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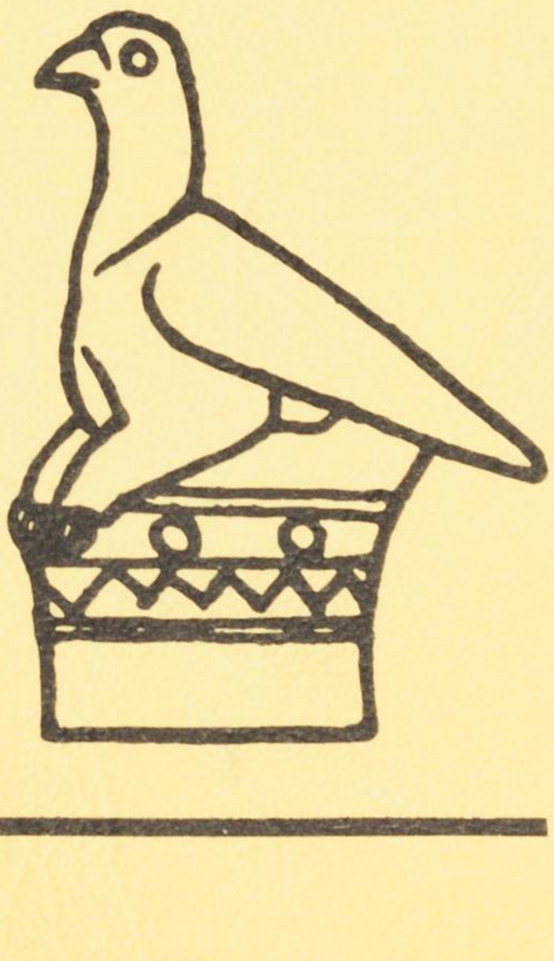
TRANSPORT & COMMUNICATIONS

SOUTHERN AFRICAN DEVELOPMENT COMMUNITY



Harare, Republic of Zimbabwe
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TRANSPORT AND COMMUNICATIONS

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PROJECT NUMBERING SYSTEM

Projects are identified using an alphanumeric numbering system:

1. The first group of three letters indicates the Member State:

AAA	-	Regional	NAM	-	Namibia
ANG	-	Angola	SWA	-	Swaziland
BOT	-	Botswana	TAN	-	Tanzania
LES	-	Lesotho	ZAM	-	Zambia
MAL	-	Malawi	ZIM	-	Zimbabwe
MOZ	-	Mozambique			

2. The first digit defines the Sector:

0	-	Multimodal/Operational Coordination
1	-	Roads
2	-	Railways
3	-	Ports and Water Transport
4	-	Civil Aviation
5	-	Telecommunications
6	-	Meteorology
7	-	Postal Services

3. The second digit is a serial number.

A B R E V I A T I O N S

ADB	=	African Development Bank
AGIP Spa	=	AGIP Spa
AIDAB	=	Australian International Development Aid Bureau
ANG	=	Angola
AUS	=	Australia
BADEA	=	Arab Bank for Economic Development in Africa
BEL	=	Belgium
BOT	=	Botswana
BRA	=	Brazil
CAN	=	Canada
CBI	=	Confederation of British Industries
CFTC	=	Commonwealth Fund for Technical Cooperation
CHI	=	Peoples Republic of China
CITES	=	Convention on International Trade in Endangered Species
DEN	=	Denmark
EEC	=	Commission of the European Communities
FAO	=	Food and Agriculture Organisation of the United Nations
FIN	=	Finland
FRA	=	France
FRG	=	Federal Republic of Germany
IBRD	=	International Bank for Reconstruction and Development
ICAO	=	International Civil Aviation Organisation
ICE	=	Iceland
IDA	=	International Development Association
IDRC	=	International Development Research Centre
IDU	=	Industrial Development Unit of the Commonwealth Secretariat
IFAD	=	International Fund for Agricultural Development
ILO	=	International Labour Organisation
IMPOD	=	Import Promotion Office for Products from Developing Countries
IRE	=	Ireland
ISNAR	=	International Service for National Agricultural Research
ITA	=	Italy
ITB	=	International Tourism Board
ITU	=	International Telecommunications Union
JAP	=	Japan
KUW	=	Kuwait Fund
LES	=	Lesotho
MAL	=	Malawi
MOZ	=	Mozambique
NAM	=	Namibia
NET	=	Netherlands
NOR	=	Norway
NORDICs	=	Nordic countries
OPEC	=	Organisation of Petroleum Exporting Countries
POR	=	Portugal
SADCC	=	Southern African Development Coordination Conference
SAFTTA	=	Southern African Federation of Travel and Tour Associations
SAREC	=	Swedish Agency for Research Cooperation with Developing Countries
SATEP	=	ILO Southern African Team for Employment Promotion
SPA	=	Spain
SWA	=	Swaziland
SWE	=	Sweden
SWI	=	Switzerland
TAN	=	Tanzania
TAZARA	=	Tanzania Zambia Railway Authority
UAPTA	=	Unit of Account of the Preferential Trade Area
UK	=	United Kingdom

UNDP	=	United Nations Development Programme
UNIDO	=	United Nations Industrial Development Organisation
USA	=	United States of America
USSR	=	Union of Soviet Socialist Republics
WB	=	World Bank
ZAM	=	Zambia
ZIM	=	Zimbabwe

1. EXECUTIVE SUMMARY

1.1 General Issues

(a) The 1992 Annual Conmsultative Conference theme document tittled "SADCC: Towards Economic Integration" and the measures being taken to formalize and transform the SADCC into a "Southern Africa Development Community" have signified the commitment and definitive action being taken by Member States to achieve economic integration of the region. For the transport and communications sector, a critical vehicle for social economic integration, this means implementing specific actions leading to the bringing of the national transport and communications systems closer together for operating an efficient and well integrated regional system for unimpeded smooth flow of traffic accross national borders. In response to this challenge, SATCC is in the process of taking measures to address the remaining few missing links in the infrastructure and, more critically, the non-physical or invisible operational impediments including policy, regulatory, organisational, administrative and procedural issues.

(b) The severe drought currently being experienced in Southern Africa has posed a challenge for the transport services to move the grain efficiently and timeously. A total of more than 7 million tonnes needs to be imported into the SADCC region in 1992 and early 1993. An organisational set-up has been established centred around the SADCC Food Security Technical Advisory Unit, and the SATCC as the leader and overseer of the transport and logistics activities related to the emergency grain imports. Transport operations are carried along the established SADCC transport corridors and the South Africa corridor. Corridor groups have been established involving users and transport operators in each corridor. The corridor groups meet to resolve operational issues in their respective corridors. Since the beginning of the operation in April 1992, SADCC corridors are reported to have performed well and had, by end of July 1992, already carried a total of 776,320 tonnes or about 45% of total grain imported into the region during the period. Nonetheless some operational problems have been identified involving Donors, SADCC Member States and the transport operators. These problems as well as under utilization of some SADCC ports are being resolved within the organizational framework which has been set up for this purpose.

(c) The Regional Transport and Communications Integration Study for Southern Africa is yet to start. The study Terms of Reference were approved by SATCC Ministers and submitted to the EEC who, in January 1992, confirmed

their intention to finance the study. However, as of July 1992, a formal confirmation of the approval was still being awaited from the EEC.

(d) An acknowledged deficiency in the operation of the SATCC has been its inability to obtain and analyse transport and communications data for planning purposes as well as prepare sector and subsector overview reports for distribution to Member States, Cooperating Partners and other interested parties. With the ongoing strengthening of the SATCC Technical Unit, and on the basis of the approved recommendations of the 1991 Workshop on Information Handling in SATCC, concrete measures are being taken to address this matter. Furthermore, discussions are underway with cooperating partners to provide the required additional support in this regard.

(e) SATCC continued to participate in the transport and communications activities and programmes being carried out at continental or Sub-Sahara Africa level, in the auspices of principally the OAU, United Nations Economic Commission for Africa (ECA) and the World Bank managed Sub-Saharan Africa Transport Programme (SSATP). The SATCC involvement includes participation in the drafting of the Protocol on Transport and Communications to be incorporated in the Treaty of African Economic Community (Abuja Treaty), implementation of the United Nations Transport and Communications Decade for Africa Phase II (UNTACDA 1991-2000) programme, and participation in other continental projects such as RASCOM (Regional Africa Satellite Communications) System.

1.2 Surface Transport

In 1991, a general decrease of about 22% in the usage of the SADCC ports transport systems was recorded for international (import/export) dry cargo as compared to the 1990 performance. However, for liquid bulk cargo, an increase of about 11% was recorded. For all traffic, there was an overall decrease of 8%. This decrease is principally attributed to the poor economic performance of the hinterland countries manifested by a drop in exports (due to drought) and imports. A summary of performance of the different components of the transport systems is given below:

(a) Ports and Shipping

The completion of projects in the subsector, especially the main Beira Port projects, boosted the throughput capacity of SADCC ports in 1991 by over 9% (to 28.3 million tonnes) as compared to 1990. However the total actual throughput of the SADCC ports in 1991 decreased by 11% (to 7.5 million tonnes) compared to the 1990

level. Furthermore, the 1991 usage levels represent an overall use of only about 26.5% of the installed capacity of the SADCC ports. Measures are being taken to improve the performance of the ports and, thereby, enhance their ability to attract traffic.

(b) **Railways**

Total international traffic carried by the corridors' railways in 1991 (about 1.2 million tonnes) signifies a 25% decrease compared to the 1990 performance. The decline in traffic carried by the railways is due to reduced availability of traffic, inadequate rolling stock, sub-optimal operations and increasing competition from road transport. Measures are being taken to address the efficiency improvement actions necessary to bring about improvement in the performance of the railways.

(c) **Roads and Road Transport**

Due to paucity of data, it has not been possible to have any meaningful reporting on the performance of this subsector. However, as stated above, road transport is carrying increasing international traffic, thereby taking away traffic from the railways.

Measures are underway to improve data collection, including inventory of the conditions of the Regional Trunk Road Network (RTRN), inventory and performance of road transport vehicle fleets and traffic flow along the RTRN.

1.3 Civil Aviation

The SADCC air transport industry continued to experience expansion in capacity by the acquisition of three new B737-300 aircraft (by Mozambican Airlines and Air Malawi). With respect to performance, there was an increase of about 9% of interstate passengers carried by SADCC airlines in 1991 compared to their achievement in 1990. However, the performance of the airlines in other aspects such as load factors and labour productivity was low and below the acceptable international standard.

To address the safety and efficiency issues of the SADCC aviation industry, a comprehensive review has been made, and a strategy to solve the identified problems has been developed and is to be presented to the cooperating partners for consideration. Furthermore, a strategy to restructure the SADCC Airlines is being developed with a view to making them commercially viable.

1.4 Telecommunications

In 1991, progress continued to be made in attaining of higher regional connectivity. However, access to the national networks remained difficult as exemplified by low call success rate of incoming calls, which averaged below 30% in 1991. Furthermore, although notable growth rate of Direct Exchange Lines (DEL) was recorded for all SADCC countries in recent years, the regional DEL capacity in 1991 was still below the expressed demand (comprising connected DEL and waiters) by 12%.

As regards performance, the volume of intra-SADCC traffic increased by 13% in 1991 as compared to 1990. However, a number of countries were still having their intra-SADCC traffic transiting outside Africa. These include Angola (99%), Tanzania (16%), Mozambique (2%), Botswana and Zambia (1%) respectively. Furthermore, there was an increase of traffic transiting through South Africa mainly for Lesotho, Botswana and Mozambique. Measures are being taken to address the missing links and improve the performance and commercial outputs of Telecommunications Organisations.

1.5 Postal Services

A growing market of the SADCC Post Office Express Mail Service (EMS) has been observed. For better reporting on performance of the subsector, measures are underway to institute a system for systematic acquisition of statistics.

Furthermore, measures to improve the quality of service of the SADCC Postal Services are included in the review of the SADCC Postal programme to be presented at the 1993 SADCC Annual Consultative Conference.

1.6 Meteorology Services

The inadequate pre-reporting of the severity of the current drought in the region has clearly indicated that the capacity of the SADCC Meteorology sector needs further strengthening. In this respect, an appeal is strongly being made to the Cooperating Partners to extend their support to the two very important projects: The Drought Monitoring Centre in Harare and the final phase of the SATCC/FINNIDA/WMO Project. These projects have run out of funds and are in danger of being prematurely terminated at critical stages.

1.7 Training

The Human Resources Development (HRD) activity continues to occupy a very central role in the overall coordination of regional transport and communications activities. Its ultimate aim is for SADCC to attain self-sufficiency levels in skilled human resources requirements. To this end, studies and specific programmes continued to be initiated,

developed and implemented in the different subsectors. New training interventions are anticipated to continue to come out of the ongoing and new activities being undertaken.

1.8 Programme Review

While implementation of capital investment projects continued with a view to closing the remaining missing or weak links in the regional transport and communications network, emphasis in the activities of SATCC has been shifted to operational coordination and efficiency improvement issues.

Aggregated estimated costs of the SATCC programme has increased from US$ 6.573 billion in 1990/91 to US$ 6.652 billion in 1991/92, a growth of only about 1.2% as apposed to an average of over 10% per year for the years up to 1989/90. This indicates stabilization in the growth of the capital investment programme.

Critical reviews of the subsectors' projects are being made with a view to include only those which are strictly regional, and whose implementation is expected to have immediate and significant impact in regional economic integration. Such reviews have already been completed for the Civil Aviation and Postal Services Subsectors.

Funding secured and under negotiations for the SATCC Programme increased by 5.2% (to US$ 3.559 billion) in 1991/92 as compared to 1990/91. However the funding gap of about 46% indicates that close to a half of the SATCC programme is yet to secure financing and, therefore, cannot be implemented.

The drive and need to attain efficiency in the performance of the SADCC transport and communications systems has exposed the need to undertake fundamental structural changes in the management of the State Owed Enterprises (SOE) which operate the systems. Hence, restructuring work is underway in almost all the subsectors. SATCC is in the process of identifying common restructuring issues and strategies that can be taken in the region.

2. REVIEW OF THE REGIONAL SITUATION

2.1 General Issues

(a) SADCC Regional Economic Integration and the Transport and Communications Sector

The decision and directive by the SADCC Summit to formalize SADCC; and, finally, the approval by the SADCC Council of Ministers, in Maputo in January 1992, of the theme document - "SADC: Towards Economic Integration" have strongly signified a clear commitment by the SADCC Member States to take definitive and

accelerated measures to achieve economic integration of the region. For the transport and communications sector, a critical vehicle for economic integration, this means implementing specific actions leading to the bringing of the national transport and communications systems closer together for operating an efficient and well coordinated regional system able to facilitate smooth flow of traffic across national borders. Specifically, SATCC will need to urgently address the remaining few missing links in the infrastructure and, more critically, the non-physical or invisible operational impediments including policy, regulatory, organizational, administrative and procedural issues.

In order to effectively respond to the challenge, the SATCC/TU, Working Groups and the SATCC members as a whole need to improve their capacity and performance in dealing with technical issues and implementing agreed positions. Concrete actions will need to be taken to urgently start implementing simple harmonization, standardization and operational coordination measures which have a significant impact, and provide testimony to the commitment to this expressed current SADCC ideal. Examples,albeit symbolic ones, of actions which can be immediately taken in this regard are the issuing of a SADCC motor vehicle driving licence, displaying of a SADCC logo on all SADCC airlines, and having separate channels at regional airport terminals for immigration processing of SADCC nationals. Such measures, especially the first two, do not require any further significant technical input to start implementing.

As regards strengthening of the SATCC/TU to facilitate analysis and effective promotion of implementation of agreed measures, the ongoing recruitment of regional technical staff under the regionalization programme is expected to provide the required core staff complement. However, for this core staff to be effective, three additional measures need to be taken, namely:

(i) the original job descriptions of the existing staff and those being recruited need to be amended to reflect the emphasis on operational activities. Initiatives have been started by SATCC/TU to do this as well as propose additional measures for reorientation of the mandate, composition and functions of the Unit. A short review report will be prepared, if necessary with the assistance of a short term expert consultancy.

(ii) Further strengthening of the SATCC/TU in sector evaluation and analysis of policy and operational issues is necessary. In this regard, the SATCC/TU has held consultations with some Cooperating Partners with a view to their

providing technical assistance to the SATCC/TU in the form of a Policy Analysis Advisor and a Computer Systems Analyst. These will be supported by regional information gathering, analysis as well as policy implementation promotion officers to be located in the Ministries of Transport in the Member States.

(iii) In addition to the aforestated technical assistance, the core SATCC/TU staff needs to be further supported by special consultancies to study and analyse or elaborate on specific identified issues. It is expected that the ongoing strengthening of technical staff complement at the SATCC/TU, and enhanced need to address operational issues will lead to the generation of more analytical work. The support required in this context is similar to what has been provided through the technical support/services funds by Cooperating Partners. In carrying out such consultancies, regional consultants will be used as much as possible. As a way of strenghthening consultancy expertise in the region, it is being negotiated with the Cooperating Partners that the foreign consultants to be engaged should be required to incorporate or use local experts. To facilitate this, a catalogue of SADCC regional consultancy firms and individuals is being updated now and will continue to be updated periodically. In addition, and in order to build up a basis for sustainability of this programme in future, a certain sum will be proposed for allocation in the SATCC/TU budgets to finance small consultancy studies by local/regional experts.

(b) **Support to Transport of and Logistics for Drought Emergency Grain Imports**

As a result of the severe drought currently being experienced in Southern Africa, food imports amounting to a total of between 6 and 7 million tonnes will need to be procured and imported into the SADCC region to cover the deficits. Including requirements for South Africa, the total grain imports for Southern Africa for 1992 is estimated at between 10 and 12 million tonnes. Apart from mobilizing funds for procurement of grain, the other big challenge is for the transport services to move the grain efficiently and timeously.

In order to effectively manage the procurement, transport of and logistics for the expected grain imports, a SADCC organizational framework has been instituted. A Regional Task Force (TF) of senior officials from the SADCC Ministries of Agriculture and Transport has been established. The TF is responsible

for overall coordination and management of the endeavour. The TF is chaired by SADCC Food Security Coordinator, with SATCC as Vice Chairman. The TF reports to the Ministers of Agriculture and Transport. Two sub-committees of the TF, the procurement, and transport and logistics subcommittees, have been also formed to advise the TF. The Transport and Logistics subcommittee, chaired by SATCC, deliberates on overall issues as identified by the separate six corridor groups which have been established to resolve operational issues in their respective corridors. The corridors are Eastern 1 (Nacala), Eastern 2 (Beira and Maputo), Southern (South African Ports), Western 1 (Walvis Bay), Western 2 (Lobito) and Northern (Dar es Salaam).

Coordination at operational level is provided by a Logistics Advisory Centre (LAC) which has been established at the SADCC Food Security Technical Advisory Unit (FSTAU) in Harare to gather, analyse and distribute operational information to all the actors. LAC, divided into two sections, the procurement, and transport and logistics sections, also provides secretariat services to the TF as well as its two subcommittees. The SATCC is working closely with FSTAU to ensure smooth flow of the emergency grain imports along the corridors.

The performance of the SADCC corridors in the movement of the drought related grain imports is as indicated in Table 1. It is indicated that the SADCC corridors had, by end of July 1992, transported a total of 776,320 tonnes, or about 45% of a total of over 1.7 million tonnes imported into SADCC countries by the same time. The performance is acknowledged to be better than estimated especially for the Maputo and Beira corridors. However further improvements are being made by resolving the identified operational problems.

(c) **SADCC Transport and Communications : Post Apartheid**

The SATCC in November 1991 approved the Terms of Reference of the Regional Transport and Communications Integration Study for Southern Africa. The study is to consider, in detail, issues related to the integration of the transport and communications systems in the post apartheid era including the scenario of a democratic South Africa joining SADCC. The Terms of Reference were submitted to EEC who, in January 1992, confirmed their intention to finance the study. EEC then indicated that they expected the approval process to be finalized by end of May 1992. However, to date confirmation of the approval is still being awaited.

(d) **Improvements in the Establishment of a SATCC Statistical Data Base**

An acknowledged deficiency in the operation of the Technical Unit has been its inability to obtain and analyse transport and communications data, and to utilise this data for its own planning purposes as well as to prepare sector and subsectors overviews for distribution to the SATCC member states. With the recent recruitment of regional technical staff, the Unit's capacity has improved significantly. Since the beginning of April 1992 the Technical Unit has made some improvements in data collection and processing.

However, further strengthening of the information handling activities at the SATCC/TU is needed and is, thus, being pursued.

2.2 Surface Transport

The overall capacity and usage of the SADCC ports transport systems for the years 1989-1991 is indicated in figure 1, according to the type of traffic (Chart 1A) and usage by SADCC Countries (Chart 1B). The following general observations arise from the information provided:

(a) Some gaps still exist in the available information. Measures are being taken to enable the SATCC/TU to be systematically provided with the remaining information to enable an analysis and a reasonable interpretation to be made.

(b) The capacity of the transport systems as determined by port capacities still exceeds present (up to 1991) usage levels.

(c) Compared to international (import/export) dry cargo traffic flows reported for 1990, in 1991 a general decrease of about 22% in the usage of the SADCC port transport systems was recorded. That is, a total of 4.010 million tonnes was transported through the systems in 1991 compared to 5.171 million tonnes in 1990. For liquid bulk cargo, 3.149 million tonnes were moved through the systems in 1991 compared to 2.838 million tonnes in 1990, an increase of about 11%.

(d) The information does not include the overall usage of the regional networks of land modes of transport (i.e. rail and roads) by domestic and intra-SADCC traffic. This traffic is indicated in the respective modal sections presented below.

2.2.1 **Ports and Shipping**

With the completetion, in 1991, of most rehabilitation works at Beira (whose new container terminal was commissioned in April 1992), the combined SADCC ports annual capacity increased by about 2.4 million tonnes, from 25.9 million tonnes in 1990 to 28.3 million tonnes in 1991. The present capacities of the individual SADCC ports are depicted in chart 1A for both dry and liquid bulk cargo. It should be noted that data for Walvis Bay is not available.

The total SADCC ports throughput (including cabotage) in 1991 decreased by about 11% from about 8.3 million tonnes in 1990 to about 7.5 million tonnes in 1991. The 1991 usage levels indicate an overall use of only about 26.5% of the SADCC ports total installed capacity. The trend in traffic development for each port is indicated in charts 1A and 1B. Chart 2 also provides a clearer elaboration of ports usage in 1991. The decrease in the SADCC ports throughput in 1991 is attributed to the poor economic performance of the hinterland countries manifested primarily in the general decrease in imports, the decrease in exports caused by drought; and the diversion of traffic to non-SADCC ports (notably sugar exports through Maputo port).

Information on other ports performance indicators (eg ship days, handling rates and cargo/ship dwelltime) and general shipping data is not available in a form to allow meaningful reporting. As stated elsewhere in this report, and in the relevant subsectoral reports, measures are being taken to obtain this information.

2.2.2 **Railways**

The SADCC corridors' railway operating capabilities and usage for the years 1989-91 are depicted in chart 3. The estimated annual corridors railways operating capabilities amounts to 11.6 million tonnes, with an estimated split of 5.3 million tonnes in the up (away from ports) and 6.3 million tonnes in the down (towards the ports) direction.

Total international traffic carried by the corridors' railways in 1991, is estimated to be about 1.2 million tonnes. Compared to about 1.6 million tonnes moved in 1990, the 1991 traffic performance signifies a 25% decrease.

The decline in traffic carrying by the corridor railways is generally attributed to reduced traffic availability due to poor economic performance of user countries, inadequate rolling stock, suboptimal operations and increasing competition from road transport. It is clear that the Railways must continue to address the efficiency improvement measures necessary to bring about improvement in their performance.

There is not sufficient information available on the performance of individual railways to enable meaningful assessment of their level of utilisation of infrastructure, rolling stock and other facilities.

In this respect, information, including net tonne kilometres and locomotive and wagons availability and utilization, is currently being gathered. This will allow meaningful evaluation of railways performance in future.

2.2.3 **Roads and Road Transport**

As can be appreciated, roads capacities are practically unlimited except where there are severe restrictions due to the poor condition. Information is presently being gathered on the inventory of conditions of the different sections of the Regional Trunk Road Network (RTRN). Nonetheless the common capacity limitation in road transport is determined by vehicles availability and movements. Such road transport data is presently unavailable to make it possible to draw any conclusions regarding road transport capacity. Measures are being taken to collect the required data.

As regards usage of the RTRN, chart 4, indicating the 1991 average daily traffic (ADT) levels for the different sections of the RTRN, provides the best available data. The figure indicates the most densely trafficked parts of the RTRN being Kapiri Mposhi-Kitwe-Chingola, Harare-Mutare, Harare-Gweru and Mbabane-Manzini. However, meaningful reporting on this aspect in the future will also depend on the above mentioned ongoing measures to improve roads data.

2.3 **Civil Aviation**

The SADCC air transport industry continued to experience expansion in capacity. The Mozambican Airlines (LAM) and Air Malawi's acquisition of, respectively, two and one new 737-300 added considerable capacity for regional traffic.

With respect to performance of the SADCC air transport industry, Table 2 presents some selected available statistics which are currently being updated. While there has been a steady increase of weekly inter-state passengers carried by SADCC airlines, the load factor indicated a consistent decline over the years 1987 to 1989, for which data is available. This may be due to the introduction of new, bigger capacity equipment. Furthermore, although improvement of labour productivity was recorded from an average of 243,000 to 251,000 RPKS per employee in 1988 and 1989 respectively, the 1989 level was still far below other airlines. Comparatively, in 1989 Ethiopian Airlines attained 470,000 RPKS per employee, South African 810,000 and British Airways 1,220,000.

2.4 Telecommunications

In 1991 progress continued to be made in attaining of higher regional connectivity through development of international transmission links, via terrestrial and spatial links, as well as switching exchanges. However, access to the national networks remains difficult in most cases due to poor level of quality of service exemplified by low call success rate of incoming calls, which averaged below 30% in 1990. Although notable growth rate of Direct Exchange Lines (DEL) was recorded for all SADCC countries between 1989 and 1990 (see chart 5), they continue to suffer from limited capacity. In 1990 there was a total of only 687,792 DEL compared to the recorded requirement of 773,429 DEL, comprising connected 485,069 DEL and 288,360 waiters. The 1990 DEL capacities and recorded requirements for each SADCC country are depicted in chart 6.

In order to attain higher telephone and telecommunications penetration in the SADCC countries, especially in rural areas, SATCC will continue to participate in the implementation of the RASCOM system. The system is based on satellite communication technology and aims at having a dedicated satellite facility for Africa. The facility is to be used for providing direct communications links between areas within and between countries.

Direct communication using satellite (ie RASCOM system) is expected to be cheaper than using terrestrial networks. A RASCOM organization has been established by the African Ministers responsible for Communications and is to have its headquarters in Abidjan, Côte d'Ivoire.

As regards performance, Table 3 shows the volume of intra-SADCC traffic in 1990. An overall growth of 13.4.% was recorded in 1990 to a total traffic equivalence of 155.2 Erlangs (or 15,520,000 call minutes). However, this performance was characterized by:

(a) A 55% reduction of intra-SADCC traffic transiting outside the region was achieved compared to 1989;

(b) A number of countries were still having their intra-SADCC traffic transiting outside Africa (Angola 99%, Tanzania 16%, Mozambique 2%, Botswana and Zambia 1%) respectively;

(c) A 61% increase of traffic transiting through South Africa mainly for Lesotho, Botswana and Mozambique (Maputo).

2.5 Postal Services

There is presently no data to enable reporting on capacity and performance of this subsector. However a clearly growing market of the EMS has been observed, although the

post office still faces stiff competition from other couriers. Notable competition in other services, especially domestic parcels, is also being experienced due to poor transport services. For better reporting in future, measures are underway to institute a system which will ensure systematic acquisition of statistics. This is incorporated in the revised Postal Ten Year Plan.

2.6 Meteorology Services

Although it is not possible to quantitatively report on the capacity and performance of the meteorology subsector, it is clear, especially from the inadequate pre-reporting of the severity of the current drought, that the capacity of the SADCC Meteorology sector needs further strengthening. Envisaged capacity development should adequately address the needs of transport and communications as well as those of other sectors including agriculture, energy, land (hydrology) and environment.

2.7 Human Resources Development

2.7.1 General

The HRD activity continues to occupy a very central role in the overall coordination of regional transport and communications activities. Its ultimate aim is for SADCC States to attain self-sufficiency levels in their human resources requirements. To this end, studies and programmes continue to be initiated and developed in all aspects of the transport and communications sector. Specifically, training needs studies in the different transport modes and communications subsectors have confirmed and to a large extent, ascertained the range and quantum of training and manpower development needs to be addressed.

Training subgroups or task forces have been formed to complement the work of SATCC-TU in the monitoring and coordination of training in some subsectors.

Funding for the various projects constitutes one of the biggest single constraint. In order to realise the full implementation of the current HRD SATCC programme, which now contains seventeen (17) projects, SATCC requires more than USD 140 million. So far secured funds stand at about USD 80 million, leaving a gap of above 60%.

2.7.2 The Developments and Status in each Subsector

(a) Road Infrastructure, Road Traffic and Transport

The progress on the implementation of the Road Transport Training Plan has been slow mainly due to lack of funding. Funding for the Plan's eight main modules is presently being sought by the Technical Unit

and discussions have already been held with a number of prospective donors.

Financing of the Road Transport Training Plan is being pursued with Cooperating Partners. The Senior Management Training Programme to be undertaken by ESAMI is at an advanced stage of preparation.

The study on the manpower development for the road infrastructure is underway and is expected to be finalised in October 1992.

(b) **Railways**

This subsector has enjoyed the largest share of training intervention amongst the various transport modes because of its well established institutional arrangements to spearhead and coordinate the HRD programme. So far more than 600 work/weeks of training have been provided at regional level. The courses, which range from english language training to management training, are being offered on a rotational basis in the region under the auspices of DE Consult and SATCC.

Having reached this stage of implementation, a Monitoring and Evaluation (M & E) consulting firm has been engaged to develop M & E systems that will be used to evaluate the impact of training being provided on overall railway performance.

Additional work is envisaged in the study into the Establishment of the Regional Management Training Centre. An update of railways training needs in the region with a view to expanding on the scope of the current training initiatives is expected to be carried out starting in 1992.

(c) **Ports, Shipping and Clearing and Forwarding**

The training programmes included in various Port projects continue to be implemented. In addition, specific training projects are included in the SATCC programme, namely,

. **ANG.3.01:** It is hoped that the rehabilitation of the Port School, Lobito, as part of emergency phase of the Lobito Port Rehabilitation will start once funding is obtained.

. **MOZ.3.05:** The construction of the Port Training Institute in Maputo is almost complete.

. **TAN.3.02:** Improvements to the Bandari College, Dar-es-Salaam, are under way.

On the whole, this subsector is presently lacking coordination of operational and training activities. It is hoped that once the Ports Specialist is in place, these issues will be resolved.

(d) **Civil Aviation**

Technical Assistance for institutional building in the region continued to be enjoyed in this subsector. Fellowships for studies abroad continued to supplement regional efforts. However, management training in this subsector has not been adequately provided and coordinated.

The next five years should, therefore, see more emphasis placed on management training of senior personnel to enhance their managerial competence.

