops product value chains identified and promoted.
1.3 5 policy options for enhancing demand-driven crops product value chains advocated and facilitated.
1.4 30 percent increase in capacity for implementing crops product value chain research.
1.5 30 percent increase on crops product value chains research knowledge and information communication products for different communication stakeholder categories.

Outputs	Responsible/ Collaborators	Intended users	Outcome
1.0 Integrated food crops and crop health product value chains for increased productivity, commercialisation and competitiveness of the crop sub sector developed and promoted.	Researchers, Extension, Farmers/Clients, Private sector, Relevant Ministries and parastatals, Processors, NGOs/CBOs and development partners	Farmers/Clients, Traders, Processors, Extension Agents, Researchers, Planners and Policy Makers	Increased productivity, commercialization and competitiveness of the food crops and crop health product value chains.
2.0 Integrated horticulture and industrial crops product value chains for increased productivity, commercialisation and competitiveness of the crop sub sector developed and promoted.	- Do -	- Do -	Increased productivity, commercialization and competitiveness of the horticulture and industrial product value chains.

2.0 Development and Promotion of Integrated Livestock Product Value Chains.

Goal/Impact
A vibrant commercially – oriented agricultural sector propelled by science, technology and innovation.

Purpose/Outcome
Livestock knowledge, information and technologies that respond to client's demands and opportunities generated and promoted.

Purpose/Outcome Indicators by 2012
2.1 30 technologies and innovations for demand-driven livestock product value chains generated and promoted.
2.2 5 markets and marketing strategies for livestock product value chains identified and promoted.
2.3 3 policy options for enhancing demand-driven livestock product value chains advocated and facilitated.
2.4 30 percent increase in capacity for implementing livestock product value chain research.
2.5 30 percent increase on livestock product value chains research knowledge and information communication products for different communication stakeholder categories.

Outputs	Responsible/ Collaborators	Intended users	Outcome
1.0 Integrated animal production product value chains for increasing productivity, commercialisation and competitiveness of the livestock sub sector developed and promoted.	Researchers, Extension, Farmers/Clients, Private sector, Relevant Ministries and parastatals, processors, NGOs/CBOs and development partners	Farmers/Clients, Traders, Processors, Extension Agents, Researchers, Planners and Policy Makers	Increased productivity, commercialization and competitiveness of the animal production product value chains.
2.0 Integrated animal health product value chains for increasing productivity, commercialisation and competitiveness of the livestock sub sector developed and promoted.	- Do -	- Do -	Increased productivity, commercialization and competitiveness of the animal health product value chains.
3.0 Integrated range resource and range animal product value chains for increasing productivity, commercialisation and competitiveness of the livestock sub sector developed and promoted.	- Do -	- Do -	Increased productivity, commercialization and competitiveness of the range resource and range animal product value chains.

3.0 Enhancement of Sustainable and Integrated Management of Natural Resources.

Goal/Impact
A vibrant commercially – oriented agricultural sector propelled by science, technology and innovation

Purpose/Outcome
Natural resource management knowledge, information and technologies that respond to client's demands and opportunities generated and promoted.

Purpose/Outcome Indicators by 2012
3.1   10 natural resource management research technologies and innovations for enhancing demand-driven crops and livestock product value chains generated and promoted.
3.2   3 markets and marketing strategies for natural resource management product value chains identified and promoted.
3.3   3 policy options for natural resource management for enhancing demand-driven natural resource management product value chains advocated and facilitated.
3.4   30 percent increase in capacity for implementing natural resource management product value chains research.
3.5   30 percent increase on natural resource management product value chains research knowledge and information communication products for different communication stakeholder categories.

Outputs	Responsible/ Collaborators	Intended users	Outcome
1.0 Land use planning for increasing productivity, commercialisation and competitiveness of priority crops and livestock product value chains improved.	Researchers, Extension, Farmers/Clients, Private sector, Relevant Ministries and parastatals, Processors, NGOs/CBOs and development partners	Farmers/Clients, Traders, Processors, Extension Agents, Researchers, Planners and Policy Makers	Increased productivity, commercialization and competitiveness of priority crops and livestock product value chains.
2.0 Soil and water conservation for increasing and sustainable productivity, commercialisation and competitiveness of priority crops and livestock product value chains improved.	- Do -	- Do -	- Do -
3.0 Integrated soil fertility management for increasing productivity, commercialisation and competitiveness of priority crops and livestock product value chains improved.	- Do -	- Do -	- Do -
4.0 Irrigation, drainage and management of problem soils for increasing productivity, commercialisation and competitiveness of priority crops and livestock product value chains improved.	- Do -	- Do -	- Do -

4.0   Enhancing the Use of Biotechnology and Genetic Resources

Goal/Impact
A vibrant commercially – oriented agricultural sector propelled by science, technology and innovation

Purpose/Outcome
Biotechnology and genetic resources management knowledge, information and technologies that respond to client's demands and opportunities generated and promoted.

