



**MULTINATIONAL
TANZANIA/KENYA**

ARUSHA-NAMANGA-ATHI RIVER ROAD DEVELOPMENT PROJECT
APPRAISAL REPORT

NB: This document contains errata or corrigenda (see Annexes)

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MUTINATIONAL TANZANIA / KENYA**ARUSHA – NAMANGA – ATHI RIVER ROAD DEVELOPMENT PROJECT
PROJECT INFORMATION SHEET**

The information given hereunder is intended to provide some guidance to prospective suppliers, contractors and consultants and to all persons interested in the procurement of works, goods and services for project approved by the Board of Directors of the Bank Group. More detailed information and guidance should be obtained from the Executing Agency of the Recipient countries.

1. **COUNTRIES:** Tanzania / Kenya
2. **PROJECT TITLE:** Arusha – Namanga – Athi River Road Development Project
3. **LOCATION:** Arusha region in Tanzania and Kajiado district in Kenya and the coastal strip between Tanga and Malindi.
4. **RECIPIENT:** United Republic of Tanzania and Republic of Kenya
5. **EXECUTING AGENCIES:**

<p>(a) Tanzania National Roads Agency P O Box 11364 DAR ES SALAAM, Tanzania Tel: +255-22-215 2576 Fax: +255-22-215 0022 Email: tanroadshq@tanroads.org</p>	<p>(b) Ministry of Roads and Public Works P O Box 30260 – 00100 NAIROBI - Kenya. Tel: +254-20-272 3101 Fax: +254-20-272 5098 Email: smngare@roadsnet.go.ke</p>	<p>(c) The East African Community Secretariat AICC Kilimanjaro Wing P O Box 1096, ARUSHA Tanzania Tel: +255-27-2504253/8 Fax: +255-27-2504255 Email: nyangweso@eachq.org</p>
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6. DESCRIPTION:

The Arusha – Namanga - Athi River Road Development Project will consist of Works, Consultancy Services and other components scheduled below.

- a. Civil Works, in 2 lots, for the reconstruction / rehabilitation of road 240km of Arusha - Namanga - Athi River road to 7m wide carriageway with a surfacing of asphalt concrete and single seal surface dressing and 2 m wide sealed shoulders on each side.
- b. Consultancy services for the supervision of the above works (2 consultancies, one firm for each lot of works)
- c. Project Audit consultancy services for the whole project.

- d. Consultancy services (in 2 packages) for Feasibility study and detailed engineering design for 560 km of road (Arusha-Holili/Taveta -Voi road and Tanga – Horohoro/LungaLunga–Malindi road)
- e. Consulting services in form of Technical Assistance for capacity building of East African Community Secretariat using two individual consultants.
- f. Consultancy services to evaluate the contracting capacity for civil works in East Africa and recommend measures to improve contracting capacity to participate in major projects.
- g. Other miscellaneous costs will be incurred in compensation people affected by the project.

7. COST:

Total Cost:	UA 98.815 million
Composed of Foreign Exchange:	UA 81.633 million and
Local Cost:	UA 17.182 million

8. BANK GROUP CONTRIBUTION:

ADF X Multinational window (Loans):	UA 49.778 million
<u>ADF X Multinational window (Grants):</u>	<u>UA 3.501 million</u>
Total Bank Group contribution:	UA 53.279 Million

9. OTHER SOURCE OF FINANCE:

JBIC :	UA 39.712 million
GOT – Counterpart Funds:	UA 0.203 million
<u>GOK– Counterpart Funds:</u>	<u>UA 5.621 million</u>
Total Other Sources:	UA 45.336 million

<u>Total Financing:</u>	<u>UA 98.815 million</u>
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10. DATE OF APPROVAL: 29 November 2006

11. STARTING DATE: June 2007

12. PROJECT DURATION: 36 months + 12 months defects liability period.

13. PROCUREMENT OF GOODS AND WORKS:

The civil works contract will be packaged in two lots to be procured under International Competitive Bidding (ICB) procedures.

14. CONSULTANCY SERVICES REQUIRED AND STAGE OF SELECTION:

A total of four main consultancy services will be required. Two related to supervision of civil works, and the other two are for studies and design component, which will be acquired on a short- list basis for qualified engineering consulting firms. Other Consultancies will include individual consultants for the capacity building component, a consultancy firm for the contracting capacity and an audit firm for the project’s audit services.

15. ENVIRONMENTAL CATEGORY

The project has been categorised as Category 1 because of its multinational nature.

CURRENCY AND MEASURES

Currency Equivalents

(September 2006 Exchange Rates)

Currency Unit	=	Tanzania Shilling TZS
		Kenya Shilling KES
1 UA	=	TZS 1853.77
1 UA	=	KES 109.237
1 UA	=	US\$ 1.48852
1 US\$	=	TZS 1245.378
1 US\$	=	KES 73.3863

Weights and Measures

1 metric tonne (t)	=	2,205 lbs.
1 kilogram (kg)	=	2.205 lbs.
1 metre (m)	=	3.281 ft
1 foot (ft)	=	0.305 m
1 kilometre (km)	=	0.621 mile
1 square kilometre/ sq. km (km ²)	=	0.386 square mile
1 hectare (ha) = 0.01 km ²	=	2.471 acres

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LIST OF ABBREVIATIONS

AAA	=	Advance Action for Acquisition of consultancy services
AADT	=	Annual Average Daily Traffic
AC	=	Asphalt Concrete
ACFA	=	Accelerated Co-financing Facility for Africa
ADB	=	African Development Bank
ADF	=	African Development Fund
APA	=	Advance Procurement Action for works
ASALs	=	Arid and Semi-arid Lands
Asl/asl	=	above sea level
BADEA	=	Arab Bank for Economic Development for Africa
BCR	=	Benefit Cost Ratio
BoQs	=	Bill of Quantities
CAA	=	Civil Aviation Authority
CBO	=	Community Based Organization
CCTTFA	=	Central Corridor Transit & Transport Facilitation Agency
COMESA	=	Common Market for Easter and Southern Africa
CPAR	=	Country Procurement Assessment Review
CSP	=	Country Strategy Paper
DBM	=	Dense Bitumen Macadam
DfID	=	Department for International Development (U.K.)
DIR	=	Detailed Implementation Review
DP	=	Development Partners
DRA	=	Demand Responsive Approach
DRC	=	Democratic Republic of Congo
DRCs	=	District Road Committees
EAC	=	East African Community
EATTF	=	East Africa Trade & Transport Facilitation
EDF	=	European Development Fund
EIRR	=	Economic Internal Rate of Return
EPZ	=	Export Processing Zone
ERSWEC	=	Economic Recovery Strategy for Wealth and Employment Creation

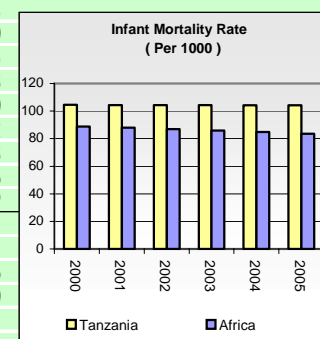
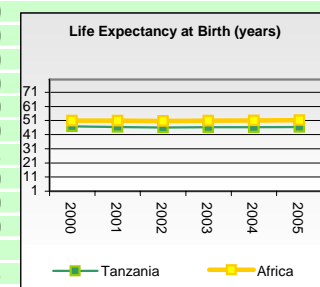
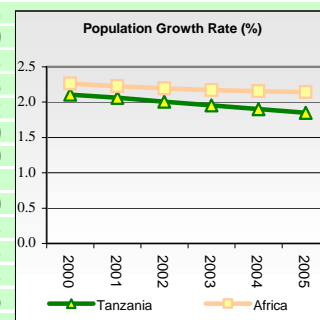
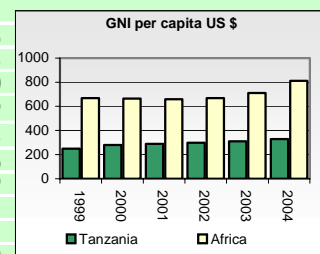
ESA	=	Equivalent Standard Axle
ESAL	=	Equivalent Standard Axle Load
ESMP	=	Environmental & Social Management Plan
EU	=	European Union
Forex	=	Foreign Exchange
FE	=	Foreign Exchange
FYRR	=	First Year Rate of Return
GDP	=	Gross Domestic Product
GOT	=	Government of Tanzania
GOK	=	Government of Kenya
GPN	=	General Procurement Notice
HDM	=	Highway Development and Management Model
HIV/AIDS	=	Human Immuno Virus/Acquired Immune Deficiency Syndrome
ICAO	=	International Civil Aviation Organization
ICB	=	International Competitive Bidding
IDA	=	International Development Association (World Bank)
IGAD	=	Intergovernmental Agency for Development
IMO	=	International Maritime Organization
IPR	=	Independent Procurement Review
IRI	=	International Roughness Index
JBIC	=	Japan Bank for International Cooperation
JICA	=	Japanese International Cooperation Agency
JKIA	=	Jomo Kenyatta International Airport
CAA	=	Kenya Airports Authority
KCAA	=	Kenya Civil Aviation Authority
KDHS	=	Kenya Demographic and Health Survey
KES	=	Kenya Shilling
KMA	=	Kenya Maritime Authority
KPA	=	Kenya Ports Authority
KPC	=	Kenya Pipeline Company Ltd
KRB	=	Kenya Roads Board
KRC	=	Kenya Railways Corporation
LC	=	Local Cost
LGA	=	Local Government Authorities
MDG	=	Millennium Development Goals
MoID	=	Ministry of Infrastructure Development
MoRPW	=	Ministry of Roads and Public Works
MoT	=	Ministry of Transport
MTR	=	Mid-term Review
NACC	=	National AIDS Control Council
NAWAPO	=	National Water Policy
NCTTCA	=	Northern Corridor Transit & Transport Coordination Authority
NEMA	=	National Environmental Management Authority
NEMC	=	National Environmental Management Council
NEPAD	=	New Partnership for Africa Development
NGO	=	Non-Governmental Organization
NMT	=	Non Motorized Transport
NPGD	=	National Policy on Gender and Development
NSGRP	=	National Strategy for Growth and Reduction of Poverty
NPV	=	Net Present Value
NSGD	=	National Strategy for Gender Development
NTP	=	National Transport Policy

OPEC	=	Organization of Petroleum Exporting Countries
PCR	=	Project Completion Report
PER	=	Public Expenditure Review
PEDP	=	Primary Education Development Programme
PLWHA	=	People Living With HIV/AIDS
PMORALG	=	Prime Minister's Office for Regional Administration and Local Government
PPOA	=	Procurement Oversight Authority
PPP	=	Public Private Partnership
PRSP	=	Poverty Reduction Strategy Paper
PS	=	Permanent Secretary
RD	=	Roads Department
RFB	=	Road Fund Board
RFP	=	Request for Proposal
RMF	=	Road Management and Financing
RMLF	=	Road Maintenance Levy Fund
ROW	=	Right-of-Way
RRSDP	=	Regional Road Sector Development Program
RSDP	=	Road Sector Development program
RVWSSP	=	Rift Valley Water Supply and Sanitation Project
SADC	=	Southern Africa Development Community
SATCC	=	Southern Africa Transport Coordination Commission
SPN	=	Specific Procurement Notice
SSATP	=	Sub-Sahara Africa Transport Policy & program
STI	=	Sexually Transmitted Infections
TA	=	Technical Assistance
TAA	=	Tanzania Airports Authority
TACAIDS	=	Tanzania Council for AIDS
TAF	=	Technical Assistance Fund
TANROADS	=	Tanzania National Roads Agency
TAORT	=	Tripartite Agreement on Road Transport
TAZARA	=	Tanzania Zambia Railway Authority
TCAA	=	Tanzania Civil Aviation Authority
TDHS	=	Tanzania Demographic and Health Survey
TEU	=	Twenty-foot Equivalent Unit
THA	=	Tanzania Harbour Authority
TOR	=	Terms of Reference
TPA	=	Tanzania Ports Authority
TRC	=	Tanzania Railway Corporation
TRF	=	Tanzania Roads Fund
TRFB	=	Tanzania Roads Fund Board
TRRL	=	Transport Road Research Laboratory
TSDG	=	Transport Sector Donors Group
TSIP	=	Transport Sector Investment Program
TZS	=	Tanzania Shilling
UA	=	Unit of Account
USD	=	United States Dollar
Veh –km	=	Vehicle Kilometer
VOC	=	Vehicle Operating Costs
WSC	=	Water Sanitation Committee

Tanzania

COMPARATIVE SOCIO-ECONOMIC INDICATORS

	Year	Tanzania	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km ²)		945	30 307	80 976	54 658
Total Population (millions)	2005	38.3	904.8	5 253.5	1 211.3
Urban Population (% of Total)	2005	37.5	38.9	43.1	78.0
Population Density (per Km ²)	2005	40.6	29.9	60.6	22.9
GNI per Capita (US \$)	2004	330	811	1 154	26 214
Labor Force Participation - Total (%)	2003	51.2	43.4	45.6	54.6
Labor Force Participation - Female (%)	2003	49.2	41.1	39.7	44.9
Gender -Related Development Index Value	2003	0.414	0.460	0.694	0.911
Human Develop. Index (Rank among 174 countries)	2003	164	n.a.	n.a.	n.a.
Popul. Living Below \$ 1 a Day (% of Population)	2001	35.7	45.0	32.0	20.0
Demographic Indicators					
Population Growth Rate - Total (%)	2005	1.8	2.1	1.4	0.3
Population Growth Rate - Urban (%)	2005	4.6	3.4	2.6	0.5
Population < 15 years (%)	2005	42.6	41.5	32.4	18.0
Population >= 65 years (%)	2005	3.2	3.4	5.5	15.3
Dependency Ratio (%)	2005	84.6	81.4	57.8	47.8
Sex Ratio (per 100 female)	2005	99.0	99.8	102.7	94.2
Female Population 15-49 years (% of total population)	2005	26.2	26.7	27.1	25.0
Life Expectancy at Birth - Total (years)	2005	46.4	51.2	64.1	76.0
Life Expectancy at Birth - Female (years)	2005	46.6	52.0	65.9	79.7
Crude Birth Rate (per 1,000)	2005	36.4	36.8	22.8	11.0
Crude Death Rate (per 1,000)	2005	16.4	15.0	8.7	10.4
Infant Mortality Rate (per 1,000)	2005	104.2	83.6	59.4	7.5
Child Mortality Rate (per 1,000)	2005	162.3	139.6	89.3	9.4
Total Fertility Rate (per woman)	2005	4.7	4.8	2.8	1.6
Maternal Mortality Rate (per 100,000)	2000	1 500	622.9	440	13
Women Using Contraception (%)	1999	25.4	26.6	59.0	74.0
Health & Nutrition Indicators					
Physicians (per 100,000 people)	2002	2.3	38.2	78.0	287.0
Nurses (per 100,000 people)	2002	36.7	110.7	98.0	782.0
Births attended by Trained Health Personnel (%)	2002	35.0	43.7	56.0	99.0
Access to Safe Water (% of Population)	2002	51.0	64.5	78.0	100.0
Access to Health Services (% of Population)*	2000	93.0	61.7	80.0	100.0
Access to Sanitation (% of Population)	2002	34.0	42.4	52.0	100.0
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2003	9.3	6.4	1.3	0.3
Incidence of Tuberculosis (per 100,000)	2003	476.0	406.4	144.0	11.0
Child Immunization Against Tuberculosis (%)	2004	91.0	78.2	82.0	93.0
Child Immunization Against Measles (%)	2004	94.0	68.8	73.0	90.0
Underweight Children (% of children under 5 years)	2003	44.0	39.0	31.0	...
Daily Calorie Supply per Capita	2003	1 959	2 439	2 675	3 285
Public Expenditure on Health (as % of GDP)	2002	2.7	2.7	1.8	6.3
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2003/04	91.0	96.7	91.0	102.3
Primary School - Female	2003/04	95.0	89.3	105.0	102.0
Secondary School - Total	2003/04	36.0	43.1	88.0	99.5
Secondary School - Female	2003/04	4.9	34.6	45.8	100.8
Primary School Female Teaching Staff (% of Total)	2004/05	47.0	44.1	51.0	82.0
Adult Illiteracy Rate - Total (%)	2005	19.9	35.0	26.6	1.2
Adult Illiteracy Rate - Male (%)	2005	12.9	26.9	19.0	0.8
Adult Illiteracy Rate - Female (%)	2005	26.7	42.9	34.2	1.6
Percentage of GDP Spent on Education*	2000	2.20	4.7	3.9	5.9
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2005	4.2	6.0	9.9	11.6
Annual Rate of Deforestation (%)	2000	0.23	0.70	0.40	-0.20
Annual Rate of Reforestation (%)	2000	8.0	10.9
Per Capita CO2 Emissions (metric tons)	2005	0.13	1.0	1.9	12.3



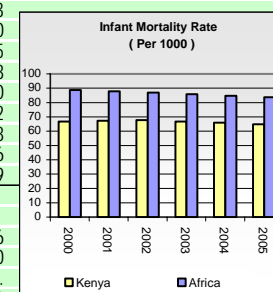
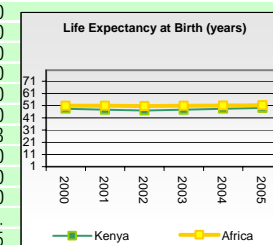
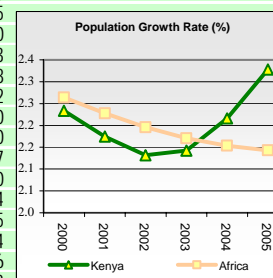
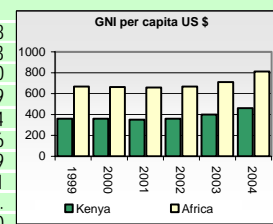
Source : ADB Statistics Division databases; UNAIDS; World Bank Live Database and United Nations Population Division; Country Reports

Notes: n.a. Not Applicable; ... Data Not Available. * : latest data available within 1995-2000

Kenya

COMPARATIVE SOCIO-ECONOMIC INDICATORS

	Year	Kenya	Africa	Developing Countries	Developed Countries
Basic Indicators					
Area ('000 Km ²)		580	30 307	80 976	54 658
Total Population (millions)	2005	34.3	904.8	5 253.5	1 211.3
Urban Population (% of Total)	2005	39.9	38.9	43.1	78.0
Population Density (per Km ²)	2005	59.0	29.9	60.6	22.9
GNI per Capita (US \$)	2004	460	811	1 154	26 214
Labor Force Participation - Total (%)	2003	52.4	43.4	45.6	54.6
Labor Force Participation - Female (%)	2003	47.1	41.1	39.7	44.9
Gender-Related Development Index Value	2003	0.472	0.460	0.694	0.911
Human Develop. Index (Rank among 174 countries)	2003	154	n.a.	n.a.	n.a.
Popul. Living Below \$ 1 a Day (% of Population)	2002	56.0	45.0	32.0	20.0
Demographic Indicators					
Population Growth Rate - Total (%)	2005	2.3	2.1	1.4	0.3
Population Growth Rate - Urban (%)	2005	4.1	3.4	2.6	0.5
Population < 15 years (%)	2005	42.8	41.5	32.4	18.0
Population >= 65 years (%)	2005	2.8	3.4	5.5	15.3
Dependency Ratio (%)	2005	83.9	81.4	57.8	47.8
Sex Ratio (per 100 female)	2005	100.3	99.8	102.7	94.2
Female Population 15-49 years (% of total population)	2005	26.5	26.7	27.1	25.0
Life Expectancy at Birth - Total (years)	2005	49.0	51.2	64.1	76.0
Life Expectancy at Birth - Female (years)	2005	48.1	52.0	65.9	79.7
Crude Birth Rate (per 1,000)	2005	39.2	36.8	22.8	11.0
Crude Death Rate (per 1,000)	2005	14.5	15.0	8.7	10.4
Infant Mortality Rate (per 1,000)	2005	64.8	83.6	59.4	7.5
Child Mortality Rate (per 1,000)	2005	111.5	139.6	89.3	9.4
Total Fertility Rate (per woman)	2005	5.0	4.8	2.8	1.6
Maternal Mortality Rate (per 100,000)	2003	414	622.9	440	13
Women Using Contraception (%)	2003	39.0	26.6	59.0	74.0
Health & Nutrition Indicators					
Physicians (per 100,000 people)	2004	13.5	38.2	78.0	287.0
Nurses (per 100,000 people)	2004	110.9	110.7	98.0	782.0
Births attended by Trained Health Personnel (%)	2003	42.0	43.7	56.0	99.0
Access to Safe Water (% of Population)	2002	62.0	64.5	78.0	100.0
Access to Health Services (% of Population)	2002	...	61.7	80.0	100.0
Access to Sanitation (% of Population)	2002	48.0	42.4	52.0	100.0
Percent. of Adults (aged 15-49) Living with HIV/AIDS	2003	7.5	6.4	1.3	0.3
Incidence of Tuberculosis (per 100,000)	2003	821.0	406.4	144.0	11.0
Child Immunization Against Tuberculosis (%)	2004	87.0	78.2	82.0	93.0
Child Immunization Against Measles (%)	2004	73.0	68.8	73.0	90.0
Underweight Children (% of children under 5 years)	2003	19.9	39.0	31.0	...
Daily Calorie Supply per Capita	2003	2 155	2 439	2 675	3 285
Public Expenditure on Health (as % of GDP)	2002	2.2	2.7	1.8	6.3
Education Indicators					
Gross Enrolment Ratio (%)					
Primary School - Total	2003/04	104.8	96.7	91.0	102.3
Primary School - Female	2003/04	101.6	89.3	105.0	102.0
Secondary School - Total	2003/04	29.8	43.1	88.0	99.5
Secondary School - Female	2003/04	27.6	34.6	45.8	100.8
Primary School Female Teaching Staff (% of Total)	2002/03	41.0	44.1	51.0	82.0
Adult Illiteracy Rate - Total (%)	2005	13.1	35.0	26.6	1.2
Adult Illiteracy Rate - Male (%)	2005	8.3	26.9	19.0	0.8
Adult Illiteracy Rate - Female (%)	2005	17.9	42.9	34.2	1.6
Percentage of GDP Spent on Education	2000	6.20	4.7	3.9	5.9
Environmental Indicators					
Land Use (Arable Land as % of Total Land Area)	2005	7.0	6.0	9.9	11.6
Annual Rate of Deforestation (%)	2000	0.53	0.70	0.40	-0.20
Annual Rate of Reforestation (%)	2000	1.0	10.9
Per Capita CO2 Emissions (metric tons)	2005	0.31	1.0	1.9	12.3



Source : ADB Statistics Division databases; UNAIDS; World Bank Live Database and United Nations Population Division; Country Reports

Notes: n.a. Not Applicable; ... Data Not Available. *: latest data available within 1995-2000

MULTINATIONAL TANZANIA /KENYA: ARUSHA – NAMANGA - ATHI RIVER ROAD DEVELOPMENT PROJECT
PROJECT MATRIX

REVISION DATE : October 2006

DESIGN TEAM: M.Wa-Kyendo, N. Kulemeka, J.Berlin, D.Gebremedhin

Hierarchy of Objectives	Expected Results	Reach	Performance Indicators Source Method	Indicative Targets Timeframe	Assumptions / Risks
<p>1 - Sector Goal</p> <p>1.1 To support regional integration, cross border trade, tourism, socio - economic development of the zone of influence and contribution to the reduction of poverty.</p>	<p><u>Long Term Outcomes</u></p> <p>1.1 Enhance cross border social and economic activity. 1.2 Improve regional trade between Tanzania and Kenya 1.3 - Enhance tourism around Arusha Region</p>	<p><u>Beneficiaries</u></p> <p>1.1 The tourism industry 1.2 Cross border trading 1.3 Regional integration 1.4 Population in areas of the Arusha region, Kajiado and Nairobi districts.</p>	<p><u>Indicators</u></p> <p>1.1 Increased volume of motorized traffic 1.2 Increased in cross border trading 1.3 Increased tourism activities.</p> <p><u>Sources /Method</u> : Statistics from Tanzania and Kenya annual traffic data; national statistics; Customs Office at Namanga</p>	<p><u>Target Indicators</u></p> <p>1.1 Improvement in cross border trade , tourist arrival and traffic movement</p>	<p><u>Assumptions</u></p> <p>1.1. GOT and GOK through the EAC will continue cooperating at all levels (political, economic, and social).</p>
<p>2. Project Objective:</p> <p>2.1 To improve the essential road transport infrastructure between Kenya and Tanzania.</p>	<p><u>Medium Term Outcomes</u></p> <p>2.1 Improved transport service between Arusha, Namanga, Athi River and Nairobi. 2.2 To reduce transport cost and improve the road transport services for the population in the project zone of influence 2.3 Smooth border passage</p>	<p><u>Beneficiaries</u></p> <p>2.1 Tourism operators within the Arusha, Tsavo and Serengeti Parks 2.2 National and regional transport operators 2.3 National and regional traders. 2.4 General population within Arusha, Namanga, Athi River and Nairobi.</p>	<p><u>Indicators</u></p> <p>2.1 Reduced VOCs 2.2. Reduced travel times 2.3. Increased traffic 2.4. Increased length of road in good condition in Arusha region and Kajiado district.</p> <p><u>Source/Method</u>: National Statistics</p>	<p><u>Target Indicators</u></p> <p>2.1 Reduction of composite VOCs per vehicle km by 19% from USD0.56 in 2006 to USD0.45 in 2010 2.2 Average composite travel time cost per day reduced by 58 % from USD 70 in 2006 to USD 30 in 2010. 2.3 Weighted average traffic along the project road increases by 36 % from 1325 in 2006 to 1795 in 2010. 2.4. Paved roads in good condition in Arusha Region(Tanzania) increases from 163 km (46% of the paved road) in 2006 to 267 km (76%) in 2010. During the same period in Kenya, Kajiado district, increased from 110 km (36%) to 246km (81%) 2.5 Trade volume between Tanzania and Kenya increased by 26 % from</p>	<p><u>Assumptions</u></p> <p>2.1 GOT and GOK allocate sufficient funds for routine and periodic maintenance and maintenance of completed road will be optimum. 2.2 . GOK's commitment to the implementation of measures with regard to financial prudence 2.3. The one stop border post concept will be successful at Namanga and removal of other non-physical barriers.</p>

				104,000 ton in 2006 to 131,000 ton in 2010. 2.6 Reduced road roughness from IRI of 5.65 in 2006 to 2.08 in 2010.	
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<p>3. Activities:</p> <p>A. Civil Works Procurement through open tendered International competitive bidding (ICB) Construction of 240 km of 7m + 4m road from Arusha to Athi River</p> <p>B Consultancy Service Procurement and delivery of service</p> <p>C. Others Compensation of affected people</p> <p style="text-align: center;">Inputs:</p> <p style="text-align: center;">Inputs - millions UA:</p> <table border="0"> <tr><td>Civil Works</td><td></td></tr> <tr><td>Arusha - Namanga</td><td>32.061</td></tr> <tr><td>Athi River – Namanga</td><td>43.851</td></tr> <tr><td>Supervision (KE)</td><td>2.713</td></tr> <tr><td>Supervision (TZ)</td><td>2.713</td></tr> <tr><td>Studies</td><td>2.600</td></tr> <tr><td>Capacity building</td><td>0.521</td></tr> <tr><td>Audit services</td><td>0.067</td></tr> <tr><td>Other (compensation)</td><td>0.067</td></tr> <tr><td>Base Cost</td><td>84.593</td></tr> <tr><td>Contingencies</td><td></td></tr> <tr><td> Physical</td><td>6.345</td></tr> <tr><td> Price</td><td>7.877</td></tr> <tr><td>Total Project cost</td><td>98.815</td></tr> </table> <p>Sources of Financing (million UA)</p>	Civil Works		Arusha - Namanga	32.061	Athi River – Namanga	43.851	Supervision (KE)	2.713	Supervision (TZ)	2.713	Studies	2.600	Capacity building	0.521	Audit services	0.067	Other (compensation)	0.067	Base Cost	84.593	Contingencies		Physical	6.345	Price	7.877	Total Project cost	98.815	<p>Short Term Outputs:</p> <p>3.1 New road with Asphalt Concrete surface , 7 mts carriageway and 2 mts SBST shoulders on either side between Arusha Namanga (104 km) in Tanzania and between Namanga and Athi River (136 km) in Kenya.</p> <p>3.2 Design & Bidding documents for 560 km Arusha to Voi road and Tanga to Malindi road.</p> <p>3.3 Increased capacity at EAC.</p> <p>3.4. Identification of regional I contracting industry constraints.</p>	<p>Beneficiaries</p> <p>3.1 Regional and international contractors, local communities, consultants and suppliers.</p> <p>3.2 Kajiado and Arusha government officials delivering services.</p> <p>3.3 Local traders and producers.</p> <p>3.4 Road users and passengers.</p>	<p>Indicators</p> <p>3.1 Loans approval 3.2 Award of civil works contracts/ consulting services contract 3.3 Commencement and completion of Construction and consultancy activities</p> <p>Source / Method : Quarterly financial and technical reports, Technical and financial Audit reports , Bank Supervision missions and Mid –term review.</p>	<p>Target Indicators</p> <p>3.1 Loans approved by 29th November 2006</p> <p>3.2 Approval of implementation contracts on schedule</p> <p>3.3 Completion of 240km of road to design standards on schedule May 2010</p> <p>3.4 Delivery of design and bidding documents</p> <p>3.5 100% disbursement by 2011</p> <p>3.6 Disbursements / payments to contractors according to schedule</p>	<p>Assumptions</p> <p>3.1 GOT and GOK disburse counterpart fund timely for the construction work 3.2 Oil prices will not increase far above USD 70 per barrel in the short term. 3.3 Effective supervision by GOT and GOK. 3.4 Implementation of the ESMP by GOT and GOK.</p>
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MULTINATIONAL TANZANIA /KENYA : ARUSHA – NAMANGA - ATHI RIVER ROAD DEVELOPMENT PROJECT

MATRIX SPECIFIC TO ADF GRANT

REVISION DATE : October 2006

DESIGN TEAM: M.Wa-Kyendo, N. Kulemeka, J.Berlin, D.Gebremedhin

Hierarchy of Objectives	Expected Results	Reach	Performance Indicators Source Method	Indicative Targets Timeframe	Assumptions / Risks
<p><u>1 - Sector Goal</u></p> <p>1.1 To support regional integration, cross border trade, tourism, socio - economic development of the zone of influence and contribution to the reduction of poverty.</p>	<p><u>Long Term Outcomes</u></p> <p>1.1 Enhance cross border social and economic activity. 1.2 Improve regional trade between Tanzania and Kenya 1.3 - Enhance tourism around Arusha Region</p>	<p><u>Beneficiaries</u></p> <p>1.1 The tourism industry 1.2 Cross border trading 1.3 Regional integration 1.4 Population in areas of the Arusha region, Kajiado and Nairobi districts.</p>	<p><u>Indicators</u></p> <p>1.1 Increased volume of motorized traffic 1.2 Increased in cross border trading 1.3 Increased tourism activities.</p> <p><u>Sources: /Method:</u> Statistics from Tanzania and Kenya annual traffic data; national statistics; Customs Office at Namanga</p>	<p><u>Target Indicators</u></p> <p>1.1 Improvement in cross border trade , tourist arrival and traffic movement</p>	<p><u>Assumptions</u></p> <p>1.1. GOT and GOK through the EAC will continue cooperating at all levels (political, economic, and social).</p>
<p><u>2. Project Objective:</u></p> <p>2.1 To improve transport service between Tanzania and Kenya, particularly between Arusha and Mombasa and between Malindi and Dar es Salaam 2.2 To improve capacity of EAC Secretariat 2.3 To improve contracting capacity of regional contractors</p>	<p><u>Medium Term Outcomes</u></p> <p>2.1 Identification of bankable projects that would improve transport services between Tanzania and Kenya. 2.2 Improved EAC capacity 2.3 Improved regional contractors.</p>	<p><u>Beneficiaries</u></p> <p>2.1. National and regional transport operators 2.2 National and regional traders. 2.3 General population in the project area. 2.4 Tourism 2.5 EAC 2.6 Regional contractors</p>	<p><u>Indicators</u></p> <p>2.1. Reduced VOCs 2.2. Reduced travel times 2.2 Increased traffic</p> <p>Source/Method: National Statistics</p>	<p><u>Target Indicators</u></p> <p>2.1 To be known by the outcome of the studies.</p>	<p><u>Assumptions</u></p> <p>2.1 Continued collaboration and shared commitment among member countries for greater cooperation and regional integration. 2.2 Capacity of EAC will be improved due to the TA</p>

3. <u>Activities:</u>	<u>Short Term Outputs:</u>	<u>Beneficiaries</u>	<u>Indicators</u>	<u>Target Indicators</u>	<u>Assumptions</u>										
<p>3.1 Feasibility studies and detail engineering design for 260 km Arusha – Holili/Taveta – Voi Road in Tanzania and Kenya.</p> <p>3.2 Feasibility studies and detail engineering design for 300 km Tanga – HoroHoro/ LungaLunga – Mombasa – Malindi Road in Tanzania and Kenya.</p> <p>3.3 Technical Assistance of Individual Consultant for East African Community Capacity Building and Study of Assessment of the Capacity of Regional Contractors.</p> <p style="text-align: center;">Inputs:</p> <p style="text-align: center;"><u>Inputs - millions UA:</u></p> <table border="0" style="width: 100%;"> <tr> <td>Arusha – Voi studies and</td> <td></td> </tr> <tr> <td>Tanga – Malindi Studies</td> <td style="text-align: right;">3.035</td> </tr> <tr> <td>Audit</td> <td style="text-align: right;">0.078</td> </tr> <tr> <td>TA to EAC</td> <td style="text-align: right;">0.608</td> </tr> <tr> <td style="border-top: 1px solid black;">Total Cost</td> <td style="text-align: right; border-top: 1px solid black;">3.721</td> </tr> </table>	Arusha – Voi studies and		Tanga – Malindi Studies	3.035	Audit	0.078	TA to EAC	0.608	Total Cost	3.721	<p>3.1. Reports for the studies and bidding documents for the 260 km Arusha – Holili/ Taveta – Voi Road</p> <p>3.2 Reports for the studies and bidding documents for the 300 km Tanga – HoroHoro/LungaLunga – Mombasa – Malindi Road</p> <p>3.3. Increased Capacity at EAC</p> <p>3.4 Report on the Assessment of the Capacity of Regional Contractors in East Africa.</p>	<p>3.1 Regional and international, consultants</p> <p>3.2 Government officials</p> <p>3.3 Regional Contractors</p>	<p>3.1. Award of consulting services and TA</p> <p>3.2 Commencement and completion of consultancy activities and TA</p> <p>Source / Method : Quarterly and annual reports, Interim and final design reports, project progress reports</p>	<p>3.1. Delivery of design and bidding documents by September 2008.</p> <p>3.2 Completion of TA and study of Assessment of the Capacity of Regional Contractors on schedule March 2011 and May 2007 respectively.</p> <p>3.3. 100% disbursement by 2008, 2009 and 2011 for the Study of Assessment of the capacity of Regional Contractors, feasibility studies and design, and TA respectively.</p>	
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EXECUTIVE SUMMARY

Project Background

The East African Community (EAC) aims to improve the regional transport infrastructure with a view to supporting economic and social development programmes in two member countries, namely Kenya and Tanzania and fostering regional integration within the East African Community. In this context, both countries' Governments have requested the Bank to finance the rehabilitation and reconstruction of the Arusha-Namanga-Athi River trunk road. The road forms part of the EAC priority Corridor No.5 of the Regional Roads Network Programme which spans from Tunduma in southern Tanzania/Zambia border to Moyale in northern Kenya/Ethiopia border.

The project road will facilitate growth in key sectors among which trade and tourism. The Arusha region is the hub of tourism in Tanzania attracting more than 80 percent of all tourist visitors. Nearly a quarter of those arrive from Kenya via the Arusha-Namanga-Athi River Road. As regards trade activities, about 41% and 20% of Kenya exports and imports to and from Tanzania respectively go through the project road. Also the project road will foster economic integration by helping to eliminate physical barriers to cross-border trade and improve the flow of production factors. In addition, the road will promote agricultural production by large and small farmers along the road corridor area.

The Bank's intervention in this road project is in line with the development priorities of both the Government of Tanzania (GOT) and the Government of Kenya (GOK). It is also in compliance with the Bank Group's strategy of promoting economic co-operation, regional integration and multinational infrastructure projects. The project will be co-financed by the Japan Bank for International Cooperation (JBIC). The project is not new to the Bank. In 2003 and 2006, it already received financing for the feasibility study and detailed engineering design of Arusha – Namanga – Athi River road, which represents the basis for the project design.

Purpose of the Loan

The joint African Development Fund and the Japan Bank for International Cooperation (ADF/JBIC) loan of UA 89.490 million will be used to finance all the foreign exchange cost and part of the local cost for the civil works and the supervision consultancy. In addition, an ADF Grant of UA 3.501million will be used to finance 95% of the cost of the study / design component and 90% of audit services and capacity building programme of the EAC Secretariat. The total ADF/JBIC financing will amount to UA 92.991 million.

Sector Goal and Project Objectives

The main goal for the Bank's intervention in this sector is to support regional integration, cross border trade, tourism, socio - economic development of the zone of influence and contribution to the reduction of poverty. The principal beneficiaries will be the tourism industry, cross border traders and socio- economic aspects of regional integration. The project's core objective is to improve road transport infrastructure between Kenya and Tanzania through the priority road corridors in the sub-region.

Brief Description of Project Outputs:

The main components/outputs of the Arusha – Namanga - Athi River Road Development Project comprise:

- a. Civil Works, in 2 lots, for the reconstruction / rehabilitation of road 240km of Arusha - Namanga - Athi River road to 7m wide carriageway with a surfacing of asphalt concrete and single seal surface dressing and 2 m wide sealed shoulders on each side.
- b. Consultancy services for the supervision of the above works (2 consultancies, one firm for each lot of works)
- c. Project Audit consultancy services for the whole project.
- d. Consultancy services (in 2 packages) for Feasibility study and detailed engineering design for 560 km of road (Arusha-Holili/Taveta -Voi road and Tanga – Horohoro/LungaLunga– Malindi road)
- e. Consulting services in form of Technical Assistance for capacity building of East African Community Secretariat using two individual consultants.
- f. Consultancy services to evaluate the poor contracting capacity for civil works in East Africa and recommend measures to improve contracting capacity to participate in major projects.
- g. Other miscellaneous costs will be incurred in compensation people affected by the project.

Project Cost

The estimated project cost (net of taxes) of the whole project is UA 98.815 million of which UA 81.633 million (83%) will be in foreign exchange and UA 17.182 million (17%) will be in local currency. This includes costs for civil works and project supervision, capacity building, compensation, project audit services and a component on study / design of two related multinational roads and provision for physical contingency and financial contingency.

In dollar terms and inclusive of taxes and duties, the total project cost is USD 185 million; USD 108 million (Kenyan section) and USD 77million (Tanzanian section).

Source of Finance

An ADF loan of UA 49.241 million to Kenya will cover 90% of civil works and supervision consultancy in Kenya. GOK counterpart funds (UA 5.511 million) will cover 10% of the project costs of respective works and cost of compensating affected people.

