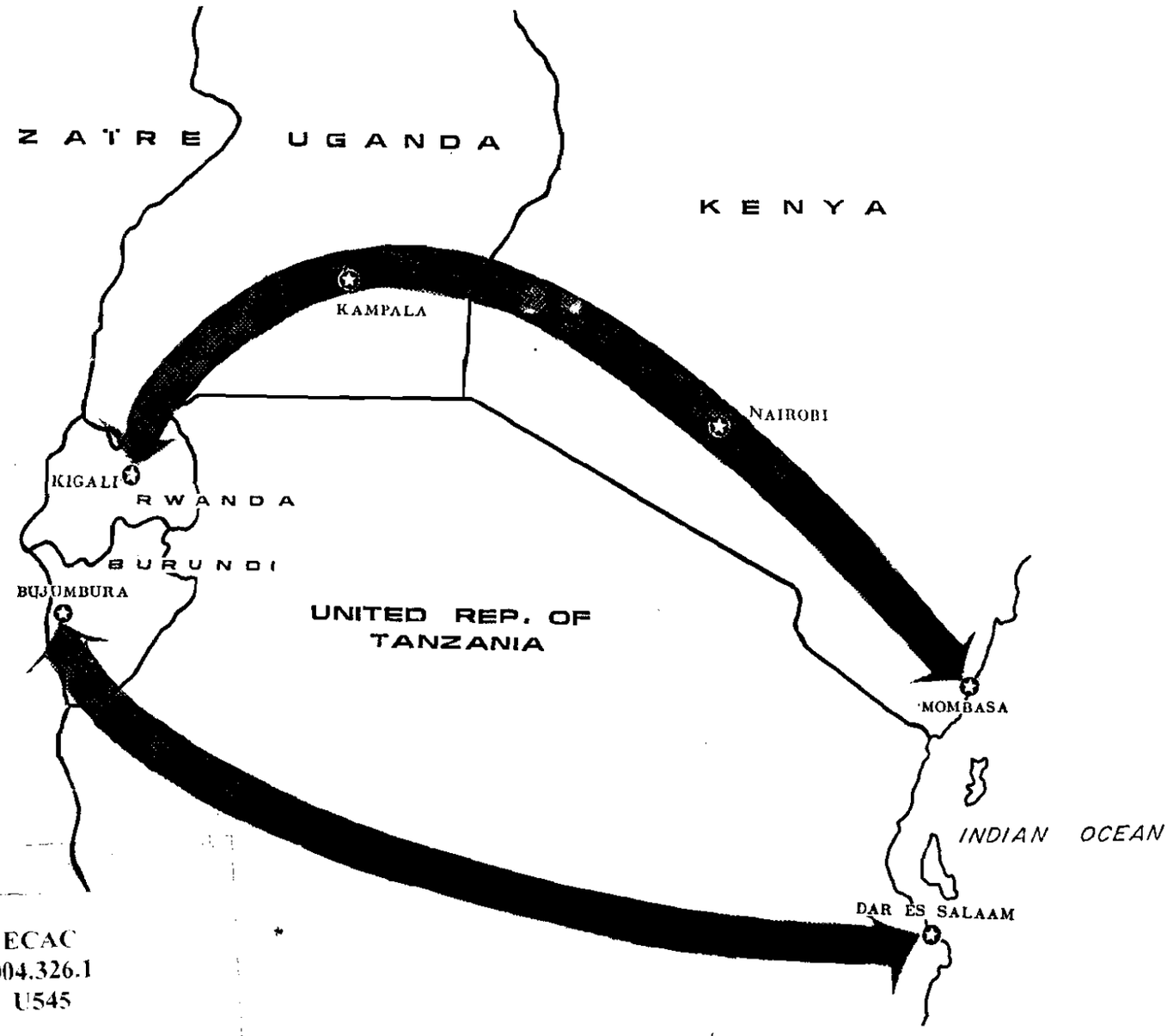
UNITED NATIONS TRANSPORT AND COMMUNICATIONS DECADE IN AFRICA 1978-1988

CO-FINANCING MEETING FOR PROJECTS IN EAST AFRICAN TRANSPORT CORRIDORS



ECAC
004.326.1
U545

Bujumbura, BURUNDI

23-25 September 1987

5468

Distr.: LIMITED

DEC/TRANSCOM/CFM/2/1/Rev.1
29 July 1987

Original: ENGLISH

ECONOMIC COMMISSION FOR AFRICA

UNITED NATIONS TRANSPORT AND COMMUNICATIONS
DECADE IN AFRICA, 1978-1988

CO-FINANCING MEETING FOR PROJECTS IN EAST AFRICAN TRANSPORT CORRIDORS

BUJUMBURA (BURUNDI)
23-25 SEPTEMBER 1987

C O N T E N T S

C O N T E N T S (Cont'd)

C O N T E N T S (Cont'd)

PART FOUR

ABBREVIATIONS

BADEA	Arab Bank for Economic Development in Africa
BCEOM	Bureau Central d'Etudes et d'Equipements d'Outre-mer
CCCE	Caisse Centrale de Cooperation Economique (French bilateral aid agency)
CIDA	Canadian International Development Agency
ECA	Economic Commission for Africa
ECOSOC	Economic and Social Council of the United Nations
EEC	European Economic Community
FAC	Fonds d'Aide et de Cooperation (French bilateral aid agency)
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association (of the World Bank)
KBO	Kagera Basin Organization
CEPGL	Communaute Economique pour les Pays des Grands Lacs
KFW	Kreditanstalt fuer Wiederaufau (German (FRG) bilateral aid agency)
TEU	Twenty-foot Equivalent Unit
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNTACDA	United Nations Transport and Communications Decade in Africa
PTA	Preferential Trade Area for Eastern and Southern Africa
GDP	Gross Domestic Product

PART ONE: INTRODUCTION

CHAPTER I. Co-Financing Meetings

1.1 Objective

The objective of the co-financing meeting is to provide a suitable forum for the African countries concerned to jointly present their national projects, in the context of the transit corridors, for consideration by the financial institutions and donor agencies. The joint presentation would help to highlight the importance of national projects which may act as bottlenecks, but might not be recognized as such when considered in isolation.

The six countries concerned, or their subregional organizations, are expected to present their individual projects, highlighting their importance within the national economic development priorities, and their government's commitment to facilitating the development of the entire corridor. Each of these countries is expected to follow up on any interest expressed during the meeting by the financing institutions and agencies.

On their part, the financing institutions and donor agencies are called upon to indicate their readiness to provide financial and/or technical assistance for the implementation of these projects. Their advice is also sought on how best to pursue these projects in terms of preparation, packaging and presentation in order to attract their financing.

The ECA and its partner subregional organizations (PTA, CEPGL) will, in addition to preparing this document and organizing the meeting, offer technical assistance to the countries in pursuing any further negotiations regarding the financing of the projects.

1.2 Background

Since the United Nations Transport and Communications Decade in Africa (UNTACDA) programme was launched in 1978, great effort has been expended by all concerned to mobilize the financial and other resources required to implement the numerous projects of the programme. Notable efforts were made by the United Nations Secretary General when he organized a Pledging Conference in New York in 1979, at which a modest sum of $128,000 in pledges was made. Subsequently ECA, as the "Lead Agency" for the implementation of the programme, led the efforts to contact financial institutions, agencies and donor countries in order to obtain financing for the projects.

Co-financing has been proposed as the appropriate mechanism for mobilizing financing for the Decade projects at this stage of implementation. The co-financing concept is here defined simply as an arrangement to obtain financing for a project from more than one financing source.

In considering the goals of the Global Strategy for UNTACDA as well as the progress so far achieved in implementing the Decade projects, ECA has recommended that the priority areas on which the co-financing meetings should be focused are those geared to opening up the landlocked countries. In this respect, it must be emphasized here that the corridor approach ties closely to the joint efforts made by ECA and UNCTAD to formulate a priority transport programme for the fourteen (14) landlocked countries of Africa.

As part of the preparations for this meeting, ECA carried out consultations with the African regional financial institutions (ADB, BADEA) regarding the overall approach to co-financing the corridor projects. In addition, missions were undertaken to each of the countries to consult on the definition of corridor projects, their priority in the sector and national development plans, as well as the physical and financing status of the projects.

The information contained in this document was obtained from the countries and jointly prepared by ECA, as well as PTA and CEPGL for their respective subregions.

1.3 Transit Corridors of Eastern Africa

There are two identified corridors which offer alternative transit outlets for the three landlocked Eastern African countries of Burundi, Rwanda and Uganda, as well as Eastern Zaire. These are the Mombasa (Kenya) - Uganda-Rwanda-Burundi-Eastern Zaire; and Dar es Salaam (Tanzania) - Burundi-Rwanda-Eastern Zaire-Uganda corridors. The projects identified for each corridor are shown in Table 1 and Table 2 respectively. There are thirty eight projects in all, costing an estimated US$849 million, out of which US$592 million (or 70 per cent) is being sought at this meeting.

1.3.1 The Northern Corridor: Mombasa-Uganda-Rwanda-BurundiZaire

The northern corridor transit route is over 2,000 km long (Mombasa-Bujumbura). In terms of projects identified for this meeting, this corridor consists of 19 projects costing an estimated total of US$540 million. About US$205 million (38 per cent) of funding has been secured, leaving US$335 million still to be sought. The 19 projects consist of 3 roads, 14 railways, 1 multimodal transport and 1 port (Table 1). It should be noted that out of the 19 projects, 10 are for Uganda (US$379 million or 70 per cent), 1 Rwanda and 8 Kenya.

1.3.2 The Central Corridor: Dar es Salaam-Burundi-Rwanda-Zaire-Uganda

The central corridor transit route is over 1,848 kms (Dar es Salaam-Bujumbura). There are 19 projects in this corridor, with an estimated cost of US$309 million, out of which US$52 million (17 per cent) has been secured. Unlike the first corridor above, over 91 per cent of the toal cost of the projects (US$280 million) is for projects in the transit country Tanzania and only 9 per cent of the total cost (US$28 million) for the other 3 countries in the corridor (Table 2). In terms of project type, the 19 projects include 5 roads, 6 railways, 4 inland water transport, 1 port and 3 for telecommunications.

Table 1

Projects For The Transit Corridors Of Eastern Africa

Northern Corridor (Mombasa, Kenya = Uganda, Rwanda, Burundi, Zaire)

Project Description			Total cost US $ m	Financing secured US$ m			External Financing Required US $ m	Status
				External				
Number	Title	Type		Amount	Source	Local Amount		
	(a) Kenya							
1. ROP-22-NI	Rehabilitation of the Eldoret-Turbo-Webuye-Malaba road	Rehabilitation	26.00	6.0	EEC	4.0	16.0	The Turbo-Webuye section is under execution with EEC assistance
2. RAP-22-001	Provision of training facilities at the railway training school	Construction	2.08	-	-	0.92	1.16	Investment package has been given to the World Bank and ODA for consideration.
3. RAP-22-N1	Re-alignment of the Mombasa-Nairobi main line	Rehabilitation	1.44	-	-	-	1.44	Looking for financier to implement the project.
4. RAP-22-N2	Re-alignment of the Plateau Section	Rehabilitation	62.50			50.0	12.5	Financing is being sought to complete the project.
5. RAP-22-N3	Relaying of the Mombasa-Voi Section	Rehabilitation	19.38	6.13	World Bank	-	13.25	Materials to relay some sections have been secured from the World Bank. Additional financial assistance is being sought to complete the project.
6. RAP-22-N4	Upgrading of the Nakuru-Kisumu line	Rehabilitation	15.00	-	-	-	15.00	Already 80 lb materials to cover 92 km have been purchased through IBRD loan. More funds are required to purchase materials for the remainder of 143 kms.
7. RAP-22-N5	Improvement of the Kenya Railways telecommunications Network II	Rehabilitation	17.05	-	-	-	17.05	The investment package has been submitted to the World Bank and ODA. Also KFW has been approached but no reply to date.

Project For The Transit Corridor OF Eastern Africa

Table 1 Cont d

Northern Corridor (Mombasa, Kenya = Uganda, Rwanda, Burundi, Zaire)

Project Description			Total cost US $ m	Financing secured US $ m			External Financing Required US$ m	Status
				External		Local		
Number	Title	Type		Amount	Source	Amount		
8. RAP-22-N6	Improvement of signalling	Rehabilitation	6.88	-	-	1.67	5.21	Looking for funds.
	(b) Rwanda							
9. RAP-35-001	Construction of warehouse for Rwanda at Mombasa Port	Study & Const.	10.20			0.20	10.00	Looking for the external fund
	(c) Uganda							
10. ROP-46-002	Rehabilitation of the Mbarara Ishaka and Ishaka-Katunguru Road	Rehabilitation	12.61	0.26	-	0.03	12.32	Economic and technical studies have been completed
11. ROP-46-N1	Upgrading of road maintenance	Rehabilitation	110.06	61.46	-	0.05	48.55	Limited maintenance is ongoing but additional resources are required to salvage the roads which are approaching a terminal state of repair.
12. RAP-46-002	Procurement of railway rolling stock	Equipment Purchase	112.02	25.98	-	-	86.04	Ongoing project looking for funds to complete the project.
13. RAP-46-003	Renewal and Improvement of the Permanent way	Rehabilitation	83.13	4.98	-	0.15	78.00	An engineering study was carried out. Ongoing project looking for funds for completion.
14. RAP-46-005	Study and design of the workshop for carriage and wagon repairs	Study	0.50	-	-	-	0.50	New project
15. RAP-46-007	Study on the establishment of a railway training school	Study	0.51	-	-	0.08	0.43	Pre-feasibility study is being conducted at present with World Bank assistance.

Table 1 Contd.

Project For The Transit Corridor Of Eastern Africa
Northern Corridor (Mombasa, Kenya - Uganda, Rwanda, Burundi, Zaire)

Project Description			Total cost US $ m	Financing secured US$ m			External Financing Required US$ m	Status
				External		Local		
Number	Title	Type		Amount	Source	Amount		
16. RAP-46-N1	Completion of Diesel locomotive repair workshops	Construction & Equipment	49.98	35.36	IDA/KFW	6.79	7.83	Ongoing project, looking for funds for completion.
17. RAP-46-N2	Improvement of safety of rail level crossing	Rehabilitation	1.0	-	-	-	1.0	New project
18. RAP-46-N3	Improvement of the supplies function of Uganda Railways Corporation	Rehabilitation	1.02	0.75	-	-	0.27	Preliminary survey exists
19. MMP-46-N1	Containerization of rail traffic	Study/Construction/Equipment	8.41	0.25		-	8.16	Feasibility study has been undertaken
	TOTAL 19 Projects		533.77	141.17		63.89	334.71	

Table 2

Projects for the transit Corridor of Eastern Africa

Cental Corridor (Dar-es-Salaam, Tanzania = Burundi, Rwanda, Zaire , Uganda)

Project Description			Total cost US$ m	Financing Secured US$ m			External Financing Required US $ m	Status
				External		Local		
Number	Title	Type		Amount	Source	Amount		
	(a) Burundi							
1. ROP-05-005	Study on the proposed road: Ruyigi-Cankuzo-Muyinga-Rubangabanga-Tanzania frontier.	Study	1.00	-	-	-	1.00	New project
2. ROP-05-N1	Study on the road link between Tanzania (Kigoma) and the road network in Burundi between Boma du Chef and Nakamba	Study	0.65	-	-	-	0.65	Improvement of some section has been started with financing from Kuwait
	(b) Rwanda							
3. TEP-35-002	International link Cyangugu Bukavu (Zaire)	Equipment/ Construction	0.16	-		0.01	0.15	Looking for funds to implement the project
4. TEP-35-003	International link Kigali-Bujumbura (Burundi)	Equipment/ Construction	2.35	-	-	0.15	2.20	Looking for funds.
	(c) Tanzania							
5. ROP-43-001	Strengthening and asphalting the Bukavu-Mutukula road (128.14 km)	Construction	69.40	-	-	20.80	48.60	The project has economic and technical studies including design. It only needs updating.
6. ROP-43-004	Construction to bitumen standard of the Kobero-Rusumo-Isaka road (60 km)	Construction	63.90	-	-	-	63.90	The project has been studied and designed.
7. ROP-43-N1	Construction of the Bukombe--Isaka road (112.5 km)	Construction	51.54	-	-	15.46	36.08	The project has already been designed.

Table 2 Contd.

Projects for the Transit Corr[illegible]or of Eastern Africa
Central Corridor (Dar-es-Salaam, Tanzani[illegible] = Burundi, Rwanda, Zaire, Uganda)

Project Description			Total Cost US $ m	Financing Secured US$ m			External Financing Required US $ m	Status
				External		Local		
Number	Title	Type		Amount	Source	Amount		
8. RAP-43-001	Improvement of railway training facilities	Construction/ Equipment/ Development of training courses	36.94	-	-	-	36.94	The feasibility study has been carried out in 1984.
9. RAP-43-N1	Acquisition of petroleum tank wagons	Equipment	5.00	-	-	-	5.00	Looking for funds.
10. RAP-43-N2	Purchase of new 2000 HP locomotives	Equipment	21.00	-	-	-	21.00	Financial resources are being sought to implement the project.
11. RAP-43-N3	Track component workshop and manufacturing plant	Construction/ Equipment	2.00	-	-	-	2.00	New project.
12. RAP-43-N4	Luiche Bridge works	Construction	0.50	-	-	-	0.50	Preliminary survey been carried out.
13. RAP-43-N5	Purchase of heavy duty track trolley cars	Equipment	1.20	-	-	-	1.20	Evaluation has been made and Government is looking for financiers
14. HAP-43-N1	Entrance channel improvement of the Port of Dar-es-Salaam	Construction/ Equipment	25.00	-	-	-	25.00	Feasibility study has been done.
15. TEP-43-N1	Purchase and installation of Dar-es-Salaam-Dodoma digital (140 mbit) microwave link.	Equipment	4.04	-	-	0.21	3.83	Looking for funds to implement the project
	(d) Uganda							
16. INP-46-001	Rehabilitation of marine services	Equipment/ Construction	1.12	-	-	0.06	1.06	Looking for funds

Table 2 Contd.

Project for the Transit Corridor of astern Africa
Central Corridor (Dar-es-Salaam, Tanzania - Burun i, Rwanda, Zaire, Uganda)

Project Description			Total cost US $ m	Financing secured US $ m			External Financing Required US$ m	Status
				External		Local Amount		
Number	Title	Type		Amount	Source			
17. INP-46-002	Connection between Port Bell and Kampala	Construction	7.00	-	-	-	7.00	Technical study would be required before construction
18. INF-46-N1	Lake Victoria wagon ferries	Equipment	15.27	12.40	IDA	2.29	0.58	Looking for the remaining funds to implement the project.
	(e) Sub-regional							
19. INP-60-N1	Study on the Kagera River	Study	0.40	-	-	-	0.40	The preliminary study has been completed and recommends feasibility studies follow immediately. The preliminary study was financed by ECA and Rwanda Government.
	Total 19 projects		308.47	12.40		38.98	257.09	

PART TWO: SUBREGIONAL OVERVIEW

CHAPTER II. Economy and Trade Flows Within East Africa

2.1 Current economic situation of countries in East Africa

The deteriorating economic performance of countries of East Africa which started in the mid 1970s has worsened in the last few years. As a result of the recession in the industrialized countries, the demand for and prices of primary commodity exports have decreased substantially. On the other hand, the prices of manufactured goods that are purchased from industrialized countries have continued to rise. This combination of reduced export prices and increased import prices has led to high import bills although the quantity of imports has decreased. According to estimates by the UN agencies and World Bank, the terms of trade of the countries of the PTA subregion are today 36 per cent below the average of the entire decade of the 1970s.

A sectoral analysis further reveals that agricultural output per capita has continued to decline; hence food imports have increased, contributing about one fifth of the subregion's cereal requirements. Much industrial capacity stands idle, the victim of falling domestic incomes, poor investment choices, a failure to develop export opportunities, inadequate foreign exchange for material and spare parts and lack of skilled manpower.

This general low level of output in all sectors has reduced public revenue. Fiscal constraints have led to cuts in public expenditure that have in general affected developmental public expenditure. Existing capital stock is being steadily eroded because of the inability to undertake timely maintenance. Unemployment levels have continued to rise. Despite the curtailment of public expenditure, deficits have not been eliminated and since these have been in a large measure financed by external borrowing, inflation has persisted. The debt servicing ratio for African countries which rose from 8 per cent in 1973 to 25 per cent of export earnings in 1983 and for some of the countries of the Preferential Trade Area for Eastern and Southern Africa (PTA) to more than 50 per cent of export revenue - has constrained the economic development of the subregion. It has also increased the dependence of the subregion on industrialized countries for aid, technology, expertise and, more recently, food.

2.2 The trade pattern of the region

Trade links among the countries of East Africa are very weak. They trade more with the outside world, particularly with the developed countries, than they do among themselves. As a percentage of total trade, trade among the countries of the subregion is of limited importance. It is their trade with the outside world which is of significant importance.

However, there is a problem in their trade relationship with the outside countries. This problem lies in the fact that most of the countries depend on imports for many consumer goods, spare parts, raw materials and investment goods and are dependent on a few primary commodities for their exports to markets outside the region. But these commodities face declining prices. Faced with deteriorating terms of trade as a result of falling primary commodity prices and rising prices of manufactures which they import, these countries cannot pay their import bills from their export earnings; hence they face chronic balance of payments difficulties.

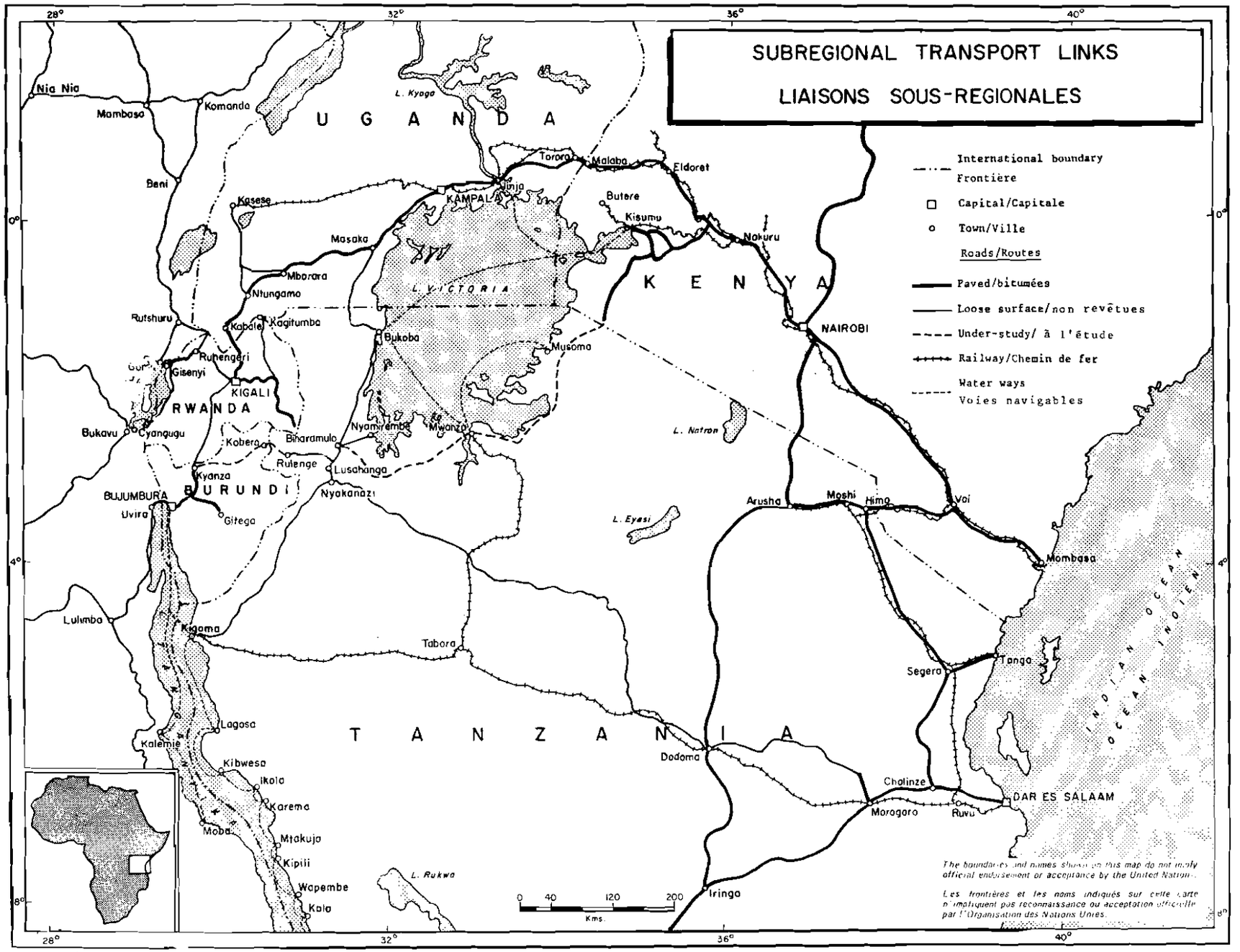
Trade among the six countries is also hampered by lack of complementarity of the subregion's economies. The fact that the principal markets for their exports and sources of their imports are in Europe and North America implies that the subregion produces what it does not consume and consumes what it does not produce. The lack of complementarity reflects the relatively underdeveloped nature of the production sectors, the agricultural and manufacturing sectors.

Agriculture is the mainstay of the economies, contributing about 30 per cent of GDP on average. The agricultural sector has two subsectors: the subsistence subsector, on which the majority of the population depends, produces staple crops such as maize, cassava, millet and sorghum. The productivity of this subsector is very low mainly due to traditional production techniques, widespread drought, high cost of fertilizers, problems of pests and low investment levels. The commercial subsector mainly produces cash crops for export such as coffee, tea, sisal, cotton and tobacco.

The manufacturing sector is small in absolute terms and in terms of its contribution to GDP. The major constraints which face the manufacturing sector include limited market size and low purchasing power, inadequately skilled and educated manpower to form a highly productive work force as well as insufficient numbers of enterpreneurs with business, commercial, administrative and management experience, insufficient and inefficient transportation and communications systems and the high cost of energy.

In addition to these constraints, there is the weakness of structural relations between the manufacturing and agricultural sectors. Hence, the economic sector of these countries suffers from low levels of sectoral integration and complementarity, both at the national and subregional levels.

There is very limited processing of agricultural and mineral raw materials. Consequently, the manufacturing sector concentrates, in most countries, on import substitution industries which depend heavily on imports of capital and intermediate goods. In most cases, these industries operate at below optimum capacity due to the smallness of markets. The result of this is excess capacity which, together with high freight rates and high construction and installation costs creates high-cost industrial structures the products of which cannot be easily tailored to the demand structures of the majority of the rural population.



CART-87-20 (02/87)

Compounding these problems are national commercial policies which aim at protecting local industries and conserving foreign exchange. Trade arrangements and commercial policies in the subregion have certain common features. Most countries maintain relatively high tariff and non-tariff barriers for the protection of domestic industries. The protection of industries which is intended to allow time for new industries to develop has, in many instances, encouraged relatively high cost domestic production. Thus, export of manufactures has been made more difficult than any other merchandize originating in the subregion. Added to this are restrictive trade practices in the developed countries which seek to limit imports of manufactures from developing countries.

CHAPTER III: Transport and Communications Systems

3.1 Objectives

The main objective of co-operation among the countries of East Africa in the sector of Transport and Communications is to improve and expand inter-State Transport and Communications as a means of furthering trade through greater movement of goods and persons. Complementary to the development of physical infrastructure is the simplification and standardization of transit rules, regulations and procedures as well as the reduction to a minimum of documentary requirements.

3.2 Programme and projects under implementation

3.2.1 Infrastructural projects

In order to adequately cater for intra-regional trade and international traffic flows, the countries of the subregion are in the process of rehabilitating and upgrading existing inter-State transport and communications infrastructure and constructing new ones that are necessary for the physical and economic integration of the subregion. In the short and medium term improvements are focused on roads, railways, telecommunications, inland water transport and ports.

The resultant physical and qualitative improvements and expansion of transport and communications links among the countries in the subregion are essential to the process of trade liberalization, integration of their markets and the sustenance of specific inter-sectoral programmes that have been formulated to realize intra-country specialization and complementarity in the productive sectors of agriculture and industry.

The importance of efficient communications systems as a medium of disseminating and exchanging trade information cannot be over-emphasized; hence, the priority that is being accorded by these countries to the construction of transit transport facilities and the construction of direct high capacity microwave inter-State links.

3.2.2 Removal and elimination of non-physical barriers

The qualitative improvements and expansion of physical infrastructure is a necessary but not sufficient condition for promoting intra-regional trade. For trade promotion and expansion to effectively take place it is essential that all forms of legal and administrative barriers should be eliminated. In this respect, programmes in transport involve the implementation of regional programmes aimed at facilitating the movement of traffic across country boundaries.

In the roads sub-sector, programmes that are in the process of implementation concern the use by road transport operators of a uniform Road Customs Transit Declaration Document (RCTD) and a common Third Party Motor Vehicle Liability Insurance Scheme both of which are sponsored by the PTA.

The introduction of the Road Customs Transit Declaration Document will benefit transport operators in that it will reduce delays at border posts by eliminating unnecessary documentation and the need on station personnel and the services of clearing and forwarding agents at entry border posts. At the moment, the role of the forwarding agents, among others, is to prepare fresh documentation for the movement of goods in the country to be transited to meet national customs requirements. In contrast, under the RCTD system sufficient copies for all countries to be transited will be prepared at the country of departure. Once cleared by the customs offfice of commencement these copies will be accepted by customs control offices in transit countries.

Another programme that is in the process of implementation is the PTA multilateral Third Party Motor Vehicle Liability Insurance Scheme. The Insurance Scheme will facilitate expeditious movement of international traffic and make it possible for prompt compensation for accident victims and damage to property. The Third Party Motor Insurance Scheme will eliminate the need for drivers to take out third party cover for every cross-border movement.

In addition to the programmes that are in the process of implementation, PTA is working on other measures to facilitate the movement of traffic. These cover, inter alia, diverse issues such as technical provisions and specifications for vehicles, common inter-State road design standards, harmonization of road permit licensing, transit fees and commercial vehicle guarantees.

In the railways subsector, the measures for the removal of legal and administrative bottlenecks entail, among other things, co-ordination of railway operations, introduction of standard inter-railway agreements, through booking and single invoicing of traffic, common commodity classifications as well as common wagon specifications.

3.2.3 Air transport

The PTA member States accord high priority to the development of air cargo and passenger services. The short to medium term programmes focus on centralization of aircraft maintenance and training of civil aviation personnel which are necessary for realization of economies of scale, improving the movement and clearance of cargo and passengers at airports and the co-ordination of member airlines' time tables. It is expected that the implementation of these programmes will enable air transport to play a significant role in the promotion of intra-regional trade as well as the development of a viable and competitive air transport industry.

3.2.4 Maritime and inland water transport

Compared to other modes of transport there has been a discernible lack in the subregion of emphasis on articulated programmes and policies aimed at the development of maritime and inland water transport and ancillary infrastructure. This has been mainly due to the fact that the development and utilization of water and lake transport require a co-ordinated regional approach. In view of the important role that water transport can play in intra-regional and international trade, studies are underway to formulate strategies for co-ordinated development of maritime, inland water, road and railway transport.

In the short term the main concentration is aimed at the improvement of the operations of existing inland water transport and coastal vessels, and co-ordination of traffic movements with road and railway transport at the port interface. For the medium to long term, studies are being undertaken for the improvement, inter alia, of the infrastructure, manpower development, rehabilitation and acquisition of new vessels as well as the enhancement of navigational safety.

CHAPTER IV. Transit Corridors

4.1 General definition of corridors

There are two types of transit surface corridors. The first type is one which enables landlocked countries to have access to sea ports and also to the countries that are traversed. Given that international trade accounts for approximately 95 per cent of total national trade for the group of countries under consideration, these corridors are an important lifeline to these countries. It is against this background that these transit transport corridors are viewed as contributing to the disenclavement of the landlocked countries, which belong to the category of least developed countries, characterized by severe structural weaknesses, low per capita incomes, under-developed infrastructure and over dependence on agricultural export earnings.

The second type of transit corridors are those that link up countries in the form of a grid network as opposed to the first type which is linear. The construction of grid transport and communications networks connecting contiguous countries have until recently not been accorded priority in individual countries in respect of resource mobilization both internally and externally. This largely explains the space economy that is characterized by the absence of physical integration at both the national and regional level. Consequently, there exists a lack of total connectivity between cities in different countries thereby contributing to reduced accessibility because of indirect connections. However, it is important to note that commendable efforts have been made in the development of a grid network that not only gives rise to a cohesive and integrated regional space economy but also contributes to the disenclavement of landlocked countries by giving them a greater number of access points to regional ports through alternative transport and communications corridors.

Following on the preceding general description of transit corridors, it is clear that these transit corridors can be defined as transport and communications systems that radiate from ports to the hinterland which is made up of landlocked countries. Viewed from a systems framework the constituent elements of these corridors comprise ports, roads, railways, pipelines, lake transport and communications. The inter-relationship and interdependence of these elements is such that the poor performance of one element contributes to reduced overall performance of the transit corridor because of imbalance between the supply and/or condition of transport capacity and demand.