(e) **Telecommunications**

Training continued to be provided, largely on an ad hoc basis, to fill the gap that has been created by the lack of a comprehensive Manpower Development Plan in this subsector.

A Training Needs Survey to develop a Manpower and Training is underway. It is expected to be completed by end of 1992. The plan is expected to give direction in the HRD strategy for telecommunications.

In the meantime "filler" training will continue to be provided. A total of 47 work/weeks of training have been achieved in this respect.

(f) **Meteorology**

Training, such as rotating seminars in aeronautical meteorology and others, continued to be provided. During the reporting period (1991) 44 SADCC nationals have benefited from the fellowship programme. However, funding for specialised training is still lacking, hence the consultancy mission on specialised training could not be implemented.

(g) **Postal Services**

The postal services sector continued to experience very little progress in the area of training as much of what could be done depends on the outcome of the manpower study which will also cover the MCTC in Blantyre, to be carried out in the region at the instigation of SADCC and RTC. Funding is being sought.

3. REVIEW OF THE SATCC PROGRAMME

3.1 General Progress of Programme Implementation

(a) Thrust and Growth

While implementation of physical capacity building and capital investment projects continued with a view to closing the remaining missing or weak links in the regional transport and communications network, emphasis in the activities of the SATCC/TU and Working Groups has been shifted to operational coordination and efficiency improvement issues.

The growth of the SATCC programme as a whole, including capital investment, operational coordination and training projects, again recorded a modest growth in 1991, indicating stabilization of the size of the programme since 1990. Aggregated estimated costs of the programme has increased from US$ 6.573 billion in 1990/91 to US$ 6.652 billion in 1991/92, a growth of about 1.2% as opposed to an average of over 10% per year for the years up to 1989/90.

Critical reviews of the subsectors' projects have been initiated in 1991 with a view to including those which are strictly regional, and whose implementation is expected to have immediate and significant impact in regional economic integration. In this regard reviews have been completed in the course of preparations of the Civil Aviation and Postal Services subsectors Ten Year Development Programme/Strategy. Approval of the recommendations will lead to a reduction in the total projects costs in these subsectors from US$ 458.2 million in 1991 to US$ 173.0 million.

(c) Financing Status

Funding secured and under negotiation increased from US$ 3.383 billion in 1990/91 to US$ 3.559 billion in 1991/92, an increase of about 5.2%. It should, however, be noted that these figures exclude funds expended for completed projects which have been taken out from the existing list of projects.

As regards future financing and, hence, sustainability of the SATCC programme of action, SADCC, as a whole, is critically examining and taking initiatives to build up capacity to finance some projects from SADCC's own resources. Specific decisions have been made by Council of Ministers that SADCC Member States should initially assume responsibility to finance workshops/seminars. Similarly project sponsors are required to make a contribution to the financing of feasibility studies (eg. by paying for the local costs).

In the case of SATCC, additional consideration should be made to finance the activities of special sub-working groups, or consultancy teams of local experts, which are increasingly being formed to address specific issues (such as overload control, road related research identification and coordination etc.).

Initial ideas on possible future sources of financing of the activities of such special sub-working groups include:

- Institutions/Governments paying for travel costs of their own participating experts; and

- Allocation of a small amount in the SATCC/TU budget to cater for small consultancies by regional experts.

(b) **Progress of Programme Implementation**

As regards overall implementation of the SATCC programme, the funding gap of about 46% indicates that close to a half of the programme is yet to secure financing and, therefore, cannot be implemented. Efforts must, therefore be made to continue to mobilize further resources for programme implementation.

For more elaborate reporting on overall progress of implementation of the SATCC programme, the SATCC/TU is presently collecting additional information and data. However, available data for Beira Transport system projects, Limpopo Corridor projects and the Dar es Salaam Port Development projects have been used to provide an indication of such progress. Using the level of actual expenditure or disbursements as a measure, chart 7 indicates that out of a total US$1051 million for these projects, US$521 had been disbursed by 31 December 1991. This indicates an overall 49.6% implementation of the programme covering these projects. As stated above, reporting on progress of implementation of the SATCC programme is expected to improve in future after the completion of the ongoing work to collect information on financial and physical implementation of projects.

(c) **Restructuring of SADCC State Owned Enterprises**

The major regional transport and communications systems including ports, railways and telecommunications are presently managed and operated as state owned enterprises (SOEs). The drive and need to attain higher efficiency in the performance of the SADCC transport and communications system has revealed that some fundamental structural changes have to be made in the management of these SOEs.

Restructuring work is already underway in Railways, and some initiatives have started to be taken in Telecommunications, Postal Services and Civil Aviation subsectors. However, it is desirable that the initiatives being taken in Member States and SATCC subsectors are coordinated for optimal use of resources. In this regard, the SATCC/TU has taken initiatives to have a review conducted to identify common issues and strategies that can be taken in the region. The aim of this regional effort is to finally identify specific actions to be taken by individual SOEs to undertake efficiency improvement measures necessary for improved regional sectoral performance.

3.2 Surface Transport

3.2.1 Ports and Shipping

Apart from progress attained in the development of SADCC ports capacity, through the implementation of the capital projects, as stated earlier in this report, the operational coordination and efficiency improvement activities of the subsector were reactivated in March 1992, with the holding of the 2nd Joint Meeting of the Working Groups of Ports and Shipping and Clearing and Forwarding. The groups had not met since the first joint meeting held in June 1989. The groups agreed to address the following important issues:

- Formulation of a coordinated shipping policy
- Establishing of a shipping information system
- Assess transhipment possibilities for regional ports and feasibility of coordination between members regarding port investments and tariffs.
- Assess improvement of coordinated coastal shipping and development of feeder services
- Assess introduction of multi-modal transport operations to enhance transport chain efficiency
- Determine need of dry docking facilities and capacity development perspectives
- Harmonization of port regulations/legislation
- Port Statistics development (harmonized systems)
- Port Tariffs
- Commodity classification nomenclature
- Updating of technical information on ports
- Comparative analysis of efficiency/performance of SADCC ports
- Ports Organizational Improvement
- Ports Employment conditions and regulations
- Coordination of Training activities

Financing of the analytical work envisaged in the activities of the Working Groups is still not assured yet. It is, however, expected that the recruitment of the port (and shipping) specialist will help to minimize the problem. In addition, the SATCC/TU is consulting donors to provide

funding for specific projects in the aforestated work programme.

3.2.2 **Railways**

Generally, implementation progressed well except for the Benguela railway where work is expected to pick up as a result of attainment of peace in the country. With regard to operational and efficiency improvement activities, the following are to be pursued, including new initiatives:

- Improvement of Railway Transport Statistics
- Traffic costing systems and capability
- Wagon interchange rules and procedures improvement
- Joint/coordinated acquisition of spare parts
- Accident investigation procedures and training
- Wagon specification and numbering
- Train operations improvement
- Regional Rolling Stock Information System (RSIS)
- Training
- Establishment of Association of SADCC Railways (ASAR)

3.2.3 **Road and Road Transport**

Apart from ongoing implementation of the SATCC Roads and Road Transport capital investment projects, the following important operational coordination issues are being dealt with:

- Review of SADCC Design Standards and Specifications
- Road Management improvement
- Regional Road Trunk Network updating and SADCC route numbering system
- Review of Vehicle Weights and Dimensions Limits
- Identification and coordination of regional research programme for roads
- Manpower Development
- Driver Training and Licencing
- Control of Overloading
- Harmonization of Road Traffic Legislation
- Road Safety
- International Road Transport Facilitation

The activities on this subsector also suffer from the lack of a roads specialist at the SATCC/TU. Recruitment of such a specialist has been recommended and is being pursued initially with the assistance of Cooperating Partners.

3.3 **Civil Aviation**

A major review has been made in the SATCC Civil Aviation programme of action. The proposed action plan contained in the document "Civil Aviation in Southern Africa: A Development Strategy for the 1990's" includes the following main elements:

- Establishment, in a phased manner, of a Regional Air Transport Council
- Establishment of a formal organization for airlines coordination
- Airline restructuring and regulatory policies
- Establishment of a Regional Flight Safety inspection unit
- Measures for attaining effectiveness of technical assistance
- Measures to improve local financing of initial airports rehabilitation and facilities improvement.
- Completion of implementation of Air Navigation Plan for the Africa-Indian Ocean Region
- Civil Aviation Safety Action Plan

It is expected that the strategy, will provide a basis for faster development and performance improvement of the SADCC Air Transport Industry.

3.4 **Telecommunications**

The Telecommunications Ten Year Plan has been revised and will be presented to Cooperating Partners at the 1993 SADCC Annual Consultative Conference. In addition to the projects included in the revised plan, the following crucial activities are being dealt with:

- Improvement of network management systems including systems coordination, traffic and training; management of transmission and switching facilities.
- Manufacturing strategy
- Maritime communication
- Telecommunications Policy, regulation and institutional restructuring
- Frequency management and monitoring
- Regional synchronization planning
- Regional Maintenance repair centre
- Data communications strategy
- Development of a Telecommunications Data base

The need to transform the Telecommunications administrations into viable commercial enterprises has been given special emphasis in the programme.

3.5 **Postal Services**

As in the case of Civil Aviation, the SADCC postal services programme of action has been reviewed and, the proposed Postal Development Plan includes software projects for improvement of institutional organization and performance as well as overall quality of service.

In addition, the following operational coordination issues are being pursued:

- Coordination of improvement of quality of service
- Counter service improvement
- Marketing
- Improvement of Management Tools, especially statistics.

3.6 Meteorology Services

The SATCC Meteorology Services programme of action addresses the following issues:

- Establishment of a well maintained network of surface and upper air observation stations
- Improvement of operational meteorological telecommunications facilities
- Improvement of operational data processing facilities
- Training
- Establishment of Regional Drought Monitoring Centre in Harare, Regional Telecommunications Hub in Lusaka and Regional Maintenance facility in Gaborone
- Enhancing operational coordination among SADCC Meteorology departments.

Since the Meteorology Services sector caters for needs of other non-transport and communications sectors such as agriculture, energy, land and environment, there is need to strengthen the subsector to enable it to effectively address such needs. In this respect, the SATCC/TU has taken initiatives to strengthen staffing of the SATCC/TU with a Meteorology expert.

Furthermore, the SATCC is greatly concerned with the advised termination of the financing of the third and final phase of the only major Meteorology project under implementation, the SATCC/FINNIDA/WMO project. An appeal has been made to FINNIDA to review the decision. Furthermore, appeals are being made to other donors to assist implementation of this final phase so that the gains which have been obtained so far, are sustained and consolidated. Similar appeals are also being made to secure financing of the Drought Monitoring Centre in Harare which is also facing similar financial difficulties.

3.7 Deletion of Projects

As a result of review of the Civil Aviation and Postal Services Programmes, the following Projects were deleted:

Civil Aviation

- AAA.4.05 Study on General Aviation Activities
- MOZ.4.04 SADCC B737 Flight Training Centre
- NAM.4.01 ATC Training Namibia
- MAL.4.01 New Airport at Mzuzu, Malawi

- MOZ.4.06 Development of Inhambane Airport
- MOZ.4.07 Development of Vilanculos Airport
- NAM.4.02 Installation of Air Traffic Control Radar at Windhoek Airport, Namibia
- ZAM.4.01 Study on the Improvement of Livingstone, Ndola and South down Airports, Zambia

Postal Services

- AAA.7.01 Postal Training Development Programme
- AAA.7.02 Feasibility Study on the Introduction of a Postal Giro System in the SADCC Countries
- AAA.7.03 Technical Assistance to Postal Services
- AAA.7.04 Regional Programme for the Development of Postal Terminals
- ANG.7.02 Development of Postal Training in Angola
- LES.7.01 Postal Training School, Lesotho
- MAL.7.02 Upgrading of Postal Wing of MCTC in Blantyre, Malawi
- MOZ.7.01 Stamp Printing Facilities in Maputo, Mozambique
- MOZ.7.02 Development of Postal Training in Mozambique

3.8 **New Projects**

The following new projects were approved:

Multimodal

- AAA.0.11 Regional Transport & Communications Integration Study for Southern Africa

Roads

- BOT.1.05 Rehabilitation of the Lobatse-Francistown Road, Botswana
- NAM.1.07 Kavango-Ovambo road link, Namibia
- ZIM.1.07 Pandamatenga-Victoria Falls Road Junction, Route 746/745 (85km)

Postal Services

- AAA.7.05 Management Projects
  (GM-1) General Policies for Management of Autonomous Postal Administrations
  (GM-2) Organizational Restructuring of Postal Administrations
  (GM-3) National Postal Master Plans
  (GM-4) Financial Information Systems
  (GM-5) Statistical Systems

- AAA.7.06 General Postal Projects
  (GP-1) Marketing
  (GP-2) Mail Conveyance
  (GP-3) Counter Service
  (GP-4) Postal Financial Services

- AAA.7.07 Manpower Development
  (MP-1) Human Resource Development Programme
  (MP-2) Urgent Training Projects
  (MP-3) Development of Multi Country Training Centre in Malawi

- AAA.7.08 Strengthening of Infrastructure
  (SI-1) Postal Terminals
  (SI-2) Purchase of Equipment
  (SI-3) Transport Plans and Vehicles

3.9 **Modification of Existing Projects**

Modification of the following projects, by including new elements, was noted:

Multimodal

AAA.0.05 - SATCC Technical Services Fund to include funds being negotiated for provision of Policy Analysis Advisor and Computer Systems Analyst as well as support to SADCC Ministries of Transport to enhance their capacity in data management and sector analysis.

AAA.0.09 - Package of Transport Statistics Programme to include a programme for Namibia and the development of a system for collection and management of traffic flow and axle load data.

AAA.0.02 - Operational Coordination Development Programme

(3) Railways

(i) Study on Train Operations Improvement

(ii) Regional Rolling Stock Information System

(iii) Technical Assistance for Railways Restructuring

(4) Civil Aviation

(i) Technical Assistance for the Implementation of the Yamoussoukro Declaration

Railways

AAA.2.09 - Study of Interchange Rules for Rail Operations in the SADCC Region

(i) Preparation of the Manual of Interchange Rules

AAA.2.06 - Development of Railway Training

(ii) Updating of the Railway Training needs survey.

BOT.2.01 - Rehabilitation of the Main Railway Line, Botswana

(5) Improvement to Signals and Telecommunications System

4. CURRENT STATUS OF PROJECTS

4.1 Summary of Status of Funding

In this chapter the 212 projects of the SATCC programme are listed, by transport system/subsector or sector, and subdivided into the following categories concerning the status of financing:

a) projects with external funding fully secured;

b) projects requiring additional external funding; and

c) projects with no external funding.

A summary of projects briefs including objectives, status, cost and financing of individual projects is given in Annexes of this report in the section on Projects Descriptions. More details are available at the SATCC Technical Unit, Maputo.

4.2 Operational Coordination Projects

The total cost of the 35 operational coordination projects amount to US$ 107.6 million. They are relatively well funded with US$ 67.3 million secured or under negotiation, leaving a funding gap of US$ 40.3 million.

The efforts made in Operational Coordination are fairly extensive.

a) Projects with external funding fully secured:

AAA.0.01 Technical Assistance to the SATCC

AAA.0.02 11 of 12 Sub-Projects in the Operationl Coordination Development Programme

AAA.0.05 SATCC Technical Services Fund

AAA.0.10 Update on the Adoption of a Common Freight Nomenclature System within the SADCC region

AAA.0.11 Regional Transport & Communications Integration Study for Southern Africa

AAA.1.01 3 of 8 Sub-Projects in the Package of Road Safety Programmes

AAA.2.09 Study of Interchange Rules for Rail Operations in the SADCC Region

AAA.2.10 Study of the Joint Acquisition of Spare Parts for Wagons and Locomotives

AAA.2.11 Update of the SADCC Railway Rolling Stock Study

AAA.2.12 Development of Railway Accident Investigation Procedures and Courses for SADCC Railways

BOT.2.10 Equipment for Maintenance Depots for Botswana Railways

AAA.4.03 Coordinated Use of Aircraft Maintenance Facilities

AAA.4.10 Joint Use of Aircraft and Sub-Regional Cooperation

AAA.4.13 Planning and Design for Implementation of the Rationalized Plans in the Region

AAA.5.08 Regional Data Communication Strategy Study

AAA.5.11 Workshop/Seminar Digital Synchronisation Planning

b) Projects requiring additional external funding:

AAA.0.04 Transit Transport Project

AAA.0.06 SATCC Statistics Data System

AAA.0.07 SATCC Housing in Maputo

AAA.1.02 1 of 9 Sub-Projects in the Package of Weighbridge Programmes

AAA.5.03 Study on AXE 10 Repair Centre

AAA.5.04 Implementation Plan for Regional Earth Station Connectivity Project (1989-93)
AAA.5.05 Study on the Harmonization of Telephone and Telex Tariffs for the Sub-Region.
AAA.5.06 Study on the Development of a Regional Manufacturing Strategy
AAA.5.10 Study for Establishment of Regional Maintenance/Repair Workshops
AAA.5.12 Establishment of Network Management Control Centres

c) Projects with no external funding secured:

AAA.0.02 1 of 12 Sub-Projects in the Operational Coordination Development Programme
AAA.0.09 Package of Transport Statistics Programmes
AAA.1.01 5 of 8 Sub-Projects in the Package of Road Safety Programmes
AAA.1.02 8 of 9 Sub-Projects in the Package of Weighbridge Programmes
AAA.1.03 Implementation of Harmonized Road Maintenance Management System in SADCC Countries
AAA.3.03 Marine Safety Development Programme for SADCC Coastal States
AAA.3.04 Package of Port Statistics Programmes Rationalized Plans in the Reg.
AAA.4.14 Feasibility Study of an Inspection Services Unit
AAA.4.15 Feasibility Study of Independent Operators
AAA.5.07 Model Study on Maint Procedure and Scheds for PANAFTEL Terres trial Microwave Radio Systems
AAA.5.09 Study on Optimisation of Regional Switching and Signalling Facilities
AAA.5.13 Study on Establishment of satellite Land Based Mobile Service.

4.3 **Training Projects**

The training programme includes 9 projects, whose total cost is US$ 134.1 million. Of this US$ 60.0 million, or 45%, is secured or under negotiation.

a) Projects with external funding fully secured:

AAA.0.03 3 of 7 Sub-Projects in the Training Development Programme
AAA.2.06 Development of Railway Training, Regional
MOZ.2.13 Development of Railway Training for Portuguese speaking Personnel
SWA.2.03 Provision of Technical Assistance and Management Training to Swaziland Railway
MOZ.3.05 Port Staff Training Institute, Mozambique

b) Projects requiring additional external funding:

AAA.0.03 4 of 7 Sub-Projects in the Training Development Programme
AAA.6.01 Meteorological Expert Services and Fellowships

c) Projects with no external funding secured:

AAA.1.04 Task Group for the Road Transport Training Plan
AAA.2.06 (02) Updating of the Regional Railway Training Needs Survey
ANG.5.06 Expansion of Telecommunication Training Centre, Angola
MAL.5.04 Expansion of Telecommunications Training Centre, MPO, Malawi

4.4 Maputo Port Transport System

The total cost of the 18 main projects concerning the Maputo Transport System is estimated at US$ 1,064.3 million, of which US$ 448.3 million, or 42%, is secured including funding under negotiation.

a) Projects with external funding fully secured:

LES.1.05 Upgrading of the Road Mokhotlong-Oxbow, Lesotho
BOT.2.01 1 of 3 Sub-Projects in the Rehabilitation of the Main Railway Line, Botswana
MOZ.2.01 2 of 2 Sub-Projects in the Rehabilitation of the Mozambique - Swaziland and Railway
MOZ.2.06 20 of 23 Sub-Projects in the Rehabilitation of Maputo-Chicualacuala Railway

b) Projects requiring additional external funding:

LES.1.01 Upgrading of the Road Mohales Hoek-Quthing-Qachas Nek, Lesotho
MOZ.1.04 Rehabilitation of the Road Maputo - Swaziland Border, Mozambique
SWA.1.01 Rehabilitation/Upgrading of the Road Mozambique Border at Lomahasha-Siteki-Big Bend
MOZ.3.01 1 of 3 Sub-Projects in the Maputo Port, Mozambique

c) Projects with no external funding secured:

LES.1.02 Upgrading and Reconstruction of the Road Taung-Mokhotlong- Sani Top, Lesotho
LES.1.03 Upgrading of the Road Thaba Tseka-Taung-Mpiti, Lesotho
LES.1.04 Construction of a Road Ramabanta-Semonkong-Sekake, Lesotho
MOZ.1.06 Road Linking Southern Zimbabwe with the Maputo Area, Mozambique

SWA.1.02 Improvement of the Mbabane- Manzini Road, Swaziland
ZIM.1.06 Upgrading of Rutenga-Boli-Sango Road Route 456, Zimbabwe
BOT.2.01 2 of 3 Sub-Projects in the Rehabilitation of the Main Railway Line, Botswana
MOZ.2.06 3 of 23 Sub-Projects in the Rehabilitation of Maputo-Chicualacuala Railway
SWA.2.01 Rolling Stock for Swaziland Railway
SWA.2.04 Dieselization of Swaziland Railway
SWA.2.05 Provision of Operating, Security and Safety Related Equip. for Swaziland Railway
SWA.2.06 Integrated Telecommunications for Swazilan Railway
MOZ.3.01 2 of 3 Sub-Projects in the Maputo Port, Mozambique

4.5 **Beira Port Transport System**

The Beira Port Transport System programme includes 6 projects. Most of these are divided in several sub-projects. The total cost of the programme is US$ 516.6 million of which US$ 447.1 million, or 87%, is secured or under negotiation.

a) Projects with external funding fully secured:

MOZ.0.01 9 of 9 Sub-Projects in the Multimodal Projects in the Beira Port Transport System Development Plan
MOZ.1.01 3 of 4 Sub-Projects in the Road Projects in the Beira Port Transport System Development Plan
MOZ.2.03 14 of 24 Sub-Projects in the Railway Projects in Beira Port Transport System Development Plan
MOZ.3.02 13 of 14 Sub-Projects in the Port Projects in the Beira Port Transport Development Plan
MOZ.4.03 2 of 8 Sub-Projects in the Civil Aviation Projects in the Beira Port Transport System Development Plan

b) Projects requiring additional external funding:

MOZ.1.01 1 of 4 Sub-Projects in the Road Projects in the Beira Port Transport System Development Plan
MOZ.4.03 1 of 8 Sub-Projects in the Civil Aviation Projects in the Beira Port Transport System Development Plan

c) Projects with no external funding secured:

ZIM.1.03 Upgrading of Eastern end of Harare-Mutare -Mozambique Border Road, Zimbabwe
MOZ.2.03 10 of 24 Sub-Projects in the Railway Projects in Beira Port Transport System Development Plan
MOZ.3.02 1 of 14 Sub-Projects in the Beira Port Transport Development Plan
MOZ.4.03 5 of 8 Sub-Projects in the Civil Aviation Projects in the Beira Port Transport System Development Plan

4.6 Nacala Port Transport System

The cost of the 5 main projects concerning the Nacala Port Transport System is estimated at US$ 321.1 million, of which US$ 257.4 million, or 80%, is secured including funding under negotiation.

a) Projects with external funding fully secured:

ZAM.1.06 Rehabilitation of the Road Lusaka - Chipata, Zambia
MOZ.3.03 Rehabilitation of the Port of Nacala

b) Projects requiring additional external funding:

MOZ.2.05 1 of 6 Sub-Projects in the Rehabilitation of the Nacala - Entre-Lagos Railway, Mozambique

c) Projects with no external funding secured:

MAL.1.01 Study on Upgrading of the Road Mangochi-Mandimba-Mitande, Malawi/Mozambique
MAL.2.02 Rehabilitation and Acquisition of Locomotives, Rolling Stock and Maintenance Equipment, MR
MOZ.2.05 5 of 6 Sub-Projects in the Rehabilitation of the Nacala-Entre-Lagos Railway, Mozambique

4.7 Dar es Salaam Port Transport System

The main 8 projects in the Dar es Salaam Port Transport System are estimated to cost a total of US$ 863.4 million. Of this US$ 594.9 million, or 69%, is secured or under negotiation.

a) Projects with external funding fully secured:

MAL.1.03 Road Link Balaka - Salima - Karonga - Uyole, Malawi / Tanzania
MAL.1.04 Road Shuttle Service Malawi-TAZARA
TAN.2.01 15 of 26 Sub-Projects in the TAZARA 10 Year Development Plan and Malawi-Dar es Salaam Projects

TAN.3.01 Development of Navigation on Lake Niassa/Nyasa/Malawi, Malawi, Mozambique, Tanzania
TAN.3.02 17 of 22 Sub-Projects in the Development of the Port of Dar es Salaam, Tanzania

b) Projects requiring additional external funding:

TAN.1.03 Rehabilitation/Strengthening of the TANZAM Highway, Tanzania
ZAM.1.08 Rehabilitation of the TANZAM Highway, Zambia
TAN.2.01 5 of 26 Sub-Projects in the TAZARA 10 Year Development Plan and Malawi-Dar es Salaam Projects
TAN.3.02 1 of 22 Sub-Projects in the Development of the Port of Dar es Salaam, Tanzania

c) Projects with no external funding secured:

TAN.2.01 6 of 26 Sub-Projects in the TAZARA Development Plan and Malawi-Dar es Salaam Projects
TAN.2.02 Conversion from UIC to AAR airbrake standard for TAZARA and Malawi Railways
TAN.3.02 4 of 22 Sub-Projects in the Development of the Port of Dar es Salaam, Tanzania

4.8 Lobito Port Transport System

The Lobito Port Transport System programme includes 5 main projects. The total estimated cost is US$ 594.7 million, of which US$ 131.0 million, or 22%, is secured or under negotiation.

a) Projects with external funding fully secured:

ANG.0.01 3 of 7 Sub-Projects in the Multimodel Projects in the 10 Year Plan for Lobito Port Transport System
ANG.2.01 1 of 24 Sub-Projects in the Benguela Railway Projects in the Ten Year Development Plan for Lobito Port Transport System
ANG.3.01 10 of 19 Sub-Projects in the Port Water Transport Projects in the Ten Year Development for the Lobito Port Transport System

b) Projects requiring additional external funding:

ANG.0.01 2 of 7 Sub-Projects in the Multimodel Projects in the 10- Year Plan for Lobito Port Transport System
ANG.2.01 5 of 24 Sub-Projects in the Benguela Railway Projects in the Ten Year Development Plan for Lobito Port Tran. System

ANG.3.01 2 of 19 Sub-Projects in the Port & Water Tran. Projects in the Ten Year Dev. Plan for the Lobito Port Transport System

c) Projects with no external funding secured:

ANG.0.01 2 of 7 Sub-Projects in the Multimodel Projects in the 10 Year Plan for Lobito Port Transport System
ANG.1.03 2 of 2 Sub-Projects in the Roads & Road Transport Projects in the 10 Year Develop Plan-Lobito Port Transport System
ANG.2.01 18 of 24 Sub-Projects in the Benguela Railway Projects in the Ten Year Development Plan for Lobito Port Transport System
ANG.3.01 7 of 19 in the Port & Water Transport Projects in the Ten Year Development Plan for the Lobito Port Transport System
ANG.4.01 2 of 2 Sub-Projects in the Civil Aviation Projects in the Ten Year Development Plan for the Lobito Port Transp. System

4.9 Intra-Regional Surface Transport Systems

Altogether 44 projects are included in this category, with a total cost estimated at US$ 1,654.3 million, of which US$ 867.9 million, or 52%, is secured or under negotiation.

a) Projects with external funding fully secured:

AAA.1.06 Feasibility Study for a Bridge Across the Zambezi
MAL.1.02 2 of 3 Sub-Projects in the Study on the Upgrading of the Blantyre-Milanje-Mocuba Road, Malawi/Mozambique
MAL.1.05 Study on the upgrading of Karonga-Chitipa -Nakonde-Mpulungu Road, Malawi/Zambia
MOZ.1.02 Rehabilitation of the Zimbabwe-Tete-Malawi Road, Mozambique
NAM.1.01 Construction of the Gobabis to Buitepos Roads, Namibia
NAM.1.04 The Ovambo Road Network Improvement Master Plan, Namibia
NAM.1.06 Climbing/passing lanes on road between Windhoek and Windhoek International Airport, Namibia
NAM.1.07 Kavango-Ovambo road Link, Namibia
ZAM.1.01 Study on Angola-Zambia Road link, Zambia
BOT.2.07 Establishment of Dry Ports/ ICD's in Botswana
MAL.2.03 Establishment of Dry Ports/ ICD's in Malawi
MOZ.2.12 Rehabilitation and Acquisition of Locomotives for CFM
SWA.2.02 Establishment of Dry Port/ICD in Swaziland
ZAM.2.01 6 of 29 Sub-Projects in the Zambia Railways 10-Year Development

ZIM.2.04 Acquisition and Rehabilitation of Locomotives, National Railways of Zimbabwe
MOZ.3.04 2 of 2 Sub-Projects in the Buoy Handling and Maintenance Vessel, Mozambique
TAN.3.03 Coastal Navigational Aids, Tanzania

b) Projects requiring additional external funding:

BOT.1.01 Partial Reconstruction of Nata - Kazungula Road
BOT.1.02 Construction of Jwaneng-Mamuno Road Link, Botswana
BOT.1.05 Rehabilitation of the Lobatse-Francistown Road, Botswana
TAN.1.01 Rehabilitation and Upgrading of the Mtwara-Songea- Mbamba Bay Road, Tanzania
ZAM.1.03 Rehabilitation of the Lusaka-kafue -Livingstone-Kazungula Road, Zambia
ZAM.1.05 Rehabilitation of the Lusaka-Kapiri-Chingola-Zaire Border Road, Zambia
MOZ.2.08 Rehabilitation and Maintenance of Wagons - CFM, Mozambique
MOZ.2.11 Computerized Wagon Control System for CFM, Mozambique
ZAM.2.01 3 of 29 Sub-Projects in the Zambia Railways 10-Year Development
ZIM.2.03 Telecommunications, Signalling and Wagon Control, NRZ
ANG.3.02 2 of 4 Sub-Projects in the Development of the Port of Luanda

c) Projects with no external funding secured:

AAA.1.05 Improved Ferry Service at Kazungula, Botswana/Zambia
ANG.1.01 Study on the Road N'Zeto - Soyo
ANG.1.02 Studies of Four Roads in Angola
BOT.1.04 Study on Maun - Ghanzi Road, Botswana
MAL.1.02 1 of 3 Sub-Projects in the Upgrading of the Blantyre-Milanje-Mocuba Road, Malawi/Mozambique
MOZ.1.05 Study on Unity Bridge and Access Roads, Mozambique / Tanzania
NAM.1.02 Improvement of the Trans-Caprivi Highway, Namibia
NAM.1.05 Construction of a bitumen surfaced road between Goageb and Aus, Namibia
ZAM.1.07 Improvement of the Road Lusaka -Mongu, Zambia
ZIM.1.05 Rehabilitation of Harare-Nyamapanda Route 202.
ZIM.1.07 Pandamatenga-Victoria Falls Road Junction, Route 746/745 (85 km)
LES.2.01 Establishment of Dry Port/ICD in Lesotho
MAL.2.04 Improvement of Communications Systems, Malawi Railways