An ADF grant of UA 3.501 million to the East African Community will cover 95% of cost of studies and design, and 90% of costs of audit and capacity building. The GOT and GoK counterpart funds (totaling UA 0.202 million) will cover the respective 5% and 10% of the remaining costs.

A JBIC loan of UA 39.712 million to Tanzania will cover 98.5% of construction and supervision cost in Tanzania and an ADF loan of UA 0.537 million will cover 1.33% of this cost. GOT counterpart funds (UA 0.093 million) will cover 0.13% of project cost and also all the cost of compensation of affected people. The table below summarises the financing arrangement.

SOURCE	AMOUNTS (in UA Millions)			Total
	Tanzania	Kenya	EAC	
ADF GRANT	0	0	3.501	3.501
ADF LOAN	0.537	49.241	0	49.778
JBIC LOAN	39.712	0	0	39.712
GOT FUNDS	0.093	0	0.110	0.203
GOK FUNDS	0	5.511	0.110	5.621
Total	40.452	54.862	3.501	98.815

Project Implementation Agencies

The Tanzania National Roads Agency and the Ministry of Roads and Public Works of Kenya shall be the executing agencies for the respective works. The EAC Secretariat will be the executing agency for the study/design component and the capacity building programme. EAC will also be responsible for coordinating and monitoring the whole project. Project construction will be implemented over a period of 36 months starting June 2007 and will be completed by June 2010. In addition, 12 months defects liability period have been allowed for.

Conclusions and Recommendations

The overall economic evaluation proved this project to be viable. The project is well conceived, technically feasible, socially justified and environmentally sustainable.

The proposed project is in compliance with the Bank Group's Strategy, which as related to economic co-operation and regional integration, and puts emphasis on multinational infrastructure projects. The intervention in the road sector by the Bank is in line with the development priorities of the GOT and the GOK.

It is recommended from the ADF X multinational resources that (i) a loan not exceeding UA 49.241 million be extended to the Government of Kenya, (ii) a loan not exceeding UA 0.537 million to given to the Government of Tanzania, and (iii) a grant not exceeding UA 3.501 million be extended to the East African Community, for the purpose of implementing the project described in this report subject to the conditions specified in the Loan Agreements and Protocol of Grant Agreements.

1 ORIGIN AND HISTORY OF THE PROJECT

1.1 In May 1998, immediately following the establishment by the East African Community (EAC) of the Permanent High-Level Standing Committee on East African Road Network Project, a donors' conference was organized on the urgent need to develop modern regional road networks in order to accelerate regional integration and the socio-economic development of the peoples in the concerned region. Six (6) road corridors were identified as priority areas for action. Among these was the Arusha-Namanga-Athi River road. The Government of Tanzania (GOT) and the Government of Kenya (GOK), within the EAC development framework, aim at improving regional transport infrastructure in order to deepen economic co-operation and foster regional integration. The EAC, which comprises Kenya, Tanzania and Uganda was revitalized in 1998. In November 1999, the Heads of States of the three countries ratified the Treaty for the establishment of the EAC to relocate its secretariat in Arusha, Tanzania. In April of 1998, the EAC entered into agreement with the African Development Bank providing legal framework for cooperation and identifying priority areas for Bank's intervention, which includes infrastructure as a priority area.

1.2 The proposed project is a product of a study, which commenced in 2003 that the Bank funded under African Development Fund (ADF) /Technical Assistance Fund (TAF) Grant of Unit of Account (UA) 940,000. The feasibility study and detailed design of the 240 km road from Arusha through Namanga upto Athi River, near Nairobi, showed that the project is viable for prompt implementation. Detailed engineering designs were undertaken and tender documents prepared. In February 2006, the EAC Secretariat submitted a request, followed up later with formal requests from both the GOK and GOT to the African Development Fund ("the Bank") to finance under the ADF X Multinational Window the development of Arusha – Namanga – Athi River road. Consequently, the Bank mounted a preparation mission to Tanzania and Kenya in May 2006, and thereafter, an appraisal mission in August 2006. In addition, the Government of Japan through the Japan Bank for International Cooperation (JBIC) has also agreed co- financing the project. JBIC also took part in both preparation and appraisal missions.

1.3 The road is of strategic importance to the region and forms part of the priority Corridor No.5 of the EAC Regional Roads Network, which spans from Tunduma in southern Tanzania to Moyale in northern Kenya, and onward to Addis Ababa. The designation of six priority corridors is a result of collaborative effort between the EAC, the Partner States of Uganda, Tanzania and Kenya and donors active in the region's transport sector. The development of this road project will facilitate movement of traffic between Zambia, Tanzania, Kenya, Uganda and Sudan. The significance of the road as a regional road network is in line with the development priorities of the GOT and the GOK and the Bank's strategy to support multinational programs with a strong focus on regional integration among African states. EAC's last two five-year regional development strategies (2001/05, 2006/10) highlight the importance of all three countries collaborating in the development of the transport and communications sectors.

1.4 This appraisal report is based on the updated project study reports, discussions held with the EAC, the governments' agencies and other development partners, and additional information collected by the Bank missions.

2 THE TRANSPORT SECTOR

2.1 Sector Overview

2.1.1 The East Africa Region operates five modes of transport systems consisting of road, rail, maritime, air and oil pipeline. The EAC Development Strategy recognized that regional infrastructure interventions are strategic in attracting investment into the region, improving competitiveness, and promoting inter-trade. The infrastructure and support services sub-sector covers roads, railways, civil aviation, maritime transport and ports, multi-modal transport, freight administration and management. A number of Tripartite Agreements have been reached in the field of infrastructure including Road Transport, and Inland Water Transport. These aim at providing a catalytic instrument to regulate inland waterways transport, particularly across Lake Victoria. The transport system in Tanzania and Kenya, in addition to supporting national economic development, acts as a vital transit network for the neighbouring landlocked countries of the Lake Victoria Basin Region, namely, Uganda, Rwanda, Burundi, Ethiopia, southern Sudan and the Democratic Republic of Congo (DRC).

2.1.2 In Tanzania, recent transport sector reforms have included the formation of regulatory authorities of operational agencies and the privatization of operations. Current efforts by the GOT are geared towards ensuring that the transport sector effectively contributes to economic growth and poverty eradication in the country. In Tanzania, the transport sector is estimated to have accounted for 5.4 % of Gross Domestic Product (GDP) in 2004, having grown by 6.2% in 2004 when compared to 5.0% in 2003. It also accounts for between 15% and 21% of the country's foreign exchange earnings. In Kenya, transport sector reforms being implemented by the GOK emphasize the creation of autonomous regulatory institutions and the need to increased investment in the sector. In 2005, transport and communication represented 10.9% of GDP in Kenya. In real terms an 8.3 percent increase in sector's growth was recorded between 2004 (6.7%) and 2005.

2.2 Transport System

2.2.1 **Road Transport:** The EAC has identified six main corridors of strategic importance within the community (a total length of some 8,300 km), which urgently need rehabilitation and upgrading. Four of these corridors span the two countries, Kenya and Tanzania. The lack of financial resources has tremendously hampered the development of the regional network. To that effect, the EAC Secretariat in collaboration with member countries has initiated a donor-co-ordinated assistance in order to mobilize funds for the development of the corridors. The Bank's project fits within this broad donor assistance.

2.2.2 Under the High Level Standing Committee on the East African Road Network, the EAC has facilitated the implementation of the agreed conditionalities for the implementation of the East African Road Network Project, which includes the formation of Roads Boards/Agencies, participation of private sector, harmonization of regional policies and axle loads control in the road sub-sector. Tanzania and Kenya have road fund boards. Tanzania has already established a semi autonomous road agency while Kenya is to establish road authorities by end of 2007.

2.2.3 In 2005, Tanzania and Kenya had road networks, which stood at 85,000 km and 195,000 km respectively. The respective road densities are 90 km/1000 km² and 335 km/1000 km².

Although the road densities are above the Africa's average of 50 km/1000 km², it is clear that the existing networks are far from being sufficient and more roads are still required to be developed and conditions need improvement.

2.2.4 The major spine of the transport system in Kenya is the 1000 km corridor from the port of Mombasa through the capital city, Nairobi, and to the border with Uganda. It forms part of the Northern Corridor route to Uganda, and neighboring landlocked countries. The Arusha-Namanga-Athi River Road meets this spine at Athi River hence forming part of the Great North Corridor spanning from Tunduma in south Tanzania through Nairobi to Moyale in northern Kenya. Most of the east and north of the country have little road development.

2.2.5 **Rail Transport:** At the regional level, the EAC acknowledges the need to rationalize rail development within the region and to harmonize road and rail transport operations along the main corridors and has therefore, embarked on a study to come up with future plan of the railway service in the region. Railway transport is the second most important mode of transport after road and critical for long distance freight along the main transport corridors in both Tanzania and Kenya.

2.2.6 Tanzania has a total of 3,676 km of railway lines operated by two railway systems, Tanzania Railways Corporation (TRC) and Tanzania – Zambia Railways (TAZARA). Due to poor conditions of tracks and ageing rolling stock and locomotives, tonnage freight volumes and passenger numbers have continued to fall every year. The World Bank together with the African Development Bank (ADB) has committed funds for the development of the infrastructure. In order to alleviate the problems of the sub-sector, the Government is bringing in public /private sector partnership (PPP) while retaining public ownership of the infrastructure and regulation. Privatization of TRC is almost completed and is expected to be transferred to the Concessionaire by end of 2006. The study on the privatization of TAZARA was completed in 2005. The two privatization agencies of Tanzania and Zambia are working together on the subsequent actions to be implemented.

2.2.7 Kenya Railways Corporation (KRC) operates a rail network of 2,778 km of lines. The mainline connects the Mombasa port to Nairobi and to the Kenya / Uganda border at Malaba. The KRC carried 4.5 million tons of freight per year in the early 1980s but declined to 2.0 million in 2005. Passenger traffic however has been increasing steadily from 1.8 million in 1971 to 4.8 million. However passenger traffic represented only 5 percent of the total revenue in 2005. Even though the freight performance has continued to decline, it still plays a critical role in the transport of export and import goods, which account for about 35% of the long haul freight traffic handled at the port of Mombasa. But operations are hampered by the poor condition of tracks and ageing rolling stock and locomotives. The ongoing joint concessioning of the Kenya / Uganda Railways Corporations (financed by World Bank) is at an advanced stage and is aimed at rejuvenating its activities and turn it into a profit making organization.

2.2.8 With the poor performance and falling service levels of the railway transport system, the road transport has taken a large proportion of the freight and passenger services in the two countries. Thus investment in the road sub sector is critical to meet the growing transport demand. The project road as part of the main trunk road takes in freight transport.

2.2.9 **Air Transport:** The EAC is playing a key role in the aviation industry in the region and together with the partner states and the International Civil Aviation Organization (ICAO) have conceptualized the East African Civil Aviation Safety Project. The EAC is facilitating a program that will enhance the civil aviation safety across the skies of the sub-region with financial assistance from the European Investment Bank.

2.2.10 Air transport plays an important role in the economies of the two countries particularly for the tourism sector and horticulture. Air and road transports are complementary with respect to the tourism along the project road. Twenty four percent of all tourists' arrivals in Tanzania enter through Namanga, having traveled on the project road, via Jomo Kenyatta International Airport.

2.2.11 Tanzania has three international airports, which are Dar-Es Salaam, Kilimanjaro and Zanzibar and a total of 368 aerodromes. Kenya has also three international airports, namely Nairobi, Mombasa and Eldoret. In addition, Kenya has three domestic airports namely Nairobi-Wilson, Kisumu and Malindi, and over 230 smaller airports and air strips.

2.2.12 Air Transport regulations are overseen by the Ministry of Infrastructure Development in Tanzania with Tanzania Airports Authority (TAA) managing most of the airports. Following the 1992 liberalization program, Tanzania has over 30 private airlines providing scheduled and charter services throughout the country. Passenger traffic has increased by 41 percent from 1.08 million in 1999 to 1.52 million in 2004. Tanzania Civil Aviation Authority (TCAA) regulates the provision of services and the operation of aerodromes. As per the GOT's policy of liberalization, management of the Kilimanjaro Airport has been leased to a private operator since 1998 and a private owned and managed Precision Airlines operates in the Country.

2.2.13 In Kenya, the Ministry of Transport (MoT) administers air transport operations and the responsibilities are shared between the Kenya Civil Aviation Authority (KCAA), which is responsible for civil aviation and air safety, and the Kenya Airports Authority (KAA), which is responsible for the administration of airports. Passenger traffic had increased from 4.3 million in 2001 to 5.9 million in 2005, while freight traffic increased from 160,000 tones to 274,000 tones over the same period. The national airline, Kenya Airways, has been privatized and currently has a strategic partnership with KLM. The Kenya Airways has improved in its operational and financial performance.

2.2.14 **Maritime Transport:** East Africa possesses navigable water resources, with the most prominent being the Indian Ocean and Lake Victoria. While the ports on the Indian Ocean (Mombasa of Kenya and Dar-Es Salaam of Tanzania) mainly act as lifelines for many of the industries and other activities in the region. Lake Victoria plays a critical role in transportation and has the potential for cruise tourism and water sports. In addition Kenya has subsidiary ports of Kilifi, Lamu, Malindi and Shimoni; while Tanzania has the ports of Zanzibar, Tanga, Mwanza and Mtwara. Each country has also a rail-ferry service that operates cargo transport on Lake Victoria.

2.2.15 The ports of Mombasa and Dar es Salaam offer the highest throughput in the eastern coast of Africa. The container terminal handled by the port of Dar es Salaam has increased from 145,000 Twenty – foot Equivalent Unit (TEU)s in 2001 to 254,000 in 2004. During the same period the port of Mombasa has handled 291,000 and 439,000 TEUs. The port facilities with the connecting railway systems and the different road corridors serve the mainland of the

EAC countries and the regional economies of Zambia, Malawi, Rwanda and Burundi; and to a lesser extent the DRC and southern Sudan. In 2004, the transit traffic through Dar es Salaam and Mombasa were 22 and 27 percent respectively.

2.2.16 The EAC, in order to build capacity in the maritime disciplines, has identified the Dar es Salaam Maritime Institute as a regional centre of excellence and has invited donors to support the Institute's investment requirements not covered by International Maritime Organization (IMO) support.

2.2.17 The Tanzania ports are operated by Tanzania Ports Authority (TPA) and the Marine Service Company Ltd operates the inland water service transport on lakes Victoria, Tanganyika and Nyasa. The Kenyan maritime sub-sector is overseen by MoT but managed through Kenya Ports Authority (KPA) and Kenya Maritime Authority (KMA), KPA has responsibility for ports and maritime affairs, while KMA regulates and manages the principal seaport and the subsidiary ports. The KPA's vision is to retain the port of Mombasa as a major port of call and to progressively become the hub port on the eastern board of the Western Indian Ocean.

2.2.18 The efficiency of the ports need to be accompanied by the effectiveness of the land transport modes that facilities the delivery of the goods to the final destination or vice –versa. In the case at hand, the project road complements the Mombasa port service to the northern part of Tanzania, mainly Arusha region.

2.2.19 **Pipeline:** The Kenya Pipeline Company Ltd (KPL), which is under the Ministry of Energy, operates three pipelines: Mombasa –Nairobi (450 km), Nairobi–Eldoret (325 km) and Sinedet–Kisumu (121 km). The Sinedet-Kisumu line is the main conveyer of white petroleum products for domestic use and export to Uganda, Rwanda and the DRC. Through a PPP arrangement, the governments of Kenya and Uganda have set up a Commission to oversee the extension of the pipeline from Kenya to Uganda. The Tanzania Pipeline transport includes TAZAMA and SONGAS. The TAZAMA pipeline transports crude oil from Dar es Salaam to the Ndola refinery terminal in Zambia, a distance of 1750 km and the SONGAS pipeline (232 km), owned by SONGAS, transports gas from Songo – Songo island to Dar es Salaam.

2.2.20 The development of the pipeline transport system for petroleum products has eased pressure on the parallel roads (Mombasa – Nairobi, for example) and generally, by reducing the trucking of these products on the road, and contributing to the reduction in road accident and damage on the road by heavy oil tankers.

2.3 Transport Policy, Planning and Coordination

2.3.1 Policy: The objective of the transport policy of the East Africa Region to achieve an efficient, reliable and sustainable transport system for economic development. In Tanzania, the National Transport Policy (NTP) of 2003 draws its clout from the Government's long-term aspirations as stipulated in the Vision 2025, the Millennium Development Goals and the National Strategy for Growth and Reduction of Poverty (NSGRP). The MoID has the overall responsibility for policy and strategy on transport and communication. The NTP defines the mission of the Ministry as one of developing safe, reliable, effective, efficient and fully integrated transport infrastructure and operations, which will best meet the needs of travel and transport. Its core objective is to improve levels of services, at low costs in a manner, which supports government strategies for socio-economic development whilst being economically and environmentally

sustainable. At the road sub-sector level, the NTP has defined the objectives of the pan-territorial road infrastructure to be that of facilitating road transport corridor development through construction, rehabilitation and maintenance in order to encourage a smooth flow of goods and services and attract investment in other sectors. In addition, it endeavours to establish appropriate institutional arrangements for efficient road transport corridor management.

2.3.2 At sector level, the MoT, in Kenya, has the responsibility for formulating overall national transport policy including the determination of sub-sectoral objectives, coordinating the preparation of sub-sectoral strategies, monitoring evaluation and implementation for all modes except pipeline transport, which falls under the responsibility of the Ministry of Energy. However, for roads policy formulation, the responsibility is split between MoT and Ministry of Roads and public Works (MoRPW). Kenya's Economic Recovery Strategy for Wealth and Employment Creation (ERSWEC) for the period 2003-2007 recognize the need for a functional transport sector as the third pillar of economic recovery. The objective for the Transport Sector is to provide quality infrastructure as an essential element for poverty reduction and economic growth. The immediate focus is on maintenance, rehabilitation and reconstruction of existing infrastructure. For the long run, the focus is to reduce the cost of doing business, encourage the participation of the private sector and in so doing, enhance Kenya's competitiveness on the domestic, regional and international markets.

2.3.3 **Planning and Coordination:** In Tanzania, the MoID is the body in charge of planning and coordination of transport and communication. At sub sector level, the various parastatals, namely, Tanzania Railways Corporation (TRC), Tanzania – Zambia Railways Authority (TAZARA), Tanzania Ports Authority (TPA), Tanzania Airport Authority (TAA) and Tanzania National Roads Agency (TANROADS) are in charge of their respective operations. The responsibility for trunk and regional road has been transferred to TANROADS while the Ministry of Regional Administration and Local Government through the local authorities is responsible for district, feeder and urban roads.

2.3.4 Regarding road planning, Tanzania has a 10 Year Road Sector Development Program (RSDP), which was launched in 2001/02 and helps the effective and efficient development of road infrastructure and mobilization of local and international resources to speed up the road infrastructure development.

2.3.5 At sector level, the MoT, in Kenya, has the responsibility for transport planning and coordination for all modes except pipeline transport, which is the responsibility of the Ministry of Energy. However the responsibility for roads planning and coordination is the responsibility of MoRPW. Furthermore, the various parastatals are in charge of their respective operations. These include Kenya Airports Authority, Kenya Railways Corporation, Kenya Ports Authority, Kenya Roads Board (KRB), Kenya Civil Aviation Authority and Kenya Maritime Authority. Kenya is in the process of creating more focused authorities dealing with road transport, which includes Kenya National Highways Authority, Kenya Rural Roads Authority, and Kenya Urban Roads Authority.

2.3.6 The Kenyan system has elements of overlap between the MoT, MoRPW and KRB. However this overlap in the systems and the need for strengthening the respective capacities is being addressed in the current reforms. These on going reforms towards formation of highway authorities will improve the whole road sub sector delivery capacity. The absence of a road sector policy, strategy and investment program was largely perceived as a major weakness for proper road planning. Recognizing the importance of the problem, the Government has commissioned a

consultant for the preparation of Road Sub-sector policy and Strategy including investment program for 2007 -2020 with funding from the European Union.

2.4 Impact of Bank Group Assistance and Strategy

2.4.1 The current Bank intervention in road transport is very strategic, which has focused on construction of links on EAC Corridor No 2 (Dar es Salaam to Masaka) and Corridor No. 5 (Tunduma to Moyale to Addis Ababa). The planned projects including the Arusha Namanga- Athi River, and the Iringa –Dodoma –Singida- Babati-Minjingu-Arusha program all feed into this strategic corridor that have potential to connect Malawi, Zambia, Democratic Republic of Congo (DRC), Tanzania, Uganda, Rwanda, Burundi, Kenya, southern Sudan and Ethiopia. The Bank has intervened in the development of this same road Corridor No.5 between Isiolo – Moyale - Addis Ababa (Kenya –Ethiopia) road, which is one of the missing links on the Great North Trans-African Highway (Cape Town to Cairo), which is included in the New Partnership for African Development (NEPAD) short-term action plan.

2.4.2 In Tanzania, the Bank funded, under the ADF VII window, the rehabilitation of the Himo-Moshi-Arusha Road section, which was completed in 1997 and connects with the current project. In the recent past, the Bank has financed 6 road projects, 2 of which are on going and the rest were completed in the last 1 year. In all, the Bank has funded fifteen transport projects in Tanzania (see Annex 10) whose loans were approved between 1974 and 1999 and the respective projects were completed in May 2006. Thirteen of these projects were in roads, one airport study and two railway projects. The loans and grants total UA 163.7 million. Out of this, UA 120.05 million has been disbursed and the rest of UA 43.65 million cancelled.

2.4.3 The overall commitment of the Bank Group in Kenya's transport sector since its first intervention in 1967 to date amounts to UA 173.1 million. The interventions covered 16 projects in the road sub sector and one railway project (see Annex 11). Fifteen of the operations have been completed. The completed projects consist of more than 1000 km of paved roads, maintenance and rehabilitation of 2,900 km of rural roads. The completed projects have largely contributed to the strengthening the infrastructural base of the Kenya economy particularly in the most productive provinces of the country, including Nyanza, Western, Central and Rift Valley Provinces. The Bank is among the leading donors in the road sector, together with the World Bank and the European Union. The Bank Group has two ongoing road projects in Kenya.

2.4.4 The majority of the projects in both countries were completed without major problems. However, in Tanzania, some projects took longer than planned. In Kenya, the Bank ordered a special audit of the ongoing projects in the road sector in 1998 following findings that loans resources to the tune of about UA 7.80 million were being diverted to pay taxes and claims that were not eligible for financing under the loans. Subsequently the Bank suspended disbursements on all ongoing road projects until the issues were resolved and the diverted resources were recovered under a set-off arrangement agreed to between the Government and the Bank. The Bank has since resumed funding.

2.5 Governance Issue in the Transport Sector in Kenya

2.5.1 The Government of Kenya, with the assistance of the donor community, is devoting efforts in dealing with the problem of corruption in the public sector. In 2004 the GOK, with the assistance of EU and World Bank carried out an Independent Procurement Review (IPR) whose outputs were incorporated in the drafting of the Public Procurement and Disposal Act of 2005, which is now law and is expected to be operational early 2007. The new Act intends to, among others things, address issues that exacerbated corrupt tendencies in the public sector in the past. These included lack of procurement plans, delays in decision making to award contracts which were prone to manipulation, inappropriate use of procurement methods, arbitrary decision making with regard to compliance which resulted in fake competition, lack of checks and balances during authorization to pay, poor record management which resulted in double payments and embezzlement of funds, and slow and cumbersome process of review and approval by the defunct Central Tender Board

2.5.2 The abolition of the Central Tender Board five years ago and now the creation of the Public Procurement Oversight Authority (PPOA) was an important achievement in fight against corruption.. The Central Tender Board, which was required to approve public procurement, was a bottleneck in the process and was bureaucratic and presented many opportunities for corruption. The new PPOA is an independent semi-autonomous authority whose main responsibility is that of oversight in all procurement matters in the public sector – it will not approve any procurement. The PPOA will monitor all procurement processes and undertake procurement audits and conduct regular procurement and financial audits. The PPOA will also help in capacity building in the various public procurement units and will apply punitive measures against any offenders including prosecution. In order to achieve desired goals of PPOA, a Strategic Plan for the period 2005-2010 is being implemented.

2.5.3 Other related efforts in this area are finalization of the Regulatory Framework, promulgation of the Public Office Ethics Act of 2003 and Anticorruption and Economic Crimes Act of 2003, modernization of the procurement process and capacity building. Complementary to these efforts is an ADF Grant of UA 5.52 made available to Kenya in June 2006 to fund the Kenya Institutional Support for good Governance whose purpose is to contribute to good governance by creating the institutional capacity to promote transparency and accountability.

2.5.4 At transport sector level, the World Bank conducted a Detailed Implementation Review (DIR) within the MoRPW to establish confidence for continued support to activities in the sector. The DIR looked at procurement capacity and procedures, financial management and disbursement capacities. By following the review recommendations, the World Bank approved a USD 207 million credit that is financing the 4 contracts of the Northern Corridor Project in Kenya. The Arusha – Namanga – Athi River project has been designed to be implemented following similar financial and procurement safeguards. More specifically, the Country Coordinator/Project Engineer for this project (within the Roads Department of MoRPW) will be overseen by the Chief Engineer of Roads and will work with a Project Technical Committee comprising materials engineer, contracts specialist, structural engineer, disbursement expert, accountant, environmentalist/social scientist, and an auditor. The Committee will ensure that implementation and fiduciary compliance are based on the Loan Agreement and the Appraisal Report. In addition, as part of capacity enhancement and institutional reform by World Bank, the National Highway Authority will be established by December 2007. It is expected that the above mentioned measures will contribute to the improvement of the governance issues in the transport sector in Kenya.

3 THE ROAD SUB-SECTOR

3.1 Road Network, Vehicle Fleet and Network Traffic

3.1.1 The EAC development objectives of improving road connectivity across the region include the complete rehabilitation and construction of prioritized regional roads, including the Arusha Namanga Athi River project road. In order to promote, regulate and facilitate traffic flow, the member states of EAC have embarked on measures intended to harmonize and strengthen efforts in the enforcement of road transport laws and regulation in the region. These efforts focus on Tripartite Agreement on Road Transport (TAORT), the Permanent High Level Standing Committee on the East Africa Road Network Project, and the Committee for Easing Cross – Border Movements. TAORT was promulgated to promote, facilitate and regulate international road transport services and in transit through their respective territories and develop the road transport facilities, infrastructure, bridges and related services.

3.1.2 The legal framework governing road transport operations in Tanzania and Kenya are basically similar. These laws are Kenya’s Road Traffic Act of 1975 and the Transport Licensing Act of 1979 and Tanzania’s Road Traffic Act of 1973 and the Transport Licensing Act of 1973. In both countries, the market is generally liberalized. Controls and regulations are centred primarily on the issuance of various operator licenses and the safety of passengers and freight. Among major problems are the weaknesses recorded in traffic management and road safety. Road Safety Councils, established in both countries, are mostly inactive. In order to alleviate the problems in traffic management and road safety, measures are being taken including the need to enjoin vehicle owners in legal suits involving their drivers; standardization of driver training and regular updating of driving skills; and provision of facilities for non-motorized transport such as pedestrian crossings, foot paths and pavements and cycle lanes. The design of the project road has taken into account these needs and has incorporated standard engineering safety provisions such as pedestrian crossing, cycle lanes, traffic signs, speed limit signs and climbing lanes etc.

3.1.3 In Tanzania, trunk and regional roads account for about 35,000 km out of which 4,741 km are paved giving a paved road density of 5 km per 1000 km². On the other hand, Kenya has larger network of roads with a classified net work of 63,580 km out of which 9,100km are paved, giving a paved road density of 20 km per 1000 km sq. Refer to Tables 3.1, 3.2 and 3.3 below. Tanzania has maintained its network in a better condition with 53% of paved road in good condition compared to Kenya’s 19%. The above data indicates that Tanzania network, though above Africa’s average road density, needs expansion, whilst for Kenya’s network, maintenance and rehabilitation is very critical.

Table 3.1: Tanzania Road Network

Tanzania: Category	Paved (Km)	Unpaved (Km)	Total (Km)
Trunk Roads	3914	6386	10 300
Regional Roads	327	24373	24 700
District Roads	30	19970	20 000
Feeder Roads	0	27550	27 550
Urban Roads	470	1980	2 450
TOTAL	4741	80259	85 000

Table 3 2: Kenya Road Network

Kenya: TYPE	Classified Roads (Km)		Unclassified Roads (Km)		Total (Km)
	Main	Rural	Rural	Urban	
Paved	7,100	2,000	0	2,500	11,600
Unpaved	7,204	47,277	117,000*	12,000	183,481
Total	14,304	49,277	117,000*	14,500	195,081

Source: Preparation of Roads Sub-sector Policy and Strategy Including Investment Program for 2007-2020

Table 3.3: Road Density and Condition

Parameter	Road Density*	
	Tanzania	Kenya
Total Land Area of the country (sq. km)	945,087	583,000
Density of all roads per 1000 sq. km	90	335
Density of paved roads per 1000 sq. km	5	20
Road Condition of the network		
Good (%)	53	19
Fair (%)	31	49
Poor (%)	16	32
Total (%)	100	100

* Road density is measured per area of 1000 square km

Source: 10 Year Transport Sector Investment program (Tanzania) and Preparation of Roads Sub-sector Policy and Strategy Including Investment Program for 2007 -2020 (Kenya)

3.1.4 In Tanzania, the number of vehicles increased from 106,600 in 1994 to 548,326 in 2004, recording an annual average growth of 6.2 percent. The Kenyan fleet increased from 346,600 in 1995 to 712,000 in 2005, with an annual growth rate of about 7.5 percent. The motorization rate of 21 vehicles per 1000 people in Kenya is high when compared with Tanzania's 14 vehicles per 1000 people as shown in Table 3.4 below. This high rate of growth of vehicles has not been matched by expansion of road network, restricting traffic movement especially along key corridors.

Table 3.4: Rate of Motorization*

Parameter	Tanzania	Kenya
Total Population in million	38.3	34.3
Total vehicle fleet	548,326	712,000
Motorization rate per 1000 people	14	21

*The Tanzania information is that of 2004 while Kenya is of 2005.

Source: Transport, Communications and Meteorology Sector Statistics and Information (2004) (Tanzania) and Economic Survey 2006 (Kenya)

3.1.5 In Tanzania, 2004 traffic survey on trunk and regional roads revealed that traffic is concentrated on paved roads and highest traffic volume in Dar es Salaam region. The corridors with largest traffic levels (1000 to 6000 Annual Average Daily Traffic (AADT)) are TANZAM (Dar es Salaam to Tunduma) and North Eastern Corridor from Taveta to Minjingu. The traffic along the project road on the Tanzanian section ranges from 460 to 2700 AADT and connects part of the North Eastern Corridor that goes from Arusha area to Taveta, and will contribute to decongest this corridor.

3.1.6 Road traffic surveys in Kenya show that the highest levels of traffic are recorded along the Nairobi - Thika, Nairobi – Nakuru and Nairobi – Athi River roads, which have the highest concentration of population and manufacturing activities; as well as within Mombasa district along the Northern Corridor. The paved road network carries more than 60 percent of the total vehicle – kilometres and nearly 90 percent of the heavy truck traffic. The traffic along the Kenya side of the project road ranges from 800 in Namanga to 7600 at Athi River and connects the Northern Corridor at Athi River. This shows the importance of the project to the wider regional road corridor.

3.1.7 The rate of new motor vehicle registration in both countries has been high in the last 5 years reflecting the economic growth in the countries and underlining the need for expanding and improving the road network. The historical traffic levels on the project road have also been increasing as trade, tourism and social interaction between Tanzania and Kenya builds up, further underscoring the need for investment in the expansion and rehabilitation of the road network.

3.2 The Road Transport Industry

3.2.1 In the EAC countries, the key players in the road transport industry are both the private and public sectors. The Governments are responsible for the development of the infrastructure and regulatory functions while freight and passenger transport operations are managed by the private sector. Truck, bus and other operators are free to provide their services at will and to charge according to market conditions. Operators from the landlocked countries for which Kenya and Tanzania provide a transit corridor from their respective ports also operate according to their own national legal requirements. Trucking business has been growing steadily since the decline of rail transport service in the region. Truck transport has taken over from the rail as the primary mode for long haul freight transport, while buses and minibuses dominate public passenger transport.

3.2.2 Axle load control, road safety, one stop joint border control, regional vehicle insurance and harmonization of road transport charges are some of the major concerns with respect to the road transport industry in the Region. Poor axle load control not only contributes to road destruction, it also is one of the causes of transit traffic delays and therefore generates unintended costs and inconveniences in the EAC region transport industry. This is due to the number of stations where vehicles must be weighed, the queuing at stations, the inconsistency in weights recorded between stations, the manner in which penalties for violations are administered and corruption. Axle load control needs to be managed in a fair, transparent manner and one, which imposes minimum delays of truck movements.

3.2.3 In order to protect the investment in the road sector, the issue of overloading by heavy goods vehicles is being addressed through the upgrading and establishment of additional weighbridge facilities, the checking of sealed containers at port of entry and fuel tankers at the port of loading and the banning of vehicles with illegal axle configuration. Tanzania is implementing axle load control as per the Road Traffic Maximum Vehicle Mass Regulation 2001. A total of 15 fixed weighbridges are strategically located along the main road transport corridors. Through enforcement, overload has reduced from 40 percent in 2000 to 10 percent in 2005. In Kenya axle load is carried out at 12 points on the road network, five of these points are static weighbridges. Kenya has tried to improve its axle load control (even though results are poor and inconsistent) and as a result, a study sponsored by KRB has been completed which forms a basis for improving axle load control. The study recognizes that there are problems in axle load control and is focused on measures to be taken which include installation of new weigh bridges on various roads. Some of

these weigh bridges will be installed within the Northern Corridor project whose implementation has just started. However, both the private operators and the government have stepped up measure to control overloading. Bamburi cement factories at Mombasa and Athi River, for example, control their own truck axle loading at source using their own weigh bridges. Still more axle load control and harmonisation of standards need to be done as both governments invest heavily in road development.

3.2.4 With regard to the project road in Kenya, there is only one weighbridge station at Athi River, which serves the Arusha-Nairobi traffic. This project has also included a provision that during the construction, a scoping study will be conducted to determine the need for installation of additional axle load controls if necessary, the most appropriate location and type of axle load control system.

3.2.5 With respect to Road Safety, in Tanzania, more than 2,000 people are killed and many more are injured in road accidents every year. TANROADS is working together with other organisations to raise awareness about the importance of road safety and make travelling on Tanzania's road network safer. In Kenya an average of 2,500 fatalities occur as a result of road accidents every year. There have been many initiatives to curb this high rate of accidents, which are increasingly caused by poor road condition. Poor vehicle condition and driver error also contribute to incidents of accidents. Government of Kenya is planning to establish a Road Safety Authority that will give full surveillance on road safety matters and formulate measures to counter road accident. The existing poor condition of the project road contributes to accident occurrence. Thus the intervention in the project road improvement will strengthen the road transport industry and improve the safety standard.

3.2.6 The "one-stop joint border control" has been developed as a result of excessive delays experienced in cargo clearance at border points. The delays in cargo clearance are mainly caused by poor institutional, management system, inadequate physical infrastructure and services required to support cross border cargo management. In order to solve the problem, this project has included construction of one stop joint border control at Namanga. The Japanese International Cooperation Agency (JICA) has expressed interest to provide technical assistance in training of personnel involved in the one stop border control.

3.2.7 In order to facilitate cross border movement of vehicles and solve the problems related to insurance, the Common Market for Easter and Southern Africa (COMESA) Yellow Card for intra EAC and COMESA transportation is in use. The COMESA Yellow Card is an insurance certificate, which is an extension of the third party policy. Harmonisation of policies between COMESA, Southern Africa Development Community (SADC) and Intergovernmental Agency for Development (IGAD) overlapping regional blocs is ongoing to streamline the insurance and related issues.

3.2.8 EAC, COMESA and SADC are very active in adopting trade facilitation programs to harmonize policies and regulations for the smooth flow of passengers and goods throughout the region. For the EAC region, the harmonization of road transit charges between member countries is on going. For example, Kenya is a member of COMESA, whereas Tanzania is a member of the Southern African Development Community (SADC). This dual membership to regional groupings has occasionally led to a situation where the EAC member countries apply different standards. Tanzania charges USD16 per 100 km for transit vehicles exceeding three axles, while Kenya charges only USD10, following COMESA guideline. The difference in the transit charge will

contribute to higher transport cost in Tanzania, and may affect the usage of the project road, although only marginally as there is no alternative route across the border to and from Arusha.

3.3 Road Administration and Training

3.3.1 Following the signing of the Southern Africa Transport Coordination Commission (SATCC) Protocol in August 1996, Tanzania government has made major reforms in all sectors including financial, parastatal and the private sector. In the road sub-sector, the recent reforms permitted the establishment of Roads Fund Board and Tanzania National Roads Agency (TANROADS). TANROADS has four functional divisions, namely Maintenance, Development, Engineering, and Finance and Administration. At the regional level, the Agency is represented by the Regional Managers who report to Zonal Managers based at the headquarters. All trunk and regional networks are managed by the Ministry of Infrastructure Development (MoID) through TANROADS, while district and feeder roads are managed by the Prime Minister's Office for Regional Administration and Local Government (PMORALG). The staffing levels at the MoID and TANROADS still need to be increased especially key personnel at the district level. However, MoID sponsors short and long-term training for its employees.

3.3.2 In Kenya, the Roads Department (RD) of the Ministry of Roads and Public Works (MoRPW) is in charge of policy and planning for the road sub-sector. It is headed by the Chief Engineer (Roads) and has 5 divisions: Planning, Design, Construction, Maintenance, and Finance and Administration. The RD administers road classes A, B and C, the District Roads Committees administer classes D, E and all special purpose roads; and the Kenya Wildlife Services administers roads going through the national parks. The Local and Urban Authorities are responsible through the Ministry of Local Government for unclassified roads in urban areas, and the Forestry Department of the Ministry of Environment and Natural Resource for the unclassified roads within the industrial and natural forests in about 30 districts. The Kenya Roads Board was created in 2001 with the responsibility of administering and allocating funds from the road maintenance Fuel Levy Fund and also overseeing the management of the road network.

3.3.3 With technical assistance from the World Bank, the institutional reforms aimed at establishing the three autonomous statutory road authorities (Kenya National Highways Authority, Kenya Rural Roads Authority and Kenya Urban Roads Authority) by 2007 are expected to improve the administration of the road network. The Training Unit of the MoRPW, which in the past has been supported by World Bank, the European Union (EU), and GOK handles short and long term training and staff development both locally and abroad. The technical and vocational training of sub-professional staff at the training unit has a well established program at Kisii Training centre. The department is currently understaffed due to the freeze on employment for the last 11 years and resignation of many engineers that joined other organizations. However, the Government is planning to recruit more engineers under free market terms and conditions of services when it establishes the road authorities in 2007.

3.3.4 In Tanzania, since July 2000, the day-to-day management of the roads was transferred to the semi-autonomous executing agency, TANROADS, which shows strong capacity and good institutional arrangements although there is room for enhancing its legal instruments. On the other hand, the absence of such an autonomous institution is a weakness on the Kenyan side. However the current reforms towards formation of highway authorities, expected in December 2007, will improve the whole road sub sector delivery capacity.

3.3.5 The project road falls within the jurisdiction of TANROADS (for Tanzania section), which has capable administrative system and qualified personnel. On the Kenya side, the project road will be under the RD of the MoRPW. Since the institutional reforms in Kenya will be effective in December 2007, during the early period of the construction, the project will then be managed by the new highways authority, which will be operating under better conditions.