4.1.1 Northern Corridor

The Northern Corridor is defined in the Northern Corridor Transit Agreement as "the transport infrastructure and facilities in East Africa served by the port of Mombasa in the Republic of Kenya"1/. The hinterland of Mombasa port comprises Burundi, Eastern Zaire, Rwanda, Southern Sudan and Uganda.

1/ Northern Corridor Transit Agreement, Bujumbura, February, 1984.

The Northern Corridor transit system consists of road, railway, oil pipeline, lake transport and communications links that run from the port of Mombasa to the hinterland countries and vice versa. In February 1985 Burundi, Kenya, Rwanda and Uganda signed the Northern Corridor Transit Agreement. During the same year, Zaire became a member State of the Northern Corridor. The object of the Agreement is to establish common and uniform transit regulations and policies for all surface modes of transport.

The oil pipeline that runs from Mombasa to Nairobi is part of the Northern Corridor transit route. Fuel is transported by rail and road to onward destinations from Nairobi. The Northern Corridor (Mombasa-Bujumbura) is approximately 2,000 kms long.

The following are the road transit routes by country:

Kenya: Mombasa-Nairobi-Kisumu-Busia; Mombasa-Nairobi-Eldoret-Malaba.

Uganda: Malaba-Jinja-Kampala-Masaka-Kabale-Katuna; Busia-Jinja-Kampala-Masaka-Kabale-KatunaKagitumba; Kasese-Ishaka-Ntungama.

Rwanda: Kagitumba-Kigali-Butare-Upper Akanyaru; Gatuna-Kigali-Butare-Upper Akanyaru; Cyangugu-Bugarama; Cyanika-Ruhengeri-Gisenyi.

Burundi: Upper Akanyaru-Kayanza-Bujumbura-Gatumba; Gisenyi-Kirundo-Ngozi-Bujumbura; Luhwa-Rugomba-Bujumbura-Upper Akanyaru.

The following are the rail transit routes on the Northern Corridor.

Kenya: Mombasa-Nairobi-Eldoret-Malaba; Mombasa-Nairobi-Kisumu:

Uganda: Tororo-Jinja-Kampala-Kasese.

From Kisumu traffic can be transshipped to lake transport vessels or road transport for onward movement to ultimate destinations via Jinja and Busia respectively. Traffic is also railed to Kampala and Kasese from where it is moved by road transport to destinations in Rwanda, Burundi and Eastern Zaire.

In addition to the transit routes listed above, goods can be transported by railway from Mombasa to Kisumu port and from there by vessels on Lake Victoria to Kemondo Bay. From Kemondo Bay goods can be transported by road on the Biharamulo-Rusumo Falls road to Kigali in Rwanda and from Rusumo Falls to Bujumbura in Burundi. The link from Kemondo Bay to Biharamulo and Rusumo Falls is a gravel road that is not designed to carry heavy vehicles. It is worth noting that up to 1977 when the East African Community broke up this route was used by Burundi and Rwanda. In February 1986 steamer services on Lake Victoria were resumed on a trial basis between Kisumu and Kemondo Bay. Unfortunately, the utilization of this route was not sustained due to failure between users and owners of the vessels to reach an agreement on the freight tariffs for the Lake segment of the journey.

4.1.2 Central Corridor

The Central Corridor consists of the transport infrastructure and facilities in East Africa that are served by the port of Dar es Salaam in the United Republic of Tanzania. The rail corridor runs from Dar es Salaam to Kigoma (1,248 km) where lake shipping services transport the cargo to Bujumbura (600 km), whilst cargo destined for Rwanda (300 km away) is transported by road. Altogether, the Central Corridor by rail, ship and road from Dar es Salaam to Bujumbura to Kigali is approximately 1,500 km. Also from Bujumbura the Central Corridor continues by road to the town of Bukavu in Eastern Zaire. Bukavu is also linked to the Kigoma railhead by lake ferry services.

The rail corridor also runs from Dar es Salaam to Tabora to Isaka where traffic is transshipped to road vehicles for onward movement to Burundi and Rwanda on the Isaka-Rusumo Falls-Kigali road link.

4.2 Traffic flows

4.2.1 Northern Corridor

The Northern Corridor transit system accounts for the bulk of traffic from the landlocked countries of Uganda, Rwanda, Eastern Zaire, and to a lesser extent for Burundi. Table 3 below shows the total volume of imports and exports in tonnes for Burundi and Rwanda.

Table 3. Imports and Exports for Rwanda and Burundi
(in tonnes)

COUNTRY	1980	1981	1982	1983	1984
Rwanda					
Imports in tonnes	235 886	295 324	339 425	349 793	307 492
Exports in tonnes	30 760	31 176	24 370	18 412	18 452
Total imports and exports	266 646	326 500	363 795	368 205	326 944
Burundi					
Imports in tonnes	118 356	107 104	114 049	116 043	139 032
Exports in tonnes	31 491	34 861	29 211	30 384	33 880
Total imports and exports	149 847	141 965	143 260	146 427	163 912

Source: Ministries of Transport in Burundi and Rwanda.

Total imports and exports for Rwanda for the period (1980-1984) amounted to 1,651,090 tonnes of which 47 per cent (776,012 tonnes) went through the Northern Corridor transit system to Mombasa. An analysis of traffic carried by mode reveals that of the total 1,651,090 tonnes of foreign trade 40 per cent (i.e. 660,436 tonnes) went by road and railway transport to the port of Mombasa. Since Rwanda does not have a railway line, road transport carries traffic to railheads in Uganda at Kasese and Kampala. To Kasese, the route is from Kigali-Kagitumba-Ishaka-Kasese whilst to Kampala road transport moves from Kigali-Kabale-Masaka. In addition fuel is ferried by road transport from Nairobi to Kigali and Bujumbura. The bulk of the traffic is, however, carried by road transport as through traffic from Kigali to Mombasa. Between 1980-1984, 7 per cent of traffic (54,146 tonnes) was carried by air to Mombasa whilst the other seven per cent went by unspecified routes.

Table 3 shows that Burundi's total imports and exports from 1980 to 1984 amounted to 745,411 tonnes, of which 190,173 tonnes (26 per cent) went through the Northern Corridor to the port of Mombasa. During the same period 64 per cent (474,538 tonnes) of Burundi's traffic went by the Central Corridor (Dar es Salaam-Kigoma-Bujumbura). It is evident from these figures that Burundi does not utilize the Northern Corridor to the same extent as Rwanda.

Due to unavailability of import and export figures (in tonnes) for Uganda it has not been possible to include an analysis on Uganda of the modal split of traffic between railways and road transport on the Northern Corridor. It is however, known that following the demise of the East African Community in 1977, the modal split which was predominantly in favour of rail was altered. It is now estimated that rail transport handles a quarter of the transit traffic[2/]. However, available figures for import and export traffic carried by railways reveal a significant 219 per cent increase in imports hauled by railways between 1980 and 1986; during the same period export traffic hauled by railways on average increased by 205 per cent.

An examination of Table 4 containing modal tonnage split for the Mombasa port hinterland reveals that in 1980 import and export traffic moved by road transport was three times more than that carried by rail. By 1984 the modal split was more pronounced with road transport carrying five times more traffic than rail. The predominance of traffic carried by road transport has put a lot of strain on the road infrastructure with the consequence that increased funding is required for both maintenance and reconstruction of those sections where the pavement has given in due to heavy traffic flows.

Table 4. Mombasa Port Hinterland and Modal Tonnage Split

Modal Transport	1980	1981	1982	1983	1984
By road, imports	1 407 384	1 405 766	881 170	681 318	1 311 578
By rail, imports	529 610	501 692	371 694	327 994	274 040
Total by road and railway	1 936 994	1 907 458	1 252 864	1 009 312	1 585 618
By road, exports	532 857	509 283	531 089	715 862	550 586
By rail, exports	101 632	110 738	115 200	136 399	124 411
Total by road and railway	634 489	620 021	646 289	852 261	674 999

Source: Kenya Ports Authority

2/ Study on Harmonization and Co-ordination of Transport in Africa in the Southern African Subregion, ECA, August 1985.

4.2.2 Central Corridor

The main route on the Central Corridor is the railway line from Dar es Salaam to Kigoma on Lake Tanganyika from where traffic is transported by lake vessels to Bujumbura or to Kalemie in Eastern Zaire. From Bujumbura traffic destined to Bukavu (Zaire) and Kigali (Rwanda) is moved by road. Table 5 shows volume of transit traffic through the port of Dar es Salaam from Zaire, Burundi and Rwanda. During the period 1979 to 1984, an average of 128,000 tonnes of transit cargo passed through the port of Dar es Salaam.

Table 5. Transit Traffic Through Dar es Salaam Port, for Burundi Rwanda and Zaire - Thousand Tonnes

	1979	1980	1981	1982	1983	1984
Imports	53	60	58	45	40	69
Exports	51	60	83	66	90	94
TOTAL	104	120	141	111	130	163

Source: Study on Harmonization and Co-ordination of Transport Modes in Africa. Eastern and Southern African subregion.

An analysis of rail/road modal split of the Dar es Salaam port hinterland reveals that in 1980 road transport accounted for 83 per cent of imports, leaving 17 per cent to railways (see Table 6 below). In 1984, the modal split for imports had changed to 65 per cent by road and 35 per cent by railway. Between 1980 and 1984 railway traffic has on average increased by about 2 per cent. The modal split in favour of railway transport has been more pronounced for exports than imports. In 1980 road and rail transport carried 58 per cent and 42 per cent of export traffic respectively. In contrast, by 1984 the railway was carrying 71 per cent and road transport 29 per cent of total export traffic.

Table 6. Dar es Salaam Port Hinterland Transport by Modal Tonnage Split

	1980	1981	1982	1983	1984
By road, imports	872 625	712 643	825 454	519 829	631 637
By rail, imports	185 064	91 633	127 346	221 993	335 083
Total by railway and road	1 057 689	804 276	952 800	741 822	966 720
By road exports	424 466	302 860	259 317	233 320	182 980
By railway, exports	301 452	344 854	396 752	335 395	449 221
Total by road and railway	725 918	647 714	656 069	568 715	632 201

Source: Tanzania Harbour Authority.

A comparison of the Northern Corridor and Central Corridor indicates that for the former road transport has taken an increasing share of traffic at the expense of railways; whilst for the latter railway transport has increased its share from 27 per cent in 1980 to 49 per cent in 1984.

4.3. General status of the corridors

4.3.1 Physical condition of road links

The Northern Corridor road link, Bujumbura-Kigali-Kampala-Nairobi-Mombasa, is bituminized. However, some sections of the pavement have deteriorated to such an extent that urgent rehabilitation and/or reconstruction is required.

In Kenya, the Mombasa-Nairobi-Eldoret-Malaba road link is in overall good condition. There are, however, five different sections totalling 194 kilometres on which rehabilitation works are either in progress or are scheduled to commence during 1987.

In Uganda a total length of 216 kms of road sections that were originally constructed to bitumen standards are in need of reconstruction. Funding has been partly secured for 116 km and work is expected to start in 1987. These sections are: Jinja-Kampala and Masaka-Lyantonde-Mbarara. The 100 km Kakiturnba-Ntungamo-Ishaka road is on the main road connecting Kasese, which is the Uganda Railway terminal. Prior to the upgrading of this class II gravel road to bitumen standard, feasibility studies and detailed engineering design work should be carried out as well as for the 40 km long section of Kabale - Gatuna in Uganda.

In Rwanda the road link from Gatuna to Kigali is being reconstructed, whilst the sections between Kigali and Butare and Upper Akanyaru on the Rwanda/Burundi border is in good condition.

The Burundi section of the corridor from Upper Akanyaru to Bujumbura is in good condition.

With regard to the Central Corridor the construction of some road sections linking Burundi and Rwanda to Tanzania is required. Within Burundi these are Muyinga-Kobero and Makebuko - Gankuso which leads to the Rusumo-Isaka-Dar es Salaam road. To the South, the construction of the road Boma du chef to Mabanda would give access to the Uvinga rail head on the Kigoma-Dar es Salaam railway line.

Road traffic from Rwanda can either go to Bujumbura where it is transshipped to vessels for onward transportation to Kigoma or from Kigali to Dar es Salaam via Rusumo and Isaka. From the Isaka railhead traffic can be moved by rail to the ports. Within Tanzania 127 km of the Rusumo-Isaka road (Lusahanga-Bukombo) is under construction, while for the Bukombe-Isaka section the updating of the engineering design has been completed.

4.3.2 Physical condition of the railway system

Of the three railways found in the subregion Kenya Railways Corporation (KRC) has fewer operational and infrastructural constraints than Uganda Railways Corporation (UAR) and Tanzania Railways Corporation (TRC). Certain improvements need to be made to sections of the KRC track in order to reduce transit time, increase haulage capacity, strengthen the line to enable it to accept a higher axle load and to install a more efficient and reliable telecommunications network. These improvements include the realignment of two sections to reduce the steep gradients and sharp curves, the re-laying of two sections with heavier rails and the strengthening of viaducts, and the improvement of signalling.

The track of Uganda Railways Corporation is in a very poor condition, especially between Kasese and Kampala where the rails were laid without ballasting. The line is, therefore, desperately in need of rehabilitation, especially ballasting and the replacement of the old rails. Other problems are shortage of wagons and spare parts for both wagons and locomotives.

Tanzanian Railway Corporation's track and telecommunications network is also in dire need of rehabilitation.

4.3.3 Inland ports and wagon ferry services

Traffic carried by wagon ferries between Kisumu in Kenya and Port Bell in Uganda has grown substantially since the signing of the Inter-Railway Agreement between Kenya Railways Corporation and Uganda Railways Corporation which also covered marine transport on Lake Victoria. The objective of the Agreement, inter alia, is to streamline documentation, immigration and customs procedures so as to effect clearance of trains at border posts within four hours of receiving traffic during working hours. The increase in traffic routed via Kisumu and Jinja can be attributed to the Agreement between the two railway administrations to route all traffic to destinations west of Tororo via Kisumu. In order to cope with the traffic between Jinja and Kisumu and vice versa, Uganda Railways operates two wagon ferries whilst Kenya Railways has M.V. Uhuru servicing the route. The movement of traffic is in block trains. A recent estimate has put the volume of traffic handled by wagon ferry services at 10 per cent with all coffee and oil shipments going by lake transport. This upsurge in traffic has underscored the need to improve port installations at Port Bell.

On the Central Corridor the lake ports of Kigoma in Tanzania and Bujumbura in Burundi need certain new equipment and spare parts for the repair of some of their old equipment.

4.3.4 The sea ports

Mombasa Port: The port of Mombasa is very well equipped for handling all types of cargo. Apart from 16 quay side berths, it also has 6 deep water mooring berths, and special equipment for handling certain goods. Generally speaking, the port facilities meet the requirements of the current volume of traffic. Transit goods are handled in the same way as other goods: as soon as the forwarding agent has settled the transit fees (transit bond) with the Kenyan customs authorities, the goods in transit may be cleared from the port and deposited in warehouses in town.

The most important area of Mombasa is Kilindini Harbour which has mooring facilities for all categories of shipping vessels. Mombasa Port offers the following facilities: - 16 deep water berths (total length approximately 3,000 m, depth 10 m); - two jetties for crude oil (berths for tanker vessels); - two berths for loose cement (total length 315 m); - one jetty for oil in containers; - approximately 30 warehouses (total area of 180,000 m^2 approximately); - two cold rooms (capacity 2,480 m^3); - more than 100 cranes (one of 20 t); - 40 mobile cranes (one of 35 t); - two floating cranes (5 at 60 t); - two aerial conveyor belts; - one "Kone" crane for containers (40 t); - three "trainstainer" cranes ("Caillard", 40 t); - lateral loading equipment, tractors, towlines and forklifts.

With regard to the port's capacities, it is utilized to approximately 70 per cent capacity. Full capacity will be attained as soon as better organization can be arranged. There is an increase in the availability of equipment and fewer customs formalities.

Dar es Salaam Port: The port is situated in Mzinga Creek. The dimensions and depth of the first section, Malindi quay or lighterage quay make it particularly suitable for lighterage with 3 mooring berths and a 600 m long quay. This section also contains a dock for passenger ships and several moorage facilities for sambouks.

The second part, Southern creek, has a slightly narrower water area but is, however, 450 m wide and almost completely dredged to a depth of 10 m. There are 5 mooring berths (used for lighterage and as a port of call), about 10 quayside berths and two adjacent dock fronts, covering a total of 2,030 m with a 300-350 m platform at the rear.

In all, apart from the mooring berths, there are 11 deep water berths for medium and large vessels.

The Tanzania Harbour Authority (THA) has complete monopoly over all port activities, from the far end of the slipway right up to the exit from the port area, as well as its own personnel and equipment.

There are 57 cranes with adjustable jib, on rails, irregularly distributed along the quayside, 57 mobile cranes, 372 forklifts, 75 tractors and 164 towlines for containers. The equipment is in poor condition.

The facilities for handling cargo include: - an equipped jetty for offloading/onloading of petroleum products (Kurasini Oil Jetty) which can be used by fully loaded vessels of 20,000 Tpl or partially loaded vessels of 35,000 Tpl; depots along the coast for petroleum products installed on an area of 150,000 m^2, with a total capacity of approximately 100,000 t; three berths with a rear surface area of 52,000 m^2 for the traffic of RO-RO containers; 10 warehouses comprising six transit warehouses alongside the quay, with a total capacity of 75,500 m^2 and the other 4 situated in the rear (with a total capacity of 22,500 m^2).

The stocks depots cover an area of 142,440 m^2 and this includes 52,000 m^2 reserved for containers.

Outside the boundaries of the Port, the following areas are available: a THA Warehouse - 24,000 m^2, beside which there is an open area of 19,000 m^2 situated at approximately 10 km from the port; and a TAZARA Warehouse of 50,000 m^2, partly covered, located at 2 km from the port.

The railway network serving the docks and warehouses extends farther than the road network. It is adequately linked with the TRC network (1,000 mm gauge), as well as with the TAZARA network (1,067 mm gauge).

The lighterage fleet and the auxiliary services are comprised of the following vessels: three pilot boats; 14 tugs; 35 cargo barges; 16 cargo lighters; 12 boats for mooring services; and 15 boats for miscellaneous services.

It can be affirmed that the port of Dar es Salaam is currently adequately operated and that it does not yield large profit margins. Greater efficiency could be obtained by increasing containerization and in improving the existing facilities, especially those located at the rear of the docks.

4.3.5 Transit rules and regulations

The rules, procedures and regulations governing national transit are a result of the legal and administrative controls that authorities in transit countries enforce. Transit requirements on the Northern and Central Corridors, inter alia, include documentation, bonding of transit traffic, transit permits and border formalities.

Within the framework of the PTA and the Northern Corridor Transit Agreement a uniform transit regime is in the process of being implemented. Firstly, transit transport documents have been simplified and standardized for harmonized customs control purposes. Furthermore, a regional third party motor vehicle insurance has been worked out and is due to be implemented before the end of 1987. Secondly, programmes aimed at reducing the cost of taking out bonds for transit traffic are also under active consideration. The implementation of these transit transport and trade facilitation measures is expected to reduce delays at borders that are caused by requirements to fulfil national transit requirements by completing new documents, taking out bonds and third party motor vehicle covers. It has been estimated that at present travelling accounts for 55 per cent of time, whilst 45 per cent of the time is spent at border posts processing transit formalities.

4.3.6 Transportation costs

Transportation costs by road are relatively higher than railway and shipping costs (see Table 7 below). A comparison of transport costs between road and rail shows that the former is three times more expensive than the latter. The least expensive mode is lake transport which cost $21 per metric tonne compared to $250 per metric tonne by road transport. A comparison between the Central Corridor and the Northern Corridor reveals that transport cost is cheaper on the Central Corridor than on the Northern Corridor. The differential costs between the corridors can be attributed to shorter distances on the Central Corridor and the fact that there are fewer countries transited than in the Northern Corridor.

Table 7. Multimodal Transportation Costs for Burundi and Rwanda

BURUNDI	MODE	KILOMETRE	US$/MT
Mombasa-Kampala-Kigali-Bujumbura	Road	2 000	242
Dar es Salaam-Bujumbura	Road	1 500	250
Dar es Salaam-Kigoma	Rail	1 200	92
Kigoma-Bujumbura	Ship	600	21

Source: OTRABU 1986

RWANDA			
Mombasa-Kampala-Kigali	Road	1 700	221
Dar es Salaam-Kigali	Road	1 200	200
Dar es Salaam-Kigoma	Rail	1 200	92
Kigoma-Bujumbura	Lake	600	21
Bujumbura-Kigali	Road	300	60

Source: STIR, 1986

A combined transportation of goods by railway, lake and road on the Central Corridor is the cheapest. On average transport costs from Dar es Salaam-Kigoma-Bujumbura amount to $113 per metric tonne. If the goods proceeded by road from Bujumbura to Kigali the cost would be $173/metric tonne. All other things being equal, the Central Corridor is the cheapest, hence the urgent need to improve the capacity and capability of Tanzania's railway system as well as the construction of direct road links between Burundi and Tanzania on one hand and Rwanda and Tanzania on the other.

PART THREE: COUNTRY REPORTS

CHAPTER V. Burundi

5.1 Geography and Demography

Burundi is a land-locked country situated on the shores of Lake Tanganyika; it borders Rwanda to the north, Tanzania to the south and east and Zaire to the west. The country has a total area of 27,834 sq. kilometres and an estimated population of 4.3 million which makes it one of the most densely populated countries in Africa (145 inhabitants per sq. km).

The climate is tropical moderated by altitude (mostly above 1500 metres). The average temperature on the plateau is 21°c with a range of 6°c to 30°c. Around Lake Tanganyika region the climate is more equatorial. The dry season is between the months of May and August.

5.2 Economy and Trade

5.2.1 Agriculture: Ninety-six percent of the population is engaged in agriculture with the main food crops being cassava, sweet potatoes, beans, maize, sorghum and bananas. Millet, wheat, peas and rice are also produced but are of secondary importance.

The main cash crops are coffee, tea, cotton, palm oil, tobacco. Production of coffee, which is the major crop amounts to between 25,000 and 35,000 tons per year. The second and third cash crops are tea and cotton respectively. Livestock occupies an important place in Burundi's economy and fishing in Lake Tanganyika is an important industry as fish forms an important part of the diet.

5.2.2 Industry and Energy: The main industry in Burundi is the processing of local agricultural products: coffee, tea and cotton. Other industrial enterprises produce metal goods, soap, paint and varnish. There are also factories for textiles and shoes as well as a brewery. The mineral sector includes cassiterite, bastnaesite, nickel, uranium, copper and platinum. There is enough hydroelectric power to meet the country's needs.

5.2.3 Trade: Agricultural products represent about 95 per cent of Burundi's exports with coffee providing about 90 per cent of export earnings followed by cotton, hides and skins. About 5 per cent of Burundi's exports are minerals mainly casseterite and bastnaesite. Main export markets are USA and EEC countries.

Main imports are machinery and transport equipment, manufactured goods, fuel and lubricants, chemicals and related products and food items. Suppliers are EEC countries, Japan, China and Iran.

5.3 General condition of transport and communications networks

5.3.1 Internal network

In Burundi three forms of transport are mentioned in the five-year economic and social development plan 1983-1987, namely land, water and air transport. The situation of these different forms of transport is described hereafter:

5.3.1.1 Roads: The national road network totals 5,442 km divided as follows:

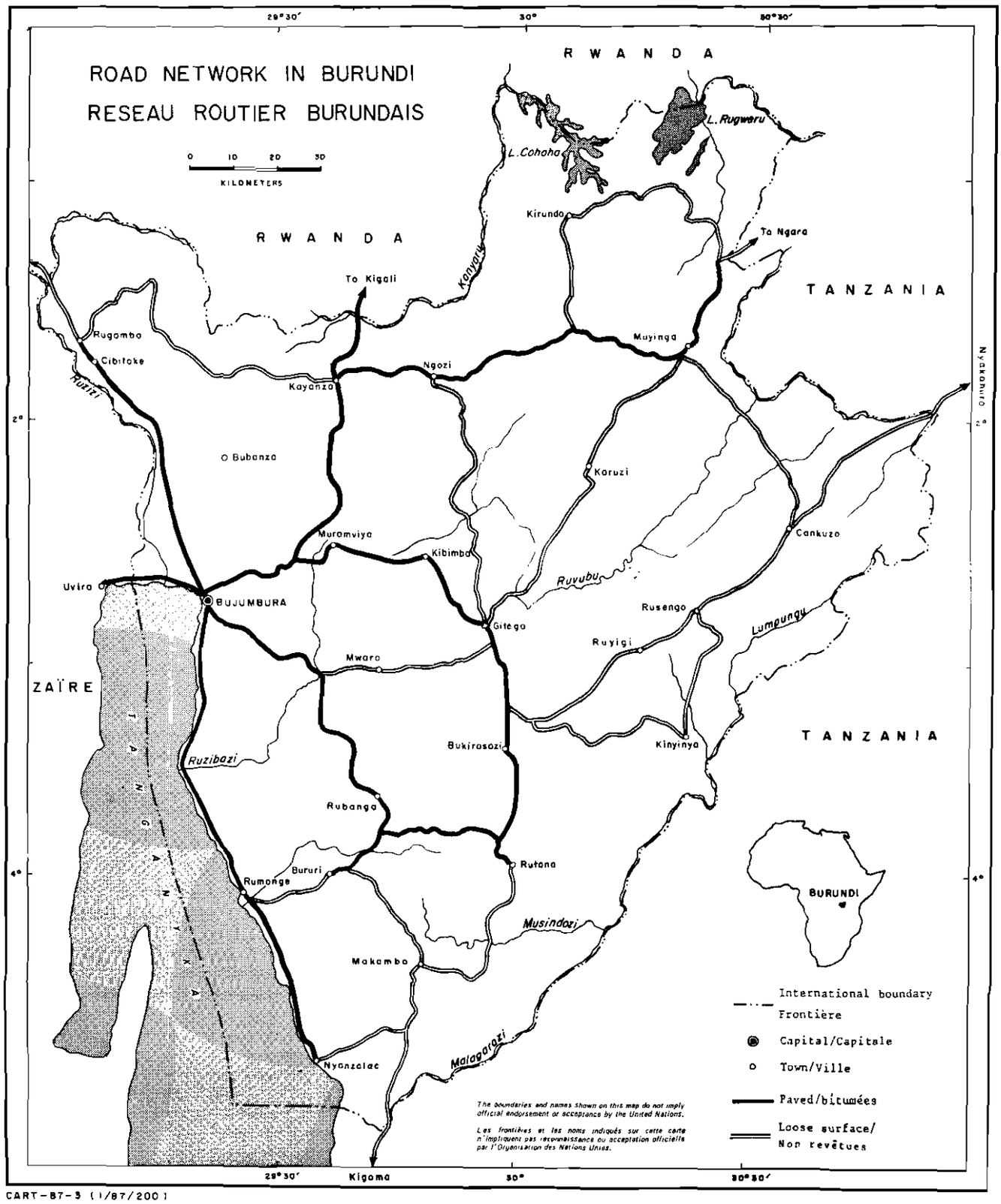
- 755 km trunk roads (RN) - 3 in all. Of the 755 km, 548 km have been surfaced, 159 km are under construction and 52 km of the project are awaiting construction;
- 1,165 km regional roads (RIG) - 14 in all, of which 60 km are surfaced;
- 1,362 km provincial roads (RP); and
- 2,160 km village roads (RC) and tracks.

In addition to the main highways, the 4th quinquennial plan 1983-1987 provides for the construction of 4 major trunk roads, a total of 329 km of supplementary roads, of which 238 km will be eventually asphalted. The proposed roads will link Rugamo-Kayanza (133 km), Mutambara-Nyanza-Lake (91 km), Gitega-Ngozi (81 km) and Muzinda-Bulanza (24 km). However, the road network is still inadequate since several regions to the north, east and south of the country still do not have roads which are passable in all seasons.

The layout of the road network is largely determined by the relief conditions. Its extremely irregular terrain necessitates major excavation works which are very costly.

5.3.1.2 Road transport: In its 3rd quinquennial plan, Burundi went all out to improve the modes of transportation of persons and goods, by establishing a joint transport service operated by OTRABU. The capital Bujumbura has 15 inter-urban services. There are also inter-regional services linking Bujumbura with the interior of the country.

5.3.1.3 Water transport: Shipping operations exist on Lake Tanganyika's ports - Bujumbura, Kigoma in Tanzania, Mpulungu in Zambia, Kalemie and Kalundu in Zaire. This form of transportation provides a back-up to transportation of goods by railway (Dar-es-Salaam-Kigoma). The main products transported are cement, salt, construction material, sugar and coffee. The port of Bujumbura handled more than 221,000t of goods in 1986 as against 135,000t in 1975.



CART-87-3 (1/87/200)

ARNOLAC Company organizes lake transportation in Burundi on behalf of the government. Its fleet comprises 5 tugs, 3 motorized vessels, each with a capacity of 100t, 8 barges for general cargo with a capacity of 4,050t, tanker - barges with a total capacity of 525t. There is also a 252t container vessel donated by France. The fleet's import capacity is 149,850t for general cargo and 17,000t for fuel. Taking into account the volume of imports in 1986, 118,352t from Kigoma and Mpulungu handled by ARNOLAC, it can be deduced that only 71% of this is utilized.

Some units are very old and require regular maintenance, but the Kigoma shipyard does not have the capacity to cope with this maintenance. On a short term basis, it is envisaged that the fleet will be increased by a Greek vessel (500t capacity) and by the ex "Duc de Brabant" (300t capacity) now undergoing repairs.

In 1986 the volume of goods handled in the port of Bujumbura as divided among the various companies as follows:

Company	Tonnage	%
ARNOLAC	148,483	67
MUHABURA	16,766	8
SNCZ	25,312	11
OTHERS	30,486	14
Total	221,047	100

The port is protected by two jetties forming the access channels. There are no floating buoys nor any navigation aids. At the entrance to the port there is an internal harbour with concrete quays for moorage. The port has the following facilities:

- 2 quays for dry cargo equipped for loading and off loading oil barges;
- 2 transit warehouses for imports (each approximately 4,000^2);
- 2 warehouses for storage of tea and coffee for export (4,000 m^2);
- 4 cranes on rails (Titan 2.5 t at 36m, or 5t at 18m);
- 1 fixed crane for unloading containers (50), 5 mobile cranes and 5 fork lifts.

Neither the port facilities nor the equipment for handling goods are properly maintained. The Titan cranes and the fixed crane (30t) need urgent overhauling.

Bujumbura Port was built to handle an annual traffic of 350,000t of dry goods. Thus the port is functioning at only 50% capacity. It is possible to increase the effectiveness of the port and its facilities by making more intense use of its existing resources; however this should always be accompanied by adequate maintenance.

5.3.1.4 Air transport : Burundi national airlines provides domestic air services by operating two Twin Otters. Kigali, Kalemi and Kigoma have regular services. The national carrier, Air Burundi, also operates occasional non regular flights to the interior of the country. At the moment the three countries of the CEPGL have plans for establishing a community airline which will be responsible for implementing air services in Burundi, Rwanda and Zaire.

5.3.2 International Links : Burundi maintains international road links through the Mombasa and Dar-es-Salaam corridors, with the combined use of roads, railways and lakes. This diversified network operates as follows:

Bujumbura-Kigali-Kagitumba-Kampala	(Road)	871 km
Kampala-Mombasa	(Road)	1338 km
	Total	2209 km
Bujumbura-Kigali-Kagitumba-Kampala-Malaba	(Road)	1093 km
Malaba-Mombasa	(Rail)	1085 km
	Total	2178 km
Bujumbura-Kigali-Nyamirembe	(Road)	623 km
Nyamirembe-Kisumu	(Lake)	440 km
Kisumu-Mombasa	(Rail)	932 km
	Total	1995 km
Bujumbura-Kigali-Nyamirembe	(Road)	623 km
Nyamirembe-Kisumu	(Lake)	440 km
Kisumu-Mombasa	(Road)	830 km
	Total	1893 km
Bujumbura-Kigali-Bukiba	(Road)	672 km
Bukiba-Kisumu	(Lake)	380 km
Kisumu-Mombasa	(Rail)	932 km
	Total	1984 km
Bujumbura-Kigali-Bukoba	(Road)	672 km
Bukoba-Kisumu	(Lake)	380 km
Kisumu-Mombasa	(Road)	830 km
	Total	1882 km
Bujumbura-Kigali-Kahama	(Road)	813 km
Kahama-Nairobi	(Road)	1108 km
Nairobi-Mombasa	(Road)	334 km
	Total	2255 km
Bujumbura-Kigoma	(Lake)	175 km
Kigoma-Dar-es-Salaam	(Rail)	1253 km
	Total	1428 km
Bujumbura-Kigali-Isaka	(Road)	781 km
Isaka-Dar-es-Salaam	(Rail)	981 km
	Total	1763 km

CHAPTER VI: Kenya

6.1 Geography and Demography

Kenya covers an area of 583,000 sq. km. It lies on the equator, but wide variations in altitude and topography provide a range of climatic and soil conditions. More than half of the total area is semi-desert, but the remaining, which varies from tropical to temperate includes some of the most fertile soils on the continent. The most populated area of the country is the fertile area in the centre (Nairobi, Thika, Emba areas) and in the south-west (Kericho, Kisumu, Kakamega areas).