ZAM.2.01 20 of 29 Sub-Projects in the Zambia Railways 10-Year Development
ZIM.2.05 Acquisition of Coaches for the National Railways of Zimbabwe
ZIM.2.07 Replacement of 1961 General Purpose Wagons
ZIM.2.08 Procurement of 39 Diesel Electric Locomotives
ZIM.2.09 Replacement of CTC and Signalling System Harare - Mutare.
ANG.3.02 2 of 4 Sub-Projects in the Development of the Port of Luanda
ZAM.3.01 Study of the Navigability of the Zambezi and Shire Rivers

4.10 Civil Aviation

The total estimated cost of the 29 civil aviation projects in the programme is US$ 214.4 million, of which US$ 103.7 million, or 48%, is secured including funding under negotiation.

a) Projects with external funding fully secured:

NAM.4.06 1 of 1 Sub-Project in the Civil Aviation Safety Action Plan, Namibia
ZAM.4.07 1 of 1 Sub-Project in the Civil Aviation Safety Action Plan, Zambia

b) Projects requiring additional external funding:

ZIM.4.04 Improvement and Expansion of Radar Coverage, Zimbabwe

c) Projects with no external funding secured:

ANG.4.03 Technical Assistance to ENANA
ANG.4.04 Telecoms and Navaids for Luanda Airport
ANG.4.05 Technical Assistance to DNAC
ANG.4.06 Navigation Aids for Luanda FIR
ANG.4.07 Luanda Airport Master Plan
LES.4.06 Telecommunications for Lesotho
MAL.4.02 Technical Assistance to the DCA
MOZ.4.08 Improvement of ATC Equipment in Beira FIR, Mozambique
MOZ.4.10 Telecoms and Navaids for Beira FIR
MOZ.4.11 Technical Assistance to ADM
MOZ.4.12 Maputo Airport Master Plan Study
MOZ.4.13 Technical Assistance to DNAC
NAM.4.07 Technical Assistance to DCA
NAM.4.08 En-Route Navigation Aids for Windhoek FIR
SWA.4.05 Technical Assistance to the Civil Aviation Branch
SWA.4.06 Development of Matsapha Airport
TAN.4.02 Technical Assistance to the DCA
TAN.4.03 Dar-es-Salaam Airport Facilities Repairs
TAN.4.04 Telecoms and Navaids for Dar-es-Salaam FIR

TAN.4.05 Study and Design of New Organizational Structure for Civil Aviation Sector
TAN.4.06 Upgrading of the Flight Calibration Unit
ZAM.4.08 Technical Assistance to NACL
ZAM.4.09 Rehabilitation of Lusaka Airport
ZAM.4.10 Telecoms and Navaids for Lusaka Airport and FIR
ZAM.4.11 Technical Assistance to ZASTI
ZIM.4.05 Development of Harare Airport

4.11 Telecommunications

The 40 telecommunications projects included in the programme are estimated to cost a total of US$ 1,150.3 million, of which US$ 571.5 million, or 50% is secured including funding under negotiation.

a) Projects with external funding fully secured:

ANG.5.01 3 of 8 Sub-Projects in the Telecommunication Projects in the 10 Year Development Plan for Lobito Port Transport System
ANG.5.02 Expansion of International Telecommunication Services, Angola
ANG.5.08 Provision and Expansion of National Telex Exchanges, Angola
BOT.5.05 Rural Telecommunications Development for Botswana
LES.5.04 Fundamental Master Plan and Planning Unit, Lesotho
MAL.5.03 Supply of Digital Equip. for the Expansion of Tele. Exchngs in Blantyre- Lilongwe-Zomba
MOZ.5.01 National/Regional Satellite Communication System of Mozambique
MOZ.5.05 1 of 5 Sub-Projects in the Telecommunications Projects in Beira Port Transport System Development Plan
SWA.5.05 Extension of Nat. Switching Centre and Associated Network Digitalization, Swaziland
ZAM.5.01 Extension of the International Telephone Switching Centre (ITSC) in Lusaka, Zambia
ZAM.5.04 Microwave Link Zambezi-Luene, Zambia
ZAM.5.06 Microwave Link Kariba (Zimb.)- Siavonga (Zambia) - Lusaka
ZIM.5.06 Provision of Packet Switching for Data Network in Zimbabwe
ZIM.5.08 Expansion of the Earth Station at Mazowe, Zimbabwe
ZIM.5.10 Extension of ITSC GWERU, Zimbabwe

b) Projects requiring additional external funding:

ANG.5.10 Provision of Domestic SatellitNetwork ANGOSAT for Angola
BOT.5.03 Expansion of the Microwave Trunk Network, Botswana

MOZ.5.03 National Telecomms Development Proj.with Connections to Neigh bouring Countries (Reg. Part)
MOZ.5.05 1 of 5 Sub-Projects in the Telecommunication Projects in Beira Port Transport System Development Plan
MOZ.5.06 Maritime Radio Communication Project, Mozambique
NAM.5.02 Telecommunications Master Plan Study, Namibia
NAM.5.03 Extension of Backbone Trunk Network, Namibia
TAN.5.02 Extension of ITSC Capacity,and Associated Telephone Exchanges Dar es Salaam, Tanzania
TAN.5.08 Provision of Digital Exchanges, Tanzania
ZAM.5.02 Expansion of the Earth Station at Mwembeshi, Zambia
ZIM.5.07 Supply of Digital Telephone Exchanges in Zimbabwe

c) Projects with no external funding secured:

ANG.5.01 5 of 8 Sub-Projects in the Telecommunication Projects in the 10 Year Development Plan for Lobito Port Transport System
ANG.5.03 Microwave Link Luanda-Cabinda
ANG.5.09 Provision of digital exchanges for Angola Development Programme (1990-2000)
LES.5.02 Rural Communication System, Lesotho
LES.5.03 Rural Automatic Telephone Exchanges, Lesotho
LES.5.05 Provision of New ITSC and Digitalization of National Exchanges, Lesotho
MOZ.5.05 3 of 5 Sub-Projects in the Telecommunication Projects in Beira Port Transpor System Development Plan
NAM.5.01 Extension of International Telecommunications Services, Namibia
TAN.5.04 New Transit Digital Telephone and Telex Exchanges for Dodoma Tanzania
TAN.5.05 Digital Microwave Link Dar - Dodoma - Zanzibar and Exp. of Multiplex Equip. at Dodoma
TAN.5.07 Provision of Digital Microwave Link Dar es Salaam-Mtwara- Songea and Exchange at Songea
TAN.5.09 Rehabilitation of Trunk PENAFTEL Links, Tanzania.
ZAM.5.03 Microwave Terminal at Chingola to Complete the Link Zambia - Zaire
ZAM.5.09 Masterplan Study and Fundamental Planning Unit for Zambia
ZAM.5.10 Upgrading Lusaka-Livingstone and Southern Ring Microwave Trunk Network, Zambia
ZIM.5.09 Provision of Telex Exchange and Network, Zimbabwe.
ZIM.5.11 Digital Microwave Link Gweru (Zimbabwe) to Maputo Mozambique.

4.12 Meteorology

The meteorology projects included in the programme are 9. The total cost is estimated at US$ 20.8 million and US$ 9.8 million, or 47% is secured or under negotiation.

a) Projects with external funding fully secured:

AAA.6.08 Data Rescue Project

b) Projects requiring additional external funding:

AAA.6.02 Regional Drought Monitoring Centre, Harare
AAA.6.03 Regional Meteorological Telecoms Hub and Data Exchange, Lusaka
AAA.6.04 Regional Maintenance Support of Meteorological Services
AAA.6.05 Data Processing in Meteorological Services
AAA.6.06 Meteorological Observational Networks
AAA.6.07 Meteorological Telecommunications

c) Projects with no external funding secured:

AAA.6.09 Meteorological Buoys for Mozambique and Tanzania
MOZ.6.02 Aeronautical, Meteorological Equipment for Airports in Mozambique

4.13 Postal Services

The SATCC programme includes 4 projects in postal services, with a total cost of US$ 10.7 million. Of this nothing is secured or under negotiation.

a) Projects with external funding fully secured:

None.

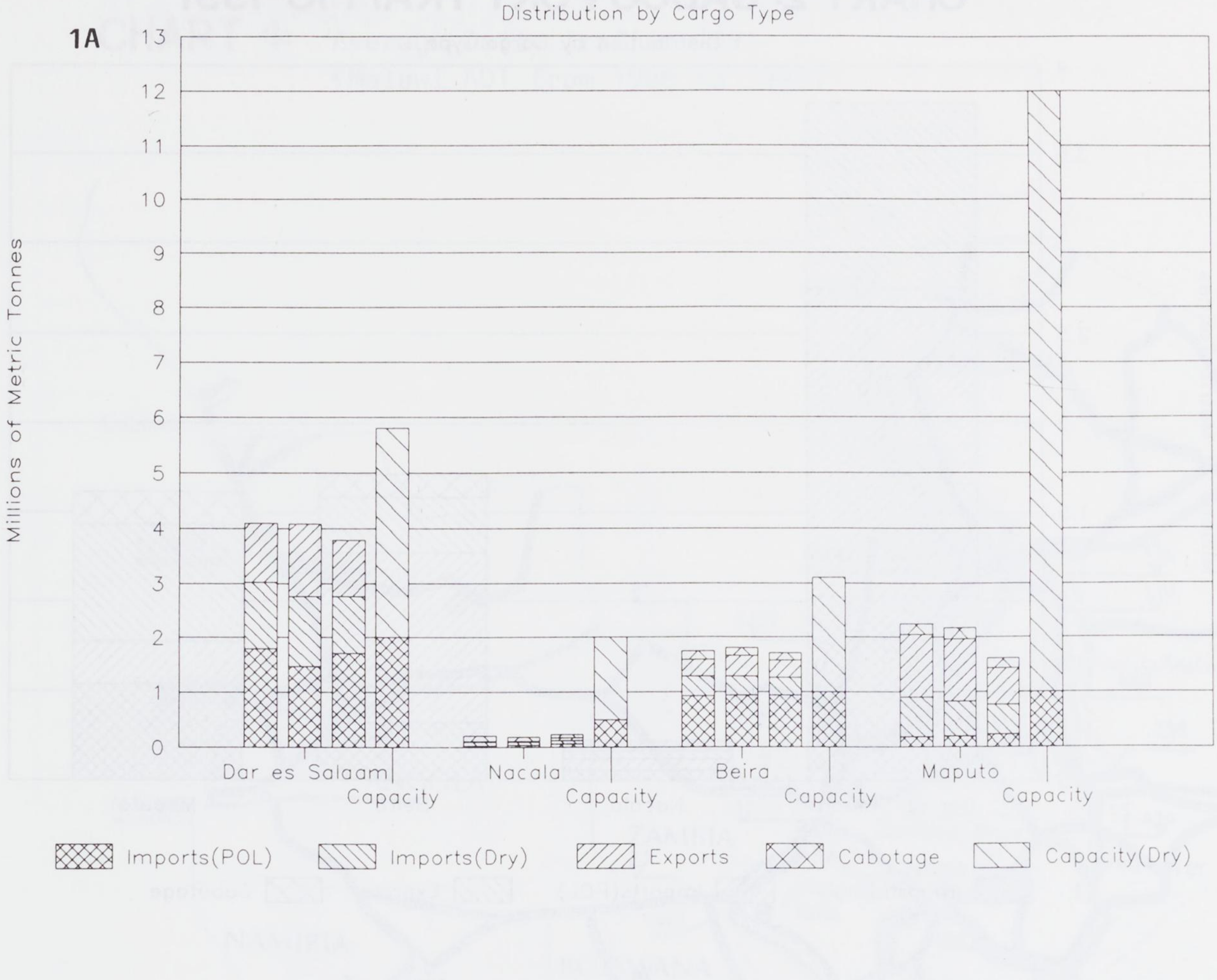
b) Projects requiring additional external funding:

None.

c) Projects with no external funding secured:

AAA.7.05 Management Projects
AAA.7.06 General Postal Projects
AAA.7.07 Manpower Development
AAA.7.08 Strengthening of Infrastructure

CHART 1: SADCC PORT TRAFFIC 1989-1991



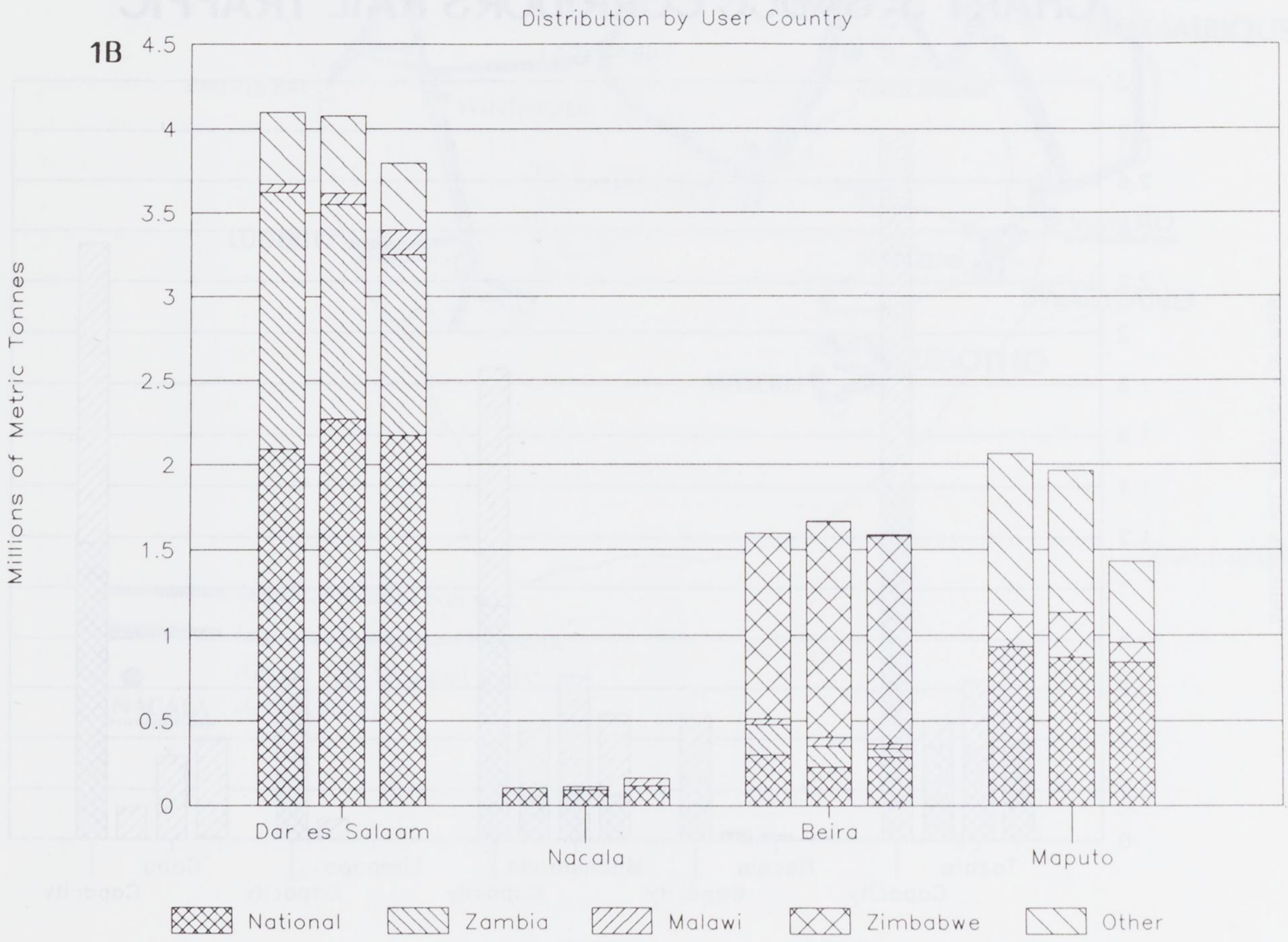


CHART 2: SADCC PORT TRAFFIC-1991

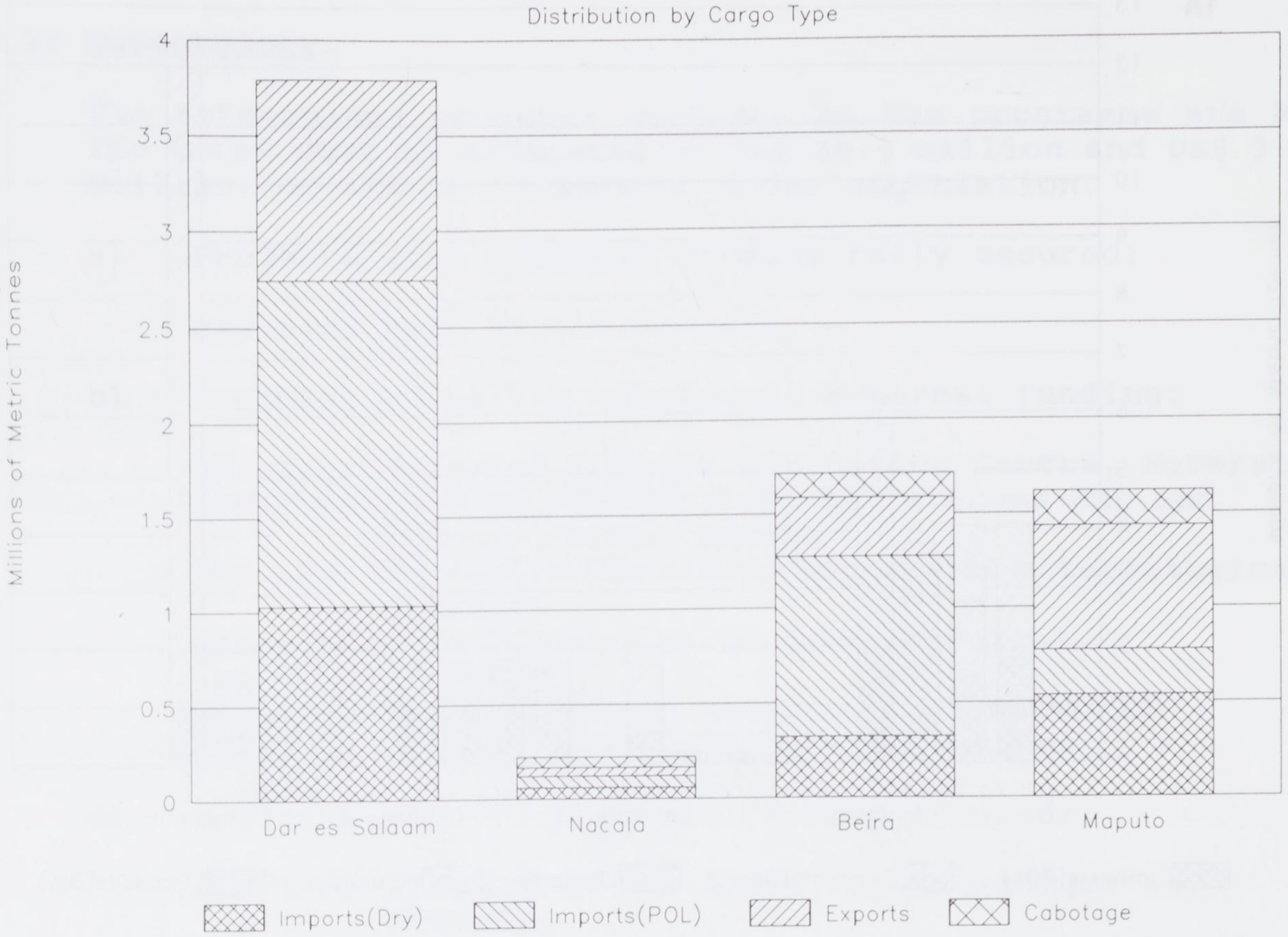


CHART 3: SADCC CORRIDORS RAIL TRAFFIC

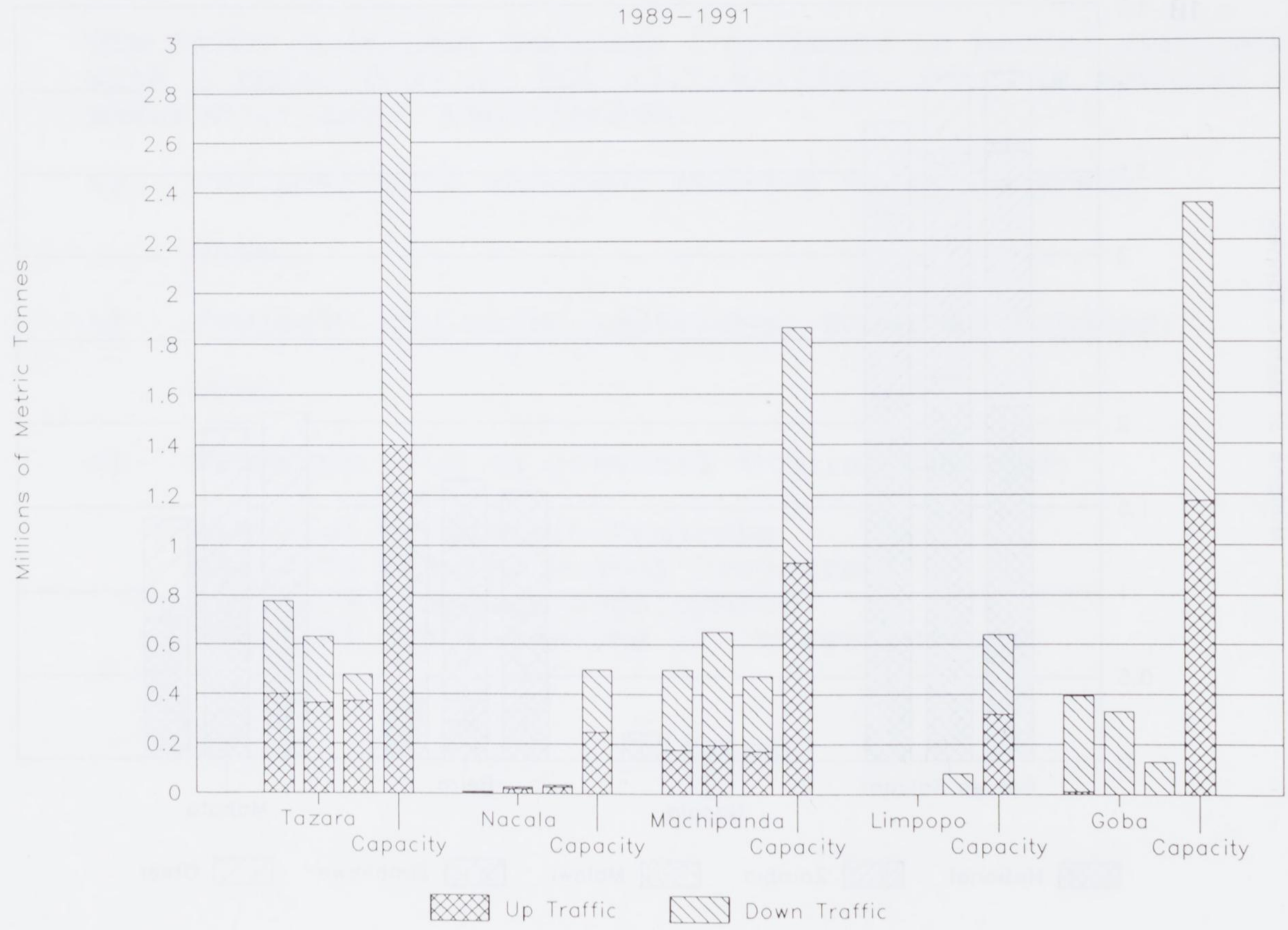
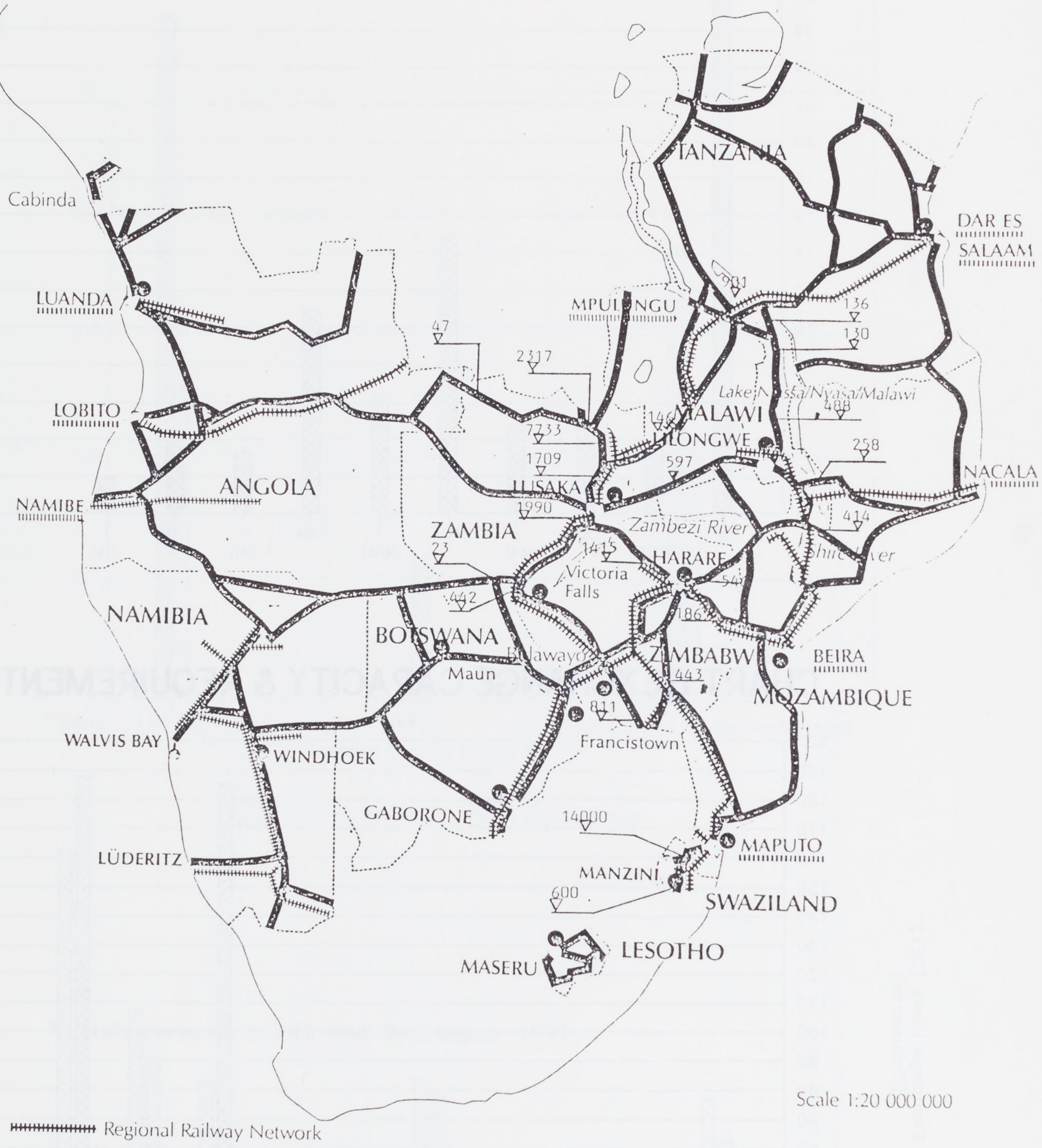


CHART 4: Average Daily Traffic 1991
(Malawi ADT from 1988 to 1990)