3.3.6 The East African Community has realised the importance of creating and improving the multinational transport networks as a necessary condition to advance its goals and objectives. To that effect various agreements like the Tripartite Agreement on Road Transport, Permanent High-Level Standing Committee on East African Road Network Project and a committee for Easing Cross-Border Movements were established to foster regional integration aimed at improving the socio-economic status of its peoples. While its mandate has expanded, the EAC has recognized in its Development Strategy 2006-2010 the shortfall in the expansion of the professional staff in many of the departments, including the one in charge of Transport. At the moment there is only one engineer in charge of Transport, who is involved in the implementation of the various tasks of the Secretariat related to transport. In order to ameliorate this shortfall, a capacity building component has been incorporated in this project whereupon the project will fund under Technical Assistance, 2 Liaison Engineers to assist the EAC Transport Engineer. For the sustainability of the building – up capacity of the EAC, it is further planned that the 2 engineers will be absorbed into the EAC establishment after project completion. This component is a complementary to the capacity building efforts under the other project, the East Africa Trade and Transport Facilitation Project, financed by the Bank. The ADB in partnership with the World Bank is financing the East Africa Trade and Transport Facilitation Project (EATTF), Northern Corridor Transit Transport Coordination Authority (NCTTCA) and Central Corridor Transit Transport Facilitation Agency (CCTTFA). The EATTF in addition to consultancy and acquisition of equipments has a component of capacity building to the EAC in other fields different from engineering and therefore is complimentary to the capacity building in the engineering ranks by which the Arusha Namanga Athi River road project is supporting the EAC.

3.4 Road Planning and Financing

3.4.1 One of the EAC development objectives listed in the Draft Strategic Plan (2006-10) is improved road connectivity across the region. The Strategic interventions include completion of rehabilitation/construction of prioritized regional roads and continuation with the harmonization of traffic laws, including regulations and highway codes. The EAC has prioritised several road corridors that serve integration of the economies of the partner states. In its East African Road Network, EAC has considered the priorities of each partner state. The road planning and financing in the two countries are discussed in the following paragraphs.

3.4.2 The planning and programming of the road network in Tanzania is the shared responsibility of MoID / TANROADS for the trunk and regional roads; Local Government Authorities (LGA) for the urban, district and feeder roads; Tanzania National Park, Mining Companies and village authorities for unclassified roads within the industrial and national Parks. During the period 2001-2005, the Government implemented the First Phase of the Ten Year Road Sector Development Program (RSDP). The emphasis was on providing a safe and efficient road network for the trunk and regional roads so as to support the economic and social development, to provide effective linkage with the district, urban and feeder roads. The Second Phase of the 10 Year RSDP is planned to be implemented from 2006/07 to 2010/11, which includes development projects and maintenance works for trunk and regional roads, institutional development and

capacity building. GOT has also formulated a 10 Year Transport Sector Investment Programme (TSIP) Phase I for 2006/07 -2010/11 that includes all modes of transport, except pipeline.

3.4.3 Development and maintenance of infrastructure in Tanzania is financed through budgetary allocation and development partners. The approved Budget for the road sub-sector over the last three years has increased from USD 244 million in 2003/04 to USD 287 million in 2004/05 and to USD 344 million in 2005/06. Tanzania has a Transport Sector Donor Group (TSDG), which comprises ADB, Japan, NORAD, DANIDA, EU, Italy, OPEC, Kuwait and World Bank. The First Phase of the Ten Year Road Sector Investment Programme contribution by donors was US\$ 546.55 million while GOT contributed US\$ 311.74 million. Donors have completed trunk roads worth USD 197.12 million between 2001 and 2006 and their contribution is summarized hereunder in Table 3.5. These resources are, however, not sufficient to meet the financial requirements. Hence, there is the need for involvement of private sector through PPP arrangements, which is in line with GOT policies, which so far has not been explored.

Table 3.5: Donors contribution to Tanzania Road Sub Sector (2001 and 2006)

No.	Development Partner	Commitment (Million USD)
1	ADB	39.72
2	DANIDA	37.00
3	KUWAIT / OPEC / SAUDI	29.30
4	EU	19.00
5	Italy	14.60
6	IDA	14.23
7	NORAD	12.30
8	KUWAIT / OPEC	9.50
9	KUWAIT	9.12
10	JICA	7.15
11	OPEC	5.20
12	BADEA	12.00
	Total	209.12

The planning and programming of the classified road network in Kenya is the shared responsibility of the RD of the MoRPW and the KRB. The Ministry's strategic plan for the year 2004-2009 has recognized the shortfall in infrastructure provision citing such factors as insufficient funding, lack of capacity, governance issues etc. It aims at bringing the existing roads to motorable and maintainable state, including road sector reform. The Ministry has published a Draft Sessional Paper of 2006. The Sessional Paper outlines key sectors for reforms and is based on studies on road sub sector strategy and transport sector policy which were undertaken in 2003-2004. The reforms include the formation of three autonomous statutory road authorities. The ministry will be left with core functions of regulation, policy etc. The Sessional Paper was submitted and approved by Cabinet in September 2006. It is planned that the Highway Authorities will be functional by December 2007. The Kenya Road Board Act gives the KRB power over road transport policy, somewhat conflicting with the MoRPW. However, this will be streamlined during the implementation of the reforms as the issue is in the Sessional Policy Paper.

3.4.4 The major financiers of Kenya road sub-sector are the Government, the Kenya Road Fund / Board and development partners. KRB through the Road Maintenance Levy Fund spends about USD 110 million every year on road development activities. Most of it is used in road maintenance

activities, which out of need, includes rehabilitation works. The absence of a road sector development program was largely perceived as a major weakness. The Government commissioned a consultant in 2004 that prepared Transport Sector Policy and Roads Sub-Sector Policy and Strategy with funding from the EU. Currently, EU is further funding the preparation of roads sub-sector policy and strategy including investment programme for 2007 - 2020. The outcome of the study, when it is complete, will serve two purposes, namely provide a comprehensive statement of the country's strategies, policies and plans for road transport, and secondly to use it as a basis for mobilising funds from government sources as well as donors. Despite the lack of clear strategy and development plan, road development has continued albeit at a slow pace. Most of the development work is financed by the donor community including the ADB. MoRPW has requested the government to mobilize funds to the tune of about 4% (about USD 730 million) of the GDP annually for road development and maintenance activities. The current donor commitments since 2002 to date are summarized under Table 3.6 below.

3.4.5 The increase of fuel levy in June 2006 in Kenya will improve the revenue for maintenance, development works and counterpart funding of projects. In addition with the support of development partners' funding, financing of maintenance and rehabilitation of road is likely to be achieved.

Table 3.6: Donors Commitment in the Kenyan Road Sub-Sector since 2002

No.	Development Partner	Commitment (Million USD)
1	World Bank	175.0
2	European Union	150.0
3	AFD/KfW	55.0
4	ADB	54.0
5	BADEA	26.0
6	Korea	25.0
7	China	17.0
8	SIDA	16.0
9	JICA	10.0
	Total	528.0

3.5 Road Engineering and Construction

3.5.1 In the EAC region, there are about 35 Class A contractors who are able to undertake more than USD 10 million contracts. Hardly any of the contractors would be able to take a USD 40million contract without collaboration with foreign contractors because of lack of capacity. In addition, most of these contractors are currently busy with government funded rehabilitation / maintenance contracts. It is therefore unlikely that any local contractor will be able to participate in this project independently. This is in spite of the fact that Kenya has a reasonably well-developed construction industry and some of the major local construction companies have the capability to compete with international firms in USD 10-20 million contracts. There is no difficulty in sourcing plant and construction equipment in the open market.

3.5.2 However, most of the East African road periodic and maintenance activities and other forms of rehabilitation to the tune of USD 10 million and above are undertaken by regional contractors.

3.5.3 The unlikely - hood of the regional contractors to participate in this project prompted a request from EAC and the two Governments that having considered this poor state of affairs, a component be included in the project to undertake a scoping study on the contracting capacity of the East Africa region with a view to establishing causes for poor capacity and what can be done to raise the levels of participation. Already there are plans in place in Tanzania to build capacity of local contractors, including establishment of Contractors Assistance Fund.

3.5.4 There are consultants in the East Africa region who can undertake the supervision of works and the study and design components of the project. However, the region is currently experiencing shortage of experienced engineers because of increased opportunities for work. Once construction of the World Bank / EU financed Northern Corridor in Kenya is fully under implementation, Consultants may be forced to get Engineers from outside the continent to fill up the top positions. This will translate into high fees and therefore consultancy costs may be high, a fact, which is considered in the project cost estimates.

3.5.5 The Engineering Division of TANROADS is responsible for the review of preliminary and detailed engineering design reports, engineering support services, road network and bridges condition, preparation of tender documents and specifications. In Kenya, the Design Branch of the Roads Department is responsible for survey, design and tender documentation for road projects. It is also responsible for standard and design manual and matters relating to road reserves and control of access. Basic engineering designs are standardized following long-standing research and field-testing. Domestically financed design studies are normally executed by the Branch or by local consultants who are capable of handling most road engineering projects. Foreign consultants are hired for some of the large projects financed by donors.

3.6 Road Maintenance in the Region

3.6.1 The Road Management and Financing (RMF) theme of the Sub-Sahara Africa Transport Policy and Program (SSATP) provides the policy underpinning the promotion of sustainable road management and financing. The EAC countries are members of SSATP. RMF has helped to develop the reform process based on the premise of commercialization of road management (charging for road use on a fee-for-service basis and managing roads as a business enterprise). The experience of the Road Funds in East Africa has been successful in better securing road maintenance resources and improving governance in their management. Kenya and Tanzania have had road funds for more than 5 years and Ugandan government has approved establishment of a road fund. To reach full impact of the reforms (a lasting improvement in the road sector), the establishing of an efficient and autonomous road agencies is needed. Tanzania and Uganda has established a semi-autonomous road agency and are working towards establishment of autonomous authorities. Kenya's autonomous authorities are expected to be operational by December 2007.

3.6.2 The current policy in the region on maintenance of trunk roads is to prioritize the preservation of all roads that are in good condition by channelling funds, first, to routine maintenance to cover the full range of maintenance activities and to periodic maintenance. Both countries allocate about USD 1400 per km per year for routine maintenance of roads in good and fair condition. This policy is generally referred to as 'maintaining the maintainable roads first'. The basis for this policy is that in the past, neglecting repair of simple failures like development of potholes, cracking, opening of drainage systems, etc over time led to full scale deterioration of the road, which eventually required capital investment in reconstruction. The achievements and

constraints in Tanzania and Kenya with respect to road maintenance are reviewed in the following sections. Through out the region, periodic maintenance is entirely contracted out to private contractors, while routine maintenance is undertaken by a combination of force account and private contractors.

3.7 Road Maintenance in Tanzania

3.7.1 The Tanzania National Roads Agency (TANROADS) is responsible for maintenance of all trunk and regional roads in the country. The Road Fund Board is responsible for funding the maintenance activities carried out by TANROADS. With the establishment of TANROADS and Road Fund Board (RFB), Tanzania has improved remarkably in its road maintenance achievements. The proportion of the road network in good condition has increased from 43% in December 2004 to 53% in March 2006. Periodic and routine maintenance is entirely contracted out to private contractors.

3.7.2 TANROADS became operational at all levels in the regions in July 2000. TANROADS is responsible for maintenance and development of trunk roads and regional roads. Roads Fund and RFB commenced operation in 2000 and is responsible for collecting and disbursement road fund for road maintenance. At least 90 percent of the Roads Fund is exclusively set for road maintenance and not more than 10 percent for development projects.

3.7.3 The purpose of forming the RFB was to alleviate the institutional problem of inadequate funding for roads maintenance, cumbersome administrative and procurement procedure and unmotivated staff which resulted in considerable projects delays, cost overruns, backlog of maintenance works and loss of confidence from road users as well as the road sector development partners. The sources of Roads Fund are all monies collected as road tolls imposed on diesel and petrol, transit fees, heavy vehicle licenses, vehicle overloading fines and other source at the rate or rates to be determined by Parliament from time to time.

3.7.4 An analysis was conducted based on road length and condition data of all bitumen roads in Tanzania. Assuming that all roads in good and fair condition, which constitute 84% (3982 km), are to receive full annual routine and 7yearly periodic maintenance, Tanzania would need about USD 75 million every year for trunk roads. This figure is based on a provision of USD 1400 per km for Routine maintenance and USD150,000 every 7 years per km for periodic maintenance. Table 3.7 below refers. The RFB collected USD 75.1 million in 2005/06. The fund normally disburse 63% of it annual revenue to TANROADS which is equivalent to USD 46.7 million for year 2005/06 for maintenance of trunk and regional roads (Table 3.8 below). This means that Tanzania has a shortfall of a about USD 30 million per annum for the trunk bitumen road. Considering an ideal maintenance regime for all trunk gravel roads estimated at USD 50 million per annum, the annual maintenance funding gap increases to about USD80 million. This figure would increase dramatically if the regional gravel roads were to be included.

Table 3.7: Estimating Tanzania Road Maintenance Needs

Type	Length, Km		Length of bitumen road in good + fair condition, Km	Cost of Routine Maintenance required, USD millions	Cost of periodic required USD Millions		Average per year cost of maintenance USD Millions
	Bitumen	Gravel			in 7 year cycle	averaged per year	
Trunk	3914	6386	3288	4.603	493.164	70.452	75.055
Regional	327	24373	275	0.385	41.202	5.886	6.271
District/Feeder	30	47520	25	0.035	3.780	0.540	0.575
Urban	470	1980	395	0.553	59.220	8.460	9.013
Total	4741	80259	3982	5.576		85.338	90.913

Source: ADB Mission (2006)

3.7.5 The government recognized this funding gap as a recurring problem that needs to be addressed. To start with the Government has since June 2006 increased fuel levy charge from Tanzanian Shilling (TZS) 90 to TZS 100 per litre of petrol and diesel, in increase of about USD 0.008. In addition the government has appealed for donor support on maintenance. Historical data show that the government has continued to increase allocation of funds to maintenance from USD 42 million in 2001/02 to USD 68 million 2005/06 (Table 3.9 below). The Transport Donor Group, which the Bank is a member, is in support of increased Government spending on road maintenance and has pledged to scale up support.

3.7.6 As regard the Arusha Namanga road project, there is no doubt that the Government will afford routine maintenance, whose cost is not substantial, immediately after defects liability period expires. Periodic maintenance will not become due until 7 – 8 years after construction, which is around 2019. The Government and the development partners need to commit to increase their resources to cover the maintenance funding gap by 2019.

Table 3.8: Tanzania Road Fund Revenue and Disbursement (2000-2005) (million USD)

FY	TANROADS	PMORALG	MOID	RFB	TOTAL
	USD	USD	USD	USD	USD
2000/01	21.4	9.0	2.4	0.5	33.4
2001/02	26.2	12.7	2.9	0.5	42.3
2002/03	34.7	16.1	3.7	0.6	55.1
2003/04	33.5	16.0	3.7	0.6	53.8
2004/05	38.2	18.2	4.2	0.6	61.2
2005/06 (Dec. 05)	46.7	22.3	5.2	0.9	75.1
TOTAL	200.7	94.3	22.1	3.7	320.8
%	62.6%	29.3%	6.9%	1.1%	100.0%

Source: RFB – Tanzania (2006)

Table 3.9: Road Construction and Maintenance Expenditures in Tanzania (in million USD)

Year	1998/99	2001/02	2002/03	2003/04	2004/05	2005/06
Total	33.9	123.7	190.4	207.6	247.9	343.3
Construction	-	80.7	135.7	152.9	185.7	275.2
Maintenance	33.9	43.0	54.7	54.7	62.2	68.1
% construction		65	71	74	75	80
% Maintenance		35	29	26	25	20

Source: Maintenance data form TSIP Document, Planning Section, MoID (2006)

3.8 Road Maintenance in Kenya

3.8.1 In Kenya, maintenance of the trunk road network is carried out by the Roads Department (RD) of MoRPW. The Kenya Road Board (KRB) is responsible for funding aspects of road maintenance activities. Key agencies of the KRB include the MoRPW who manage all classified road network and receives 57 percent of the KRF funds for trunk road. The KRB has annual revenue of about USD110 (set to increase in 2006/07 to about USD 200 million) and has ring fenced maintenance funds since 2001. The Fund revenue comes from a fuel levy of USD 0.08 per liter (increased in June 2006 to USD 0.125) of fuel and has been operational since 1999.

Table 3.10: Estimating Kenya Road Maintenance Needs

Type	Length		Length of bitumen road in good + Fair condition, Km	Cost of Routine required, USD Millions	Cost of Periodic Maintenance required, USD millions		Cost of periodic required USD Millions
	Bitumen	Gravel			in 7 year cycle	averaged per year	
Trunk Roads	7100	7204	4828	6.8	724.2	103.5	110.2
Non-Trunk roads	2000	47277	1680	2.4	252.0	36.0	38.4
Urban roads	2500	12000	2100	2.9	315.0	45.0	47.9
Total	11600		8608	12.1		18.5	196.5

Source: ADB Mission (2006)

3.8.2 An analysis was conducted based on road length and condition data of all bitumen roads in Kenya. Assuming that all trunk bitumen roads in good and fair condition, which constitute 68% (4828 km), are to receive full annual routine and 7yearly periodic maintenance, Kenya would need about USD 110 million every year. This figure is based on a provision of USD 1400 per km for Routine maintenance and USD150,000 every 7 years per km for periodic maintenance. Table 3.10 above refers. Considering an ideal maintenance regime for all trunk gravel roads estimated at USD 60 million per annum, the total annual trunk road maintenance needs are about USD 170 million. In 2006/07, the KRB will provide USD 114 million (57% of 2006/07 projected collection of about USD 200 million) annually on trunks roads. This implies the trunk roads maintenance funding gap is about USD 56 million per annum.

3.8.3 The Kenya Government has recognised this funding gap, which is road sub-sector wide, and has taken steps to address it. Estimates presented to the Cabinet in May 2006 by MoRPW show that the Government allocates only USD 280 million (approximately 1.5% of GDP) for road maintenance,

rehabilitation and development per year, which is considered inadequate. However, backlog maintenance requires USD 305 million a year for 7 years and routine maintenance of trunk roads (excluding urban and other roads) requires an additional USD 214 million. The road authorities have therefore asked the government to mobilize from its own resources as well as private sector and donors, about USD 730 million per year to cater for the whole road sub sector (including urban and minor roads) development and maintenance. This will be approximately equal to 4% of GDP, which is in line with the recommendations of the World Bank. The Government is seriously considering this proposal.

3.8.4 As regard the Athi River Namanga road project, there is no doubt that the Government will afford routine maintenance, whose cost is not substantial, immediately after defects liability period expires. Periodic maintenance will not become due until 7 – 8 years after construction that is around 2019. If the Government approves the proposals to increase global funding and obtains support from development partners to fund the road sector to the tune of USD 730 million, then periodic maintenance will be executed when it falls due.

3.8.5 Other than funding, the road maintenance has experienced institutional constraints as well. The KRB engaged consultants in 2004 to undertake a technical and financial performance audit of all the agencies of the Fund to determine the impact of the annual USD 110 million budget on road maintenance. Official reports are not yet out but KRB availed to the Bank the unedited consultants report. The report shows that in recent years MoRPW has generally done well in contracted road maintenance works but it is poor in routine maintenance. There have been incidences in the past when funds could not be accounted for properly and which the financial auditors termed as material costs that are explicitly questioned because they are not incurred in pursuance of the approved work plans.

3.8.6 The KRB does not have a legal performance contract with its road agencies as in the case for Tanzania's Road Fund Board that has performance contracts with TANROADS. A 2001/02 audit report by the Auditor General show that the law governing KRB only provides for the audit of its account without provision for auditing the road agencies who spent 97% of the USD 110 million fund, and that makes KRB a '*mere conduit*' of the fuel levy. The report recommends for legal review. This has been addressed in the recent reforms in the road sector. The Auditor General in any case audited the road agencies and reports '*a very unsatisfactory state of affairs*' in the way contracts for road maintenance were awarded and managed. Lack of performance agreement with the agencies is viewed as a stumbling block to accountability. The KRB should increase the accountability of the agencies by agreeing on specific targets with possible sanctions. ***Therefore a requirement that Kenya Roads Board should start entering into Performance Agreements with the road agencies by December 2007 shall be the 'Other' condition of the loan to Kenya.***

Table: 3.11 Actual Disbursements from the KRB in USD

ROAD MAINTENANCE LEVY FUND DISBURSEMENTS IN MILLION US DOLLARS									
	KRB	Roads Dept - ABC Roads	Roads Dept - DE Roads	Kenya Wildlife Service	District roads committees	Constituencies	Muni. Councils	Ministry of Local Govt	TOTAL
2001/02	1.6	60.4	19.1	-	-	16.5	-	12.8	110.4
2002/03	3.2	61.0	8.7	0.7	8.7	17.3	1.0	8.7	109.2
2003/04	3.6	68.3	13.3	0.9	5.0	19.2	-	9.6	119.9
2004/05	4.0	76.8	14.0	1.0	5.7	21.6	-	11.7	134.8
2005/06*	3.5	63.5	16.2	0.9	6.8	20.2	-	9.5	120.6
TOTAL	16.0	330.1	71.3	3.4	26.1	94.8	1.0	52.2	595.0
%	2.7%	55.5%	12.0%	0.6%	4.4%	15.9%	0.2%	8.8%	100.0%

Source: Kenya Roads Board, *(9 months) FY (Forex KES/USD = 70.056)

4 THE PROJECT

4.1 Project Concept and Rationale

4.1.1 **Concept:** The project concept is based on the larger vision of establishing major arterial trunk roads with a regional bearing to facilitate trade and integration of the east African region. Within the context of pursuing an integrated East African Community, 6 corridors were identified for upgrading to trunk roads. In addition, traffic flows had to be facilitated in order to enhance trading links among the member countries. For that reason the project includes the one –stop border post at Namanga. The linking up of Arusha to the Northern corridor near Nairobi would be complemented by establishing a further road link to Mombasa port from Arusha through Voi, which is part of the northern Tanzania. In addition, the Arusha Voi section will connect the mainland Kenya - Kilimanjaro – Mombasa tourist circuit. The other road design component (Tanga-Malindi) is intended to connect the Malindi and Kenya's North Coast, with the South Coast and the Tanzania coastal areas, all of which are world tourist destinations.

4.1.2 **Larger Integrated Program:** The project road is part of the Tunduma – Addis Ababa backbone road corridor funded by the Bank. The Isiolo-Moyale section and further on the Moyale – Addis Ababa section in Ethiopia are being implemented under Bank financing. The Nairobi - Thika in Kenya has been placed in the Pipeline for 2007 lending. In Tanzania, the Bank is funding Singida Arusha section as well as the Dodoma – Iringa section for 2007 lending.

4.1.3 **Strong Commitment of Governments and EAC:** The Governments of Kenya, Tanzania, Uganda, and increasingly those of the DRC, Zambia, Djibouti, Eritrea, Rwanda, Burundi and Ethiopia are striving to achieve total integration through transport networks which will link the entire sub-continent. Pronouncements in various regional forums such as the EAC itself, SADC, IGAD, COMESA show commitment by the regional countries to achieve such high level of integration to boost economic developments of their respective countries. More specifically, the GOT and GOK have declared that proper transportation of goods and services is one of the main pillars for the sustainability of the current economic recovery programmes. Both in Kenya and Tanzania, there has been strong commitment in terms of making available resources for developing the road sub-sector and providing resources for maintenance programs. The creation of Roads Boards and Authorities testify for themselves. Consultations during the design and

project preparation were intense and covered many government departments and their inputs were incorporated in the overall project design. The Ministries in charge of finance and roads were categorical in their commitment to the development and sustainability of the project. EAC secretariat, in spite of their low capacity, effectively coordinated the study and design and most of the preparation activities.

4.1.4 Implementing agencies: The revitalization of the EAC plays a pivotal role in unifying the concept of regional integration as it represents the interests of the three member states. EAC being the Secretariat has the responsibility of coordinating and planning for the region's transport network. The feasibility and design studies for this road were implemented by EAC, which has gained experience useful for the two studies planned under this project. The Tanzania National Roads Agency (TANROADS) and Roads Department of the MoRPW Kenya will be the implementing agencies of the various components of the project. The same institutions were in charge of the study and design phase and actively participated in all stages including the approvals of the deliverables. They, together with the Bank missions, formulated the project concept for implementations and are committed to its success completion.

4.1.5 Beneficiaries: The beneficiaries of this road are the commercial farmers, commodity trade dealers, tourism and hotel operators, and officers in charge of regional integration and customs, local people leaving within the roads sphere of influence. All beneficiaries or their representative were all consulted during design and preparation and their concerns incorporated in the design.

4.1.6 Affected Groups: The design Consultant used the participatory approach during the study and took into account stakeholder suggestions. The stakeholders included, government departments concerned with water resources, livestock, tourism, health and Non Governmental Organization (NGO)'s, donors, transport operators and the local communities, including small traders operating on road sides. The Bank also consulted widely and took further recommendations into consideration during the preparation and appraisal of the project. All parties consulted supported the project implementation.

4.1.7 Rationale for selected design and alternative technologies. The alternatives, which were considered by the design included the types of pavements which must carry the type of loading projected during its life. The pavement structure of the road varies depending on road section to reflect traffic and ground conditions. The Athi river end of the project carries heavy truck loads and as the road is in average to good condition, the considerations of alternatives were between asphalt overlays and reconstruction / rehabilitation. The later was chosen as more appropriate. Some bridges, while in good structural state, were found to have low hydraulic capacity. Most of them will be replaced. The whole road length will have an asphalt concrete (AC) surfacing with a surface dressing on top to arrest cracking of AC, which is noted as problem in East Africa. The final design was done to detail and many alternatives were considered.

4.1.8 Lessons learnt: From experience in managing projects in this area, it has been shown that many small projects even with a cumulative large quantum are problematic in management. It is preferred that the Bank finances large project. This project is thus divided into 2 large lots of 104 km and 136 km. In addition, projects must be designed to great technical detail so that almost all technical and financial options are explored at design / preparatory stage to avoid changes during implementation. This is reflected in this project. Further the capacity of the implementing agency should be supported whenever necessary. The implementation of the study/design project was well coordinated and EAC coordination preserved the good regional nature of the project. EAC will

execute studies/design component of this project but as their capacity is over-stretched, the project includes a capacity building component. Most major Bank projects are constructed without the participation of local/regional contractors, and that is undesirable. For that reason, EAC requested that a scoping study be included in the capacity building component to survey and report the problems regional contractors experience and suggest what would be the way forward.

4.1.9 In line with Bank and government strategies: The intervention in the road sector by the Bank is in line with the development priorities of the GOT and the GOK and the countries strategy programmes. The Bank financed the feasibility study and detailed design between 2003 and 2006. The project is part of the strategy of the EAC to deepen economic cooperation and foster regional integration among member states of the community. In addition the road section completes connection between Arusha, EAC capital, with Nairobi and Kampala, effectively linking the three State capitals, making it strategic for GOT and GOK.

4.2 Project Area and Beneficiaries

Project Area

4.2.1 The road traverses Arusha Region of Tanzania. It runs north from Arusha through Oldonyo Sambu and Longido villages and ends at border town of Namanga. The area of Arusha Region is 36,486 km². The topography is generally flat rising from 1,450 m above sea level (asl) in Arusha to about 1,850 m asl in Oldonyo Sambu and drops to about 1,250 m in Longido. The area between Arusha and Longido is generally of volcanic origin and has volcanic ash and basalt gravel. Further on, the geology changes to metamorphic rock. The temperatures range between 12°C and 27°C, and mean annual average rainfall varies between 450mm and 1250mm.

4.2.2 The road continues to run northwards through Kajiado district and ends at Athi River (35 km south of Nairobi). The district area is 21,105 sq km and 65% of the area is categorized as Arid and Semi-Arid Lands (ASALs). Most of the land is used for ranching with very few smallholder farms. Rainfall in the district is bi-modal, have rainfall of about 600 mm and having rich volcanic soils, the area is good for agriculture. Temperatures vary with altitude ranging between 30°C and 16°C. The geology of the area comprises quaternary volcanic and basement rocks with gneiss and quartzite predominating.

Project Beneficiaries

4.2.3 The main beneficiaries of the project will be people living in the vicinity of the road in Arusha Region in Tanzania and south Rift Valley Region in Kajiado district in Kenya. Arusha has a population of 1.3 million people while Kajiado has 0.48 million. These are predominantly rural communities making their living from livestock and subsistence agriculture. Among the major beneficiaries will be tourists who come to the region on both sides of the border, and tourist and hotel operators. Other beneficiaries will be the commercial horticulture farmers from both Kenya and Tanzania who are growing cut-flowers for export. As the road gets closer to Athi River hence outskirts of Nairobi, main beneficiaries will be those operating in the Export Processing Zone (EPZ), the cement factory operators and traders in both animal products and merchandise in general. Officials managing the border posts, local administration and other local government activities will also benefit from the upgraded road.

4.2.4 **Quality of life** is generally low and social problems include high infant and maternal mortality and low nutrition intake. In Arusha Region (as per Tanzania Demographic and Health Survey (TDHS) 2004)), for example, only 67% of the under-five children received all essential vaccines compared to 79% national average. Access to health facilities required transportation. 36% of women in Arusha (as compared to national average of 49%) delivered at home, and 18% of new born babies received one shot of tetanus toxoid vaccine compared to national average of 24%. The situation in Kenya (Rift Valley – Kenya Demographic and Health Survey (KDHS) 2003)) is not very different where 59% of children received all essential vaccines compared to 60% at national level. 63% of new deliveries occurred at home compared to 59% national average, and only 33% of new born babies got a shot of tetanus toxoid. Education performance has been improving in the two countries where net primary school enrolment ratios for the 2002/03 period were 67% and 82% in Kenya and Tanzania, respectively, according to the Poverty and Human Development Report for Tanzania (2005), 78% of women.

4.2.5 **Economic Activities of the Area.** Agricultural crops produced in the Arusha Region of Tanzania include coffee, bananas, cut-flowers, maize, wheat, barley and legumes. In addition, the region has large numbers of livestock. In 2002/03, the region had 1.6 million herds of cattle, 1.7 million goats and 1.0 million sheep. Tourism is a major activity of the area. Other activities in Arusha Region include 69 large and medium scale industries employing over 9,500 people. Mostly these are in tyre production, beverages, textiles, soap, milling and engineering.

4.2.6 In Kenya, the main activities in the zone of influence are agriculture and livestock production, small scale industries, tourism, cement production and activities within the export processing zone. Kajiado produces cut-flowers for export through Jomo Kenyatta International Airport, Nairobi (JKIA), and food cash crops for sale around Nairobi such as tomatoes, okra, bulb onion, maize and beans. Isinya has five large farms with a total land area of around 50 hectares under horticultural production and cut flowers. The East African Portland Cement Company and Bamburi, the major cement suppliers in the country, are located in Athi River. The EPZ , also in Athi River, occupies a 339 hectare site with 20 enterprises operating within it. Kenchic, the major producer of poultry products in Kenya, has four farms along the project road with a capacity of 120,000 chickens. In addition to supplying these to Nairobi, Kenchic exports chickens and eggs to Tanzania.

4.2.7 **Tourism:** A major and growing economic activity in the area is tourism. Arusha serves as an international tourist hub with leading national parks in its vicinity and the project road links Kilimanjaro Airport and JKIA in Nairobi. Arusha has 11 tourist hotels and 84 registered tour operators. The tourist attractions include Mt. Kilimanjaro, Arusha National Park, Amboseli National Park, Chyulu Game Reserve and several other major parks. In both countries the Maasai population forms central piece and adds glamour to cultural and traditional exhibits. Twenty four percent of all tourists' arrivals in Tanzania (148, 000 in 2005) enter through Namanga, having traveled on the project road.

4.2.8 **Economic growth and incidence of poverty:** Tanzania's Gross Domestic Product (GDP) has grown at approximately 5.8% (2000 – 2004) annually mainly drawing from the agriculture sector. Arusha is Tanzania's second city and the headquarters of the EAC and its contribution to the economy was 7.7% (2002). Kenya's GDP grew by 4.8% in 2004 up from 2.6% in 2003. Much of the growth was attributed to the agriculture and tourism sectors (23% and 15.1% share of growth, respectively). According to the national estimates, 36% of Tanzanians lived below the poverty line of USD 1 a day, 21% of population of Arusha Region lived below the poverty line

(Household Budget Survey 2002 and Poverty and Human Development Report 2005). An estimated 42% of Kenyans lived below the poverty line according to recent UNDP estimates, with Kajiado south having over 45% below the poverty line (Geographic Dimensions of Well-being in Kenya, Vol. II, 2005).

4.2.9 Incidence of HIV/AIDS: Human Immuno Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) prevalence rate for the 15 – 49 year old in Tanzania was 7% (2004) of which 7.7% was the rate for women and 6.3% men. Prevalence rate for Arusha region was 5.3%. The prevalence rate in Kenya was 6.4% (2005) down from 12.8% in 1997. The incidence in Kajiado district is estimated at 2.8% among adult population (2004) of which 1.9% was men and 3.6% women. A macroeconomic study on the impact of HIV/AIDS in Kenya (National AIDS/STI Control Programme – NASCOP, 2005) shows a reduction of 14.5% of GDP growth was being experienced due to HIV/AIDS.

4.2.10 Gender and employment: Data show that 23% (Tanzania) and 32% (Kenya) are female-headed households, and 79.5% of these in Kenya live below the poverty line. 64% of women were literate compared to 80% among men in Tanzania (2004). While in Kenya 86% of women were functionally literate (2003) compared to 90% men. Only 6% of women obtained post secondary education compared to 10% among men. While 79% of women in Tanzania were engaged in some kind of employment (majority – 78% in agriculture), only 2% of the working women were in managerial, professional or technical jobs compared to 4% men. In Kenya, the majority of women (80%) live in rural areas with 70% working in agriculture. Although wage employment in modern sector has increased over the years, women represented only 29.6% of the wage earning work force (2004), and only 7% were in professional, technical and managerial positions.

4.3 Strategic Context

4.3.1 The East African Community, right from its re-birth, realised the importance of developing multinational transport networks as a necessary condition to advance its goals and objectives. The EAC member countries have signed several Treaties, reached various agreements and created instruments that foster, among other things, regional integration aimed at improving the socio-economic status of its peoples, and in so doing complementing the national goals of poverty alleviation. Among these is the Tripartite Agreement on Road Transport (TAORT) signed in 1998 whose goal was to harmonize road transport operations in the region. Its objectives were to (i) promote, regulate and facilitate traffic flow through transit routes, and (ii) improve customs procedures and governance, expedite movement of goods, and simplify and harmonize documentation and procedures. Subsequently, EAC established the Permanent High-Level Standing Committee on East African Road Network Project at a donors' conference held in May 1998. The Committee's responsibilities were to formulate RFBs and road authorities; enhance private sector capacity in road maintenance and participate in roads sub-sector management; implement axle load controls, enhance funding for transport corridor projects from internal and external sources. A Committee for Easing Cross-Border Movements was also established. Through this committee, the EAC Commission directed that a review be conducted of East Africa passports, temporary passes for business people, intermediate passes and other issues spelt out in the TAORT.

4.3.2 The Development Strategy (2006-2010) for EAC recognizes that regional infrastructure is important in attracting investment into the region, improving competitiveness, and promoting trade. Partner states have therefore reaffirmed their commitment to enhance budgetary resources,

expedite the necessary legislations in the roads sub-sector, strengthen institutional and administrative capabilities of the ministries and agencies formed to manage the sub-sector, prioritize the EAC road network projects within their national poverty reduction strategies and budget provisions. These initiatives and plans are contained in the Roads Sub-sector Policy and Strategy, and the Investment Programme for 2007-2020 in case of Kenya; and the Ten Year Transport Sector Investment Programme (2006/07-2016/17) for Tanzania. It is clear, therefore, that the Arusha-Namanga-Athi River road is consistent with the two countries' strategic plans and programs.

4.3.3 The development of the Arusha-Namanga-Athi River road is, therefore, strategically fulfilling these objectives and goals to the extent that it will not only link Arusha region of Tanzania to outskirts of Nairobi, but it is part of the regional road corridor which effectively stretches from Tunduma on the Tanzania border with Zambia to Addis Ababa through Moyale on the Kenya/Ethiopia border. Through its intersection with the Northern Corridor, it well connects the capital cities of Dar es Salaam, Nairobi and Kampala. Alongside the EAC, the three member countries are members of COMESA (Kenya and Uganda) and SADC (Tanzania) whose goals are on similar lines.

4.4 Project Objectives

4.4.1 **Sector Goal:** The sector goal of the project is to support regional integration, cross border trade, tourism, socio - economic development of the zone of influence and a contribution to the reduction of poverty. The indicators of the sector goal will be enhanced cross border economic activity. The principal beneficiaries will be the tourism industry in both countries, cross border trading, regional integration (social and economic aspects), population in areas of the project influence. The project impact will include increased cross border traffic, increased cross border tourism, increased social-economic activities at the principal towns of Arusha, Namanga and Nairobi, and both Tanzania's and Kenya's coast line. Arusha, which is the capital of East African Community, will have an excellent link with Nairobi. These impacts are measurable using traffic counts, economic activity surveys, etc.

4.4.2 **Project Objective:** The principal project objective is to improve the essential road transport infrastructure between Kenya and Tanzania, particularly between Arusha and Nairobi, Arusha and Mombasa and Malindi and Dar es Salaam. The indicators will be improved transport service and lower transport costs between the two countries which may be measured by assessing the road roughness, estimating vehicle operating costs, and counting traffic both to the border from both countries (national traffic) and across the border (international traffic). In addition, the project will improve capacity at East African Community Secretariat, and improve contracting capacity for civil works in the region.

4.4.3 **Project Outputs/ Indicators:** The principal outputs will be the rehabilitation / reconstruction of the 240km of road in Tanzania and Kenya (104 km long Namanga – Arusha Road section in Tanzania and the 136 km long Athi River – Namanga road section in Kenya). The road will have 7m carriageway surfaced with asphalt concrete and 2m wide shoulders surfaced with single bituminous surface treatment. In addition, the outputs will include (i) two study/design road projects with a total length of about 560 km designed to final stage and their respective tender documents prepared, ready for implementation, (ii) the improvement of the technical capacity of EAC and (iii) a report recommending how to improve East Africa's contracting capacity.

4.5 Project Description

4.5.1 Project Components: The Arusha – Namanga - Athi River Road Development Project will consist of three categories, that is, Works, Consultancy Services and others. The components are described in detail in the following paragraphs.

Works Components

4.5.2 Civil works for Arusha – Namanga (104 km) section in Tanzania (Lot T) which will consist of a rehabilitation section (68.2km) and reconstruction section (36km), and will include construction of one-stop border post. The pavement will consist of a base layer of 150mm cement stabilized materials and a surfacing of 50mm asphalt concrete and single surface dressing. The road will have a 7 m wide carriageway and 2 x 2 m wide shoulders with a single surface dressing treatment.

4.5.3 Civil Works for Athi River – Namanga (136 km) section in Kenya (Lot K) which will consist of rehabilitation and reconstruction, and will include construction of one-stop border post. The Pavement structure will consists of 150mm dense bitumen macadam (DBM) and a 50mm asphalt concrete layer with a single surface dressing. The road will have a 7 m wide carriageway and 2 x 2 m wide shoulders with a single surface dressing treatment.