Purpose/Outcome Indicators by 2012
4.1   8 biotechnology and genetic resources management technologies and innovations for demand-driven crops and livestock product value chains generated and promoted.
4.2   5 markets and marketing strategies for biotechnology and genetic resources management product value chains identified and promoted.
4.3   3 policy options for enhancing biotechnology and genetic resources management for demand-driven crops and livestock product value chains advocated and facilitated.
4.4   30 percent increase in capacity for implementing biotechnology and genetic resources management product value chain research.
4.5   30 percent increase on biotechnology and genetic resources management product value chains research knowledge and information communication products for different communication stakeholder categories.

Outputs	Responsible/ Collaborators	Intended users	Outcome
1.0 Development and promotion biotechnology product value chain for increasing productivity, commercialisation and	Researchers, Extension, Farmers/Clients, Private sector, Relevant Ministries and parastatals,	Farmers/Clients, Traders, Processors, Extension Agents, Researchers, Planners	Increased productivity, commercialization and competitiveness of the crops and livestock product

competitiveness of agricultural sector	Processors, NGOs/CBOs and development partners	and Policy Makers	value chains.
2.0 Acquisition and conservation of genetic resources product value chain for increasing productivity, commercialisation and competitiveness of agricultural sector.	- Do -	- Do -	- Do -
3.0 Maintenance, multiplication and promotion of pre-released product value chain for increasing productivity, commercialisation and competitiveness of agricultural sector.	- Do -	- Do -	- Do -

5.0 Enhancing the Utilization of Socio economic and Biometrics Information in Research

Goal/Impact
A vibrant commercially – oriented agricultural sector propelled by science, technology and innovation

Purpose/Outcome
Socio-economics and applied statistics knowledge and information that respond to clients' demands and opportunities for development of appropriate agricultural technologies generated and promoted.

Purpose/Outcome Indicators by 2012
5.1 15 socio-economics studies and applied statistics training and services for enhancing the development of appropriate technologies and innovations for demand-driven agricultural product value chains undertaken and promoted.   5.2 15 socio-economics and applied statistics markets and marketing strategies for enhancing agricultural product value chains identified and promoted.   5.3 10 policy options for enhancing socio-economics and applied statistics for demand-driven agricultural product value chains advocated and facilitated.   5.4 30 percent increase in the capacity for implementing socio-economics and applied statistics for demand-driven agricultural product value chains research.   5.5 30 percent increase in socio-economics and applied statistics knowledge and information communication products for different communication stakeholder categories.

Outputs	Responsible/ Collaborators	Intended users	Outcome
1.0 The use of socio-economics information in the development of appropriate technologies and innovations for demand-driven agricultural product value chains enhanced.	Researchers, Extension, Farmers/Clients, Private sector, Relevant Ministries and parastatals, Processors, NGOs/CBOs and development partners	Farmers/Clients, Traders, Processors, Extension Agents, Researchers, Planners and Policy Makers	Increased productivity, commercialization and competitiveness of the agricultural product value chains.
2.0 Market and policy information and knowledge along different agricultural product value chains analyzed and provided.	- Do -	- Do -	- Do -
3.0 Development and promotion of use of appropriate applied statistical research methods and services in research planning, implementation and analysis.	- Do -	- Do -	- Do -

6.0 Enhancing the Use of Appropriate Adaptive Research, Outreach and Partnerships Methodologies and Approaches

Goal/Impact
A vibrant commercially – oriented agricultural sector propelled by science, technology and innovation.

Purpose/Outcome
Adaptation and scaling up of knowledge and information that respond to clients' demands and opportunities for development of appropriate agricultural technologies generated and promoted.

Purpose/Outcome Indicators by 2012
6.1 30 demand-driven agricultural product value chains technologies and innovations adapted and up scaled.   6.2 10 markets and marketing strategies for demand-driven agricultural product value chains adapted and up scaled.   6.3 5 policy options for enhancing adaptation and up scaling of demand-driven agricultural product value chains technologies and innovations advocated and facilitated.   6.4 30 percent increase in the capacity for adapting and up scaling of demand-driven agricultural product value chains technologies and innovations.

6.5	30 percent increase on adaptation and up scaling knowledge and information communication products for different communication stakeholder categories.		
Outputs	Responsible/ Collaborators	Intended users	Outcome
1.0 Adaptation of demand-driven technology and innovation packages for improved productivity, commercialisation and competitiveness of the agricultural product value chains promoted.	Researchers, Extension, Farmers/Clients, Private sector, Relevant Ministries and parastatals, Processors, NGOs/CBOs and development partners	Farmers/Clients, Traders, Processors, Extension Agents, Researchers, Planners and Policy Makers	Improved productivity, commercialization and competitiveness of the agricultural product value chains.
2.0 Scaling up of demand-driven technology and innovation packages for improved productivity, commercialisation and competitiveness of the agricultural product value chains promoted.	- Do -	- Do -	- Do -
3.0 Strategic and beneficial partnerships for improving productivity commercialization and competitiveness of the agricultural product value chains established and operationalized.	- Do -	- Do -	- Do -

7.0 Improvement of Corporate Research Support Functions and Services

Goal/Impact
A vibrant commercially – oriented agricultural sector propelled by science, technology and innovation

Purpose/Outcome
Contribution of the corporate research support functions and services to the generation and promotion of knowledge, information and technologies that respond to clients' demands and opportunities improved.