Scale 1:20 000 000

Regional Railway Network

Regional Trunk Road Network

Airport with Regional Traffic

NACALA Regional Port

CHART 5:EXCHANGE CAPACITIES GROWTH RATE

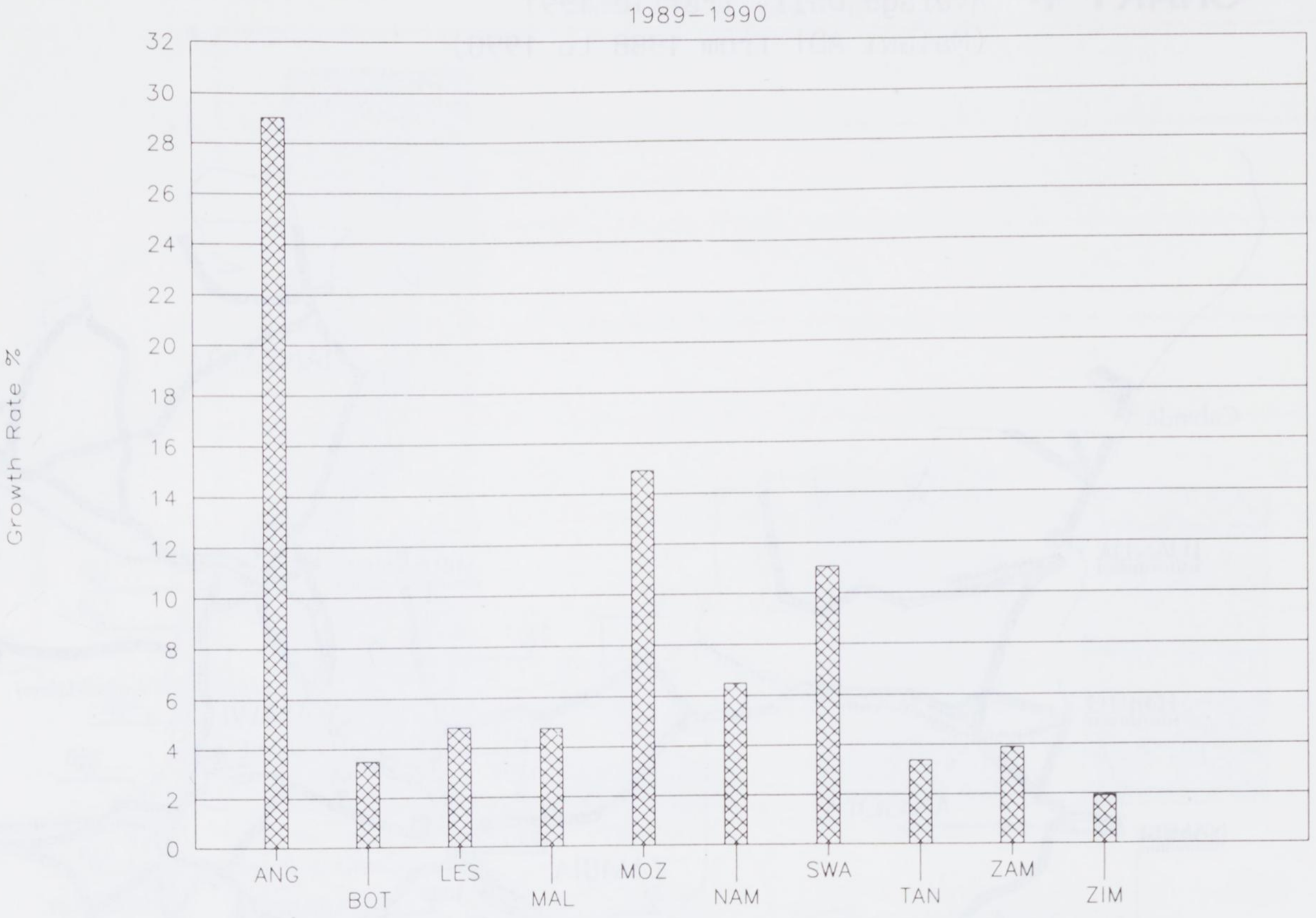


CHART 6:EXCHANGE CAPACITY & REQUIREMENT

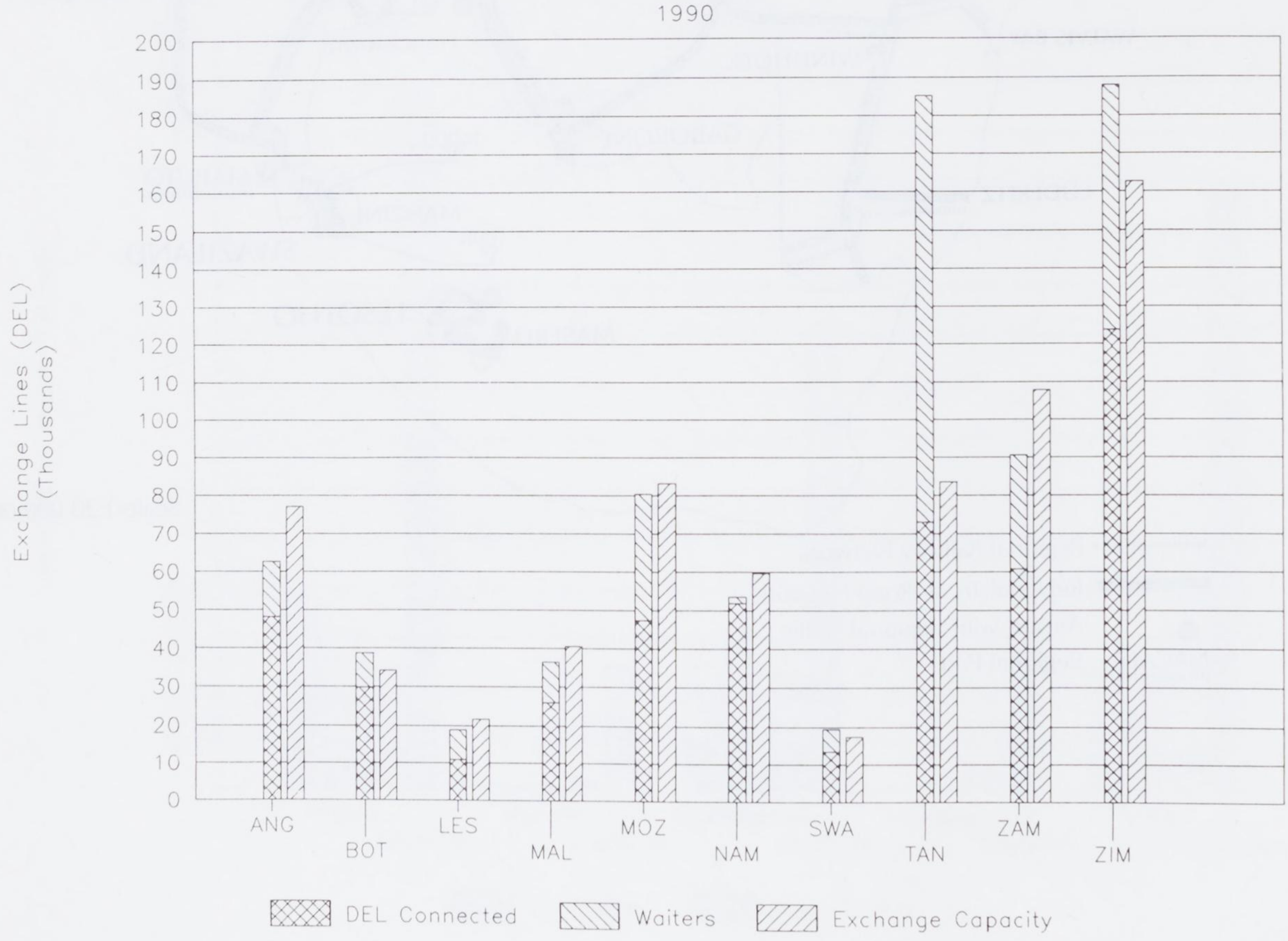
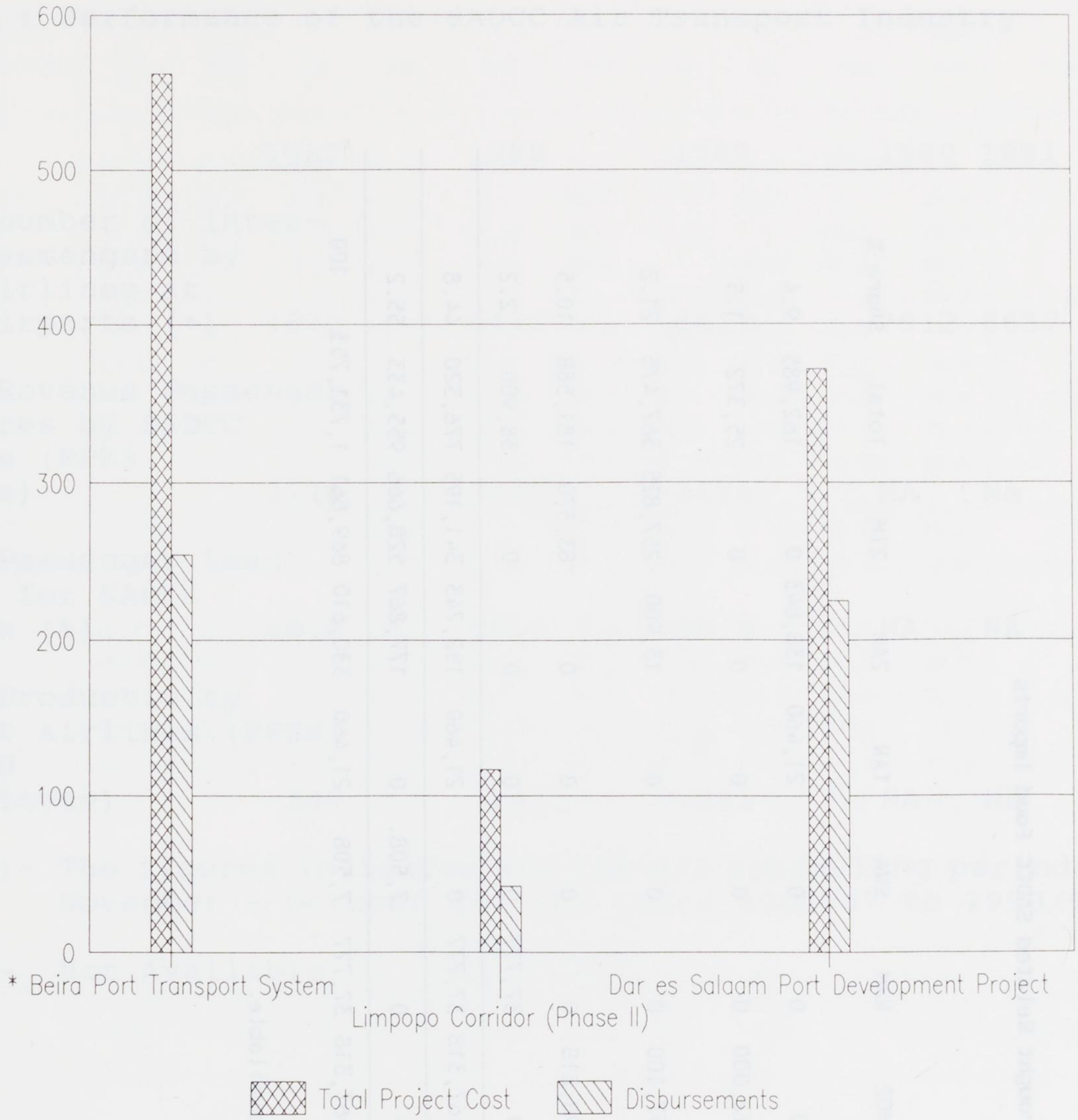


CHART 7: ESTIMATED TOTAL PROJECT COSTS AND DISBURSEMENT PER 31 DEC 1991



* Disbursement until end September 1991.

Table 1:SADCC Ports Performance in the Transportation of Drought Related SADCC Food Imports
To end of July 1992 (M. Tonnes)

	ANG(*)	BOT	LES	MAL	MOZ	NAM	SWA	TAN	ZAM	ZIM	Total	Share %
Dar es Salaam	0	0	0	2,682	0	0	0	21,460	138,843	0	162,985	9.4
Nacala	0	0	0	13,372	12,000	0	0	0	0	0	25,372	1.5
Beira	0	0	0	38,650	57,100	0	0	0	13,900	257,825	367,475	21.2
Maputo	0	0	0	0	98,218	0	0	0	0	83,370	181,588	10.5
Walvis Bay	1,123	0	0	0	0	37,777	0	0	0	0	38,900	2.2
Sub Total-SADCC Ports(*)	1,123	0	0	54,704	167,318	37,777	0	21,460	152,743	341,195	776,320	44.8
South Africa Ports	0	65,105	49,062	127,225	0	0	7,508	0	177,867	528,666	955,433	55.2
Grand Total	1,123	65,105	49,062	181,929	167,318	37,777	7,508	21,460	330,610	869,861	1,731,753	100

Note: - (*) Statistics for Lobito and Luanda Ports not available.
- 0 Denotes nothing (zero) or insignificant.

Table 2 : Performance of the SADCC Air Transport Industry

	1987	1988	1989	1990	1991
Weekly number of inter-state passengers by SADCC Airlines at SADCC airports (*)	4672	5411	6417	7912	8657
Annual Revenue Passenger kilometres by SADCC Airlines (RPKS millions)	3114	3408	3476	NA	NA
Annual Passenger Load Factors for SADCC Airlines (%)	60.5	59.2	58.5	NA	NA
Labour Productivity of SADCC Airlines (RPKS thousand per employee)	249	243	251	NA	NA

Note (*)- The figures indicated are for air scheduling periods of November - October for the years 1986/87 to 1990/91.

NA- Not Available

TABLE 3

INTRA SADCC TRAFFIC MATRIX (ERLANGS)

1990: PAGE 1	FROM: ANG	BOT	LES	MAL	MOZ	NAM	SWZ	TNZ	ZAM	ZIM	TOTAL FROM SADCC
ANGOLA		0.04	0.00	0.00	0.23	0.43	0.01	0.03	0.16	0.23	1.13
BOTSWANA	0.01		1.86	0.70	0.08	1.83	0.74	0.15	4.65	22.38	32.41
LESOTHO	0.00	1.64		0.17	0.06	0.27	0.16	0.03	0.16	0.27	2.76
MALAWI	0.00	1.17	0.28		0.15	0.33	0.23	0.15	2.53	6.76	11.60
MOZAMBIQUE	0.06	0.14	0.10	0.73		0.10	7.14	0.11	0.35	1.90	10.64
NAMIBIA	0.04	0.09	0.21	0.03	0.02		0.13	0.04	1.22	0.21	1.99
SWAZILAND	0.01	1.70	1.74	0.27	5.78	0.34		0.09	1.15	0.70	11.79
TANZANIA	0.04	0.47	0.06	0.52	0.05	0.13	0.15		1.45	1.16	4.02
ZAMBIA	0.02	4.15	0.16	1.28	0.05	1.57	0.50	0.70		12.30	20.71
ZIMBABWE	0.08	29.61	0.74	7.19	4.89	2.11	0.93	0.49	12.12		58.16
SADCC TOTAL	0.26	39.00	5.14	10.89	11.31	7.13	9.98	1.79	23.80	45.89	155.20
%OF SADCC TOTAL	0.17	25.13	3.31	7.02	7.29	4.59	6.43	1.15	15.33	29.57	100.00
TRANSIT-REGION	0.00	1.17	0.00	0.58	0.25	0.00	0.00	0.03	0.00	0.00	2.03
%	0.00	2.99	0.00	5.32	2.22	0.00	0.00	1.68	0.00	0.00	1.31
-RSA	0.00	3.57	2.47	1.33	0.19	7.13	3.72	0.01	2.62	1.17	22.20
%	0.00	9.15	48.02	12.21	1.66	100.00	37.27	0.37	11.01	2.55	14.31
-OTHER	0.26	0.51	0.09	0.00	0.22	0.00	0.00	0.30	0.24	0.23	1.86
%	98.84	1.32	1.85	0.01	1.96	0.00	0.00	16.59	1.01	0.49	1.20
NOTE: % of the total to SADCC Reg.	assumed ZBW-ANG via Portugal/ZBW-NAM via SA/ZBW-LSO via SA/ ZBW-SWZ via SA.										
SOUTH AFRICA	0.01	168.70	82.86	17.79	25.69	374.84	107.50	0.03	18.54	177.02	972.97
Ratio RSA/SADCC	0.05	4.33	16.11	1.63	2.27	52.58	10.77	0.02	0.78	3.86	6.27

CONVERSION FORMULA IS

$$A = \frac{Ms}{Mc\ 60} \quad \text{where : A = traffic (in Erlangs) offered in the mean busy hour.}$$

$$= 1.04 \times 10^{-4} \frac{M}{}$$

M = traffic volume in paid minutes in busiest month of year

or

S = ratio of mean call duration to mean chargeable duration (s = 1.3)

$$A = \frac{M}{9615}$$

M = busy month to day ratio; (m = 26)

C = day to busy hour ratio, (c = 8)

Figures

Figure 1 Regional Surface Transport Networks and Airports

Scale 1:20 000 000

Regional Railway Network

Regional Trunk Road Network

Airport with Regional Traffic

NACALA Regional Port

Figure 2 Railway, Road, Port and Water Transport Projects

Figure 3 Regional and Overseas Fligths by SADCC National Airlines

Weekly Regional connections

5 pairs of connections

1 pair of connections

Weekly connections to and from destinations outside the SADCC-Region

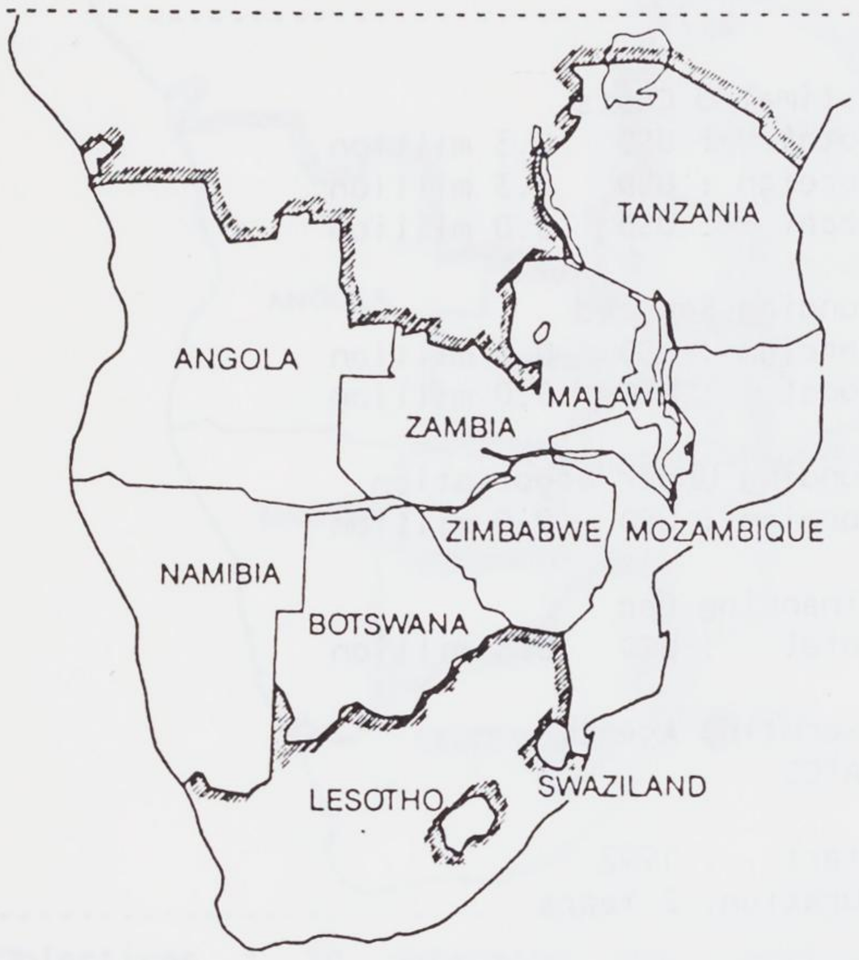
1 pair of connections

Figure 4 Telecommunications System Projects

Summary Status of Projects

Multi Modal/Operational Coordination

AAA.0.02: Operational Coordination Development Programme



Estimated Costs
Total : USD 7.4 million
Foreign : USD 7.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 1.9 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 5.2 million

Financing Gap
Total : USD 0.3 million

Executing Agency
SATCC

Start :
Duration:

Objectives : Promotion of regional operational co-ordination within all sectors. The programme encompasses eleven identified sub-sectors and aims at harmonization, standardization or more general co-operation between the Member States in the identified fields.

Description : Operational co-ordination has high priority in the SATCC work. The Technical Unit of SATCC is directly involved in the initiation of these activities. There is, however, a need for supplementary technical assistance concerning preparation of meetings and follow-up work in order to secure timely implementation of the work programmes. Due to this outside financing is needed for each activity.

Status : DANIDA provides technical assistance to the Working Group on Road Infrastructure. Current agreement covers the period 1991-1993. Total grant is DKr. 4.4 million (US$ 0.7 million).

NORAD provides technical assistance to the Working Groups on Road Traffic and Transport. Current agreement covers the period 1991-1993. Total grant is NKr. 5.0 million (US$ 0.7 million).

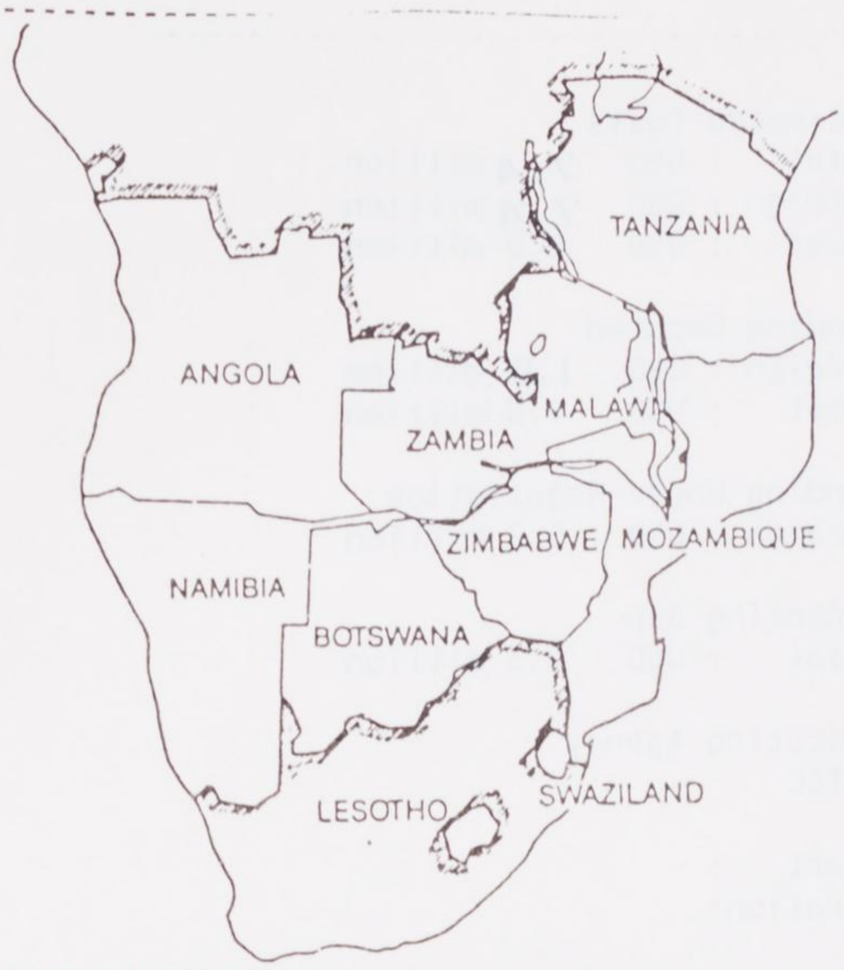
Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01	Road Infrastructure	0.7	0.7	0.0	0.7	0.0	0.0
02	Road Traffic and Transport	0.7	0.7	0.0	0.7	0.0	0.0
03	Railway Administrations	5.0	5.0	0.0	0.0	5.0	0.0
04	Civil Aviation Administrations Techn. Assist. for the Implem. of the Yamoussoukro Declarat.	0.3	0.3	0.0	0.0	0.0	0.3
*05	National Airlines	0.0	0.0	0.0	0.0	0.0	0.0
*06	Port Administration	0.0	0.0	0.0	0.0	0.0	0.0
*07	Shipping, Clearing and Forwarding	0.0	0.0	0.0	0.0	0.0	0.0
*08	Telecommunications	(0.5)	(0.5)	(0.0)	(0.5)	(0.0)	(0.0)
*09	Meteorology	0.0	0.0	0.0	0.0	0.0	0.0
*10	Postal Services	0.0	0.0	0.0	0.0	0.0	0.0
11	Survey for Regional Frequency Management and Radio Monitoring	0.5	0.5	0.0	0.5	0.0	0.0
12	Workshop/Seminar on Telecommunication Policy, Regulation and Restructuring	0.2	0.2	0.0	0.0	0.2	0.0
		7.4	7.4	0.0	1.9	5.2	0.3

*08 financed under PAAA.0.5

September 1992

AAA.0.02: Civil Aviation Administrations Techn. Assist. for the Implem.
(04) of the Yamoussoukro Declarat.



Estimated Costs
Total : USD 0.3 million
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.3 million

Executing Agency
SATCC

Start : 1992
Duration: 2 Years

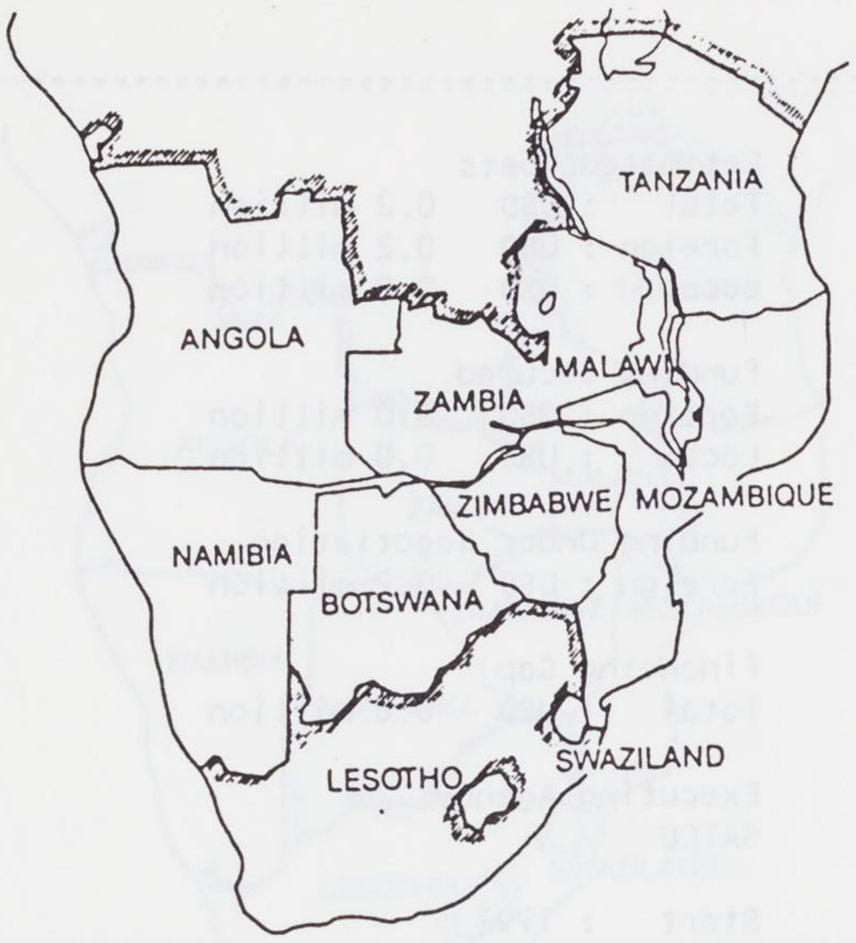
Objectives : To assist airline working groups with experts when needed for the implementation of the Yamoussoukro Declaration.

Description : Various airline working groups involved in the SATCC preparations, for implementating the Yamoussoukro Declaration are in need for expert assistance above the capacity that is available at SATCC/TU.
Some of the activites include finalisation of studies made on airline joint marketing strategy, joint use of aircraft maintenance facilities, common principles of accounting, establishment of SATCC Civil Aviation data bank, study on hubs and gateways, preparations for the Civil Aviation restructuring seminar etc.

Status : The African Development Bank has indicated interest in funding various Yamoussoukro Declaration projects. The Nordic countries have also indicated interest in operational Coordination which in case of Civil Aviation is just the Yamoussoukro Declaration.

September 1992

AAA.0.02: Survey for Regional Frequency Management and Radio
(11) Monitoring



Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start : 1991
Duration: 2 Years

Objectives : To determine the needs and requirements for frequency management and radio monitoring stations in the region to assist in the assignment, co-ordination, and monitoring of radio frequencies.

Description : The project consists of survey for the following parts in order to co-ordinate the usage of the radio spectrum :

- survey of staff needs and requirements for Radio frequency management for the SADCC Administrations;

- determine the requirements for computer aided Frequency Management techniques to be used in connection with the selection and co-ordination of regional frequencies and design detailed specifications.

- survey and determine frequency range, geographical positions, size, tasks and number of fixed and mobile monitoring stations in each SADCC member country with detailed list of type of equipment to be used;

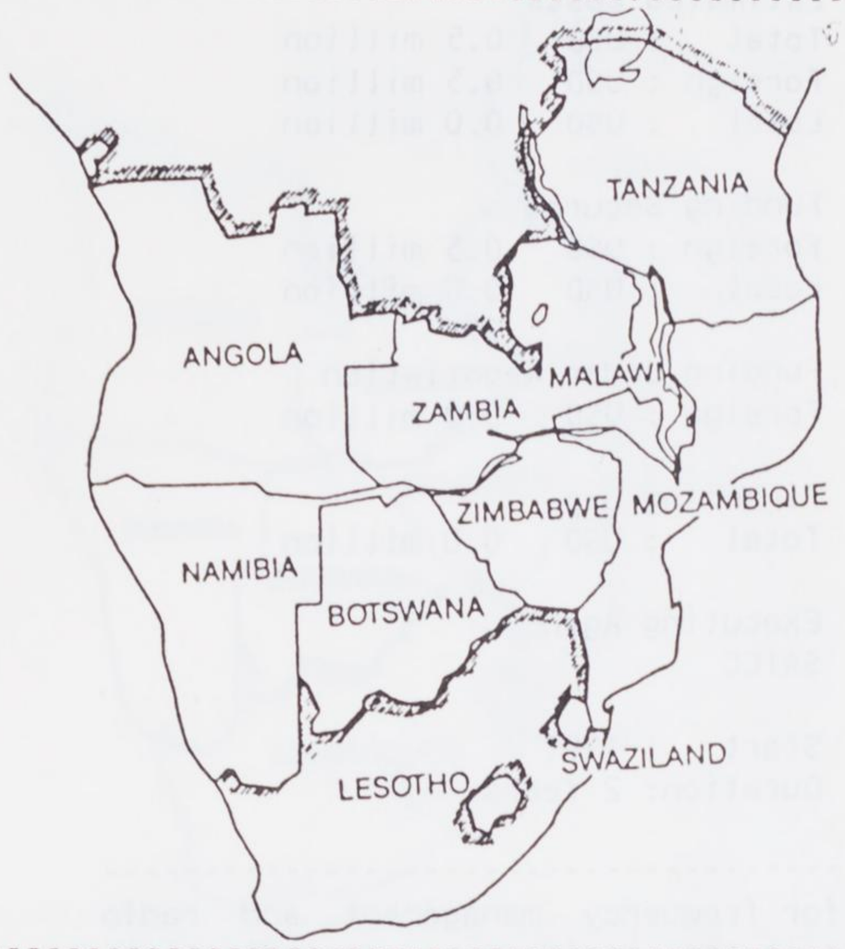
- devise systematic frequency selection procedures in the region to allow for ease of frequency co-ordination among adjacent countries; determination of principles for establishing SADCC agreements on co-ordination of frequency assignments in border areas; and determination of procedures and functions of the Interference Investigation Service; and

- determine and implement appropriate training programme and seminar.

Status : Full feasibility study and drawing up of detailed specification and requirements for project implementation undertaken with funding from SATCC Australia Trust Fund.

September 1992

AAA.0.02: Workshop/Seminar on Telecommunication Policy,
(12) Regulation and Restructuring



Estimated Costs
Total : USD 0.2 million
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.2 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start : 1992
Duration: 1 Year

Objectives : The comprehension of policy and regulation issues which facilate the development and telecommunication system in the region.

Description : Telecommunication entities in most SADCC Countires act as both regulatory and policy formulation bodies for the provision of services. There is need therefore to redifine this relationship in relation to the commercialisation of operations of the entities.

The Workshop/Seminar will undertake to:

- Identify improvements in telecommunication policies which would meet the needs of the Member States given the World Wide trends in the sector;
- determine the framework of a regulatory capability to administer the chosen policies and give assistance to the Government in the further development of policy in this fiels, and
- examine the contribution that sector restructuring can make to improve sector policies including commercialisation of the entity and relationship with the Government.

The Sub-project will involve the provision of final assistance for development of the seminar, fellowships to two senior executives from the entities and the Ministries responsible for telecommunications.

Status : Financing is under negotiation with USAID

September 1992

AAA.0.03: Training Development Programme

Estimated Costs
Total : USD 2.8 million
Foreign : USD 2.8 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 2.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.8 million

Executing Agency

Start :
Duration:

Objectives : To promote the development of training within the transport and communications sector in the Member States. The project includes four separate regional training activities.

Description : The project includes those training activities which at this stage are considered urgently needed and which have not yet been defined as separate projects. Training has high priority and the Technical Unit of SATCC will be closely involved in the initiation/development of the above activities. There is, however, a need for supplementary technical assistance and outside financing. The activities included in the project are listed below;

(1) Road traffic and transport training, study and establishment of a Task Group (completed).
(4) Training course in national telecommunications network planning.
(5) Satellite communications technology course (see separate brief).
(7) Workshop/Seminar on Telecommunications Switching Signalling System in the Sub-Region. ITU financed the provision of lectures and fellowships for the seminar (see separate brief).
(8) Local Network (External Plant) Planning Course (see separate brief).
(9) Telecommunications Training Needs Survey. NORAD is Financing the study to assess the needs and requirements for training in telecommunications which will provide proposals and future training programmes (see separate brief).
(10) Telecommunications course in Traffic and Accounting procedures (see separate brief).
(11) Seminar on Rural Telecommunications Planning (see separate brief)

Status : (see separate briefs for each subproject.)