The country has a population of 18.1 million (1983) and a population density of 31 persons per km^2. The average annual rate of population growth is 3.8 per cent.

Although Kenya is an industrialised country in the African context, only 12.5 per cent of the population lives in the urban areas. Formal sector employment in 1983 was 1,093,000 out of which 1.9 per cent was in the transport sector.

6.2 Economy and Trade

Kenya is basically an agricultural country with a well developed industrial sector. It has one of the most stable economies in the Eastern and Southern African sub-region, partly because of its diversified economic base, well developed infrastructure and its easy access to the sea.

The country had a Gross Domestic Product (GDP) at current prices of K£3,291 million in 1983 and the economy has expanded at an average annual rate of 4 per cent in real terms. Agriculture contributes 33.2 per cent of the GDP, followed by manufacturing (12.4 per cent) and tourism and related industries at 10.5 per cent.

Despite its relatively stable economy, Kenya faces a trade deficit like many other African countries. The main exports are coffee, tea, petroleum products, meat and meat products. In value terms the EEC countries are the most important destination for Kenya's exports. Imports originate from the Middle East, the EEC and the United Arab Emirates (UAE) in order of importance.

6.3 General Status of Transport and Communications System

6.3.1 Institutional Framework

The Ministry of Transport and Communications is responsible for the development and maintenance of transport and communications infrastructure. Government policy on transport is based on the following three premises:

(i) That transport is a service sector which should be developed in line with the needs of the productive sectors.

(ii) Modal split should be based on the comparative advantage of the carriers.

(iii) The comparative advantage should be attained through the market mechanism.

6.3.2 Internal System: The internal transport and communication system is well developed in Kenya; road, inland water and railway systems cater for the movement of local goods and passenger traffic including international transit traffic.

The railway network in Kenya is a 2,101 km route, with the main line running from Mombasa to Malaba with a branch at Nakuru west to Kisumu, and Voi to Taveta. Kenya Railways has adequate capacity to handle increased volumes of traffic without any major change in the system except improved track utilisation and rolling stock.

With regard to roads, Kenya has a total road length of 150,600 km out of which 57,940 km are classified and special purpose roads. Classified roads are administered by the Ministry of Transport and Communications and fall into the following five types: (i) International trunk roads; (ii) National trunk roads; (iii) Primary roads; (iv) Secondary roads; and (v) Minor roads,

Since the break-up of the East African Community in 1977, lake transportation on Lake Victoria has been limited to the country's own territory. In February 1986 steamer services were inaugurated between Kisumu, Kemondo Bay and Mwanza Port. However, it appears that this service has not been sustained.

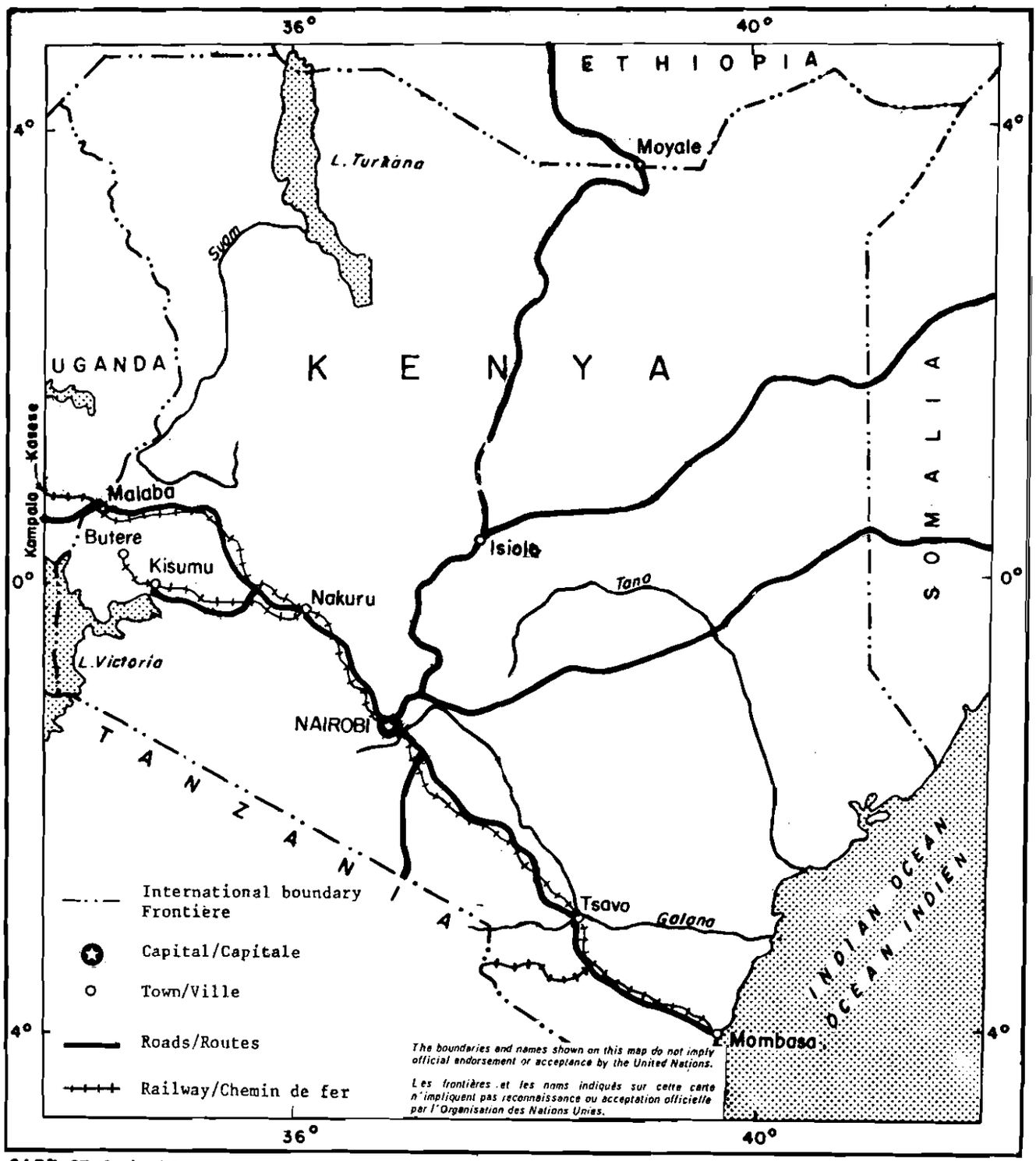
6.3.3 International Links: The road and railway systems link up with the road/rail systems of Uganda and Tanzania at the respective border posts. The northern corridor rail link which runs from Mombasa to Nairobi and from there either to Malaba or to Kisumu is in good condition. Kenya Railways can handle with ease all traffic that is offered. The inter-State road links comprise the Mombasa - Nairobi - Eldoret - Malaba and the Mombasa-Nairobi-Kisumu-Busia-Uganda on the Northern Corridor; to the South Nairobi-Namanga road link to Tanzania. Other inter-State road links, such as Isiolo-Moyale (Kenya/Ethiopia border) and Garrisa-Liboi (Kenya/Somalia border), require to be constructed to standards which will allow unrestricted movement of inter-State traffic.

6.3.4 Problem Areas: The major problem areas concern the under-utilisation of existing Kenya vessels for lake transport services and road and railway transit requirements that are not only costly, but cause considerable delays to the movement of international traffic.

KENYA

EXISTING TRANSPORT LINKS WITH RWANDA, BURUNDI, UGANDA, ZAIRE AND TANZANIA

LIAISONS EXISTANTES ENTRE LE KENYA ET LE RWANDA, LE BURUNDI, L'OUGANDA, LE ZAIRE, LA REPUBLIQUE UNIE DE TANZANIE



CART-87-23 (3/87/)

Transit factors that cause delays and increased transit costs are mainly due to documentation and bond security requirements. With regard to road transport the introduction of the uniform Road Customs Transit Declaration Document (RCTD) will reduce delays and eliminate transit documentation costs because a set of documents for the entire journey will be completed at the office of commencement of the transit operation. For inter-State railway transport the absence of single invoicing of railway traffic causes delays at border posts because of the need to raise new documents. Border formalities also contribute to increased transit times as a result of inadequate customs and immigration officials to serve traffic; physical separation of border posts between Kenya and neighbouring countries which entails double checking and clearance and inadequate parking facilities.

The problem areas highlighted above are being tackled at the sub-regional level, within the framework of PTA and the Northern Corridor Transit Agreement. Consequently, a regional transit system of which the objective is to facilitate the movement of goods, persons and services is in the process of being implemented.

6.4 Transport and Communication within the current national development plan.

Previous development plans in Kenya have emphasized the importance of infrastructural facilities for all modes of transport and communications; however during the Fifth Development Plan (1984-1988) emphasis has been given to modernization and maintenance of existing infrastructure.

The highway sub-sector has been allocated about two-thirds of the total transport investments with emphasis on strengthening rehabilitation and resealing of paved roads and regravelling of gravel roads followed by the ports and telecommunications subsectors. The latter, however, generate a large proportion of their investment needs from their own cash flow.

The projects included for consideration for the corridors have been selected taking into account current structural adjustments going on in Kenya and within the framework of the above priorities.

CHAPTER VII. Rwanda

7.1 Geography and Demography

Rwanda, a land-locked State in Central Africa just south of the Equator, is bounded to the west by Zaire, Uganda to the north, Tanzania to the east and Burundi to the south. The total area of the country is 26,338 sq.km. The population is estimated to be just over 5 million and is one of the most densely populated African countries, (163 inhabitants per sq.km.). Having a very fertile soil and favourable climatic conditions, Rwanda is mainly an agricultural country. The climate is tropical with an annual temperature of 18°c.

7.2 Economy and Trade

7.2.1 Agriculture - About ninety-five per cent of the population is engaged in this sector dominated by subsistence farming. Main food crops are plantain, bananas, beans, peas, sweet potatoes, cassava, sorghum, maize, millet. The main cash crops are coffee, pyrethrum, quinine, cotton, tea, tobacco. Livestock development is also important. The current five year livestock development plan of Rwanda is intended to improve meat production and exports of hides and skins.

7.2.2 Industry - The industrial sector of Rwanda is dominated by food processing and breweries. In addition, agricultural products such as coffee, tea, cotton are also processed in the country. Other factories such as textile mills, soap, paint, pharmaceutical items and furniture also exist.

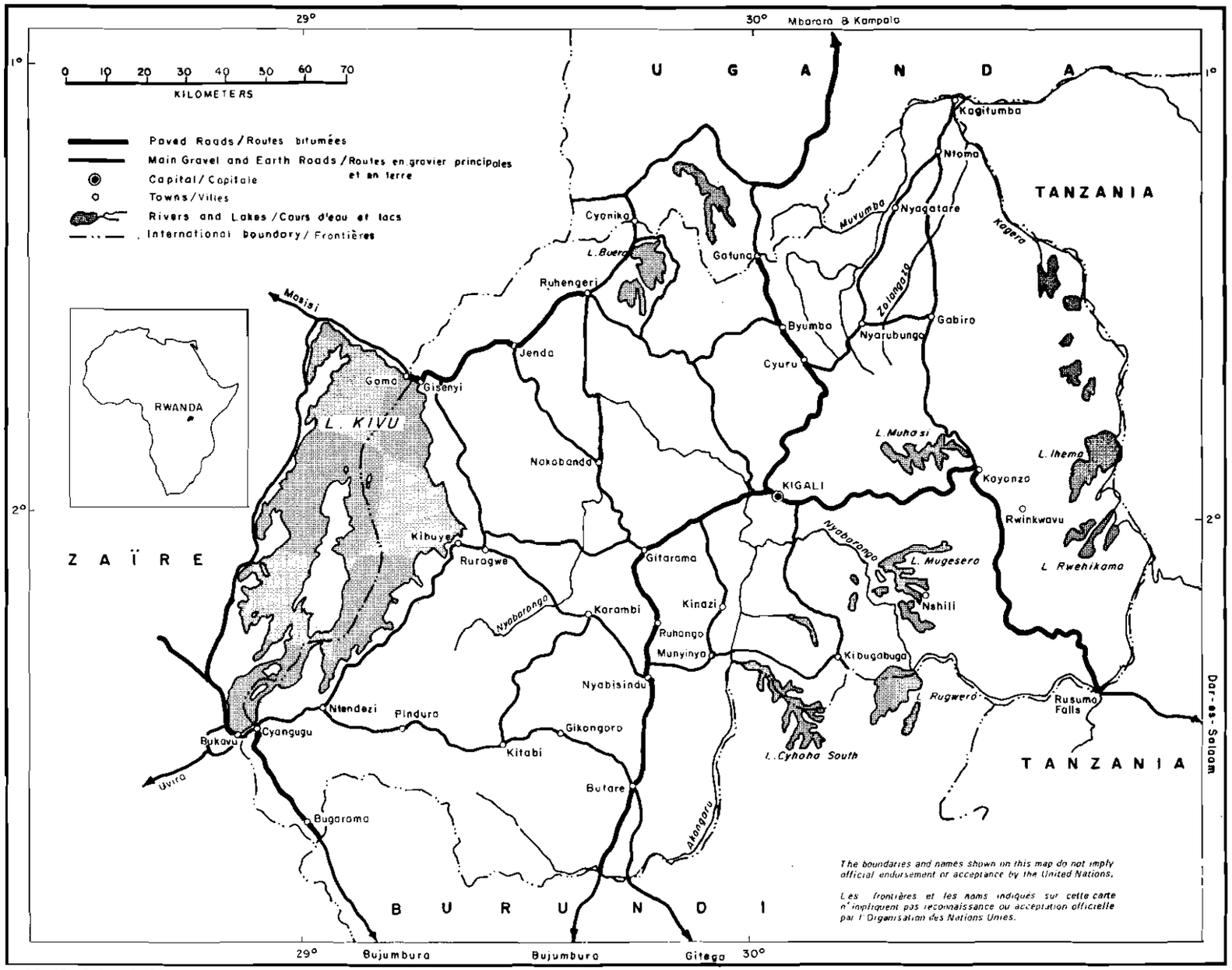
Mining also plays an important part in the economy and occupies second place in the export earnings, after agriculture. The main items are cassiterite, wolfarm, tin ore, methane gas and gold.

7.2.3 Trade - The major trade connections are with the United States of America, EEC countries and the neighbouring countries of Zaire and Burundi. The main exports are coffee (60%), tin ore, wolfram, tea, pyrethrum, hides and skins, while the major imports are machinery and transport equipment, food items, fuel and lubricants, industrial and construction equipment and materials.

7.3 General Condition of Transport and Communications Network

7.3.1 Road Network - In the early 1970's, the whole country had only 40 km of asphalted trunk roads and 21 km of asphalted urban roads. The entire length of the then existing road network was 6,000km. From the 1970's onwards, this network was rapidly developed, increasing the secondary network from 6,000 km to more than 12,000 km by 1985. At the moment, Rwanda has a road network of 13,000 km. The major asphalted trunk road network in 1985 was comprised of:

ROAD NETWORKS IN RWANDA
RESEAUX ROUTIERS AU RWANDA



CART-87-2 (1-87-200)

Kigali - Gatuna	80 km
Ruhengeri - Gisenyi	60 km
Kigali - Rusomo	153 km
Kigali - Butare	153 km
Kigali - Ruhengeri	86 km
Ruhengeri - Cyonika	23 km
Gisenyi - Braliwa	6 km
Butare - Cyangugu (under construction)	86 km
Total	647 km

Rwanda's road network development plan provides for the construction of the following roads by 1990:

Butare - Cyangugu (completed)	67 km
Kyonza - Kagitumba	120 km
Gitarama - Kibuye	86 km
Gitarama - Ruhengeri	100 km
Total	373 km

7.3.2 Air Transport - There are five domestic airports served by Air Rwanda, the national airlines. The airports are located at Gisenyi, Kemembe, Ruhengeri, Butare and Gabari. On its domestic routes the national airline operates one Twin Otter, one BN Islander and one Piper Aztec. The total volume of passenger traffic rose to 30,000 in 1983, whilst the volume of goods traffic was nil due to the small size of the country.

7.3.3 Water Transport - Water transport is highly developed on Lake Kivu. The activities on this lake can be divided into two, namely, Rwanda transport services and Zaire transport services. The flow of cross-border transport services is still quite low. The volume of goods handled in the main ports of Rwanda as: Gisenyi, 24,800t; Kibuye, 16,560t and Cyangugu, 17,960t.

7.3.4 International road links - The Rwanda international road network which links Kigali to Mombasa and Dar-es-Salaam is composed of the following sections:

Kigali-Kagitumba-Kampala-Mombasa	(Road)	1737 km
Kigali-Kagitumba-Kampala	(Road)	573 km
Kampala-Mombasa	(Rail)	1338 km
	Total	1911 km
Kigali-Kampala-Malaba	(Road)	808 km
Malaba-Mombasa	(Rail)	1085 km
	Total	1893 km
Gisenyi-Kasese	(Road)	391 km
Kasese-Mombasa	(Rail)	1672 km
	Total	2063 km

Kigali-Nyamirembe	(Road)	338 km
Nyamirembe-Kisumu	(Lake)	440 km
Kisumu-Mombasa	(Road)	932 km
	Total	1710 km

Kigali-Nyamirembe	(Road)	338 km
Nyamirembe-Kisumu	(Lake)	440 km
Kisumu-Mombasa	(Road)	830 km
	Total	1608 km

Kigali-Bukoba	(Road)	387 km
Bukoba-Kisumu	(Lake)	380 km
Kisumu-Mombasa	(Road)	830 km
	Total	1597 km

Kigali-Kahama	(Road)	528 km
Kahama-Nairobi	(Road)	1108 km
Nairobi-Mombasa	(Road)	334 km
	Total	1970 km
Kigali-Bujumbura	(Road)	285 km
Bukumbura-Kigoma	(Lake)	175 km
Kigoma-Dar-es-Salaam	(Rail)	1253 km
	Total	1713 km

Kigali-Isaka	(Road)	496 km
Isaka-Dar-es-Salaam	(Rail)	982 km
	Total	1478 km

Bukavu-Bujumbura	(Road)	150 km
Bujumbura-Kigoma	(Lake)	175 km
Kigoma-Dar-es-Salaam	(Rail)	1253 km
	Total	1578 km

Bukavu-Kigali-Isaka	(Road)	861 km
Isaka-Dar-es-Salaam	(Rail)	982 km
	Total	1843 km

The transport network existing between the port of Matadi on the Atlantic coast and Mombasa comprises the following sections:

Bukavu-Mombasa-Kisangani	(Road)	1335 km
Kisangani-Kinshasa	(River)	1927 km
Kinshasa-Matadi	(Road)	362 km
	Total	3624 km

Upon the completion of the Bukavu-Kisangani road, the distance between these two points will be shortened as follows:

Bukavu-Kisangani		(Road)	708 km
Kisangani-Kinshasa		(River)	1927 km
Kinshasa -Matadi		(Road)	362 km
	Total		2997 km

While noting that the Bukavu-Kisangani road is considered as one of the links in the Mombasa-Lagos Transafrican Highway, it must also be remembered that in the case of Burundi and Rwanda, it provides an outlet to the main Zairian national highway which leads to the Atlantic Ocean (Bukavu-Kisangani road, Kisangani-Kinshasa/River Zaire and Kinshasa-Matadi (sea port) by railway).

CHAPTER VIII: United Republic of Tanzania

8.1 Geography and Demography

Tanzania has a large land surface, 945,000km² and a fairly large population of 19.8 million. The country lies just south of the Equator between the great lakes of Central Africa (Victoria, Tanganyika, and Nyasa) and the Indian Ocean. The United Republic of Tanzania consists of mainland Tanzania and the islands of Zanzibar and Pemba, both of which lie about 32 km from the mainland. Although Tanzania has a fast growing population at 3.4 per cent per year, the population density is low, 20 persons per km². Most of the population, 80 per cent, is rural and is dependent on agriculture either directly or indirectly.

8.2 Economy and Trade

The agricultural subsector accounts for over 45 per cent of GNP, 90 per cent of employment and roughly 85 per cent of total foreign exchange earnings. The industrial sector is still small, contributing under 13 per cent of GDP. Exports continue to be dominated by the traditional primary products which include coffee, cotton, cashew nuts, sisal, tea and tobacco. Tanzania is among the 25 poorest countries in the world. In 1983 GDP per capita was US$ 229.

8.3 General Status of Transport and Communications

8.3.1 Institutional Framework: The transport and communications system in Tanzania falls under the Ministry of Works and Communications. The transport policy, based on guidelines contained in the "Structural Adjustment Programme for Tanzania, June 1982", lists the objectives and strategies in transport as:

(i) Maximum use of existing railways, shipping and port services to reduce the pressure on the already burdened and more expensive road transport system;

(ii) In the short and medium term periods, priority will be given to the rehabilitation and maintenance of rail and road systems and of existing vehicle fleet and rolling stock rather than creating new transport facilities;

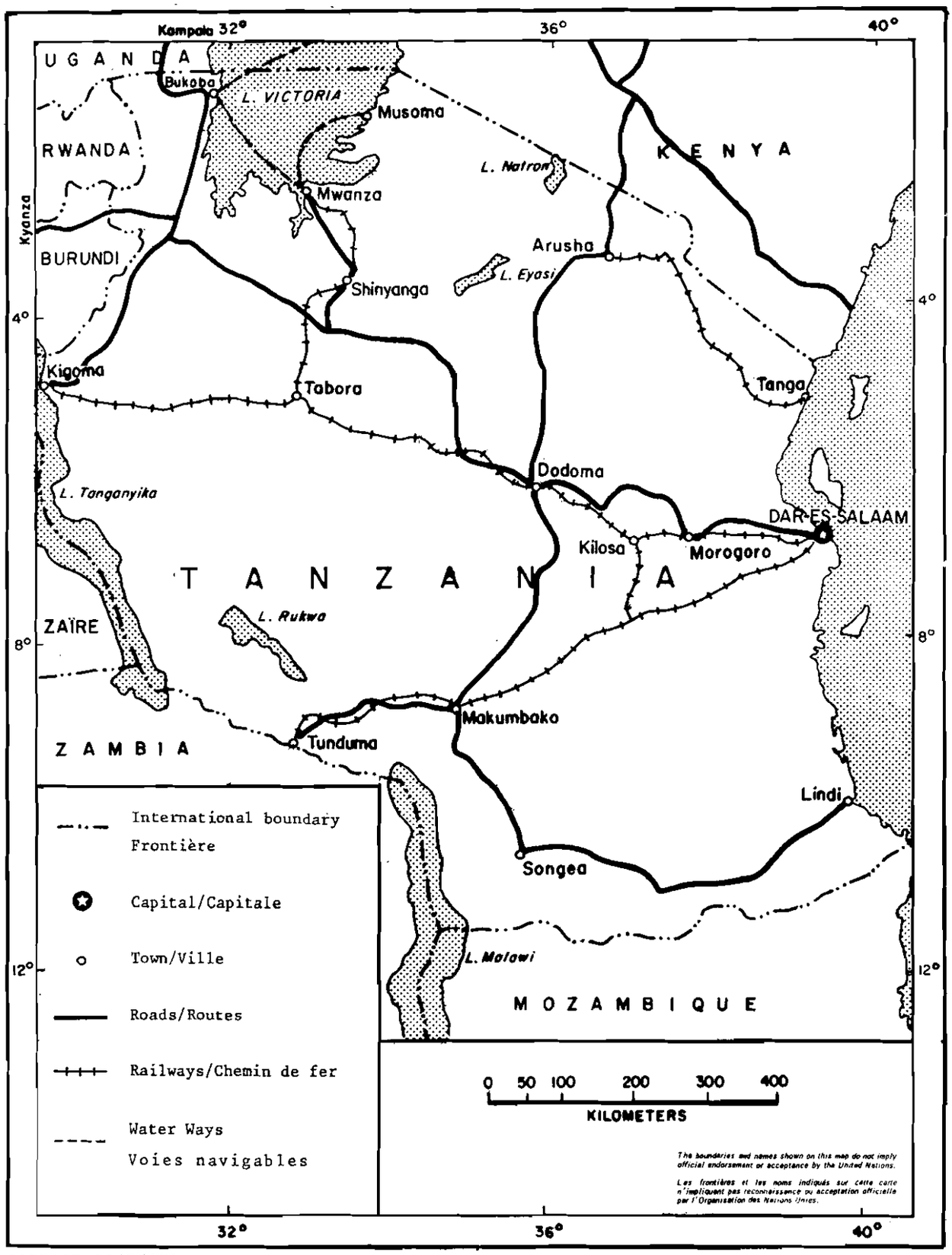
(iii) Sufficiently flexible traffic structures to allow for real cost differentials among regions in terms of cost structures; road standards and different types of operation. This is to allow for the recovery of costs and reasonable margins for transport operations;

(iv) Removal of unnecessary administrative restrictions and controls on inter-regional movement of goods and vehicles that limit efficient use of transport facilities;

TANZANIA

EXISTING TRANSPORT LINKS WITH RWANDA, BURUNDI, UGANDA AND KENYA

LIAISONS EXISTANTES ENTRE LA REPUBLIQUE UNIE DE TANZANIE ET LE RWANDA, LE BURUNDI, L'OUGANDA, LE ZAIRE, LE KENYA



CART-87-24 (3/87)

(v) More systematic measures to ensure more economic use of energy.

8.3.2 Internal System - Generally the transport network in Tanzania is in need of rehabilitation. With regard to roads, there exists a total network of 50,000 km out of which 9,500 km are primary, 7,300 km secondary and the rest rural roads and tracks. In 1982, 2,500 km of the total network were bitumen. The paved roads are mainly the road from Dar-es-Salaam to Arusha in the North and the TANZAM Highway from Dar-es-Salaam to the Zambian border.

The total railway network of 3,680 km is operated by Tanzania Railway Corporation (TRC), a parastatal which is wholly owned by the government, as well as the Tanzania, Zambia Railway Authority (TAZARA) which is jointly owned with the government of Zambia. TRC accounts for 2,640 km of the network while the TAZARA network in Tanzania is 1,040 km. The two railway systems have experienced operational problems that have been due, inter alia, to the poor condition of infrastructure, inadequate motive power, lack of wagons and manpower skills.

Inland water transport on Lake Tanganyika is another important activity. Lake ferry services ply between Kigoma and Mpulungu in Zambia, Bujumbura in Burundi and Kalemie in Zaire.

8.3.3 International Links - Tanzania Railway Corporation links three important port areas: Mwanza and Musoma on Lake Victoria and Kigoma on Lake Tanganyika. From Mwanza, lake ferry services operate to Kisumu (Kenya) and Jinja (Uganda), while from Kigoma lake ferry services operate to Kalemie (Zaire) and Bujumbura (Burundi). TRC also provides a link with Kenya Railways at Taveta. TAZARA links the port of Dar-es-Salaam to Zambia and Malawi via Mbeya where goods for Malawi are transhipped from railway wagons to road vehicles and vice versa.

There are two major paved inter-State routes: Dar-es-Salaam-Morogoro-Iringa-Mbeya-Tunduma on the Zambian border and Arusha-Namanga on the Kenyan border. Existing gravel inter-State road links with Burundi and Rwanda need to be constructed to all weather and eventually to bitumen standard.

8.3.4 Problem Areas - The main problem areas are: poor road conditions, inadequate port capacity, dilapidated railway track, especially Dar-es-Salaam to Kigoma, shortage of locomotive power and wagons, skilled manpower shortages and communications. Several projects which have been formulated will, when implemented, improve the capacities and performances of the road, railway and port systems.

8.4 Transport and Communications within the current national development plan

The Government has set the main criteria for resource allocation and for identification of priority activities for 1987/88 and 1988/89 fiscal years. Transport has been considered a major bottleneck for Tanzania's economy and therefore, has been provided the second highest allocation of resources. The transport sector programme consists of:

(i) the continuation of projects to improve port, highway, airports, and railway infrastructure;

(ii) new road construction in areas of high economic priority;

(iii) reconstruction of badly damaged major roads as well as feeder roads in key production areas, the improvement of maintenance capabilities;

(iv) to increase the effective haulage capacity of the road and railway transport systems;

(v) purchase of railway wagons and buses for public transportation;

(vi) increasing the availability of spare parts, in particular for short-haul trucks.

The lack of adequate maintenance of the telecommunication infrastructure has left the system in serious danger of collapsing. Therefore, the following has been programmed: provision for urgent catch-up maintenance, including adequate supplies of spare parts; and expansion of local networks and the strengthening of system linkages.

The projects that have been identified for this meeting are within the framework of the above criteria.

CHAPTER IX: Uganda

9.1 Geography and Demography

Uganda is a landlocked country in the upper Nile basin, astride the Equator and bounded by the Sudan to the north, Kenya to the east, United Republic of Tanzania, and Rwanda to the south and Zaire to the west. The total area of the country is 236,000 km^2, of which about one seventh is swamps and lakes, and most of the remainder is a plateau about 1,700 m above sea level. Rainfall averages 1,270 mm in the central and eastern parts of the country while the somewhat drier northern parts receive about 760 mm annually. Neither its temperate climate nor its topography pose major impediments to transport.

The population, estimated at 13.5 million and growing at 2.6% per annum, is predominantly rural (93%). Population density averages 57 persons per km^2, which is about twice that of neighbouring Kenya.

9.2 Economy and Trade

The economy is essentially agriculture based, with that sector contributing 75% of GDP and 95% of the country's exports. The share of coffee, the most important export crop, in export receipts increased from 53 per cent in 1981 to over 94 per cent in 1984 and 1985 despite a decline to 151,500 tons in 1985 from 191,000 tons in 1970. Other export cash crops are cotton, tea, tobacco and recently maize which in the past provided up to 42 per cent of export earnings and currently account for less than 10 per cent of agricultural exports.

Uganda is categorised among the Least Developed Countries (LDCs) of the World. In 1984, the country's Gross Domestic Product (GDP) was US$4,710 million and per capita GDP was US$314. The GDP is split between the monetary economy which totalled UShs 4,063 million in 1985 and non-monetary, UShs 2,353 giving a total GDP of Ushs 6,416. In constant 1966 prices, real GDP declined from UShs 7.181 billion to UShs 6,115 billion, a fall of 14.8 per cent between 1978 and 1980, then it recovered to UShs 7,171 billion, an increase of 17.3 per cent by 1983 and declined further to UShs 6,416 billion, or by 10.5 per cent for the years 1984 and 1985.

9.3 General Status of Transport and Communications System

9.3.1 Institutional Framework- There are two Ministries in Uganda which deal with transport and communications. Transport falls under the jurisdiction of two Ministries; the Ministry of Works (MOW) and the Ministry of Transport (MOT). The Ministry of Works is charged with the construction, maintenance and planning of road infrastructure and bridges. Road network management is done at two levels; the Ministry of Works looks after trunk and feeder roads while respective local government authorities are responsible for urban and smaller feeder roads. The Ministry of Transport is responsible for transport planning, regulation and enforcement of additional traffic regulations. This Ministry is also responsible for posts and telecommunications.

The broad policy objective of the government of Uganda in transport is to promote the development of transport infrastructure and capacity so as to alleviate constraints on the marketing, movement and export of agricultural produce. The core of the strategy in transport is to transfer long distance freight traffic from roads to rail. The absence of a comprehensive transport policy has made it difficult for the government to realise its stated objectives.

9.3.2 Internal System: The internal transport and communications system is generally poor and requires urgent rehabilitation, a result of several years of inadequate resource allocation for maintenance and construction.

The road network consists of 25,500 km of unpaved roads and 2000 km of paved roads. The Ministry of Works is responsible for maintaining about 7,500 km of paved and unpaved road while the remainder is maintained by local authorities.

With regard to the railway network, Uganda has 1280 route km. The physical condition of most of the track is not good, as a result speed restrictions on certain sections are imposed. The problem of poor track is compounded by outdated signalling and telecommunications systems Train operations are adversely affected by the shortage of locomotives and wagons. The rehabilitation of track, modernisation of signalling and telecommunications and procurement of rolling stock are required to improve the performance of the railway line.

The government of Uganda has been actively promoting the utilisation of wagon ferry services on Lake Victoria, which were operated by the former East African Railways between the ports of Jinja, Kisumu and Mwanza. In 1978 the government obtained three railway car ferries for Lake Victoria service from Belgium. At the moment, rehabilitation and reconstruction works of ports at Lake Victoria (Port Bell and Jinja) are planned.

9.3.3 International Links - Uganda has ten major inter-State links. Three towards the Zairian border, three towards the Sudanese border, two towards the Kenyan border and two towards the Rwandese and Tanzanian borders. The most important of these is the Northern Corridor link which runs from Malaba-Busia - Jinja - Kampala - Masaka - Mbarara - Kabale - Katuna.