4.5.4 Supervision consultancy for the Arusha – Namanga works: Experienced firms of consultants will undertake supervision services of the civil works. The responsibility of the consulting firms will include the following: review of prior arrangements made for the diversion of services and public utilities; supervise the civil works; administer the construction contracts; inspect the works; supervise the necessary quality control testing performed by the contractors; track progress and costs; and report to and maintain close liaison with the TANROADS; superintendence during the maintenance defects liability period; provision of monthly and quarterly progress reports; and preparation and submission of the project reports. Description of the services for the consulting firm will be detailed in the Terms-of-Reference and in the respective contract agreement.

4.5.5 Supervision consultancy for the Namanga – Athi River works is similar to that of the Arusha – Namanga described above, except the consultant will be reporting to the Roads Department of the Ministry of Roads and Public Works (MoRPW) of Kenya.

Studies Components

4.5.6 Feasibility study and detailed design consultancy services for the study and design of 260 km Arusha- Holili/Taveta - Voi road. A reputable engineering firm will be recruited to undertake the above studies. The objective is to prepare pipeline project for possible future funding. The project has been strategically selected by the governments. Their services will include field survey to collect economic, environmental, social and engineering data, preparation of feasibility study and detailed engineering design reports, and bidding documents to the EAC, TANROADS and MoRPW. The expected time of execution of the study/design component is 18 months after commencement. Description of the services for the consulting firm will be detailed in the Terms-of-Reference and in the respective contract agreement.

4.5.7 **Feasibility study and detailed design** consultancy services for the study and design of 300km Tanga - Horo Horo/Lunga Lunga – Mombasa – Malindi road is similar to that of Arusha – Holili/Taveta- Voi road described above.

Capacity Building Components

4.5.8 **Capacity Building in the form of Technical Assistance:** Capacity building to the EAC Secretariat to include two Technical Assistants (referred to as Liaison Engineers) consisting of qualified and experienced contracts engineers whose sole mandate will be to assist the EAC Transport / Structures Civil Engineer to liaise and coordinate the project at construction level, and to oversee the studies/ design components of the project. The two Liaison Engineers will serve for 48 months each and will be absorbed into EAC ranks upon completion of the project.

4.5.9 **Evaluation of Contracting Capacity in East Africa:** Consultancy services to evaluate the contracting capacity of civil works contractors in the East African region and determine why the contractors do not participate fully in donor funded projects and recommend a way forward. For this 3-month consultancy, an individual consultant shall be procured competitively to undertake a survey, prepare report and organize a workshop consisting of contractors, government officials, financiers etc, for information dissemination and to chart a way forward. Description of the services for all the capacity building consultants will be detailed in the Terms-of-Reference and in the respective contract agreements.

Project Audit consultant services

4.5.10 **Project Audit consultancy** services for all the works and services will consist of a contract of external auditor who will provide project audit services (financial and management). The selected auditor shall verify the accounts of the operation of the project and make recommendations for project management. In addition, the auditor shall conduct a physical check of the facilities and supplies provided by the contractors. The selected firm shall provide annual project reports and a final audit report at completion of the project. Description of the services for the consulting firm will be detailed in the Terms-of-Reference and in the respective contract agreement. Description of the audit services will be detailed in the Terms-of-Reference and in the respective contract agreements.

Other Components

4.5.11 **Other Components: Social and environmental management** for implementation of the ESMP including compensation of project affected persons. The two Governments will be responsible for payments for compensation. There are no houses and people to be relocated throughout the Arusha – Namanga – Athi River. The project estimates that approximately 20 kiosks, some 5 structures would be affected.

4.6 Traffic Demand and Road User Prices

4.6.1 **Traffic Demand:** The demand for transport on the Arusha – Namanga – Athi River Road has been assessed based on the traffic survey carried out in June 2004. Based on the traffic survey, seven homogenous sections (three on Tanzanian side and four on Kenyan side) have been identified for purposes of economic analysis. The traffic counted along the Arusha - Namanga road (Tanzania side) varied from an AADT of 460 at Namanga to 2,736 at Arusha. Along the Athi

River - Namanga road (Kenya side), the traffic varied from 7629 at Mombasa Road Junction - Athi River to 812 at Namanga. The weighted average traffic in 2006 is 977 for Tanzania side, 1593 for Kenya side and 1325 for the whole project road. The traffic in 2010 is expected to reach 1427 for Tanzania side, 2081 for Kenya side and 1797 for the total road project. A summary of the traffic flow for the seven homogenous sections of the project road is shown in Table A.1 of Annex 4. The vehicular composition of the traffic indicated that trucks and buses constitute about 49 percent of the traffic, while pick-up vehicles and cars attribute to the remaining.

4.6.2 The traffic levels for Tanzania are projected to grow by 5.5 to 7.3 percent for the different vehicle types between 2010 and 2029, while the Kenya traffic is projected to grow between 4.7 and 6.7 percent during the same period. Generated traffic of about 20.8 percent for Tanzania and 8.5 percent for Kenya has been assumed and there is no diverted traffic expected. Details of projected traffic forecast are presented in Annex 4, Table A.3.

4.6.3 The border crossing at Namanga is very significant in the trade between Tanzania and Kenya. It has recorded an annualized growth of 21 percent from 40,433 tones in 1999 to 87,076 tones in 2003. The international freight traffic is forecasted to grow at an annual weighted average of 5.1 percent between 2010 and 2029. In addition the project road is important for the Tanzania's tourism industry which contributes 16% to Tanzania's GDP. The Arusha region is home to most of Tanzania's tourist attractions including the Northern Tourist Circuits and Kilimanjaro. Therefore eighty percent (80%) of national tourist arrivals are destined for Arusha region and twenty four percent of all tourists arrivals in Tanzania enter through Namanga border post, having traveled on the project road, via Jomo Kenyatta International Airport. The aim of the Tanzanian Government policy is for tourists numbers to increase to one million by 2010 (240,000 using the project road). This shows an increase of 30% by 2010 over the 2006 expected. The project road fits within the country's strategy on tourism.

4.6.4 **Road Users Prices:** The road user costs with respect to the project road include vehicle operating costs (VOC), travel time value and accident costs. Original cost estimates at feasibility study stage in 2004 were based on oil price of USD 35 per barrel. At appraisal (August 2006), all inputs and the prevailing exchange rates were updated with oil price of USD 70 per barrel. The composite VOC is estimated at USD 0.56 / vehicle kilometre (veh – km) on the existing road and this would be reduced to USD 0.45 / veh – km when the project road is completed and open to traffic in 2010. Travel time savings has been estimated on the basis of product of value passengers time and journey time in with and with out project scenario. Average composite travel time cost per day is reduced by 58 percent from USD 70 in 2006 to USD 30 in 2010.

4.6.5 Annual road traffic accident along the Tanzania side of the road between 2000 and 2004 is 39 while the highest accident frequency of 3.59 accidents per million vehicle km is recorded on the Lariboro – Revinjave section. On the Kenya side, the annual road traffic accident varies from 44 in 1999 to 33 in 2004, with an annual average of 49 accidents. During this period, the accident frequency varies from 0.41 accidents per million vehicle km in Kitengela – Isinya to 1.2 accidents in Isinya – Kajiado section of the road. International experience indicates that increasing the width of the carriageway from 5 to 7 m might reduce the accident rate by 40 percent and a MoRPW report demonstrates that widening a carriageway from 6.5 m without shoulders to 7.0 m with shoulders can reduce accidents by 28 - 40 percent subject to other environmental factors. From these findings, it has been assumed that in the absence of the project, the number of accidents would increase at the same rate of traffic growth as compared to a 20 percent reduction with the project.

4.6.6 For the economic analysis, financial construction cost per km of USD 674,600 for Arusha - Namanga; and USD 773,400 for Athi River – Namanga were considered. With respect to maintenance, financial cost of reconstruction of USD 331,000 per km and routine maintenance of USD 1348 per km per year for Arusha – Namanga were used. For Athi River – Namanga, the respective figures were USD 331,000 per km for reconstruction and USD 1400 per km per year for routine maintenance. These prices are obtained from the detailed design of the road and are consistent with current prices in the region.

4.7 Environmental and social Impact

Environmental Impact

4.7.1 The project is Category 1 mainly because it is an international trunk road. From Athi River, the road passes through an area of very low population density, supporting Maasai pastoralist groups. The population only increases on approaching the lower slopes of Mt Meru and significantly increases within 10 km of Arusha. There will be limited net environmental impacts derived from the project beyond a positive facilitation of wildlife and natural area tourism. Significant environmental management requirements are largely confined to those related to construction. In line with Bank Policy, the ESIA Summary and the Abbreviated Resettlement Plan were posted on the Bank website on 28th July, 2006 and distributed to the Board on 2nd August, 2006 under reference No. ADF/BD/IF/2006/182.

4.7.2 The road traverses semi-arid land on both sides where water sources for both human and animal consumption are limited. On each side of the border there is only one perennial river crossed. Adjacent to the road, on the Tanzanian side, are dry montane forest ecosystems. The road development will not bring greater pressure on natural resources. Indeed the increased tourism should create employment opportunities and perhaps relieve pressure on the natural environment, as well as create incentives for conservation. The project will not create any new barrier to animal migration patterns or gene pools. On the Kenya side of the border are the important wildlife areas of the Chyulu Hills and Amboseli. Such areas are accessed from the project road. But the project will not significantly affect water supplies or water flows post-construction, nor will it affect animal migrations.

4.7.3 **Environmental Management Issues:** Best practice in construction environmental management will be achieved through implementation of a detailed Environmental and Social Management Plan (ESMP). This includes full compliance with social aspects and full compensation of project affected persons (**this is a condition precedent to first disbursement of the loans**); and proper management of borrow pits restored as appropriate following community involvement in decision-making. The Consulting Engineer for the project will be responsible for environmental management and related components.

4.7.4 **Institutional Arrangements and Monitoring:** An ESMP has been approved by the government authorities, National Environmental Management Authority (NEMA) (Kenya) and National Environmental Management Council (NEMC) (Tanzania). The Consulting Engineer will supervise the contractor with assistance from an environmental /social facilitation assistant who will help manage the various components of the ESMP. Regular reports shall simultaneously be shared with environmental units of MoRPW and TANROADS, as well as NEMA and NEMC.

Positive Social impact

4.7.5 Employment opportunities and gender equity: The road works will bring additional employment opportunity, which will be enhanced by this project for the people in the project area. During construction approximately 800 people will be directly employed with many more getting jobs in road maintenance. Further employment opportunities, especially for women, will come from provision of services such as sales of food items and domestic employment and hotel and restaurant businesses. In Tanzania, TANROADS has a clear policy of allocating 25% of sub-contracts to women.

4.7.6 Improved access to potable water: The project design includes water supply, through the civil works contract, to the communities and their animals along the project road. For every one borehole that the contractor shall drill, the community will be served with their own borehole or other alternative source of potable water. It is expected that the contractor may sink between 10 and 15 boreholes for the communities in the project zone. Since this is ASAL, water sources may not be restricted to simple hand pumps, but could include protected springs, boreholes with motorized pumps feeding into elevated storage facilities, etc. In addition excavation of borrow areas shall be in such a way that rain water shall be harvested for use of livestock. All this is in recognition that the zone of influence is semi arid and water sources are very scarce.

4.7.7 In order to ensure sustainability and consistency with other programs and national policies, the Contractor and the Supervision Consultant will coordinate with various entities working in rural water sector within the project area where other Bank projects are under implementation. This is very important to ascertain that harmonization of all Bank projects. In the case of Tanzania, the Bank is financing the Monduli District Water Project (part of Longido area) which was prepared in 2003. This project is taking a Demand Responsive Approach (DRA) hence requiring beneficiaries to have a say in what sort of water source they prefer and show some commitment through a token contribution towards its cost. Related operations and maintenance expenses are designed within National Water Policy (NAWAPo) and are often affordable and acceptable to communities. The Contractor and Supervising Consultant working with the Social Specialist from TANROADS will collaborate with the Project Implementation Team which is based at Namanga and at village level with the Water and Sanitation Committee (WSC) in order to facilitate the communities.

4.7.8 Similar approach will be adopted for Kenya where the Bank is yet to commence implementation of the pilot rural water supply project for the same region the project road is traversing. Currently, the Bank is implementing a Rift Valley Water Supply and Sanitation Project (RVWSSP) which was prepared in 2005. While its main focus is urban and peri-urban, the design includes piloting rural supply approaches. It is envisaged, therefore, that the RVWSSP pilot program will extend to the ASAL parts of the Rift Valley which covers the road project area. Just as the Monduli Project, the principle of community participation, ownership and management of the schemes will prevail. Communities will be trained to operate and maintain the schemes and mechanisms to ensure availability of spare parts will be put in place. In this case the Contractor and the Supervising Consultant working in collaboration with the Environmental and Social Unit of MoRPW will liaise with the Rift Valley Water Services Board on the approach to be adopted and facilitate the participation of the beneficiary communities.

Negative Impacts and Mitigation

4.7.9 **HIV/AIDS and Sexually Transmitted Infections (STI):** Although HIV/AIDS prevalence rates for the area of influence are lower than most averages in the two countries and in the sub-region, there will nevertheless be a potential risk in the spread of HIV/AIDS and sexually transmitted infections (STI) by improved transportation; construction workers are away from their families for extended periods, and workers will have a much higher purchasing power. Three dimensions of concern are (i) spread among construction workers, (ii) transmission to the communities around the road site camps, and (iii) spread among mobile communities visiting other places or being visited for various purposes.

4.7.10 As a measure for mitigation against the spread of the HIV/AIDS, prevention and treatment (for opportunistic infections), awareness and mitigation activities will be undertaken, both for workers and for the largely scattered and transient communities along the project route in collaboration with NACC and TACAIDS. The project has budgeted \$120,000 for the two contracts which will be in the contractors' Bill of Quantities (BoQs), and will become the responsibility of the contractor. There are on-going activities coordinated by local authorities, NGOs and Community Based Organizations (CBOs) in Kenya and Tanzania. Bill boards carrying HIV/AIDS awareness messages will be erected along the road and community education activities developed. The one-stop-border post at Namanga will reduce time truckers spend at the border. Kenya has established Tourist Police and Tanzania is giving warning messages at all tourist entry points to guard against child sex exploitation.

4.7.11 **Loss of Property and Disturbance:** There are very minor compensation issues involving mainly road side businesses and formal structures requiring legal settlement especially on the Kenya side of the road. Few livelihoods will in any way be disturbed. Never-the-less Property Compensation: In accordance with Bank policy, all project affected persons will be compensated by the project. The survey conducted has established detailed costs of all individuals and properties. A provisional total sum required for the two countries has been estimated to be USD 123,000, respectively. Detailed plan is included as an attachment to the ESMP. The responsibility for ensuring that all compensation matters have been resolved prior to commencement of works will rest with TANROADS in Tanzania and MoRPW in Kenya.

4.7.12 **Road Safety:** The road serves as a major road link with most buses traveling from Dar es Salaam to Nairobi, and Mwanza and Moyale. There is potential risk, therefore, for increased accidents once the road is improved due to increase in vehicle speeds. As a measure to reduce this impact and build sustainable systems of road safety, the project has included improved parking bays, provision of services roads on busy areas, provision of pedestrian crossing on bridges and high gorges, widening of the road in some places to allow for bicycle paths and pedestrian side walks. Livestock loading ramps will be built at strategic locations. In addition, the two countries will continue with road civic education and Information Education and Communication campaigns on road safety. An estimated budget of USD20,000 has been set aside for these and related activities.

4.7.13 **Community Participation and Involvement:** Extensive consultations have been undertaken with stakeholders along the route including transport operators, mini-bus operators (matatus), traders at market places, government officials, and tourism companies. A list of issues raised was prepared and followed-up with appropriately. There will also be community participation in establishing parallel use of boreholes drilled in the project, and borrow pits that

might if appropriate serve as water pans for livestock after road construction works. There is universal acceptance for the road improvement as designed.

4.7.14 Loss of Property and Disturbance: There are very minor compensation issues involving mainly road side businesses and formal structures requiring legal settlement especially on the Kenya side of the road. Few livelihoods will in any way be disturbed and no dwelling house will be demolished. Never-the-less there will be property compensation in accordance with Bank policy and the two governments prior to commencement of works. The survey conducted has established that approximately 10 households and entities will be affected on the Tanzanian section of the road, and 7 on the Kenyan side. A provisional total sum required for the two countries has been estimated and included in the project costing. The detailed implementation plan is included as an attachment to the ESMP. The responsibility for all compensation matters will rest with TANROADS in Tanzania and MoRPW in Kenya. To ensure full compliance, this has been included as a **condition precedent to first disbursement of the respective loans**.

4.8 Project Costs

4.8.1 The prices of oil rose dramatically within the intervening period between the original economic evaluation (2005) and the preparation / appraisal (2006) from USD 35 to USD 70 per barrel. Consequently, the cost of project estimated at the detailed design stage is higher than that at feasibility stage.

4.8.2 The project cost estimate (net of all taxes and duties) is UA 98.815 million (USD 147.088 million) of which the foreign exchange cost is UA 81.633 million (USD 121.513 million) or 83% of the total. The local cost portion is UA 17.182 million (USD 25.575 million). The project cost inclusive of taxes and duties is estimated at UA 124.459 million (about USD 185.259 million).

4.8.3 The estimated project cost is based on the Bills of Quantities prepared by an engineering consulting firm contracted by EAC and financed through an ADF grant; and supplemented by estimates made during the appraisal mission. Summary of project cost estimates by component are shown in Table 4.1 and by category of expenditure are presented Table 4.2.

4.8.4 The project cost of civil works is estimated at UA 75.912 million. An amount of UA 8.614 million is provided for all consulting services and UA 0.067 million for compensation of affected people. A provision of 7.5% of base cost (UA 6.345 million) is made to accommodate physical contingency. Using inflation rates of 4% on foreign currency costs, 10.4% on Kenya local currency costs and 4.3% on Tanzania currency costs, a price contingency of UA 7.877 million has been provided.

Table 4.1: Summary of Project Cost (Net of Taxes) Estimates by Component

ARUSHA- NAMANGA- ATHI RIVER ROAD PROJECT	Project Costs (in millions US Dollars)			Project Costs (in Millions UA)			% FE
	FE	LC	Total	FE	LC	Total	
Component							
A. Civil Works							
Lot K Civil Works	56.787	8.485	65.272	38.150	5.701	43.851	87%
Lot T Civil Works	35.936	11.787	47.723	24.142	7.919	32.061	75%
B. Consultancy Services							
i) Lot K: Supervision consultancy	3.635	0.404	4.039	2.442	0.271	2.713	90%
ii) Lot T: Supervision consultancy	3.635	0.404	4.039	2.442	0.271	2.713	90%
iii) Audit (Grant)	0.040	0.060	0.100	0.027	0.040	0.067	40%
iv) Capacity Building (Grant)	0.465	0.310	0.775	0.312	0.209	0.521	60%
v) Feasibility/design (Grant)	3.484	0.387	3.871	2.340	0.260	2.600	90%
C. Others (Compensation)							
Compensation	-	0.100	0.100	-	0.067	0.067	0%
Total Base Cost	103.982	21.937	125.919	69.855	14.738	84.593	83%
D: Contingency							
Physical Contingencies	7.798	1.646	9.444	5.239	1.106	6.345	83%
Price Contingency	9.733	1.992	11.725	6.539	1.338	7.877	83%
Total Project Cost	121.513	25.575	147.088	81.633	17.182	98.815	83%

Table 4.2: Summary of Project Cost by Category of Expenditure (Net of Taxes)

ARUSHA- NAMANGA- ATHI RIVER ROAD PROJECT	Project Costs (in millions US Dollars)			Project Costs (in Millions UA)			% FE
	FE	LC	Total	FE	LC	Total	
Categories							
A. Civil Works	92.72 3	20.272	112.995	62.292	13.620	75.912	82%
B. Consultancy Services	11.25 9	1.565	12.824	7.563	1.051	8.614	88%
C. Others (Compensation)	0	0.100	0.100	0	0.067	0.067	0%
Total Base Cost	103.9 82	21.937	125.919	69.855	14.738	84.593	83%
Physical Contingency	7.798	1.646	9.444	5.239	1.106	6.345	83%
Price Contingency	9.733	1.992	11.725	6.539	1.338	7.877	83%
Total Project Cost	121.5 13	25.575	147.088	81.633	17.182	98.815	83%

4.9 Sources of Financing and Expenditure Schedule

4.9.1 The African Development Fund (ADF), Japan Bank for International Cooperation (JBIC), Government of Kenya (GOK) and Government of Tanzania (GOT) will jointly co-finance the project as shown in Table 4.3 and outlined below. JBIC will fund Tanzania only and has already given its Conditional Approval.

Table 4.3: Tanzania and Kenya: Overall Financing Arrangement

Arusha Namanga Athi River Road Project Source	Amounts (in millions USD)			Amounts (in millions UA)		
	Foreign Exchange	Local Costs	Total Costs	Foreign Exchange	Local Costs	Total Costs
ADF GRANT	4.655	0.556	5.211	3.127	0.373	3.5001
ADF LOAN	71.795	2.300	74.095	48.233	1.545	49.778
<i>Total ADF Contribution</i>	76.450	2.856	79.303	51.360	1.918	53.279
JBIC LOAN	45.062	14.050	59.112	30.273	9.439	39.712
GOT	0	0.302	0.302	0	0.203	0.203
GOK	0	8.368	8.368	0	5.621	5.621
<i>Total Other Contribution</i>	45.062	22.720	67.782	30.273	15.263	45.536
<i>Total Project Financing</i>	121.513	25.575	147.088	81.633	17.182	98.815

4.9.2 **ADF Loan to Kenya:** The ADF will provide a loan to Kenya from the ADF X multinational window amounting to UA 49.241 million to finance 90% of the total project cost of the Kenya's Lot K civil works and supervision consultancy services. The Bank loan will have covered the whole foreign currency cost and 22% of the local currency cost. Table 4.4 below illustrates the category of expenditure by source for the Kenya loan.

Table 4.4: Kenya Loans: Category of Expenditure

Kenya		Amounts in UA Millions		
Category	Source	FE	LC	TOTAL
Civil Works	ADF	44.827	1.226	46.053
	GOK	0	5.472	5.472
Consultant services	ADF	2.869	0.319	3.188
	GOK	0	0	0
Total	ADF	47.695	1.545	49.240
	GOK	0	5.472	5.472
Grand Total		47.695	7.017	54.712

4.9.3 **JBIC Loan to Tanzania:** JBIC will provide loan amounting to UA 39.712 million which will be equivalent to 98.54% of the combined costs of the civil works and supervision consultancy for Tanzania's Lot T component. JBIC loan will cover the total cost of works and 80% of the consultancy cost. The approval of the ADF loan will be conditional to the submission of evidence, by the Tanzania Government that the required resources to be provided by JBIC for joint co financing of the project have been secured. **JBIC loan conditional approval will suffice.**

4.9.4 **ADF Loan to Tanzania:** The ADF will provide loan to Tanzania from the ADF X multinational window amounting to UA 0.537 million which will be equivalent of 1.33% of the combined cost civil works and supervision consultancy contract for the Lot T component. The ADF funds will cover 18% of the consultancy costs only. Table 4.5 below illustrates the category of expenditure by source for the Tanzania loan.

Table 4.5: Tanzania Loans: Category of Expenditure (UA Millions)

Tanzania		Amounts in UA Millions		
Category	Financier	FE	LC	Total
Civil works	ADF	0	0	0
	JBIC	27.981	9.178	37.159
	GOT	0	0	0
Consultant Services	ADF	0.537	0	0.537
	JBIC	2.293	0.261	2.553
	GOT	0	0.054	0.054
Total	ADF	0.537	-	0.537
	JBIC	30.273	9.439	39.712
	GOT	0	0.054	0.054
Grand Total		30.811	9.493	40.303

4.9.5 **ADF Grant to East African Community Secretariat:** the ADF will provide a grant to EAC from the ADF X multinational window amounting to UA 3.501 million to cover 95% the costs for studies and design consultancy contract, and 90% of cost of audit consultancy and consultancy services for EAC capacity building and evaluation of contractors' capacity components. The Grant will cover UA 3.127 million in Foreign Exchange costs and UA 0.373 million in Local costs.

4.9.6 **Kenya Counterpart Funding (Total UA 5.621 million):** GOK will finance 10% of the civil works and the supervision consultancy project costs, totaling UA 5.472 million. GOK will also finance compensation to affected people on the Kenyan side to the tune of UA 0.039 million. In addition GOK will contribute to the ADF Grant components UA 0.110 million to cover 2.5% of studies/design costs and 5% of audit and capacity building cost.

4.9.7 **Tanzania Counterpart Funding (Total UA 0.203 million):** GOT will provide UA 0.054 million to cover part of supervision consultancy contract, which is equivalent to 10% of the ADF Loan to Tanzania (which will be about 0.13% of the combined cost of civil works and supervision consultancy for Lot T). GOT will also finance the costs of compensation to people affected by the projects to the tune of UA 0.039 million. In addition GOT will contribute to the ADF Grant components with UA 0.110 million to cover 2.5% of studies/design costs and 5% of audit and capacity building cost.

4.9.8 Tables 4.6, 4.7 and 4.8 below summarize the array of financing arrangements for each country (Loans) and the Grant separately.

Table 4.6: Tanzania: Financing Arrangement of Arusha - Namanga Section

TANZANIA SECTION	Amounts (in millions USD)				Amounts (in UA millions)		
	<i>FE</i>	<i>LC</i>	<i>Total Costs</i>	<i>% of Total</i>	<i>FE</i>	<i>LC</i>	<i>Total Costs</i>
ADF LOAN	0.800		0.800	1.33%	0.537		0.537
JBIC LOAN	45.062	14.050	59.112	98.54%	30.273	9.439	39.712
GOT Counterpart	0	0.080	0.080	0.13%	0	0.054	0.054
GOT (Compensation)	0	0.058	0.058		0	0.039	0.039
Total	45.862	14.188	60.050		30.811	9.532	40.342

Table 4.7: Kenya: Financing Arrangement of Athi River - Namanga Section

KENYA SECTION	Amounts (in millions USD)				Amounts (in millions UA)		
	<i>FE</i>	<i>LC</i>	<i>Total Costs</i>	<i>% of Total</i>	<i>FE</i>	<i>LC</i>	<i>Total Costs</i>
ADF LOAN	70.995	2.300	73.295	90%	47.696	1.545	49.241
GOK Counter Part	0	8.145	8.145	10%	0	5.472	5.472
GOK (Compensation)	0	0.059	0.059	100%	0	0.039	0.039
Total	70.995	10.504	81.499		47.695	7.056	54.752

Table 4.8: EAC: Grant Financing Arrangement for the Studies / Design, EAC Capacity Building, Contractors Capacity and Audit Consultancy Services

GRANT PORTION	Amounts (in millions USD)				Amounts (in millions UA0)		
	<i>FE</i>	<i>LC</i>	<i>Total Costs</i>	<i>% of Total</i>	<i>FE</i>	<i>LC</i>	<i>Total Costs</i>
ADF Grant	4.655	0.556	5.211	94.1%	3.128	0.373	3.501
GOT Counter-part	0	0.164	0.164	5.9%	0	0.110	0.110
GOK Counter-part	0	0.164	0.164		0	0.110	0.110
Total	4.655	0.884	5.539	100%	3.128	0.593	3.721

4.9.9 The expenditure schedule by component of the project is shown in Table 4.9 below and the expenditure schedule by source of financing is shown in Table 4.10 below. The expenditure schedule has evolved from the total estimated cost of the project spread over the implementation programme in proportion to the works and services programmed for each year of project implementation.

Table 4.9: Expenditure Schedule by Component (in millions UA)

Disbursement per Component per Year						
ARUSHA- NAMANGA- ATHI RIVER ROAD PROJECT	2007	2008	2009	2010	2011	Total
Component	Disbursement per Component per Year in Million UA					
A. Civil Works	17.736	26.604	26.604	13.302	4.434	88.680
B. Consultancy Services						
i) Supervision consultancy	1.267	1.900	1.900	0.950	0.317	6.333
ii) Audit (Grant)	0.016	0.024	0.024	0.012	0.004	0.078
iii) Capacity Building (Grant)	0.122	0.182	0.182	0.091	0.030	0.608
iv) Feasibility/design (Grant)	0.607	0.911	0.911	0.455	0.152	3.035
C. Compensation	0.039	0.039	0	0	0	0.078
Total	19.787	29.660	29.621	14.810	4.937	98.815

Table 4.10: Expenditure Schedule by Source of Finance (in million UA)

ARUSHA- NAMANGA- ATHI RIVER ROAD PROJECT	Disbursement per Source per Year					
	2007	2008	2009	2010	2011	Total
<i>Source</i>						
<i>ADF GRANT</i>	0.700	1.050	1.050	0.525	0.175	3.501
<i>ADF LOAN</i>	9.956	14.933	14.933	7.467	2.489	49.778
<i>JBIC LOAN</i>	7.942	11.914	11.914	5.957	1.986	39.712
<i>GOT</i>	0.052	0.069	0.049	0.025	0.008	0.203
<i>GOK</i>	1.136	1.694	1.675	0.837	0.279	5.621
Total	19.787	29.660	29.621	14.810	4.937	98.815

5 PROJECT IMPLEMENTATION

5.1 Executing Agencies

5.1.1 There shall be three Executing Agencies as follows: (i) **Tanzania National Roads Agency (TANROADS)** for the construction and supervision of the Tanzania section namely Arusha – Namanga Road (Lot T); (ii) **the Ministry of Roads and Public Works (MoRPW)** for the construction and supervision of Kenya section namely Athi River-Namanga Road (Lot K); and (iii) **East African Community Secretariat (EAC)** assisted by the MoRPW (Kenya) and Tanroads (Tanzania) for the study and design components the capacity building and Audit consultancy. This shall follow same format as was in the case of the Arusha - Namanga - Athi River Study/design.

5.1.2 The TANROADS is a semi-autonomous road agency of the Ministry of Infrastructure Development of Tanzania with the responsibility for the maintenance and development of the classified trunk and regional road networks. TANROADS, although it exercises a considerable degree of independence in its operations, reports directly to the Permanent Secretary (PS) Ministry of Infrastructure Development. The TANROADS board, consisting of 5 private sector members and 4 government senior managers, is only advisory to the PS and the PS (who chairs the meetings) calls upon their advice in line with the National Executive Agencies Act No 30 of 1997

and TANROADS establishment order. The Roads Department of the MoRPW, on the other hand is fully a government department, which is in charge of project implementation of all classified road network. The two organizations have the requisite organizational capacity to maintain and develop the classified trunk and regional road network in the respective countries. These institutions have a wealth of experience and resources in project management, which will be utilised in the execution of this project. Both institutions have well established procedures for procurement, accounting and supervision and have experience in management of donor funded projects. The EAC has experience in planning and coordination of projects in several sectors including Transport and Communications, Energy, Agriculture, Tourism, Legal and Judicial co-operation as well as in the macro-economic sectors. The EAC secretariat successfully executed the Arusha - Namanga - Athi River road study / design project.

5.1.3 TANROADS consists of a Chief Executive with its functions divided among four departments of Maintenance, Development, Engineering and Finance and Administration. TANROADS is fully staffed with over 770 staff of which 160 are engineers. The headquarters is staffed sufficient number of Engineers. The Agency is managing at least 1 Bank project and has just completed 3 other projects within the last one year. Many other donor projects are also being executed by TANROADS. An individual engineer of suitable experience, with minimum BSC graduate, Registered Engineer and 10 years experience in roads / project management, acceptable to the Bank, will be nominated to be the Project Engineer and Country Coordinator for the whole project including the studies / design and capacity building component (Annex 7). **This will be a condition precedent to the first disbursement of the Loan.**

5.1.4 The Ministry of Roads and Public Works, the Kenya executing agency, is in charge of project implementation of all classified road network. The Roads Department, on which the responsibility lies, is headed by the Chief Engineer (Roads) and has 5 divisions: Planning, Design, Construction, Maintenance and Finance and Administration. The department is staffed at the headquarters and has road engineers in each of the 71 districts of Kenya. The district engineers report to the 8 Provincial Engineers. The current staffing of the Roads Department is composed of 2830 employees of which 175 are engineers, 615 road supervisors, and the rest are technicians and artisans. GOK froze recruitment of civil servants since early 1990s under donor pressure and currently is experiencing shortage of staff in the middle level of the professional cadre. The Government has recognized this and within the wider road sector reforms which will create 3 autonomous road authorities in 2007, more engineers will be recruited. The World Bank has in the last 2 months approved 4 projects under the Northern Corridor Project which are being executed by the Roads Department. For the purposes of this project, an individual engineer of suitable experience, with minimum BSC graduate, registered engineer and 10 years post experience in roads / project management, acceptable to the Bank, will be nominated to be the Project Engineer and Country Coordinator for the whole project including the studies / design and capacity building component (Annex 7). **This will be a condition precedent to the first disbursement of the ADF Loan.**

5.1.5 The Treaty for the Establishment of the EAC empowers EAC to co-ordinate activities with respect to the construction, maintenance, rehabilitation, upgrading and reconstruction of trunk roads connecting the Partner States to common standards of design. The EAC has experience in coordinating programmes and projects for a sustainable, equitable and balanced development of partner states in several sectors including Transport and Communications, Energy, Agriculture, Tourism, Legal and Judicial co-operation as well as in the macro-economic sectors. Besides, the Secretariat also co-ordinates donor activities with regards to regional projects within the partner

states. The EAC will appoint a person (Transport Engineer/Economist) to act as EAC Project Coordinator who shall have experience and skills acceptable to the Bank, (with minimum relevant Bachelors degree and 10 years experience in roads / project management). Refer to Annex 7. **This will be a condition precedent to the first disbursement of the ADF Grant**

5.1.6 However, the EAC has recognized in its Development Strategy 2006-2010 that while its mandate has been expanding, there has not been a corresponding expansion of the professional cadre and many of the departments, including the one in charge of Transport are understaffed. There is only one engineer in charge of Transport and Structures projects. This project has taken this into consideration and designed a capacity building component whereupon the project will fund under Technical Assistance, 2 Liaison Engineers to assist the EAC Transport Engineer. They shall have as a minimum post graduate degree in transport engineering or equivalent and 10 years in site road construction / project management (Annex 9B). As the EAC has a recruitment programme underway, the 2 engineers will be absorbed into the EAC establishment after project completion. The terms and conditions of service for the Liaison Engineers will be the same of those of the EAC. The Liaison Engineers will be recruited before the commencement of the project implementation. The building-up capacity at EAC is sustainable and is complementary to the capacity building efforts under the another Bank project, the East Africa Trade and Transport Facilitation project which has extensive capacity building to all sectors at the EAC secretariat. **The recruitment of the Liaison Engineers will be a condition precedent to the first disbursement of the ADF Grant.**

5.2 Institutional Arrangements

5.2.1 The project has three executing agencies and involves two governments of sovereign countries and a Regional Development Community. Coordination of the project implementation is therefore critical to the successful outcome of the project. As such, the EAC in addition to their role as the executing agent shall also coordinate the whole process. Two committees shall be formed to streamline and enhance the coordination as well harmonize the implementation. The institutional relationships are described below and a flow chart is also attached as Annex 6 to the report to further clarify the inter-linkages.

5.2.2 At the policy/ leadership level there shall be two committees that will guide the policy as well as the technical aspects of the project. The **Steering Committee** will take charge of the policy issues and its purpose is to facilitate each of the government from Partner States to reach an informed decision. The Steering Committee include the Secretary General, EAC (Chairing), Permanent Secretary (PS) Ministry of Roads and Public Works, Kenya, PS Ministry of Infrastructure Development, Tanzania, PS Ministry of Finance, Kenya, PS Ministry of Finance, Tanzania, PS Ministry of East African Cooperation, Kenya, PS Ministry of East African Affairs, Tanzania, Chief Executive, TANROADS. The Committee may co-opt officials from other stakeholder ministries and organizations as and when required. The Committee will deliberate issues collectively but respective country officials will be responsible for decisions within their jurisdictions. The Steering Committee shall have no contractual obligations under any of the works or consultancy contracts. The Steering Committee shall meet at least twice a year.

5.2.3 The **Technical Committee** will facilitate, coordinate, monitor and assist as necessary the technical aspects of the project and advice the Steering Committee as necessary. The Committee will consist of Deputy Secretary General (Projects and Programmes), EAC (Chairing), the Chief Engineer (Roads), Ministry of Roads and Public Works, Kenya, the Director of Development,

TANROADS, the Head of Infrastructure, EAC. The respective Country Coordinators / Project Engineers and Transport/ Structure Engineer (EAC) and the Liaison Engineers shall be incorporated in the committee to provide technical inputs and act as joint secretaries. The Committee may co-opt other officials to provide technical inputs in their fields of expertise. These will include but shall not be limited to; Materials Engineers, Contract Specialists, Structural Engineers, Disbursement Experts, Accountants, Environmental Scientists, Economists and External Auditors. The responsibility for decisions shall be taken by respective Partner States officials. The Technical Committee shall have no contractual obligations under any of the works or consultancy contracts. The Committee shall meet quarterly or by notice. **The nomination of members of the Steering and Technical Committees by the Borrowers (to be done before the project implementation starts) has been included as one of the conditions precedent to first disbursement of the loans.**

5.2.4 In accordance with FIDIC form of works contract, the key implementation roles shall be played as described here. A flow chart is attached as Annex 6, which demonstrates the various layers of roles and responsibility with respective linkages. The Employer shall be the Ministry of Roads and Public Works in Kenya for Lot K works and supervision contract. Tanzania National Roads Agency in Tanzania for Lot T works and supervision contract and EAC Secretariat for the Studies and Design contracts, Audit and the capacity building Technical Assistance. The Engineer for the works shall be the Chief Engineer of the Roads Department of the Ministry of Roads and Public Works, Kenya, for Lot K works, Director of Development, Tanzania National Roads Agency, Tanzania, for Lot T works. The Chief Engineer and the Director of Development shall designate Project Engineer respectively, who will be the Country Coordinators and will be responsible for the Lot K and Lot T works respectively. ***The Project Engineer to be nominated shall obtain a no objection from the Bank.*** The **Engineer's Representative** shall be the works' Supervising (Engineering) Consulting firm for each respective Lot K and Lot T works.

5.3 Supervision and Implementation Schedules

5.3.1 The construction works for the Arusha – Namanga- Athi river road project will be carried out by 2 contractors. The works will be inspected and supervised by 2 engineering consulting firms. The construction works will be implemented over a period of 36 months starting from June 2007 to June 2010 followed by a 12-month defects liability period.

5.3.2 Procedures for Advance Procurement Action (APA) for procurement of works and Advance Action for Acquisition (AAA) of consultancy services will be used in the procurement of contractors and consultants for works supervision and study/design. The procedures have been approved by the Bank and a Note for Information has been sent to the Board on the same. The GOT and GOK requested for fast tracking of the project and this was discussed during the Preparation and Appraisal missions, and found justifiable. The 2004-2006 rapid oil price increase from USD 35 per barrel at end of feasibility stage in 2004 to USD 70 in July 2006 was the major concern that if the project is delayed any further, the price of the project could increase to affect its economic viability negatively. It was noted that the estimated cost inclusive of taxes and duties increased from USD 100 million in 2004 to current USD 185 million. The detailed design documents and bid documents are ready and have been reviewed by the governments. In addition, the works are not complex – they involve rehabilitation/upgrading of existing bitumen road. Thus the use of APA and open International Competitive Bidding (ICB) procedures do not pose any risk. GOT and GOK understand that no contract award will be signed by the government before

the Bank's loan approval, in spite of the approval of the AAA and APA, and that this approval will not commit the Bank to approve the project loan.