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
04	Training Course in National Telecommunications Network Planning	0.8	0.8	0.0	0.5	0.0	0.3
05	Satellite Communications Technology Course	0.4	0.4	0.0	0.4	0.0	0.0
07	Workshop/Seminar on Telecoms Switching Signalling Systems in the Sub-Region	0.3	0.3	0.0	0.1	0.0	0.2
08	Local Network (External Plant) Planning Course	0.4	0.4	0.0	0.2	0.0	0.2
09	Telecommunications Training Needs Survey	0.4	0.4	0.0	0.4	0.0	0.0
10	Telecommunications Course in Traffic, Tariffs and Accounting Procedures	0.4	0.4	0.0	0.3	0.0	0.1
11	Seminar on Rural Telecommunications Planning	0.1	0.1	0.0	0.1	0.0	0.0
		2.8	2.8	0.0	2.0	0.0	0.8

September 1992

AAA.0.03: Satellite Communications Technology Course
(05)

Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.1 million

Executing Agency
SATCC

Start : 1992
Duration: 6 Weeks

Text

Objective : To provide detailed and complete understanding of communications by satellite technology to operations and maintenance staff presently working or intending to work at the Satellite Earth Stations in SATCC Member Countries.

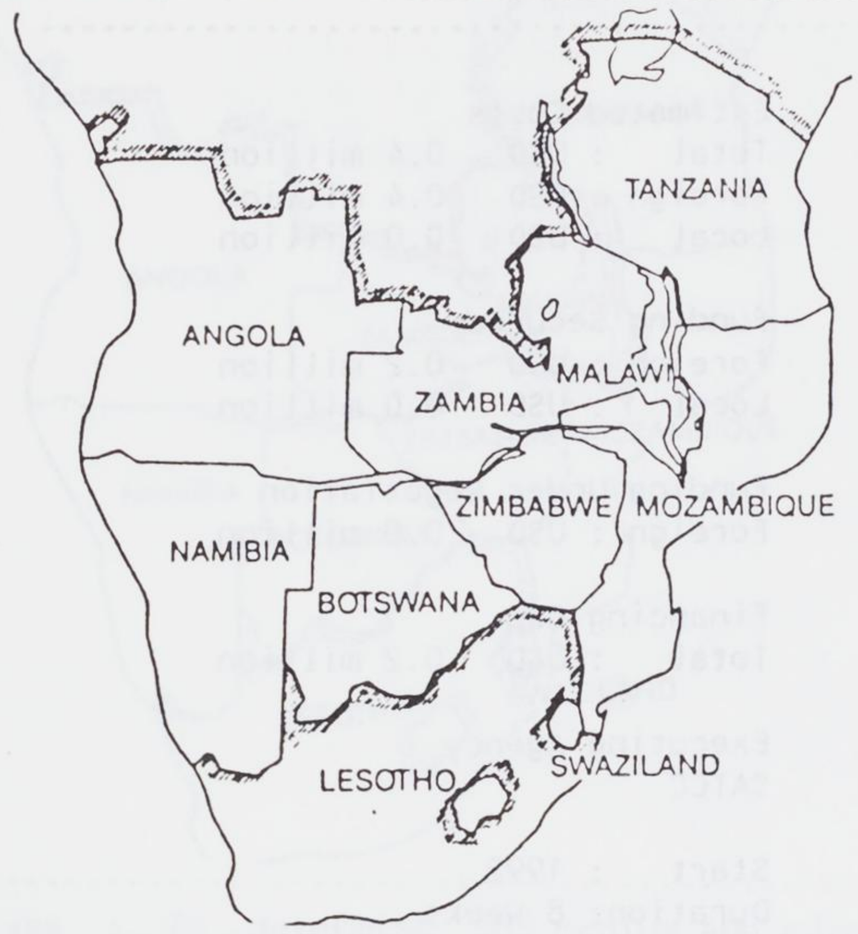
Progress : Satellite Earth Station facilities are present in all SATCC Countries and an important plan of expansion will be implemented in the second part of the eighties. In two years time, a network of direct satellite links besides other international links will be established between SADCC countries. Lack of the competent local operations and maintenance personnel is one of the major problems of concern affecting operation of Satellite Earth Stations in SATCC Member Countries. Hence, this type of trining is initiated in order to ensure total localization in maintenance and therefore minimizing operational costs, without degrading performance efficiency.
Further there is a need to develop planning and operational expertise in IDR/DCME new digital technologies.

The first course wae held in Malawi in 1987 and attended by two trinees from each of the nine Member Coutries; similarly a second course was held in Lesotho in March 1990.

A study survey to determine course and manpower requirements and demand for satellite technology training was undertaken in 1990 with CIDA funding.

Status : Financing for the present programme was secured under the CIDA/SATCC Technical services Fund.

AAA.0.03: Workshop/Seminar on Telecoms Switching Signalling Systems
(07) in the Sub-Region



Estimated Costs
Total : USD 0.3 million
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.2 million

Executing Agency
SATCC

Start : 1992
Duration: 1 Week

Objectives : To promote in co-operation with manufacturers the detailed and complete Understanding of the signalling systems to telecommunications operations and planning staff in SADCC Member Countries.

Description : The Signalling systems in use in the SADCC countries concerning service features for world wide international semi automatic and automatic telephone traffic are met by the following recommendations :

- CCITT R2 (International) (Red Book Fascicle VI.4)
- CCITT No. 5 (Red Book Fascicle VI 2)

Also UNIFORM R2 is used for traffic through the national switching centres between adjacent countries or local exchanges in the case of frontier relations.

No plans have been forumlated up to now to make CCITT No. 7 for regional use.

The first seminar was held in Gaborone, March 1989, to harmonize the interpretation of the above signalling formats and features. It was attended by two participants from each administration, the manufacturers and ITU.

A follow-up seminar was held in 1990 regarding harmonized technical specification for CCTTT No.7 Signalling System.

Status : ITU / UNDP financed the provision of lecturers and fellowship for one participant from Administrations for the first seminar.

Financing is sought to draw up harmonised technical specification and parameters for CCITT No.7 and to provide fellowships for regional participants to attend the second seminar.

September 1992

AAA.0.03: Local Network (External Plant) Planning Course
(08)

Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.2 million

Executing Agency
SATCC

Start : 1992
Duration: 8 Weeks

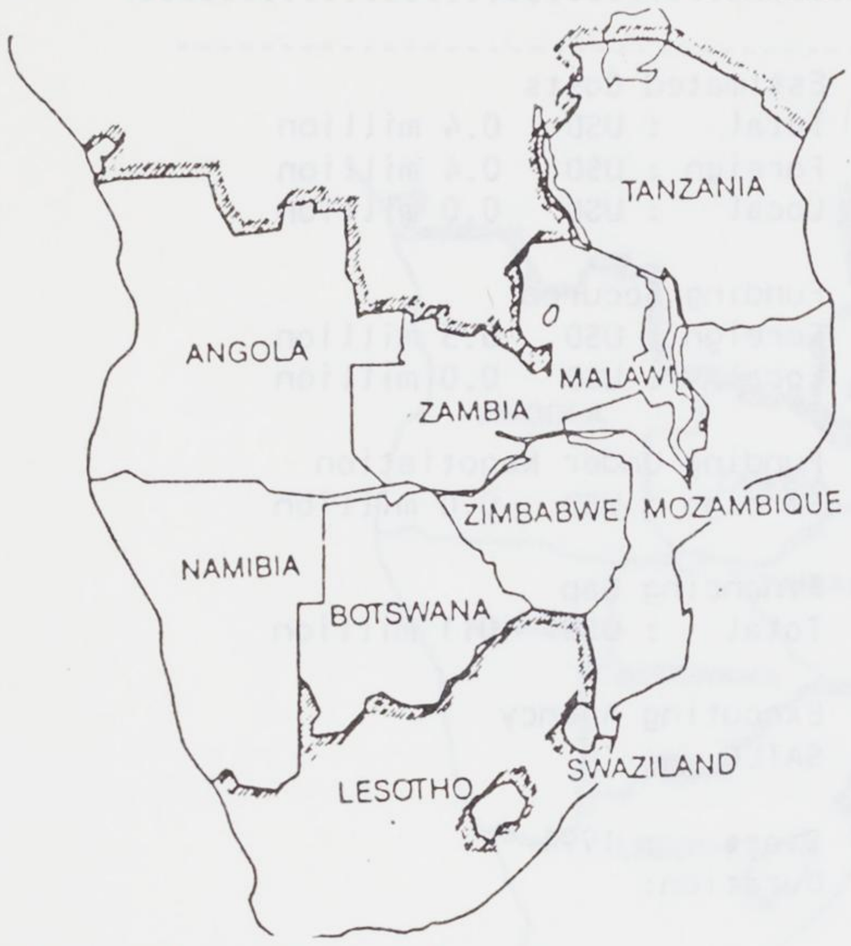
Objectives : The course is aimed at providing a complete understanding, comprehension and capability of Local Network telecommunications external plant, planning techniques.

Description : Current telephone population in all SADCC countries is 400,000 accounting for an average penetration of less than 1 per 100 population with a potential waiting list of more than 100,000 subscribers who are unable to obtain service due mainly to lack of external plant planners and construction personnel which is on of the major problems retarding the growth and extension of telephone service. Hence, this type of training is initiated in order to ensure and improve increased telephone penetration in the SADCC countries.

Status : The first course for 36 trainees was held in Zimbabwe in June/July 1988 financed by Italy. A follow up course with revised syllabus is necessary.

Financing is required for the preparation of the syllabus and running of the follow-up course.

AAA.0.03: Telecommunications Training Needs Survey
(09)



Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start : 1991
Duration: 1 Year

Objectives : To determine the medium and advanced level training requirements taking into account as far as possible all national telecommunications training facilities in order to provide a co-ordinated training programme over the next 5 to 10 years.

Description : The project is to undertake a telecommunications training needs survey to make recommendations for a co-ordinated programme of training rather than in a piecemeal fashion. The project is required to:

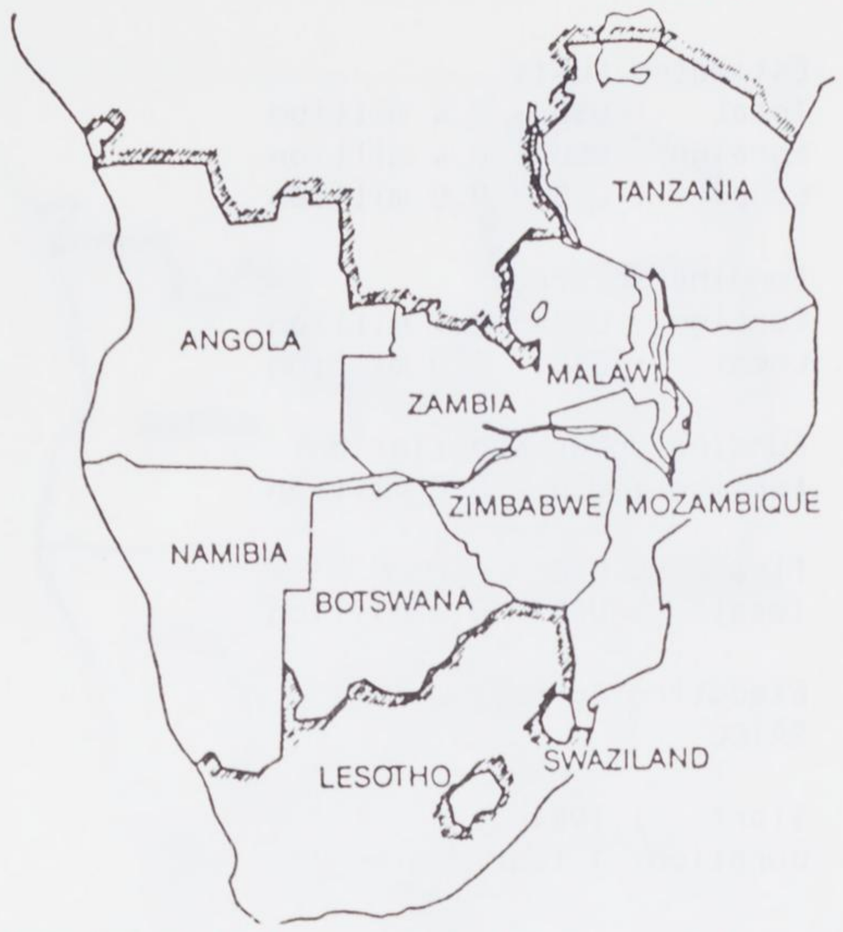
- assess the performance capabilities of existing national and regional training centres and draw conslusions as to what type and level of training courses should be developed for implementation in order to meet the identified needs.

- provide participating co-operating partners and agencies with an estimate of the physical, manpower, and financial resources which would be needed to support a recommended implementation programme.

Status : Norad has provided financing for the study to be undertaken by consultants from NORWAY TELECOMS in conjunction with the ITU.
Financing will be required to undertake the project elements emanating from the study.

September 1992

AAA.0.03: Telecommunications Course in Traffic, Tariffs and
(10) Accounting Procedures



Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.1 million

Executing Agency
SATCC

Start : 1991
Duration:

Objectives : The course is aimed at comprehension and understanding of basic principles of teletraffic and calculations for accounting rates, collection charges and accounting revenue division procedures for the international circuit used for telephony, telex and private leases.

Description : Most Administrations in SADCC countries are experiencing difficulties in qualitatively quantifying traffic and dimensioning their networks for interworking with national, regional and international relations.
Further there are disparities in the region of charges collected by Administrations for public use of the international telephone service and accounting rate per traffic unit agreed between Administrations for the establishment of international accounts.
The course will initially be for two fellowships from each SADCC Telecommunication Administration.

The courses will cover the following:

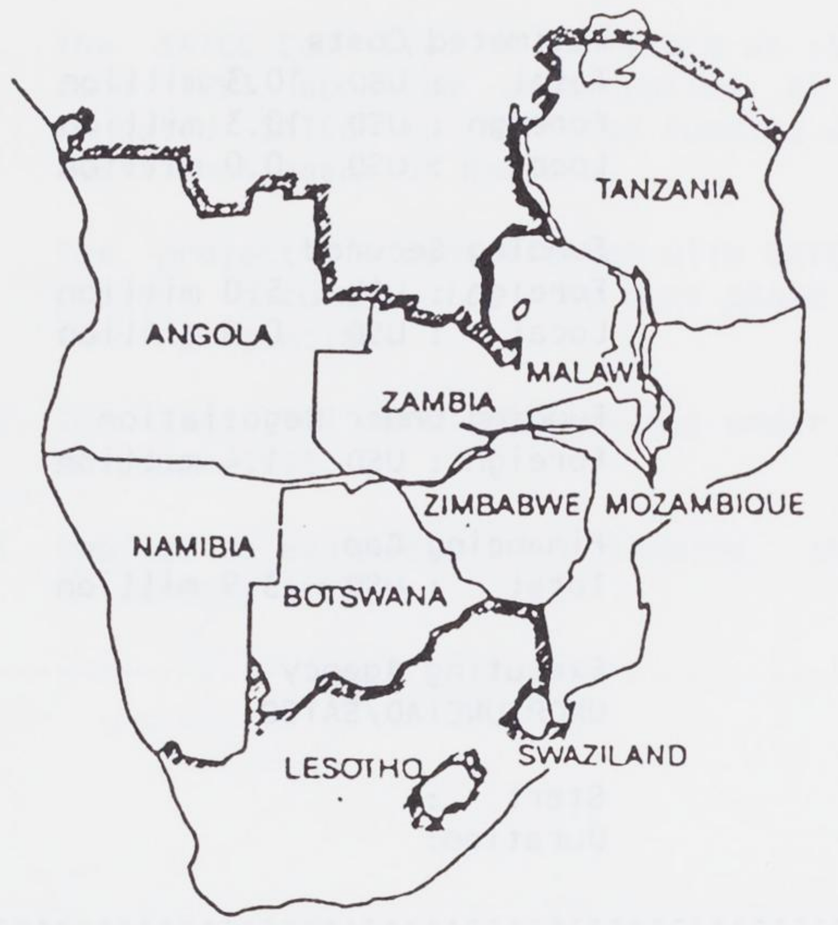
- teletraffic engineering, traffic measurement procedures and computerisation of traffic database (It is envisaged that provision of computer facilities to Administrations will form part of the programme);
- accounting rate and collection charges;
- various procedures for remunerating Administrations;
- determination of accounting rate shares and collection charges; etc.

ITU/UNDP financed and organised courses in Teletraffic Engineering and Accounting Rate Procedures at AFRALTI. Tariff Collection Charges Course was financed by CIDA and held at AFRALTI.

Status : Financing is required for follow-up courses in 1992.
A Tariff seminar for the Directors of Finance financed by CIDA has been conducted in November 1991.

September 1992

AAA.0 03: Seminar on Rural Telecommunications Planning
(11)



Estimated Costs
Total : USD 0.1 million
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start : 1992
Duration: 4 Weeks

Text

Objective : To provide detailed comprehension and skills for integrated planning and maintenance operations of rural systems into the main trunk telecommunication networks.

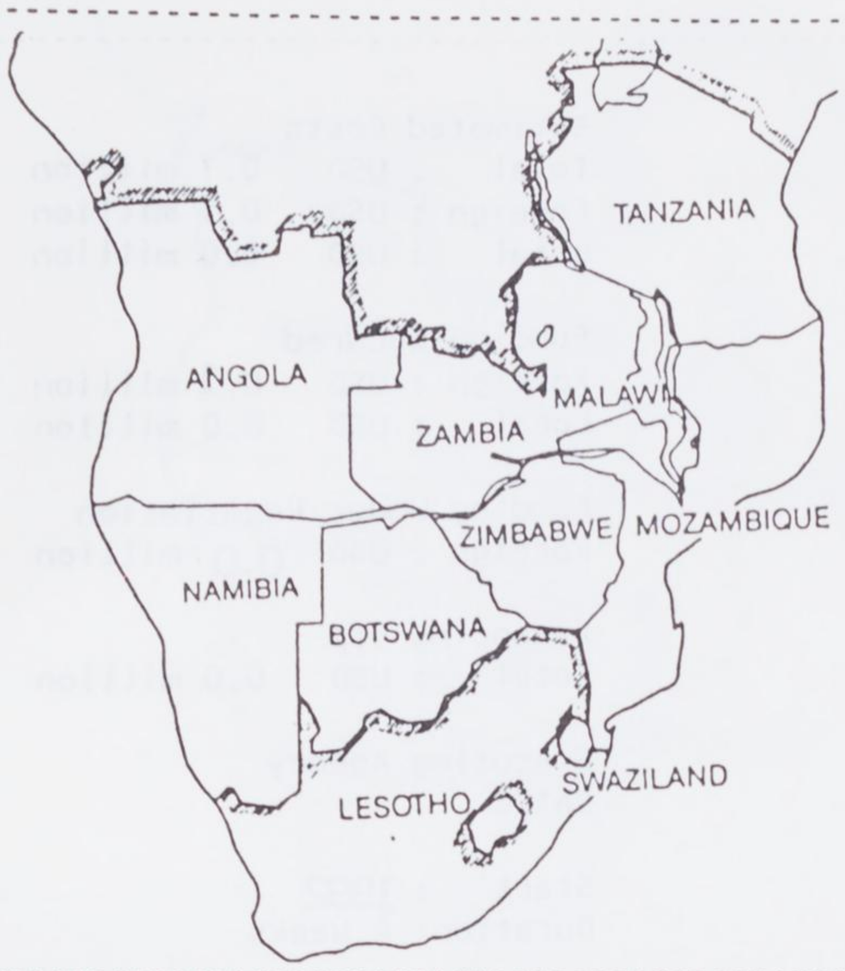
Description: Penetration of telecommunication services in the rural development areas is very low despite the availability of PANAFTEL Microwave trunk routes forming the main backbone of the regional networks.

The seminar will cover:
- design parameters for rural transmission extension.
- identification and selection of appropriate technology.
- identification of logistic constraints in the operations and maintenance of the systems.

Seminar will be attended by two participants from each of the SADCC countries, manufacturers, and specialized lecturers.

Status : The seminar has been organised by SATCC/TU and Telecoms Australia Int. with funding from SATCC Australia Trust Fund.

AAA.0.04: Transit Transport Project



Estimated Costs
Total : USD 10.3 million
Foreign : USD 10.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 5.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 1.4 million

Financing Gap
Total : USD 3.9 million

Executing Agency
UNDP/UNCTAD/SATCC

Start :
Duration:

Objectives : To build institutional capacity within the SADCC sub-region to effectively address the constraints that inhibit efficient operation of international transport corridors thereby contributing towards reduced transit transport and related costs.

Description : The project based in Blantyre, Malawi is a regional project covering nine countries. In addition to direct assistance to Member States to strengthen their institutional capacity to address transit transport issues it also supports SATCC in its operational co-ordination work involving railways, road traffic and transport, ports and shipping and the Operations Planning Committee (OPC).

The main elements of the project are:

i. Trade Facilitation
   - simplification/harmonization of trade and transport documents

ii. Development of Dry Ports

iii. Bilateral Transport Agreements

iv. Support to Ministries of Transport to establish Transport Data Bases

v. Development and implementation of Railway Tracking System

vi. Human Resource Development related to Transit Transport.

The project has achieved most of the planned outputs as contained in the current project document (1987-1991).

Additional work is aimed at consolidating outputs achieved and integrating them into national structures and largely assisting recipient institutions to build and strengthen their institutional capacity to carry out these activities on their own. This is the objective of the next phase (1992-96). It is also intended to establish a stronger linkage between the project and related programmes at the national level so as to enhance the pace of implementation. Namibia, now the tenth member of SATCC, needs to be included in the project.

Status : Project funding has been fully expended under the current phase. Additional funding is required for the next phase, 1992-1996. Funding of US$4.8 million was provided by UNDP and USAID. In addition, a further bridge funding of US$0.225 million was provided by UNDP to sustain the project for the period July to December 1991 following a budgetary shortfall. The funding status is as follows;

i. Negotiations are on-going with USAID for US$1.44 million to support Trade Facilitation activities for which the USAID has indicated interest.

ii. Funding is sought from UNDP and other donors for the next phase, 1992-1996.

iii. An Evaluation Mission to asses the performance and impact of the project involving UNDP, USAID, UNCTAD and SATCC was carried out August-September 1990. The evaluation recommended continuation of the project.

iv. The SATCC Committee of Ministers at its meeting in Windhoek, Namibia in June 1991 approved continuation of the project for another phase and mandated SATCC to mobilise funding which should take into account the additional needs of Namibia.

v. The project in consultation with SATCC and Member States is preparing a project document for the next phase to be submitted to UNDP and other funding agencies.

vi. The last TPR and SC meetings under the current phase are planned for November 1991.

vii. Subject to availability of funding, the next phase is expected to commence in January 1992.

September 1992

AAA.0.05: SATCC Technical Services Fund

Estimated Costs
Total : USD 17.4 million
Foreign : USD 17.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 14.2 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 3.2 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start :
Duration:

Objectives : To contribute within the SATCC Member States for the identification, analysis and resolution of current and potential bottlenecks in the regional transportation and communications systems.

Description : The Funds have been and are being used for the following types of activities and studies:

- Activities related to the work of the Groups of Experts on operational co ordination
- Training and courses;
- Project identification and preparation;
- Studies;
- General tasks of regional importance beyond the capacity of the SATCC Technical Unit.

Status : The Canadian (Transport) Technical Services Fund Phase 1 covered the period January 1986 to September 1988. Total funds allocated was CND 3.270,00 (USD 2,845,000). The second phase started September 1988 and runs until July 1992. Initial allocation of funds was CND 4,950,000 (USD 4,306,500).

The Canadian (Telecommunications) agreement was signed in February 1988 and covers the period up to June 1992. Total amount allocated was USD 3,3 million.

The NORAD fund was established in 1984 with an initial allocation of NOK 3.0 million (USD 435,000). In May, 1989, a supplementary agreement was signed providing additional financial assistance of NOK 4,0 million (USD 580,000).

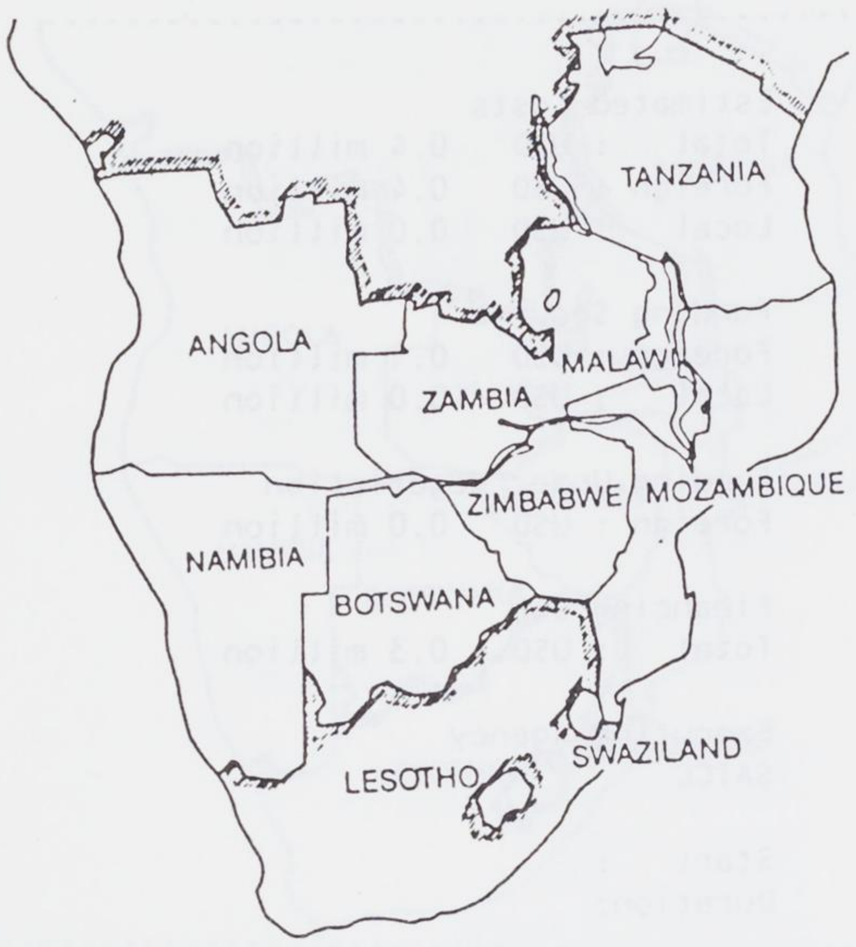
The SATCC/Australia Consultants Trust Fund covers an amount of AUD 250,000 replenished on the basis of quarterly certified accounts of expenditure.

The Administration Agreement between KFW and the SATCC for the Mozambique/SADCC Supraregional Study and Expert Fund IV was signed in May 1990. The total financial contributions amounts to DM 3.0 million (US$ 1.9 million).

Funds are being negotiated with USAID for provision of Policy Analysis Advisor and Computer Systems Analyst as well as support to SADCC Ministries of Transport to enhance their capacity in data management and sector analysis. Total estimated cost USD 3.2 million.

September 1992

AAA.0.06: SATCC Statistics Data System



Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.3 million

Executing Agency
SATCC

Start :
Duration:

Objectives : The objectives of this project are to:

(a) To develop and place into operation a computerized, multimodal transport statistics data system for use by the SATCC.

(b) To train SATCC staff in the use of the data system and in the procedures for updating the information contained.

(c) To establish procedures by which the data base can be updated periodically.

Description : The study phase has been completed for transport statistics part. The system is gradually being introduced. For telecommunications, see AAA.0.06 (01).

Status : Part financing for this Sub-project has been secured under the CIDA/SATCC Technical Services Fund.
Financing sought for remaining parts.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01	Telecommunications Statistics Database System	0.4	0.4	0.0	0.1	0.0	0.3
		0.4	0.4	0.0	0.1	0.0	0.3

September 1992

AAA.0.06: Telecommunications Statistics Database System
(01)

Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.3 million

Executing Agency
SATCC

Start :
Duration:

Objectives : To develop a computerised database telecommunication information system intended for forecasting and regional network planning and as an information source for the existing regional network and traffic.

Description : For the regional network information and records on traffic flow, route changes, service quality, telephone density etc is not available on a regular basis. Current information is obtained from meetings and questionaires.

The project has been divided into five phase and will involve designing:

- routines for collection of the imformation and data for computer treatment on a regular basis;
- a system giving status of the existing network;
- system capability for analysis of different restoration plans and forecasting on route by route basis;
- training programme for SATCC and regional Administration staff who will be operating the system; and
- Provision of the necessary hardware/software at SATCC and Administrations.

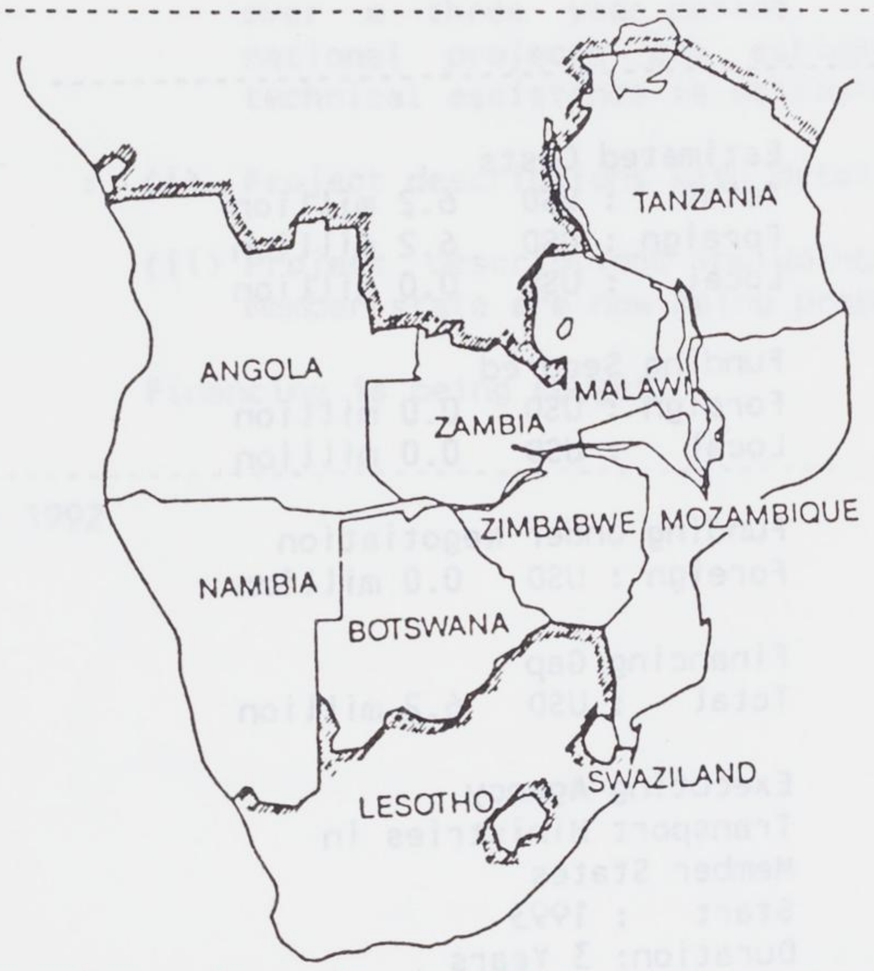
Co-ordination is also necessary for compatibility with the SATCC INFORMATION HANDLING SYSTEM and the ITU PANAFTEL datasystem, "PANBASE".

SWEDTEL has undertaken phase 1 of the project through the NORDIC/SATCC Technical Services Fund for system design development, data collection and Working Group.

Status : Financing is required for further system design, development, training programme and provision of the necessary hardware/software.