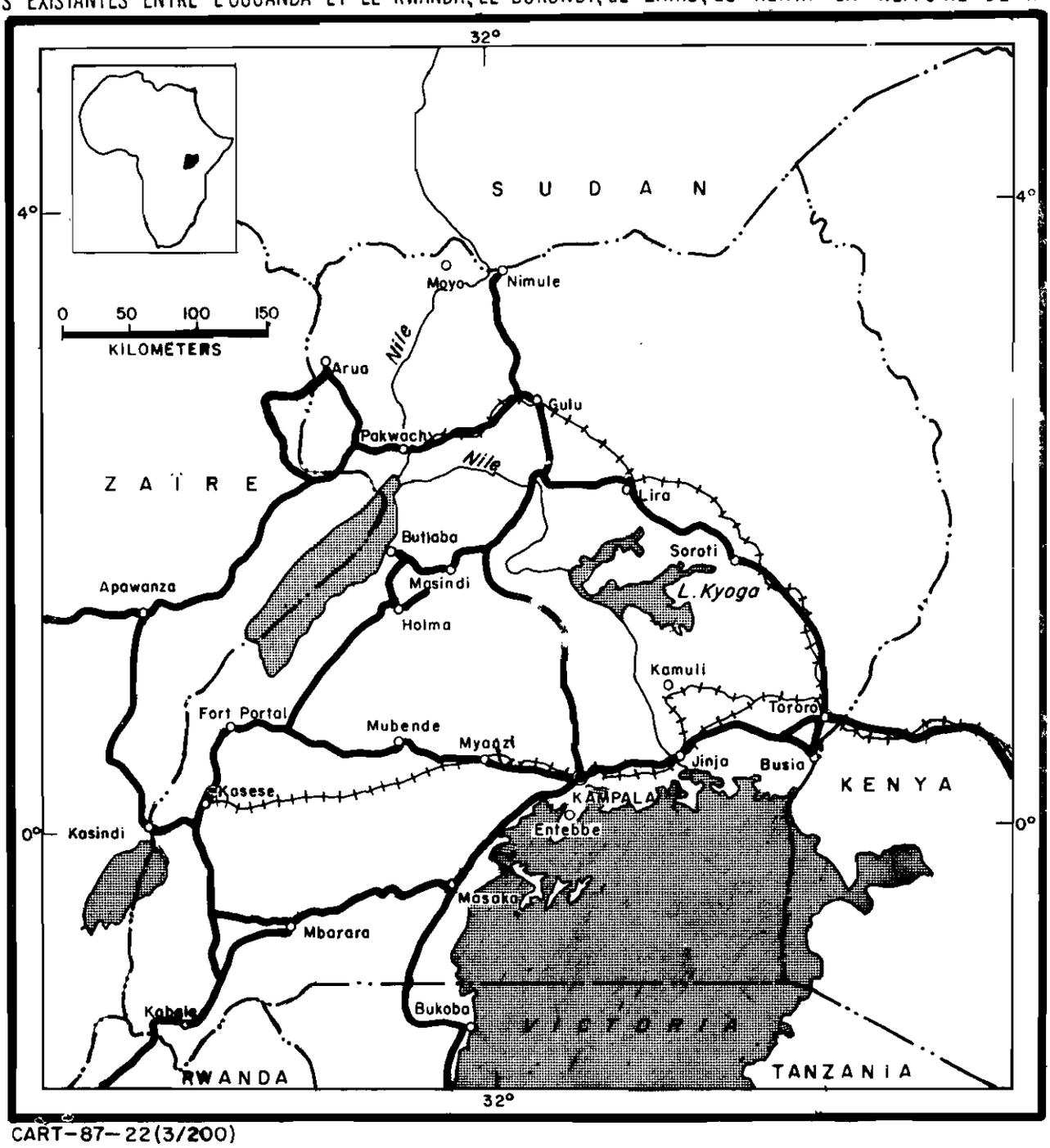
The section of the Northern Corridor passing through Uganda is in poor condition due to inadequate maintenance and inability to enforce regulations especially those related to overloading. Diversion to road transport for both transit and local traffic has been due to the inability of railways to move all bulk traffic.

9.3.4 Problem Area - Transit transport rules, procedures and regulations in Uganda are essentially similar to those of Kenya. As in the case of Kenya, Uganda is in the process of implementing the PTA and Northern Corridor Transit systems which will speed up the movement of transit traffic.

UGANDA

EXISTING TRANSPORT LINKS WITH RWANDA, BURUNDI, ZAÏRE KENYA, AND UNITED REP. OF TANZANIA

LIENS EXISTANTES ENTRE L'OUGANDA ET LE RWANDA, LE BURUNDI, LE ZAÏRE, LE KENYA LA REP. UNIE DE TANZANIE



CART-87-22(3/200)

International boundary / Frontiere

Capital/ Capitale

Towns/Ville

Roads/Routes

Railway/Chemin de fer

Lakes & Rivers / Cours d'eau & lacs

The boundaries and names shown on this map do not imply official endorsement or acceptance by the United Nations.

Les frontières et les noms indiqués sur cette carte n'impliquent pas reconnaissance ou acceptation officielle par l'Organisation des Nations Unies.

Other problem areas for Uganda concern the poor state of the infrastructure which is in need of rehabilitation and regulatory weaknesses in respect of enforcing axle load controls.

9.4 Transport and Communications within the current national development plan

The Government has identified transport and communications as a key sector in the growth and development of Uganda's economy. The sector accounted for about 25 per cent of the total resources allocated for the Recovery Programme.

It has been Government policy to transfer long distance haulage traffic (especially bulk commodities) from road to rail. Road transport should be used to supplement the railways especially in the rural areas and in places which are not served by the railway network. This policy requires rehabilitation of existing railway facilities and provision of modern and adequate equipment to enable rail transport to cope with increasing traffic. Also an immediate priority is the rehabilitation of transport (especially roads) and telecommunication services, especially in the war ravaged areas.

The projects identified for submission to donors during the Co-financing meeting are drawn from the national development plan and are in accordance with the laid down priorities.

CHAPTER X: Zaire

10.1 Geography and Demography

The Republic of Zaire lies in Central Africa, bordered by Congo to the Northwest, Central African Republic and the Sudan to the north, Uganda, Rwanda and Burundi to the east and Zambia and Angola to the south.

The country has a total area of 2,344,885 sq. km and a population of about 30 million. Thus, it is thinly populated. Zaire is considered a semi land-locked country with only 40 km of coastline along the Atlantic Ocean.

Zaire has a diversified climate: western and central areas are hot and humid, tropical forest and east and south east regions are cooler plateaux. In the tropical forest region the temperature varies from 20°c to 30°c and in the high plateau, 15-20°c.

10.2 Economy and Trade

10.2.1 Agriculture - About 70 per cent of the population is engaged in subsistence farming. However, because of migration to the urban centres and partly because of neglect, agricultural production has been declining in recent years. In order to meet food demands in the country, the Government imports a huge quantity of food items including wheat and rice.

The main cash crops in Zaire are: palm oil and palm products, coffee, rubber, tea, cocoa, sugar, tobacco, pyrethrum, quinine, cotton, citrus fruits and vegetables. However, coffee and palm oil output has fallen almost by half since the early 1960's. Rice development was encouraged by FAO in the early 1970's in upper Zaire and Kivu areas and has shown good results. Timber products (logs and sawn wood) are important. It is estimated that almost half of Zaire is covered with forests. Fishing is developed in inland waterways and the annual catches reach about 160,000 tons.

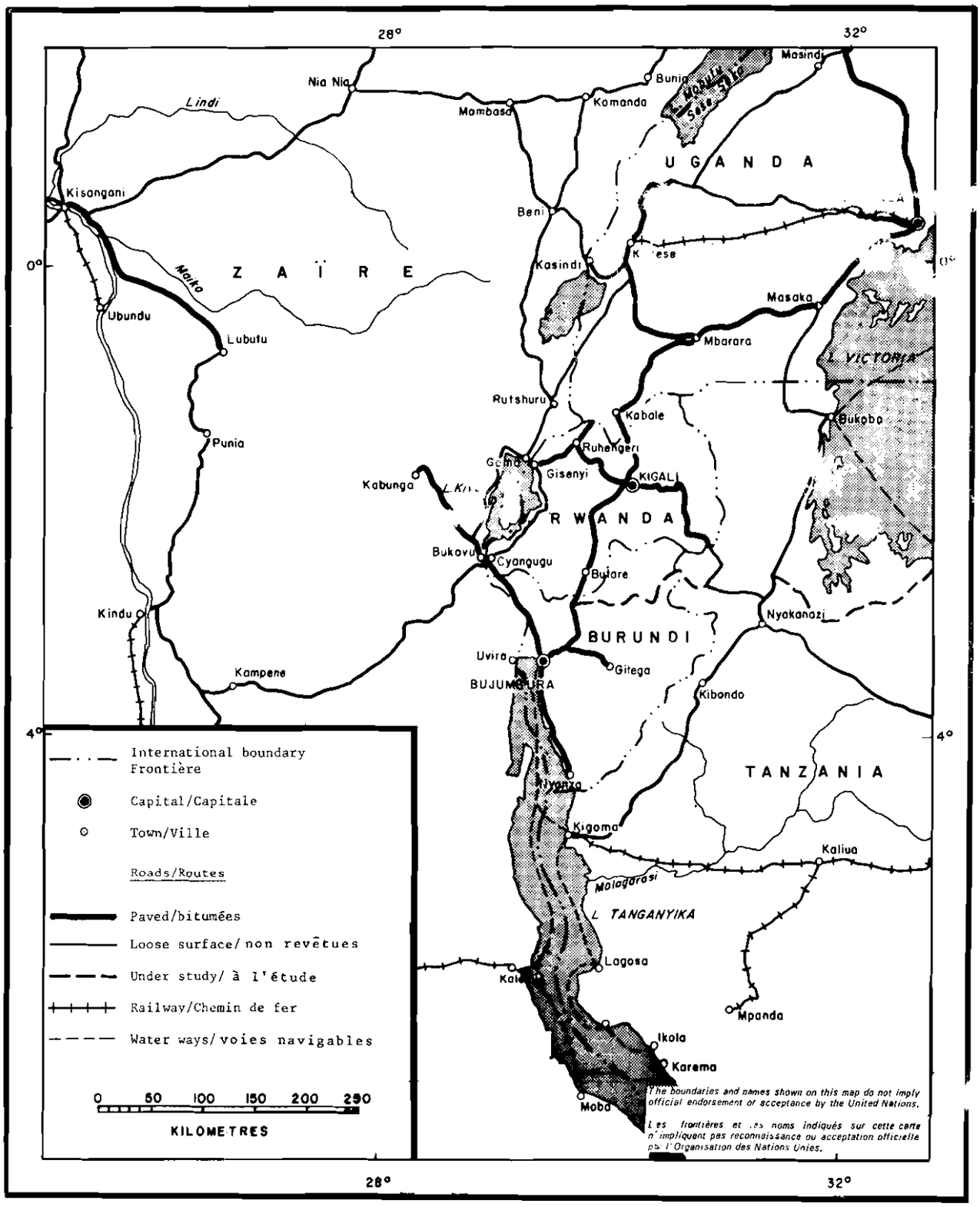
10.2.2 Industry : Zaire's economy is greatly dependent on mineral products which at present are severely hit by the collapse in the price for copper, which represents 50 per cent of Government revenue, and closure of the Benguela Railway since 1975. Other products are industrial diamonds, gold, petroleum, coal, cadmium, crude zinc concentrate, cassiterite, manganese ore, wolfarm, silver, uranium and methane gas. Although crude oil production reaches about 9 million barrels, the country still has to import about half as much in order to meet domestic demand.

10.2.3 Trade - The major trade connections are with EEC countries, USA and Japan. The major exports include copper, cobalt, zinc, tin ore, industrial diamonds, cassiterite, manganese and gold. On the agricultural side, the main exports are coffee, palm oil and palm products, rubber, logs and sawn wood, cotton, cocoa and tea. Exportation of logs and sawn wood is hampered by internal transport difficulties.

EASTERN ZAÏRE
ZAÏRE ORIENTAL

EXISTING TRANSPORT LINKS WITH RWANDA, BURUNDI, UGANDA, KENYA AND TANZANIA

LIAISONS EXISTANTES ENTRE LE ZAIRE ET LE RWANDA, LE BURUNDI, L'OUGANDA, LE KENYA, LA REPUBLIQUE UNIE DE TANZANIE



CART-87-25(4/87/)

The main imports are rice, wheat, maize, ground nuts, consumer goods vehicles and transport equipment, agricultural and industrial machinery and petroleum products. The main suppliers are USA, EEC countries and Japan.

10.3 General State of Transport and Communications Network

10.3.1. Roads - The road network in Zaire comprises approximately 145,000 km of which 7,400 km are urban roads. Part of the network, a total of 38,100 km can be classified in three categories, as follows: 20,700 km trunk roads (RN); 20,200 km main regional roads (RR); 17,200 km secondary regional roads (RR2).

The following table indicates the distribution of local roads (RTL) comprising the rest of the network, more than 58,000 km in all.

Region	RN	RR1	RR2	Total
Bas-Zaire	1,380	891	869	3,140
Bandudu	2,177	3,505	3,160	8,842
Equator	2,939	2,707	3,158	8,842
Haut-Zaire	3,612	3,578	3,075	10,265
Kivu	2,893	2,639	1,932	7,464
Shaba	4,024	4,024	2,958	11,046
Kasai Occ.	1,909	1,230	859	3,998
Kasai Or.	1,457	1,627	1,234	4,318
Kinshasa	252	-	-	252
Total	20,683	20,201	17,245	58,129

Source: Department of Works and Planning.

In 1984, apart from urban roads, Zaire had a network of 2,349 km of asphalted roads, distributed as follows: Bas-Zaire 588 km, Bandudu 361 km, Kasai or. 130 km, Kivu 465 km Haut-Zaire 123 km, Shaba 480 km and Kinshasa 202 km.

10.3.2 Air Transport

The national airline, Air Zaire, is the main operator on international routes, but on the domestic front it is faced with competition from other privately owned airlines. In August 1985 the Air Zaire fleet comprised one DC 10- Series 30; two Boeing 737 for passenger traffic; one DC 8-33 and one Fokker F-27. At the moment, the French airline UTA assists the general administration of Air Zaire in its operations.

In 1978, in conformity with the Mobutu Plan, there was a complete reorganization of air transport. One of the main objectives of the Mobutu Plan was the policy of liberalization of the air transport sector, and the subsequent abolition of Air Zaire's monopoly, which led to the establishment of privately owned airlines operated by Zairian nationals or by foreigners living in Zaire.

Thus in 1984, there were 46 air transport enterprises, some of which were not functioning or which had never been able to acquire aircraft. At the moment, the majority of the new airlines, specialized in domestic freight, are facing difficulties because the aircrafts they operate have generally been immobilized by economic and technical problems.

There are 21 airports in Zaire but only four, namely Kinshasa-N'Djili, Kisangani, Lumumbashi and Goma have a runway of 2,750 m or longer. The main airports in the Great Lakes region, the part of Zaire which is land-locked, are: Goma with a 3,000 m runway, Bunia with a 1,850 m runway and Kalemi with a 1,600 m runway.

10.3.3 Water transport - In eastern Zaire the busiest river port is Kalemie, but the volume of traffic declined from 155,000t in 1976 to only 90,000t in 1980. The main outward bound products in 1980, were minerals - 35.6 thousand tons; coal - 12.4 thousand tons; and general goods - 34.3 thousand tons. Inward bound goods were: agricultural products (2.9 thousand tons); other food stuffs (1.8 tons) and miscellaneous products (3.7 tons).

Kalemie port is operated by the SNCZ and has installed two Titan cranes of three tons by 15 and two Tirlemont cranes of three tons by 20 m each and one derrick of 30 tons. The port is operated 24 hours a day by two successive shifts. However the poor lighting conditions in the handling areas and the poor state of the machinery affect productivity, especially for the night shifts. Since the port has only very limited warehouse space, off-loading and loading is done by direct-transit depending on the availability of boats and railway wagons. The layout of the quays is such that the handling cranes cannot be easily moved around. Thus the reduction of useful areas on the quays and of tracks for moving the cranes around is one of the causes of the poor results recorded. With improvements in operations, in the layout of the quays and improved lighting systems, the equipment in Kalemie has the capacity to handle three times the volume now handled.

The Zairian fleet for general cargo transport has adequate capacity to handle exports of its minerals and other general goods, as well as its commodity imports. Zaire has at its disposal a combined system of Zairean railways (Societe Nationale des Chemins de Fer Zairois - SNCZ) and shipping vessels registered in Zaire and operating on Lake Tanganyika with a total capacity to export more than 185,000 tons of minerals, 49,000 tons of coal, 63,000 tons of fuel and more than 110,000 tons of various goods.

P A R T F O U R

P R O J E C T P R O F I L E S

List of Projects by Country

List of Projects by Country

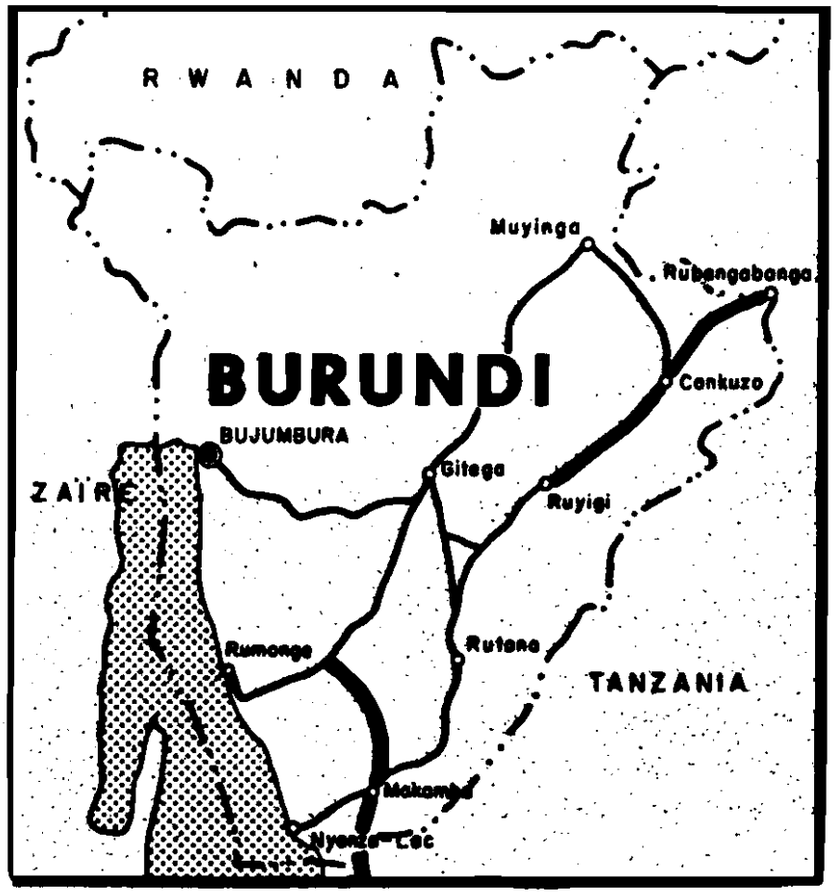
No.	Country & Project No.	Title	Cost (Mil.US$)
I	BURUNDI		
1.	ROP-05-005	Study on the proposed road: Ruyigi-Cankuza-Mugera-Rubangabanga-Tanzania frontier	1.00
2.	ROP-05-N1	Study on the road link between Tanzania (Kigoma) and the road network in Burundi between Boma du Chef and Makamba	0.65
II	KENYA		
1.	ROP-22-N1	Eldoret-Malaba Road, 135 km	26.00
2.	RAP-22-001	Provision of Training Facilities at the Railway Training School	2.08
3.	RAP-22-N1	Re-alignment of the Mombasa-Nairobi Main Line	1.44
4.	RAP-22-N2	Re-alignment of the Plateau Equator Section	62.50
5.	RAP-22-N3	Relaying of the Mombasa-Voi Section	19.38
6.	RAP-22-N4	Up-grading Nakuru-Kisumu Line	15.00
7.	RAP-22-N5	Improvement of Kenya Railways Telecommunications Network II	17.05
8.	RAP-22-N6	Improvement of Signalling	6.88
III.	RWANDA		
1.	HAP-35-001	Construction of Warehouse for Rwanda at Mombasa Port	10.20
2.	TEP-35-002	International Link Cyangugu-Bukavu (Zaire)	0.16
3.	TEP-35-003	International Link Kigali-Bujumbura (Burundi)	2.35
IV.	TANZANIA		
1.	ROP-43-001	Strengthening and asphalting the Bukoba Mtukula Road (128.14 km)	69.40

No.	Country & Project No.	Title	Cost (Mil.US$)
2.	ROP-43-004	Construction to bitumen standard of the Kobero-Rusumo-Isaka Road (60 km)	63.90
3.	ROP-43-N1	Construction of the Bukombe-Isaka Road (112.5 km)	51.5[illegible]
4.	RAP-43-001	Improvement of Railway Training Facilities	36.9[illegible]
5.	RAP-43-N1	Acquisition of Petroleum Tank Wagons	5.00
6.	RAP-43-N2	Purchase of New 2000 HP Locomotives	21.00
7.	RAP-43-N3	Track Component Workshop and Manufacturing Plant	2.00
8.	RAP-43-N4	Luiche Bridge Works	0.56
9.	RAP-43-N5	Purchase of Heavy Duty Track Trolley Cars	1.20
10.	HAP-43-N1	Entrance Channel improvement of the Port of Dar-es-Salaam	25.00
11.	TEP-43-N1	Purchase and installation of Dar-es-Salaam - Dodoma Digital (140 Mbit) Microwave Link	4.0[illegible]
V.	UGANDA		
1.	ROP-46-002	Rehabilitation of the Mbarara and Ishaka-Katungura Road	12.61
2.	ROP-46-N1	Up-grading of Road Maintenance	110.0[illegible]
3.	RAP-46-002	Procurement of Railway Rolling Stock	112.0[illegible]
4.	RAP-46-003	Renewal and Improvement of the Permanent Way	83.13
5.	RAP-46-005	Study and design of the workshop for carriage and wagon repairs	0.5[illegible]
6.	RAP-46-007	Study on the establishment of a railway training school	0.51
7.	RAP-46-N1	Completion of Diesel Locomotive Repair Workshops	49.98
8.	RAP-46-N2	Improvement of Safety of Rail level crossing	1.0[illegible]

No.	Country & Project No.	Title	Cost (Mil.US$)
	9. RAP-46-N3	Improvement of the Supplies Function of Uganda Railways Corporation	1.02
	10. INP-46-001	Rehabilitation of Marine Services	1.12
	11. INP-46-002	Connection between Port Bell and Kampala	7.00
	12. INP-46-N1	Lake Victoria Wagon Ferries	15.27
	13. MMP-46-N1	Containerization of Rail Traffic	8.41
VI.	SUB-REGIONAL		
	1. INP-60-N1	Study on the Kagera River	0.40

BURUNDI PROJECT No. ROP-05-005

I. IDENTIFICATION AND SUMMARY : Study on the proposed road : Ruyigi-Cankuzo-Mugera-Rubangabanga-Tanzania frontier (99 km)



1. Origin of the project
Submitted by the Government of Burundi

2. Subsector
Roads and road transport

3. Order of priority
National project with subregional impact, in favour of a disadvantaged country

4. Nature
Feasibility study

5. Location
Eastern Burundi

6. Cost : US$ 1.00 m

7. External financing required
US$ 1.0 m

8. Duration
One year

9. Desirable starting date
1987

10. Project initiator
Ministry of Works, Energy and Mines

11. Project management authority
General Highway Division

12. Remarks Nil

II. DESCRIPTION

The projected road lies along a principal route connecting eastern Burundi with Tanzania. The proposed feasibility study would determine the viability of the road taking into account current and future agricultural and industrial activities and the overall economic and social development of the regions.

1. Aim and objectives

The purpose of this project is to carry out a feasibility study of the Ruyigi-Tanzanian Frontier Road so as to determine the economic and technical feasibility of improving the road to all-weather or bitumen standard, depending upon the outcome of the study.

2. Nature and Constituent Parts

The work will be carried out in phases. During the first phase, preliminary economic study and analysis shall be carried out with a view to determining the volume and characteristics of current and future traffic, and to determine the agricultural and industrial development potential in the zone of influence of the road, as well as the impact of the project on the overall development of the region, complete with cost estimates, and benefit cost determination. This phase will also include topographical and geotechnical studies required for a sound cost estimation of the project. The next phase of the study will include detailed technical studies and preparation of tender documents and schedules of implementation, complete with general and specific instruction to prospective contractors.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and Benefits

The road will open up the eastern part of Burundi and provide a much needed inter-State road link with neighbouring Tanzania. The study will determine in precise terms the benefits to be accrued from improvement of the highway.

2. Cost

The cost of the study is estimated to be US$ 1.0 m

IV. STATUS

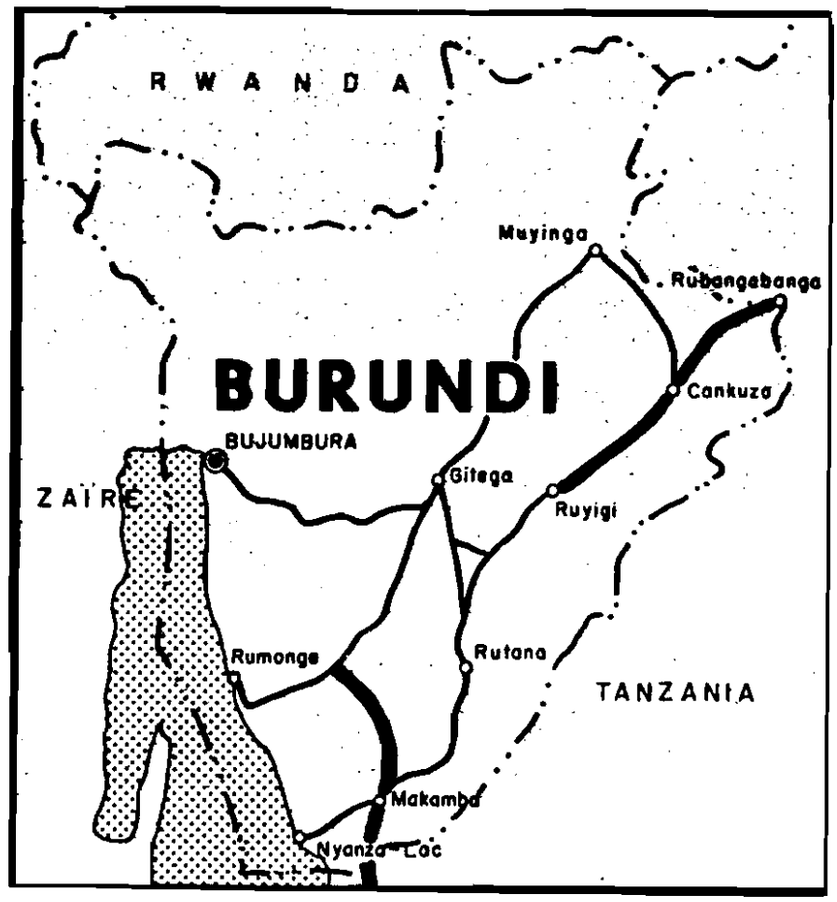
New project

V. FINANCING

(1)	Total estimated cost	US$ 1.00 m
(2)	Foreign component	US$ --
(3)	Local funds	US$ --
(4)	External Finance secured	US$ --
(5)	Available local funds (equivalent)	US$ --
(6)	Short fall (Gap)	US$ 1.00

BURUNDI PROJECT No. ROP-05-N1

I. IDENTIFICATION AND SUMMARY : Study on the road link between Tanzania (Kigoma) and the road network in Burundi between Boma du Chef and Makamba



1. Origin of the project
Submitted by the Government of Burundi

2. Subsector
Roads and road transport

3. Order of priority
National, with regional impact

4. Nature
Technical study (feasibility Design)

5. Location
Southern Burundi

6. Cost ; US$ 0.65 m

7. External financing required
US$ 650 000

8. Duration
Nine months

9. Desirable starting date
1987

10. Project initiator
Ministry of Works, Energy and Mines

11. Project management authority
General Highway Division

12. Remarks Nil

II. DESCRIPTION

The existing road between Mabanda and the Tanzanian Border has good quality laterite base with not much traffic, while the road between Boma du Chef and Makanda has good quality laterite surfacing, with a traffic volume of approx. 300 vehicles per day. However, there is no road between Nyanza-Lac and Kigoma. The project is of interest to the Buragane region, which will soon be linked with the capital by an asphalted road.

1. Aim and objectives

The purpose of the project is to study the opening up of the country, along the Lagos Mombasa Trans-African Highway System, and along the Kigoma (Tanzania) and Goma (Zaire) axis, in conformity with the IV 5-year plan; thus providing access to the land-locked, southern region of the country. The project will also improve trade along the transit route to the sea, through Tanzania.

2. Nature and Constituent Parts

The work consists of feasibility and pilot technical studyt relating to the alternative routes to Kigoma, from Nyanza-Lac and from Mabanda; then detailed engineering design of the selected route, including preparation of tender documents.

Recommended design standards would be as follows:

(a) Basic speeds: 80 km/hr. on flat terrain, 60 km/hr on rolling terrain, and 40 km/hr on hilly terrain.

(b) maximum axle load: 13 T

(c) Road width: 8.50 m

(d) Surface width: 6.00 m

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and Benefits

The benefits include savings on road maintenance costs, and reduction of international transport costs; ensuring transportation for 30 to 40 per cent of perishable commodities left in storage at Kigoma Port; import-export facilities by direct road access between Kigoma in Tanzania, the interior of Burundi and the region around Kivu in Zaire, and improvement of the infrastructure of the Central Corridor.

2. Cost

The estimated costs are as follows:

The link with Tanzania		US$ 250 000
Boma du Chef to Makamba		US$ 400 000
	Total	US$ 650 000

IV. STATUS

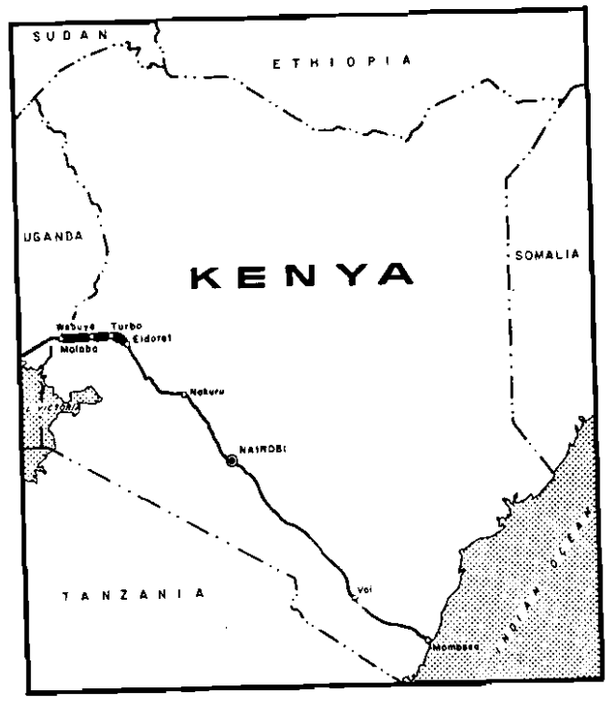
Improvement of the Nyanza Lac-Mabanda road was started at the beginning of 1986 with financing from Kuwait.

V. FINANCING

(1)	Total estimate	US$ 0.65
(2)	Foreign component	--
(3)	Local funds	--
(4)	External finance secured	--
(5)	Available local funds	--
(6)	Shortfall gap	US$ 650,000

KENYA PROJECT No. ROP-22-N1

I. IDENTIFICATION AND SUMMARY : Eldoret-Malaba Road, 135 km



1. Origin of the project
Submitted by the Government of Kenya

2. Subsector
Roads and road transport

3. Order of priority
Regional, section of the Lagos-Mombasa Trans-African Highway

4. Nature
Rehabilitation

5. Location
Western Kenya

6. Cost : US$ 26.00 m

7. External financing required
US$ 16.1 m

8. Duration

9. Desirable starting date
1987

10. Project initiator
Ministry of Transport and Communications

11. Project management authority
MOTC

12. Remarks Nil

II. DESCRIPTION

The project involves upgrading a section of the Lagos-Mombasa Highway inside Kenya, to provide a uniform standard of service throughout.

1. Aim and objectives

The aim is to rehabilitate the 135 km Eldoret - Turbo - Webuye - Malaba road which is a section of the Lagos-Mombasa Trans-African Highway in Kenya.

2. Nature and Constituent Parts

The road is divided into three distinct sections as follows:

(1) Eldoret-Turbo: (35 km) improve width to 7 m; construct 100 line - improved sub-base 135 mm line-improved gravel base, flush with existing terrain surface, 130 mm and 115 mm asphalt concrete overlay at km 0.11, 11.5, and 27.55, providing adequate lateral and horizontal drainage.

(2) Turbo-Webuye: (39 km) Reconstruction to ameliorate extensive surface damage, eroded and broken edges; improve shoulders and junctions applying dense bitumen macadam on entire section; provide lay-vehicle bays. (Work on going).

(3) Webuye-Malaba: (61 km) patching, resealing and reconstruction of pavement and shoulders, embankments and drainage culverts, application of bitumen overlay throughout, construction of truck bays, and improvement of junctions and accesses.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The benefits of this improvement include reduced vehicle operating costs due to reduced wear and tear, and hence reduced drain on foreign exchange.