5.3.3 Using the Advance Procurement Action for procurement of contractors and Advanced Action for Acquisition of consultancy services, the project Implementation schedule is shown on Table 5.1 below.

Table 5.1: Summary of Project Implementation Schedule

<u>Activities</u>	<u>Date</u>	<u>Agency Responsible</u>
<u>i. Construction of Works Contract (APA)</u>		
Approve APA	Sept 2006	ADF
Publication of GPN	Oct 2006	GOT/GOK
Call for tenders/Invitation to bid/SPN	Oct 2006	GOT/GOK/EAC
Board Approval	Nov 2006	ADF
Receipt of Tenders (90 days)	Jan 2007	GOT/GOK
Evaluation	Feb 2007	GOT/GOK
Approval of evaluation	Mar 2007	ADF
Negotiation and signing of Contract	Apr 2007	GOT/GOK
No objection to Draft Contract	Apr 2007	ADF
Execution/signing contract	Apr 2007	GOK/GOT/EAC
Contract commencement	Jun 2007	GOT/GOK
Construction completed	Jun 2010	GOT/GOK
Defects Liability End	Jun 2011	GOT/GOK
<u>ii. Consultancy Services for Works Supervision (AAA)</u>		
Approve AAA	Sept 2006	ADF
Short listing of Consultants by Borrowers	Sept 2006	GOT/GOK
Request for No objection to Short List	Oct 2006	GOT/GOK
No Objection to Short list / RFP	Nov 2006	ADF
Board Approval	Nov 2006	ADF
Issue of RFP	Nov 2006	GOT/GOK
Receipt of Proposals	Jan 2007	GOT/GOK
Complete Evaluation	Feb 2007	GOT/GOK
Approval of evaluation/No Objection	Mar 2007	ADF
Negotiation	Apr 2007	GOT/GOK
No Objection to contract signature	Apr 2007	ADF
Signing of Contracts	May 2007	GOT/GOK
Commencement of Consultancy Services	May 2007	GOT/GOK
Completion of Services	May 2011	GOK/GOT

iii. **Consultancy Services for Study / Design**

Advertisement and Notification (SPN)	Nov 2006	EAC/GOT/GOK/ADF
Board Approval	Nov 2006	ADF
Prequalification of Consultants	Jan 2007	EAC/GOT/GOK
Approval of short-list and RFP	March 2007	ADF
Issue of RFP	April 2007	EAC/GOT/GOK
Receipt & Evaluation of Proposals	July 2007	EAC/GOT/GOK
Award of Contracts	Aug 2007	EACGOT/GOK
Commencement of Consultancy Services	Sept 2007	GOT/GOK/ADF
Completion of services	May 2009	EAC/GOT/GOK

iv. **Technical Assistants – 2 Liaison Engineers**

Preparation of Terms of Reference (TOR)	Sept 2006	EAC
Advertise	Oct 2006	EAC
Submission of application	Nov 2006	EAC
Board Approval	Nov 2006	ADF
Short Listing	Nov 2006	EAC
Interviews/Evaluation/ Recommendations	Jan 2007	EAC
Approval	Jan 2007	ADF
Commencement of services	Mar 2007	EAC
Completion of services	Mar 2011	EAC/GOT/GOK

v. **Study on the Capacity of Local Contractors**

Preparation of TOR	Oct 2006	EAC
Advertise	Nov 2006	EAC
Board Approval	Nov 2006	ADF
Submission of application	Dec 2006	EAC
Short Listing	Dec 2006	EAC
Receipt of Proposals	Jan 2007	EAC
Complete Evaluation	Feb 2007	EAC
Approval of evaluation	Mar 2007	ADF
Award of Contracts	Apr 2007	EAC
Commencement of Consultancy services	May 2007	EAC
Workshop of Stakeholders	Jun 2007	EAC
Consultancy completed	Jun 2007	EAC

vi. **Compensation of affected persons**

Compensation of affected persons end	Mar 2007	GOT/GOK
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5.4 Procurement Arrangements

5.4.1 Procurement arrangements are summarized in Table 5.2. All procurement of goods, works and acquisition of consulting services financed by the Bank will be in accordance with the Bank's *Rules of Procedure for Procurement of Goods and Works*, or as appropriate *Rules of Procedure for the Use of Consultants*, using the relevant Bank Standard Bidding Documents. As provided for in the joint *Guidelines for the Implementation of the Accelerated Co-Financing Facility for Africa (ACFA)* between the Bank and JBIC, the procedures will also incorporate the Japan Bank for International Cooperation rules of procurement, wherever JBIC loans is applied.

5.4.2 **Civil Works:** The procurement of civil works will be carried out under International Competitive Bidding (ICB) procedures using open bidding and Advanced Procurement Action (APA) will be applied. The civil works contracts for the construction of the Arusha - Namanga – Athi River road will be packaged in two lots. Lot T: Arusha – Namanga road section in Tanzania is valued at UA 37.159 million, and Lot K: Athi River – Namanga road section in Kenya is valued at UA 51.524 million (excluding taxes and duties). Table 5.2 below summarise the procurement arrangements.

5.4.3 **Supervision Consulting Services:** Two engineering consultants will be procured for the supervision of the two lots of works in line with Banks Rules of Procedure for the Use of Consultants. The services are valued at UA 6.333 million. The 2 firms, one for each works Lot K and Lot T, will be procured on the basis of short-lists of consulting firms prepared by the Executing Agencies. The selection procedure for Lot T (Tanzania) supervision consultancy will be based on the technical quality only. In the case of Lot K (Kenya) supervision consultancy selection will be based on combined technical quality and price consideration.

Table 5.2: Summary of Procurement Arrangements

Project Categories	Summary of Procurement Arrangements (in millions UA)			
	ICB	Short List	Others	Total
1. Civil Works				
1.1 Construction (2 lots)	88.683 (46.371)*			88.683 (46.371)
2. Consulting Services				
2.1 Supervision (2 lots)		6.333 (3.407)		6.333 (3.407)
2.2 Capacity Building		0.608 (0.547)		0.608 (0.547)
2.3 Feasibility / design study		3.035 (2.883)		3.035 (2.883)
2.3 Project Auditing		0.078 (0.071)		0.078 (0.071)
3. Miscellaneous				
3.1 Resettlement			0.0784	0.0784
TOTAL	88.683 (46.371)	11.398 (6.907)	0.0784	98.815 (53.279)

* Amounts in parentheses () are those financed by the ADF.

5.4.4 **Feasibility study and detailed design** consultancy services for the study and design of 260 km Arusha- Holili/Taveta - Voi road and 300km Tanga - Horo Horo/Lunga Lunga – Mombasa – Malindi road is valued at UA 3.035 million. Two reputable engineering firms will be recruited to undertake these studies on the basis of expression of interest of consulting firms. The selection procedure will be based on combined technical quality and price consideration. Abridged TOR are appended here as Annex 9A.

5.4.5 **Project Audit Services:** One firm for the audit services will be procured through a short-list of auditing firms, under the guidance of the respective national Auditor General Offices, to audit the three executing agencies (EAC, TANROADS and MORPW) in so far as the project works and consultancy services are concerned. Since the amount of contract for audit services is less than UA 350,000, according to Bank rules, the Borrowers may limit the publication of the announcement to national or regional newspapers. However, any eligible consultant, being regional or not, may express the desire to be short-listed. The selection procedure will be based on establishing the comparability of technical proposals and selection of the lowest financial offer.

5.4.6 **Capacity Building:** The 2 Technical Assistants (Liaison Engineers) under EAC capacity building will be procured according to Banks Rules of Procedure for Use of Consultants for Individual Consultants. The Borrowers may shortlist consultants and obtain Bank's no objection.

5.4.7 **Capacity of Contractors:** The individual consultant for evaluating contracting capacity in East Africa will be procured according to Banks Rules of Procedure for Use of Consultants for Individual Consultants. The Borrowers may shortlist consultants and obtain Bank's no objection. The value of the Technical Assistance described above and the Contracting Capacity consultancy is UA 0.483 million and UA 0.125 million respectively.

5.4.8 **National Procedures and Regulations:** The national procurement laws and procedures have been examined and found acceptable. However, Bank rules will be applied in the procurement of works and services.

5.4.9 **Executing Agency:** TANROADS (Tanzania) and Ministry of Roads and Public Works (Kenya) will be responsible for the procurement of works and supervision consultant. The EAC, assisted by the TANROADS and the MoRPW will be responsible for procuring the design/study consultants, audit consultancy services, capacity building technical assistants and the consultant to evaluate the contracting capacity in the region. The recipient governments will be responsible for compensation of the project affected persons according to the ESMP.

5.4.10 **General Procurement Notice:** The text of a General Procurement Notice (GPN) has been issued for publication in the 16 October 2006 issue of the United Nations Development Business, upon approval of the APA and AAA procedures by the Bank.

5.4.11 **Review Procedures:** The following documents are subject to review and approval by the Bank under the APA and AAA procedures: Specific Procurement Notices, Tender Documents and Requests for Proposals including post qualification documents, Tender Evaluation Reports and Reports on Evaluation of Consultants' Proposals and Draft Contracts, if the Form of Contract document in the Standard Bidding Document has been amended.

5.5 Disbursement Arrangements

5.5.1 The ADF/JBIC loans will be used to finance two categories namely civil works and consultancy services for supervision. The grant resources will be used to finance feasibility study/ design, audit, capacity building technical assistants and the consultant for evaluating contracting capacity in the region.

5.5.2 As regards disbursement under the civil works, supervision consultancies and study/design consultancies, the direct payment method will be used for the ADF loan and the grant respectively against standard documentation as specified in the Bank's Disbursement Handbook. The JBIC loans will be disbursed according to Direct / Transfer Procedures as provided in the ACFA agreement and JBIC rules.

5.5.3 Grant funds for financing capacity building components (the Technical Assistance for EAC capacity building and regional contracting capacity consultancy services) will be disbursed using the special account method of disbursement as specified in the Bank's Disbursement Handbook. The EAC will open a special account in a bank acceptable to ADF into which part of the grant resources will be deposited. The ADF will replenish the special account after the EAC has provided valid justifications for the use of at least 50% of the previous deposit. *The opening of the special account will be a condition precedent to first disbursement.*

5.6 Monitoring and Evaluation

5.6.1 During the implementation, TANROADS and Ministry of Roads and Public Works respectively will be responsible for monitoring project implementation (including the ESMP) and will send regular reports to the Bank.

5.6.2 TANROADS and Roads Department shall regularly provide the Bank and JBIC with quarterly progress reports for the project including the implementation of the ESMP in the established format covering all aspects of the concerned components. These reports will include physical, financial performance indicators, social and environmental impacts. All reports shall be submitted 30 days after the close of a quarter and shall be copied to the Bank's Field Offices. In addition, monitoring of the project will be done through the Bank's supervision mission program.

5.6.3 The Bank together with JBIC will mount a Project Launch Mission in which they will avail expertise in various project management areas, especially in disbursement. A mid-term review will be undertaken during the second year of implementation in 2008/09 to identify any major constraints facing the project and provide the required corrective measures.

5.6.4 The implementation of the environmental and social mitigation measures will be monitored by the supervision consultant and the respective Tanzania and Kenya environmental authorities. They will send periodic reports of its monitoring activities to the Bank.

5.6.5 Within six months of project completion, TANROADS and Roads Department will prepare the Recipient's Project Completion Report (PCR) to be submitted to the Bank. Subsequently, the Bank will carry out its own PCR. The two reports and the Executing Agencies'

performance statistics and financial results will form the basis for the post-evaluation of the project.

5.7 Financial Reporting and Auditing

5.7.1 The Finance and Administration Division of TANROADS will be responsible for financial management and reporting procedures for the project component in Tanzania. The Division has been fully established with its full complement of staff as shown in the organizational structure. TANROADS has already prepared an Accounting Manual which is in use. This will ensure that accounting and auditing functions are carried out in a sound and desirable manner.

5.7.2 The Finance and Administration Division of MoRPW will be responsible for financial management and reporting procedures for the project components in Kenya. A well-documented Financial Management Manual, which outlines internal control procedures as well as financial reporting arrangement to Government and Donors, has been developed. The manual describes the accounting system, the accounting records, supporting documents, computer files, authorizations procedures for transactions, financial reporting and disclosures, and contract administration and monitoring procedures. The Accounting System is fully computerized and operational. The Finance and Administration Division would be able to monitor the expenditures of the project and meet the financial reporting and auditing requirement under the projects.

5.7.3 Under the Finance and Administration Deputy Secretary General, the EAC has established a Finance and Accounts divisions which will be responsible, with the assistance of the respective division of TANROADS and MoRPW, for financial management and reporting for the study/design components of the project. Although limited compared to TANROADS, the EAC has capacity to audit the design components, and will be able to monitor the expenditures of the project and meet the financial reporting and auditing requirement under the project.

5.7.4 The Executing Agencies (TANROADS, MoRPW and the EAC) will open and maintain a separate account for the project, and keep all the financial records of the projects. The financial statements and project accounts will be audited annually during project implementation following the Bank's Guidelines for Project Audit. Qualified independent audit firms procured on the basis of terms of reference acceptable to the Fund shall undertake the auditing services. The Audit reports shall be submitted to the Bank regularly once every year and after project completion.

5.8 Aid Co-Ordination

5.8.1 Key Development Partners (DP) in the transport sector in Tanzania includes World Bank, EU, DANIDA, Japan, NORAD and AfDB who have formed an organization for which the EU is the secretariat and meet once per month. The Government presented to DP in July 2006, the Transport Sector Investment Programme (TSIP). While the initiative was welcomed by the DP, the programme is overly ambitious and has no prioritization. Never-the-less, donors have committed themselves to scale-up support with the 2007/08 budget cycle. In order to enable the donors proceed with their preparation, a few undertakings were agreed upon, and these include (i) GOT's commitment to increase resources for maintenance including a three year paved roads and airports periodic maintenance programme, (ii) financially affordable five year plan for the TSIP, (iii) jointly agreed sector performance assessment and monitoring framework, (iv) suitable road safety policy and strategy, and (v) a Roads Act that responds to the institutional needs of the sector including provision for a reformed TANROADS. As a way forward GOT agreed to revitalize the

Joint Technical Committee (JTC) between MoID and DP to implement the agreed covenants in time for the planned transport sector review meeting scheduled for November 2006.

5.8.2 Donor coordination in Kenya at sector level is spearheaded by the Ministry of Roads and Public Works. There are 9 major donors supporting the transport sector which include World Bank, EU, France, KFW, China, JICA/JBIC, DANIDA, SIDA and the Bank. The lead donor status rotates among the most active donors every two years, and currently the EU is the lead donor. The donors are scheduled to meet with government at least 3 times a year. The collective total financing by the donor group is estimated at US\$750 million. Most of recent dialogue between donors and government has concentrated on institutional reforms and capacity building to ensure that there are adequate resources for network development, routine and periodic maintenance of roads, and improved performance by all relevant entities in the road sector. Currently the EU is supporting MoRPW to produce a Roads Sub-sector Policy and Strategy and the Roads Sub-sector Investment Plan for the period 2007 – 2020. The purposes for these two pieces are to comprehensively articulate a statement of the Country's strategy, policies and plans for the transport sector and secondly to bid for more resources, both internally and from development partners. It is the intention of donors, therefore, that Kenya Government adopts the findings and recommendations of this report so as to develop a coherent financing plan according to the priorities set out there-in hence advance the Paris Declaration on Aid Effectiveness agenda.

5.8.3 As an on-going process the Bank is fully engaged with other donors in furthering coordination and leveraging on prevailing synergies. In Tanzania, the Bank is taking a leading role in establishing the Central Corridor Transit Transport Facilitation Agency (CCTTFA). The Bank in partnership with the World Bank is financing the East Africa Trade and Transport Facilitation (EATTF) Project and Northern Corridor Transit Coordination Authority. The Bank is providing assistance to the EAC and to the two Northern and Central corridor authorities to strengthen their capacity on policy, planning, harmonization, advocacy and implementation of facilitation. The Bank financed component of EATTF for EAC includes (i) consultancy services for the preparation a regional road sector development program (RRSDP) for 2008 – 2018; (ii) transport facilitation consultancy services to review the EAC Tripartite Agreement on Road Transport and the road traffic acts of the EAC member; (iii) consultancy services for the implementation of EAC Customs Union; (iv) Regional Customs IT Interconnection System which comprise works on software, communications infrastructure and hardware for data base management and (v) EAC Capacity Building - the acquisition of corporate ICT systems and recruitment of a fix –term trade policy advisor.

5.8.4 As regards the Arusha Namanga Athi River road project, through ACFA agreement, Japan Bank for International Corporation (JBIC) is co-financing with the Bank. In addition, JICA will support through Technical Assistance the one-stop-border post at Namanga as part of initiatives towards trade and traffic flows facilitation. This endeavour will be in a form of training and equipment, and will complement the activities of the EATTF. Further details of JICA support will be stipulated in collaboration with EAC (Customs Unit) and government officials from customs departments, immigration and revenue authorities.

6 PROJECT SUSTAINABILITY AND RISKS

6.1 Recurrent Costs

6.1.1 The project recurrent cost in this context refers to the routine and periodic maintenance costs. Before start of project and after the completion of road construction, the project recurrent costs will be borne by the Governments of Tanzania and Kenya respectively. During construction, maintenance of the road and its contractual road deviations will be the responsibility of the contractor. The contractor will be responsible for road maintenance during the construction and the one year defect liability period.

6.1.2 According to current expenditure on routine maintenance (about USD 1400 per km per year), the annual need for the Tanzania section will be USD 0.15 million and USD 0.2 million for the Kenyan section. The impact of the project maintenance costs on governments' recurrent costs will not be significant and both governments have financial and institutional capacity to carry out proper road maintenance. As a matter of policy, Tanzania Road Fund Board (RFB) has prioritised routine maintenance of all bitumen roads in maintainable condition. This means that, regardless of the total funding available, the project road is assured to receive sufficient routine maintenance. The first periodic maintenance for the newly constructed road will be due around 2016, ten years from now. According to financial plan of the RFB, by that time Tanzania, will have mobilised funds and closed the current funding gap. In addition, RFB will be collecting sufficient funds to cover all periodic maintenance needs, including those of the project road. The situation is similar for Kenya, where the KRB is set to collect over USD 200 million per year starting 2006/07 for road maintenance, which is more than enough for its current estimate of USD 125 million per annum for road maintenance.

6.2 Project Sustainability

6.2.1 **Tanzania:** Tanzania Roads Fund Board (TRFB) is responsible for funding road maintenance while the Tanzania National Roads Agency is responsible for the execution of the maintenance activities. These two institutions have both institutional and legal capacity to maintain the road network in the country including the project road. GOT has expressed its commitment to the maintenance of this road and the rest of the network. Experience in the past 5 years, where roads newly constructed have continued to get due maintenance and independent audit have indicated that TANROADS is delivering value for money on its allocation, it is well demonstrated that road maintenance will be sustained in Tanzania. Furthermore, measures to reduce pre-mature road destruction are being implemented through axle-load control. Through enforcement, overload has reduced from 40% in 2000 to 10% in 2005. In Tanzania as well as Kenya, the project road is one of the core networks of the strategic roads that are given priority in allocation of fuel levy funds.

6.2.2 **Kenya:** Kenya Roads Board (KRB) and the Roads Department of MoRPW are the main players in road maintenance in Kenya and they have legal and institutional capacity to operate and deliver proper road maintenance. However, even though maintenance of roads in Kenya has improved, there are still a large proportion of roads in poor condition, which leads to questions the institutions' competence. The main thrust of the legal and institutional review that is on going in the road sub sector is aimed at setting up autonomous road authorities, by December 2007, to work under private-sector mentality and improved terms of service that will match the market rates. The legally constituted KRB is a leap in the right direction as funding is guaranteed under the law that

created the Board which has ring fenced funds for road maintenance. The institutional reforms within Roads Department have already started bearing fruit as the donors, led by the World Bank (by approving in July 2006 the start of USD 200m Northern Corridor Project), have recognised it. Kenya has put efforts to improve its axle load control but the results are inconsistent and poor. Therefore, KRB sponsored a study which has just been completed which has recommended strategic installation of new weigh bridges and improvement of existing ones.

6.2.3 There is increased role of the private sector in routine and periodic maintenance and a corresponding reduction of use of the force account units (government owned contracting capacity) who are now limited to emergency responses only. At the moment 99 percent of the maintenance works are contracted out in Tanzania. In Kenya the proportion is 50% and 90% for routine and periodic maintenance works respectively. This is leading to proper market creation and thereby enhances the growth of the private contractors and the domestic construction industry.

6.2.4 From the foregoing, it can be confirmed that in both Tanzania and Kenya, maintenance program would be implemented for the sustainability of the project road. Further, all the major beneficiaries (trade, tourism and regional integration) were consulted widely during project design and preparation and all have confirmed their acceptance of the project and are sure to utilise the road and all auxiliary facilities.

6.3 Critical Risks and Mitigation Measures

6.3.1 The implementation of the project assumed several project risks, namely, political risk, capacity of EAC, price escalation, counterpart funding, financial prudence, effectiveness of the one border post and implementation of ESMP. These risks and the mitigation measures are discussed as follows.

6.3.2 As a multinational projects, there is a political risk that extraneous matters, or otherwise, could delay the project implementation. To mitigate against any negative political development, the project is designed like two stand alone contracts so that each can run independent of the other. Further the project is designed to involve the Permanent Secretaries from both governments, working together with the EAC Secretary General in a non-contractual manner, to coordinate the project and to keep the regional nature of the project alive. Thus continuous and structured communication reduces the risk of political problems developing at project level.

6.3.3 Capacity of EAC to coordinate such a large project involving two governments could be overstretched. In order to mitigate the situation the Bank is funding a capacity building component of the project. In addition EAC is receiving institutional enhancement support from the Bank via a separate project.

6.3.4 There is the risk of price escalating to a point that the project viability is threatened due to world fuel price increases. The risk is managed by fast tracking the project implementation and its immediate execution. In addition the viability of the project has been reviewed and reconfirmed in August 2006, considering the effect of the existing high oil price.

6.3.5 Regarding financial prudence with respect to project funds, road maintenance funds and procurement procedures, new Kenyan laws have been enacted and new bodies created to combat mis-procurement and other malpractices. The World Bank approved of financing the Northern Corridor after carrying out a Detailed Implementation Review of the MoRPW, confirming that the

procurement and other project specific activities are safe. In addition project specific mitigation measures with respect to transparency in procurement process and use of project funds are already incorporated in the project design. These includes the appointment of an independent project audit firm that ensures the submission of regular annual audit report; Bank's approval of all project procurement activities and contract awards; use of direct payment method for disbursement; and frequent Bank supervision missions. Thus these measures would further reduce the risk associated with poor project management and enable timely resolutions of issues.

6.3.6 The Kenya ADB Field Office will be operational by December 2006, which will provide closer day to day supervision of the project related issues. Further the publishing of the audit report of the road agencies performance, requirement that KRB should have performance agreement with the road agencies have been included as loan condition.

6.3.7 The risk of failure by the recipient governments to provide counterpart funding. Both Governments have ensured that funds will be provided timely in the national budgets. The increases of fuel levy in June 2006 in both countries have improved the revenue of the Governments which is allocated for maintenance, development works and counterpart funding of projects.

6.3.8 There is a risk of effectively utilizing the one – stop –border post at Namanga due to lack of skilled manpower, the required equipment and system. To mitigate this risk, JICA is preparing a training program for the border control officials and police officers.

6.3.9 The risk of failure to implement the ESMP. The environmental and social issues are not major; notwithstanding, an undertaking of the two governments to comply with the ESMP **will be a condition precedent to first disbursement.**

7 PROJECT BENEFITS

7.1 Economic Analysis

7.1.1 The methodology for the Economic Analysis used is based on the Highway Development and Management (HDM – IV) model. The indicator of viability used is the Economic Internal Rate of Return (EIRR) and Net Present Value (NPV) for each of the project links and for the overall project. For economic analysis, financial construction costs in section 4.8 have been converted to economic costs using standard conversion factors of 0.80 and 0.76 for Tanzania and Kenya respectively. The opportunity cost of capital for Tanzania and Kenya estimated at 12% has been adopted for the economic evaluation as minimum rate of return acceptable for intervention in the project. The weighted average traffic in 2006 is 977 for Tanzania side, 1593 for Kenya side and 1325 for the whole project road. This traffic is expected to reach 1427 for Tanzania, 2081 for Kenya and 1797 for the total road project.

7.1.2 The economic analysis was revised in August 2006 to take into consideration the dramatic rise in cost of oil from USD 35 per barrel in May 2004 (at preliminary cost estimates which were basis for feasibility study) and the August 2006 price of USD 70 per barrel, a 100% rise. The Economic Cost for the investment in the project is estimated as USD 136.06 million.

7.1.3 The result of the economic evaluation for both section combined indicated an EIRR of 14.9%, which is above the opportunity cost of capital in Tanzania and Kenya and NPV of USD 19.71 million. The EIRR for the Tanzania section of the road is 15.7% and the Kenyan section 14.4% which are well above the opportunity cost of capital in Kenya and Tanzania of 12%. The corresponding NPV values are USD 11.25 million and USD 8.52 million for the Tanzania and Kenya sections respectively. These results confirm the economic viability of reconstruction and rehabilitation of each section separately and for the whole Arusha - Namanga – Athi River road project. The FYRR value for the whole project is 15.7%, which is above the discount rate of 12% suggesting perfect timing. It is imperative that the whole project should be implemented immediately without delay.

7.1.4 The intervention on the road project is therefore economically desirable and would contribute significantly to regional integration, cross border trade, the development of the tourism industry, improve access to markets and social service in the project's zone of influence. A summary of the economic analysis result is in Annex 4.

7.2 Social Impact analysis

7.2.1 The impact of the road on people living in the project zone of influence will generally be positive. The people were characterized as poor and exhibiting unsatisfactory social indicators. While the EIRR is satisfactory, most of the social impacts on the people are unquantifiable. They have been identified and taken account of to the extent possible in decision making, according to significance and indeed whether they are positive or negative. Here they are seen as largely positive factors complementing the road project.

7.2.2 Improved agriculture and livestock production and marketing opportunities will be enabled by road improvements. Efficient road transport link with JKIA is essential for export of cut-flowers grown in the area. Improved road conditions will stimulate demand for meat, milk, hides and poultry products from Tanzania to Kenya resulting in economic benefits. According to the Tanzania Agricultural Sector Development Strategy (2001), government aims to reduce rural population below the poverty line from 39% (2000) to 20.4% by 2010 through efficiency gains and commercialization of agriculture; and reduce the proportion of rural food-poor from 20.4% to 11.6%. Similarly, Kenya's Economic Recovery Strategy for Wealth and Employment Creation (ERSWEC) is focusing on ASALs of which the road zone lies and has embarked on reforms to revitalize agriculture including developing the livestock industry which accounts for 7% of GDP. The reforms include private sector and local authorities' establishing of small abattoirs and meat processing facilities.

7.2.3 Trade, tourism and hotel industry will get a boost from the improved road. Inter-regional trade will benefit from an improved road network. For instance the reopening of KMC factory at Athi River will benefit from the improved road access to Tanzanian, COMESA and Great Lakes regional markets for raw materials and finished products. Tourism industry contributes significantly to economic growth (12% to Kenya's GDP and 16% to Tanzania's GDP). In Kenya, tourism earnings grew by 52% to USD 560 million in 2004. In 2005, 148,000 holiday visitors (about 24% of Tanzania tourist) entered Tanzania from Kenya through the Namanga border.

7.2.4 The people in the zone of influence will benefit from improved delivery of social services such as health services, education and water services due to improved access resulting from the road project as elaborated earlier on. Complementary to the road project is the government of

Tanzania's PRSP whose goals emphasize primary and preventive health care and reduction in infant mortality from 95/1000 in 2002 to 50/1000 in 2010; continued implementation of the Primary Education Development program (PEDP) and increase primary completion rate to 90% for girls and boys; and an increase in proportion of rural population with access to clean and safe water from 53% in 2003 to 65% by 2010. The road will, therefore play a good role in realizing these broader goals.

7.2.5 The project will increase opportunities for creating employment for both men and women in the project area either through direct employment during and after construction but also through local business activities that will come due to improved transportation. The road will play its part in helping achieve aspirations of women, and there are associated complementary policies and strategies which will have a greater chance of success. The National Policy on Gender and Development (NPGD -2000) elaborated by the Government of Kenya spells out guidelines for mainstreaming gender across sectors. The May 2005 Sessional Paper No. 5 provides a framework for the operationalization of gender mainstreaming in policy, planning and programming.

7.2.6 Similarly, Tanzania has developed a National Strategy for Gender Development (NSGD – 2005) which is based on the Women and Gender Development Policy (2000). The NSGD highlights the major issues of concern to gender equality, challenges and provides guidance on the interventions and identifies the roles or various actors and the coordination mechanisms. It is therefore hoped that the road intervention will provide in the two countries a catalyst for achieving goals and targets set out in the respective strategies.

7.3 Sensitivity Analysis

7.3.1 The robustness of the economic results discussed above was tested for sensitivity to changes in the basic assumptions on construction costs and on traffic levels (Table 7.1). Three alternatives were checked, namely: (i) construction cost increased by 10 percent while benefits remained the same; (ii) benefits declined by 10 percent while costs remained the same; and (ii) a combined 10 percent increase in cost and 10 percent decrease in benefit.

7.3.2 The economic parameters were calculated for all the three cases above. The results given in the table hereunder indicate that in all the three alternatives, the project road is satisfactorily with an EIRR higher than the threshold of 12.0% opportunity cost of capital for Kenya and Tanzania and NPV remaining positive. In the worst case scenario of a combined 10% increase in costs and 10% decline in traffic, the project is still viable with an EIRR of 12.4 % and a NPV of USD 3.35 million.

Table 7.1: Sensitivity Analysis on Base Case

Scenarios	Traffic Level as % of base case	Cost of Const. as %age of expected cost	EIRR (%)	NPV in million USD
• Base case	100%	100%	14.9	19.71
• Costs Increased by 10%	100%	110%	13.7	15.27
• Benefits Reduced by 10%	90%	100%	13.6	12.80
• Combined 10% increased cost and 10% decrease in traffic levels	90%	110%	12.4	3.35

7.3.3 The results of economic evaluation are sensitive to both increases in construction cost and traffic decline. But the result is marginally more sensitive to the decline in the traffic than increase in construction cost. The decline in the traffic by 10 percent is most unlikely as traffic growth rate on the network over the last ten years has been above 5.0% per annum and a medium growth assumption of 6% to 7% has been considered.

7.3.4 Project construction cost estimates are based on detailed engineering design study and taking into account the prevailing oil price. In addition physical contingency provision of about 7.5 % above the base costs. With this consideration, the project is still viable with a 10 per cent increase in the construction cost.

7.3.5 An analysis of switching values is undertaken for the whole project. Switch values represent the percentage change in costs of benefits that would give NPV of zero or result in EIRR equivalent to the opportunity cost of capital of 12.0% in Tanzania and Kenya. The result indicated that the project viability will be threatened if construction cost increases by 29.2% or traffic declines by 22.6%, which are higher than the threshold of 12 percent of opportunity cost of capital. The financial contingency considered the inflation likely to affect the foreign exchange costs and the local costs as well and has considered the costs rise occasioned by the recent 100% oil price increase. It is therefore unlikely that a 29.2% price increase could occur within the implementation period.

8 CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

8.1.1 The results of economic analysis of the proposed project shows a positive net present value and an internal rate of return higher than the opportunity cost of money in Kenya and Tanzania. The project, if implemented, will be sustainable within the existing policy and institutional arrangements. Therefore, the proposed Arusha – Namanga - Athi River Road Development Project is viable and well timed for implementation.

8.1.2 Implementation of the project will herald the benefits of regional integration, increased cross border trade, increased tourism and social and economic development for the Partner Countries of the EAC.

8.1.3 The project has been well conceived and is technically feasible, socially and environmentally sustainable, and economically justified and viable.

8.2 Recommendations

It is recommended that the African Development Fund (ADF) provides, from the ADF X Multinational window, (i) loans to Government of the Republic of Kenya and Government of the United Republic of Tanzania not exceeding UA 49.241 million and UA 0.537 respectively, and (ii) a grant to the East African Community not exceeding UA 3.501 million.

8.3 Conditions of Loan and Grant Approval

The loan shall be subject to the following specific and particular conditions:

A: Conditions Precedent to Entry into Force:

The entry into force of the Agreements shall be subject to the fulfilment by the Borrowers of the conditions set forth in Section 5.01 of the General Conditions Applicable to Loans and Guarantee Agreements of the Fund.

B: Conditions Precedent to First Disbursement of the Loan to Kenya:

The obligations of the Fund to make the first disbursement of the loan shall be conditional upon entry into force of this Loan Agreement as provided above and the Borrower shall have to the satisfaction of the Fund:

- i. Provided evidence to the Fund of the appointment of Project Engineer / Country Coordinator by MoRPW of experience and skills acceptable to the Bank (Para, 5.1.4)
- ii. Provided evidence satisfactory to the Fund of full compensation of project affected persons prior to commencement of civil works within specific sections of the road according to construction schedules as per the ESMP (Paras.4.7.3 & 6.3.9).
- iii. Provided evidence by the Government of Kenya of the appointment of members of the Steering committee and the Technical committee. (Paras. 5.2.2 &5.2.3)

C: Other Conditions to the Loan Agreement to Kenya:

In addition, the Kenya Government shall submit evidence to the Fund that the Kenya Roads Board has made proper and sufficient arrangements to enter into performance agreements with the designated road maintenance agencies by December 2007 (Para 3.8.6)

D: Conditions Precedent to First Disbursement of the Loan to Tanzania:

The obligations of the Fund to make the first disbursement of the loan shall be conditional upon entry into force of this Loan Agreement as provided above and the Borrower shall have to the satisfaction of the Fund:

- i. Provided evidence to the Bank of the appointment of Project Engineer / Country Coordinator by TANROADS of experience and skills acceptable to the Bank (Para, 5.1.3)
- ii. Provided evidence satisfactory to the Fund of full compensation of project affected persons prior to commencement of civil works within specific sections of the road according to construction schedules as per the ESMP (Paras.4.7.3 & 6.3.9).
- iii. Provided evidence by the Government of Tanzania of the appointment of members of the Steering committee and the Technical committee. (Paras. 5.2.2 &5.2.3)
- iv. Provided evidence to the satisfaction of the Bank that the required resources to be provided by JBIC for co financing of the Lot T works and supervision costs components of the project have been secured. JBIC loan conditional approval will be sufficient. (Para. 4.9.3).

E: Conditions Precedent to Entry into Force of the Protocol of Grant Agreement

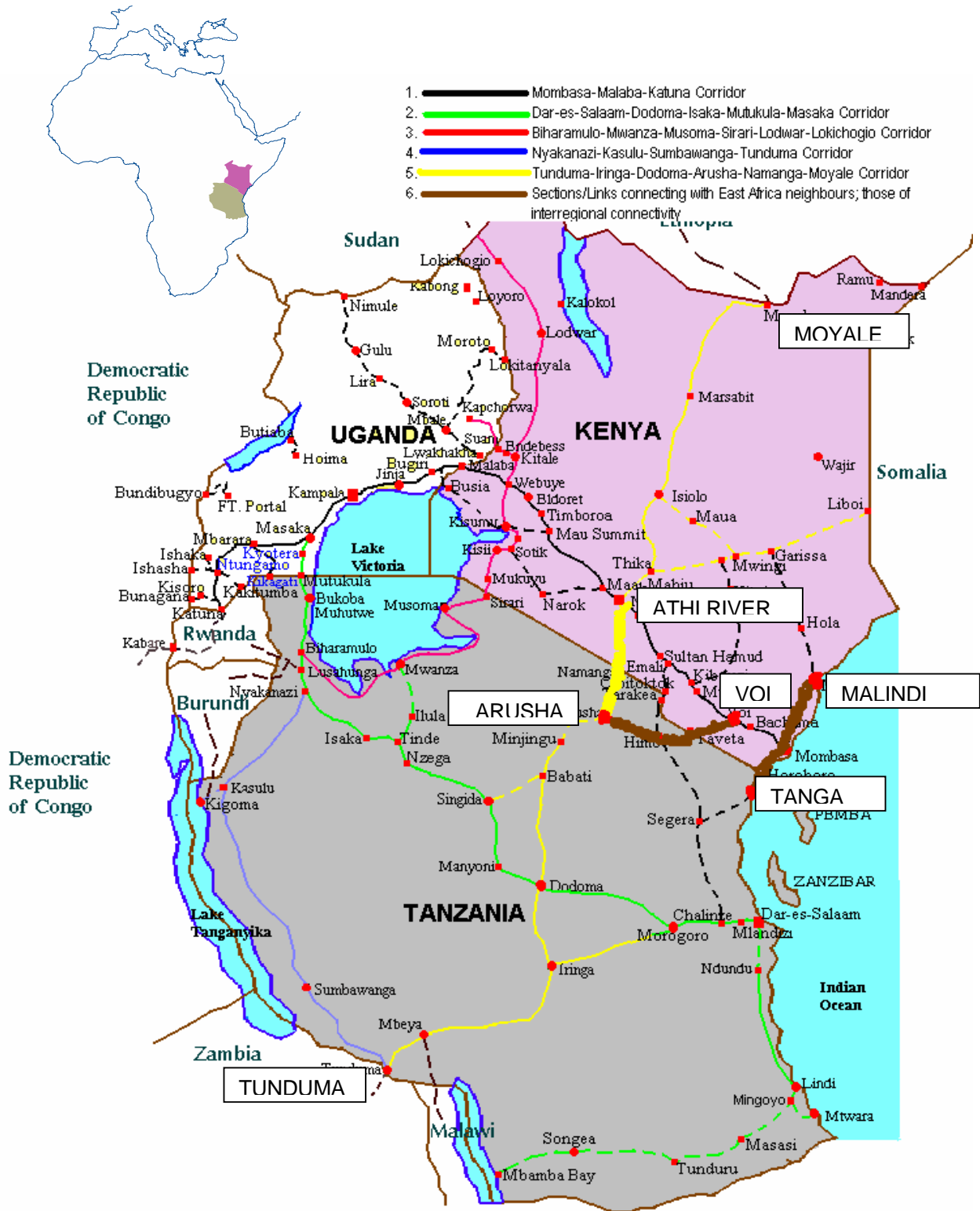
The entry into Force of the Protocol of Grant Agreements shall be subject to the fulfilment by the recipients of the provisions of Section 4.01 of the General conditions Applicable to Protocol of Agreements.