Purpose/Outcome Indicators by 2012
7.1 50 improved corporate research support functions and services contributing to the development of appropriate technologies and innovations for demand-driven agricultural product value chains.
7.2 2 improved corporate research support functions and services contributing to the development of appropriate markets and marketing strategies for demand-driven agricultural product value chains.
7.3 10 improved corporate research support functions and services contributing to the advocacy and facilitation of formulation of appropriate policy options for enhancing demand-driven agricultural product value chains.
7.4 30 percent increase in the capacity for implementing improved corporate research support functions and services for enhancing the development of demand-driven agricultural product value chains research.
7.5 30 percent increase in improved corporate research support functions and services knowledge and information communication products for different communication stakeholder categories.

Outputs	Responsible/ Collaborators	Intended users	Outcome
1.0 Human resource development and management improved.	Researchers, Extension, Farmers/Clients, Private sector, Relevant Ministries and parastatals, Processors, NGOs/CBOs and development partners	Administrators, Research Managers, Planners, Policy Makers	Improved human resource for increasing productivity, commercialization and competitiveness of the agricultural product value chains.
2.0 Financial resource mobilization/acquisition and management improved.	- Do -	- Do -	Improved financial resources acquisition and management.
3.0 Physical resource development and management improved.	- Do -	- Do -	Improved physical resource development and management.
4.0 Procurement and supplies services improved.	- Do -	- Do -	Improved procurement and supplies services.
5.0 Planning, monitoring and evaluation improved.	- Do -	- Do -	Improved Planning, monitoring and evaluation system.

6.0 Internal financial and assets audit improved.	- Do -	- Do -	Improved Internal audit system.
7.0 Corporate and legal services improved.	- Do -	- Do -	Improved Corporate and legal services.
8.0 Information management and communication technology improved.	- Do -	- Do -	Improved Information management and communication technology.
9.0 Sustainable funding for agricultural research improved	- Do -	- Do -	Improved sustainable funding for research.

(vi) Government Information Technology Services

	Function/Objective	Outputs/Outcome	Performance indicator
1	To provide a flexible, reliable, manageable, secure and scalable ICT infrastructure	Improved communication and information exchange within and between GOK organizations	No of ministries with LAN, a working Metro network
2	Develop ICT operation, technical and project management skills among all cadres in government managers and	Improved development and utilization of ICT in Government	No of staff trained at all levels and on all ICTs courses; technical, management and basic/user
3	Enhancing the GOK data Centre and setting up of an offshore Data Disaster Recovery site	A centralized, efficient and centrally managed processing unit	A centralized, efficient and centrally managed processing unit Skilled Manpower High availability of Data An offshore Data Disaster Recovery Site

(vii)   Integrated Population Registration System

Name of Sub programme(SP)	Key outputs (KQ)6	Key Performance Indicators(PI)7
Introduction of 3rd generation ID card System	More secure identification system	system in place
Births and Deaths Registration System	Improved service delivery	system in place
Visa issuing system	Improved service delivery and enhanced revenue collection	system in place
Biometric passport system	More secure Passports	system in place
Border management system	Improved security within the country	system in place
Refugees management system	Improved Refugee status	system in place

(viii)   Kenya Marine and Research Institute
Key Indicators of Sub-Sector Performance
The logical matrix below presents performance indicators for KMFRI's core activities

Sub-programme	Sub-programme objectives	Activities	Outputs	Performance indicators	Outcomes
1. Fisheries research	1.1 To undertake research aimed at increasing fisheries production	Undertake stock assessment surveys for new and existing fishing grounds	Data and information on fish stock abundance and distribution determined and new fishing grounds identified	- Number of stock assessments done - Number of technical reports	Sustainable fish production
		Undertake studies on changes in fish life-cycles and reproductive patterns	Studies on fish life cycles and reproductive pattern undertaken and disseminated	Number of technical reports. Number of workshops held	Improved fisheries management and conservation
2. Aquaculture research	2.1 To undertake research aimed at increasing fisheries production	Assess the potential and develop adaptive aquaculture technology	Adaptive aquaculture technology developed and disseminated	Number of technologies developed	Increased aquaculture production
3. Value addition and post-harvest research	3.1 To develop value added products and reduce post-harvest losses	Develop techniques for reducing post-harvest losses	Techniques for reducing post-harvest losses developed and disseminated	Techniques for reducing post-harvest losses developed	Reduction in post harvest losses and improved shelf life of fishery products
4. Environment and ecology research	4.1 To increase the productivity of the aquatic systems	Undertake biophysical studies in relation to fisheries	Biophysical studies undertaken and disseminated	Number of technical reports. Number of workshops held	Improved fisheries management and conservation

Sub-programme	Sub-programme objectives	Activities	Outputs	Performance indicators	Outcomes
5. Socio-economics research	5.1 To undertake research on methods to improve livelihoods of fisheries-dependent communities	Study the demographic and cultural characteristics of the fisher families	Technical reports and data	Number of technical reports	Improved fisheries management and involvement of local communities
		Study the causes of high poverty levels in fisher communities	Technical reports	Proposals on ways of improving savings	Advice on and promotion of alternative livelihoods