2. Cost

The break-down of costs for the various sections is as follows:

(1) Eldoret-Turbo: US$ 3.9

(2) Turbo-Webuye: US$10.0

(3) Webuye-Malaba: US$12.22 = Total: US$26.12

IV. STATUS

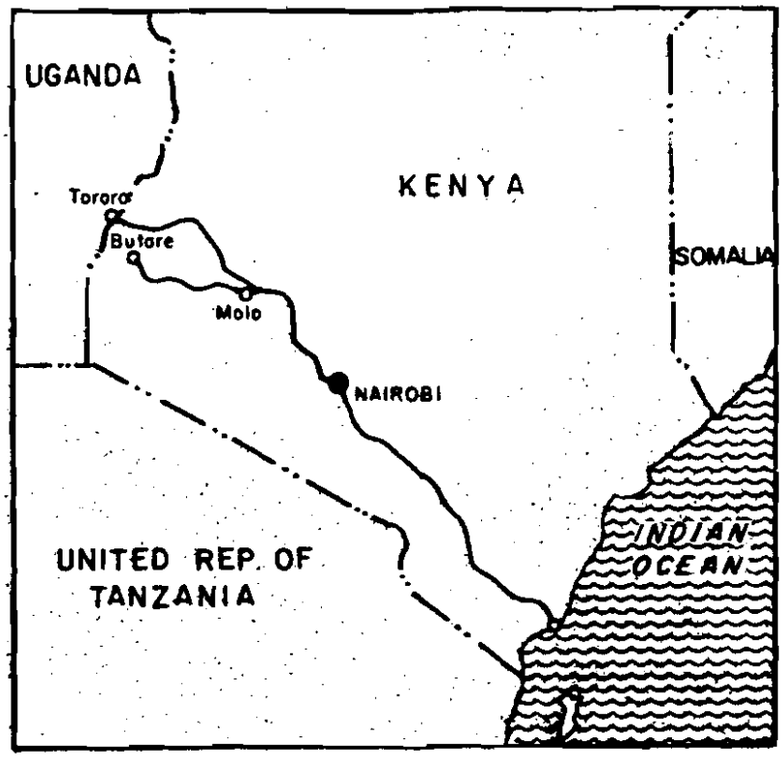
The Turbo-Webuye section is under execution with the assistance of the EEC.

V. FINANCING

(1)	Total estimated cost	US$ 26.00 m
(2)	Foreign component	--
(3)	Local funds	--
(4)	External finance secured	US$ 6.00 m
(5)	Available local funds (equivalent)	US$ 4.00 m
(6)	Shortfall (Gap)	US$ 16.10 m

KENYA PROJECT No. RAP-22-001

I. IDENTIFICATION AND SUMMARY : Provision of Training Facilities at the Railway Training School



1. Origin of the project
Submitted by the Government of Kenya

2. Subsector
Rail and Rail transport

3. Order of priority
Training

4. Nature
Construction of facilities

5. Location
Railway Training Centre, Nairobi

6. Cost : US$ 2.08 m

7. External financing required
US$ 1.162 m

8. Duration
Three years

9. Desirable starting date
1987

10. Project initiator
Ministry of Transport and Communications

11. Project management authority
Kenya Railways

12. Remarks Nil

II. DESCRIPTION

Establishment of Management Training Centre will entail conversion of some of the existing buildings at the present Railway Training School and also adding on new classrooms and syndicate rooms, toilets and infrastructure. It will also include adding a bar and up-grading a kitchen.

1. Aim and objectives

Shifting emphasis from training mainly young school leavers to providing new jobs, refresher and up-dated training and accommodating the proposed Management Training Centre (proposed to be within the Railway Training Centre) would provide training for more Senior Staff (at RA and RS grades) than is currently provided. Generally speaking, the Centre will be used to conduct seminars in management techniques for Kenya Railways Staff and also offer special training courses and seminars for middle management staff, operating, planning and personnel officers.

2. Nature and constituent parts

1. The conversion of Mount Kilimanjaro Hostel building to provide a Management Training Centre. The Centre would include 24 single bedrooms, offices, syndicate rooms and a classroom.

2. Construction of Training Facilities Centre that will contain a library, workroom, reprographic room, conference/lecture room, audio-visual unit production room and a small cinema. The Centre would provide a resource for the Management Training Centre and the existing teaching activities of the school.

3. Rehabilitation of existing workshops and classrooms to improve teaching facilities.

4. Improvements in student accommodation

5. Construction of additional staff accommodation.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

Improvement in facilities is expected to provide the necessary environment for more effective teaching. It is also anticipated that extensive technical assistance to revise curricula and up-grade teaching skills will be provided.

This project proposal has come up as one of the important recommendations of the recent Training Requirements Study (TPS). General improvement of facilities and equipment in the school is important if the recommended development of more appropriate curricula for the school is to bring maximum benefits. Further consideration of this project proposal will take place later at an appropriate time.

It is also important to note that the Union of African Railways (UAR) had identified the Railway Training School as an appropriate place to locate their proposed Regional Training Centre.

2. Cost US$ 2.08 m

IV. STATUS

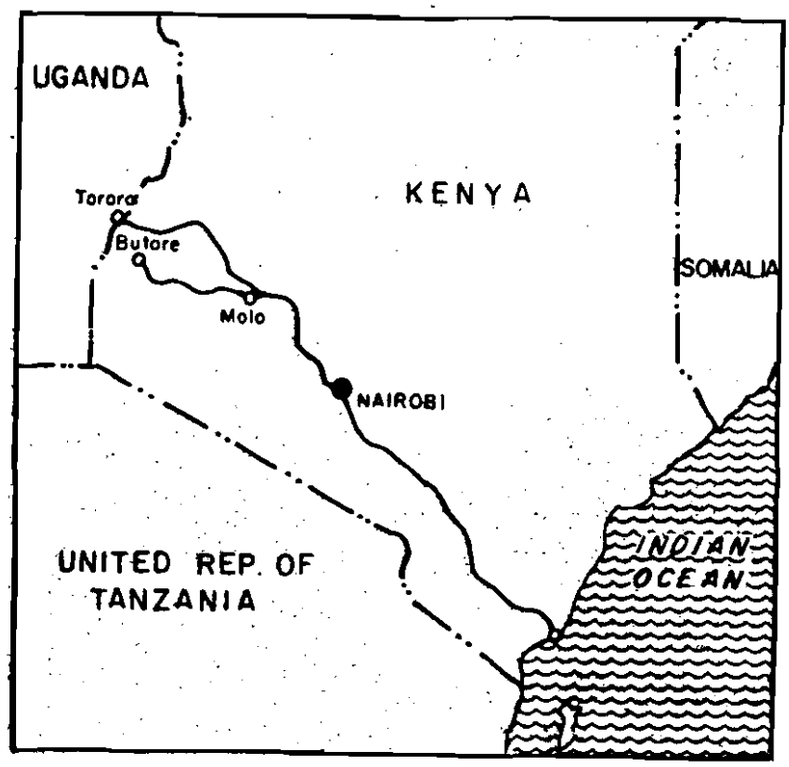
A donor is sought for this project. The World Bank had indicated interest during the previous 1979 - 1983 Plan period when the idea was first mooted. The project has been included in the Corporation's Short Term Action Programme. The investment package has been given to the World Bank and ODA for consideration.

V. FINANCING

(1)	Total estimate	US$ 2.08
(2)	Foreign component	US$ 1.162
(3)	Local funding	US$ 0.919
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Shortfall (financing gap)	US$ 1.162

KENYA PROJECT No. RAP-22-N1

I. IDENTIFICATION AND SUMMARY : Re-alignment of the Mombasa-Nairobi Main Line



1. Origin of the project
Submitted by the Government of Kenya

2. Subsector
Rail and Rail transport

3. Order of priority
National project with sub-regional importance

4. Nature
Re-alignment

5. Location
Mombasa-Nairobi

6. Cost : US$ 1.44 m

7. External financing required
US$ 1.438 m

8. Duration
Undetermined

9. Desirable starting date
1987

10. Project initiator
Ministry of Transport and Communications

11. Project management authority
Kenya Railways

12. Remarks
Duration to be determined by the feasibility study

II. DESCRIPTION

1. Aim and objectives

The objective is to increase train speed and thereby reduce transit time and increase line capacity. The wear and tear of equipment which is usually associated with sharp bends and sharp gradients will also be reduced.

2. Nature and constituent parts

The project involves the realignment of various curvatures and the removal of certain steep gradients along the Mombasa-Nairobi main line.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

--

2. Cost : US$ 1.4

IV. STATUS

Critical sections between Mazeras and Mariakani have been realigned at a cost of Sh.20 million. Another section at Konza has been realigned at a cost of Sh.3 million. More sections are pending.

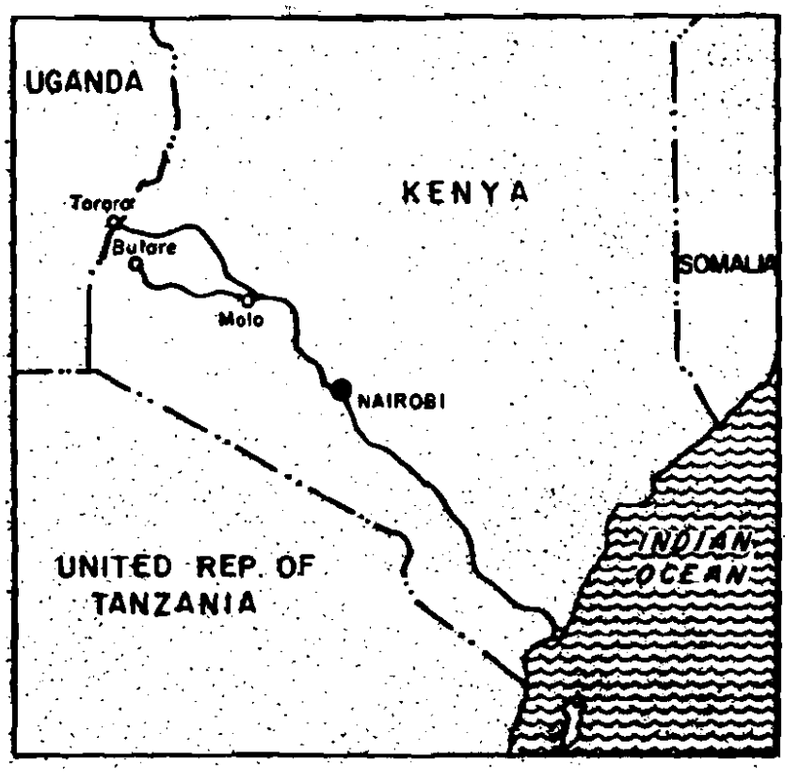
The Corporation has spent Sh.23 million out of its meagre internal resources. A financier will have to be found for the remaining work.

V. FINANCING

(1)	Total estimate	US$ 1.44 m
(2)	Foreign component	US$ 1.430 m
(3)	Local funding	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Shortfall (financing gap)	US$ 1.430 m

KENYA PROJECT No. RAP-22-N2

I. IDENTIFICATION AND SUMMARY : Re-alignment of the Plateau Equator Section



1. Origin of the project
Submitted by the Government of Kenya

2. Subsector
Rail and Rail Transport

3. Order of priority
National project with subregional impact

4. Nature
Re-alignment of track

5. Location
Central Kenya

6. Cost : US$ 62.50 m

7. External financing required
US$ 12.5 m

8. Duration
Undetermined

9. Desirable starting date
1987

10. Project initiator
Ministry of transport and Communications

11. Project management authority
Kenya Railways

12. Remarks Nil

II. DESCRIPTION

The Plateau - Equator is part of the Mombasa-Nairobi main line. The steep gradients and curvatures limit the capacity of the line.

The above section passes through very difficult terrain where gradients are high and bends sharp.

1. Aim and objectives

The project aims at reducing gradients and curvatures. The objectives of the project include the increases in train speed, thereby increasing line capacity, increasing the safety of equipment and reducing the wear and tear of equipment which results from operating in areas where the land terrain is difficult.

2. Nature and constituent parts

The project consists of realignment of the line.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The re-alignment will release the existing bottleneck on the busy main line. This will result in increased line capacity.

Cost : US$ 62.5 m

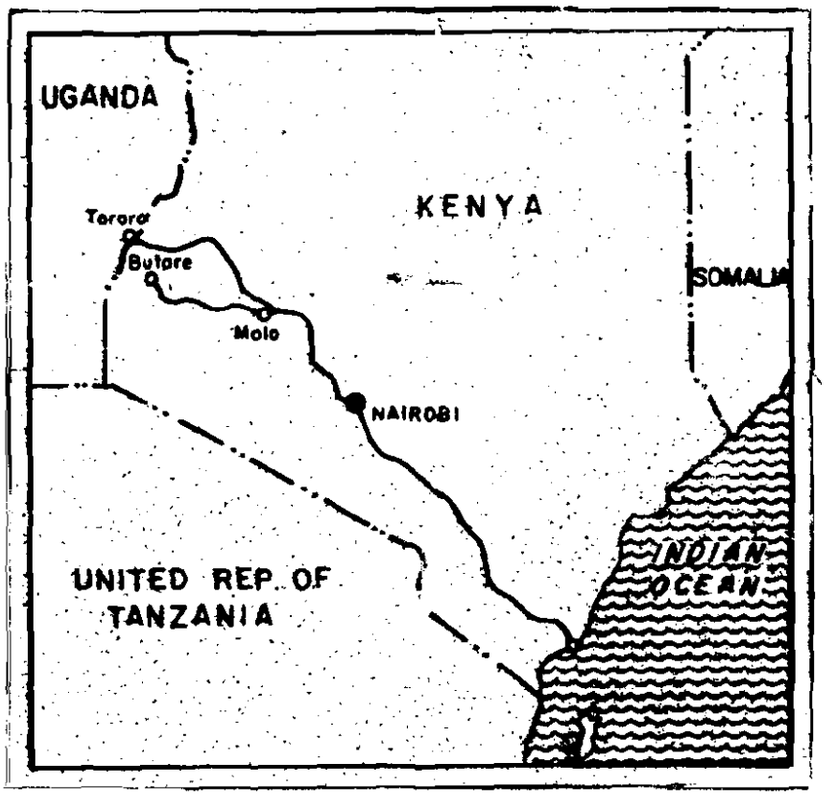
IV. STATUS

V. FINANCING

(1)	**Total estimate**	US$ 62.5 m
(2)	Foreign component	US$ 12.5 m
(3)	Local funding	US$ 50.0 m
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 12.5 m

KENYA PROJECT No. RAP-22-N3

IDENTIFICATION AND SUMMARY : Relaying of the Mombasa-Voi Section



1. Origin of the project
Submitted by the Government of Kenya

2. Subsector
Rail and Rail transport

3. Order of priority
National project

4. Nature
Construction

5. Location
Southern Kenya

6. Cost : US$ 19.38 m

7. External financing required
US$ 13.25 m

8. Duration
Five years

9. Desirable starting date
1987

10. Project initiator
Ministry of Transport and Communications

11. Project management authority
Kenya Railways

12. Remarks Nil

II. DESCRIPTION

1. Aim and objectives

Relaying of the track is anticipated to reduce incidents of train accidents and would also reduce train delays that normally result from operating trains on worn out rails. The ride on welded rails will be smoother and will reduce the wear and tear of the equipment.

2. Nature and constituent parts

The project involves the relaying of the Mombasa - Voi Section.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

2. Cost : US$ 19.375 m

IV. STATUS

Materials to relay Mombasa - Mariakani Section (i.e. 32 km) and another 24 km (part of the Mombasa - Voi Section) have been secured through a World Bank loan of KES.98m. However, part of the materials await acquisition of Flash Butt Welding Machine which will be used in installing continuously welded rails in place of the present track with bolted joints.

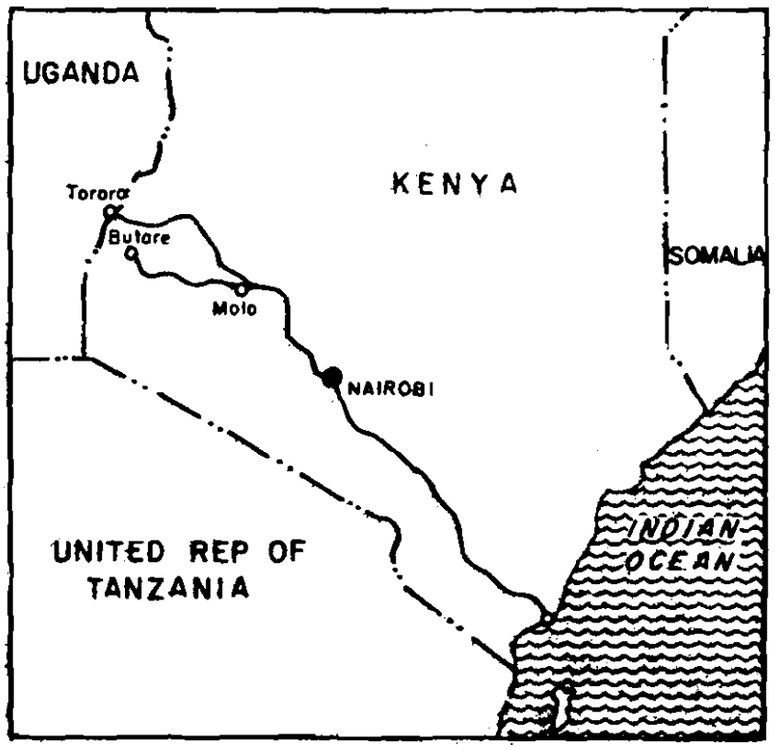
An additional financial assistance of Sh. 212 million is required for the relaying of the remaining 109 km in the Mombasa - Voi Section.

V. FINANCING

(1)	Total estimate	US$ 19.375m
(2)	Foreign component	US$ 19.375m
(3)	Local funding	--
(4)	External financing secured	US$ 6.125m
(5)	Available local funds	--
(6)	Financing gap	US$ 13.25m

KENYA PROJECT No. RAP-22-N4

I. IDENTIFICATION AND SUMMARY : Upgrading Nakuru-Kisumu Line



1. Origin of the project
Submitted by the Government of Kenya

2. Subsector
Rail and Rail transport

3. Order of priority
National project with subregional impact

4. Nature
Reconstruction

5. Location
Western Kenya

6. Cost : US$ 15.00 m

7. External financing required
US$ 15m

8. Duration
Undetermined

9. Desirable starting date
1987

10. Project initiator
Ministry of Transport and Communications

11. Project management authori
Kenya Railways

12. Remarks Nil

II. DESCRIPTION

1. Aim and objectives

The project is intended to up-grade the line with 80 lb rail material and if need be, strengthen the viaducts to accommodate 92 and 93 class locomotives.

2. Nature and constituent parts

The project comprises two components:

(a) Up-grading the line with 80 lb material,

(b) Strengthening the viaducts to accept 92 and 93 class locomotives.

III. JUSTIFICATION: ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The up-grading of Nakuru-Kisumu line with 80 lb rail material is intended to sufficiently strengthen the line in order to accept a higher pay load through 92 and 93 class locomotives.

It is expected to increase haulage capacity on the line and, since 87 class locomotives will be phased out once the 92 and 93 classes are accepted on the line, savings in maintenance costs, reduction in parts holdings and better locomotive utilization are anticipated to be realized.

2. Cost : US$ 15m

IV. STATUS

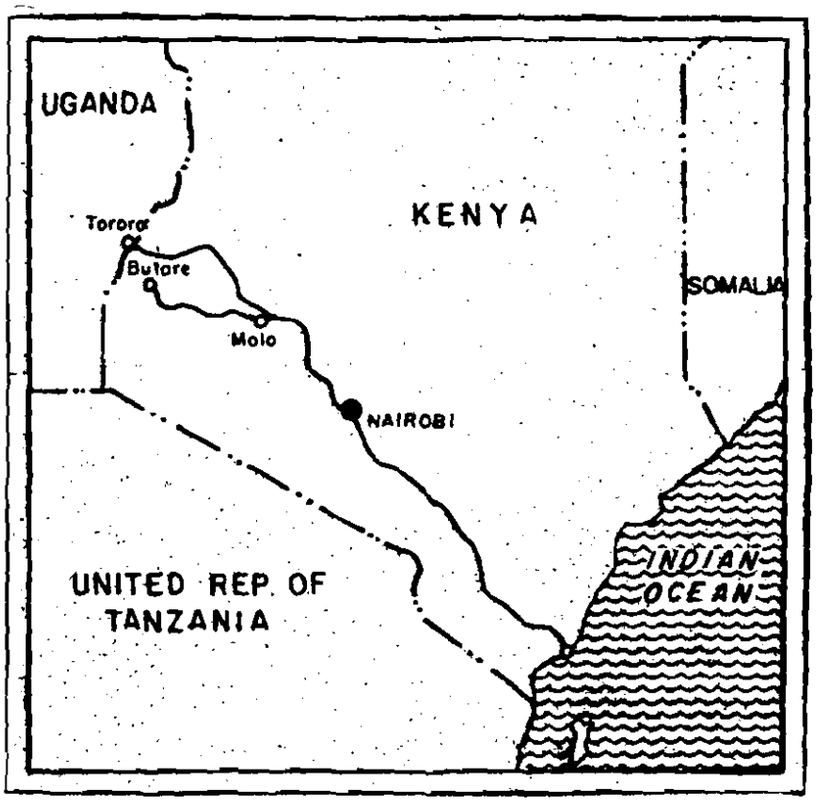
Nakuru-Kisumu line is currently railed with 60 lb material and can only be served by no more than 87 class locomotive. This has restrictions on haulage capacity on the line and the line is unnecessarily subjected to the availability of the 87 class locomotives. Already 80 lb materials to cover 92 km have been purchased through an IBRD loan. More funds are required to purchase materials for the remaining of 143 kms.

V. FINANCING

(1)	Total estimate	US$ 15 m
(2)	Foreign component	US$ 15 m
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 15 m

KENYA PROJECT No. RAP-22-N5

I. IDENTIFICATION AND SUMMARY : Improvement of Kenya Railways Telecommunications Network II



1. Origin of the project
Submitted by the Government of Kenya

2. Subsector
Rail and Rail transport

3. Order of priority
National project with sub-regional impact

4. Nature
Installation of equipment

5. Location
Central and Western Kenya

6. Cost : US$ 17.05 m

7. External financing required
US$ 18.625 m

8. Duration
7 to 8 years

9. Desirable starting date
1987

10. Project initiator
Ministry of Transport and Communications

11. Project management authority
Kenya Railways

12. Remarks
Implementation subject to economic evaluation

II. DESCRIPTION

Under recent and ongoing projects, railway automatic telephone exchanges are being provided to major centres from Mombasa through to Nakuru. This will allow railway management to communicate effectively between these centres. The provision of similar exchanges to the remaining major centres in the system is required to complete this programme, and maximise its potential benefits.

1. Aim and objectives

To provide efficient railway telecommunications service in the areas of Nairobi-Nakuru-Malaba and Nakuru-Kisumu. Improved administrative communications will facilitate effective management of the railway, and allow headquarters staff to maintain the necessary links with districts. This will result in general improvements in operational performance and efficiency.

2. Nature and constituent parts

The project comprises amalgamation of the Control Centres at Headquarters and Nairobi and the installation of PAXB's and underground cables to replace the overhead lines as stated below:

i) PABX equipment at Kisumu, Eldoret, Malaba Sagans, and Railways Training School;

ii) Underground cable and associated wayside equipment and power supply between Nairobi and Nakuru;

iii) Underground cable and associated wayside equipment and power supply between Nakuru and Malaba;

iv) Underground cable and associated wayside equipment and power supply between Nakuru and Kisumu;

v) Underground cable and associated wayside equipment and power supply between Nairobi and Nanyuki.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

Transformation of existing train control communications would restore effective centralised control of train movements. This is expected to result in very substantial reductions in locomotive running times and provision of a more reliable service and a significant increase in the available motive power.

The existing traffic control telephone system has generally ceased to function in the areas of Nakuru to Malaba and Nakuru to Kisumu. Between Nairobi and Nakuru the system is subject to multiple failures and interruptions. Improved traffic control systems should perform the vital task of arranging at which stations all trains running will cross and/or pass each other. Without improved communications individual station masters must take operating decisions based

on very limited information. This typically results in lengthy delays. In addition to this, absence of a more effective traffic control communications system often leads to further extensive delays in the event of accidents, washouts and other abnormal operating problems.

2. Cost

The project is estimated to cost US$ 17.05m (KES.273.5m)

IV. STATUS

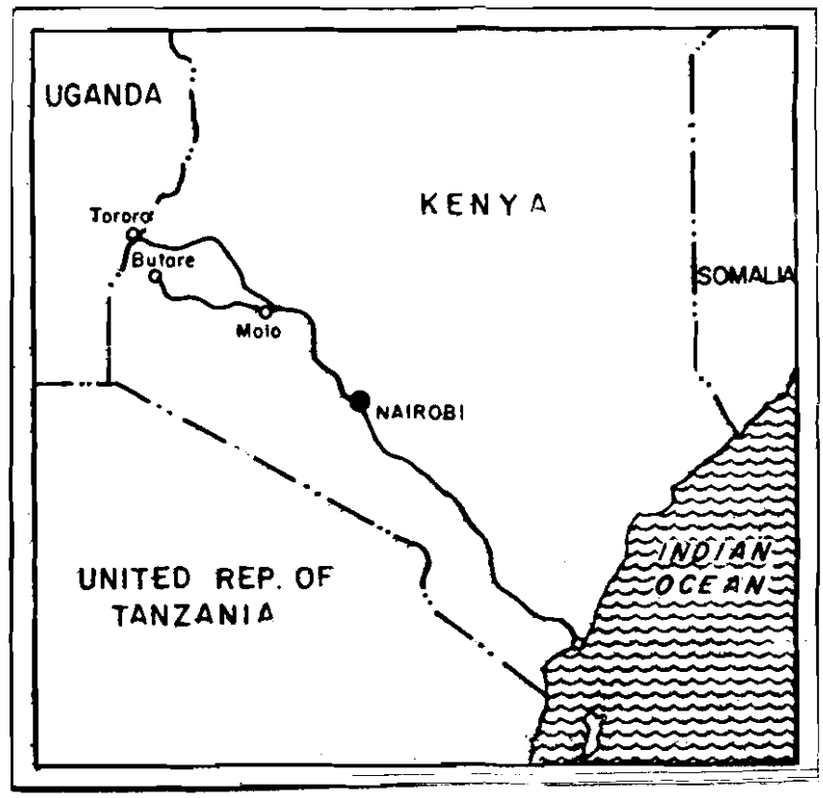
This project has been included in the corporation's corporate plan 1986/1987 - 1990/91 and Short-Term Action Programme. The investment package has been submitted to the World Bank and ODA for consideration. For the reason that the project needs to be compatible with that of Nairobi - Mombasa, KFW finance would be preferred. To this effect, KFW has been approached but no commitment has been made.

V. FINANCING

(1)	Total estimate	US$ 17.05 m
(2)	Foreign component	--
(3)	Local component	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 17.05 m

KENYA PROJECT No. RAP-22-N6

I. IDENTIFICATION AND SUMMARY : Improvement of Signalling



1. Origin of the project
Submitted by the Government of Kenya

2. Subsector
Rail and Rail transport

3. Order of priority
National project with sub-regional impact

4. Nature
Installation of equipment

5. Location
Nairobi area

6. Cost : US$ 6.875 m

7. External financing required
Nil

8. Duration
Two years

9. Desirable starting date
1987

10. Project initiator
Ministry of Transport and Communications

11. Project management authority
Kenya Railways

12. Remarks
Implementation subject to economic evaluation

II. DESCRIPTION

In Nairobi Yard there are six (6) mechanical signal boxes and four (4) ground frames from which train movements are controlled.

At Makadara, there is a double wire mechanical signalling installation including two (2) ground frames and one (1) signal box.

A new container depot has recently been constructed near Embakasi on the Embakasi - Makadara section.

The sections covered by the three stations are the most heavily worked and complex in terms of operations on Kenya Railways. The existing signalling system cannot alleviate the resultant operational problems. Traffic flow is frequently disrupted or builds up on either side of the section under consideration due to slow handling of traffic by the existing system.

The recent introduction of commuter passenger service through Makadara and Nairobi has only added to the need for improved signalling to avert a more serious bottlenecking effect to traffic in the sections in question.

1. Aim and objectives

The objective of the project is to improve the safety and reduce transit times of trains, thus increasing the capacity of the line.

2. Nature and constituent parts

The project entails provision of electrical signalling to replace the existing mechanical signalling at Nairobi, Makadara and Embakasi stations; and replacing the existing token block with tokenless signalling between the stations.

These improvements should be undertaken by an external contractor, with the civil engineering portions of the work being carried out by the Kenya Railways Corporation's own staff.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The proposed project will result in reduced traffic transit times in the section Nairobi - Embakasi and thus facilitate better availability of limited locomotives and rolling stock, improve safety to traffic, reduce eleven (11) signal boxes and ground frames to three (3) control cabins and thus generally raise operational efficiency in the Nairobi - Embakasi section.

2. Cost

The project is estimated to cost US$ 6.875 m (KE5.110 m).

IV. STATUS

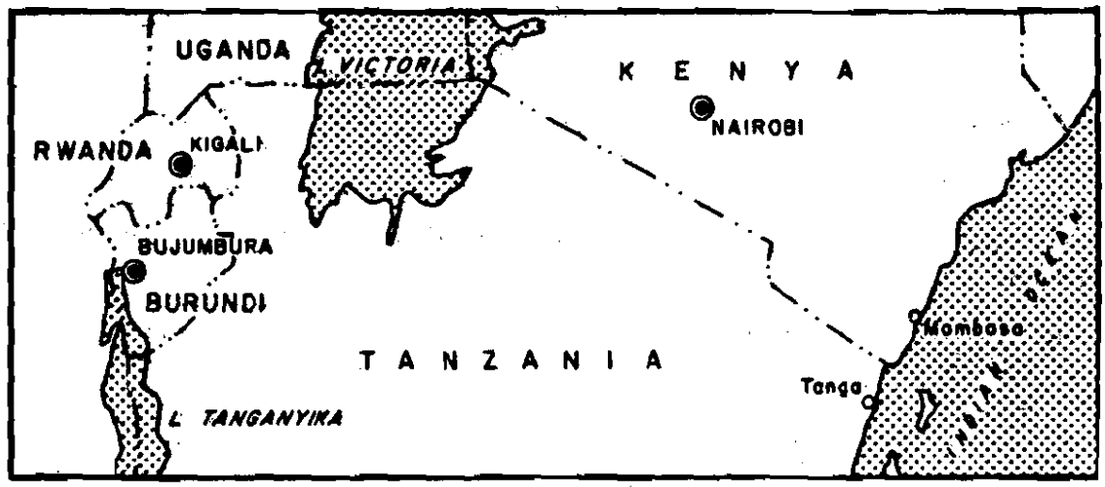
The current non-interlocking system is inefficient.

V. FINANCING

(1)	Total estimate	US$ 6.875 m
(2)	Foreign component	US$ 5.21 m
(3)	Local funding	US$ 1.665 m
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Shortfall (financing gap)	US$ 6.875 m

RWANDA PROJECT No. HAP-35-001

I. IDENTIFICATION AND SUMMARY : Construction of Warehouse for Rwanda at Mombasa Port



1. Origin of the project
Submitted by the Government of Rwanda

2. Subsector
Ports

3. Order of priority
National project for a disadvantaged country

4. Nature
Construction of warehousing facilities

5. Location
Mombasa

6. Cost : US$ 10.20 m

7. External financing required
US$ 10.0 million

8. Duration
Two years

9. Desirable starting date
1987

10. Project initiator
Ministry of Public Works

11. Project management authority
Ministry of Public Works

12. Remarks
Transferred from Phase I of UNTACDA Programme

II. DESCRIPTION

Rwanda uses extensively the port of Mombasa for its imports and exports. At present it uses storage facilities meant for Kenya's import goods thus import goods of both Kenya and Rwanda are mixed together. Such handling of cargo has raised confusion and Rwanda intends to build its own storage facilities at the port of Mombasa for it own goods. Kenya has provided land for such a construction.

1. Aim and objectives

The project aims to avoid congestion of cargo of a land-locked country, Rwanda, at Mombasa port and will ensure safety of goods and speedy transit service (procedures). Pilferage can also be controlled to a greater extent.

2. Nature and constituent parts

The project consists of construction of warehouses and transit sheds at Mombasa port.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

Mombasa serves not only Rwanda but also other land-locked countries such as Uganda, Burundi, Zaire and to some extent Southern Sudan. Recently transit and transshipment cargo of the neighbouring countries through the port was recorded to have reached about 0.5 million tons. The forecast is that of an increase. Goods are moved in and out of port by different modes of transport notably train and trucks. Goods are exposed to bad weather conditions during movements and are also levied high storage charges by the port.

The implementation of the project will therefore reduce storage charges, pilferage and damages and at the same time provide protection of cargo from bad weather during its long stay in the open area.

2. Cost

The cost of the project is US$ 10.20 million including studies. The cost of the study alone is US$ 0.2 million.