F: Conditions Precedent to First Disbursement of the Grant:

The obligations of the Fund to make the first disbursement of the grant shall be conditional upon entry into force of this Protocol Agreement as provided above and the East African Community and the Governments of Tanzania and Kenya shall have to the satisfaction of the Fund:

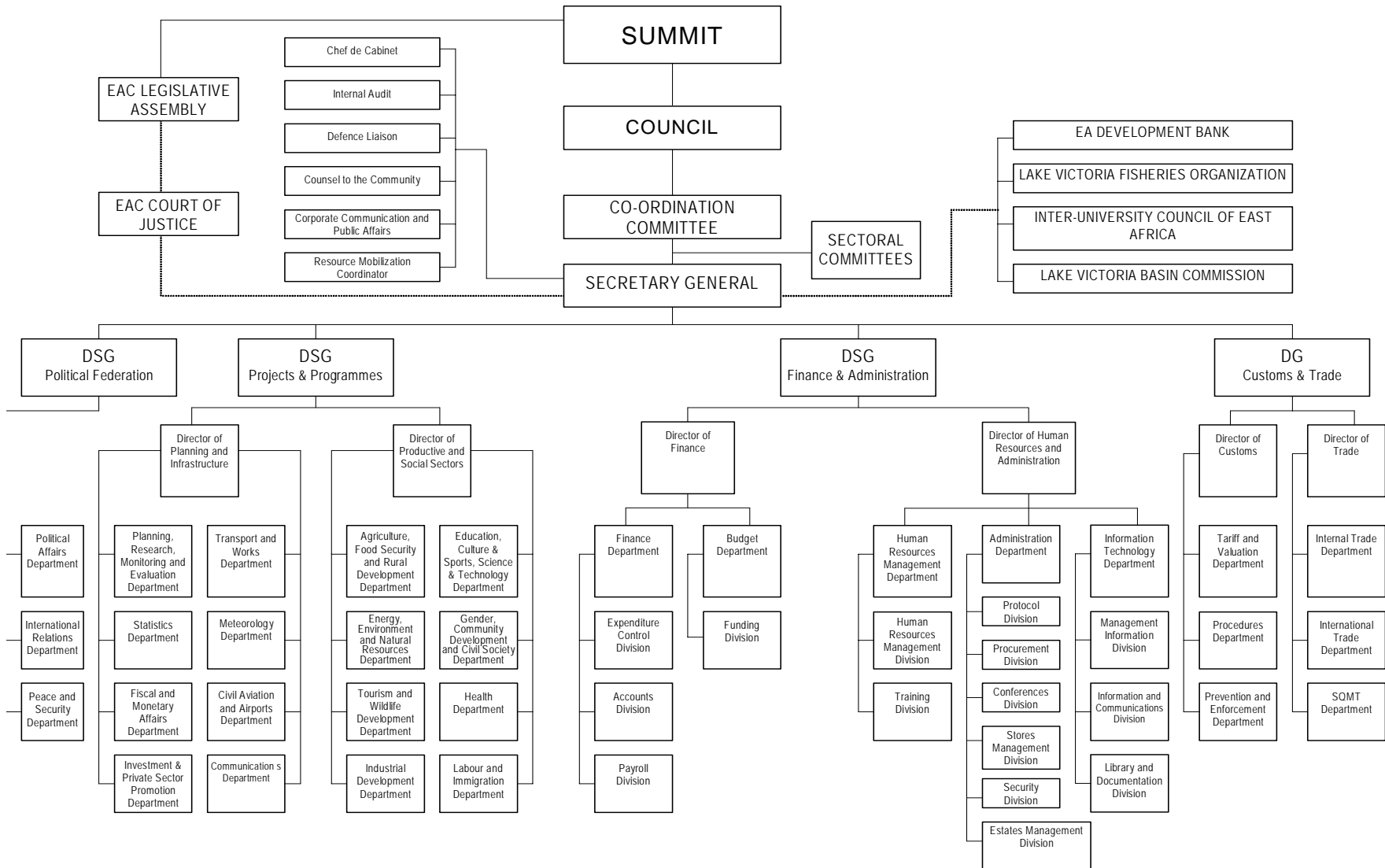
- i. Provided evidence to the Bank of the appointment of the EAC Project Coordinator (Para 5.1.5)
- ii. Provide evidence to the Bank of opening a special account by EAC in a bank acceptable to ADF into which part of the grant resources for financing the Technical assistance will be deposited for financing the Technical Assistance for EAC capacity building (Para. 5.5.3).

MULTINATIONAL TANZANIA/KENYA: ARUSHA NAMANGA ATHI RIVER ROAD ROAD MAP

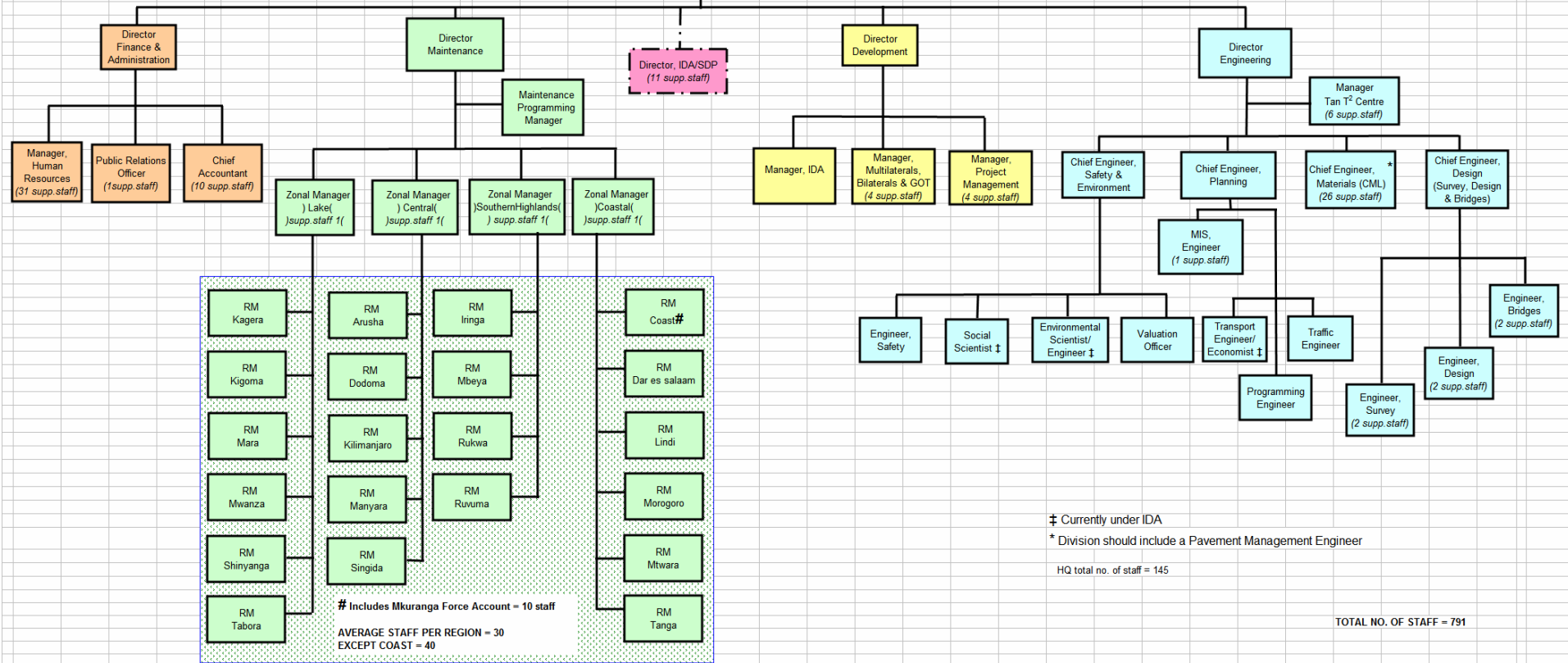
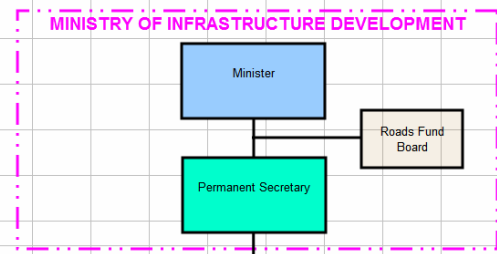


The map on this page has been prepared by the ADB Group's staff exclusively for the convenience of the readers of the report to which it is attached. The dimensions used and the boundaries shown on the map do not imply on the part of the Group and its affiliates, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

**MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
ORGANIZATIONAL STRUCTURE
EAST AFRICAN COMMUNITY SECRETARIAT**



MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
ORGANIZATIONAL STRUCTURE
TANZANIA ROADS AGENCY (TANROADS)

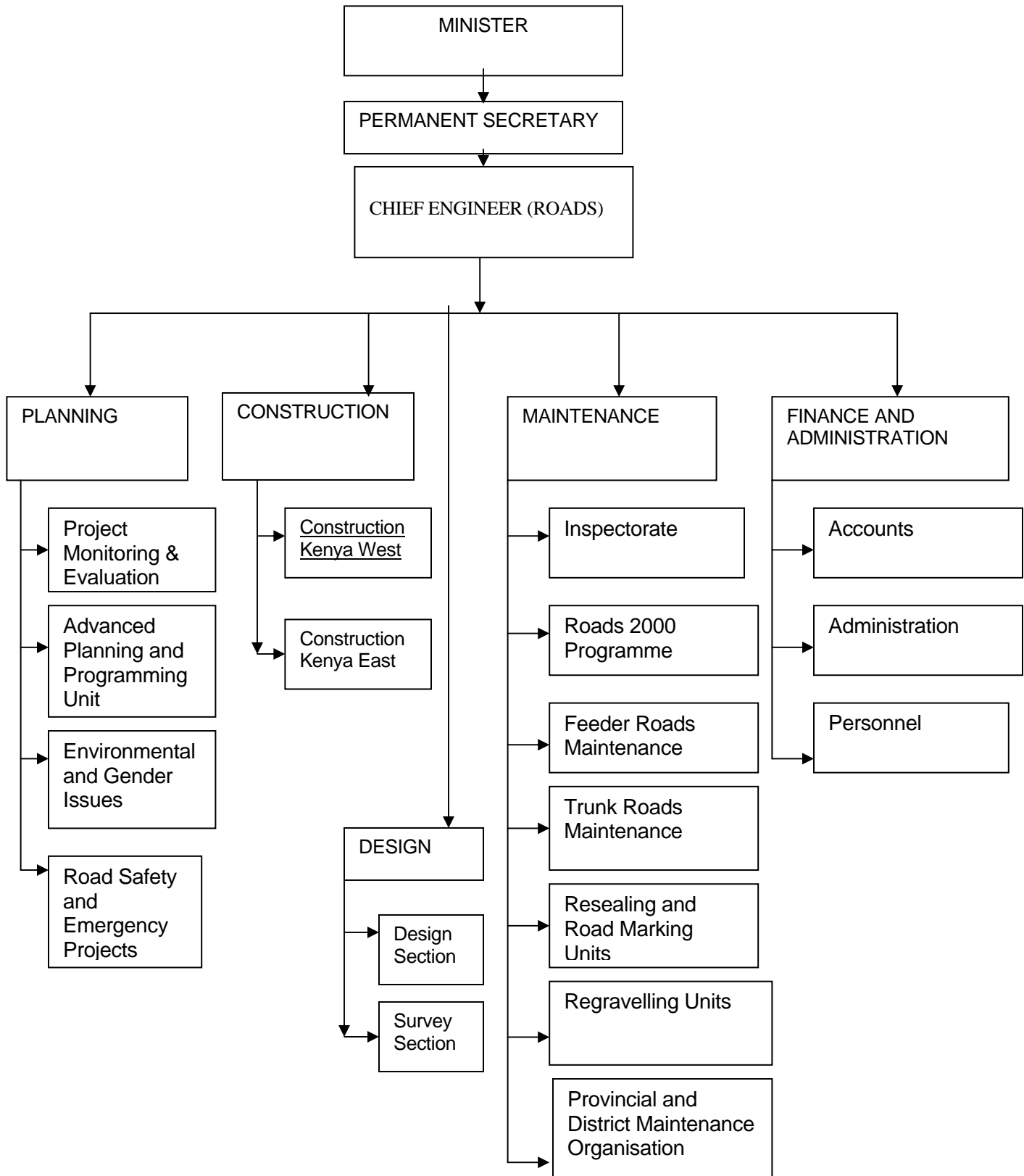


Includes Mkuranga Force Account = 10 staff
 AVERAGE STAFF PER REGION = 30
 EXCEPT COAST = 40

‡ Currently under IDA
 * Division should include a Pavement Management Engineer
 HQ total no. of staff = 145

TOTAL NO. OF STAFF = 791

MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
ORGANIZATIONAL STRUCTURE
ROADS DEPARTMENT OF THE MINISTRY OF ROADS & PUBLIC WORKS



MULTINATIONAL TANZANIA / KENYA

ARUSHA - NAMANGA - ATHI RIVER ROAD DEVELOPMENT PROJECT

IMPLEMENTATION SCHEDULE

No	YEAR ACTIVITES	2006				2007				2008				2009				2010				2011			
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T
I Civil Works																									
1.1	Approve APA/ Publication of GNP			■																					
1.2	Bidding /Contract Award				■	■																			
1.3	Mobilization						■																		
1.4	Works Execution							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1.5	Defect Liability Period																					▨	▨	▨	▨
II Contract Supervision																									
2.1	Approve AAA/ Shortlisting of Consultants			■																					
2.2	Bidding / Contract Award				■	■																			
2.3	Mobilization					■																			
2.4	Pre-Contract Services						■																		
2.5	Works Supervision							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.5.1	Construction Period							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.5.2	Defect Liability Period																					▨	▨	▨	▨
III Consultancy Services for Study / Design																									
3.1	Approve AAA			■																					
3.2	Advertisement and Notification (SPN)				■																				
3.3	Prequalification of Consultants					■																			
3.4	Approval of short-list and RFP						■																		
3.5	Evaluation of Proposals & Award of Contracts							■																	
3.6	Commencement of Consultancy services								■																
3.7	Consultancy services period								■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
IV Technical Assistance - Two Liaison Engineers																									
4.1	Preparation of TOR / Advertisement				■																				
4.2	Shortlisting					■																			
4.3	Contract Award						■																		
4.4	Service Provision							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
V Study on the Capacity of Local Contractors																									
5.1	Preparation of TOR / Advertisement				■																				
5.2	Shortlisting					■																			
5.3	Contract Award						■																		
5.4	Service Provision							■																	
5.5	Workshop of Stakeholders								■																

Note: Broken bars denote defects liability period

Source: EAC, MoID, TANROADS, MoRPW and ADB Mission, August 2006

MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER ROAD DEVELOPMENT PROJECT
SUMMARY OF TRAFFIC AND ECONOMIC ANALYSIS

1 Result of Traffic Analysis for Arusha – Namanga – Athi River Road

The result of the classified traffic counts undertaken in June 2004 for the project road is as indicated in the Table A.1 below, while the traffic variation along the whole road (upon which pavement design was based) is shown in Table A:2 and graphically represented in the embedded figure.

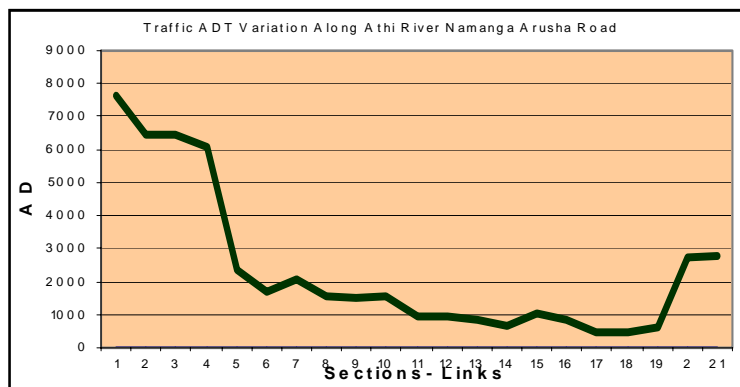
Table A -1: 2004 Traffic Counts

No	Section	km	Total Traffic	Motor Cycle	Car	P-up 4WD	Taxi Minibus	Bus	Light Truck	Medium Truck	Heavy Truck	Artic Truck	Other
Kenya Side - Athi River Namanga													
1	Mombasa Rd - Kitengela Township	6.1	6410	29	2297	1456	1511	138	174	332	286	181	5
	Percentage of vehicle composition		100	0.4	35.8	22.7	23.6	2.2	2.7	5.2	4.5	2.8	0.1
2	Kitengela – Isinya	25.7	2119	10	620	528	480	28	78	172	135	64	4
	Percentage of vehicle composition		100	0.5	29.3	24.9	22.7	1.3	3.7	8.1	6.4	3.0	0.2
3	Isinya – Kajiado	18.6	1618	20	351	363	411	27	82	159	130	67	7
	Percentage of vehicle composition		100	1.3	21.7	22.4	25.4	1.7	5.1	9.8	8.0	4.1	0.4
4	Kajiado - Namanga Border	85.3	805	9	205	166	232	22	40	46	40	44	1
	Percentage of vehicle composition		100	1.1	25.5	20.6	28.9	2.7	5.0	5.7	4.9	5.5	0.1
Tanzania Side - Arusha Namanga													
5	Namanga – Lariboro	71.3	470	3	119	121	83	27	26	63	8	19	0
	Percentage of vehicle composition			0.7	25.4	25.7	17.7	5.8	5.5	13.3	1.7	4.0	0.0
6	Lariboro – Revinjave Village	15.0	582	5	118	144	124	49	22	89	10	21	0
	Percentage of vehicle composition		100	0.9	20.3	24.7	21.3	8.4	3.8	15.3	1.7	3.6	0.0
7	Revinjave - Sakina (Arusha)	18.0	2726	70	488	873	923	38	57	179	60	29	9
	Percentage of vehicle composition		100	2.6	17.9	32.0	33.9	1.4	2.1	6.6	2.2	1.1	0.3

Source: Consultancy Services for the Feasibility Study and Detailed Engineering Design of Multinational Arusha – Namanga – Athi River Road & ADF Appraisal Mission August 2006.

Table A: 2 Part of Summary of base 2004 traffic in AADT along the Athi River Namanga Arusha Road

Athi River – Namanga: Link No.	AADT
1 - Mombasa road jun	7629
6 -Isinya	1688
10 -Kajiado	1534
15 -Namanga	1041
16 -Border point	812
Arusha – Namanga	
Link No.	ADT
16 -Border point	812
17- Longido	460
20 - Dodoma junction	2723
21 - Arusha	2736



The traffic levels for Tanzania are projected to grow by 7.3 percent for passenger vehicles, 5.5 percent for buses and 6.3 percent for freight vehicles for the period of 2010 - 2019. For the period 2020 – 2029, the annual growth of passenger vehicles is expected to increase to 7.5 percent while the others continue with the same percentage growth. The traffic projections are based on the medium forecasted economic growth of 5.5 percent for the whole project life, population growth of 1.7 percent and 1.3 percent for 2010 – 2019 and 2020 – 2029 respectively.

In the case of the Kenyan side, the projected economic growth is 4.7 percent for the whole project period, population growth of 1.0 percent for 2010-2019 and 0.7 percent for 2020-2029. This will produce traffic growth rates of 6.6 percent for passenger vehicles, 4.7 percent for buses and 5.4 percent for freight vehicles for the period 2010- 2019. For the period 2020 – 2029, the annual growth of passenger vehicles is expected to increase to 6.7 percent while the others continue with the same percentage growth.

Generated traffic of about 20.8 percent for Tanzania and 8.5 percent for Kenya has been assumed considering the reduction in VOC, travel times along the project road and price elasticity of demand. The origin-destination traffic survey indicated that most of the trips recorded were business-related. Goods recorded comprised agricultural inputs/outputs, construction materials followed by consumer goods. The higher incidence of construction inputs are linked to the presence of stone and quarries in the area which produces construction materials for Nairobi and surrounding areas and intermediate materials comprised mainly gypsum being transported to cement factories at Athi River. There is no diverted traffic expected.

The border crossing at Namanga is very significant in the trade between Tanzania and Kenya. It has recorded an annualized growth of 21 percent from 40,433 tones in 1999 to 87,076 tones in 2003. This shows that 41 percent of Kenya's exports to Tanzania and 20 percent Tanzania's exports to Kenya pass through Namanga. It is estimated that the international freight traffic is forecasted to grow at an annual weighted average of 5.1 percent between 2010 and 2029. On the other hand the project road is important for the tourism industry of Tanzania. Tourism is one of Tanzania's most significant industries in terms of national income, job creation and foreign exchange earnings. The specific economic objectives of the updated Tanzania's National Tourism Policy of 1999 and the strategic action plan of 2002 includes the stimulation of the development of infrastructure, support institutions, and linkages among the institutions related to tourism and the enhancement of regional and international tourism. The project road fits within these strategies. Tourist attractions include the Northern Tourist Circuits (Ngorongoro Conservation Area, Serengeti, Manyara, Tarangire, and Arusha National Parks) and Kilimanjaro. The Arusha Region receives 80 percent of all tourist visits into Tanzania and 24 percent of all tourists' arrivals in Tanzania (148,000 in 2005) entered through Namanga, having traveled on the project road, via Jomo Kenyatta International Airport. The aim of the Tanzanian Government policy is for tourists numbers to increase to one million by 2010 (240,000 using the project road). This shows an increase of 30 % by 2010 over the 2006 expected.

The traffic projections based on a central traffic growth assumption over the project life cycle is indicated in Table A-3. The detail traffic counts by sections are presented in the Project Implementation Document (PID).

Table A-3 : Projected Annual Traffic (2004 - 2029)

No	Section	km	2004	2006	2010	2018	2023	2029
Kenya Side - Athi River Namanga								
1	Mombasa Rd - Kitengela Township	6.1	6410	7202	9453	15107	20286	28776
2	Kitengela - Isinya	25.7	2119	2381	3116	4964	6651	9435
3	Isinya - Kajjado	18.6	1618	1818	2371	3731	4967	7046
4	Kajjado - Namanga Border	85.3	805	905	1179	1964	2466	3498
Subtotal (Kenya weighted Average)		135.7	1418	1593	2081	3365	5895	6245
Tanzania Side - Arusha Namanga								
5	Namanga - Lariboro	71.3	470	518	757	1358	1883	2826
6	Lariboro - Revinjave	15.0	582	654	953	1696	2341	3513
7	Revinjave - Sakina (Arusha)	18.0	2726	3063	4474	8021	11114	16678
Subtotal (Tanzania Weighted Average)		104.3	875	977	1427	2557	3542	5315
Total (Overall Project Weighted Average)		240.0	1182	1325	1797	3014	4872	5841

Source: Consultancy Services for the Feasibility Study and Detailed Engineering Design of Multinational Arusha – Namanga – Athi River Road & ADF Appraisal Mission August 2006.

2 Methodology and Assumptions for Economic Evaluation

2.2 Methodology

Economic analysis was done using the Highway Development and Management (HDM IV) model. The HDM IV allows modelling over the analysis period of 20 years of each of the road sections and for the whole project road corridor, the interaction between traffic volume and composition, road condition, proposed engineering interventions and their costs, road geometric characteristics and vehicle operating costs for the “with” and “with out” project scenarios. The project implementation is assumed to commence mid 2007. With a construction period of 36 months, the first year of opening the road to traffic is assumed at mid 2010 and the analysis period goes up to 2029.

All analysis components have been inputted into the model in US Dollars at rate of exchange prevailing at appraisal. For economic analysis, financial construction and maintenance costs have been converted into economic costs by applying a conversion factor of 0.80 and 0.76 for Tanzania and Kenya respectively. This is a standard conversion factor which has been estimated and adopted by the World Bank and other donors for Kenya and Tanzania road projects. The measures of project worth used are the Economic Internal Rate of Return (EIRR) and Net Present Value (NPV) at 12% discount rate, given the opportunity cost of capital of 12% in Kenya and Tanzania.

2.3 Assumptions taken during the Analysis

2.3.1 Maintenance Strategies

Maintenance of the existing road has been intermittent. The maintenance strategies incorporated into the economic evaluation are as follows:

- “*Without project*” *do minimum*: This is essentially the historic maintenance practice strategy, comprising routine maintenance, patching 100 percent of potholes, reseal at 25 % cracking and reconstruct road at 8 IRI. The reconstruction option was reset to trigger when the total damaged area reaches 50 percent.
- “*With project*” *improved road*: involves routine maintenance, patching 100 percent of potholes, resealing with 15 mm surface dressing when cracked area reaches 15% and applying a 50 mm overlay when roughness reaches 4.5 IRI m/km and the overlay resets the roughness to 2.0.

2.3.2 Residual Values

Residual values are likely to have analytical significance and have been assumed as 20 % of original capital investment; thus credited to the project in the final evaluation year of 2029.

2.3.3 Cost and Benefits

The costs taken into account are the Road Agency costs in the “with” and “without” project scenarios, which include both the cost of maintenance, and the investment cost of reconstruction and rehabilitation. Construction cost was revised in August 2006 to take into consideration the dramatic rise in cost of oil from USD 35 per barrel in May 2004 (at preliminary cost estimates which were basis for feasibility study) and the August 2006 price of USD 70 per barrel, a 100% rise.

The revised financial cost on the Arusha – Namanga road was valued at US\$ 674,600 per Kilometre. The cost estimated for the section at preliminary engineering based on December 2004 prices was US\$413,204 per Kilometre, a 63% rise. On the other hand the August 2006 financial cost for the Athi River – Namanga road were valued at US\$ 773,400 per Kilometre. This compared with the cost estimated at preliminary engineering based on December 2004 prices was US\$561,776 per Kilometre, a 38% rise.

The revised economic investment cost is estimated at USD 136.06 million and is made up of the base cost for civil works plus the physical contingencies, consulting services for supervision of works and for project audit. The financial contingencies, taxes and duties, which do not constitute consumption of economic resources, are not taken into account.

The benefits taken into account in the analysis include road user benefits which include Vehicle Operating Cost (VOC) savings, maintenance cost savings, and time savings accruing to normal and generated traffic on the project road. Accident costs, benefits resulting from the road improvement, have been taken into account as the profile and frequency of accidents was available. The details on the estimation of each category of benefit and the streams of costs and benefits over the evaluation period are in the PID.

2.3.4 Result of Cost Benefit Analysis

a) The Base Case

Results of appraisal for the Base Case Cost Benefit Analysis, which comprises the central traffic forecast indicated an Economic Internal Rate of Return (EIRR) of 14.9 %, Net Present Value (NPV) of USD 19.71 million, First Year Rate of Return (FYRR) of 15.7% and Benefit Cost Ratio (BCR) of 1.29. The EIRR is above the cut-off rate of return of 12 % opportunity cost of capital for Kenya and Tanzania.

Detailed results of the Base Case measures of economic worth of intervention, in terms of EIRR and NPV for the Tanzanian and Kenyan sections and for the project road as a whole, are as indicated here under. The streams of each category of benefits and costs over the evaluation period for each road section and for the whole project (the detailed HDM - IV run results) are in the PID.

Table 3. Summary of Base Case Economic Evaluation Results

Road Section	Estimated Economic Investment Cost in million USD	NPV in mil USD	EIRR (%)
Arusha - Namanga (104 km)	56.12	11.25	15.7
Namanga - Athi River (136 km)	79.94	8.52	14.4
Overall Project Road (240 km)	136.06	19.71	14.9

Source: Consultancy Services for Feasibility Study and Detailed Engineering Design of Multinational Arusha – Namanga – Athi River Road and ADF Appraisal Mission, August 2006.

b) Sensitivity Analysis

Economic Internal Rate of Return, NPV, FYRR and B-CR were calculated using the most likely forecast values in respect of traffic growth rates and other economic development scenarios. In reality however, the benefits and costs can be influenced by many factors that may change in comparison to the base case. Therefore, sensitivity analysis is normally conducted by increasing or decreasing inputs in order to measure the magnitude of changes in the economic parameters and the reliability of the results.

The base case result of EIRR of 14.9 % and NPV of USD 19.71 million at 12.0 % discount rate for the overall project road was then tested for sensitivity to changes in the basic assumptions on construction costs and on traffic levels. Three alternatives were checked, namely,

- costs were increased by 10 percent while benefits remained the same;
- benefits were reduced by 10 percent while costs remained the same;
- a 10 percent increase of costs and 10 percent decrease of benefits concurrently.

The economic parameters were calculated for all cases. The results given in the table hereunder indicates that in all the three alternatives cases, the project road is satisfactorily robust with an EIRR higher than the threshold of 12.0% opportunity cost of capital for in Kenya and Tanzania

and NPV remaining positive. In the worst case scenario of a combined 10% increase in costs and a 10% decline in traffic, the project is still viable with an EIRR of 12.4 % and a NPV of USD 3.35 million.

Table 4. Sensitivity Analysis on Base Case

Scenarios	Traffic Level as % of base case	Cost of Const. as %age of expected cost	EIRR	NPV in mil USD	FYRR	B-CR
Base case	100%	100%	14.9	19.71	15.7	1.29
Costs Increased by 10%	100%	110%	13.7	15.27	14.2	1.17
Benefits Reduced by 10%	90%	100%	13.6	12.80	14.1	1.16
Combined 10% increased cost and 10% decrease in traffic levels	90%	110%	12.4	3.35	12.8	1.01

c) Switch Values for Investment Cost and Traffic

In addition to the sensitivity tests above, “switch values” for construction costs and benefits have been calculated as part of the economic viability analysis. The switch value for construction cost and for Road User Benefits, which would result in an EIRR of 12.0% or NPV of zero for the project, has been estimated. In this regard, it has been observed that the costs can be increased by a maximum of 29.2 percent with benefits remaining the same and the project will still be viable at 12 percent opportunity cost of capital. Similarly, benefits can be reduced by a maximum of 22.6 percent with costs remaining the same and the project will still be viable at the opportunity cost of capital.

A more than 29.2% increase in construction costs or a drop of traffic levels (AADT) by 22.6% indicate that the project’s economic viability would be threatened. These are critical factors to watch, though the project is more sensitive to drop in traffic levels.

These situations are most unlikely and are remote as traffic growth rate on the network over the last ten years has been above 5.0% per annum and a medium growth assumption of 6 to 7 percent has been considered. Construction costs would also not go up to more than 29.2% as project cost estimates are based on detailed engineering design study and taking into account the prevailing oil price. In addition physical contingency provision of about 7.5 % has been taken into account in the economic analysis over and above the base costs. The following table shows the results of the switch values analysis.

Table 5. Switch Values for Construction Costs and Benefit for EIRR of 12.0% and NPV = 0

Case	Switch values for Construction Cost & Benefit (EIRR of 12.0%)	Switch Values for Construction Cost & Benefit NPV = 0 USD million
Base Case – EIRR	14.9%	19.71
Construction Cost	29.2%	0.0
Road User Benefits	-22.6%	0.0

MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
ECONOMIC EVALUATION RESULTS

H D M - 4		Economic Analysis Summary								
		Study Name: Prj3 Arusha - Namanga - Athi River Project								
HIGHWAY DEVELOPMENT & MANAGEMENT		Run Date: 21-08-2006								
		This report shows total economic benefits using the following:								
		Currency: US Dollar (millions).								
		Discount rate: 12.00%.								
		Analysis Mode: Analysis-by-Project								
		Alternative: Alt 2 Pavement Rehabilitation/Recon vs Alternative: Alt 1 Do Minimum (Base Case)								
		Increase in Road Agency Costs			Savings in MT Travel & Operating Costs		Savings in NMT Travel & Operating Costs	Reduction in Accident Costs	Net Exogenous Benefits	Net Economic Benefits (NPV)
		Capital	Recurrent	Special	in MT VOC	Time Costs	Costs	Costs	Benefits	(NPV)
	Undiscounted	84.12	-3.34	0.00	272.61	158.11	65.98	9.06	0.00	424.99
	Discounted	68.21	-0.64	0.00	47.90	26.49	11.22	1.66	0.00	19.71
		Economic Internal Rate of Return (EIRR) = 14.9% (No. of solutions = 1)								
HDM-4 Version 1.3										Page -1 of 1

**MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
DETAILED PROJECT COST ESTIMATES**

APPRAISAL: PROJECT COSTS (Project AND FINANCIAL) TABLES IN UNIT OF ACCOUNT (UA) & US DOLLAR - SEPT 2006								
a. ATHI RIVER - NAMANGA: KENYA SECTION		Project Costs in US Dollars			Project Costs in UA - Unit of Account (UA/USD = 1.48852 Sept 5, 2006)			1.48852
Component	Financial costs USD	Total Project Costs (Conversion Factor for works only 76%)	Foreign Exchange	Local Cost	Foreign Exchange Cost	Local Cost	Total	% Foreign Exchange
A. Civil works	85,884,615	65,272,307	56,786,907	8,485,400	38,149,912	5,700,562	43,850,474	87%
B. Consultancy Services							-	
i) Supervision consultancy	4,038,600	4,038,600	3,634,740	403,860	2,441,848	271,316	2,713,165	90%
ii) Audit (Grant)	50,000	50,000	20,000	30,000	13,436	20,154	33,590	40%
iii) Capacity Building (Grant)	387,450	387,450	232,470	154,980	156,175	104,117	260,292	60%
iv) Feasibility/design (Grant)	1,935,720	1,935,720	1,742,148	193,572	1,170,389	130,043	1,300,433	90%
C. Others (Resettlement)	50,000	50,000	-	50,000	-	33,590	33,590	0%
Base Cost	92,346,385	71,734,077	62,416,265	9,317,812	41,931,761	6,259,783	48,191,544	87%
Physical Contingency (7.5% base cost)	6,925,979	5,380,056	4,681,220	698,836	3,144,882	469,484	3,614,366	87%
Financial Contingency (inflation 10.3%)	9,319,731	7,173,408	6,241,627	931,781	4,193,176	625,978	4,819,154	87%
Total Contingency	16,245,710	12,553,464	10,922,846	1,630,617	7,338,058	1,095,462	8,433,520	87%
Total Project Cost	108,592,095	84,287,541	73,339,112	10,948,429	49,269,820	7,355,245	56,625,064	87%
Cost per km (135.7km)	800,237							
UA Equivalent of Financial costs	72,953,064		KE ADF X Grant (Econ cost of AUDT, DESIGN, CAPACITY BUILD) UA				1,594,315	
Proportion of KE in all project cost	59%							
	775,314							
b. ARUSHA- NAMANGA SECTION		Project Costs in US Dollars			Project Costs in UA - Unit of Account (UA/USD = 1.4525)			1.48852
Component	Total costs inc. taxes/duties USD	Total Project Costs (Conversion Factor works only 80%)	Foreign Exchange Cost	Local Cost	Foreign Exchange	Local Cost	Total	% Foreign Exchange
A. Civil works	59,654,214	47,723,371	35,935,699	11,787,673	24,141,898	7,919,056	32,060,954	75%
B. Consultancy Services							-	
i) Supervision consultancy	4,038,600	4,038,600	3,634,740	403,860	2,441,848	271,316	2,713,165	90%
ii) Audit (Grant)	50,000	50,000	20,000	30,000	13,436	20,154	33,590	40%
iii) Capacity Building (Grant)	387,450	387,450	232,470	154,980	156,175	104,117	260,292	60%
iv) Feasibility/design (Grant)	1,935,720	1,935,720	1,742,148	193,572	1,170,389	130,043	1,300,433	90%
C. Others (Resettlement)	50,000	50,000	-	50,000	-	33,590	33,590	0%
Base Cost	66,115,984	54,185,141	41,565,057	12,620,085	27,923,747	8,478,277	36,402,024	77%
Physical Contingency (7.5% base cost)	4,958,699	4,063,886	3,117,379	946,506	2,094,281	635,871	2,730,152	77%
Financial Contingency (Inflation 4.3%)	5,592,401	4,551,552	3,491,465	1,060,087	2,345,595	712,175	3,057,770	77%
Total Contingency	10,551,099	8,615,437	6,608,844	2,006,593	4,439,876	1,348,046	5,787,922	77%
Total	76,667,083	62,800,579	48,173,900	14,626,678	32,363,623	9,826,323	42,189,946	77%
Cost per km (104.2km)	735,769							
UA Equivalent of Financial costs	51,505,578		TZ ADF X Grant (Econ cost of AUDT, Capacity build, Design) UA =				1,594,315	
Proportion of TZ in all project cost	41%							
	715,169							
c. ARUSHA- NAMANGA- ATHI RIVER ROAD PROJECT (Combined)		Project Costs in US Dollars			Project Costs in UA - Unit of Account (UA/USD = 1.4525)			1.48852
Component	Total costs inc. taxes/duties	Total Project Costs	Foreign Exchange	Local Cost	Foreign Exchange	Local Cost	Total	% Foreign Exchange
A. Civil Works	145,538,829	112,995,679	92,722,606	20,273,073	62,291,811	13,619,617	75,911,428	82%
B. Consultancy Services							-	
i) Supervision consultancy	8,077,200	8,077,200	7,269,480	807,720	4,883,697	542,633	5,426,330	90%
ii) Audit (Grant)	100,000	100,000	40,000	60,000	26,872	40,308	67,181	40%
iii) Capacity Building (Grant)	774,900	774,900	464,940	309,960	312,351	208,234	520,584	60%
iv) Feasibility/design (Grant)	3,871,440	3,871,440	3,484,296	387,144	2,340,779	260,087	2,600,865	90%
C. Others (Resettlement)	100,000	100,000	-	100,000	-	67,181	67,181	0%
Base Cost	158,462,369	125,919,219	103,981,322	21,937,897	69,855,509	14,738,060	84,593,569	83%
Physical Contingencies	11,884,678	9,443,941	7,798,599	1,645,342	5,239,163	1,105,354	6,344,518	83%
Financial Contingency	14,912,131	11,724,960	9,733,091	1,991,868	6,538,771	1,338,154	7,876,924	83%
Total	185,259,178	147,088,120	121,513,012	25,575,107	81,633,443	17,181,568	98,815,011	83%
UA Equivalent	124,458,642	98,815,011			Actual Total Contingency=	16,8115%		

Kenya: Athi River Namanga Road Section: COSTS WITH CONTIGENCIES FACTORED IN

Component	Total costs inc. taxes/duties USD	Project Costs in US Dollars			Project Costs in UA - Unit of Account (UA/USD = 1.48852 Sept 5, 2006)		
		Total Costs	Foreign Exchange	Local Cost	Foreign Exchange Cost	Local Cost	Total
A. Civil works	100,993,561	76,694,961	66,724,616	9,970,345	44,826,147	6,698,160	51,524,307
B. Consultancy Services							
i) Supervision consultancy	4,749,076	4,745,355	4,270,820	474,536	2,869,172	318,797	3,187,969
ii) Audit (Grant)	58,796	58,750	23,500	35,250	15,787	23,681	39,469
iii) Capacity Building (Grant)	455,611	455,254	273,152	182,102	183,506	122,337	305,843
iv) Feasibility/design (Grant)	2,276,255	2,274,471	2,047,024	227,447	1,375,208	152,801	1,528,008
C. Others (Resettlement)	58,796	58,750	-	58,750	-	39,469	39,469
Total Project Cost	108,592,095	84,287,541	73,339,112	10,948,429	49,269,820	7,355,245	56,625,064