		Fish marketing studies (domestic and export)	Technical reports and data	Technical reports	Improved fish marketing
		Study alternative fisheries management systems	Technical reports and data	Technical reports and data	Improved fisheries management and conservation
		Study the effects of HIV/AIDS on the fishing communities	Technical reports and data	Technical reports and data	Advice on and promotion of alternative livelihoods
		Conduct studies to determine the economic viability of fish farming	Technical reports and data	Technical reports and data	Improved aquaculture development
		Organize workshops for stakeholders to disseminate findings	2 workshops organized annually	2 workshops organized annually	Information dissemination

Sub-programme	Sub-programme objectives	Activities	Outputs	Performance indicators	Outcomes
6. Information and data management	6.1 To manage data, produce information products for research and management, and promote networking and information sharing.	Archiving data, developing and disseminating information products, managing libraries, databases and IT systems.	Databases, internet connectivity, GIS	Marine science databases, internet connectivity with functional local area network linking KMFRI stations, GIS capability	Efficient communication systems, improved service delivery, informed decision making
7. Research policy	7.1. To develop a research policy	Develop guidelines for aquatic research policy	Research policy in place	Research policy in place	Research policy
8. Staff retention	8.1 To minimize exodus of professional staff	Establish mechanisms for retention and attraction of professional staff	-Retention of professional manpower	Reduced turn-over of professional staff	Retention of professional staff and improved staff morale

9. Institutional infrastructure in marine and inland waters	9.1. To improve institutional infrastructure in marine and inland waters	Improve collaboration with international community	Increased donor commitment and funding	Increased commitments and funding from donors	Increased donor funding for research
		Expand and improve office and laboratory	Offices and laboratories constructed	Offices and laboratories constructed	Adequate laboratory and office space for research
		Purchase laboratory and field equipment	Laboratory equipment purchased	Laboratory equipment purchased	Improved laboratory analyses
		Purchase 35 research vehicles	35 research vehicles purchased	35 research vehicles purchased	Transport for research
		Expand and improve library and IT facilities for databases, GIS, and internet	Library and IT facilities expanded to all the stations	Library and IT facilities connecting the research centers and stations	Availability of library and IT facilities will improve the quality of research output
		Purchase oceanographic research vessel for EEZ	Research vessel acquired	Research vessel acquired	Transport and platform for research in deep waters

(ix) Kenya Forestry Research Institute

Programme 1. Farm Forestry Research Outcome: Tree growing on farms increased and products utilization improved		
Sub-programme	Key outputs	Key Performance Indicators
1.1 Management and utilization	1.1.1 Increased number of species planted on farms.	From 9 to 14
	1.1.2 Water use by fast growing plantation species documented	One report
	1.1.3 Trees for water conservation recruited	At least four species
	1.1.4 Improved management practices	Five best practices
	1.1.5 High value farm tree products developed	Three products improved
	1.1.6 Farm forestry policy analyzed	Two policy briefs produced
1.2 Bio-energy	1.2.1 Growth performance of bio-energy tree species evaluated	Five trial plots established
	1.2.2 Survey and genetic mapping of bio-energy species undertaken	Report on provenance distribution

	1.2.3 Bio-energy plantations with various species	Five demonstrations established
	1.2.4 Silvicultural management practices developed	Five manuals

Programme 2. Natural Forests Research
Outcome: Conservation and management of natural forests improved

Sub-programme	Key outputs	Key Performance Indicators
2.1 Forest rehabilitation and management	2.1.1 Methods of rehabilitation of water towers and mangroves developed and demonstrated	Seven demonstration plots established and guidelines
	2.1.2 Conservation and management status documented	One technical report
	2.1.3 Current harvesting methods of mangroves reviewed	One guideline on mangrove extraction
	2.1.4 Existing policies reviewed	One report
	2.1.5 Incentive packages that would promote natural forest conservation developed	One guideline
	2.1.6 Capacity of local community members in management and conservation built	480 community members trained
2.2 Bamboo	2.2.1 Develop bamboo products	One guideline
	2.2.2. Bamboo products developed	9 products developed
	2.2.3 Value of bamboo promoted	6 publicity forums held
	2.2.4.Capacity for bamboo utilization and processing strengthened	30 artisans trained
	2.2.5 Bamboo preservation technologies developed	2 technologies
2.3 Medicinal Plants	2.3.1 Exploitation of medicinal plants monitored	Extraction reports from at least 3 forests
	2.3.2 Conservation of medicinal plants monitored	6 demonstration plots established

Programme 3. Dry lands Forests Research
Outcome: Management of woodland resources and utilization of tree products improved

Sub-programme	Key outputs	Key Performance Indicators
3.1 Woodlands management	3.1.1. Non-wood forest products developed	Gums, resins aloe and indigenous fruit trees
	3.1.2 Traditional woodlands management practices documented and piloted	One report and guidelines
	3.1.3 Charcoal processing technologies improved	One guideline
3.2 Prosopis	3.2.1 Distribution of Prosopis determined and mapped	One report