IV. STATUS

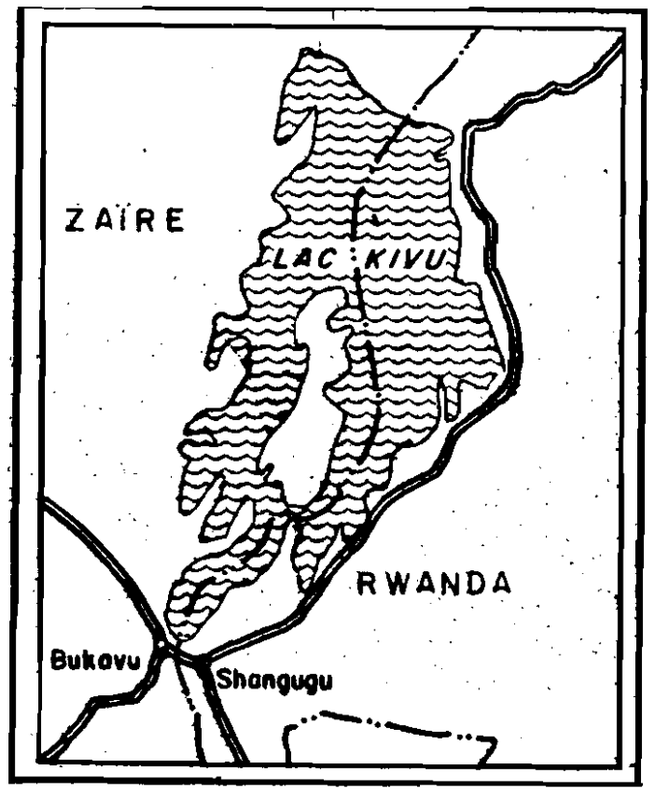
The project has to be designed and constructed.

V. FINANCING

- Local financing expected	US$ 0.2 million
- External financing received:	Nil
- External financing requested:	US$ 10.0 million.

RWANDA PROJECT No. TEP-35-002

IDENTIFICATION AND SUMMARY : International Link Cyangugu-Bukavu (Zaire)



1. Origin of the project
Submitted by the Government of Rwanda

2. Subsector
Telecommunications

3. Order of priority
Subregional project

4. Nature
Installation of equipment

5. Location
South Western Rwanda

6. Cost : US$ 0.16 m

7. External financing required
US$ 0.15m

8. Duration
One year

9. Desirable starting date
1987

10. Project initiator
Ministry of Posts and Telecommunications

11. Project management authority
Ministry of Posts and Telecommunications

12. Remarks Nil

II. DESCRIPTION

1. Aim and objectives

The purpose is to complete the Central African subregional section of the Pan-African Telecommunications Network (PANAFTEL), thereby improving communications between Rwanda and Zaire.

2. Nature and constituent parts

Specification, purchase and installation of a 120 channel microwave radio communication system equipped with 24 channel multiplexer, linking Cyangugu (Rwanda) and Bukavu (Zaire).

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The new radio link will replace a lower-capacity cable link, thereby greatly facilitating communication between Zaire and Rwanda. It makes an important contribution to the extension of PANAFTEL.

2. Cost

The cost is estimated at $160,000, of which $150,000 is expected to be financed by the World Bank.

IV. STATUS

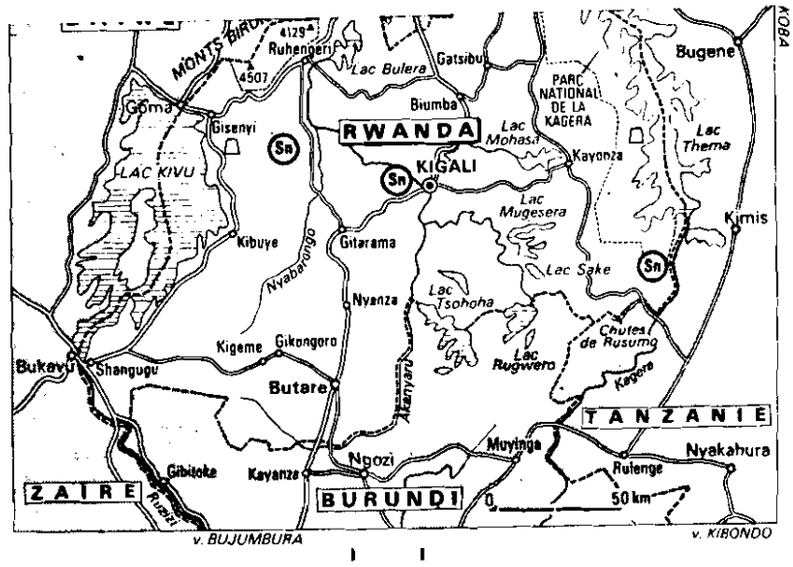
Financial resources required.

V. FINANCING

(1)	Total estimate	US$ 0.16 m
(2)	Foreign component	US$ 0.15 m
(3)	Local funds	US$ 0.01 m
(4)	External financing secured	--
(5)	Available local funds	US$ 0.01 m
(6)	Financing gap	US$ 0.15 m

RWANDA PROJECT No. TEP-35-003

I. IDENTIFICATION AND SUMMARY : International Link Kigali-Bujumbura (Burundi)



1. Origin of the project
Submitted by the Government of Rwanda

2. Subsector
Telecommunications

3. Order of priority
Subregional project

4. Nature
Installation of equipment

5. Location
Central and Southern Rwanda

6. Cost : US$ 2.35 m

7. External financing required
US$ 2.20m

8. Duration
One year

9. Desirable starting date
1987

10. Project initiator
Ministry of Posts and Telecommunications

11. Project management authority
Ministry of Posts and Telecommunications

12. Remarks Nil

II. DESCRIPTION

1. Aim and objectives

The objective is to complete the Central African subregional section of the Pan-African Telecommunications Network (PANAFTEL), thereby improving telecommunications between Rwanda and Burundi.

2. Nature and constituent parts

Specification, purchase and installation of a 300-channel microwave radio relay system, ultimately linking Kigali (Rwanda) and Bujumbura (Burundi). In phase I of the project, two links out of the four envisaged will be completed: Kigali-Tumba within Rwanda and Tumba-Ngozi (Burundi).

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The existing UHF radio link between Kigali and Bujumbura is equipped with only six telephone lines and two telegraph and telex circuits. Its quality and capacity are not good enough to handle the constantly increasing flow of traffic. Furthermore, on completion of the project, the two satellite earth stations at the extremities of the link will be able to arrange complementary and traffic-sharing operations.

2. Cost

Total project cost is estimated at $2.35 million, of which $2.20 million is expected to be financed from external sources. Phase I is estimated to cost US$950.000.

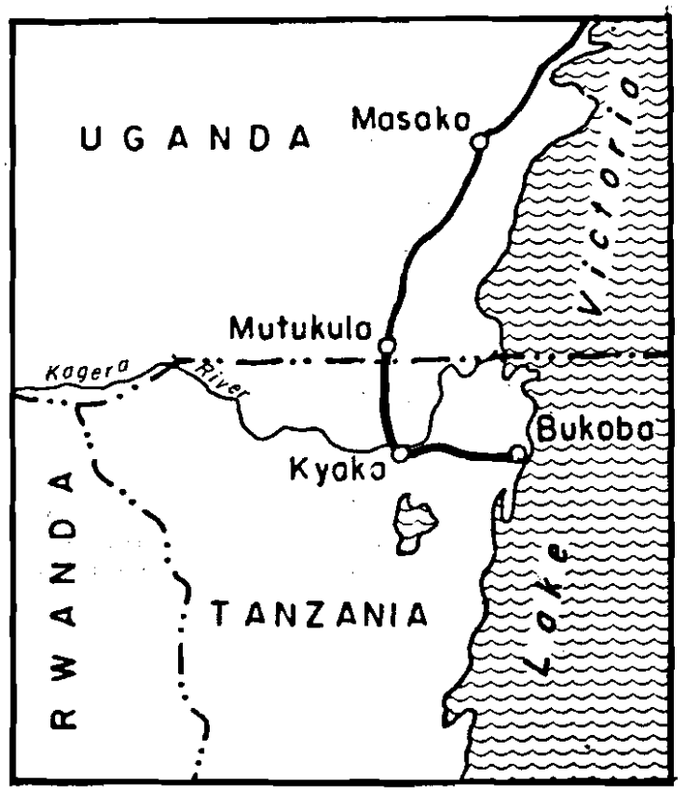
IV. STATUS

V. FINANCING

(1)	**Total estimated**	US$ 2.35 m
(2)	Foreign component	US$ 2.20 m
(3)	Local funds	US$ 0.15 m
(4)	External financing secured	--
(5)	Available local funds	US$ 0.15 m
(6)	Financing gap	US$ 2.20 m

TANZANIA PROJECT No. ROP-43-001

I. IDENTIFICATION AND SUMMARY : Strengthening and asphalting the Bukoba-Mtukula road (128.14 km)



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Roads and Road Transport

3. Order of priority
Subregional

4. Nature
Reconstruction and rehabilitation

5. Location
Northern Tanzania

6. Cost : US$ 69.40 m

7. External financing required
US$ 48.6 m

8. Duration

9. Desirable starting date
1987

10. Project initiator
Ministry of Communications and Works

11. Project management authority
Department of Roads

12. Remarks
(Study by Sir Alexander Gibb and Partners, 1976)

II. DESCRIPTION

The project is part of the 300 km long road connecting Uganda to the North-western part of Tanzania. It is partly gravel and earth with varying widths, with very poor riding surface and drainage system and needs to be paved to facilitate travel and trade.

1. Aim and objectives

The main objective is to upgrade the Bukoba Mutukula Road to improve access to a potentially rich agricultural area and on to Uganda; and, thereby reduce the transport cost of commodities.

2. Nature and constituent parts

The work includes reconstruction of the road to bitumen standard, with a uniform 6.5 cm carriageway width, and 1-1.5 m shoulders.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The Mutukula-Bukoba road is a regional project which passes through a fairly high rainfall area, and connects and north-western part of Tanzania, with the Uganda network.

2. Cost

The project is estimated to cost US$ 69.4 m

IV. STATUS

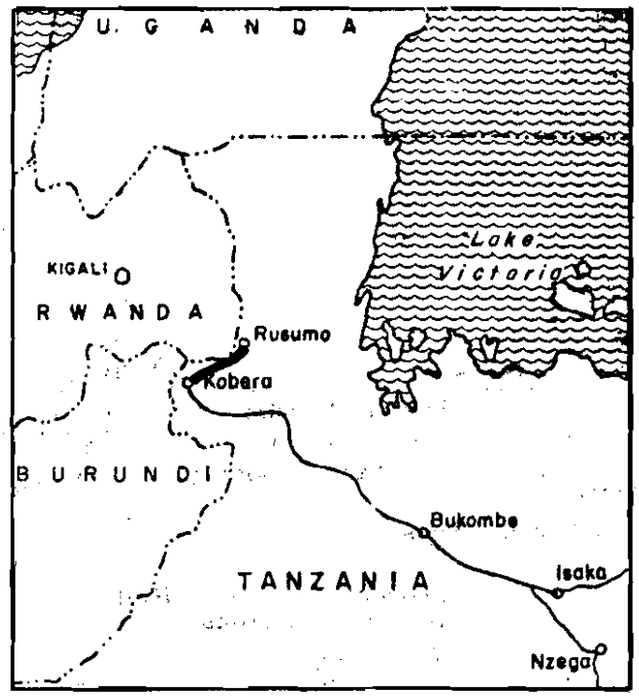
The project has already been subjected to economic and technical studies, including designs, to upgrade it to bitumen standard, by a British Consulting Firm, in 1976. The design only needs updating.

V. FINANCING

(1)	Total estimated cost	US$ 69.4 m
(2)	Foreign Exchange Component (70%)	US$ 48.6 m
(3)	Local Funds (30%)	US$ 20.8 m
(4)	External Finance Secured	--
(5)	Local Funds available (375.8 m shillings)	--
(6)	Financing required (external)	US$ 48.5 m

TANZANIA PROJECT No. ROP-43-004

I. IDENTIFICATION AND SUMMARY : Construction to bitumen standard of the Kobero-Rusumo-Isaka road (60 km)



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Roads and Road transport

3. Order of priority
National project with subregional impact, for a disadvantaged country

4. Nature
Construction (Paving)

5. Location
Western Tanzania

6. Cost : US$ 63.90 m

7. External financing required
US$ 63.9 m

8. Duration

9. Desirable starting date
1987

10. Project initiator
Ministry of Communications and Works

11. Project management authority
Department of Roads

12. Remarks
(Study by Sir Alexander Gibbs and Partners, 1985)

II. DESCRIPTION

The Kobero-Rusumo-Isaka road, 60 km in length, is a regional road situated in Ngara District, linking the Burundi Network to the Tanzania Network. The road starts on the Burundi Border at Kobero, and connects with the Rusumo-Isaka road at Nakasanza. It is a non-engineered gravel road with an average width of 7.0 m; and about 90 per cent of it has poor surfacing due to inadequate maintenance standards. The terrain is mostly hilly and mountainous.

1. Aim and objectives

The purpose of the project is to upgrade the Kobero-Rusumo-Isaka road to bitumen standard based on the designs of 1985; to facilitate local and international travel and trade.

2. Nature and constituent parts

The work involves construction of 60 km of the road to bitumen standard, with a uniform carriageway width of 6.5 m and shoulders of 1.15 m, based on the design by a British Consulting firm, completed in 1985.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The road is a regional project linking Tanzania to Burundi. Improving it from non-engineered gravel and earth to bitumen standard of uniform width would improve two-way communications between Burundi and Tanzania. The recently completed feasibility and detailed engineering study was financed by the EEC.

2. Cost

The project is estimated to cost US$ 63.9 m

IV. STATUS

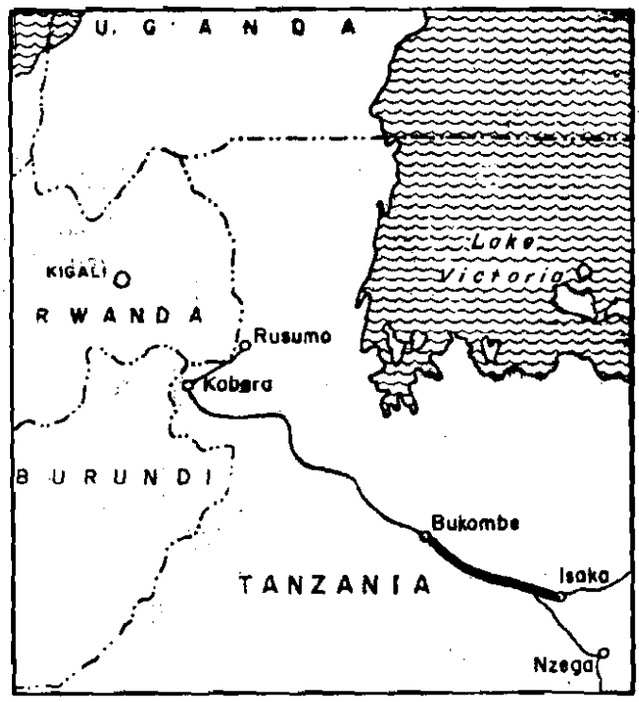
The project has been studied and designed, and tender documents have been completed for most of the project by Alexander Gibbs and Partners in 1985.

V. FINANCING

(1)	Total estimate	US$ 63.9 m
(2)	Foreign component	--
(3)	Local funds	--
(4)	External assistance secured	--
(5)	Available local funds	--
(6)	Shortfall (gap) of foreign exchange	US$ 63.9 m

TANZANIA PROJECT No. ROP-43-N1

I. IDENTIFICATION AND SUMMARY : Construction of the Bukombe-Isaka Road 112.5 km



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Roads and road transport

3. Order of priority
Subregional

4. Nature
Construction (Paving)

5. Location
Northern Tanzania

6. Cost : US$ 51.54 m

7. External financing required
US$ 51.54 m

8. Duration

9. Desirable starting date
1987

10. Project initiator
Ministry of Communications and Works

11. Project management authority
Department of Roads

12. Remarks Nil

II. DESCRIPTION

This road is part of the Kobero-Rusumo-Isaka regional project connecting the Central Railway Corridor at Isaka with the Rwanda border.

1. Aim and objectives

The purpose of the project is to reconstruct and improve the Bukumbe-Isaka road to bitumen standard to meet the demand for efficient road transport services.

2. Nature and constituent parts

The work will involve strengthening and asphalting the Bukombe-Isaka-section (112.5 km) of the Kobero-Rusumo-Isaka road. While the section from Rusumo to Lusahunga (97.3 km) has already been constructed to bitumen standard and opened to traffic recently (November 1985); the Lusahunga-Bukombe portion of the road is under construction. The proposed project will complete the missing stretch from Rusumo to Isaka.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and Benefits

The project will provide an improved transportation facility and is bound to stimulate accelerated development in agriculture, and the trade and commerce sectors at both local and regional levels. At international level the project would be part of a highway which would benefit Rwanda and Burundi providing particularly Rwanda with a shorter access towards the sea, transiting through one country only.

2. Cost

The cost of the project is estimated at US$ 51.54 m.

IV. STATUS

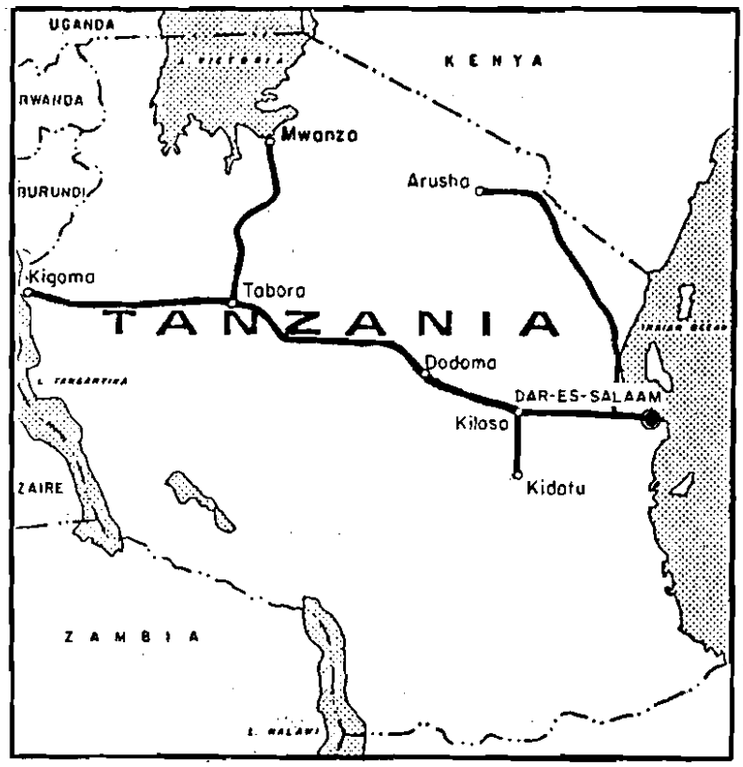
The Bukombe-Isaka road has already been designed.

V. FINANCING

(1)	Total estimated cost	US$ 51.54 m
(2)	Foreign component	US$ 36.08 m
(3)	Local funds	US$ 15.46 m
(4)	External financing secured	--
(5)	Available local funds (equivalent)	--
(6)	Shortfall	US$ 51.54 m

TANZANIA PROJECT No. RAP-43-001

I. IDENTIFICATION AND SUMMARY : Improvement of railway training facilities



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Rail and Rail transport

3. Order of priority
Training and Technical Assistance

4. Nature
Construction and installation of equipment

5. Location
Tabora, Central Tanzania

6. Cost : US$ 36.94 m

7. External financing required
US$ 36.94 m

8. Duration
Five years

9. Desirable starting date
1987

10. Project initiator
Ministry of Communications

11. Project management authority
Tanzania Railways Corporation

12. Remarks
Feasibility study available

II. DESCRIPTION

1. Aim and objectives

To expand training facilities for TRC in order to elevate the quality of staff and improve operations of the system especially in traffic control, maintenance, commerce and management.

2. Nature and constituent parts

Construction and completion of the railway training school - furnishing materials and equipment - training courses by expatriate instructors located at Tabora. The project is divided into three parts:

Architecture and civil engineering;

Furnishing of material and equipment; and

Development of training courses.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The new college when fully staffed will absorb 650 trainees which is about 3% of the labour force of the TRC at any one time, a figure which compares favourably with those of many European countries. This factor alone demonstrates that training is taken seriously by the management in its endeavours to run the business successfully.

This increased efficiency will help improve domestic and international transit traffic and reduce operating costs.

2. Cost

The estimated cost of the project is (in thousand US$) according to the feasibility study

	1985	1986	1987	1988	1989	1990
Capital costs	365	9215	9909	2076	2238	8096
Technical assistance	1497	1209	865	491	491	491
Total	1862	10424	10774	2567	2729	8587
Capital cost	31899					
Technical assistance	5044					
Total	36943					

IV. STATUS

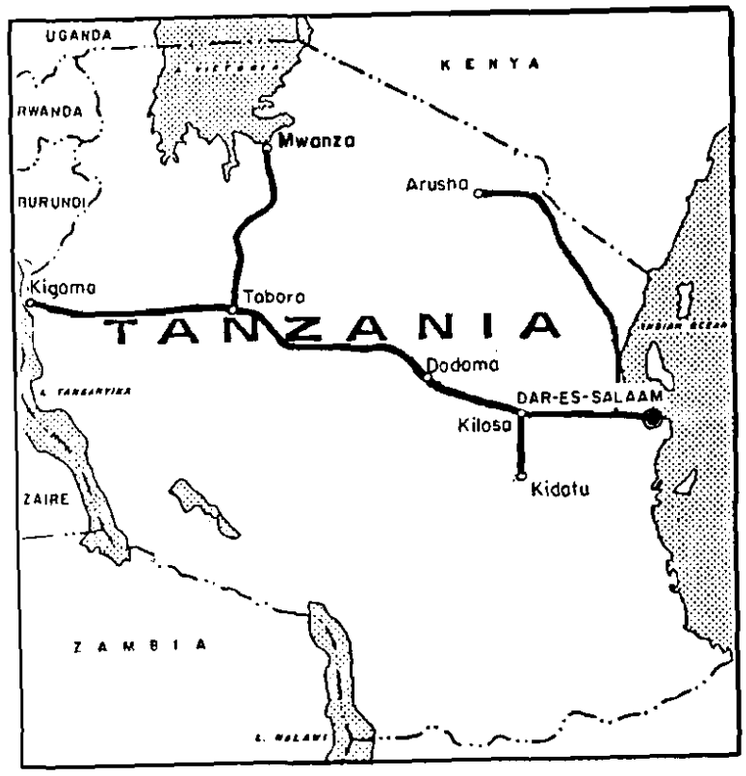
The feasibility study carried out in 1984 by G.E.R.I. Consult GMBH and TRANSMARK - O/CONSULT GMBH covers the proposed immediate, short and long term training programmes and concludes with an architect's building programme and the planning outline for the implementation of the training proposals.

V. FINANCING

(1)	Total estimate	US$ 36.943 m
(2)	Foreign component	US$ 36.943 m
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local fund	--
(6)	Financing gap	US$ 36.943 m

TANZANIA PROJECT No. RAP-43-N1

I. IDENTIFICATION AND SUMMARY : Acquisition of Petroleum Tank Wagons



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Rail and rail transport

3. Order of priority
National project with subregional impact

4. Location

5. Nature
Equipment

6. Cost : US$ 5.00 m

7. External financing required
US$ 5.0m

8. Duration

9. Desirable starting date
1987

10. Project initiator
Ministry of Finance, Planning and Economic Affairs

11. Project management authority
Tanzania Railways Corporation

12. Remarks Nil

II. DESCRIPTION

1. Aim and objectives

Acquisition of the tank wagons is intended to increase reliability of fuel energy supplies at inland destinations.

2. Nature and constituent parts

Acquisition of 50 petroleum tank wagons.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

This is expected to raise the volume of domestic production in the areas where fuel is either a direct or indirect input, hence contributing to the country's economic development. It will also enable fuel to be delivered at 4 per cent lower costs. The expected tonnage increase in volume after acquisition of these wagons is 36,400 tonnes.

2. Cost

The cost of implementing the project is estimated at US$5.00 million

IV. STATUS

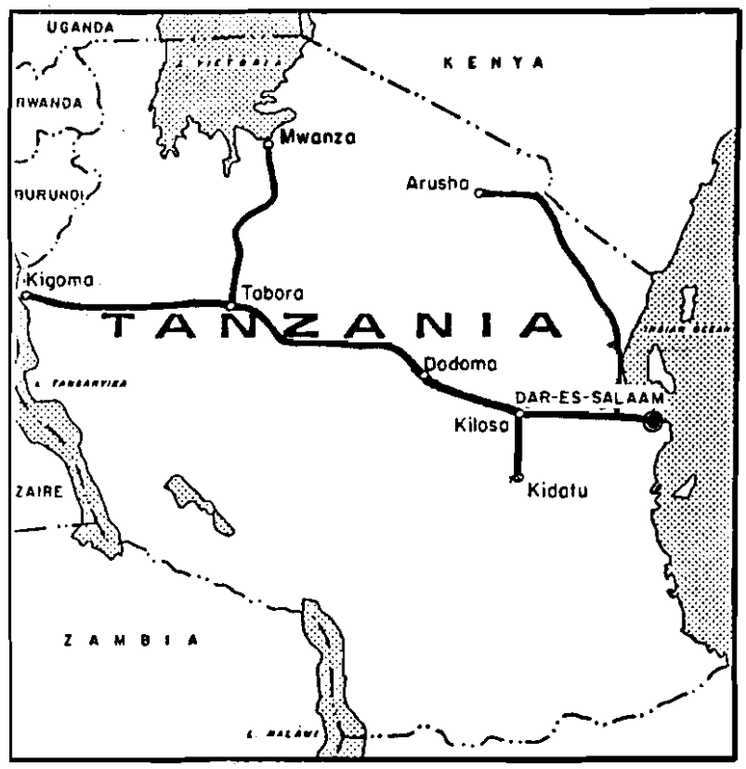
TRC can only carry 22 per cent of the fuel oil requirement with its fleet of 203 tank wagons of which only 54 per cent are in service.

V. FINANCING

(1)	Total estimate	US$ 5.0 m
(2)	Foreign component	US$ 5.0 m
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 5.0 m

TANZANIA PROJECT No. RAP-43-N2

I. IDENTIFICATION AND SUMMARY : Purchase of New 2000 HP Locomotives



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Rail and Rail transport

3. Order of priority
National project with subregional impact

4. Nature
Equipment

5. Location

6. Cost : US$ 21.00 m

7. External financing required
US$ 21.00 m

8. Duration

9. Desirable starting date
1987

10. Project initiator
Ministry of Finance, Planning and Economic Affairs

11. Project management authority
Tanzania Railways Corporation

12. Remarks Nil

II. DESCRIPTION

The Tanzania Railways Corp. has now capacity to haul one million tonnes of cargo. Additional traction power to double this capacity is required.

1. Aim and objectives

To acquire additional motive power required by TRC, to meet expected future demand.

2. Nature and constituent parts

The project involves purchase of 15 locomotives of 2000 hp.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

This will help the Corporation to increase haulage capacity over the central line so as to cope up with an expected increase in transit freight between the land locked countries and Dar-es-Salaam. This is also expected to increase foreign exchange earnings from haulage operations.

2. Cost: US$ 21.00 million

IV. STATUS

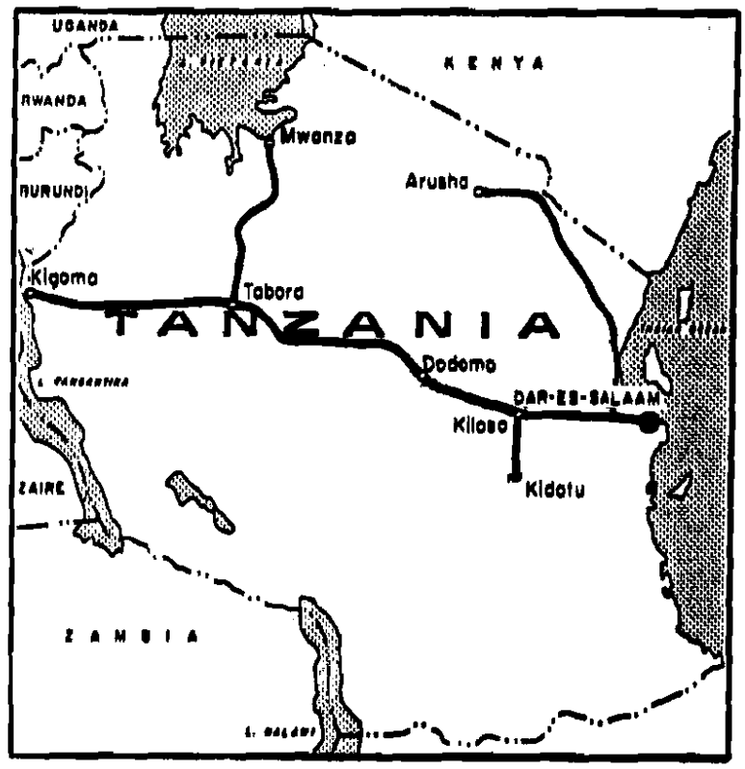
This project has been included in the TRC's 1988/2000 Corporate Plan. Financial resources are being sought.

V. FINANCING

(1)	Total estimate	US$ 21.0 m
(2)	Foreign component	US$ 21.0 m
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 21.0 m

TANZANIA PROJECT No. RAP-43-N3

I. IDENTIFICATION AND SUMMARY : Track component workshop and manufacturing plant



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Rail and rail transport

3. Order of priority
National project

4. Nature
Construction

5. Location

6. Cost: US$ 2.00 m

7. External financing required
US$ 2.00 m

8. Duration

9. Desirable starting date

10. Project initiator
Ministry of Finance, Planning and Economic Affairs

11. Project management authority
Tanzania Railways Corporation

12. Remarks Nil

II. DESCRIPTION

Currently the Corporation depends on the over-crowded Workshops meant for service of staff vehicles, which are inadequately equipped. It also contracts to outside operators who have proved to be excessively expensive.

The Corporation also depends on importation of equipment as they wear out, making it difficult for maintenance when there is shortage of foreign exchange. The situation impedes keeping the track under constant good repair.

1. Aim and objectives

It is intended to facilitate service and maintenance of plant and vehicles which are used to maintain the permanent way, and as such reduce maintenance costs by avoiding to contract the work to external operators. More thorough and effective repairs will result in more efficient operations.

As well, it aims at reduction of costs related to way maintenance by extending the life span of existing turn-outs. Also, it is expected to be an important substitution facility.

2. Nature and constituent parts

This project involves construction of a manufacturing and repair facility including provision of machinery and parts.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

2. Cost: US$ 2.00 million

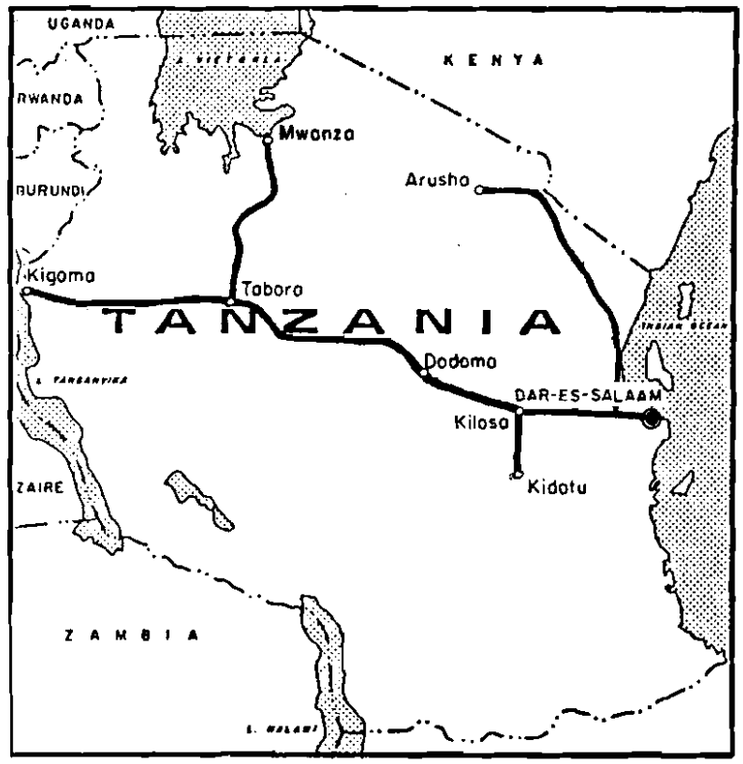
IV. STATUS

V. FINANCING

(1)	Total estimate	US$ 2.0 m
(2)	Foreign component	US$ 2.0 m
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 2.0 m

TANZANIA PROJECT No. RAP-43-N4

I. IDENTIFICATION AND SUMMARY : Luiche Bridge Works



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Rail and rail transport

3. Order of priority
National project with subregional impact

4. Nature
Construction

5. Location
Western Tanzania

6. Cost: US$ 0.50 m

7. External financing required
US$ 0.50 m

8. Duration

9. Desirable starting date
1987

10. Project initiator
Ministry of Finance, Planning and Economic Affairs

11. Project management authority
Tanzania Railways Corporation

12. Remarks Nil

II. DESCRIPTION

1. Aim and objectives

The project is intended to eliminate the ever water-logged track condition to make it an all weather track. This will facilitate efficient flow of cargo to and from Kigoma (the western end of the railway line) and other supplies by rail, thus raising the corporation's revenue.