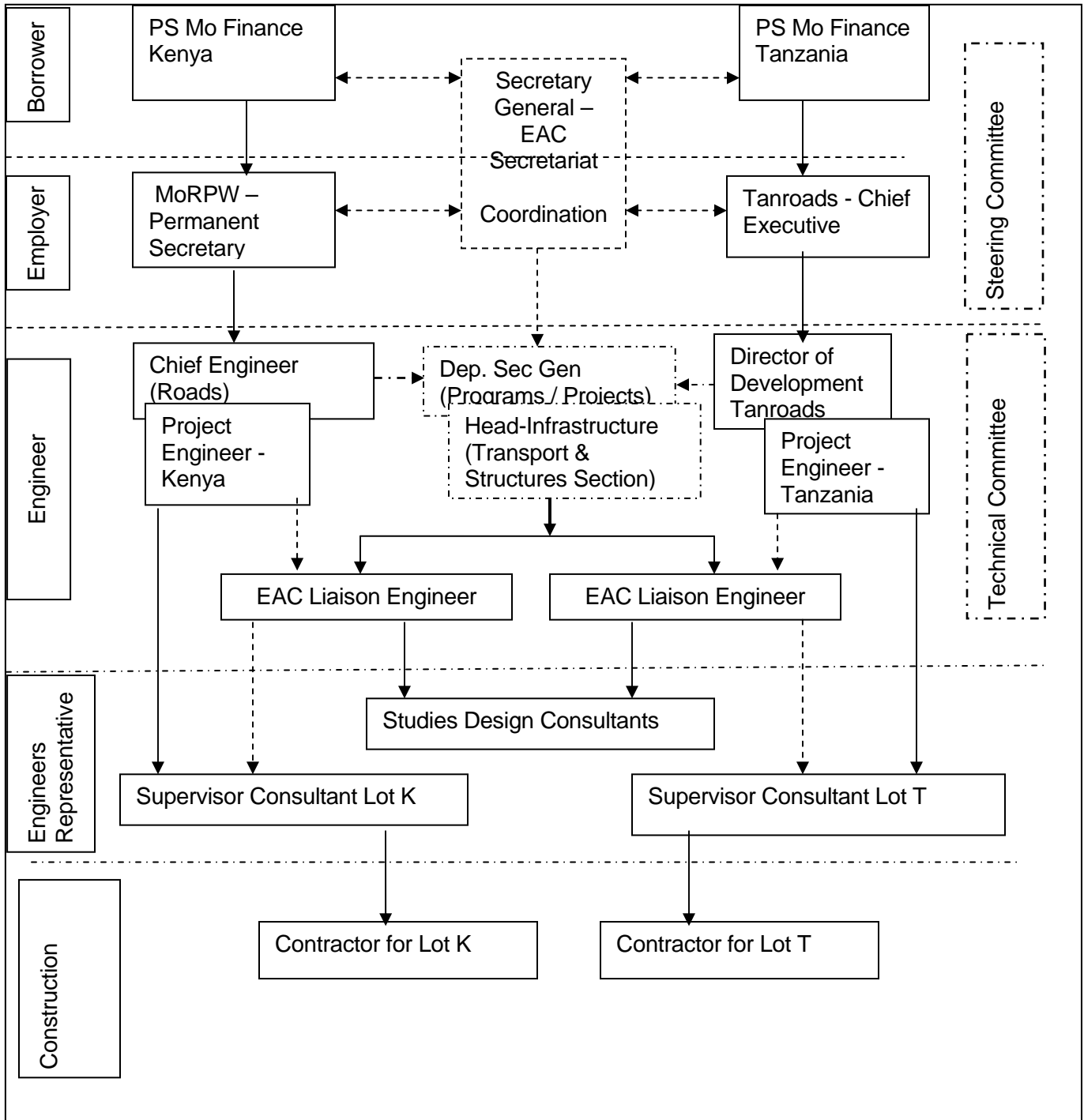
Tanzania: Arusha Namanga Road Section : COSTS WITH CONTIGENCIES FACTORED IN

Component	Total costs inc. taxes/duties USD	Project Costs in US Dollars			Project Costs in UA - Unit of Account (UA/USD = 1.48852 Sept 5, 2006)		
		Total Costs	Foreign Exchange	Local Cost	Foreign Exchange Cost	Local Cost	Total
A. Civil works	69,174,114	55,311,387	41,649,475	13,661,913	27,980,460	9,178,185	37,158,646
B. Consultancy Services							
i) Supervision consultancy	4,683,099	4,680,737	4,212,664	468,074	2,830,102	314,456	3,144,558
ii) Audit (Grant)	57,979	57,950	23,180	34,770	15,573	23,359	38,931
iii) Capacity Building (Grant)	449,281	449,055	269,433	179,622	181,007	120,671	301,679
iv) Feasibility/design (Grant)	2,244,631	2,243,499	2,019,150	224,350	1,356,481	150,720	1,507,201
C. Others (Resettlement)	57,979	57,950	-	57,950	-	38,931	38,931
Total Project Cost	76,667,083	62,800,579	48,173,900	14,626,678	32,363,623	9,826,323	42,189,946

Athi River Namanga Arusha Combined: COSTS WITH CONTIGENCIES FACTORED IN

Component	Financial costs USD	Project Costs in US Dollars			Project Costs in UA - Unit of Account (UA/USD)		
		Total Project Costs	Foreign Exchange	Local Cost	Foreign Exchange	Local Cost	Total
A. Civil Works	170,167,674	132,006,348	108,374,091	23,632,258	72,806,607	15,876,345	88,682,952
B. Consultancy Services							
i) Supervision consultancy	9,432,175	9,426,092	8,483,483	942,609	5,699,274	633,253	6,332,527
ii) Audit (Grant)	116,775	116,700	46,680	70,020	31,360	47,040	78,400
iii) Capacity Building (Grant)	904,892	904,308	542,585	361,723	364,513	243,009	607,522
iv) Feasibility/design (Grant)	4,520,886	4,517,970	4,066,173	451,797	2,731,689	303,521	3,035,210
C. Others (Resettlement)	116,775	116,700	-	116,700	-	78,400	78,400
Total Project Cost	185,259,178	147,088,120	121,513,012	25,575,107	81,633,443	17,181,568	98,815,011

**MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
ORGANISATIONAL AND INSTITUTIONAL ARRANGEMENTS FOR PROJECT EXECUTION**



MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
EAC COORDINATOR & GOT / GOK COUNTRY COORDINATOR ROLES

1.0 The project shall require Coordinators appointed by the EAC Secretariat and GOK/GOT who shall play an effective leadership role in coordinating the project and ensuring that the project is on course. The EAC coordinator will also be required to ensure the timely convening of meetings and communication. He/she will be assisted by two Country Coordinators, one from each government.

2.0 The roles of the EAC and GOK / GOT Coordinators for the project shall be as follows:

The co-ordinational role shall be split into “Administrative Coordination role” and “Technical Co-ordination role”. The Administrative Co-ordination role shall be played by the EAC Secretariat while the technical coordination role shall be played by the Country Coordinators of the Ministry of Roads and Public Works (MOR&PW), Kenya and the TANROADS Tanzania, in close collaboration with the EAC Secretariat.

- a) EAC Coordinator convenes meetings of the technical committee and the steering committee as and when the need arises. The technical committee shall evaluate the consultant’s progress and guide the implementation of the project; act as the Secretary for the meetings of both the steering and technical committees; ensure that the policy organs of the Community and the Governments of Tanzania and Kenya are appraised on the developments towards the implementation of the project within the framework of the East African Road Network Programme.
- b) The GOK / GOT Coordinators are responsible for their respective country’s and are the Bank’s contact person regarding the project. They shall be responsible for the works and supervision, and shall prepare and forward the quarterly progress reports to the Bank. The Coordinators will attend all site meetings, process the contractor’s payment certificates and the consultant’s invoices and prepare the Borrowers Project Completion Report at the end of the execution.

3.0 The qualification and experience for the EAC Coordinator will be as follows

Profession : Transport Economist/Transport Engineer

Qualification: Minimum: Post-graduate Degree in Transport Economics or Transport Engineering

Experience :

- Minimum 10 years at senior position at Management level in related fields;
- Excellent communication skills;

- Be computer literate.

Desirable :Experience in regional organizations and projects;

4.0 The qualification and experience of the GOK / GOT Country Co-ordinators will be as follows:

Profession : Civil Engineer

Qualification :

Minimum: BSC Degree in Civil Engineering and registered engineer, with specialisation in Highways and roads engineering.

Experience :

Should have at least 10 years experience in planning, design, construction and maintenance of highways and roads and its related infrastructures.

Desirable : At least 5 years experience in the preparation, review, administration of contracts; implementation and monitoring of studies and projects related to highways and roads.

MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
CONSTRUCTION DETAILS

9 Pertinent Aspects of Construction Works for Arusha - Namanga Section

- 9.1 The existing Arusha Namanga road was constructed in early 1950s and has a carriageway width of 5.3 m to 5.7 m and a bituminous surface treatment, on a 160 mm sub-base course. From km 70 onwards, there is no gravel sub-base and the base course rests directly on the sub-grade of local reddish soils. The existing surface, which has been resealed recently, is deteriorating rapidly with extensive cracking and ravelling. Roughness measured in May 2004 varied from 4.4 m/km to 5.6 m/km. The existing horizontal and vertical alignments are generally satisfactory for a 100km/h design speed. However, the road has poor drainage system and poor crest curves that limit visibility and pose a hazard. All existing 4 bridges and 13 box culverts are in a poor condition. The road is served with many 600mm diameter culverts, which are considered inadequate.
- 9.2 The 2004 traffic count varied between 462 ADT at Namanga and 2736 ADT in Arusha. The pavement is designed to carry between 5.1 and 7.8 million ESA (equivalent standard axles) in its 20 year life. Heavy axles exceeding 13 tonnes do not exceed 30% in either direction and thus the loading is not considered heavy. The proposed alignment generally follows the existing road alignment with horizontal and vertical curve improvements, and taking care to raise certain section on account of drainage needs. The maximum gradient along the road is 6.5%, which is higher than the maximum gradient allowed for design speeds of 100km/h. For purposes of economy, some of them, totaling to 2.825km of the road have incorporated climbing lanes.
- 9.3 The road is widened at deep gorges at 5 locations to provide for safe motoring as well as for construction purposes. The high fill embankments will be stabilized using reinforced earth as opposed to usual gabions because there is scarcity of rock in the area. For purposes of safety, footpaths have been provided along semi-urban areas where pedestrian traffic is considerable. Along the deep gorges, pedestrian have been provided with separate walking path by widening shoulders and providing guard rails. 1.55km of service roads has been provided at Longido. Parking space has been provided for at Namanga border point. Street lights have been provided for in the major centers.
- 9.4 Some drainage structures will be retained while new ones will be constructed at designated locations where capacity of existing ones were found insufficient. The bridges were required to have capacity to drain a 50 year flood. 3 bridges will be replaced on account of inadequate structural strength or hydraulic capacity.

10 Pertinent Aspects of Construction Works for Athi River- Namanga Section

- 10.1 The existing Athi River - Namanga road is of a bituminous standard that was constructed in 1970s and resealed in 1992 funded by ADB. The current surface roughness ranges from 2.5 m/km to 5.6m/km. Over the years the road pavement has failed. The carriageway widths vary from 6m to 6.5m. The horizontal and vertical alignments are sufficient for 80-100km/h design speed. The section has 9 river bridges and 15 box culverts and many 600mm diameter metal pipes culverts which are considered undesirable. The bridges, except the Athi River Bridge which is hydraulically insufficient, are generally in good condition and only a few box culverts are in a poor state.
- 10.2 The traffic count in 2004 varied from 7629 ADT (annual daily traffic) at Athi River to 812 ADT at Namanga. The projected 20 year traffic is 2711 AADT (Annual Average Daily Traffic) in PCU (passenger Car units) at Namanga and 48,054 AADT in Athi River.
- 10.3 The horizontal and vertical alignment was designed to 80-100 km/h speed and generally fits into the existing road. However, the road design was shifted across Athi River and Ilbissil River because the existing bridges are to be replaced as their hydraulic capacity is inadequate. The vertical curves are designed to enhance comfort and safety of the motorist and other road users. The maximum gradient is 6.8%. About 6.7 km of the road has been provided with climbing lanes. A total of 5.6 km of service roads has been provided in 5 trading centers along the road. Parking spaces and foot paths will also be provided as necessary.
- 10.4 The 20 year pavement design is based on cumulative traffic loading between 7 and 62 million ESA and considers the existing residual pavement strength. There are 7 recommended pavement solutions for this section depending on traffic loading and existing road condition. In general, the existing pavement will only be repaired and widened where the cross section is narrower than the design widths. Various combinations of different thicknesses of asphalt concrete, dense bitumen macadam, and cement stabilized gravel are applied along the road. The whole road length will be sealed with a single layer of surface treatment on 50mm asphalt concrete.
- 10.5 The hydraulic capacity of new bridges was designed using 50-year flood. Five (5) new bridges will be constructed with spans ranging from 20m to 30m with reinforced concrete and the longest bridge (across Athi River) at 90m span will be a composite steel and concrete deck bridge. Eight (8) new box culverts will be constructed and 9 existing ones extended to meet the new cross section requirements. Most of the existing pipe culverts will be replaced with a minimum diameter of 900mm. The 2000mm - 3000mm pipes will be retained and new ones added.

MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT

TERMS-OF-REFERENCE (ABRIDGED) FOR

(a) ARUSHA – HOLILI/TAVETA —VOI ROAD STUDY

(b) TANGA – HOROHORO/LUNGALUNGA – MOMBASA - MALINDI ROAD STUDY

Background

The East African Co-operation (EAC) countries are made up of the United Republic of Tanzania, the Republic of Kenya and the Republic of Uganda. The EAC was established by an Agreement establishing the Permanent Tripartite Commission for East African Co-operation in November 1993 and became functional in 1996 with its secretariat located in Arusha, Tanzania.

In November 1999, the Heads of States of the three countries ratified the instrument establishing the EAC and in April 2001, launched a new five-year regional development strategy which included economic co-operation in areas such as Trade and Industry, Transport and Communications and Energy. Within this development framework, the Government of Tanzania (GOT) and the Government of Kenya (GOK), under the sponsorship of the EAC, are desirous of improving the transport infrastructure with a view to support economic development programme within the two countries, deepen economic co-operation and foster regional integration within the East African Community. The EAC secretariat would be the executing agency of these two studies.

The studies are going to be executed under two packages as follows:

- **Package 1: The Arusha – Holili/Taveta – Voi road**

Arusha – Holili/Taveta – Voi road Has a total length of 260 km. The first section of the road, Arusha – Holili (143km) traverses Tanzania from Arusha to the Tanzania border at the village of Holili and followed by 3 km section between Holili to Taveta.

The road is very important for the import and export of northern Tanzania, using Mombasa port. In addition the road facilitates the transportation of agricultural products (mainly banana, maize, onion and timber) that are consumed in Mombasa.

The Taveta - Voi (114 km) section of the road is in Kenya. The Tanzanian section of the road is paved. The Kenya section of the road is in a very bad condition. About 30 km of it is a rough section with a bituminous surfaced dressing, while the remaining is gravel. The road serves Tsavo West Park and Mount Kilimanjaro area with numerous tourist attraction sites like sanctuary, game reserves, Lake Jipe. Food crop agriculture, livestock, sisal plantation and processing are the major economic activities along the road.

The project road meets the Northern corridor spine at Voi and the again meets THE Great North Corridor at Arusha. The road will compliment the EAC and the two governments' regional integration efforts and increase the density the road network.

- **Package 2: The Tanga – HoroHoro/ LungaLunga- Mombassa – Malindi**

Tanga – HoroHoro/ LungaLunga- Mombassa – Malindi road has a total length of 300km. The first section of the road traverses Tanzania from Tanga to the border post of HoroHoro (67 km) and is followed by 6 km stretch from HoroHoro to LungaLunga, border post of Kenya. The Tanzania section of the project road is generally fair but not easily passable for heavy good vehicles during rainy season.

It is part of the T13 trunk road, which branches from the North East Corridor T2 at Segera. It is the only unpaved section in the Dar es Saalam – Segera – Tanga – Mombassa regional road. This section of the road was upgraded to gravel standard in 1994 / 95 and seven major bridges were rehabilitated between 2003 and 2004 under IDA financing.

The LungaLunga - Mombassa 105 km section and Mobasa Malindi road (120km) (in Kenya), constructed to bitumen standards in the mid 1980's, is in a poor condition. The project road area is endowed with a variety of natural resources, which include fishing, farming, livestock and sand beaches, game reserves, national park. The arable land in the area is mainly used for planting coconuts, cashew nut, horticulture crops / fruits, cassava, maize and vegetables. The main economic activity is tourism, industry and mining activities in Kwale and cement factory in Mombasa.

Lunga Lunga Mombasa road is the shorter gateway for the imports and exports of Kenya into Tanzania's coastal hinterland and also for the greater part of Tanzania's Northern region of Arusha and beyond. It is shorter by 406 km for traffic using Segera- Tanga – HoroHoro – Mombasa compared with Segera- Holili – Mombasa route, which is currently being used by transporters.

In the regional scene, the road would enhance economic cooperation, inter-territorial trade and transport linkages within the East African region, particularly Kenya, Malawi and Zambia who mostly use the Mombassa port. About 45% of the traffic to and from neighbouring countries currently uses Segera – Himo – Holili – Mombassa road, which is about 648 km compared to 242 km of Segera – Tanga – Horohoro – Mombasa road.

Objectives of the Services

The objective of the services is to

- (a) Investigate and determine the technical, economic, environmental and social feasibility of upgrading / rehabilitation the existing roads

- **Package 1: The Arusha – Holili/Taveta – Voi road**

On the Kenyan side, the Consultant to be procured will carry out the economic / feasibility study, Environmental and Social Impact Assessment (ESIA) and review of the detailed design. On the Tanzanian side, the consultant will carry out the economic / feasibility study, ESIA, detailed engineering design.

- **Package 2: The Tanga – HoroHoro/ LungaLunga- Mombassa – Malindi**

On both the Tanzania side and the Kenyan side, part of the draft detailed engineering design is ready. The consultant will undertake for the two sections of the road economic / feasibility and ESIA study and review the detailed design. The consultant shall also undertake detailed engineering study for any section which may not be ready. On the Kenya side, the consultant will review the Mombasa By-pass feasibility and engineering study, including the feasibility study of the Likoni ferry.

- (b) Prepare standard qualification and bidding documents suitable for international competitive bidding.

Scope of Consultancy Services

The East African Community Secretariat shall be the Executing Agency (EA) with the assistance of the TANROADS and Ministry of Roads and Public Works (MoRPW) of Kenya. It will have the overall responsibility for execution, administration and co-ordination of both phases of the Study.

The consultancy will be carried out for each package in two phases as stated under section 2.0 above, namely:

Package 1: Arusha – Holili / Taveta– Voi Road

- Phase I** - Economic, Environmental Feasibility Study & Social Impact Assessments and Preliminary Engineering Design.
- Phase II** - Detailed Engineering Design, Resettlement Action Plan (RAP) and production of qualification and bidding documents.

Package 2: Tanga – Horohoro / LungaLunga – Mombassa – Malindi road

- Phase I** - Economic, Environmental Feasibility Study & Social Impact Assessments and Preliminary Engineering Design
- Phase II** - Detailed Engineering Design, Resettlement Action Plan (RAP) and production of qualification and bidding documents.

The Consultant shall review and perform all planning, engineering, financial, economic, social and environmental analyses, field investigations and related works as described herein with due care and diligence to attain the objectives of the study. The Consultant shall maintain close liaison with the Clients and shall submit for approval, from time to time, according to the work program, Environmental and Social Impact Assessment (ESIA), Feasibility Study reports, the draft design proposals for alignment, earthworks, pavement, structures, and other technical aspects of the design. In carrying out the

consulting services, the consultant shall take into account the requirements of the financing institutions and in particular relating to the tender documents that shall be prepared.

The Consultant shall determine the type and volume of existing traffic for the project road by analysing all existing statistical data, conducting and analysing traffic counts, origin – destination studies, road network analyses, examining all available information on vehicle operating and road maintenance costs for both “without” and “with” situations, economic benefits and undertaking evaluation of the economic viability of each option using HDM IV.

The Consultant shall present in a single report the Environmental Assessment and Social Assessment aspects for the road, as per the ADB Environmental and Social Assessment Procedures (ESAP) which was adopted in 2001. The report will also incorporate the provision of the preliminary EIA mitigation plan, the preliminary RAP and the estimated costs of the mitigation plans, in accordance with the environmental policies, guidelines and procedures of the GOT and the GOK, as well as in accordance with the International Environmental Conventions signed by the respective governments. In addition, the final economic feasibility and preliminary engineering design report shall take into account the recommendations of the environmental and social impact assessment.

The preliminary design shall be carried out as detailed, including all required field surveys, investigations and following as much as possible the existing road alignment. The Consultant shall conduct all topographic surveys, hydrological/hydraulic studies, sub-surface soil explorations, material surveys and other field and laboratory investigations that are required for the preliminary engineering for the different options.

The Consultant shall make recommendations concerning the sustainability of different options, by assessing the existing practices of financing the maintenance of the main roads network in the country and recommend possible solutions towards their improvement. The Consultant shall also examine the local road construction industry, assess the capacity and identify the constraints of the road agency and the local contractors for carrying out routine and periodic road maintenance works. The Consultant shall propose measures to mitigate the constraints, if any, and which will encourage the local private sector to participate in road maintenance and construction in order to facilitate improvements to the main road network activities.

The Consultant as part of this study shall provide on-the-job training for counterpart staff up to two civil engineers/transport economists as determined by the Governments.

The progression of the consultancy from Phase I to Phase II in the case of each package will depend on the results of the Feasibility Study. If the results show that the package is not viable for the proposed upgrading, then Phase II shall not be undertaken. Each phase of the consultancy for each package shall be costed separately. Phase 2 of the Study will only commence on the authorization of the GOT, the GOK and after obtaining a no-objection from the Bank for the viable options, which will be contingent upon

satisfactory review of technical, economic, environmental and social results provided by the consultant in Phase 1 of the Study. The Consultant will conduct and prepare tender documents on the basis of Bank standards and as agreed upon with the clients. These shall be in the form as required by the clients, to call for tenders on the basis of International Competitive Bidding (ICB).

Human Resource Inputs

In each phase, the Consultant is to supply resources sufficient to carry out all the services required. The resources will include, as a minimum but not necessarily limited to, the key staff shown below. The consultant is free to organize his/her resources as he/she wishes around the key personnel whose professional staff input are expected to be as follows:

- Phase I** : Pkg. 1: Arusha – Holili / Taveta – Voi Road
Pkg. 2: Tanga – Horohoro / LungoLungo– Mombassa – Malindi Road
- Phase II** : Pkg. 1: Arusha – Holili / Taveta – Voi Road
Pkg. 2: Tanga – Horohoro / LungoLungo – Mombassa - Malindi Road

The minimum requirements of these key staff are as indicated in the Attachments.

Timing

The Consultant shall commence the study within 30 calendar days of the effective date of Contract. The effective date shall be the date on which the consultancy agreement shall be signed.

The feasibility study and the detailed engineering design phases are expected to require a period of 18 months to complete, including a period of three months approximately for EAC, GOT, GOK and the Bank to review and approve the submissions.

Reporting and Other Outputs

The consultant shall prepare and submit the following reports (all in English) to the client for each road separately. Generally, the consultant will initially submit two copies of draft reports and documentation for comments by the client. The comments of the client shall be incorporated in the final version of the reports and documentation.

All final reports and documentation shall have an original plus twenty five copies to the Clients and two copies to ADF directly (1 copy to Bank in Tunis and 1 copy to Bank Field Office in Dar es Salaam), and in addition, require an electronic copy. The progress and draft study reports refer to the feasibility study, ESIA and detailed design reports.

- a) Inception Report
- b) Progress Reports
- c) Draft Economic Feasibility Study Reports
- d) Preliminary Engineering Design Reports
- e) Environment & Social Impact Assessment Reports
- f) Draft Detailed Design Reports

The Consultant is further required to prepare the documents in packages as follows:

Package 1 : Arusha –Holili / Taveta - Voi Road

Package 2 : Tanga – Horohoro / LungoLungo – Mombasa – Malindi Road

(g) Final Detailed Design Reports

After approval of the draft detailed design reports, the consultant shall submit the final detailed design reports with sets of bidding documents, acceptable to the client and the financiers and in accordance with the packaging detailed. The drawings that will form part of the bidding documents shall be in A1 size as well as reduced to A3 size.

Consultancy Services for the Feasibility Study and Detailed Engineering Design for the Upgrading

Pkg. 1: Arusha – Holili/Taveta – Voi Road and

Pkg 2: Tanga – HoroHoro/LungaLunga – Mombasa - Malindi Road

A. Economic and Environmental Feasibility Study Budget for each package

No.	Item	Unit	USD Unit Cost	Quantity	Total Cost
A. Professional Fees					
1	Team Leader	Man Month	13,000	12	156,000
2	Road Design Engineer	Man Month	10,000	12	120,000
3	Hydrologist	Man Month	10,000	6	60,000
4	Senior Transport Economist	Man Month	10,000	6	60,000
5	Material Engineer	Man Month	11,000	12	132,000
6	Senior Surveyor	Man Month	8,500	12	102,000
7	Environmental/Social Impact Specialist	Man Month	8,000	6	48,000
8	Land Economist/Valuer	Man Month	8,000	4	32,000
9	Contracts Engineer	Man Month	10,000	6	60,000
Sub-Total					770,000
B. Support Staff					
1	Technical Staff	LS	90,000	1	90,000
2	Office Staff	LS	50,000	1	50,000
Sub-Total					140,000
C. Equipment					
1	Computers	No.	4,000	2	8,000
2	Photocopiers	No.	2,500	1	2,500
Sub-Total					10,500
D. Travel, Communication & Accommodation					
1	International Travel	Trip	1,200	10	12,000
2	Communication	LS	6,000	1	6,000
3	Subsistence - Consultant	Night	350	150	52,500
4	Subsistence – Field Support Staff	Night	150	200	30,000
5	Office Rent/Accommodation	Month	1,200	12	14,400
Sub-Total					114,900
E. Operational Expenses					
1	Office Supplies	LS	8,000	1	8,000
2	Vehicle Hire (4 No.)	Day	120	200	24,000
3	Document Reproduction & Printing	LS	8,000	1	8,000
4	Soils and Material Investigation	LS	15,000	1	15,000
5	Hire of Survey Equipment & Topographic Survey	LS	30,000	1	30,000
6	Traffic, Valuation & Environmental	LS	20,000	1	20,000
Sub-Total					105,000
TOTAL					1,140,400

B. Detailed Engineering design and Bid Document preparation Budget for each package

No.	Item	Unit	Unit Cost	Quantity	Total Cost
A. Professional Fees					
1	Team Leader	Man Month	13,000	6	78,000
2	Road Design Engineer	Man Month	10,000	6	60,000
3	Hydrologist	Man Month	10,000	6	60,000
4	Senior Transport Economist	Man Month	10,000	1	10,000
5	Material Engineer	Man Month	11,000	6	66,000
6	Senior Surveyor	Man Month	8,500	6	51,000
7	Environmental/Social Impact Specialist	Man Month	8,000	3	24,000
8	Land Economist/Valuer	Man Month	8,000	3	24,000
9	Contracts Engineer	Man Month	11,500	6	69,000
Sub-Total					442,000
B. Support Staff					
1	Technical Staff	LS	50,000	1	50,000
2	Office Staff	LS	50,000	1	50,000
Sub-Total					100,000
C. Equipment					
1	Computers	No.	8,000	2	16,000
2	Photocopiers	No.	7,800	1	7,800
Sub-Total					23,800
D. Travel, Communication & Accommodation					
1	International Travel	Trip	1,200	5	6,000
2	Communication	LS	2,000	1	2,000
3	Subsistence - Consultant	Night	350	20	7,000
4	Subsistence – Field Support Staff	Night	150	100	15,000
5	Office Rent/	Month	500	6	3,000
Sub-Total					33,000
E. Operational Expenses					
1	Office Supplies	LS	5,000	1	5,000
2	Vehicle Hire (4 No.)	Day	120	1	120
3	Document Reproduction & Printing	LS	8,000	1	8,000
4	Soils and Material Investigation	LS	20,000	3	60,000
5	Hire of Survey Equipment & Topographic Survey	LS	40,000	2	80,000
Sub-Total					153,120
Total Detailed Design					651,920
Total (Feasibility Study)					1,140,400
Total (Detailed Study)					651,920
Add 8% Physical and Price Contingency					143,400
GRAND TOTAL PER ROAD					1,935,720.00
TOTAL FOR BOTH ROADS					3,871,440.00

MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT

TERMS-OF-REFERENCE (ABRIDGED) FOR

(C) Technical Assistance of Individual Consultant for EAC Capacity Building and Study of assessment of the Capacity of Regional Contractors

1.0 Background

The East African Co-operation (EAC) countries are made up of the United Republic of Tanzania, the Republic of Kenya and the Republic of Uganda. The EAC was established by an Agreement establishing the Permanent Tripartite Commission for East African Co-operation in November 1993 and became functional in 1996 with its secretariat located in Arusha, Tanzania. In November 1999, the Heads of States of the three countries ratified the instrument establishing the EAC and in April 2001, launched a new five-year regional development strategy which included economic co-operation in areas such as Trade and Industry, Transport and Communications and Energy.

The EAC has been involved in coordinating programmes and projects for a sustainable, equitable and balanced development of partner states in several sectors including Transport and Communications, Energy, Agriculture, Tourism, Legal and Judicial co-operation as well as in the macro-economic sectors. Besides, the Secretariat also coordinates donor activities with regards to regional projects within the partner states. The Treaty for the Establishment of the EAC empowers EAC to co-ordinate activities with respect to the construction, maintenance, rehabilitation, upgrading and reconstruction of trunk roads connecting the Partner States to common standards of design.

Capacity of EAC to coordinate a large project like Arusha – Namanga – Athi River Road Development project, involving two governments is overstressing. In order to mitigate the situation, EAC has requested the Bank funding for a capacity building component as part of the Multi national Tanzania / Kenya Road Development Project.

Cognizant of the absence of regional contractors to compete in large projects with international contractors, the EAC and the two governments have requested the Bank to expand the scope of the Technical Assistance to include a scoping study on the contracting capacity in the East Africa within the same existing budget.

The intervention in the road sector by the Bank is in line with the development priorities of the GOT and the GOK. The Bank has intervened in the development of this corridor. Under the ADF VII window, the Bank has funded, on the Tanzania side, the rehabilitation of the Himo-Arusha Road section which was completed in 1997.

2.0 Objectives of the Services

The objective of the assignment with respect to the capacity building is to assist EAC in capacity building of its coordination role in project management that has multi national nature and the implementation of the study design component of the project. EAC will coordinate the construction of Arusha – Namanga – Athi River Road Development Project. In order to strengthen the Secretariat capacity in project coordination the ,

Secretariat requires technical assistance. The technical assistance consists of recruiting two qualified and experienced contract engineers whose sole mandate will be to liaise and coordinate the Arusha – Namanga – Athi River Road Development Project during implementation.

The objective of the study of the assessment of the regional contracting capacity is to assess and investigate the current capacity of contractors in East Africa, their limitation and how they can be overcome.

3.0 Scope of Consultancy Services

The EAC represented by the Head-Infrastructure Division will provide coordination at the implementation level of the construction of the Arusha – Namanga – Athi River Road Development Project. The actual executing agencies of the construction are Tanzania Roads Agency (TANROADS) for the section in Tanzania and Roads Department of Ministry of Roads and Public Works (MoRPW) for the Kenya section. The consultants to be recruited will be staff members of EAC. The two engineers, to bear the title 'Liaison Engineers', will liaise between the TANROADS, the Roads Department of MoRPW, the EAC, and the supervising consultants, and other design consultants who will be undertaking the study component of the project.

The Liaison Engineers shall follow up all the construction activities of the project road and related works with due care and diligence to attain the objectives of the development project. The Liaison Engineers shall maintain close liaison with the Clients and the supervising consultants and submit periodic report to the EAC according to the work program. The Liaison Engineers, while liaising, shall follow the construction as per the engineering design, the implementation of Environmental Impact Assessment Mitigation plan and Resettlement Action Plan. The Liaison Engineers as part of this assignment shall provide on-the-job training of any counterpart staff.

The Consultant to be procured for the assessment of the regional contracting capacity will evaluate the contracting industry in Tanzania, Kenya and Uganda and propose measures required to ameliorate the problems. The survey will be done in consultation with contractors and other stakeholders and other training that has been done in the past. The Consultant will present its findings in a one or two day workshop with the contractors and other stakeholders of these countries. Following the proceeds of the workshop, the Consultant will prepare the road map for the possible improvement of the contracting industry.

4.0 Human Resource Inputs

Three or four consultants selected on the widest possible geographical base, containing no more than two consultants of the same nationality using the Borrower's own sources of information and / or those of the Bank are short-listed for each assignment. The Consultants are required to supply the curriculum vitae, supporting credentials, addresses of references to the client. The assignment of the consultant for EAC Capacity Building is for 96 man months, the construction and defect liability periods of the project.

The criteria to be used in the evaluation of qualification and experience are:

- a) General qualification and suitability for the task to be performed – 45%
- b) Experience in the specific assignment described in the TOR – 40%
- c) Language proficiency - 10%
- d) Knowledge of the Region - 5%

The Liaison Engineers will be recruited by EAC under ADF component of the project and the estimated budget for the assignment is presented as attachment I.

The above applies to the study of the capacity of regional contractors, while the assignment is for 6 man months for two consultants (3 months each) including the conducting the workshop and finalizing the proceeding of the workshop.

The indicative budget estimate for the capacity building and the study of regional contractors is presented in the following table.

The borrower will submit for approval of the Bank, the Terms of Reference, professional and academic references of the selected consultants and terms of recruitment prior to negotiation.

5.0 Qualifications

The Liaison Engineers will have a postgraduate degree in road transport engineering and ten years experience in site road construction and project management.

6.0 Timing

The Liaison Engineers shall commence the services within 30 calendar days of the effective date of Contract. The effective date shall be the date on which the consultancy agreement shall be signed. The technical assistance is expected to require a period of about 96 man months for the two experts.

The study for the capacity of regional contractors is for 6 man months for two experts.

7.0 Reporting and Other Outputs

Control of the performance, supervision and the evaluation of the technical assistance services provided will be undertaken by EAC, To that effect the Liaison Engineers shall prepare and submit the following reports regularly (all in English) to the client.

- a) Monthly Progress Reports
- b) Quarterly Progress Reports
- c) Annual Progress Reports
- d) Final Project Report

The Quarterly Annual Progress Reports and Final Project Report will be submitted in five copies to the Clients and two copies to ADF directly (1 copy to Bank in Tunis and 1 copy to Bank Field Office in Dar es Salaam), and in addition, require an electronic copy.

The Consultant for the capacity of the regional contractors shall prepare two monthly reports, draft final report for the workshop and the final report incorporating the

proceeding of the workshop. The Final Report will be submitted in eight copies to the Clients and two copies to ADF directly (1 copy to the Bank in Tunis and 1 copy to Bank Field Office in Dar es Salaam), and in addition, require an electronic copy.