	3.2.2 Impacts of Prosopis invasion evaluated	One report
	3.2.3 Prosopis management interventions demonstrated and monitored	One report
	3.2.4 Management interventions scaled up	12 demonstrations established
3.3. *Domestication of indigenous tree species*	3.3.1 Production of planting materials *Melia volkensii, Osyris laceolata*	Two guidelines
	3.3.2 High yielding varieties of M. volkensi developed	A report
	3.3.3 Silvicultural management methods for *M. volkensii* and *O. laceolat* developed.	2 guidelines
	3.3.4 Pilot rehabilitation technologies developed	One guidelines
	3.4.2 Conduct feedback workshops	One report
	3.4.3 Action plan developed	A plan
	3.4.4 Action plan piloted	One guideline
3.4 Adaptation to climate change	3.4.1 Select and develop drought tolerant valuable *Sclerocarya birrea, Acacia tortilis and Melia volkensii*	Report
	3.4.2 Method of mass propagation and establishment and establishment developed	A guideline
	3.6.3 Silvicultural management practices developed	Five manuals
	3.4.4 Technologies developed disseminated	Annual field day

Programme 4. Industrial Plantation Forest research Outcome: Productivity of industrial plantations improved		
Sub-programme	Key Outputs	Key Performance Indicators
4.1 Species diversification	4.1.1 Indigenous tree species for plantation development evaluated	6 species evaluated and demonstrated
	4.1.2 Performance of promising exotic species demonstrated	3 species demonstrated
	4.1.3 Silvicultural management regimes for selected species developed	3 Technical Orders prepared
4.2 Plantation productivity	4.2.1 Plus trees selected	300 plus trees for 5 species
	4.2.2 Hybridization of Eucalyptus species undertaken	Five hybrids developed
	4.2.3 Hybrids and plus trees evaluated through progeny trials	10 progeny trials established
	4.2.4 Additional germplasm introduced	Germplasm of 4 species

4.3 Pest and diseases management	4.3.1 Outbreaks of tree pests and diseases monitored	Reports
	4.3.1 Develop methods for control of blue gum chalcid pest.	Report and guidelines

Programme 5. Tree Seed
Outcome: High quality tree seed available to users

Sub-programme	Key Outputs	Key Performance Indicators
5.1 Seed sources	5.1.1 Additional seed stands selected	18 seed stands
	5.1.2 Seed orchards established	36 ha
	5.1.3 Establishment of seed sources by farmers facilitated	10 ha
	5.1.4 Management of seed sources improved	Quarterly reports
5.3 Seed production	5.2.1 Seed collected and processed	At least 6000 kg annually
5.5 Seed quality	5.5.2 Seed handling and storage equipment procured	Register of equipment
5.4 Seed distribution	5.3.1 Seed distribution decentralized	Records of seed distributed in 5 regional centers
	5.3.2 Seed agents identified and trained	At least 5 stockiest per year per Centre
	5.3.3 Information on tree seed provided	List of publications
5.6 Policy and regulations	5.6.1 Stakeholder workshops on seed policy and regulations held	2 reports
	5.6.2 Seed policy and regulations developed	2 drafts

Programme 6. Technology Dissemination
Outcome: Technologies available to users

Sub-programme	Key Outputs	Key Performance Indicators
6.1 ICT	6.1.1 LAN in centers installed	LAN in six centers
	6.1.2 Internet links in KEFRI Centres provided	Internet services in two centers
	6.1.3 Wide area net work (WAN) equipment at KEFRI installed	Equipments installed at KEFRI and centers
	6.1.4 Data Repository facilities for KEFRI Centres provided	5 computer servers and IT PABX
6.2 Database and documentation	6.2.1 Digitize research data and results	Report
	6.2.2 Distribution of publications improved	List of recipients
	6.2.3 Database and KEFRI website developed, maintained and update	Quarterly report
	6.2 .4 Production of publications increased	Publications increased by 5 (from 30) each year

	6.2.5 Research results packaged in user friendly language	
	6.2.5 Field excursions for stakeholders organizedv	15 excursions
	6.2. 6 Field and open days held	54 field and open days
	6.2 7 Scientific conference held	One conference
	6.2.8 Capacity of clients improved	12 courses
6.3 Stakeholders	6.3.1 Records of feed back and responses maintained	Report on feed back and responses
	6.3.2 Technology needs assessment undertaken	Report
	6.3.3 Priority setting workshop held	One workshop
	6.3.4 Center and Seed Advisory Committees meetings held	24 meetings

Programme 7. Networks and Partnership
Outcome: Increase collaboration and partnership

Sub-programme	Key Outputs	Key Performance Indicators
7.1Partnership	7.1.1 Close linkages with relevant institutions enhanced	List of collaborators
	7.1.2 Networks activities coordinated	Reports
	7.1.3 KEFRI/KFS liaison office coordinated	Minutes of 18 meetings

Programme 8. Corporate Affairs and Publicity
Outcome: Better corporate image

Sub-programme	Key Outputs	Key Performance Indicators
8.1 Corporate profile	8.1.1 Publicity material developed	A list of publicity materials
	8.1.2 Public awareness of KEFRI improved	List of media features and participation in 12 ASK shows
	8.1.3 Coordinate Consultancy services	Reports
	8.1.4 Scientists` awareness on Intellectual Property Rights (IPR) increased	Reports
	8.1.5 Social responsibility activities undertaken	6 events
8.2 Environmental management	8.2 Environmental management systems in place	ISO14000: 2004 certificate