2. Nature and constituent parts

This project involves raising part of the track and construction of 5 bridges in the area. It involves Engineering and hydrological studies; designing and construction.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

2. Cost: US$ 0.5m

IV. STATUS

Preliminary surveys have been carried out by a German firm, which recommended complete replacement of the main bridge as well as further studies of soil, hydrology and topography of the surrounding area.

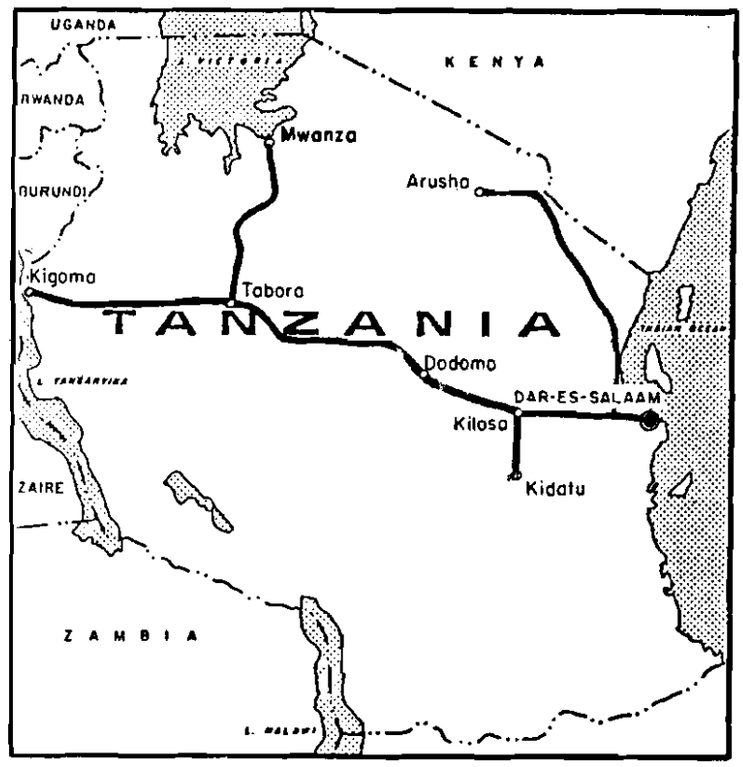
The project has been included in the Corporation's 1986-2000 Corporate plan.

V. FINANCING

(1)	Total estimate	US$ 0.5 m
(2)	Foreign component	US$ 0.5 m
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 0.5 m

TANZANIA PROJECT No. RAP-43-N5

I. IDENTIFICATION AND SUMMARY : Purchase of Heavy Duty Track Trolley Cars



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Rail and rail transport

3. Order of priority
National project

4. Nature
Equipment

5. Location

6. Cost: US$ 1.20 m

7. External financing required
US$ 1.20 m

8. Duration

9. Desirable starting date
1987

10. Project initiator
Ministry of Finance, Planning and Economic Affairs

11. Project management authority
Tanzania Railways Corporation

12. Remarks Nil

II. DESCRIPTION

1. Aim and objectives

2. Nature and constituent parts

The project involves purchase of six heavy duty trolleys for engineering to replace engineering trains at particular instances.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

Acquisition of heavy duty trolleys is intended to replace the inefficient engineering trains which are expensive to operate; especially where minor works are going on. With these trolleys, it is expected to carry out relaying works along the link-line and thereafter, the central line.

2. Cost: US$ 1.2 million

IV. STATUS

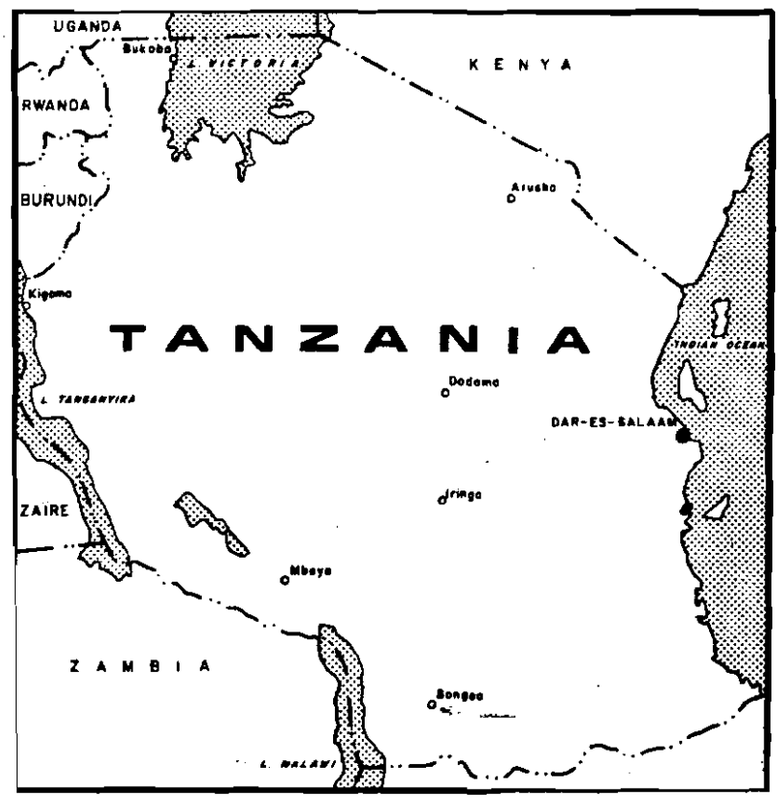
Evaluation has been made and TRC is looking for financiers.

V. FINANCING

(1)	Total estimate	US$ 1.2 m
(2)	Foreign component	US$ 1.2 m
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 1.2 m

TANZANIA PROJECT No. HAP-43-N1

I. IDENTIFICATION AND SUMMARY : Entrance channel improvement of the Port of Dar-es-Salaam



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector: Ports

3. Order of priority
National project with sub-regional implications

4. Nature
Deepening of the entrance channel and provision of navigational aids

5. Location: Dar-es-Salaam

6. Cost : US$ 25 million

7. External financing required
US$ 25 million

8. Duration: Two years

9. Desirable starting date
1987

10. Project initiator
Ministry of Transport

11. Project management authority
Tanzanian Harbours Authority

12. Remarks
Part of the expansion of the Port of Dar-es-Salaam Development Project. (HAP-43-001)

II. DESCRIPTION

The entrance channel to the main port of Dar-es-Salaam is not deep nor wide enough to allow bigger size vessels to pass through. This is especially true with full cellular vessels which are now frequently calling at Dar-es-Salaam port. The entrance channel is also without adequate Navigational Aids for night navigation.

1. Aim and objectives

The aim of the project is to enable Dar-es-Salaam port to handle bigger size vessels to meet the growing traffic demand of Tanzania as well as neighbouring Front Line States that are becoming more and more dependent on Dar-es-Salaam Port. The implementation of the project is also aimed at reducing the waiting times of vessels unable to enter the port during the night because of lack of Navigational Aids, thus eliminating ship congestion in port.

2. Nature and constituent parts

The project comprises:

- deepening of the entrance channel; the entrance channel needs deepening and widening for easy movement of bigger size vessels.

- provision of navigational aids; both sides of the channel should have adequate lighting system so that vessels could easily and safely move during night operations.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The construction of a modern container terminal is underway in the port of Dar-es-Salaam which would enable the port to handle cellular vessels up to 1500 TEU and above. However, the present condition of the entrance channel allows through container vessels up to 1200 TEU only. The deepening of the channel will allow cellular vessels of bigger sizes to pass through thus increasing port performance. The port has a traffic forecast of 100,000 TEU per year in the next five years including the traffic of the neighbouring Front Line States. The implementation of the project will also assist in reducing vessel waiting times, thus minimizing port congestion.

The provision of Navigational Aids at the entrance channel would enable easy movement of vessels especially during night-time thus increasing port productivity.

2. Cost: US$ 25 million.

IV. STATUS

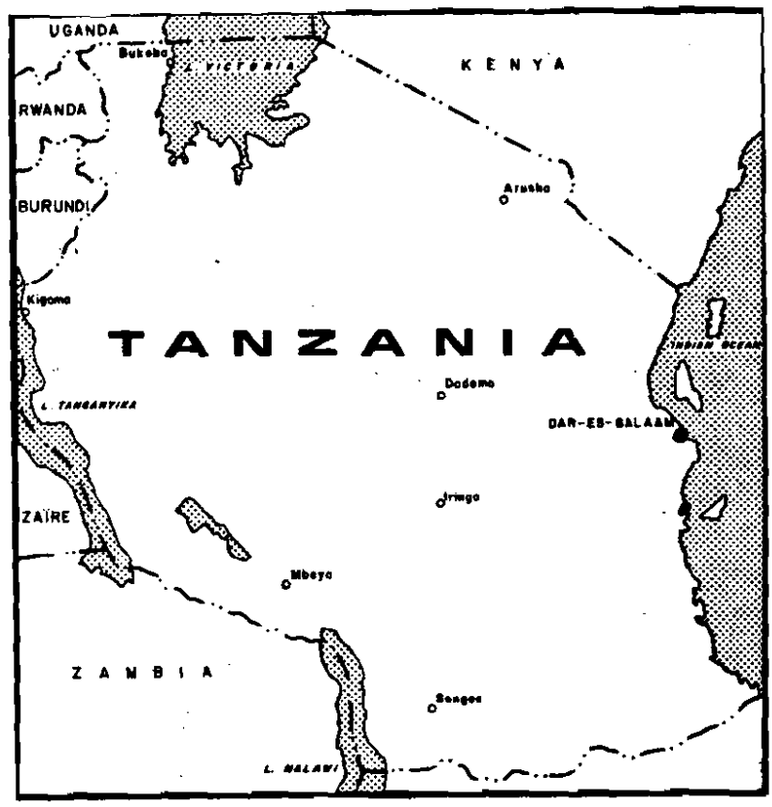
There is a feasibility study of the project available at present. Apart from such a study no other development of the project has taken place so far.

V. FINANCING

(1)	Total estimated	US$25.0 m
(2)	Foreign component	US$25.0 m
(3)	Local funds	---
(4)	External financing secured	---
(5)	Available local funds	---
(6)	Financing gap	US$25.0 m

TANZANIA PROJECT No. TEP-43-N1

I. IDENTIFICATION AND SUMMARY : Purchase and installation of Dar-es-Salaam - Dodoma Digital (140 Mbit) Microwave Link



1. Origin of the project
Submitted by the Government of the United Republic of Tanzania

2. Subsector
Telecommunications

3. Order of priority
National project with subregional impact

4. Nature
Installation of equipment

5. Location

6. Cost: US$ 4.04m

7. External financing required
US$ 3.83m

8. Duration

9. Desirable starting date
1987

10. Project initiator
Tanzania Posts and Telecommunications

11. Project management authority
Tanzania Posts and Telecommunications Corporation

12. Remarks Nil

II. DESCRIPTION

1. Aim and objectives

The objectives of the project are to satisfy the existing demand for additional circuits and also to prepare for future requirements which will result from the installation of new exchanges at Sumbawanga, Songea, Iringa, Kigoma and Bukoba.

2. Nature and constituent parts

The project includes procurement and installation of digital (140 mbit) microwave radio and multiplex equipment for the Tanzania National Telecommunications network. The proposed new microwave link between Dar-es-Salaam and Dodoma will replace the existing 960 channels which are all saturated.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

This new digital link will improve circuit performance and also meet expected increases in the Central Corridor traffic where good telecommunications are essential for co-ordination of traffic.

2. Cost

The project is estimated to cost US$ 4.04m

IV. STATUS

The project is in the 1984-1990 Tanzania Posts and Telecommunications Corporation Development Programme.

V. FINANCING

(1)	Total estimate	US$ 4.04 m
(2)	Foreign component	US$ 3.83 m
(3)	Local fund	US$ 0.21 m
(4)	External financing secured	--
(5)	Available local funds	US$ 0.21 m
(6)	Financing gap	US$ 3.83 m

UGANDA PROJECT No. ROP-46-002

I. IDENTIFICATION AND SUMMARY : Rehabilitation of the Mbarara and Ishaka-Katungura road

1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Roads and road transport

3. Order of priority
National project with a subregional impact, in favour of a disadvantaged country

4. Nature
Rehabilitation

5. Location
Western Uganda

6. Cost: US$ 12.6m

7. External financing required
US$ 12.32m

8. Duration
Four years

9. Desirable starting date
1987

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Ministry of Works

12. Remarks
IDA Feasibility Study 1983/1984

II. DESCRIPTION

The Mbarara-Ishaka-Kutungura road, which connects Uganda to Rwanda, Burundi and Eastern Zaire, and traverses highly productive agricultural areas, has major structural failures due to long-term neglect. The proposal is to rehabilitate and strengthen this important road, especially its pavement structure, shoulders and drainage systems.

1. Aim and objectives

The main objective of the project is to rehabilitate one of the major roads of the country before its complete failure and improve communications with the neighbouring countries, based on an economic and technical study of 1983/84 financed by IDA.

2. Nature and constituent parts

The work constitutes reconstruction and restoration of 76 km of the highway to bitumen standard, and carrying out major repairs on the remaining 33 kms.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The feasibility study financed by Uganda and IDA has determined that this project, which traverses highly productive areas and connects Uganda and its rail heads with neighbouring countries, is of considerable local and international significance, and the economic returns to be derived range between 12 and 20.6 per cent.

2. Cost

The cost of the project is estimated at US$ 12.61 m

IV. STATUS

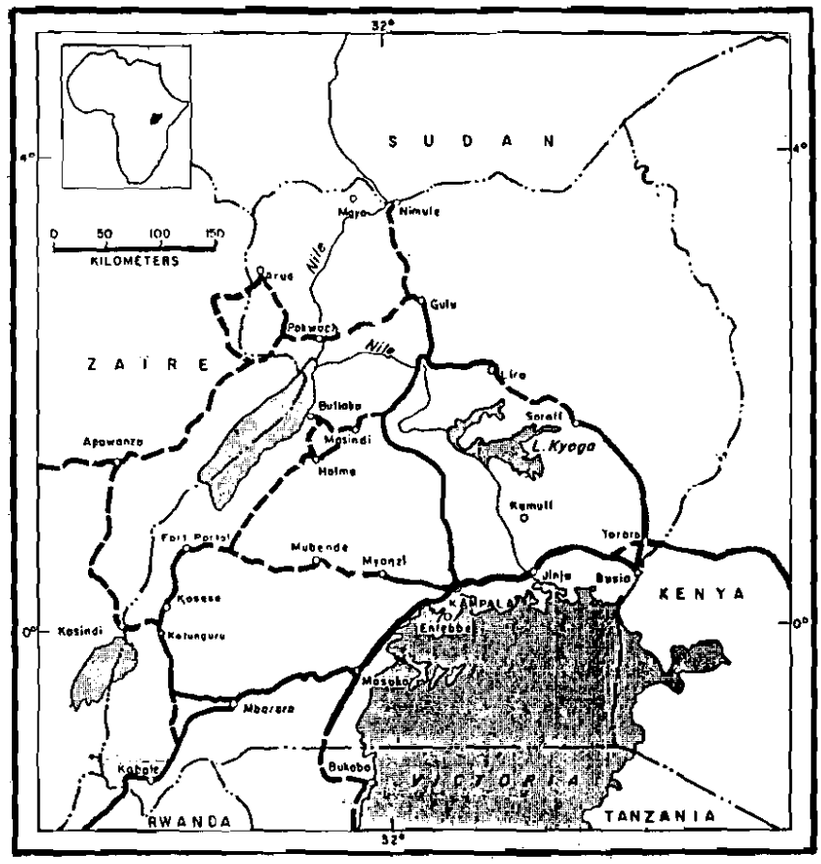
Economic and technical studies have been completed, with several mixes of variables, including differing construction standards, design life of the road, and discount rates.

V. FINANCING

(1)	Total estimate	US$ 12.61 m
(2)	Foreign component	US$ 10.38 m
(3)	Local funds	US$ 2.23 m
(4)	External finance secured	US$ 0.26 m
(5)	Available local funds	US$ 0.03 m
(6)	Shortfall (gap) of Foreign Exchange	US$ 12.32 m

UGANDA PROJECT No. ROP-46-N1

I. IDENTIFICATION AND SUMMARY : Upgrading of road maintenance



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Roads and road transport

3. Order of priority
National priority in favour of a disadvantaged country

4. Nature
Upgrading and maintenance

5. Location
Western Uganda

6. Cost : US$ 110.06 m

7. External financing required
US$ 48.60 m

8. Duration : Five years

9. Desirable starting date
1987

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Ministry of Works

12. Remarks
i) IDA Maintenance study, 1982/1983

ii) "Revised Recovery Programme"

II. DESCRIPTION

The road network in Uganda has deteriorated due to inadequate maintenance in the 1970s, and the heavy truck movements in the 1980s, which significantly replaced rail traffic for long distance freight movement. Substantial quantities of maintenance equipment of all kinds had been lost during the civil war. The project is therefore to assist in the Recovery Programme of rehabilitation and reactivation of maintenance programmes based on an IDA study in 1980/83 which determined the costs, benefits and the physical, technical, and institutional requirements for an optimum road maintenance programme in the immediate and near future.

1. Aim and objectives

The primary objective is to rehabilitate the priority, most urgent roads that require resealing and regravelling; procure the minimum quantity of equipment required to restore the capability of the Ministries of Works and Local Government, as well as to provide institutional support to strengthen the technical department of those Ministries to cope with the planning, programming and operation of road maintenance responsibilities.

2. Nature and constituent parts

The "maintenance" project, which was based on the revised Recovery Programme, includes the following component parts:

(a) A programme to improve maintenance of the country's classified roads;

(b) Technical assistance to the Ministries of Works and Transport;

(c) A pilot programme for the development of the local road construction industry; and

(d) Preparation of a future road maintenance programme, to follow the initial four year life span of the current project.

The above may further be detailed as follows:

-Contracting of periodic maintenance to private firms,

-Procurement of maintenance equipment and spare parts, and workshop equipment and tools,

-Improvement of MOW's Road Maintenance Training Centre and Workshops,

-Supply of fuel and bitumen,

-Technical assistance to re-establish road maintenance planning, organization and operation,

-Development of the transport-sector statistical and economic data base.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The serious deterioration of Uganda's road network has reached such a stage that normal maintenance procedure is no more relevant, and reconstruction/rehabilitation is needed. Road user costs have risen sharply and now include heavy increments for consumables such as fuel and parts; vehicle life is significantly shortened, and the capability to perform routine maintenance effectively has been drastically reduced. The project's economic benefits, even without the intangibles, are substantial, with a rate of return of over 50 per cent.

2. Cost

The cost of the project is estimated at US$ 48.60 million.

IV. STATUS

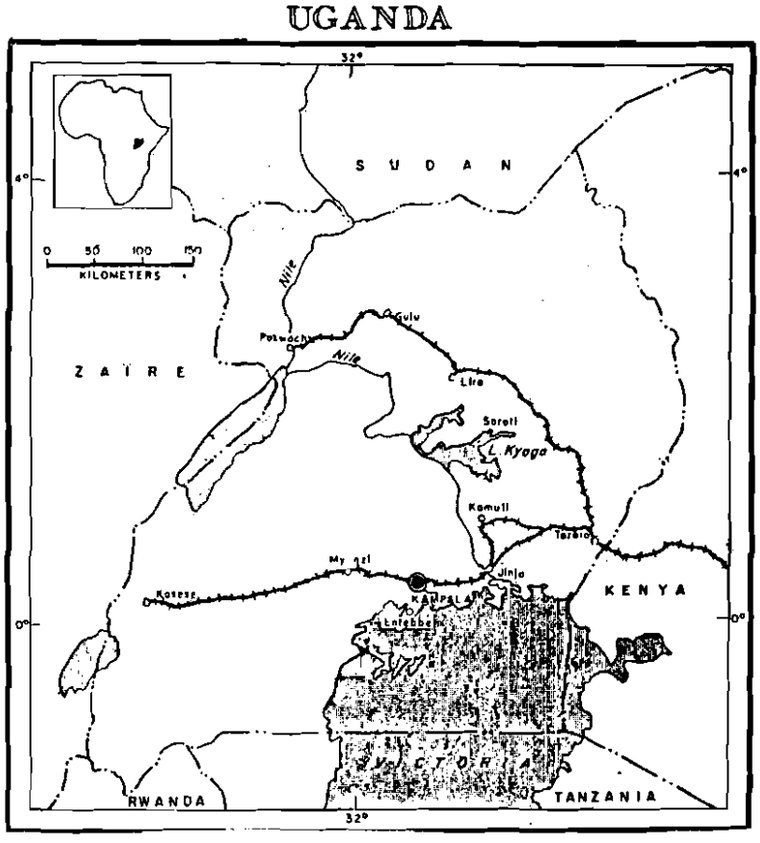
Limited maintenance operations are ongoing, and the proposed project is to bridge the gap, in foreign exchange, between current efforts and perceived requirements, especially in key priority areas, to salvage particularly the roads in Uganda which are approaching a terminal state of repair.

V. FINANCING

(1)	Total estimate	US$ 110.06 m
(2)	Foreign component	US$ 84.45 m
(3)	Local funds	US$ 25.61 m
(4)	External finance secured	US$ 61.46 m
(5)	Available local funding	US$ 0.05 m
(6)	Shortfall (gap) of Foreign Exchange	US$ 48.69 m

UGANDA PROJECT No. RAP-46-002

I. IDENTIFICATION AND SUMMARY : Procurement of Railways Rolling Stock



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Rail and rail transport

3. Order of priority
National project of a and-locked country

4 Nature
Purchase of six locomotives 88 coaches, 985 wagons and related spare parts

5. Location
Nationwide (Uganda)

6. Cost : US$ 112.02 m

7. External financing required
Whole amount

8. Duration
Five years

9. Desirable starting date
1987

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Uganda Railways Corporation

12. Remarks
A Railways Master Plan Study that was made earlier recommended the purchase of the equipment.

II. DESCRIPTION

Following the inter-State agreement on the allocation of assets and liabilities of the former East African Community (EAC) in 1984, URC as allocated nearly eight hundred units which comprised a mixed fleet of covered, open and tank wagons. Most of these have become uneconomic to operate and the balance will require major overhaul. Provision for the facilities to undertake this forms the background to a study on carriage and wagon repair shop facilities.

1. Aim and objectives

The project is designed to:

- increase the quantity of rolling stock operated by Uganda Railways Corporation (URC), primarily tank wagons for the carriage of petroleum products, covered wagons for the movement of general freight particularly export cash crops such as coffee, cotton and tea, and food stuffs, and flat wagons to accommodate containers or abnormal indivisible loads;

- increase the capability of URC to handle greater volumes of long distance freight traffic thereby fulfilling government policy to divert such traffic from road to rail to attain the dual benefits of first, the lower unit costs which rail transport offers, and secondly reductions in road maintenance costs arising from the decrease in volume of heavy truck traffic on international routes.

2. Nature and constituent parts

The nature of the project is procurement of railways rolling stock of:

- 6 locomotives

- 88 coaches

- 985 wagons and related spare parts in the course of 5 years (1987-1991)

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The project will reduce dependence on foreign carriers for the movement of import and export traffic thus reducing the drain on foreign exchange, and maximising the foreign exchange earnings of export commodities;

It will also provide cheaper means of passenger transport with the procurement of more coaches;

An increase in the locomotive power to be able to cope with the rolling stock volume can be also obtained.

2. Cost

The cost of the project is US$ 112.02 million.

IV. STATUS

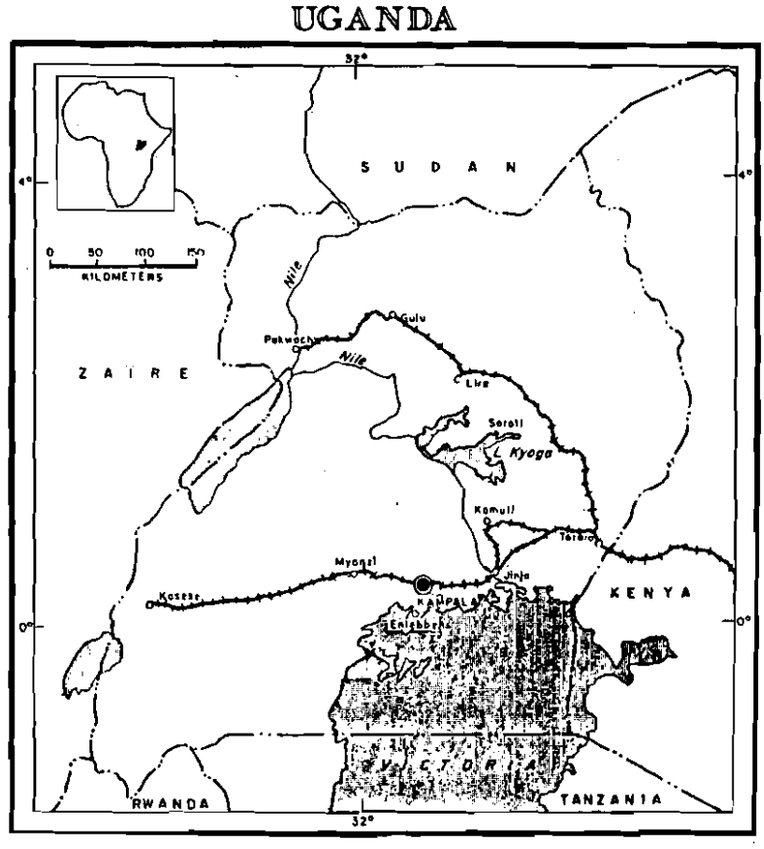
It is an ongoing project which has attracted some foreign financing up to US$ 25.98 million.

V. FINANCING

(1)	Total estimate	US$112.02 m
(2)	Foreign component	US$112.02 m
(3)	Local fund	--
(4)	External financing secured	US$ 25.98 m
(5)	Available local funds	--
(6)	Financing gap	US$ 96.04 m

UGANDA PROJECT No. RAP-46-003

I. IDENTIFICATION AND SUMMARY : Renewal and Improvement of the Permanent Way



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Rail and rail transport

3. Order of priority
National project of a land-locked country

4. Nature
Rehabilitation work on the permanent railway lines

5. Location
Nationwide (Uganda)

6. Cost : US$ 83.13 million

7. External financing required
US$ 78.00 million

8. Duration : Five years

9. Desirable starting date
1987

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Uganda Railways Corporation

12. Remarks
It is an on-going project

II. DESCRIPTION

An engineering study was carried out in 1983/84 for the Kampala - Kasese line whose economic rates of return ranged from 7.4 to 8.2 per cent. The Uganda Railway Master Plan Study examined in detail the work required to upgrade the entire existing railway network. The operations were grouped into: civil works, ballast, permanent way and renewal. Alternative levels for improvement were proposed but because of the magnitude of costs involved, government will start with the most critical sections and these are reflected in this project. Rehabilitation work on the line was identified and divided into priority stages. Government has incorporated these proposals into this project with modification to the phasing of implementation.

1. Aim and objectives

The objective of this project is to remove bottlenecks along the permanent way. This involves the renewal and improvement of critical sections in the entire network: Kampala-Kasese; Kampala-Tororo; Tororo-Pakwach; the rehabilitation of 2 railway quarries. and purchase of 20 hopper wagons.

2. Nature and constituent parts

The project consists of the rehabilitation of Uganda's railway network in the fields of civil works, ballast, permanent way and renewal. Up-grading the rail network in the country is the main task.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

As the Ugandan economy recovers, production is expected to increase and with it the volume of internal rail traffic. Moreover, the Uganda rail network is part of the Northern and Central Corridor transportation system, and it is expected that transit traffic for neighbouring countries will also increasingly be moved by rail, attracted by the system's lower unit costs compared with road transport. It is, therefore, expedient to improve the track to achieve the following immediate and long-term benefits:

- Faster and more economical operation through higher speeds and less delays;
- Decline in the rate of accidents;
- More economical utilisation of locomotive power and rolling stock;
- Reduced maintenance costs over time;
- Increase in track capacity to accommodate increases in traffic volumes.

2. Cost

The project is estimated to cost US$ 83.13 million over a period of five years.

IV. STATUS

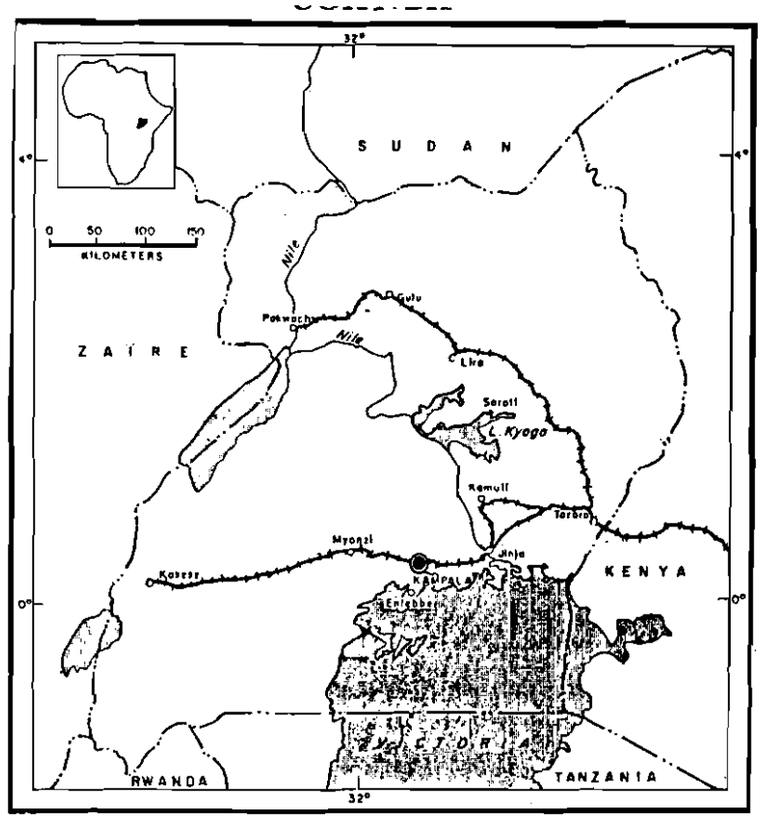
An engineering study was carried out in 1983/84 for some lines and the rest were studied under the Uganda Railway Master Plan. It is an on-going project.

V. FINANCING

(1)	Total estimate	US$ 83.13m
(2)	Foreign component	US$ 82.98 m
(3)	Local funds	US$ 0.15 m
(4)	External financing secured	US$ 4.98 m
(5)	Available local funding	US$ 0.15 m
(6)	Financing gap	US$ 78.00 m

UGANDA PROJECT No. RAP-46-005

I. IDENTIFICATION AND SUMMARY : Study and design of the workshop for carriage and wagon repairs



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Rail and rail transport

3. Order of priority
National project of a land-locked country

4. Nature
Economic and technical studies

5. Location
Not yet decided

6. Cost : US$ 0.50 million

7. External financing required
US$ 0.50 million

8. Duration: Two years

9. Desirable starting date
1990

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Ugandan Railways Corporation

12. Remarks
The project is a new project which needs attention.

II. DESCRIPTION

Uganda has an extensive rail network in the country and it is important that a well-equipped workshop be available within the country for the maintenance of carriages, wagons etc.

1. Aim and objectives

The project is aimed at establishing the feasibility and design of the carriage and wagon heavy repair workshop. Previously such repairs were undertaken in Kenya.

2. Nature and constituent parts

The project consists of:

Feasibility and economic study of the establishment of a workshop for the maintenance of carriages wagons, etc.;

Technical study including location of the workshop.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The purpose of the project is to enable such repairs to be undertaken within Uganda, thereby improving the maintenance capacity of the rail system and enhancing the availability of rolling stock.

2. Cost : US$ 0.50 m

IV. STATUS

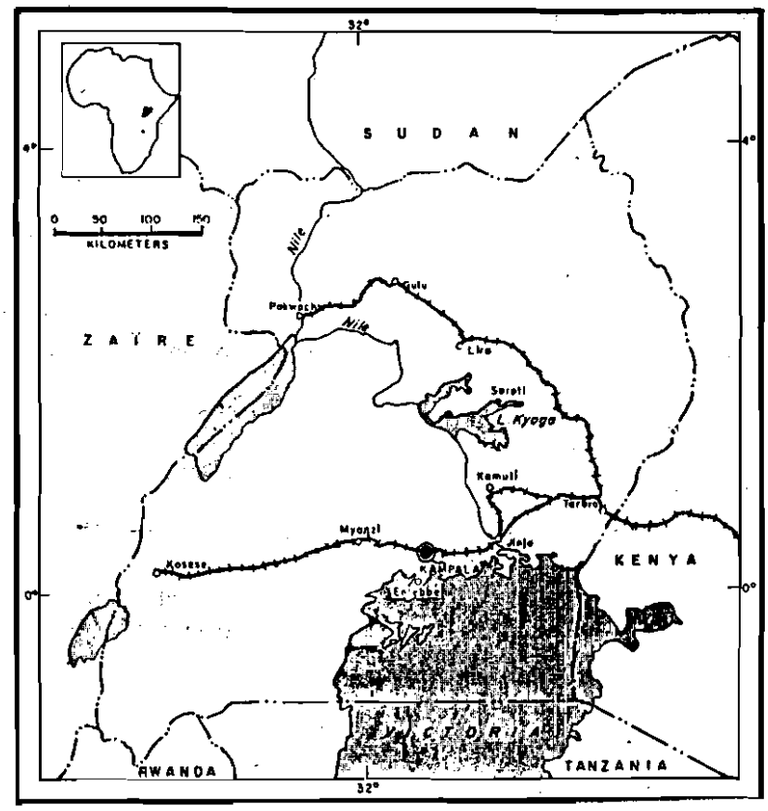
It is a new project which needs an in-depth study both economic and technical.