September 1992

AAA.0.07: SATCC Housing in Maputo



Estimated Costs
Total : USD 2.2 million
Foreign : USD 2.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 1.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.2 million

Executing Agency
SATCC

Start : 1991
Duration: 2 Years

Objectives : Construction of 20 houses for the use of SATCC expert staff.

Description : The SATCC Technical Unit is currently accomodated in 10 flats in Bairro Coop in Maputo.

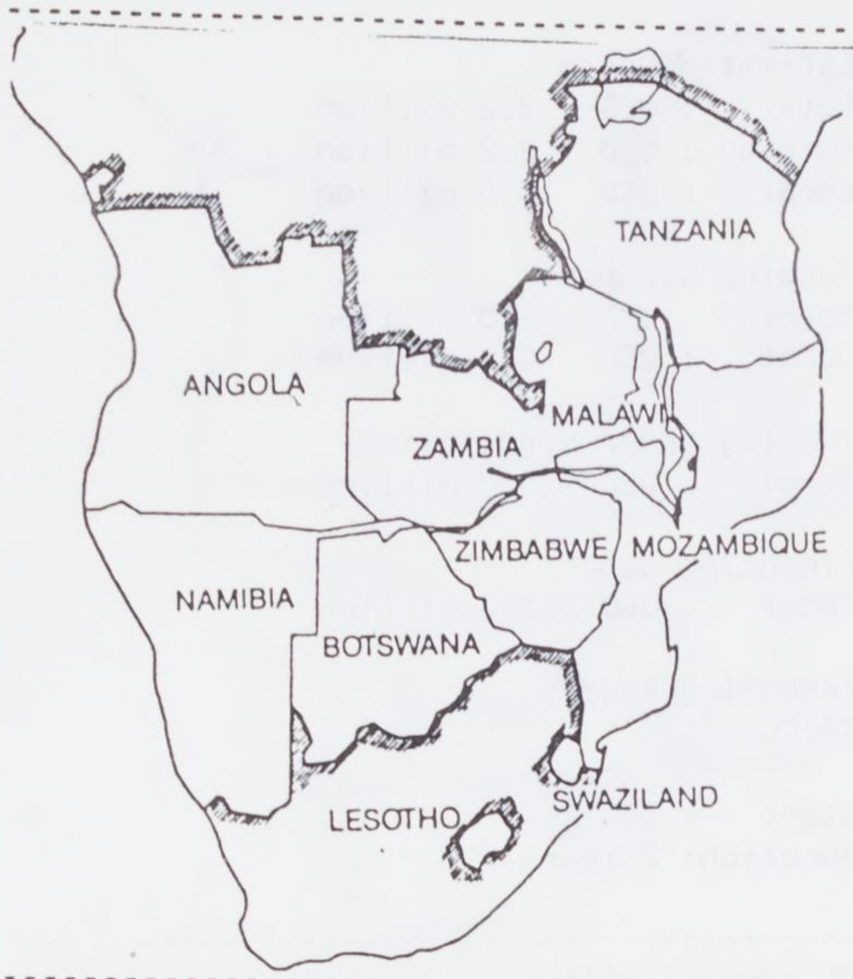
With the regionalization of the SATCC/TU staff effectively started in 1989, it is expected that there will be between 15 and 20 experts in need of family houses.

Since there is a serious lack of housing in Maputo the fastest and best way of solving the housing problem for SATCC staff is construction of new houses, preferably as one project including water supply, sewerage, Electricity, landscaping and other external work.

Status : Project documents under preparation with Nordic Funds.

September 1992

AAA.0.09: Package of Transport Statistics Programmes



Estimated Costs
Total : USD 6.2 million
Foreign : USD 6.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 6.2 million

Executing Agency
Transport Ministries in
Member States
Start : 1993
Duration: 3 Years

Objectives : Introduction of a harmonized system for transport statistics in the Member States as adopted by SATCC.

Description : (i) Implementation of a uniform system for transport statistics is an important element in the development of a sound data base for transport planning at the regional and national level.
The project also aims at implementing the harmonized commodity classification nomenclature now being developed in the Region. The system will be based on the recommendations made as a result of the study on road traffic and transport statistics which was undertaken because statistics in this sector was most seriously lacking. Contributions from other sectors will be based on concepts similar to road traffic and transport.

The project comprises 10 national projects and a regional component. At the national level it is envisaged that a transport statistics officer in the Ministry of Transport will be responsible for the compilation of data and issuance of an annual publication named Transport Statistics.

(ii) Regional co-operation related to road traffic has taken place since the establishment of SATCC. This work has been coordinated by the Working Group on Road Traffic and Transport, in close cooperation with the Working Group on Road Infrastructure. A number of analyses have been carried out and measures agreed upon within road traffic and road safety at the regional level. Implementation is now required at the national level, especially when it comes to road safety and overload control. The lack of reliable data on traffic characteristics, such as traffic volume and axle loads, has caused problems for the regional analysis and will continue to cause problems during the implementation phase.

Against this background traffic data collection programmes are now being established in the member states in order to improve the basis for transport planning, highway and pavement design, pavement management, traffic control and overload control.

The aim of the package of Traffic Data Collection Programmes is to implement the various national traffic data collection programmes in the region. The objectives of these national programmes are to establish a system for collection and treatment of data on traffic characteristics and axle loads in each member state.

Project descriptions are now being prepared for each project. Each project description will identify the national body which will be responsible for the project. It will define a national traffic data collection strategy, identify the need for equipment and make proposals as to organization, staffing and training required for implementation of the data collection programme.

It is suggested that one expert is attached temporarily to the SATCC Techncial Unit in Maputo in order to improve technical assistance to all member states. It is anticipated the national programmes be implemented over a three year period. The costs related to equipment for the ten national projects are estimated at USD 3,75 million. The cost for technical assistance is estimated at USD 0.3 million.

Status : (i) Project descriptions with detailed cost estimates are being prepared.

(ii) Project descriptions including traffic data collection programmes for each member state are now being prepared.

Financing is being sought.

September 1992

AAA.0.11: Regional Transport & Communications Integration Study for Southern Africa

Estimated Costs
Total : USD 5.0 million
Foreign : USD 5.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 5.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC/TU

Start : 1992
Duration: 20 Months

Objectives : The Study will focus on actions to eliminate the transport and communications barriers that presently constrain domestic, intraregional and international cargo flows, with a view to improving trade and commerce; and taking full account of the activities and achievements of the Southern Africa Development Coordination Conference (SADCC) in transport and communications, and the geopolitical developments in the region, including the possible inclusion of South Africa in SADCC. The Study will identify, evaluate and program further appropriate actions and investments in the areas of regional transport and communications coordination, policy reform, institutional development, infrastructure maintenance and development, and transport management, amongst other areas. The Study will cover the road, port, maritime rail, air, telecommunications, post office and meteorology subsectors.

Description : The Study will entail an in-depth review and analysis of the four different sectors (transport, telecommunications, postal and meteorology) in the regional system, all of which provide a higly diverse range of services. Accordingly, key requirements for the successful discharge of the assignment would be the ability to organise findings around the common conceptual framework provided in these terms of reference and the ability to draw the important linkages between the sectors and their constituent sub-sectors.

Status : New project. Financing under negotiation with EEC.

September 1992

ANG.0.01: Multimodel Projects in the 10- Year Plan for Lobito Port Transport System

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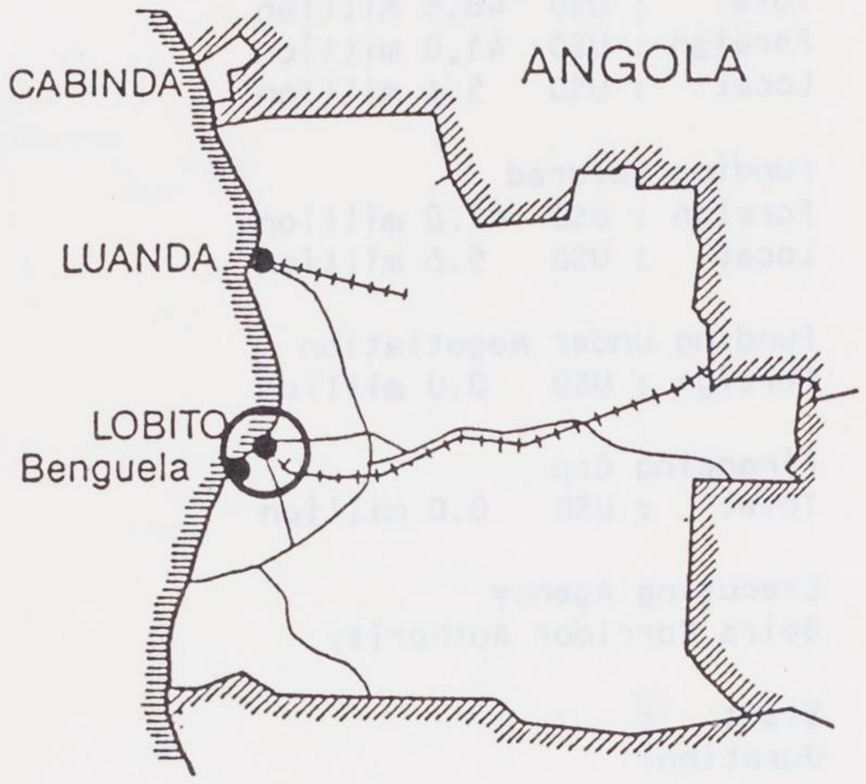


Estimated Costs
Total : USD 125.9 million
Foreign : USD 125.9 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 64.6 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 3.5 million

Financing Gap
Total : USD 57.8 million

Executing Agency
Lobito Port Authority and
Benguela Railway
Start : 1990
Duration: 5 Years

Objectives : General support for the implementation of the Ten Year Development Plan for the Lobito Port Transport System.

Status : Sub-project G-CE-1, Development of the Town of Lobito, is to be co-financed fully by Sweden, Norway and the World Bank.
Sub-project G-CE-2, Rehabilitation of Cement Factory, contract for feasibility study awarded.
Sub-project G-M-1, Project Co-ordination Unit, tender for Technical Assistance under preparation.
Sub-project G-M-4, Rehabilitation of Hotel Terminus, contract awarded.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
G-CE-1	Development of the Town of Lobito	60.0	60.0	0.0	60.0	0.0	0.0
G-CE-2	Rehabilitation of Cement Fac- tory	3.0	3.0	0.0	0.1	0.0	2.9
G-E-1	Repair and Extension of Lumaum Hydroelectric Power Plant.	42.0	42.0	0.0	0.0	0.0	42.0
G-M-1	Project Co-ordination Unit	2.9	2.9	0.0	2.9	0.0	0.0
G-M-2	Support to Workers and their Families	7.0	7.0	0.0	0.0	3.5	3.5
G-M-3	Housing for Technical Assist- ance Staff in Lobito and Huambo	9.4	9.4	0.0	0.0	0.0	9.4
G-M-4	Rehabilitation of Hotel Terminus	1.6	1.6	0.0	1.6	0.0	0.0
		125.9	125.9	0.0	64.6	3.5	57.8

September 1992

MOZ.0.01: Multimodal Projects in the Beira Port Transport System
Development Plan

Estimated Costs
Total : USD 46.6 million
Foreign : USD 41.0 million
Local : USD 5.6 million

Funding Secured
Foreign : USD 41.0 million
Local : USD 5.6 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Beira Corridor Authority

Start :
Duration:

Objectives : Support to CFM(C) organization and manpower, development of the town of Beira and project co-ordination under the Development Plan for the Beira Port Transport System.

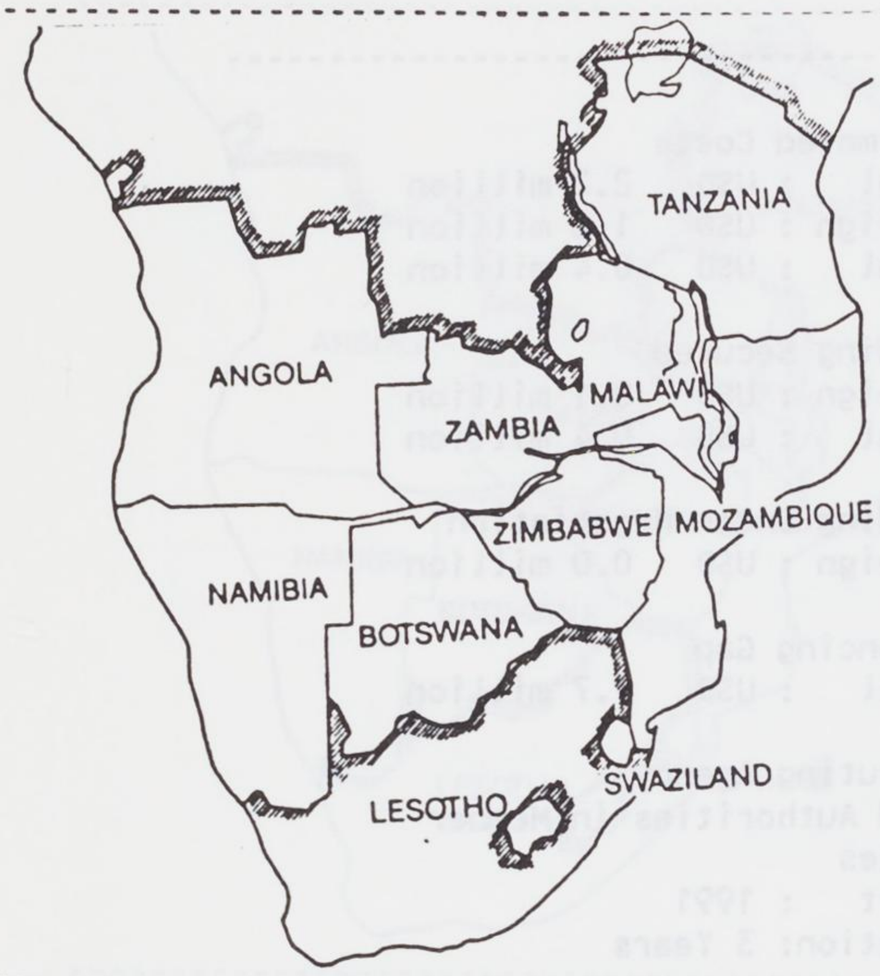
Status : The subprojects listed below are being implemented.

Subprojects Included in Programme:	--- Cost ---			-- Funding --		
	Total	For'n	Local	Secu	Nego	Gap
MS-G-03 Procurement of MIS-Hardware	0.0	0.0	0.0	0.0	0.0	0.0
*PR-M-02 Support to Workers	18.3	12.7	5.6	18.3	0.0	0.0
PR-M-02 B) Workers Transport	1.1	1.1	0.0	1.1	0.0	0.0
PR-M-02 C) Workers Housing	17.2	11.6	5.6	17.2	0.0	0.0
PR-M-04 Core Staff for Beira Corridor Authority	11.7	11.7	0.0	11.7	0.0	0.0
PR-M-06 Training Facilities	1.2	1.2	0.0	1.2	0.0	0.0
PR-M-10 Housing for Technical Assistance Personnel	2.3	2.3	0.0	2.3	0.0	0.0
PR-M-11 Studies A)Private Sector Involvement B)Incentive Scheme	0.0	0.0	0.0	0.0	0.0	0.0
TA-C-3 Technical Assistance to Implementation of Management Information System (MIS)	5.9	5.9	0.0	5.9	0.0	0.0
TA-C1/2 Technical Assistance to CFM (C) Central Services	7.2	7.2	0.0	7.2	0.0	0.0
TA-PR01 External Training	0.0	0.0	0.0	0.0	0.0	0.0
	46.6	41.0	5.6	46.6	0.0	0.0

September 1992

Roads

AAA.1.01: Package of Road Safety Programmes



Estimated Costs
Total : USD 16.1 million
Foreign : USD 16.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 7.4 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 8.7 million

Executing Agency
Road Safety Authority in each member state.
Start : 1991
Duration: 3 Years

Objectives : Implementation of road safety programmes in SADCC Member States.

Description : Regional cooperation on matters related to road safety has taken place since 1983. Recommendations have been approved for Organisation of road safety work, accident recording systems, actions against drunken driving, motor vehicle testing, control of overloading, driver training and licensing and harmonization of road traffic legislation. For the implementation of recommendations related to road safety a number of country programmes have been prepared:

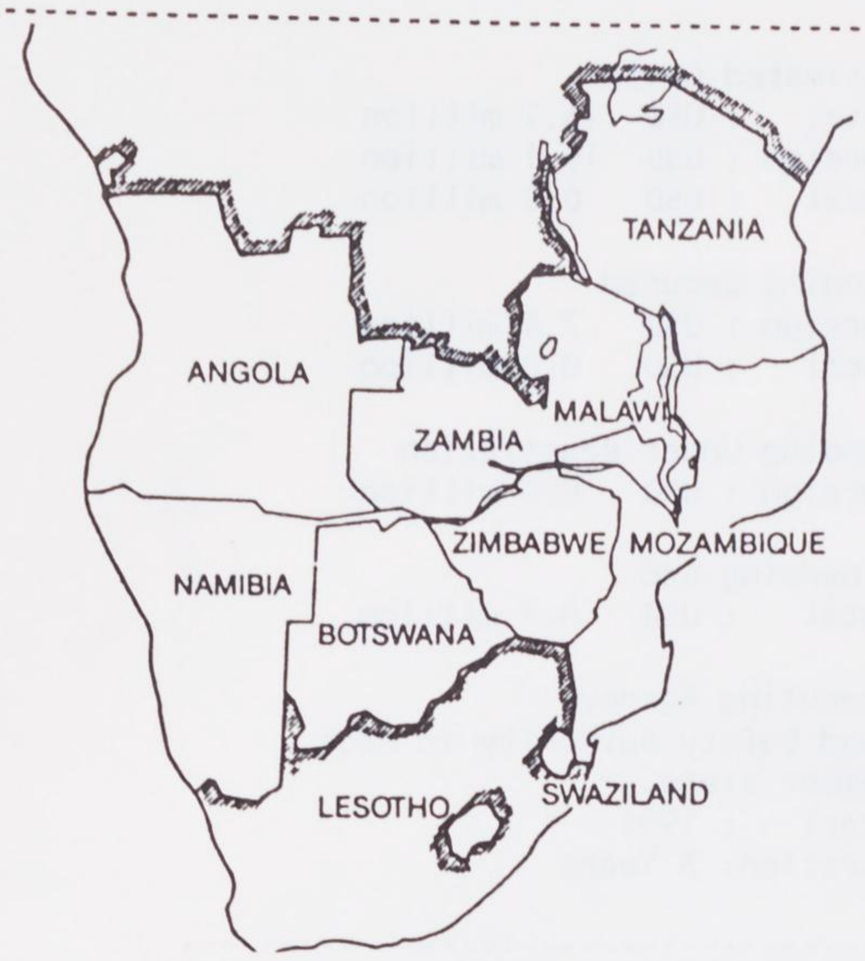
Status : A road safety programme in Botswana is already being implemented, financed by SIDA. Detailed project descriptions have been prepared for Lesotho, Malawi, Mozambique, Swaziland, Tanzania and Zambia. Cost estimates for Angola, as given above, are rough estimates, subject to corrections when detailed descriptions have been finalized.
Finland is interested in funding the project in Zambia.
Draft project description has been prepared for Zimbabwe.
A seminar was held in Harare between 12-15 June 1990 to which representatives of CIDA, FINNIDA, NORAD, SIDA and the World Bank were invited.
Member states participated.
Financing is being sought.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01	Road Safety Programme, Angola.	2.0	2.0	0.0	0.0	0.0	2.0
02	Road Safety Programme, Lesotho	2.0	2.0	0.0	0.0	0.0	2.0
03	Road Safety Programme, Malawi	2.0	2.0	0.0	2.0	0.0	0.0
04	Road Safety Programme, Mozambique	1.9	1.9	0.0	0.0	0.0	1.9
05	Road Safety Programme, Swaziland	1.8	1.8	0.0	0.0	0.0	1.8
06	Road Safety Programme, Tanzania	1.6	1.6	0.0	1.6	0.0	0.0
07	Road Safety Programme, Zambia	3.8	3.8	0.0	3.8	0.0	0.0
08	Road Safety Programme,Zimbabwe	1.0	1.0	0.0	0.0	0.0	1.0
		16.1	16.1	0.0	7.4	0.0	8.7

September 1992

AAA.1.02: Package of Weighbridge Programmes



Estimated Costs
Total : USD 2.2 million
Foreign : USD 1.8 million
Local : USD 0.4 million

Funding Secured
Foreign : USD 0.1 million
Local : USD 0.4 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.7 million

Executing Agency
Road Authorities in Member States
Start : 1991
Duration: 3 Years

Objectives : Introduction of ways and means to control overloading of motor vehicles in order to prevent the deterioration of the road network due to that factor and on commercial and safety grounds.

Description : The project includes establishment of fixed weighbridge stations, provision of portable weighbridges, organizational improvements, technical assistance and training of personnel.
It is estimated that once efficient control of overloading has been introduced, the costs of the project will be covered within a year by reduced road maintenance costs.

Status : Project descriptions have been prepared. Financing is being sought.
SIDA has provided weighbridges for Plumtree and Beitbridge at an estimated cost of Z$125.000, and 12 portables at an estimated cost of Z$100.000.
An additional 10 weighbridges are required in Zimbabwe.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01	Weighbridge Project, Angola	0.4	0.3	0.1	0.1	0.0	0.3
02	Weighbridge Project, Botswana.	0.1	0.1	0.0	0.0	0.0	0.1
03	Wrighbridge Project, Lesotho	0.1	0.1	0.0	0.0	0.0	0.1
04	Weighbridge Project, Malawi.	0.2	0.2	0.0	0.0	0.0	0.2
05	Weighbridge Project, Mozambique	0.2	0.2	0.0	0.0	0.0	0.2
06	Weighbridge Project, Swaziland	0.3	0.2	0.1	0.1	0.0	0.2
07	Weighbridge Project, Tanzania	0.3	0.2	0.1	0.1	0.0	0.2
08	Weighbridge Project, Zambia	0.3	0.2	0.1	0.1	0.0	0.2
09	Weighbridge Project, Zimbabwe	0.3	0.3	0.0	0.1	0.0	0.2
		2.2	1.8	0.4	0.5	0.0	1.7

September 1992

AAA.1.03: Implementation of Harmonized Road Maintenance Management System in SADCC Countries

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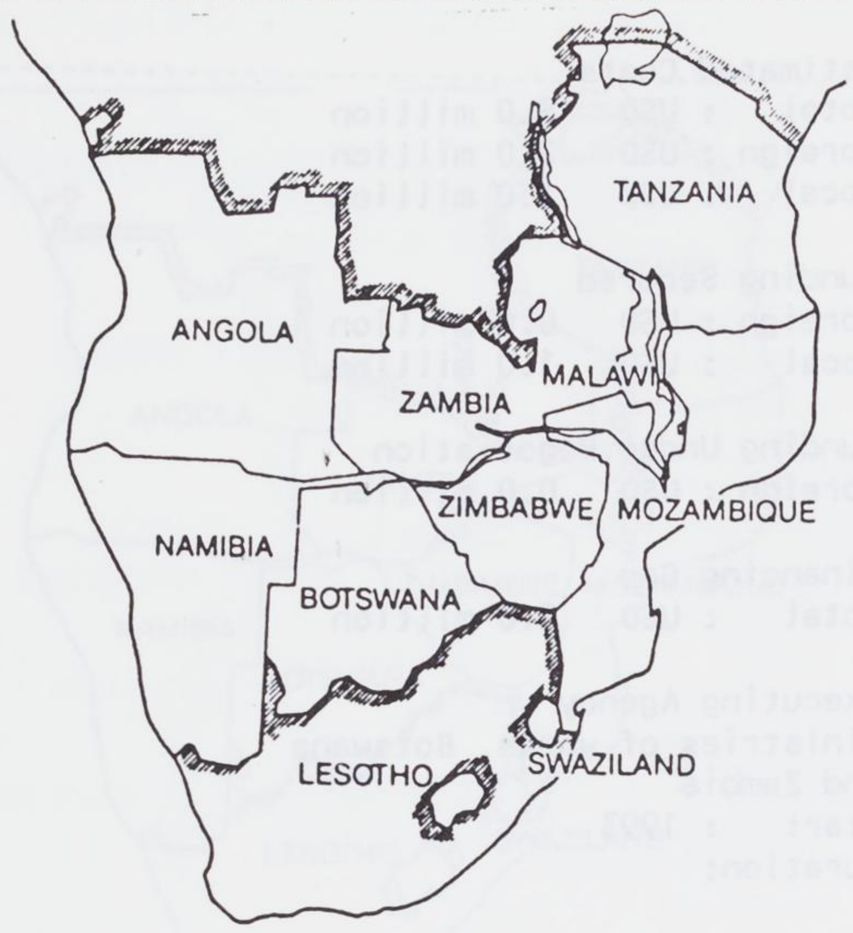

Estimated Costs
Total : USD 1.2 million
Foreign : USD 1.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.2 million

Executing Agency
Road Authorities in Member States
Start : 1993
Duration: 4 Years

Objectives : Strengthening the capacity of the road authorities in the member states for road maintenance planning and management through the implementation of a harmonized Road Maintenance Management System - RMMS.

Description : Deficient maintenance is one of the main problems in the road infrastructure sector in the SADCC Region today. This is due to both insufficient budget allocations and inadequate planning and management capacity to use the available resources efficiently in an optimal way. The implementation of a Road Maintenance Management System, harmonized regionally to the extent feasible, has been identified by the road authorities in the member states as a major step forward in helping to improve the situation.

The preparatory work for the project has been undertaken under the auspices of the SATCC Working Group on Road Infrastruture which has agreed on the principles of the contents and implementation of a harmonized RMMS in the Region.

The RMMS will enhance the medium to long-term planning of stategies and actions on the road network, both at project and network level based on economic evaluation of alternative options and lines of action. The system to be implemented will use the Highway Design and Maintenance Standard Model (HDM III), developed by the World Bank, for pavement performance prediction and economic evaluation.

The RMMS to be implemented will have the following features and capabilities:

- road data bank including road inventory and traffic data;
- data management with user-friendly input and reporting facilities;
- data evaluation through on-screen graphical presentation of data and sectioning;
- on-screen assignment of maintenance options;
- automatic input of the formatted data to HDM III model.

The project includes acquisition of equipment (PC computers, trip metres, pavement roughness metres), training of personnel in the maintenance of the system, and technical assistance in initiating the RMMS and in calibration of the pavement performance prediction models to local conditions. The system will be implemented stage wise starting with the main trunk roads and expanding the coverage to the whole road network in the course of the implementation period (4 years).

Status : TOR for development and Implementation of a Highway Management system have been completed.

Financing is being sought.

AAA.1.05: Improved Ferry Service at Kazungula, Botswana/Zambia

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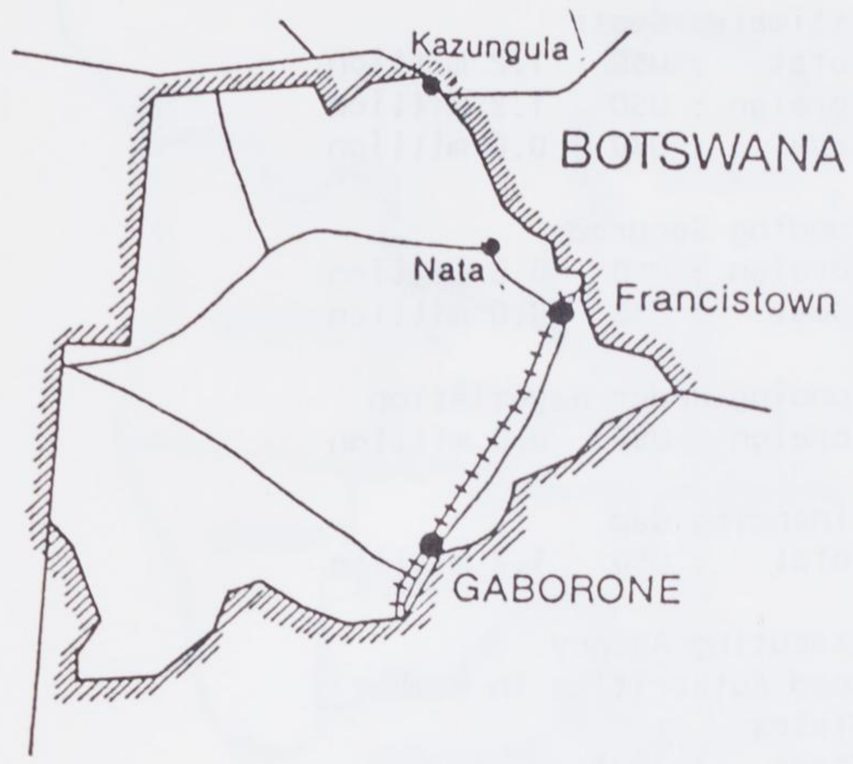


Estimated Costs
Total : USD 3.0 million
Foreign : USD 2.0 million
Local : USD 1.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 1.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.0 million

Executing Agency
Ministries of works, Botswana and Zambia
Start : 1993
Duration:

Objectives : Improvement of the existing ferry service across the Zambezi River at Kazungula River at Kazungula between Botswana and Zambia.

Description : The territories of Botswana and Zambia touch at one single point on the middle of the River Zambezi. The point isthe junction of the border lines between the four countries Botswana, Namibia, Zambia and Zimbabwe.

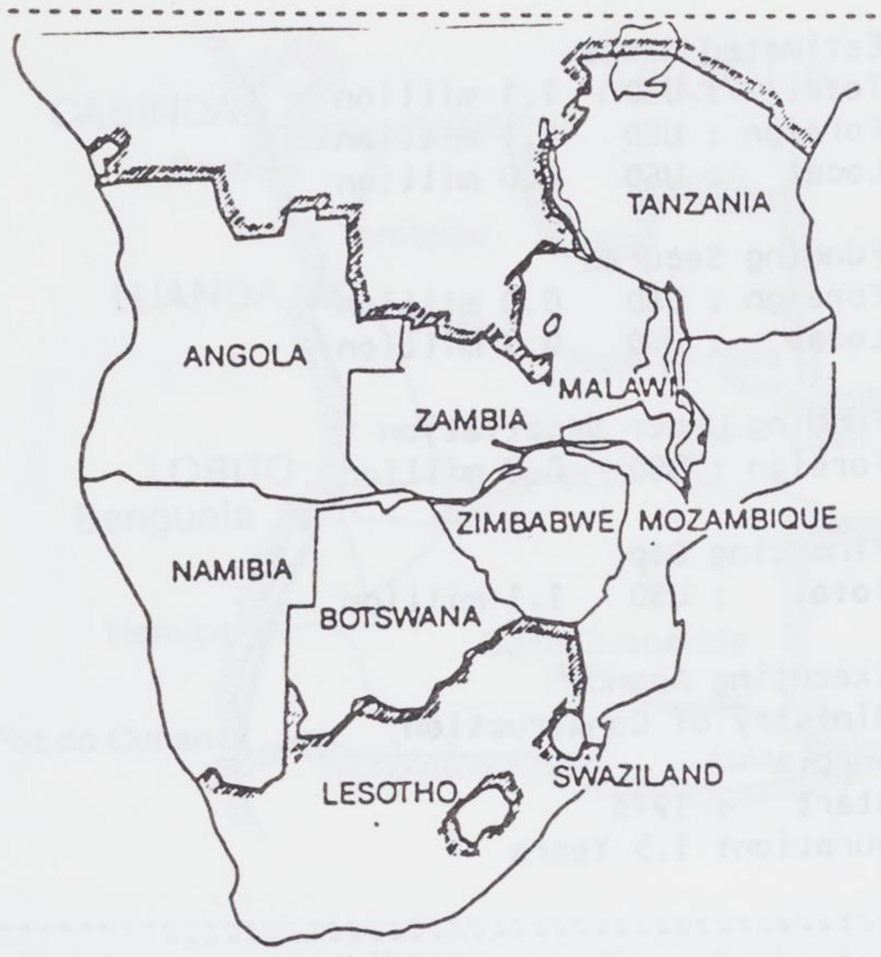
The ferry service across the river at Kazungula is the only direct link between Botswana and Zambia. The existing service is operated by the Government of Zambia. The road Gaborone - Francistown - Kazungula - Livingstone - Lusaka is part of Regional Trunk Road Network defined by SATCC.