Programme 9. Strengthening Capacity of KEFRI
Outcome: Technologies and other services delivered more efficiently and effectively

Sub-programme	Key Outputs	Key Performance Indicators

9.1 Human capacity	9.1.1 Training of scientists at post graduate level supported	9 scientists trained
	9.1.2 ICT skills improved	30 trained
	9.1.3 Dissemination skills	30 trained
	9.1.4 Foresters and seed collectors trained	30 training
	9.1.5 Scientists trained in specialized communication skills	At least 60 scientists
	9.1.6 Project planning and management skills strengthened	15 trained
	9.1.7 Financial management improved	60 trained
	9.1.8 Capacity in products development improved	12 trained
9.2 Physical facilities	9.2 Office blocks at Gede, Londiani, Kakamega and Marigat	4 office blocks
9.3 Fund raising	9.3.1 External funds for research increased	10 % of total budget
	9.3.2 Internal revenue generation increased	3 % of total budget

(x) Kenya Industrial Research and Development Institute

<mark>Submit your table please</mark>

(xi) Kenya Sugar Research Foundation

Programme 1: Crop Development Research Programme
Outcome: Increased sugarcane productivity in the sub-sector with at least 20% of this attributed to KEREF's technologies

Sub-Programme	Key Outputs	KPI's
1.1 Breeding and promotion of suitable sugar cane and related crop varieties for enhancing the productivity, value addition and competitiveness of the sugar industry.	High number of seedlings produced and selected High number of clones selected	Number of seedlings selected Number of clones selected
1.2 Development and promotion of appropriate sugar cane and related crop agronomic practices for enhancing the productivity, value addition and competitiveness of the sugar industry.	Agronomic packages developed	Number of agronomic packages developed
1.3 Development and promotion of integrated sugar cane and related crops major pests and diseases control measures for enhancing the productivity, value addition and competitiveness of the sugar industry	Integrated IPM & IWM in sugarcane developed	Number of developed IPM & IWM
1.4 Improvement on the utilization of biotechnology processes and innovations for enhancing the productivity, value addition and competitiveness of the sugar industry	Healthy seedcane developed Reduction in the selection cycle	Number of plantlets produced Selection cycle reduced from 15yrs to 12yrs
1.5 Improvement in the application of agro metrology information for enhancing the productivity, value addition and competitiveness of the sugar industry	Appropriate weather prediction model for application in the sugar industry developed	Developed weather prediction model

Programme 2: Agricultural Engineering Research Programme
Outcome: Sugarcane profitability increased by 15%

2.1 Development and promotion of appropriate soil and water conservation practices	Soil and water conservation techniques developed	Number of S&W conservation techniques developed
2.2 Development and promotion of appropriate irrigation and drainage management practices	Appropriate irrigation and drainage regimes developed	Number feasibility studies conducted Number of appropriate regimes recommended
2.3 Development and promotion of environmentally sound techniques and practices in sugarcane production, harvesting and transport developed and integrated/promoted	Environmentally sound sugarcane production techniques developed	Reduction in soil compaction levels
2.4 Development and promotion of appropriate farm machinery, tools and equipment for use in cane establishment, development, maintenance, harvesting and transport Developed and promoted	Optimum farm machinery utilization adopted	Entrenchment of appropriate harvesting and transportation techniques
2.5 Establishment and operationalization of efficient tools for mapping and management of land and water resources in sugar producing zones.	Efficient mapping methods established	Acquisition on mapping tools

Programme 3: Milling and Processing Research Programme
Outcome: Milling and processing costs reduced by 20%

3.1 Development/improvement of sugar milling and processing systems	Process constraints documented and prioritized	Number of processing technologies reviewed
3.2 Improvement of utilization and value addition of milling co products	Number of technologies developed	No of publications
3.3 Provision of engineering advisory and technical back stopping services to sugar factories	Improved process management efficiency	Reduced production costs
Programme 4: Economics and Biometrics Research Programme **Outcome:** Reduced cost of research, sugar production and marketing		
4.1 Generation and promotion of the use of socio/production economics information and knowledge in the development of demand driven agricultural and industrial sugar technologies and innovations.	Socially acceptable and economically viable technologies identified Constraints to the sugar industry identified and ranked	No of socially acceptable and economically viable technologies identified Report on constraints and priority setting
4.2 Analysis and provision of market and policy information and knowledge on agricultural and industrial sugar product value chain enhancement	Benefits to the sugar industry stakeholders identified and documented Leading policy issues within the sugar industry identified and prioritized	sugar industry stakeholders identified and documented Reports and recommendation on leading policy issues within the sugar industry
4.3 Development and promotion of the use of appropriate biometrics research methods and services in research planning, implementation and analysis.	Challenges, constraints, opportunities and recommendation on biometric methods and services identified Improved biometrics methods, services and skills use in the foundation	Report on challenges, constraints, opportunities and recommendation on biometric methods and services Number of in-house courses conducted Number of scientists receiving advisory services on design and analysis of surveys and experiments
Programme 5: Technology Transfer Research Programme **Outcome:** Reduction of poverty levels and income inequality		
5.1 Improvement/strengthening of adaptation of sugar technological and innovation packages for enhancing the productivity, value addition and competitiveness of the sugar industry	Improved productivity	No and extent of technology adoption
5.2 Improvement /strengthening of adoption and scaling up of sugar technological and innovation packages for enhancing the productivity, value addition and competitiveness of the sugar industry improved/strengthened.	Improved productivity	No and extent of technology adoption