V. FINANCING

(1)	Total estimate	US$ 0.5 m
(2)	Foreign component	--
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local funding	--
(6)	Financing gap	US$ 0.5 m

UGANDA PROJECT No. RAP-46-007

I. IDENTIFICATION AND SUMMARY : Study on the establishment of a railway training school



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Rail and rail transport

3. Order of priority
National project of a land-locked country

4. Nature
Feasibility study

5. Location
Not yet determined

6. Cost : US$ 0.51 m

7. External financing required
US$ 0.43 m

8. Duration : 1-2 years

9. Desirable starting date
1988

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Uganda Railways Corporation

12. Remarks
Pre-feasibility study conducted.

II. DESCRIPTION

There is no Railway Training Centre in Uganda that caters for manpower requirements in the country. The one at Jinja is not complete neither in facilities nor programmes.

1. Aim and objectives

The project is aimed at determining the feasibility of establishing a new Railway Training School in the country. The present one at Jinja lacks the basic facilities and offers elementary courses on an ad hoc basis. A suitable site is to be determined and the size and nature of the school defined.

2. Nature and constituent parts

The project envisages a feasibility study to be undertaken to determine the establishment of a new Railway Training School in Uganda. The study is expected to also determine the size and nature of the School.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

Uganda will benefit from the project in developing its own manpower requirement in the field of rail transport. There is shortage of trained manpower at present in the country in both management and operations fields and the school is expected to meet Uganda's training requirement. Currently Uganda Railways Corporation is compelled to send its senior staff abroad for such training.

2. Cost : US$ 0.51 m

IV. STATUS

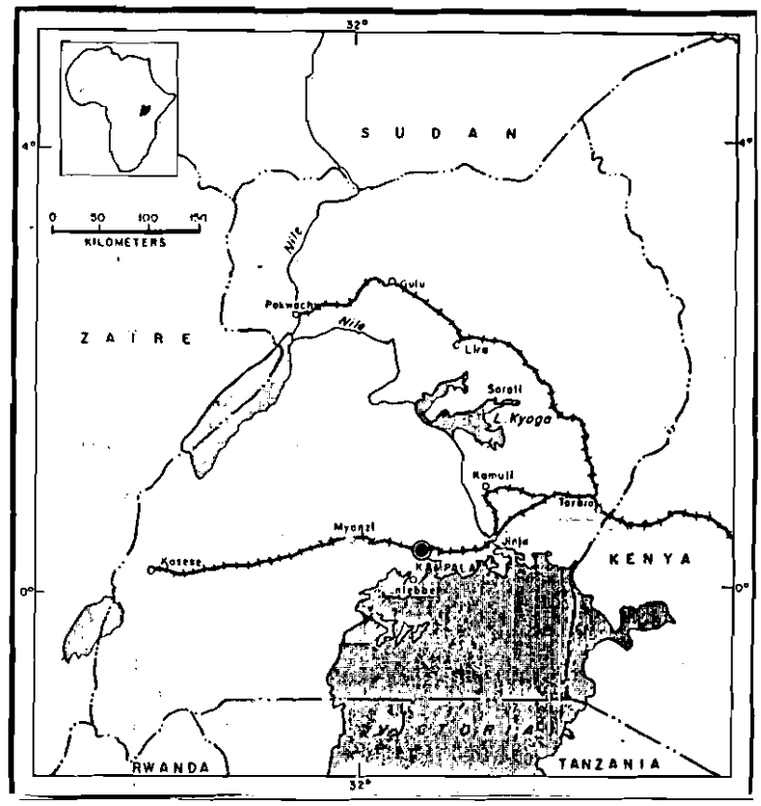
Pre-feasibility study is being conducted at present with World Bank assistance.

V. FINANCING

(1)	Total estimate	US$ 0.51 m
(2)	Foreign component	US$ 0.43 m
(3)	Local funds	US$ 0.08 m
(4)	External financing secured	--
(5)	Available local funds	US$ 0.08 m
(6)	Financing gap	US$ 0.43 m

UGANDA PROJECT No. RAP-46-N1

I. IDENTIFICATION AND SUMMARY : Completion of Diesel Locomotive Repair Workshops



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Rail and rail transport

3. Order of priority
National project of a land locked country

4. Nature
Provision of workshop facilities

5. Location : Kampala

6. Cost : US$ 49.98 m

7. External financing required
US$ 7.83 m

8. Duration
Not indicated

9. Desirable starting date
Not indicated

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Uganda Railways Corporation

12. Remarks
The project was started in 1978 and was expected to be completed in 1983.

II. DESCRIPTION

The Nalukolongo workshop was started in 1978 and should have been completed in 1983 but due to resource constraints its completion has been pending. So far the Government has financed the project using US$ 18.20 m of its own resources and US$ 20.23 m by drawing down of the Project Account for the local currency proceeds of the IDA Reconstruction Credit.

1. Aim and objectives

This project is for the completion of a workshop at Nalukolongo to enable the country to be self-reliant in major repairs to diesel locomotives. Repairs were undertaken at the former East African Railways Corporation workshop in Nairobi but were stopped due to the high cost in terms of foreign currency.

2. Nature and constituent parts

The workshop at Nalukolongo needs to be completed with workshop facilities for major repairs of diesel locomotives. Workshop buildings and stores are available. What are lacking are workshop facilities that need to be provided.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

This is a first priority project and Government has made considerable efforts to implement it to overcome the constraints imposed on the railways by lack of repair facilities. The creation of workshop facilities for major repairs and the improvement of existing facilities for normal preventive maintenance will ensure greatly improved utilisation of the existing stock.

2. Cost

The total cost of the project is US$ 49.98 m.

IV. STATUS

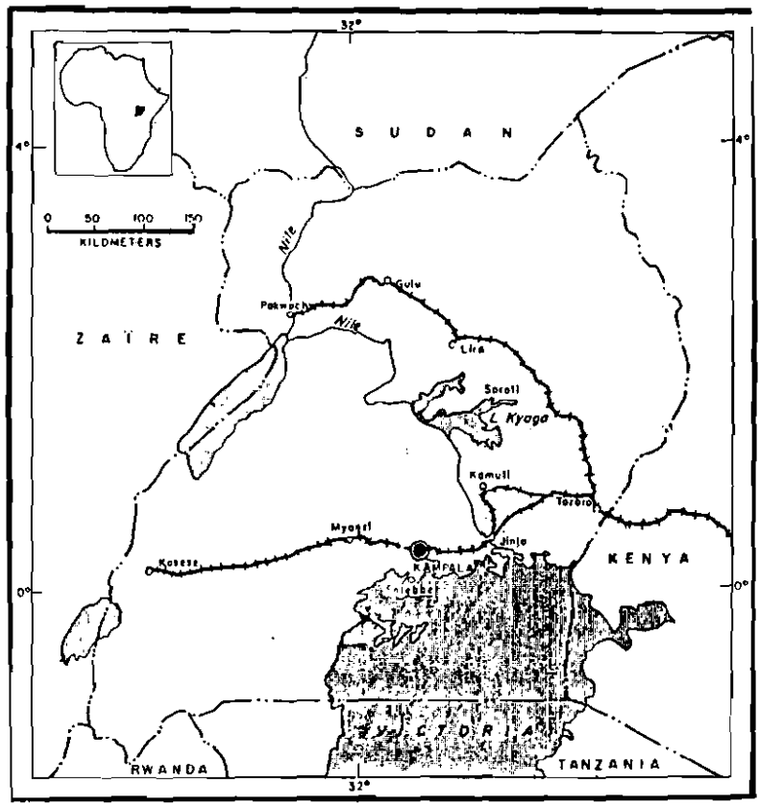
A KFW consulting mission was fielded between May and June 1985 to prepare a co-ordinated programme of training and related measures to strengthen the locomotives' capacity and performance of the URC. A phased programme of action was recommended and it has been adopted for technical assistance requirements KFW has accepted to finance the programme at a total cost of US$ 2.174 m.

V. FINANCING

(1)	Total estimate	US$ 49.98 m
(2)	Foreign component	US$ 43.19 m
(3)	Local Funds	US$ 6.79
(4)	External financing secured	US$ 35.36 m
(5)	Available local funds	US$ 6.79 m
(6)	Financing gap	US$ 7.83 m

UGANDA PROJECT No. RAP-46-N2

I. IDENTIFICATION AND SUMMARY : Improvement of Safety of Rail Level Crossing



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Rail and rail transport

3. Order of priority
National project of a land-locked country

4. Nature
Purchase and installations of rail crossing devices

5. Location
All over the Ugandan Railway Network

6. Cost : US$ 1.00 m

7. External financing required
US$ 1.00 m

8. Duration : Two years

9. Desirable starting date
1988

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Uganda Railways Corporation

12. Remarks
Currently, manual level crossing devices are used.

II. DESCRIPTION

Uganda Railway Network currently uses manual devices for level crossings which need to be improved.

1. Aim and objectives

The aim and objective of improvement is to provide safety of travel for both passengers and goods. Safety of passengers and goods during transportation is essential.

2. Nature and constituent parts

The project consists of procurement of modern rail level crossing protection devices and installation of them all over the Uganda Railways network.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The project is expected to improve safety of rail transportation in Uganda in the light of the recent high incidence of accidents on level crossings.

2. Cost

The total cost of the project for both procurement and installation is US$1.0 m.

IV. STATUS

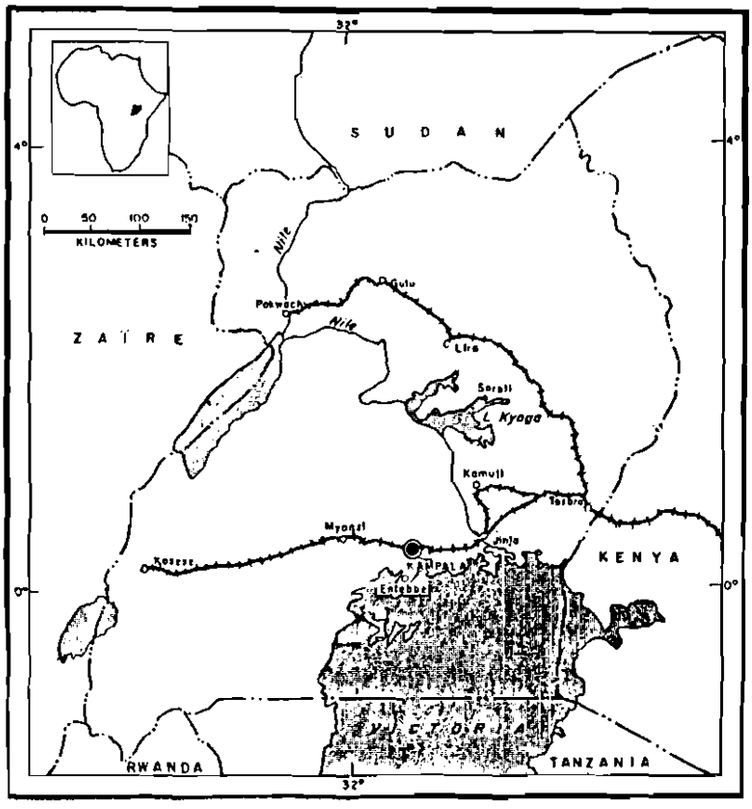
It is a new project

V. FINANCING

(1)	Total estimate	US$ 1.0 m
(2)	Foreign component	US$ 1.0 m
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 1.0 m

UGANDA PROJECT No. RAP-46-N3

I. IDENTIFICATION AND SUMMARY : Improvement of the Supplies Function of Uganda Railways Corporation



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Rail and rail transport

3. Order of priority
National project of a land-locked country

4. Nature
Rehabilitation, procurement and technical assistance

5. Location: Kampala

6. Cost : US$ 1.02 m

7. External financing required
US$ 0.27 m

8. Duration: Three years

9. Desirable starting date
1987

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Uganda Railways Corporation

12. Remarks
Survey of the supply function was made and reported in 1984

II. DESCRIPTION

Uganda Railway Corporation inherited mixed documentation and other work systems from the former East African Railways Corporation and these need to be improved.

1. Aim and objectives

The project is aimed at improving the effectiveness of the supplies function of the Uganda Railways Corporation.

2. Nature and constituent parts

The project involves rehabilitation of the supplies warehouse location, procurement of additional storage equipment and provision of technical assistances.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The existing supply organization is not fulfilling its role and problems are mounting from time to time. The improvement of the supply function as well as purchases of equipment and other improvements will contribute to the overall efficiency of railway operations.

2. Cost

The total cost is US$1.02 m.

IV. STATUS

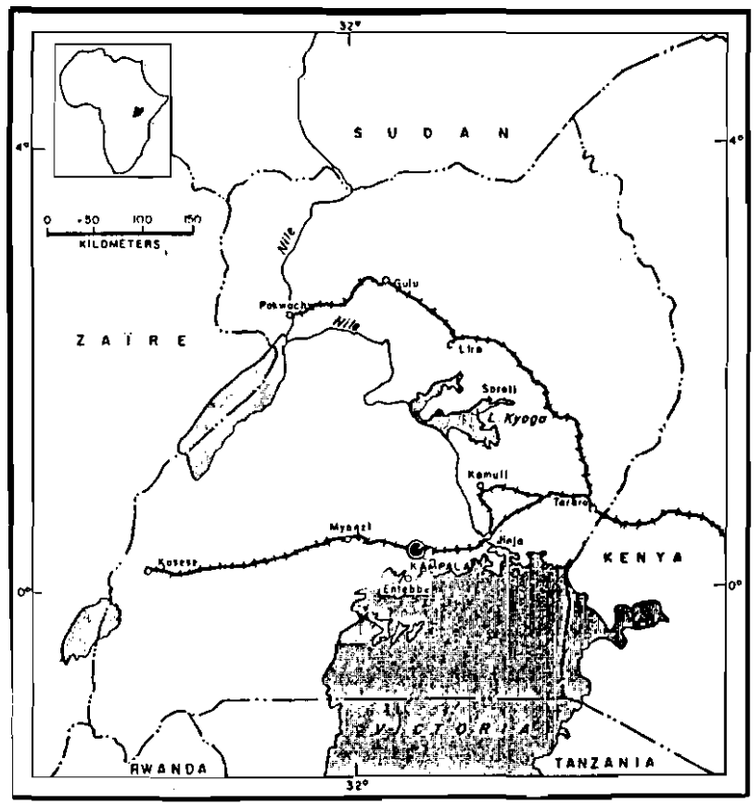
It is an important new project for which a preliminary survey exists.

V. FINANCING

(1)	Total estimate	US$ 1.02 m
(2)	Foreign component	US$ 1.02 m
(3)	Local funds	--
(4)	External financing secured	US$ 0.75 m
(5)	Available local funds	--
(6)	Financing gap	US$ 0.27 m

UGANDA PROJECT No. INP-46-001

I. IDENTIFICATION AND SUMMARY : Rehabilitation of Marine Services



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Inland-Water transport

3. Order of priority
National project with sub-regional implications

4. Nature
Rehabilitation of ferry terminal, purchase of fire fighting equipment and installations of navigational light, beacons and buoys.

5. Location
Lake Victoria, other lakes and water ways.

6. Cost : US$ 1.12 million

7. External financing required
US$ 1.06 million

8. Duration : Three years

9. Desirable starting date
1987

10. Project initiator
Ministry of Planning and Economic development

11. Project management authority
Uganda Railways Corporation

12. Remarks
A pre-feasibility study has been conducted further studies will be required.

II. DESCRIPTION

Development of Marine Services on Lake Victoria and adjacent lakes and waterways is essential for a land-locked Uganda which depends greatly on Inland-Water Transport Services. Uganda intends to have alternative routes for its access to the sea.

1. Aim and objectives

The project is designed to improve the facilities of marine services on Lake Victoria and adjacent lakes and waterways which form part of the Central Corridor Transportation system route to the sea.

2. Nature and constituent parts

The project consists of:

- Rehabilitation of Jinja Ferry Terminal,
- Purchase of fire fighting equipment,
- Installation of navigational light, beacons and buoys.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The rehabilitation of Jinja Ferry Terminal would provide better passenger and boat terminal facilities so as to accommodate large numbers of passengers and also better berthing facilities for boats and other vessels. The purchase of fire fighting equipment would ensure safety of installed facilities and life and work in general. The installation of navigational aids (light, beacons, and buoys) would also ensure safe navigation in the area.

2. Cost : US$ 1.12 million

IV. STATUS

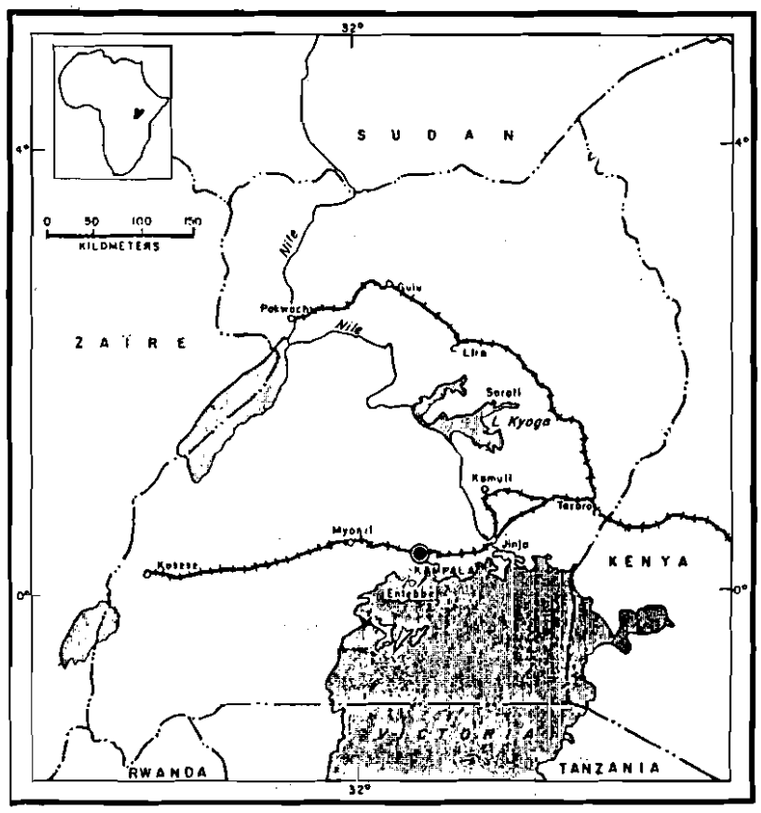
A feasibility study to define the role and potential of inland water services in other parts of Uganda (Sesse Islands, Lake Albert/Nile waterways, Lake Kyoga) is also included in the project. Also a study on the additional handling equipment required for Dar-es-Salaam and Lake Victoria ports was carried out in 1982 and the recommendations form the basis for the project components. An earlier pre-feasibility study undertaken on inland water transport shows that a further feasibility study should be made after which implementation should follow to develop a central corridor transport system.

V. FINANCING

(1)	Total estimate	US$ 1.12 m
(2)	Foreign component	US$ 1.06 m
(3)	Local funds	US$ 0.06 m
(4)	External financing secured	--
(5)	Available local funds	US$ 0.06 m
(6)	Financing gap	US$ 1.06 m

UGANDA PROJECT No. INP-46-002

I. IDENTIFICATION AND SUMMARY : Connection between Port Bell and Kampala



1. Origin of the project
Submitted by the Government of Uganda

2. Subsector
Inland Water transport

3. Order of priority
National project with regional implications

4. Nature
Reconstruction of Port Bell Wagon Ferry terminal and rail connection between Port Bell and Kampala

5. Location
Port Bell

6. Cost : US$ 7.00 m

7. External financing required
US$ 7.00 m

8. Duration
Four years

9. Desirable starting date
1988

10. Project initiator
Ministry of Planning and Economic Development

11. Project management authority
Uganda Railways Corporation

12. Remarks
The project is part of the Northern Corridor Transport System

II. DESCRIPTION

The rehabilitation work at Port Bell and the rail connection between Port Bell and Kampala are essential for Uganda as well as for Rwanda in the Northern transport corridor system.

1. Aim and objectives

The rehabilitation work will permit resumption of ferry services and make Port Bell important for servicing, repair and maintenance of wagon ferries.

The rail connection will facilitate goods transfer between Port Bell and Kampala.

2. Nature and constituent parts

The project consists of:

- Reconstruction of a wagon ferry terminal,

- Rail connection between Port bell and Kampala (6 km distance).

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The rehabilitation work will enable the resumption of ferry services between Jinja, Mwanza and Kisumu all on Lake Victoria. The resumption of this ferry services will improve trade between Uganda, Tanzania and Kenya and will also provide an additional outlet for Uganda to the Sea. It will also provide servicing, repair and maintenance facilities for wagon ferries at Port Bell.

The rail connection will improve goods transportation between Port Bell and Kampala (a distance of 6 km). At present the rail connection is discontinued.

2. Cost : US$ 7.0 million

IV. STATUS

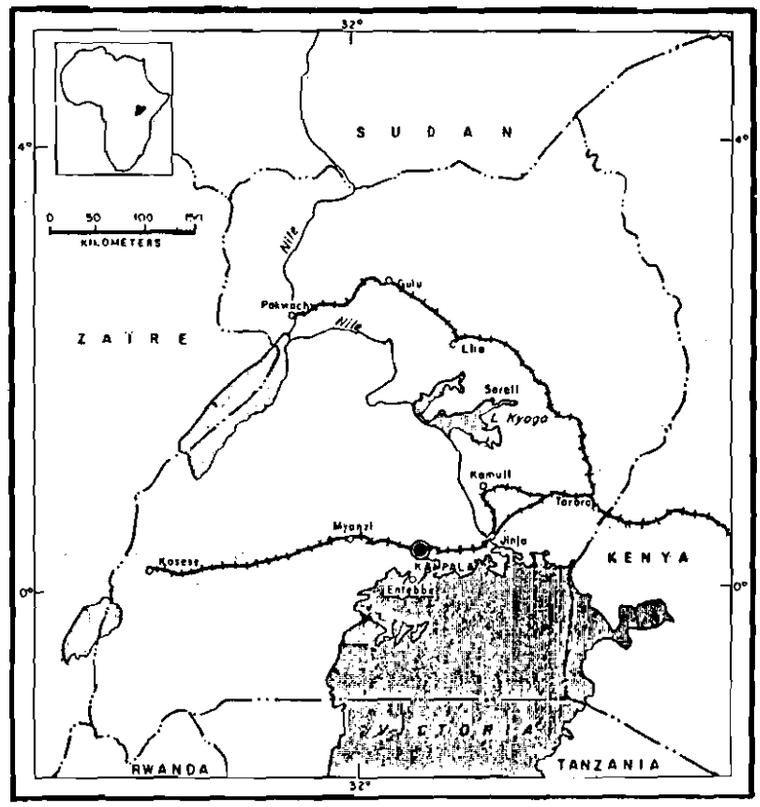
For the implementation of the project, a technical study would be required.

V. FINANCING

(1)	Total estimate	US$ 7.0 m
(2)	Foreign component	--
(3)	Local funds	--
(4)	External financing secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 7.0 m

UGANDA PROJECT No. INP-46-N1

I. IDENTIFICATION AND SUMMARY : Lake Victoria Wagon Ferries



1. Origin of the project
Submitted by the Government

2. Subsector
Inland Water Transport

3. Order of priority
National project of a land locked country

4. Nature
Purchase of wagon ferries

5. Location
Lake Victoria

6. Cost : US$ 15.27 m.

7. External financing required
US$ 0.58 m

8. Duration
Two years

9. Desirable starting date
1988

10. Project initiator
Ministry of Planning and Economic development

11. Project management authority
Uganda Railways Corporation

12. Remarks
It is an on-going project started in 1983

II. DESCRIPTION

Uganda is a land-locked country which uses many alternatives (land, lake, air transport) to reach the sea. Lake Victoria is the main inland water transport connection to Mombasa Port and it needs to be developed.

1. Aim and objectives

The aim of the project is to re-establish the alternative route to the sea through the central corridor transportation system.

2. Nature and constituent parts

The project covers the procurement and reassembling in Uganda of 3 wagon ferries, one service launch, and the necessary spare parts to re-establish the alternative route to the sea through the Central Corridor Transportation System.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

The project not only helps Uganda to connect with the sea but also has a strong regional emphasis providing other land-locked countries of Rwanda, Burundi, Eastern Zaire etc. with a second route to the sea.

2. Cost

The total cost of the project is US$ 15.27 million out of which US$ 0.58m is externally sought at present

IV. STATUS

The Government decided to purchase its own vessels to revive the marine freight services which used to be provided across Lake Victoria by East African Railways during the time of the East African Community. The first wagon ferry was commissioned in October 1983, and the second was commissioned in January 1985. The last was completed towards the end of 1985. So far the Government has financed the project using US$ 9.01 m. of its own resources and US$ 5.68 m by the drawing down of the Project Account for the local currency proceeds of the First IDA Reconstruction Credit.

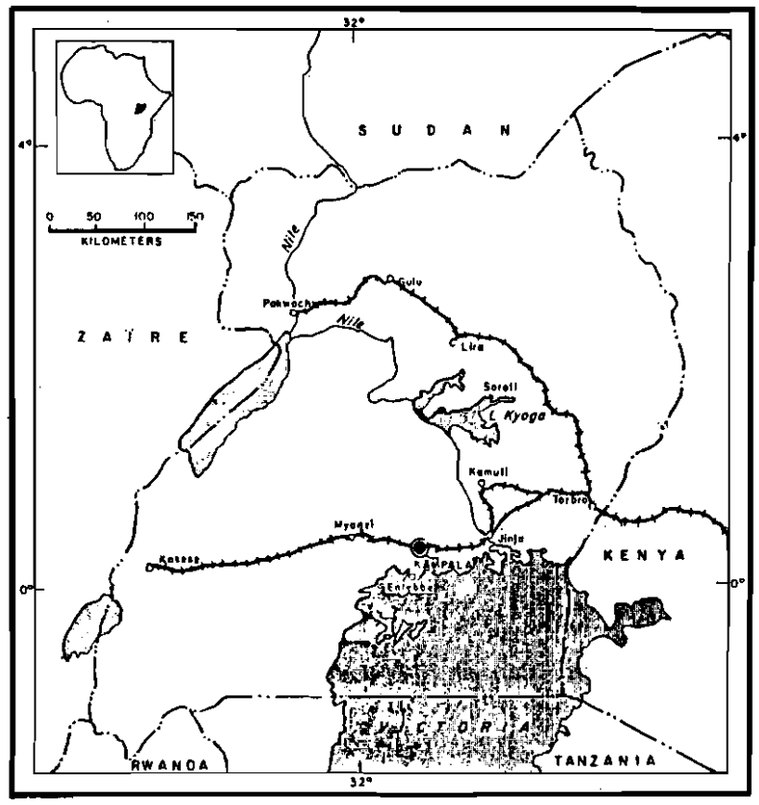
V. FINANCING

(1)	Total estimate	US$ 15.27 m
(2)	Foreign component	US$ 12.98
(3)	Local funds	US$ 2.29
(4)	External financing secured	US$ 12.40
(5)	Available local funds	US$ 2.29
(6)	Financing gap	US$ 0.58 m

UGANDA

PROJECT No. MMP-46-N1

I. IDENTIFICATION AND SUMMARY : Containerization of Rail Traffic



- **Origin of the project**
  Submitted by the Government of Uganda

- **Subsector**
  Multimodal transport

- **Order of priority**
  Inter-State Links

- **Nature**
  Construction and Purchase of equipment

  Location
  Kampala

  Cost : US$ 8.41 m

7. **External financing required**
   US$ 8.16 m

8. **Duration**
   Four years

9. **Desirable starting date**
   1988

10. **Project initiator**
    Ministry of Planning and Economic Development

11. **Project management authority**
    Uganda Railways Corporation

12. **Remarks**
    A study was carried out in 1984

II. DESCRIPTION

1. Aim and objectives

The project is aimed at ensuring that URC is capable of handling container traffic for Uganda and transit traffic for neighbouring countries.

2. Nature and constituent parts

The components are: an engineering study for an Inland Clearance Depot in Kampala, construction of the depot, purchase of equipment and spares. The purchase of container wagons is catered for under a separate project.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Contexr and benefits

A study was carried out on containerization in Uganda and a report made in May 1984. The conclusion was that the potential for containerization was high and penetration could be expected once systems to handle containers efficiently were provided. An investment programme was recommended and this project is based on that programme.

Containerization of traffic for Uganda and other land locked countries in Eastern Africa is already well established on sea routes, but there is a lack of container handling facilities on inland transit routes and at main discharge and loading points.

The potential for through movements is high and considerable penetration is predicted once facilities are provided to handle the containers effectively. The project is of first priority as it supports Government policy to direct long distance freight traffic from road to rail. The project has, therefore, both an internal and a regional impact.

2. Cost

Estimated at US$ 8.41 m in 1987.

IV. STATUS

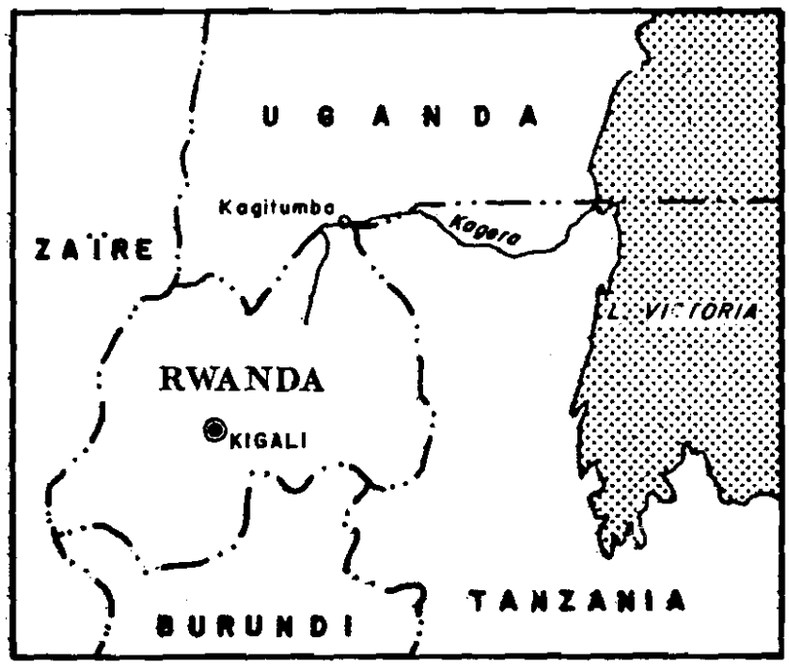
Feasibility study has been undertaken

V. FINANCING

(1)	**Total estimate**	US$ 8.41 m
(2)	Foreign component	US$ 5.27 m
(3)	Local funds	US$ 3.14 m
(4)	External financing secured	US$ 0.25 m
(5)	Available local funds	--
(6)	Financing gap	US$ 8.16 m

CEPGL PROJECT No. INP-60-N1

I. IDENTIFICATION AND SUMMARY : Study on the Kagera River



1. Origin of the project
Submitted by CEPGL

2. Subsector
Inland Water Transport

3. Order of priority
Subregional project

4. Nature
Feasibility study

5. Location
Kagera Basin

6. Cost : US$ 0.40 m

7. External financing required
US$ 0.40 m

8. Duration : Three months

9. Desirable starting date
1987

10. Project initiator
CEPGL

11. Project management authority
Department of Inland Transport
Rwanda

12. Remarks
New Project

II. DESCRIPTION

The Kagera River provides a possible alternative transport route for Rwanda and Southern Uganda on to Lake Victoria for further connections with Mwanza, Kisumu and Jinja. However, there exist several difficult passes along the river which need to be improved for navigability.

1. Aim and objectives

The objective of the project is to undertake a study to determine the feasibility of developing the inland water transport system in the Kagera Basin area between Kagitumba on the Kagera River and Lake Victoria.

2. Nature and constituent parts

The main components of the project are: identification of difficult passes and consideration of solutions to improve them for navigation; study of the region where the Kagera opens into Lake Victoria; study of the locations for installation of port facilities and establishment of these infrastructures; and preparation of reports on hydrographic, cartographic and nautical studies.

III. JUSTIFICATION, ECONOMIC AND FINANCIAL ANALYSIS

1. Context and benefits

A preliminary study undertaken by ECA/MULPOC highlighted the numerous benefits that would result from navigation on the river Kagera and its impact on the land-locked CEPGL countries, the Kagera Basin (internal and external access corridors) and the promotion of large-scale integrated development projects in the basin, which were initiated by KBO.

2. Cost

Cost of implementing the project is estimated at $400,000.

IV. STATUS

The preliminary study has been completed. It recommends that the project should be maintained and that feasibility studies follow immediately. This study was financed jointly by the ECA and the Government of Rwanda.

V. FINANCING

(1)	Total estimate	US$ 0.4 m
(2)	Foreign component	US$ 0.4 m
(3)	Local funds	--
(4)	External finance secured	--
(5)	Available local funds	--
(6)	Financing gap	US$ 0.4 m