Technical Assistance of Individual Consultant for East African Community Capacity Building and Study of assessment of the Capacity of Regional Contractors

Budget Estimates (In US\$)

No.	Item	Unit	Unit Cost	Quantity	Total Cost
A. Professional Fees					
1	2 No. Liaison Engineers	Man Month	4,200	96	403,200
Sub-Total					403,200
B. Equipment					
1	Computers	No.	3,000	2	6,000
2	Photocopiers	No.	2,000	1	2,000
Sub-Total					8,000
C. Travel, Communication & Accommodation					
1	International Travel	Trip	1,000	2	2,000
2	Communication	month	300	48	14,400
Sub-Total					16,400
D. Operational Expenses					
1	Office Supplies	month	430	48	20,640
2	Vehicle (1No.)	LS	25000	1	25,000
3	Vehicle running cost(1 No.)	month	1500	48	72,000
4	Document Reproduction & Printing	month	500	48	24,000
Sub-Total					141,640
Add 7.4% Physical and price contingency					45,660.00
T O T A L FOR INDIVIDUAL CONSULTANTS					614,900
E. Study on Assessment of the capacity of Regional Contractors					160,000
GRAND TOTAL					774,900.00

**MULTINATIONAL TANZANIA / KENYA
ARUSA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
LIST OF COMPLETED AND ONGOING PROJECTS IN TANZANIA**

TANZANIA: LIST OF COMPLETED BANK GROUP OPERATIONS AS AT 31 MARCH 2006

	SECTOR/PROJECT TITLE	FUNDS SOURCES	DATE APPROVED	AMNT (UA Mill.)	DATE SIGNED	DATE EFFECTIVE	AMNT DISB.	UNDISB. AMNT	DEADLINE FINAL DISB
	AGRICULTURE								
1	Dakawa Rice	ADF	28 Feb. 1978	4.79	04 Apr. 1979	22 May 1979	4.79	0.00	31.12.94
2	Dakawa Rice (Suppl.1.1)	ADB	28 Nov. 1980	4.50	10 Mar. 1981	30 June 1981	3.89	0.61	31.12.95
	Dakawa Rice (Suppl.1.1)	ADF	28 Nov. 1980	3.13	10 Mar. 1981	30 June 1981	3.13	0.00	31.12.96
3	Zanzibar Rainfed Rice Development	ADF	18 Dec. 1980	7.37	10 Mar. 1981	24 Apr. 1982	7.28	0.09	31.12.97
4	Kapunga & Madibira Rice Study	NTF	10 Nov. 1981	1.20	08 Jan. 1982	03 Dec. 1983	0.98	0.22	31.12.94
5	Morogoro Village Irrigation Study	ADF	08 Apr. 1982	0.49	04 Feb. 1983	00 May 1984	0.23	0.26	31.12.95
6	Small holder Rice Irrigation	ADF	08 Apr. 1982	7.37	04 Feb. 1983	25 June 1984	6.18	1.19	31.12.97
7	Dakawa Rice (Supp.II)	ADF	14 Apr. 1983	4.64	11 May 1983	11 Dec. 1984	3.46	1.18	30.06.94
8	Dodoma Livestock Development Study	TAF	12 Dec. 1985	0.51	07 May 1986	23 Dec. 1986	0.40	0.11	31.12.94
9	Kapunga Rice Irrigation	ADF	23 Dec. 1987	40.84	07 May 1988	13 Sep. 1988	40.84	0.00	31.12.97
	Kapunga Rice Irrigation	NTF	14 Dec. 1987	6.44	07 May 1982	13 Sep. 1988	6.44	0.00	31.12.98
10	National Agric . & Livestock Exten. Rehab.	ADF	23 Aug. 1988	6.52	05 July 1989	03 Apr. 1990	5.88	0.64	31.12.99
	National Agric . & Livestock Research Project.	ADF	23 Aug. 1988	6.17	05 July 1989	11 Jan.1990	6.01	0.17	31.12.01
11	Dakawa Integrated Irr. (Phase II) (Study)	TAF	11 June 1990	0.49	04 Feb. 1991	01 Sep. 1994	0.46	0.03	31.12.97

12	Kagera Sugar Estate Study	TAF	10 July 1993	0.61	24 Nov. 1993	14 Feb. 1994	0.43	0.18	30.06.97
13	Madibira Irrigation	ADF	03 Sep. 1993	21.92	24 Nov. 1993	08 May 1995	21.55	0.37	31.07.98
14	Livestock Marketing	ADF	27 Jan 1992	9.21	01 Dec. 1992	12 July 1994	8.40	0.81	31.12.05
15	Special Programme for Food Security	TAF	17 May 2000	0.77	30 Jan. 2001	11-May-2001	0.77	0.00	31.08.03
16	Selous Game Reserve	ADF	27 Nov. 1997	5.91	8-May-98	16 Nov. 1998	5.54	0.37	31.12.05
	SUB-TOTAL			132.88			126.66	6.23	
	TRANSPORT								
17	Mogoyo-Masasi Road Construction	ADB	21 Nov. 1974	4.00	15 Jan. 1975	16 May. 1975	4.00	0.00	31.12.97
18	Ten Bridges	ADF	25 Mar. 1975	4.61	20 June 1975	01 Oct. 1975	4.61	0.00	30.06.83
19	Rusumo-Lusahunga Road Construction	ADF	21 Feb. 1977	7.37	28 Mar. 1977	21 Jan. 1979	7.37	0.00	31.12.85
20	Ten Bridges (Supp.1.1)	ADF	14 Apr. 1983	3.64	11 May 1983	18 Jul. 1983	3.51	0.13	31.12.90
21	Rusumo-Lusahunga Road Construction (Supp II)	ADF	14 Apr. 1983	9.99	11 May 1983	22 Jun. 1983	9.99	0	31.12.85
22	TANZAM Highway Rehab.	ADF	15 Feb. 1987	17.68	30 Nov. 1987	03 Mar. 1989	17.67	0.01	31.12.95
23	Road Rehabilitation Project Study	TAF	11 June 1990	2.39	04 Feb. 1991	30 Jul. 1992	1.20	1.19	30.06.97
23	Road Rehabilitation Project	ADF	11 June 1990	32.88	04 Feb. 1991	17 June 1993	20.30	12.58	31.12.97
24	Three Road Studies	TAF	29 Oct. 1992	3.68	01 Dec. 1992	30 Jul. 1994	2.19	1.49	31.12.97
25	Tanzania Railway Corporation Rehab.	ADF	21 June 1992	21.18	26 Feb. 1993	16 June 1994	14.95	6.23	31.12.99
26	Airport Studies	TAF	31 Sep. 1993	1.47	24 Nov. 1993	14 Sep. 1994	1.05	0.42	31.12.97
27	Zanzibar Road Studies	ADF	09 Sep. 1998	1.06	20 Nov.1998	19 Sep. 2000	0.30	0.76	31.03.03
28	Mutukula-Muhutwe Road Project	ADF	08 Oct. 1997	20.00	17 Nov. 1997	27-Jan-1999	14.90	5.1	31.03.05
29	El Nino Road Rehabilitation	ADF	16 Dec 1998	9.75	5-Jan-1999	1-Oct-2000	4.26	5.49	30.06.05

30	Shelui-Nzega Road Project	ADF	17 June 1999	24.00	19 Nov. 1999	7-Mar-2000	13.75	10.25	29.11.05
	SUB-TOTAL			163.70			120.05	43.65	
	INDUSTRY								
31	Oil pipeline and Tankage Facilities	ADB	25 May 1971	3.00	25 May 1972	30 May. 1972	2.66	0.34	31.10.77
32	First Line of Credit to TIB	ADB	15 May 1973	1.50	21 June 1973	23 Oct. 1973	1.50	0.00	30.06.77
33	Second Line of Credit to TIB	ADB	23 Feb. 1977	3.00	24 June 1977	30 Sep. 1978	2.88	0.12	31.12.88
34	Third Line of Credit to TIB	ADF	09 June 1981	5.00	06 Nov. 1981	17 Aug. 1982	4.82	0.18	30.06.94
35	Caustic Soda Study	TAF	20 Nov. 1990	0.70	04 Feb. 1991	30 Jul. 1992	0.60	0.10	31.12.96
36	EPZ Study	TAF	26 Feb. 1992	0.74	14 May 1992	13 Dec. 1993	0.48	0.26	31.12.97
	SUB-TOTAL			13.94			12.94	1.00	
	PUBLIC UTILITIES								
37	Shinyanga-Lindi Water Supply	ADF	24 Aug. 1976	4.61	25 Nov. 1976	15 Dec. 1978	4.61	0.00	31.12.84
38	Kidatu-Mufindi Power Transmission	ADB	27 Nov. 1979	8.00	01 Feb. 1980	13 Dec. 1980	7.94	0.06	30.06.94
39	Dodoma-Water Drainage-Sewerage 1	ADB	18 Dec. 1979	7.00	01 Feb. 1980	21 Feb. 1980	7.00	0.00	31.12.84
40	Dodoma-Water Drainage-Sewerage 11	ADB	27 Aug. 1980	10.00	10 Mar. 1981	30 Sep.1981	9.30	0.70	30.06.94
41	Rural Electrification Newala-Massisi	ADF	24 June 1982	11.97	04 Feb. 1983	01 Oct. 1984	11.77	0.20	30.06.94
42	Shinyanga-Lindi Water Supply (Supp.1.1)	ADF	14 Apr. 1983	2.64	11 May 1983	16 Mar. 1984	2.64	0.00	30.06.84
43	Mwamapuli-Bulenya Water Sup. Study	ADF	27 Nov. 1986	0.55	11 Dec. 1986	06 Nov. 1989	0.55	0.00	31.12.91
44	Zanzibar-Pemba Water Supply Study	ADF	27 Nov. 1986	0.64	11 Dec. 1986	11 May 1988	0.64	0.00	31.12.94
45	Kagera Basin Telecoms	ADF	22 Dec. 1986	4.19	03 May 1987	13 Sep. 1988	3.45	0.74	31.03.99
46	Pangani Falls Hydro-Electrc. Study	TAF	17 Sep. 1987	1.50	30 Nov. 1987	21 Feb. 1990	0.00	1.50	31.12.90

47	Zanzibar-Pemba Power System	ADF	19 Jan. 1989	13.22	06 Jul. 1989	12 Jun. 1990	11.91	1.31	30.06.00
48	Zanzibar Rural Water Supply	ADF	16 Dec. 1991	7.83	01 Dec. 1992	22 Mar. 1994	3.29	4.54	31.12.97
49	Telecommunications II	ADF	24 June 1992	18.42	01 Dec. 1992	13 Oct. 1993	18.39	0.03	31.12.97
	Telecommunications II	ADB	24 June 1992	10.00	01 Dec. 1992	13 Oct. 1993	9.73	0.27	31.12.97
50	Dar es Salaam Water Supply Study	TAF	21 June 1993	0.69	23 July 1993	16 June 1994	0.52	0.17	30.06.97
51	Mchuchuma Colliery Thermal Power Study	TAF	21 Oct. 1993	2.50	13 June 1994	13 June 1994	1.75	0.75	31.12.97
52	Electricity IV	ADF	16 Dec. 1991	23.03	01 Dec. 1992	17 Aug. 1994	21.01	2.02	31.12.04
	Electricity IV	NTF	16 Dec. 1991	6.00	01 Dec. 1992	17 Aug. 1994	4.5	1.5	31.12.04
53	Monduli Rural District Water Supply Study	TAF	16 July 1997	0.78	17 Nov. 1997	13 Jun. 2000	0.75	0.03	30.09.02
54	Rural Electrification Master Plan	ADF- G	28 June 2001	1.87	28 Sep. 2001	21 Oct. 2003	1.53	81.82	31.12.05
	SUB-TOTAL			135.44			121.28	95.64	
	SOCIAL								
55	Technical and Vocational Training	ADF	19 Dec. 1978	6.45	16 May 1979	28 July 80	5.37	1.08	31.12.96
56	Muhimbili Teaching Hospital Study	TAF	23 Mar. 1989	0.59	30 May 1989	23 May 1980	0.47	0.12	31.12.97
57	Employment & Technical Education Studies	TAF	23 June 1993	0.65	23 July 1993	16 May 1995	0.63	0.02	31.03.97
58	Zanzibar Health Dev. Requirement Studies	TAF	03 Dec. 1997	0.91	08-May-98	24 Sep. 1999	0.90	0.01	30.06.04
	SUB-TOTAL			8.60			7.37	1.23	
	MULTI-SECTOR (POLICY BASED)								
59	Sector Rehabilitation (Ag and Tr)	ADF	26 Oct. 1987	28.55	29 Dec. 1987	29 Dec. 1987	26.42	2.13	30.06.94
60	Industrial Sector Adjustment	ADF	17 Sep. 1990	27.63	01 July 1991	06 Aug. 1991	27.63	0.00	30.06.94
61	Financial Sector Adjustment Programme	ADF	25 May 1992	27.63	01 Dec. 1992	16 May 1993	27.63	0.17	31.12.95

62	Structural Adjustment Loan	ADF	05 Nov. 1997	45.00	17 Nov. 1997	24 Dec. 1997	45.00	0.00	31.12.99
63	SFM Loan I	ADF	04 Dec. 1999	0.62	05 Jan. 1999	27 Aug. 1999	0.62	0.00	30.06.01
64	SFM Loan II	ADF	14 July 1999	0.55	19 Nov. 1999	27 Aug. 1999	0.55	0.00	30.06.00
65	Structural Adjustment Loan II	ADF	03 Sep. 2001	40.00	28 Sep.2001	08 Dec. .2001	40.00	0.00	30.06.04
66	Poverty Reduction Support Loan	ADF	27 Oct. 2004	50.00	09 Dec. 2004		50.00	0.00	
	SUB-TOTAL			219.98			217.85	2.30	
	GRAND TOTAL			674.54			606.15	150.05	

TANZANIA: LIST OF ON GOING OPERATIONS AS AT 31 AUGUST 2006

	SECTOR/PROJECT TITLE	FUNDS SOURCE	DATE APPROVED	AMNT (UA Mill.)	DATE SIGNED	DATE EFFECTIVE	AMNT DISB.	PER CENT DISB	DEADLINE FINAL DISB
	AGRICULTURE								
1	Agric. Marketing Systems Dev. Programme	ADF	18-Sep-2002	15.90	12 May. 2003	15 Dec. 2003	4.16	26.16	31.12.2008
		ADF- G	18-Sep-2002	1.00	12 May. 2003	15 Dec. 2003	0.42	42.00	31.12.2008
2	District Agricultural Sector Investment Project	ADF	24-Nov-2004	36.00	11-Feb- 2005	20-Jul-2005	0.09	0.25	30.06.2012
		ADF- G	24-Nov-2004	7.00	11-Feb- 2005	20-Jul-2005	0.04	0.57	30.06.2012
	SUB-TOTAL			59.90			4.71	7.86	
	TRANSPORT								
3	Road Rehabilitation / Upg. Project	ADF	03 Sep. 2001	38.65	28 Sep. 2001	6-Jun-2003	11.17	28.90	31.03.07
4	Zanzibar Roads Upgrading Project	ADF	24-Jun-2004	16.22	24-Jun- 2004	5-Oct-2004	1.55	9.56	31.12.07

		ADF- G	24-Jun-2004	0.71	24-Jun-2004		0.05	7.04	31.12.07
	SUB-TOTAL			55.58			12.77	22.98	
	INDUSTRY								
	SUB-TOTAL			0.00			0.00		
	PUBLIC UTILITIES								
5	Dar es Salaam Water Supply	ADF	17 Dec 2001	36.94	29 May 2002	19 Nov. 2003	7.59	20.55	31.12.07
		ADF- G	17 Dec 2001	1.31	29 May 2002	19 Nov. 2003	0.57	43.51	31.12.07
6	Monduli Rural District Water Project	ADF- G	27 Nov 2003	15.51	10 Feb 2004	14 Jul y 2004	5.64	36.36	31.12.08
	SUB-TOTAL			53.76			13.80	25.67	
	SOCIAL								
7	First Health Rehabilitation Project	ADF	03 Dec. 1997	15.00	08 May 1998	10 Sep. 1999	9.87	65.80	30.06.07
8	Education II Project	ADF	10 Dec. 1997	20.00	08 May 1998	06 Jan. 1999	17.08	85.40	30.06.07
9	Small Enterprises Loan Facility	ADF	11 Nov. 1998	8.00	12 Apr. 1998	29 July 1999	7.33	91.63	31.01.07
10	Three Regions Health Studies	ADF- G	14 July 1999	1.75	19 Nov. 1999	6-Apr-2001	0.98	56.00	31.01.06
11	Alternative Learning & Skills Dev. Project	ADF	31 Oct 2000	5.56	30-Jan-2001	24-Dec-2001	2.26	40.65	30.07.06
		ADF- G	31 Oct 2000	1.01	30-Jan-2001	24-Dec-2001	0.63	62.38	30.06.07
12	SAP for Vocational Ed & Training	ADF	09 July 2003	14.22	15-Sep-2003	16-Feb-2004	0.16	1.13	31.12.08
		ADF- G	09 July 2003	1.60	15-Sep-2003	16-Feb-2004	0.00	0.00	31.12.08
	SUB-TOTAL			67.14			38.31	57.06	
	MULTI-SECTOR								
13	Institutional Support for Good Governance	ADF-G	13 Dec 2004	4.8	11-Feb-2005	11-Feb-2005	0.00	0.00	31.12.08
14	Poverty Reduction Support Loan II	ADF-G	28 June 2006	50.0	9-Aug-2006		0.00	0.00	31.03.08
	SUB-TOTAL			54.80			0.00	0.00	
	GRAND TOTAL			291.18			69.59	23.90	

**MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
LIST OF COMPLETED AND ON GOING PROJECTS IN KENYA**

KENYA

Updated: 11.8.06

Project Name	Company	Approval Date	Signature Date	Entry Into Force	Net Signed Loans	Cancelled	Disbursements	Undisbursed Balance	Disbursement Rate %	Status
AGRICULTURE										
South Nyanza Sugar Road (Agriculture)	ADB	18.08.77	21.09.77	19.12.79	5.22	0.22	5.22	0.00	100.00	Completed
Ramisi Sugar Rehabilitation	ADB	17.10.78	04.01.79	19.12.79	0.00	5.00	0.00	0.00	0.00	Completed
Rainfed Rice Development	OPEC	10.10.86	22.10.86	31.12.97	3.10		0.00	3.10	0.00	Completed
West Kenya Rainfed Rice Development	ADF	22.12.86	28.01.87	17.06.88	13.76	1.11	13.76	0.00	100.00	Completed
Agricultural Sector Adjustment Programme	ADB	26.02.91	28.11.91	07.07.92	12.00		12.00	0.00	100.00	Completed
Agricultural Sector Adjustment Programme	ADF	26.02.91	28.11.91	07.07.92	11.05		11.05	0.00	100.00	Completed
Agricultural Sector Adjustment Programme	ADF	26.02.91	28.11.91	07.07.92	0.63	0.75	0.63	0.00	100.00	Completed
Nyayo Tea Zones Improvement & Forestry Conservation	ADF	21.05.91	28.11.91	21.04.92	8.74	6.37	8.74	0.00	100.00	Completed
Livestock Project	ADF	24.06.92	17.11.93	08.12.95	1.96	2.64	1.96	0.00	100.00	Completed
Horticulture and Traditional Food Crops Development	ADF	24.11.93	23.05.95	18.10.96	0.22	8.99	0.22	0.00	100.00	Completed
Eastern Province Horticulture & Traditional Food Crops	IFAD	15.02.94	15.02.94	30.09.01	5.38		0.00	5.38	0.00	Completed
Kimira-Oluch Smallholder Irrigation Development Study	ADF	18.11.98	20.07.99	16.11.00	1.35		1.35	0.00	100.00	Completed
ASAL-Based Livestock and Rural livelihoods Support Project	ADF	17.12.03	03.06.04	22.09.04	18.41		2.60	15.81	14.12	On-going
ASAL-Based Livestock and Rural livelihoods Support Project	ADF	17.12.03	03.06.04	22.09.04	3.17		0.18	2.99	5.68	On-going
Kenya-Creation of Sustainable Tsetse Area	ADF	08.12.04	04.02.05	07.04.05	6.55		0.30	6.25	4.58	On-going
Green Zones Development Support Project	ADF	12.10.05	30.11.05	27.02.06	25.04		0.97	24.07	3.87	On-going
Kimira-Oluch Smallholder Irrigation Development	ADF	31.05.06	00.00.00	00.00.00	22.98		0.00	22.98	0.00	On-going

Kimira-Oluch Smallholder Irrigation Development	ADF	31.05.0 6	00.00.00	00.00.0 0	1.15		0.00	1.15	0.00	On-going
sub-total					140.71	25.08	58.98	81.73	51.57	
<i>ADB sub-total</i>					17.22	5.22	17.22	0.00		
<i>ADF sub-total</i>					115.01	19.86	41.76	73.25		
<i>OPEC & IFAD sub-total</i>					8.48	0.00	0.00	8.48		
ENVIRONMENT										
Ewaso N'giro North National Res Conservation Project	ADF	22.04.0 5	16.06.05	27.09.0 5	13.59		0.07	13.52	0.52	On-going
Ewaso N'giro North National Res Conservation Project	ADF	22.04.0 5	16.06.05	16.06.0 5	2.89		0.09	2.80	3.11	On-going
ADB sub-total					16.48	0.00	0.16	16.32	1.81	
INDUSTRY										
Pan-African Paper Mills	ADB	25.06.7 0	23.09.70	12.09.7 3	1.05	0.27	1.05	0.00	100.00	Completed
Industrial Sector Adjustment Operation	ADB	23.02.8 9	21.04.89	26.06.8 9	30.00		30.00	0.00	100.00	Completed
Industrial Sector Adjustment Operation	ADF	23.02.8 9	21.04.89	26.06.8 9	18.42		18.42	0.00	100.00	Completed
sub-total					49.47	0.27	49.47	0.00	100.00	
<i>ADB sub-total</i>					31.05	0.27	31.05	0.00		
<i>ADF sub-total</i>					18.42	0.00	18.42	0.00		
TRANSPORT										
Two International Roads	ADB	21.04.6 7	08.08.67	15.11.6 8	2.30		2.30	0.00	100.00	Completed
Yala-Busia Road	ADB	24.11.7 1	09.12.71	12.10.7 2	3.00		3.00	0.00	100.00	Completed
Makutano-Tana Road	ADB	08.05.7 4	02.07.74	20.12.7 6	2.78	0.22	2.78	0.00	100.00	Completed
Kitale-Kapenguria Road	ADB	24.06.7 5	14.08.75	09.05.7 8	3.00		3.00	0.00	100.00	Completed
Meru-Maua Road	ADB	19.09.7 7	21.02.78	04.10.7 9	4.10		4.10	0.00	100.00	Completed
Homa Bay-Rongo Road	ADB	27.08.8 0	06.02.81	26.08.8 1	5.30		5.30	0.00	100.00	Completed
Railways Project	ADB	28.10.8 0	11.05.81	30.07.8 1	10.00		10.00	0.00	100.00	Completed
Nakuru-Nyahururu Road	ADB	23.06.8 1	30.12.81	08.09.8 3	8.80	0.20	8.80	0.00	100.00	Completed
Mumias-Kakamega Road Construction	ADF	24.02.8 3	11.08.83	03.10.8 3	5.99	0.02	5.99	0.00	100.00	Completed
Kakuma-Lokichokio Road	ADB	27.09.8 3	14.12.83	20.03.8 4	26.94	0.06	26.94	0.00	100.00	Completed

Thika-Makutano Road	ADF	14.12.88	21.04.89	27.03.91	10.85	0.04	10.85	0.00	100.00	Completed
Rural Road Upgrading Project	ADB	11.06.90	04.02.91	20.07.92	12.21		12.21	0.00	100.00	Completed
Rural Road Upgrading Project	ADF	11.06.90	04.02.91	20.07.92	23.01	0.02	23.01	0.00	100.00	Completed
Rumuruti-Maralal Road	ADF	19.11.90	04.02.91	10.08.93	0.89	0.12	0.89	0.00	100.00	Completed
Ziwa-Kitale Road	ADF	02.05.91	28.11.91	10.08.93	12.63	4.41	12.63	0.00	100.00	Completed
Roads 2000-District Rural Roads Rehabilitation Project	ADF	12.07.01	15.02.02	29.04.02	20.00		2.24	17.76	11.20	On-going
Kenya/Ethiopia: Mombasa-Nairobi-Addis Road	ADF	13.12.04	04.02.05	29.04.02	33.60		0.00	33.60	0.00	On-going
sub-total					185.40	5.09	134.04	51.36	88.89	
<i>ADB sub-total</i>					<i>78.43</i>	<i>0.48</i>	<i>78.43</i>	<i>0.00</i>		
<i>ADF sub-total</i>					<i>106.97</i>	<i>4.61</i>	<i>55.61</i>	<i>51.36</i>		

WATER / SANITATION

Nyeri Sewerage - Nanyuki Water Supply	ADF	19.12.78	19.09.79	23.10.79	7.35	0.02	7.35	0.00	100.00	Completed
Thika Water Supply	ADB	27.11.79	04.02.80	03.11.83	7.84	0.16	7.84	0.00	100.00	Completed
N'dia Water Supply	ADF	25.06.81	30.12.81	12.10.84	6.90		6.90	0.00	100.00	Completed
Murang'a Kisii-Bungoro Sewerage	ADF	26.11.82	01.02.83	05.11.93	11.06	0.92	11.06	0.00	100.00	Completed
Third Nairobi Water Supply	ADB	23.02.89	21.04.89	23.02.90	13.02		13.02	0.00	100.00	Completed
Third Nairobi Water Supply	ADF	23.02.89	21.04.89	23.02.90	13.82		13.82	0.00	100.00	Completed
Nakuru Water Supply & Sanitation Study	ADF	23.06.93	17.11.93	26.06.95	0.78	0.05	0.78	0.00	100.00	Completed
Third Nairobi Water Supply (SL)	ADF	18.10.96	06.11.96	12.02.97	13.71	0.24	13.71	0.00	100.00	Completed
Ewaso N'giro North River Conservation & Water Study	ADF	11.06.97	24.11.98	23.03.00	1.09	0.01	1.09	0.00	100.00	Completed
Rift Valley Water Supply & Sanitation	ADF	07.07.04	06.09.04	21.12.04	13.04		0.00	13.04	0.00	On-going
Rift Valley Water Supply & Sanitation	ADF	07.07.04	06.09.04	06.09.04	5.02		0.00	5.02	0.00	On-going
sub-total					93.63	1.40	75.57	18.06	81.82	
<i>ADB sub-total</i>					<i>20.86</i>	<i>0.16</i>	<i>20.86</i>	<i>0.00</i>		
<i>ADF sub-total</i>					<i>72.77</i>	<i>1.24</i>	<i>54.71</i>	<i>18.06</i>		

POWER

Kiambere Hydro-Electric Power	ADB	08.11.83	14.12.83	10.04.84	20.31	0.03	20.31	0.00	100.00	Completed
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Rural Electrification Study	ADF	05.05.9 3	17.11.93	03.11.9 4	0.71	0.06	0.71	0.00	100.00	Completed
sub-total					21.02	0.09	21.02	0.00	100.00	
<i>ADB sub-total</i>					<i>20.31</i>	<i>0.03</i>	<i>20.31</i>	<i>0.00</i>		
<i>ADF sub-total</i>					<i>0.71</i>	<i>0.06</i>	<i>0.71</i>	<i>0.00</i>		
FINANCE										
Line of Credit I	ADB	16.07.7 6	04.11.76	25.03.7 7	3.00		3.00	0.00	100.00	Completed
Line of Credit II	ADB	21.03.7 9	16.05.79	31.12.8 0	4.99	0.01	4.99	0.00	100.00	Completed
Line of Credit III	ADB	22.08.8 4	09.05.85	16.04.8 7	19.47	0.53	19.47	0.00	100.00	Completed
Line of Credit KIE	ADF	22.12.8 6	28.01.87	22.02.8 9	4.52	0.08	4.52	0.00	100.00	Completed
Line of Credit To CFC Bank Ltd	ADB	29.10.0 3	18.03.04	02.07.0 4	4.77		4.77	0.00	100.00	Completed
sub-total					36.75	0.62	36.75	0.00	100.00	
<i>ADB sub-total</i>					<i>32.23</i>	<i>0.54</i>	<i>32.23</i>	<i>0.00</i>		
<i>ADF sub-total</i>					<i>4.52</i>	<i>0.08</i>	<i>4.52</i>	<i>0.00</i>		
SOCIAL SECTOR										
Secondary Teacher Training	ADF	27.08.8 2	11.05.83	31.10.8 3	11.82	1.08	11.82	0.00	100.00	Completed
Study for Second University	ADF	22.01.8 5	19.03.85	31.10.8 3	0.00	1.58	0.00	0.00	0.00	Completed
Rural Health	ADF	20.11.8 5	27.01.86	14.04.8 7	7.81	0.02	7.81	0.00	100.00	Completed
Rural Health	OPEC	10.11.8 5	20.11.85	31.12.9 6	2.18		0.00	2.18	0.00	Completed
Education II	ADF	16.12.9 1	17.11.93	06.09.9 4	0.13	18.29	0.13	0.00	100.00	Completed
Rehabilitation of Health Facilities	ADF	23.06.9 3	17.11.93	21.03.9 5	1.48		1.48	0.00	100.00	Completed
Rural Health Services Project II	ADF	15.07.9 8	20.07.98	06.05.9 9	8.00		4.44	3.56	55.50	Completed
Emergency Assistance Victims of Floods	SRF	18.09.0 3	24.10.03	06.05.9 9	0.34		0.00	0.34	0.00	Completed
Education III Project	ADF	17.12.0 3	03.06.04	24.11.0 4	24.26		0.01	24.25	0.04	On-going
Education III Project	ADF	17.12.0 3	03.06.04	24.11.0 4	6.75		0.03	6.72	0.44	On-going
Rural Health Project III	ADF	07.07.0 4	06.09.04	15.03.0 5	17.18		0.14	17.04	0.81	On-going
Rural Health Project III	ADF	07.07.0 4	06.09.04	15.03.0 5	6.00		0.00	6.00	0.00	On-going
<i>Emergency Humanitarian Assistance to Drought</i>	<i>SRF</i>	<i>16.12.0 4</i>	<i>16.06.05</i>	<i>15.03.0 5</i>	<i>0.34</i>		<i>0.00</i>	<i>0.34</i>	<i>0.00</i>	<i>Completed</i>

<i>Emergency Humanitarian Assistance</i>	<i>SRF</i>	29.03.0 6	00.00.00.15.03.0 5	15.03.0 5	0.34		0.00	0.34	0.00	<i>On-going</i>
sub-total					86.63	20.97	25.86	60.77	32.63	
<i>ADF sub-total</i>					83.43	20.97	25.86	57.57		
<i>OPEC sub-total</i>					2.18	0.00	0.00	2.18		
<i>SRF sub-total</i>					1.02	0.00	0.00	1.02		
MULTI-SECTOR										
Study for Mombasa Export Processing Zone	ADF	27.08.9 0	16.11.90	02.07.9 1	0.73		0.73	0.00	100.00	Completed
ISP in Ministry of Finance for Modernisation of Tax System	ADF	30.10.9 0	04.02.91	19.09.9 1	3.32		3.32	0.00	100.00	Completed
Export Development Programme	ADF	22.10.9 3	17.11.93	26.04.9 5	24.42	4.00	24.42	0.00	100.00	Completed
Rehabilitation of El Nino Damaged Infrastructure	ADF	12.11.9 8	29.01.99	11.05.9 9	7.09	4.43	7.09	0.00	100.00	Completed
Structural Adjustment Loan	ADF	03.11.0 0	27.11.00	20.03.0 1	28.25		28.09	0.16	99.43	Completed
Kenya Institutional Support for Good Governance	ADF	26.07.0 6	00.00.00	00.00.0 0	5.52		0.00	5.52	0.00	<i>On-going</i>
sub-total					69.33	8.43	63.65	5.68	83.24	
<i>ADF sub-total</i>					69.33	8.43	63.65	5.68		
TOTAL					699.42	61.95	465.50	233.92		
ADB Total					200.10	6.70	200.10	0.00		
ADF Total					487.64	55.25	265.40	222.24		
OPEC & IFAD Total					10.66	0.00	0.00	10.66		
SRF Total					1.02	0.00	0.00	1.02		
GRAND TOTAL					761.37					

MULTINATIONAL TANZANIA / KENYA
ARUSHA – NAMANGA – ATHI RIVER DEVELOPMENT PROJECT
LIST OF ANNEXES IN PROJECT IMPLEMENTATION DOCUMENT (PID)

1. Feasibility and preliminary Engineering Design of Arusha Namanga Athi River
2. Detailed Engineering Design of Arusha Namanga Athi River
3. Draft Sessional paper of 2006 on the Development and Management of the Roads Sub – Sector for Sustainable Economic Growth - Kenya
4. 10 Year Transport Sector Investment program (TSIP) Phase 1 - Tanzania
5. Final Economic Report of Arusha Namanga Athi River Road
6. Environmental and Social Impact Assessments of Arusha Namanga Athi River Road
7. Preparation of Roads Sub-Sector and Strategy including Investment Program for 2007 - 2020
8. Economic Survey 2006 – Kenya
9. Transport , Communications and Metrology Sector Statistics and Information (2004) - Tanzania
10. Tourism Statistical Bulletin 2005 Edition – Tanzania
11. Bidding Documents
12. Hand Book for Procurement Under JBIC ODA Loan
13. Report of the Controller and Auditor General on Financial Statements of Kenya Roads Board for the Year ended 30 June 2007
14. Ministry of Roads and Public Works, Strategic Plan 2004 – 2009, September 2005
- 15 - Kenya Roads Board, Strategic Plan 2003 - 2008

Annex

AFRICAN DEVELOPMENT FUND



MULTINATIONAL TANZANIA / KENYA

ARUSHA – NAMANGA – ATHI RIVER ROAD DEVELOPMENT PROJECT

ADDENDUM TO THE APPRAISAL REPORT

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ADDENDUM TO APPRAISAL REPORT

MULTI NATIONAL TANZANIA / KENYA : **ARUSHA – NAMANGA ATHI RIVER ROAD DEVELOPMENT PROJECT**

Background to the Addendum

The African Development Fund Board on 13 December 2006 approved loans to the Governments of Kenya and Tanzania and grant to East African Community to finance the reconstruction of the multinational 240km Arusha-Namanga-Athi River trunk road. The project include, amongst other components, the feasibility study and the detailed engineering design of two other multinational roads totaling to 560km in length across the border of Kenya and Tanzania, namely:

- (i) Arusha-Holili/Taveta -Voi road and
- (ii) Tanga – Horohoro/Lunga Lunga– Malindi road.

The ADF grant of UA 3.501 million to finance the study/design component became effective on 8 February 2007. The Government of Tanzania, in consultation with the Government of Kenya and the East African Community, on 20 June 2007, requested the Fund to replace the section between Tanga – Horohoro with an adjacent section stretching from Tanga to Bagamoyo. The need to replace this section arose because another development partner of Tanzania has, since Board’s approval, committed to finance the design and construction of Tanga – Horohoro section, making the Bank’s offer to finance the study/design redundant.

The Tanga – Bagamoyo road section is a strategic road which, according to the Government, is a priority in both the NEPAD and the EAC transport plans. The proposed replacement is an earth / gravel road that runs along the Tanzania’s cost line. Its design will present an opportunity to connect Mombasa (the Kenya port) with Dar es Salaam the Tanzania port, with a high class bitumen road, opening up the over 350 km of prime coastal/sea tourist corridor and providing access to agricultural activities in the zone of influence.

There will be no change in the financing plan of the project. Any extra cost that may be occasioned by the increased length of the road to be designed will be minimal and will be easily absorbed within the financial contingencies.

The Bank has no objection to the governments request to replace Tanga – Hohohoro road section with Tanga – Bagamoyo road section. Consequently, the following amendments to the Appraisal Report for Multinational Tanzania/Kenya: Arusha – Namanga – Athi River Road Development Project are hereby introduced.

- i. Page (ii): Item 6(d) - Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- ii. Page (x): Logframe matrix – item 3.2: Replace ‘Tanga to Malindi’ with ‘Bagamoyo to Malindi’
- iii. Page (xii): Logframe matrix – item 3.2: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’

- iv. Page (xiv): Executive Summary – item (d): Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- v. Page 22: Para 4.1.1 – Replace ‘Tanga – Malindi’ with Bagamoyo – Malindi’
- vi. Page 29: Para 4.5.7: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- vii. Page 46: Para 5.4.4: Replace ‘Tanga – Horo Horo’ with ‘Tanga – Bagamoyo’
- viii. Annex 9A: Page 1 of 8: Title: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- ix. Annex 9A: Page 2 of 8 - Sub title and paragraph nos. 1, 4 and 5: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
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- xiv. Annex 1: Replace project Map with the one on the next page.

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MULTINATIONAL TANZANIA / KENYA

ARUSHA – NAMANGA – ATHI RIVER ROAD DEVELOPMENT PROJECT

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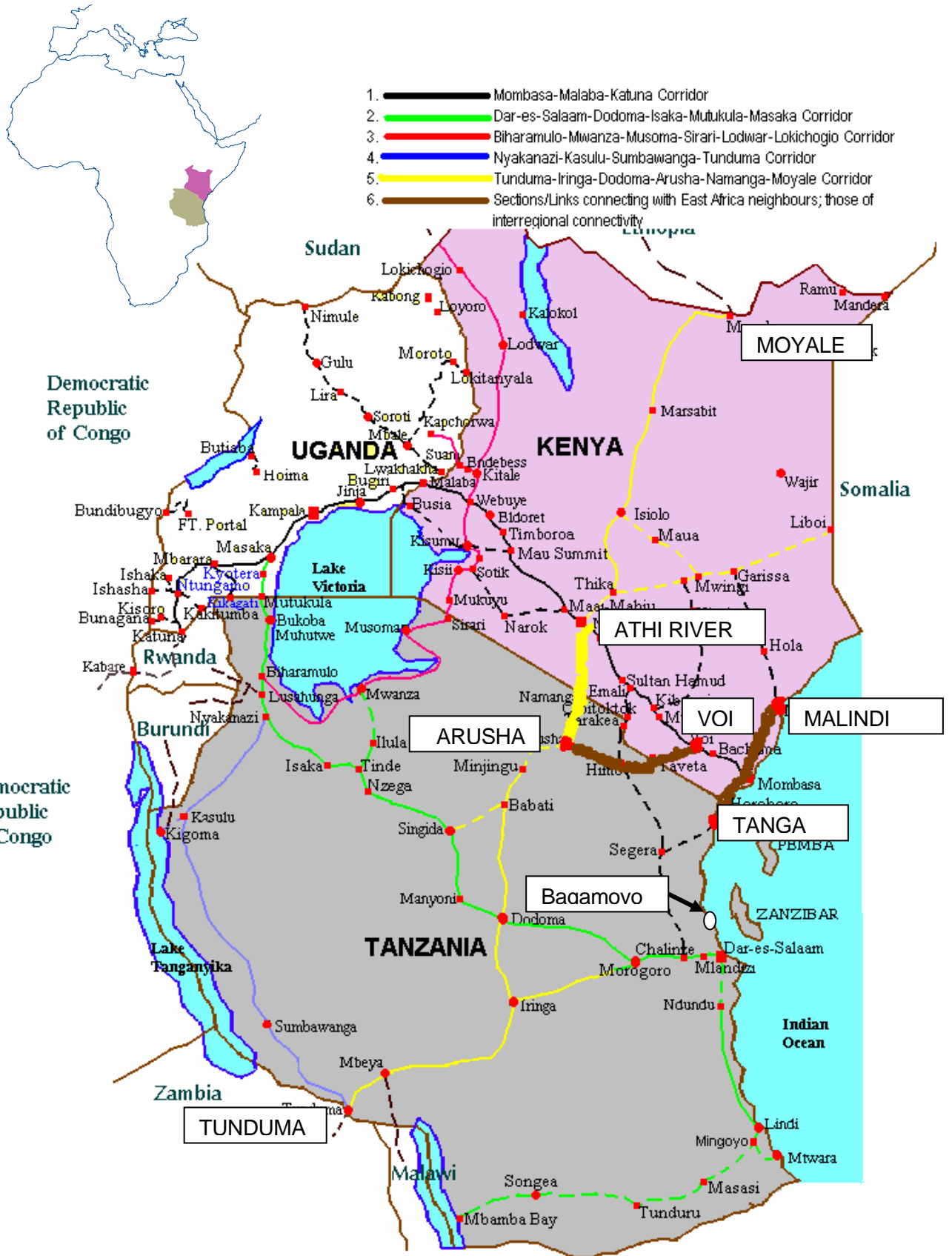
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Background to the Addendum

The African Development Fund Board on 13 December 2006 approved loans to the Governments of Kenya and Tanzania and grant to East African Community to finance the reconstruction of the multinational 240km Arusha-Namanga-Athi River trunk road. The project include, amongst other components, the feasibility study and the detailed engineering design of two other multinational roads totaling to 560km in length across the border of Kenya and Tanzania, namely:

- (i) Arusha-Holili/Taveta -Voi road and
- (ii) Tanga – Horohoro/Lunga Lunga– Malindi road.

The ADF grant of UA 3.501 million to finance the study/design component became effective on 8 February 2007. The Government of Tanzania, in consultation with the Government of Kenya and the East African Community, on 20 June 2007, requested the Fund to replace the section between Tanga – Horohoro with an adjacent section stretching from Tanga to Bagamoyo. The need to replace this section arose because another development partner of Tanzania has, since Board’s approval, committed to finance the design and construction of Tanga – Horohoro section, making the Bank’s offer to finance the study/design redundant.

The Tanga – Bagamoyo road section is a strategic road which, according to the Government, is a priority in both the NEPAD and the EAC transport plans. The proposed replacement is an earth / gravel road that runs along the Tanzania’s cost line. Its design will present an opportunity to connect Mombasa (the Kenya port) with Dar es Salaam the Tanzania port, with a high class bitumen road, opening up the over 350 km of prime coastal/sea tourist corridor and providing access to agricultural activities in the zone of influence.

There will be no change in the financing plan of the project. Any extra cost that may be occasioned by the increased length of the road to be designed will be minimal and will be easily absorbed within the financial contingencies.

The Bank has no objection to the governments request to replace Tanga – Hohohoro road section with Tanga – Bagamoyo road section. Consequently, the following amendments to the Appraisal Report for Multinational Tanzania/Kenya: Arusha – Namanga – Athi River Road Development Project are hereby introduced.

- i. Page (ii): Item 6(d) - Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- ii. Page (x): Logframe matrix – item 3.2: Replace ‘Tanga to Malindi’ with ‘Bagamoyo to Malindi’
- iii. Page (xii): Logframe matrix – item 3.2: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’

- iv. Page (xiv): Executive Summary – item (d): Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- v. Page 22: Para 4.1.1 – Replace ‘Tanga – Malindi’ with Bagamoyo – Malindi’
- vi. Page 29: Para 4.5.7: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- vii. Page 46: Para 5.4.4: Replace ‘Tanga – Horo Horo’ with ‘Tanga – Bagamoyo’
- viii. Annex 9A: Page 1 of 8: Title: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- ix. Annex 9A: Page 2 of 8 - Sub title and paragraph nos. 1, 4 and 5: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- x. Annex 9A: Page 3 of 8 – Sub title: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- xi. Annex 9A: Page 5 of 8 – paragraph no.2: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- xii. Annex 9A: Page 6 of 8 – paragraph no.2: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- xiii. Annex 9A: Page 7 of 8 – paragraph no.1: Replace ‘Tanga – Horohoro’ with ‘Tanga – Bagamoyo’
- xiv. Annex 1: Replace project Map with the one on the next page.