5.3 Establishment and operationalization of strategic and beneficial partnerships for enhancing the productivity, value addition and competitiveness of the sugar industry.	Increased funding Availability of relevant information	Growth in budget Quality publications and improved scientific reports

(xii) Department of Resource Survey and Remote Sensing

Programme	Sub-programme	Activities	Outputs	Outcomes	Performance Indicator
Environment and Natural Resource Information Management	Remote Sensing and Aerial Surveys	Wildlife and livestock populations census	-Wildlife/ livestock numbers, trends and spatial distributions covering	Trend lines, Management plans	-reports, maps, trends; -Databases; -Flight Log Books -Sample photographs
		Maintain an efficient and vibrant air service	Functional aircrafts	Well maintained Aircrafts	-Aircrafts -Flight plans -Flight hours
		Vegetation Surveys	-vegetation surveys in 4 study areas;	Change detection maps, land cover maps, species listing	-reports, maps, checklist, databases
		Land degradation	Land degradation assessment in one study areas	Land degradation maps	Reports, photographs, satellite images
		Land use/land cover Surveys	Land use / Land cover information in 4 study areas	Change detection maps	Reports, maps databases, photographs, satellite images, films, tapes
		Forest Cover	Forest cover information in 2 study areas	Forest change detection, forest degradation	Reports, maps, databases
		Early warning System	Crop yield/production statistics nation-wide; -Crop area information	Trends in surplus/deficit, Trends in production and consumption, Crop performance index	Reports, maps, databases

Programme	Sub-programme	Activities	Outputs	Outcomes	Performance Indicator
Environment and Natural Resource Information Management	Institutional Strengthening	Geo-information Policy	Formulate the natural resources information management policy	Policy on natural resources information	Management of Geo-information in the country
		Enact natural resources information Bill	The Act	Management of Geo-information in the country	The Act enacted
		Operation, maintenance and upgrade of Local Area Network, optic fibre	Functional structured cabling, optic fibre	Operational LAN	Cables, Optic fibre, switches, Nodes (network)
		Installation of Wide Area Network linking Ministry and partners	Functional structured cabling, optic fibre	Operational WAN	-Hardware -Software -Network
		GIS and Remote sensing software licence renewals	Functional GIS and Remote sensing software	Operational GIS and Remote sensing software	Licence keys
		GIS and Remote sensing software upgrade	Functional GIS and Remote sensing software	GIS and Remote sensing software	-software upgrade CD
		Upgrade skills in GIS/Network/software	Staff trained	Well experienced technical staff	Certificates, Testimonials
		Maintenance of PC's, Servers, Plotters and computer accessories	Functional PC's, Servers, Plotters and computer accessories	Well maintained PC's, Servers, Plotters and computer accessories	GPS, PC's, Servers, Plotters and computer accessories
		Maintenance and upgrade of website	DRSRS homepage	Updated websites	Homepage
		Internet/email connectivity	Functional internet and email	Operational internet and email	Internet connectivity and email outlook
		Upgrade skills in	Staff trained	Well	Certificates,

		web design, update and scripting		experienced technical staff	Testimonials
		Install CCTV and server back-up	Number of archived images	Level of security attained	CCTV, Images recorded, Manuals
Programme	Sub-programme	Activities	Outputs	Outcomes	Performance Indicator
Environment and Natural Resource Information management	Data management	Formulate the natural resources information management policy	Policy on natural resources information	Management of Geo-information in the country	Policy paper
		Enact natural resources information Bill	The Act	Management of Geo-information in the country	The Act enacted
		GIS and Remote sensing software licence renewals	Functional GIS and Remote sensing software	Operational GIS and Remote sensing software	Licence keys
		GIS and Remote sensing software upgrade	Functional GIS and Remote sensing software	GIS and Remote sensing software	-software upgrade CD
		Maintenance of PC's, Servers, Plotters and computer accessories	Functional PC's, Servers, Plotters and computer accessories	Well maintained PC's, Servers, Plotters and computer accessories	PC's, Servers, Plotters and computer accessories
		Maintenance and update of databases	1% increase in bytes of existing database	Increased capacity in terms of gigabytes	Databases
		Acquisition of satellite Images and aerial photographs	Number of satellite images and photos acquired	Number of stored satellite images and aerial photos	Data back-ups and archives
		Upgrade skills in information management,	Staff trained	Well experienced technical	Certificates