Under an earlier SATCC Project No.ZAM.1.02, Study on Kazungula Bridge an Pandama tenga - Victoria Falls Road, a feasibility of alternative improvements of the Kazungula crossing was studied in detail. The study was completed in 1987. The in 1987. The study recommends physical and institutional improvements to the ferry service, covering vessels and shore facilities as well as aspects related to border crossing.

Status : The project is awaiting the outcome of the study incl. in project AAA.1.06.

September 1992

AAA.1.06: Feasibility Study for a Bridge Across the Zambezi



Estimated Costs
Total : USD 0.3 million
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency

Start : 1992
Duration: 7 Months

Objectives : Feasibility study for a bridge across the Zambezi, at an optimal site/location to be determined by the Study within the extended catchment area between Kazangula and Katima Mulilo.

Description : The tentative plan includes a bridge across the Zambezi connecting the trunk road systems of Namibia, Zambia, Zimbabwe and Botswana.

SATCC Project No. NAM.1.02 includes the improvement of the route Rundu-Katima Mulilo in Namibia, with a connection at Ngoma at the Botswana border. Plans are being made for the improvement of the road Livingstone-Scheke in Zambia. Improvement of the Kasana Ngoma Road to bitumen standard within Botswana is being considered. A study which was previously carried out for a bridge across the Zambezi at Kazangula between Botswana and Zambia is accordingly superseded. Strengthening of the Victoria falls Bridge is being considered. Rehabilitation work is ongoing for the northern 5 km of the Nata-Kazangula road which had failed prematurerely. Plans are at an advanced stage to secure funds for the construction of the Trans-Kgalagadi Highway, for which detailed engineering design and contract documents were completed mid 1990.

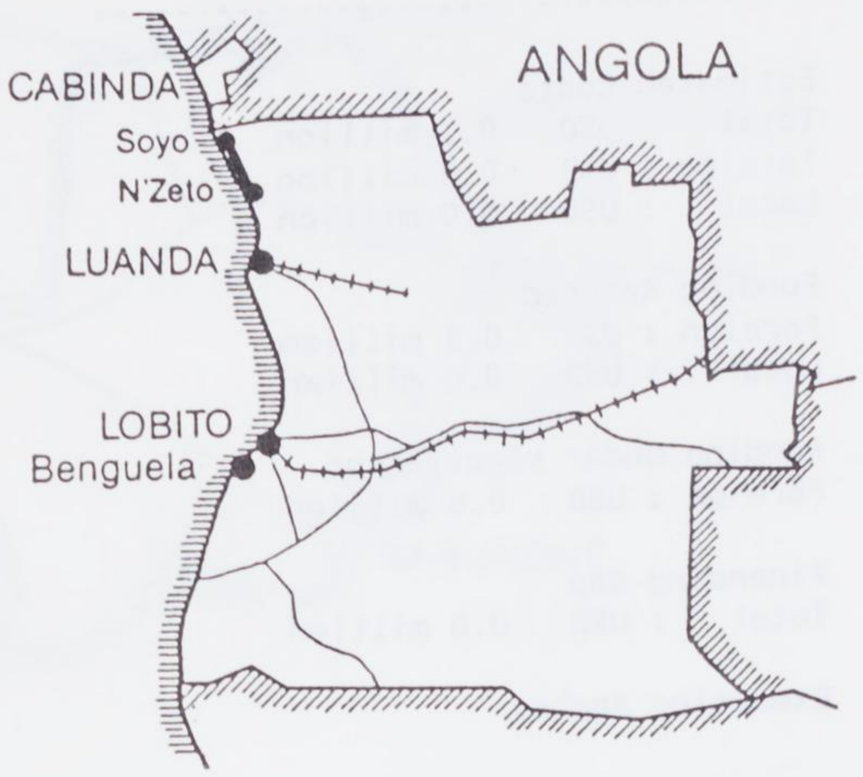
All of the above developments and traffic estimates will have to be taken into account in the study for a bridge across the Zambezi.

Based on the findings concerning traffic requirements, recommendations for bridge sites shall be made and determination of the design parameters established

Status : CIDA is financing the study. The Canadian Consultant has submitted the draft Final Report.

September 1992

ANG.1.01: Study on the Road N'Zeto - Soyo



Estimated Costs
Total : USD 1.1 million
Foreign : USD 1.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.1 million

Executing Agency
Ministry of Construction,
Angola
Start : 1993
Duration: 1.5 Years

Objectives : Feasibility and engineering studies concerning the road N'Zeto - Soyo (160 km) in northwestern Angola.

Description : The existing road between N'Zeto and Soyo is a poor earth road with difficulties of passage and maintenance.

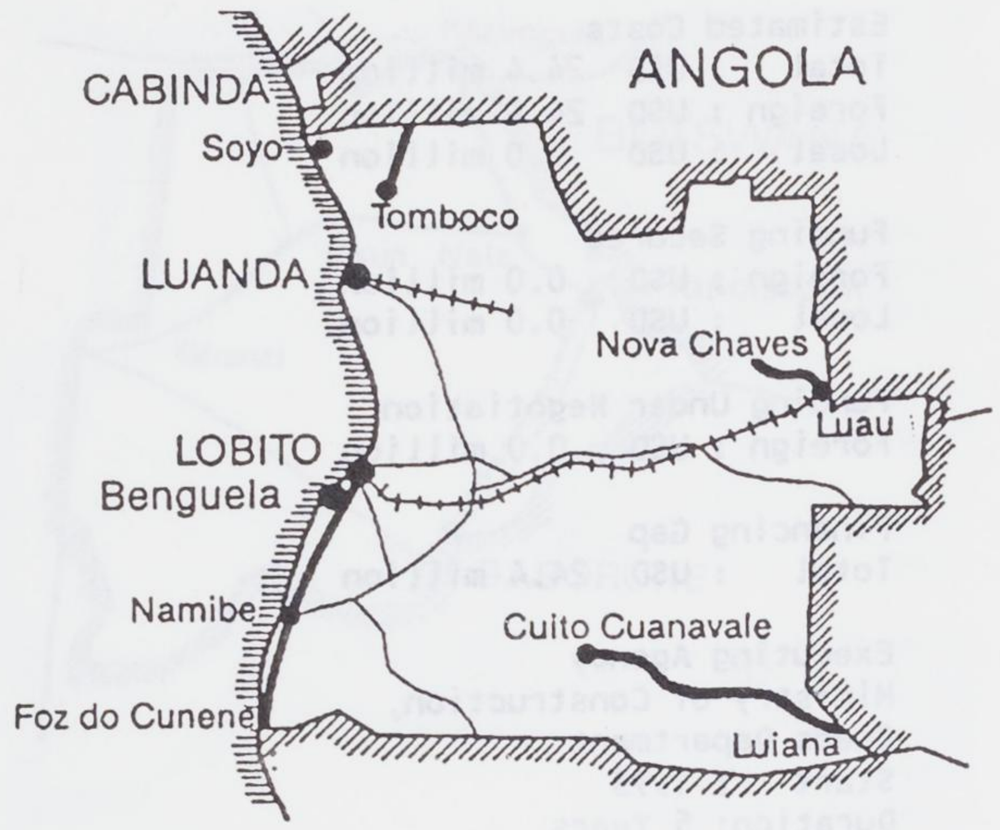
The construction of a new road of adequate standard is a high priority for the Government. This is justified by the economic importance of the area of influence of the road, including existing oil storage and loading facilities, ongoing off-shore oil exploitation and the imminent start of exploitation of the phosphate deposits in the area, as well as projects for agricultural development.

Status : The project is included in the programme of the United Nations Transport and Communications Decade for Africa 1978-1988. Terms of Reference for the studies have been prepared. The African Development Bank has been approached for financing of the studies.

Follow-up of financing.

September 1992

ANG.1.02: Studies of Four Roads in Angola



Estimated Costs
Total : USD 1.6 million
Foreign : USD 1.6 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.6 million

Executing Agency
Ministry of Construction, Angola
Start : 1993
Duration:

Objectives : Feasibility studies of the following four roads :

Ombaca - Lucira - Foz do Cunene (Namibian border), 400 km;

Tomboco - Noqui (Zaire border), 180 km;

Nova Chaves - Luau (Zaire border), 120 km;

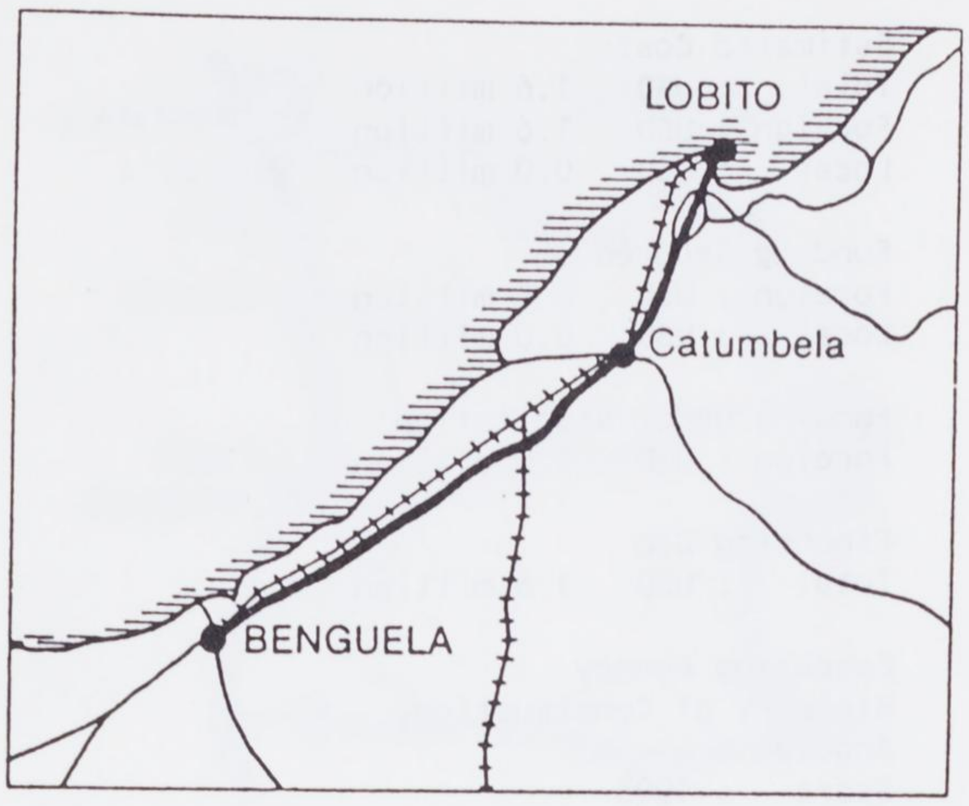
Cuito Cuanavale - Luiana (Zambian border), 650 km.

Description: These projects aim at providing links with the neighbouring countries as well as feeders to the Benguela Railway. Earlier studies exist in some sections.

Status : The projects have been included in the programme of the United Nations Transport and Communications Decade for Africa 1978 - 1988. Preliminary programmes for studies and implementation have been prepared.

September 1992

ANG.1.03: Roads & Road Tranport Projects in the 10 Year Develop Plan -
Lobito Port Transport System



Estimated Costs
Total : USD 24.4 million
Foreign : USD 24.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 24.4 million

Executing Agency
Ministry of Construction,
Roads Department
Start : 1993
Duration: 5 Years

Objectives : Improvement of access roads to serve the Lobito port and strengthening of road haulage capacity. Under the Ten Year Development Plan for the Lobito Port Transport System.

Description : The Ten Year Development Plan for the Lobito Port Transport System.

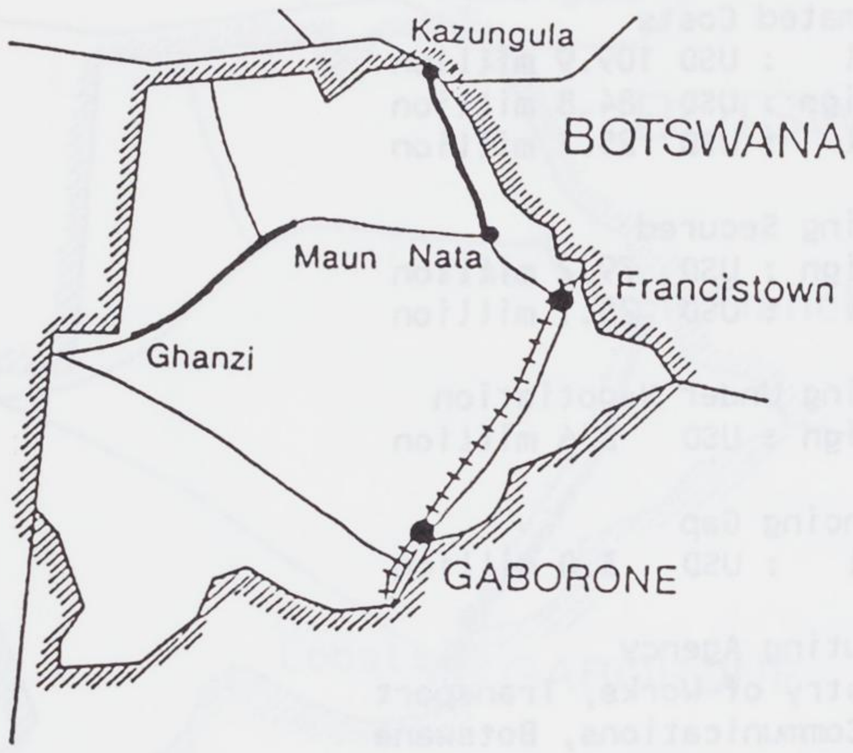
Status : A Technical Co-ordination Conference to discuss the 10-Year Plan was held in January 1989. Follow-up contacts with donors are in progress.
Sub-project RD-CE-1, Portugal interested in financing the design of the Catumbela Bridge and BADEA has shown interest in co-financing works.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
RD-CE-1	Benguela-Lobito Road & Access Roads to the Port and Railway in Lobito	17.4	17.4	0.0	0.0	0.0	17.4
RD-TR-1	Reinforcement of the Capacity of the Road Transport Company	7.0	7.0	0.0	0.0	0.0	7.0
		24.4	24.4	0.0	0.0	0.0	24.4

September 1992

BOT.1.01: Partial Reconstruction of Nata - Kazungula Road



Estimated Costs
Total : USD 16.9 million
Foreign : USD 12.0 million
Local : USD 4.9 million

Funding Secured
Foreign : USD 3.3 million
Local : USD 4.9 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 8.7 million

Executing Agency
Ministry of Works, Transport
and Communications, Botswana
Start : 1989
Duration: 4 Years

Objectives : Reconstruction of 86 Kms of the road Nata-Kazungula.

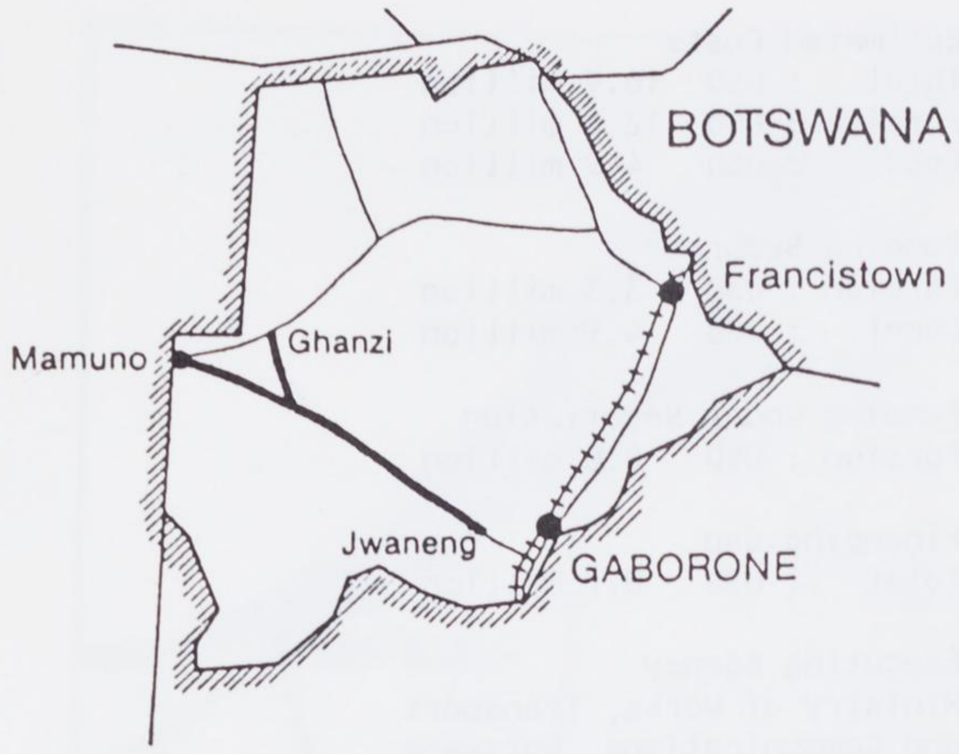
Description : The 300 km Nata-Kazungula road connects Botswana to neighbouring countries of Zambia and Zimbabwe and has proven to be an important transportation link for countries north of Botswana including Malawi.

This road was upgraded from gravel to bitumen standard in 1983 but has suffered premature failures due to unforeseen material problems. Comprehensive investigations by the roads department indicate that progressive failures are likely to continue. High maintenance costs are therefore anticipated and reconstruction of the 86 Km towards Kazungula will be necessary within the next year.

Status : Project extended to incorporate rehabilitation of remaining 50 km of stage 2 works in the on-going stage 1 works.

September 1992

BOT.1.02: Construction of Jwaneng-Mamuno Road Link, BOTSWANA



Estimated Costs
Total : USD 109.9 million
Foreign : USD 84.8 million
Local : USD 25.1 million

Funding Secured
Foreign : USD 79.2 million
Local : USD 25.1 million

Funding Under Negotiation
Foreign : USD 2.6 million

Financing Gap
Total : USD 3.0 million

Executing Agency
Ministry of Works, Transport
and Communications, Botswana
Start : 1993
Duration: 3 Years

Objectives: Construction of a new all weather heavy traffic road between Jwaneng and the Namibia border at Mamuno, with a spur to Ghanzi, about 670 Km.

Description: The proposed road from Jwaneng to the border post at Mamuno will be the main road link between Botswana and Namibia, including the Namibia ports.

A spur road (41 Km) to connect the road with Ghanzi, the main administrative centre and highly productive cattle area in Western Botswana is included in project.

The route has been subject of a Feasibility Study and Preliminary Design under the earlier SATCC study, funded by Swedish funds administered by ADB. The final report has been received by the Government of Botswana.
A demonstration project of the cost and water saving impact compaction technique for building roads in Kalahari conditions has been successfully executed over the first 7 km of the project.

The Government of Botswana has approved domestic funds for the next 74 Kilometres to Sekoma.

The Feasibility Study has revealed that considerable benefits from the road are antecipated from reduced transport costs for goods imported by Namibia, through Botswana, thus giving the road a rate of return of around 20%.

Status : The road has been divided into three sections as follows:

Section 1 : Sekoma-Kang; to be financed by Kuwait Fund, Badea and Botswana Government.

Section 2 : Kang-Ghanzi; to be funded by ADB/ADF and Botswana Government.

Section 3 : Ghanzi-Mamuno; to be funded by Japan (OECF) and Botswana Government .

Consultants appointed for section 1 (SEkoma-Kang). Construction expected to commence first quarter 1993 with other sections following in second quarter 1993. Overall completion expected mid to end 1995.

September 1992

BOT.1.05: Rehabilitation of the Lobatse - Francistown Road, Botswana

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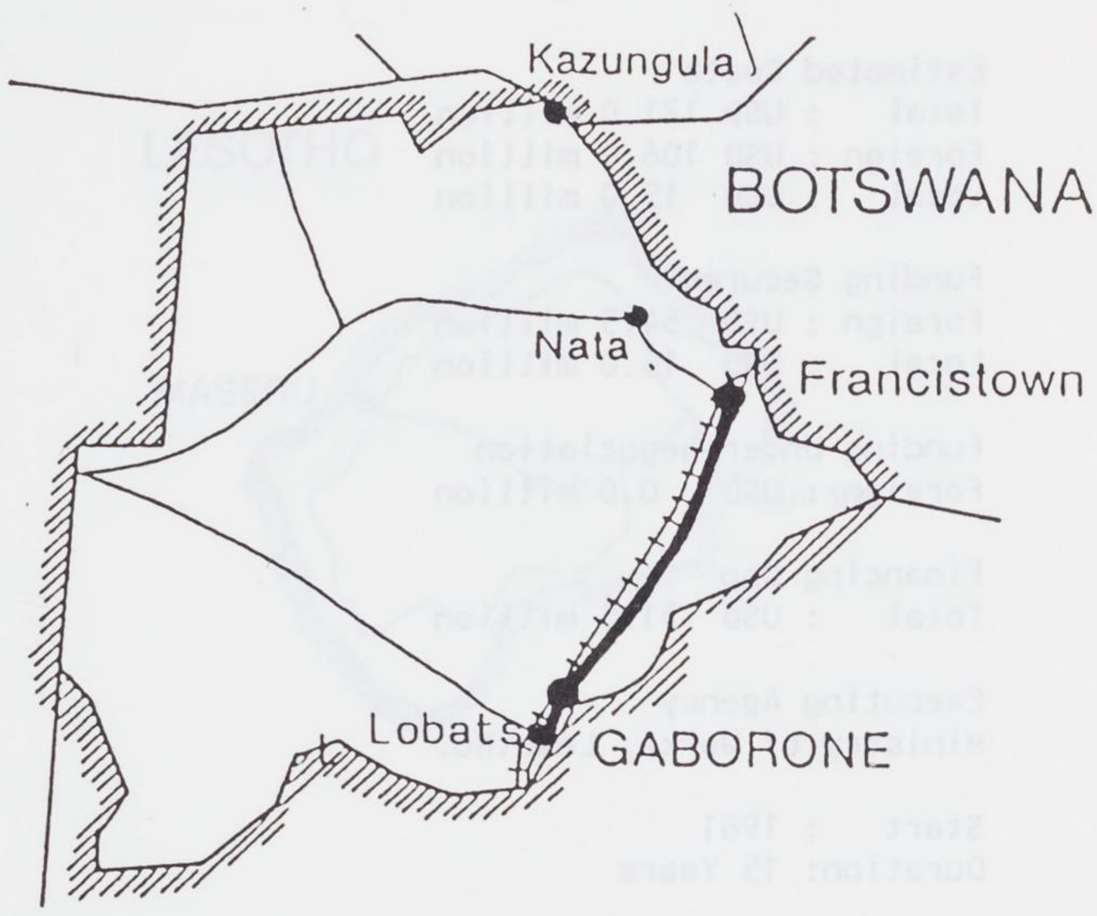

Estimated Costs
Total : USD 60.0 million
Foreign : USD 45.0 million
Local : USD 15.0 million

Funding Secured
Foreign : USD 1.5 million
Local : USD 15.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 43.5 million

Executing Agency
Ministry of Works, Transport and Communication
Start : 1992
Duration: 6 Years

Objectives : Rehabilitation of the Lobatse - Franscistown Road. This will be preceded by a pavement evaluation study leading to the formulation of a phased rehabilitation programme for this heavily trafficked, strategic link of the SADCC Regional Trunk Road Network.

Decsription : The present road connects the major town in the south of Botswana,Lobatse to the major town in the north, Francistown. Over its 510 km length it inter connects the capital Gaborone and several other major towns and villages.

The road was one of the first to be constructed to bitumen standard following Botswana's independence in 1966. It is now nearing the end of its design life and is exhibiting signs of incipient distress along many sections. A 27 km section has already been reconstructed and another is programmed to follow shortly.

There is now urgent need to establish the residual life of the remainder of the road as a basis for formulating a phased programme of rehabilitation works to take place over an estaimated 5 years.

In the regional context, the Lobatse - Francistown road provides a vital link in the Botswana - Zimbabwe and Botswana - Zambia sections of the Regional Trunk Road Network, as well as connecting those sections to the Trans - Kalahari Road linking through to Namibia.

At an estimated cost of USD 87.500 per km at today's prices (May 1992), the remaining 483 km of road rehabilitation will cost USD 58 million.

Status : New Project

September 1992

LES.1.01: Upgrading of the Road Mohales Hoek-Quthing-Qachas Nek, Lesotho

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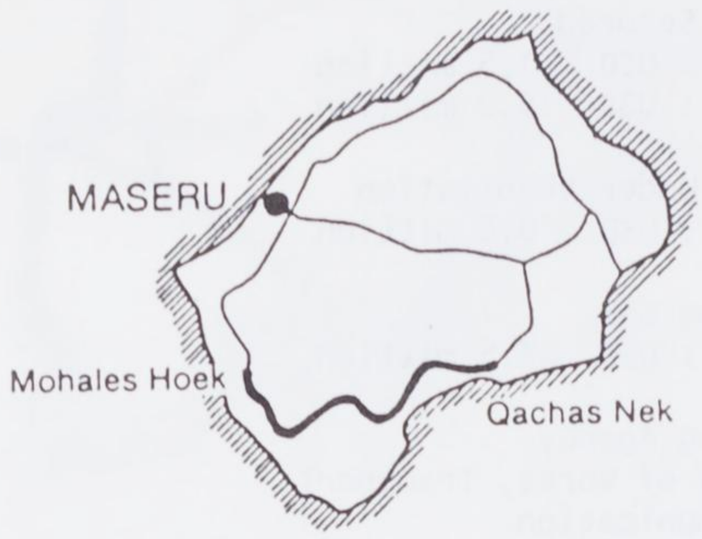

Estimated Costs
Total : USD 121.0 million
Foreign : USD 106.0 million
Local : USD 15.0 million

Funding Secured
Foreign : USD 54.5 million
Local : USD 15.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 51.5 million

Executing Agency
Ministry of Works, Lesotho.

Start : 1981
Duration: 15 Years

Objectives : The upgrading of the Southern Perimeter Road to decrease Lesotho's dependence on the South African transport network. The Southern Perimeter Road will also be important for the development of the southern and south-eastern parts of Lesotho.

Description : The project has top priority for the Government. The Mohales Hoek-Quthing section was completed in October 1991 with EDF funding. On Quthing-Mt. Moorosi section construction to bitumen standard commenced in 1986 and is now completed. Bitumenisation of the Mt. Moorosi-Mphaki section is being carried out. On the Mphaki-Qachas Nek section 13.6 km. to gravel standard completed.

Status : The section from Mphaki+13.6 km to Qachas Nek is the subject of an ongoing feasibility study. Depending on the results of the study, financing will be sought.

September 1992

LES.1.02: Upgrading and Reconstruction of the Road Taung-Mokhotlong-Sani Top, Lesotho

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Estimated Costs
Total : USD 84.0 million
Foreign : USD 67.0 million
Local : USD 17.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 17.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 67.0 million

Executing Agency
Ministry of Works, Lesotho

Start : 1993
Duration: 4 Years

Objectives : To reconstruct the existing 118 km track to bitumen standard in order to connect the eastern part of the country with the district headquarters at Thaba Tseka and with the road to Maseru.

Description : Planned standard is a bitumen road with a 6.0m carriageway and 2 x 1m shoulders, reducing to 7.2m overall on the more difficult sections.

Work commenced by direct labour in the present year at the Taung end. Some spot improvements were carried out on the Mokhotlong-Sani Top section under the World Bank Third Highway Project to bring this section to an all weather standard. As a result traffic increased five-fold, demonstrating the potential importance of the road.

Status : Despite the above mentioned spot improvements, the road needs more extensive upgrading. A feasibility study and engineering design have been completed, funded by the UK. Financing for the implementation of the works is being sought.

September 1992

LES.1.03: Upgrading of the Road Thaba Tseka-Taung-Mpiti, Lesotho

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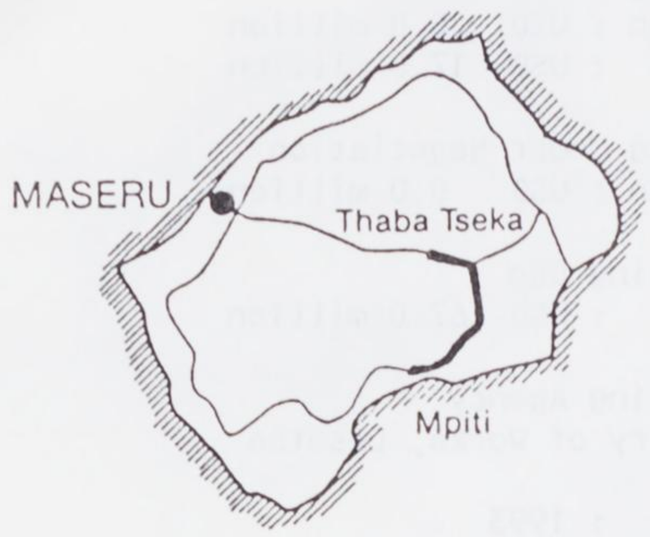
LESOTHO



Estimated Costs
Total : USD 116.0 million
Foreign : USD 93.0 million
Local : USD 23.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 23.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 93.0 million

Executing Agency
Ministry of Works, Lesotho

Start : 1993
Duration: 3 Years

Objectives : To upgrade to an all weather standard the road Thaba Tseka-Taung-Mpiti (145 km). The project is part of a scheme to reduce dependence on the South African transport system.

Description : The section is part of the north-south connection in eastern Lesotho. Extensive agricultural projects are in progress in the Thaba Tseka area with support from Ireland and Canada. The road is very important for these schemes.

The existing road is a simple track in bad condition. A low-level bridge is not passable during the rainy season.

The planned standard is "Bitumen 1", i.e. a 6.7m carriageway and 2 x 1.5m shoulders.

Status : EEC has financed a feasibility study which has just been completed. The study is under consideration by both Government and EC.