		Database design, Statistics and scripting (programming)		staff	

(xiii) Tea Research Foundation

Programme	Outputs	Performance Indicators
1. Crop Improvement and Physiology Activities Develop and avail high yielding and quality tea varieties/varieties for adverse biotic and abiotic factors and different agro-ecological and bio-economic conditions Develop and disseminate appropriate and need-driven production and quality technologies for different agro-ecological and socio-economic conditions	The productivity and quality of tea in smallholder and large estate sectors improved.	Number of clones number of new technologies, national annual tea production, enhanced earnings
2. Crop Management Activities Develop and avail technologies that enhance preservation of post harvest leaf quality; Develop appropriate and cost-effective soil fertility and plant nutrition technologies Develop environmentally-friendly, cost-effective pest and disease management technologies Develop and disseminate appropriate and need-driven production and quality technologies for different agro-ecological and socio-economic conditions	The productivity and quality of tea in smallholder and large estate sectors improved.	Number of new technologies, national annual tea production, enhanced earnings, increased awareness and practices on environmental conservation.
3. Tea Processing Technology, product diversification and value addition Activities. Develop and avail best practices in tea manufacture; Improve adoption of best practices in black tea processing and packaging; Train factory personnel on best practices in black tea manufacture and packaging; and Determine the market potential/needs for new tea products; Develop and avail technologies for product diversification; description and branding	Consistency of black tea quality improved by reducing fluctuations in tea processing and packaging. Technologies for the diversification value addition and branding of tea products availed.	an adaptive research factory, number of products, packaging methods adopted, number of training manuals, increased market share for diversified products, number of technologies on value addition
4. Socio-Economics and Technology Transfer Activities Establish effective extension approaches and technologies; Train tea farmers and extension staff on proven viable technologies; Develop and disseminate materials and information on tea production and quality.	Adoption levels of the proven tea production and quality technologies improved	Number of extension materials, number of trainings and visits,

(xiv)   **Coffee Research Foundation**

<mark>Submit your table please</mark>

(xv) National Crime Research Centre

Sub programme	Main activities	Expected outputs	Expected outcomes	Key Performance indicators
Research on violent crimes	Research on sexual violence, robbery with violence, murder, piracy, terrorism and car jacking.	Reports generated Statistics compiled	Reports Disseminated Crimes statistics and prevalence	No. of reports compiled and disseminated
Research on other crimes	Research on Economic crimes (E-crime, fraud, corruption, money laundering) Research into drugs and substance abuse Research into cyber crime , human trafficking	Reports generated	Reports Disseminated Crimes statistics and prevalence	No. of reports No. of linkage reports No. of reports

(xvi) E – Government

OBJECTIVE	ACTIVITY	OUTPUT	OUTCOME	Performance Indicators
Provide efficient and effective internal government communication and information sharing	Development of GCCN design specification	GCCN design Specifications		
	GCCN implementation and commissioning	Operational network		
	Installation of Enterprise Messaging and Collaboration System (EMACS)	An active EMACS	Improved exchanges and collaboration within government	
	Deployment of e-Government to the districts and local authorities	Operational e-Government systems in the districts		
Enhance ICT	Conduct	ICT Management	Enhanced	

OBJECTIVE	ACTIVITY	OUTPUT	OUTCOME	Performance Indicators
human resource capacity for sustainable support of e-government programmes and delivery of services	management seminars and workshops	skills	management and coordination of ICT resources	
	Undertake operational training for all cadres	ICT operational skills	Optimal utilization of e-government applications	
	Facilitate technical skills development	ICT technical skills	Sustainable support and enhancement of e-government applications	
Facilitate harmonization and convergence of government electronic services	Development standards for website	A standard/Template for Government website	Increased efficiency in service delivery	
	Enhancement of websites: increase bandwidth and input content.	Enhanced electronic services and improved web features		
Public awareness for e-government programmes and achievements	e-government awareness campaigns across government	Workshops, seminars and conferences conducted and number of participants	Increased adoption of ICT usage across government	

SUB-PROGRAMME	ACTIVITIES	OUTPUTS	OUTCOMES	INDICATORS
Online Government Services	Deployment of Government e-mail system (EMACS) for all civil servants including server installation and licensing for ministries	Operational e-mail system	Improved exchanges & collaboration within government and a fairly paperless environment	Increase in ICT usage in Government with significant reduction of paper work.
	Facilitate enhancement of websites in ministries: bandwidth, content and wireless connectivity	Improved websites with enhanced functional facilities and features	Increased availability and diffusion of Government information/services	Interactive/ functional websites.
	Development of e-transaction laws	e-transaction regulatory& legal framework	A conducive e-transactions environment	
	Coordination of design specifications for e-applications	e-application specifications	Increased efficiency in service delivery	
	Development of Government web portal	A Government web portal in place	Well harmonized ministerial websites	
	Awareness Creation : Documentaries, workshops, road shows, barazas, e.t.c.			
	Facilitate deployment of LANs/WANs			
	Promote secure technical interoperability within & across ministerial jurisdiction			

SUB-PROGRAMME	ACTIVITIES	OUTPUTS	OUTCOMES	INDICATORS
	Conduct ICT operational and technical training		ICT skilled users and operators all levels.	Optimal utilization of e-Government applications and facilities.
	Establishment of an e-learning centre: To coordinate e-learning activities.			
ICT audits services	Assessment of e-readiness	E-readiness report		
	Research/feasibility study on e-government application			
	Enhancement of ICT standards	Standards/template for government e-applications	Quality ICT components and systems applications	Standards guidelines developed
	ICT support & technical advice on ICT resource decisions in government			
	Analysis on status of e-Government implementation			
	Ensuring ICT security in government- both information and systems			