September 1992

LES.1.04: Construction of a Road Ramabanta-Semonkong-Sekake, Lesotho

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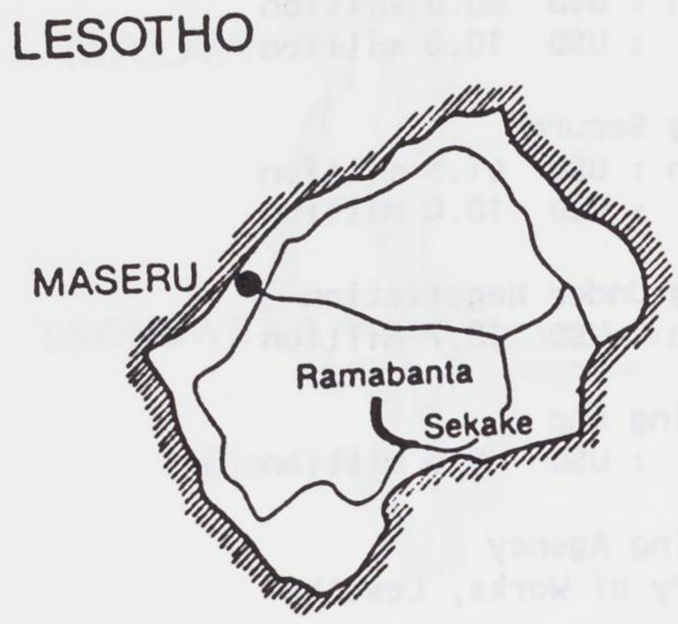


Estimated Costs
Total : USD 45.0 million
Foreign : USD 36.0 million
Local : USD 9.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 9.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 36.0 million

Executing Agency
Ministry of Works, Lesotho

Start : 1993
Duration: 3 Years

Objectives : Upgrading to classified gravel road standard of the existing road Ramabanta - Semonkong, approx. 50 Km, and construction of a new road Semonkong - Sekake, (approx. 60 Km).

Description : The road provides a connection between the south-eastern part of the Southern Perimeter Road and Maseru thus integrating this part of the country with the capital. The connection will also reduce dependence on the South African transport system.

The route passes through mountainous terrain.

The existing Remabanta-Semonkong road was upgraded to a gravel track in 1984 86. There is no road presently between Semonkong and Sekakes.

A Feasibility Study was carried out in 1979 and showed a low viability for the construction of a bitumen standard road between Semonkong and Sekakes. Updating of this Study is required.

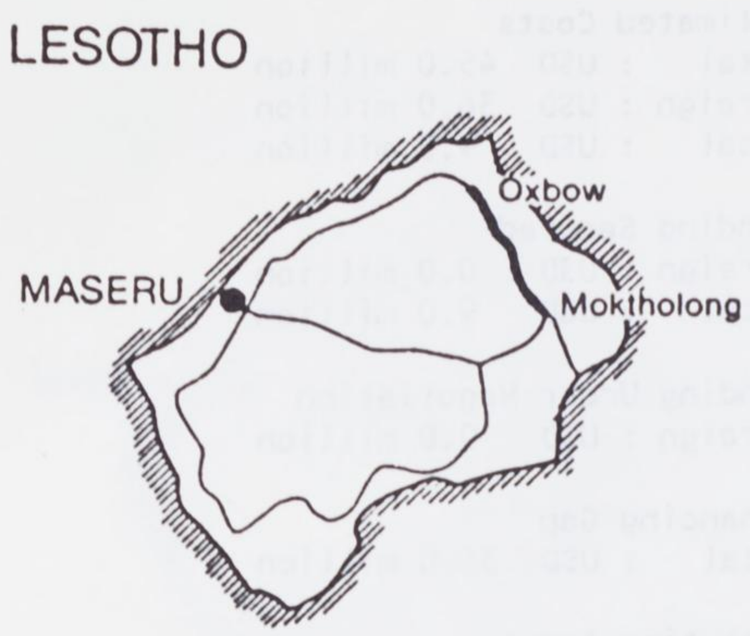
The Ramabanta-Semonkong section was designed at a cost of US$ 0.3 million by KFW funding.

Status : In view of the development of the Semonkong area it will be necessary to review the design.

Funding for construction has not yet been obtained.

September 1992

LES.1.05: Upgrading of the Road Mokhotlong-Oxbow, Lesotho



Estimated Costs
Total : USD 70.0 million
Foreign : USD 60.0 million
Local : USD 10.0 million

Funding Secured
Foreign : USD 41.3 million
Local : USD 10.0 million

Funding Under Negotiation
Foreign : USD 18.7 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Works, Lesotho

Start : 1992
Duration: 3 Years

Objectives : Upgrading to bitumen standard of the road section Mokhotlong-Oxbow, 110 km.

Description : The section between Mokhotlong and Oxbow is part of the main northern route linking Maseru through Butha-Buthe to the eastern parts of Lesotho. At present the section is a track through mountainous terrain negotiable only by 4-wheel drive vehicles in the dry season.

The proposal is to upgrade the road to bitumen standard.

Status : The project is now at tender stage and construction is scheduled to commence in October 1992. Due to the size and other difficulties there will be two separate contracts. The construction period will be three years.

September 1992

MAL.1.01: Study on Upgrading of the Road Mangochi-Mandimba-Mitande, Malawi/Mozambique

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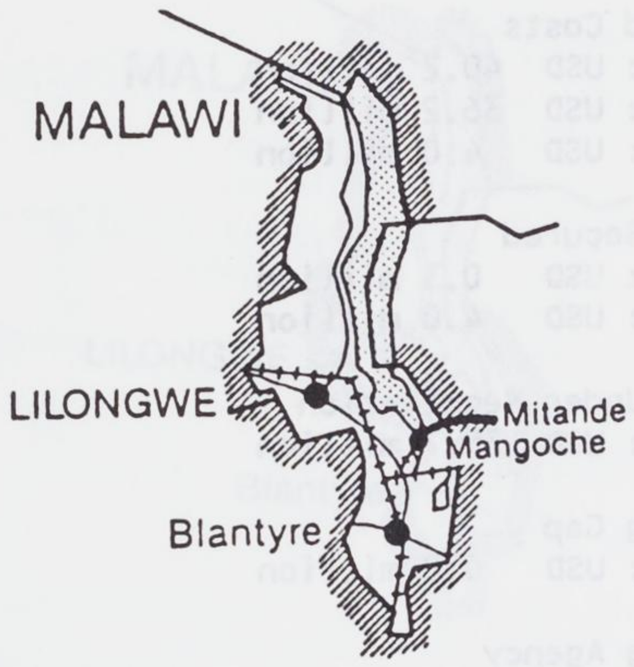


Estimated Costs
Total : USD 0.2 million
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.2 million

Executing Agency
Min.of Works Malawi/Min.Const. and Water,Mozambique
Start : 1991
Duration: 6 Months

Objectives : Feasibility Study on the upgrading of 51 Km of the main road M3 in Malawi and of 51 Km of the EN8 in Mozambique, with the objective to open up a link from the central part of Malawi to Mozambique and the nearest ports, Pemba and Nacala.

The road link is also expected to serve as a through-pass between various provinces of Mozambique, i.e. Niassa east of Malawi and Tete west of Malawi. The road will be of importance in accelerating agricultural development in the area.

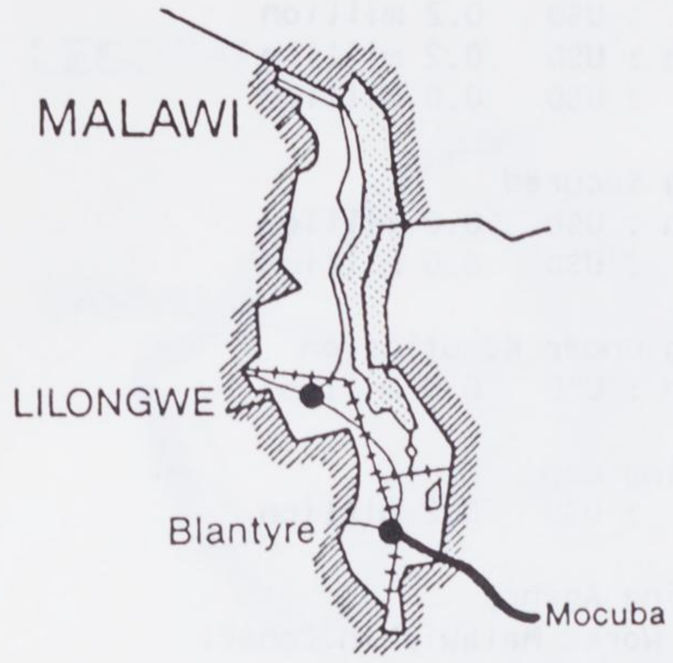
Description : The existing road has been realigned and improved on one section near Mangoche and one section above the escarpment to Mamwera. The section up to the escarpment has a very low standard with narrow hairpin bends, damaged surface and dangerous bridges. The section between Namwera and Chiponde is an earth road in a bad condition. The pass across the border is a track usable only by four wheel drive vehicles.

The route in Mozambique is an earth road which is expensive to maintain. The topography traverses easy gently undulating terrain.

Status : An in house design for 42 km (i.e. 6m c/way + 2/1.5 m shoulders) has been completed up to Masuku.

September 1992

MAL.1.02: Upgrading of the Blantyre - Milanje - Mocuba Road,
Malawi/Mozambique



Estimated Costs
Total : USD 40.2 million
Foreign : USD 36.2 million
Local : USD 4.0 million

Funding Secured
Foreign : USD 0.3 million
Local : USD 4.0 million

Funding Under Negotiation
Foreign : USD 35.7 million

Financing Gap
Total : USD 0.2 million

Executing Agency
Min. of Works, Malawi.

Start :
Duration:

Objectives : Feasibility and engineering studies on the rehabilitation and upgrading of the existing road connection to bituminized standard.The total length of the road is 270 - 290 Km depending on route in Malawi. The Mozambican section is 185 Km.

The aim of the project is to provide an all weather road connection between Malawi and Mozambique constructed to class 1 bitumen standard. The road link will serve the trade between two countries and provide a link between Malawi and the ports of Mozambique. The road passes in both countries through rich agricultural areas which are under development for local consumption and export. The road is also of touristic interest.

Description : The existing road in Malawi (103 Km) is on most of the section bituminized to a single lane width which is not sufficient for the existing traffic. The load bearing capacity is insufficient, the drainage cannot cope with the heavy rainfalls and the alignment is poor. Thus, the maintenance costs are high.

In Mozambique the existing road is a 6 m road of mainly earth standard, the alignment generally following the terrain. Existing condition is poor.

The traffic density on the Malawi section varies from more than 600 to less than 50 vehicles per day.

Status : After reaching advanced stages in the procurement of consultancy services and the selection of a contractor, EEC advised in early 1992 for the project to be postponed.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01	Study on the Upgrading of the Road Blantyre-Milanje-Mocuba (Feasibility Study)	0.2	0.2	0.0	0.0	0.0	0.2
02	Study on the Upgrading of the Road Blantyre-Milanje-Mocuba (Design)	0.3	0.3	0.0	0.3	0.0	0.0
03	Study on the Upgrading of the Road Blantyre-Milanje-Mocuba (Construction)	39.7	35.7	4.0	4.0	35.7	0.0
		40.2	36.2	4.0	4.3	35.7	0.2

September 1992

MAL.1.03: Road Link Balaka - Salima - Karonga - Uyole, Malawi / Tanzania

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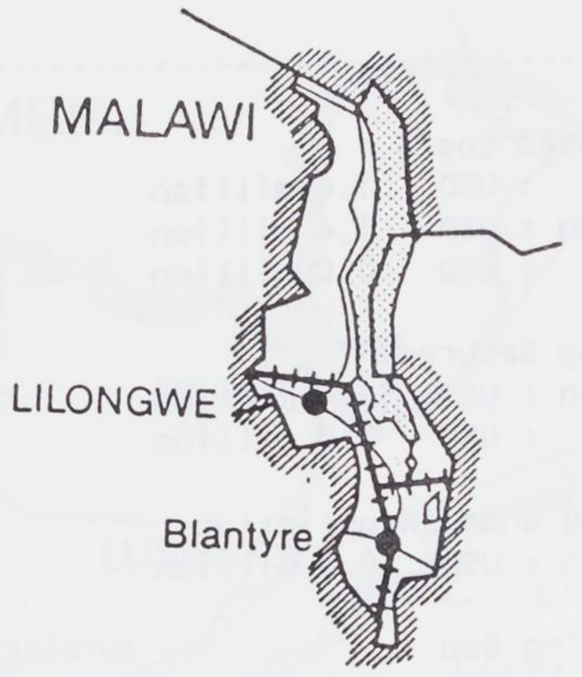


Estimated Costs
Total : USD 47.6 million
Foreign : USD 47.6 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 47.6 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Min.of Works/Supplies,Malawi
Min.Communic/Works, Tanzania
Start : 1988
Duration: 5 Years

Objectives : The linking of the Malawi road network to the Tanzam Highway and TAZARA, thus providing Malawi with a permanent outlet via the port of Dar es Salaam through the provision of an adequate bitumen standard road between Malawi and Mbeya in Tanzania.

Description : The link is part of the Regional Trunk Road Network and, as a part of the Malawi-Dar es Salaam Corridor projects, will assist in easing the import and export problems of Malawi and also promote agriculture and tourism. Furthermore, the link will give better access to the Ngana coal field in northern Malawi.

About 50 km of new road and three bridges are needed to link Karonga with Ibanda on the existing bitumen road between Itungi and Mbeya in Tanzania (cost estimate USD 23.3 million). The existing road in Tanzania between Ibanda and Uyole (98 km) is in need of improvement/strengthening (cost estimate USD 12.3 million).

The project also includes upgrading of the 145 km Balaka - Salima section of the main south - north road in Malawi, costed at USD 12 million.

Status : The 50 km Karonga-Ibanda section which was completed late last year is unfortunately performing rather badly; the pavement is deteriorating rapidly around the kerbs and the composite bridges are experiencing excessive vibrations which have, in some instances, resulted in longitudinal and transverse cracks going right through the concrete deck slab. Concrete cores have been extracted at various locations on the footway; these have been sent to four independent research organizations for testing by the Client - Ministry of Works, Consultant ADK and contractor - Philipp Holzmann.

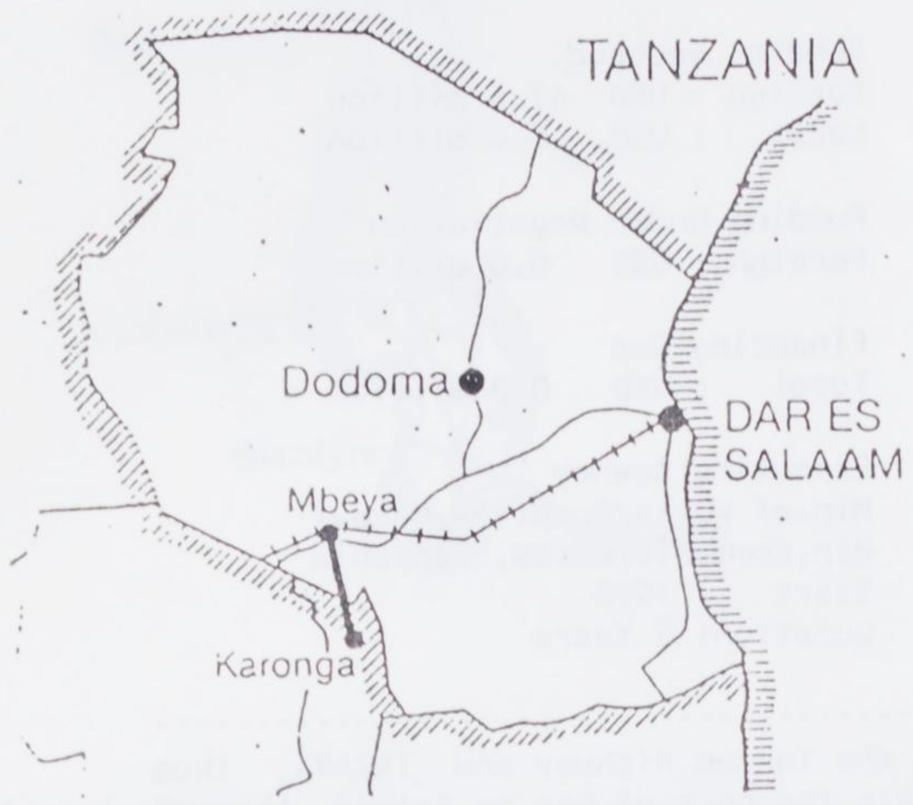
Construction of the 98km long Ibanda-Uyole Road by Sogea began in April, 1992.

The contract for the upgrading of the 145km long Balaka-Salima section, between the Hindustani Construction Company of India and Ministry of Works, which was determined in February, 1991, is likely to go before Arbitration.

Meanwhile, the contract was retendered and currently construction works are underway by a new contractor, Philipp Holzmann.

September 1992

MAL.1.04: Road Shuttle Service Malawi- TAZARA



Estimated Costs
Total : USD 1.4 million
Foreign : USD 1.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 1.4 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Transport and Communications,Malawi
Start : 1991
Duration: 1 Year

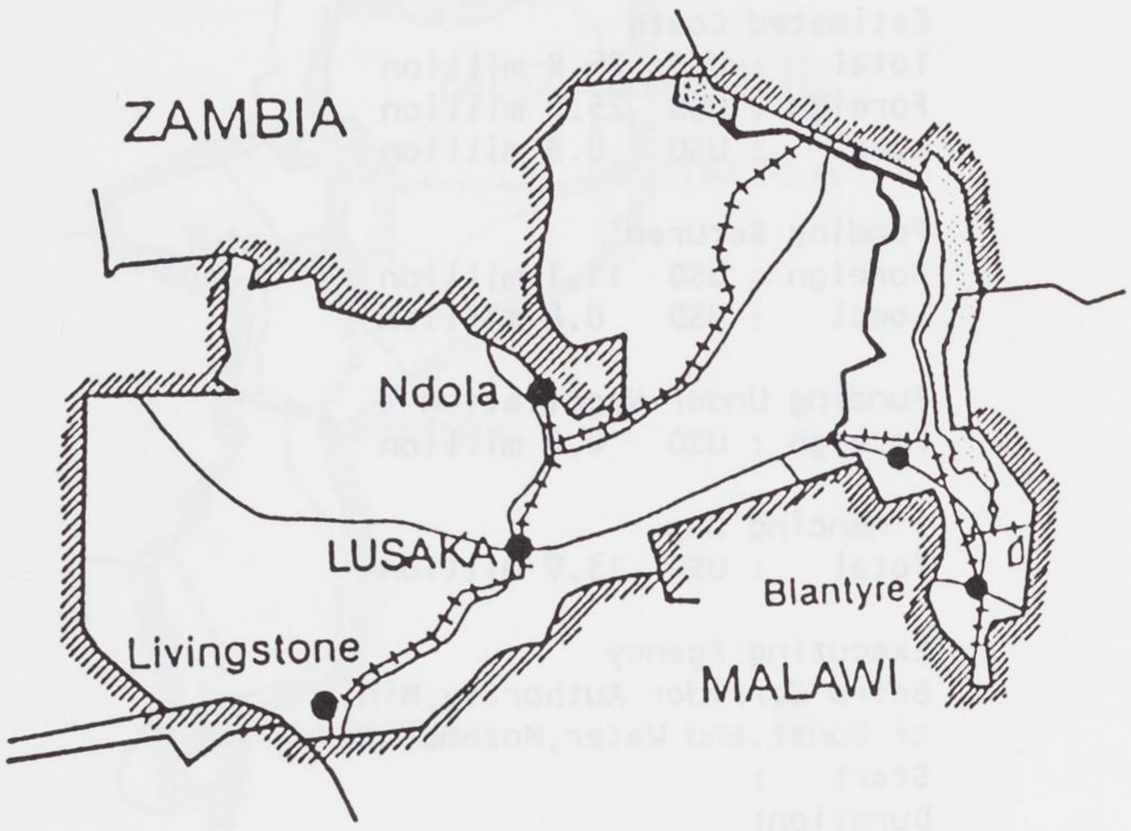
Objectives : Introduction of road shuttle services in the Malawi-Dar es Salaam Corridor between the Lake port at Chilumba and the railway/road transshipment facility at Mbeya.

Description : The project is a road haulage project being an integrated link in the multimodal Malawi-Dar es Salaam Corridor. The Corridor comprises rail services in Malawi to the lake port of Chipoka, lake services between Chipoka and Chilumba, road haulage services on the 250 Km stretch from Chilumba to Mbeya and rail services from Mbeya to Dar es Salaam.
Whereas financing now has been secured for implementation of the other links, and transshipment facilities of the Malawi-Dar es Salaam Corridor project, such financing is now urgently required for the road haulage component. The road haulage project includes the acquisition of 22 horses and 44 trailers to be operated by a parastatal in Malawi, as well as self-contained maintenance facilities at Chilumba.

Status : 22 nos fuel tank wagons and 33 nos tank containers procured using USAID funds, were handed over in 1991.

September 1992

MAL.1.05: Study on the upgrading of Karonga - Chitipa - Nakonde-
Mpulungu Road, Malawi/Zambia.



Estimated Costs
Total : USD 0.6 million
Foreign : USD 0.6 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.6 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Works (Malawi)
Min.of Works & Supply.(Zambia)
Start : 1992
Duration: 8 months

Objectives : Phase I consists of a feasibility study and preliminary engineering design on the upgrading of 423km of earth roads in Malawi and Zam,bia to well engineered all weather roads.
(Class 1 bitumen, 6.7m c/way width)

The roads which serve a hitherto underdeveloped northern part of Zambia and Malawi would also provide an alternative access route to the Indian Ocean harbours for the countries bordering Lake Tanganyika via the Tazara and Tanzam Highway.

The road offers greater opportunity for regional trade and already plays an important role in controlling the spread of Rinderpest diseases from the southern part of Tanzania to the rest of Southern Africa.

Description : The project comprises of three links:

- The 100 km Karonga-Chitipa section runs from coastal plains on the Karonga (500m asl) and to Chitipa (1300m asl) with the rise undertaken through two escarpments. The horizontal alignment has high degree of curvature and the vertical alignment is severe in general and steep in places.

- The Chitipa-Nakonde section runs through rolling terrain with few sharp horizontal curves and gentle vertical alignment.

- The 233 km Nakonde-Mpulungu section runs through gently rolling terrain over gravel and bituminized roads which require rehabilitation in places.

The estimated cost for phase I & II is USD 3.1 million.

Status : Consultant John Burrow & Partners has been engaged to carry out the study. A working paper and an Inception Report have been delivered. Efforts are under way to initiate Phase II of this project.

September 1992

MOZ.1.01: Road Projects in the Beira Port Transport System
Development Plan

Estimated Costs
Total : USD 25.8 million
Foreign : USD 25.0 million
Local : USD 0.8 million

Funding Secured
Foreign : USD 11.1 million
Local : USD 0.8 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 13.9 million

Executing Agency
Beira Corridor Authority,Min.
of Const.and Water,Mozambique
Start :
Duration:

Objectives : To rehabilitate the road sections included in the Beira Port Transport System 10-Year Development Plan.

Status : RD-CE-1 A2) The entire project will according to the work schedule presented in the 10th progress report of November 1991, be finalized by the end of June 1992.

RD-CE-1 B) Ongoing project. Implementation period January 1990 to July 1993.

RD-CE-1 C) Project documents under elaboration. Financing under negotiation with SIDA. Implementation period 1992 to 1993.

RD-CE-1 D) Tender documents under elaboration. Contacts have been taken with ADB and SIDA regarding financing of the construction works.

Subprojects Included in Programme:	--- Cost ---			-- Funding --		
	Total	For'n	Local	Secu	Nego	Gap
*RD-CE-1 Road Rehabilitation Beira-Machipanda	25.8	25.0	0.8	11.9	0.0	13.9
RD-CE-1 A2) Emergency Repairs, Manica Province.	5.4	5.4	0.0	5.4	0.0	0.0
RD-CE-1 B) Equipment and Technical Assistance to Road Maintenance Units	5.5	4.7	0.8	5.5	0.0	0.0
RD-CE-1 C)Reinforcement of the Road	0.0	0.0	0.0	0.0	0.0	0.0
RD-CE-1 D)Reconstruction of the Road	14.9	14.9	0.0	1.0	0.0	13.9
	25.8	25.0	0.8	11.9	0.0	13.9

September 1992

MOZ.1.02: Rehabilitation of the Zimbabwe -Tete-Malawi Road, Mozambique

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Estimated Costs
Total : USD 18.6 million
Foreign : USD 12.6 million
Local : USD 6.0 million

Funding Secured
Foreign : USD 12.6 million
Local : USD 6.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Construction and
Water, Mozambique
Start : 1985
Duration:

Objectives : Reinforcement and rehabilitation of the road Zimbabwe border at Cuchamano Tete Moatize Zobue at the Malawi border, 273 km, and reparation of the Tete bridge over River Zambezi. The aim of the project is to provide a road link of suitable standard for traffic Zimbabwe Malawi, Mozambique Zambia and Mozambique Malawi. It is also part of the main road link to the Province of Tete.

Description : The road is asphal-paved with a width of about 6 m and shoulders 2 m. Sections of the road are broken down and the road needs reinforcement.

Erosion at culverts and other drainage are in urgent need of repairs.

In connection with these works the road will be widened to 6.5 m carriage way, with two 1.0 m surfaced shoulders.

The bridge at Tete had been partly damaged due to flood.

The traffic varies between 80 vehicles per day at the borders and 600 vehicles per day in the vicinity of Tete. Of the international traffic a major part consists of heavy vehicles.

For the connecting road within Malawi between the border and Blantyre, reconstruction work is in progress.

Status : Over 234 km have been completed and it is expecte to completed the remaining work by the end of 1993.

September 1992

MOZ.1.04: Rehabilitation of the Road Maputo - Swaziland Border, Mozambique

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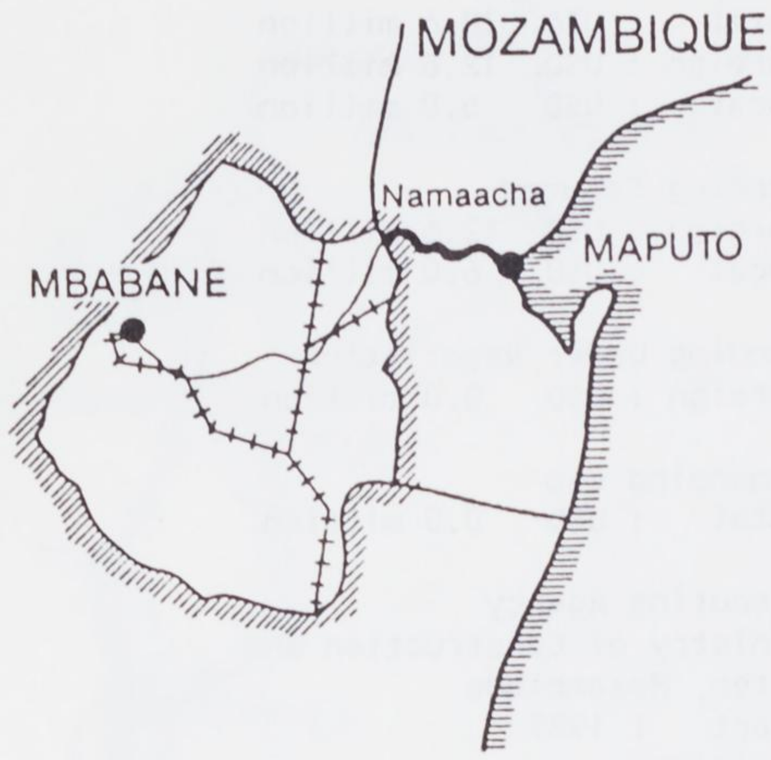


Estimated Costs
Total : USD 21.0 million
Foreign : USD 17.0 million
Local : USD 4.0 million

Funding Secured
Foreign : USD 0.8 million
Local : USD 4.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 16.2 million

Executing Agency
Ministry of Construction and Water, Mozambique
Start : 1988
Duration: 4 Years

Objectives : Rehabilitation and upgrading of the road Maputo-Boane-Namaacha-Border to Swaziland, 75 Km. The project aims at providing a road connection of adequate standard between Swaziland and Maputo, primarily with its port facilities (see Project SWZ.1.01). The 33 Km stretch between Maputo and Boane is also part of the road connection between Maputo and South Africa.

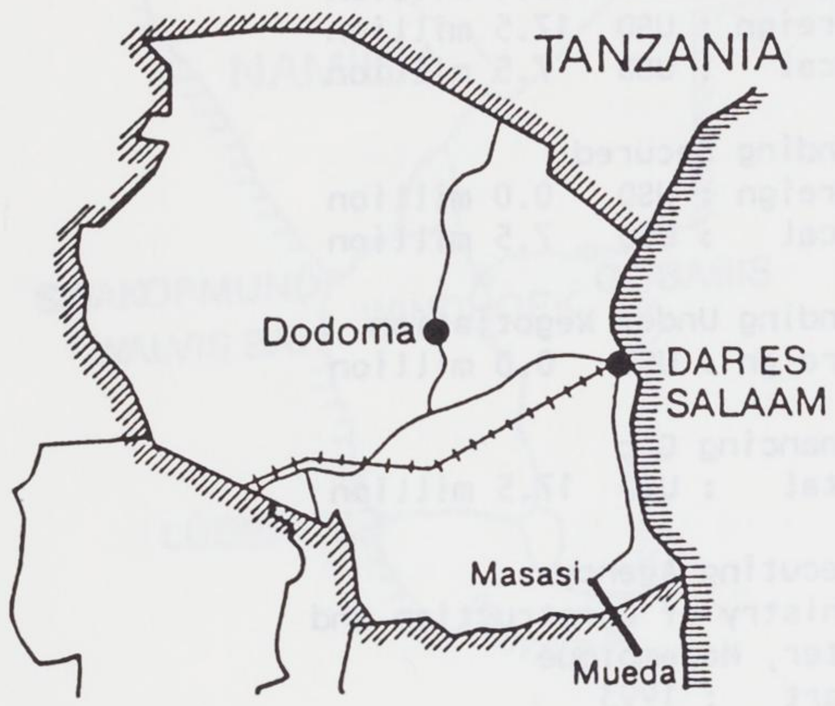
Description : The existing road is asphalt-paved, mostly in poor condition. A section of about 62 Km of the total 75 Km has a heavily damaged surface, broken down along the edges and very bumpy. The width is less than 6 m along most of the section and does not provide room for overtaking and passing on the damaged sections. Some spot repairs are being made by local funding.

The project includes rehabilitation, reinforcement and upgrading of the road and rehabilitation of the Matola bridge.

Status : A feasibility study has been completed. Engineering design for the road to be made.
Works on the Matola Bridge completed, financed by Sweden. Resealing in progress.

September 1992

MOZ.1.05: Study on Unity Bridge and Access Roads, Mozambique/
Tanzania



Estimated Costs
Total : USD 0.9 million
Foreign : USD 0.9 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.9 million

Executing Agency
The Governments of Mozambique
and Tanzania
Start :
Duration:

Objectives : Technical and economic feasibility study, including preliminary design, for the construction of a new road link between Mozambique and Tanzania.

Description: The Governments of Mozambique and Tanzania have agreed upon the construction of the Unity Bridge across the river Rovuma at the border between the two countries. The proposed location of the bridge is in the area between Mocimboa do Rovuma in Mozambique and Maparawe in Tanzania. The project includes the upgrading/construction of the bridge access roads between the river and Mueda in Mozambique (90 Km) and between the river and Masasi in Tanzania (55 Km). Estimated cost of construction of the bridge and access roads is about 40 million USD. The proposed new link is part of the Regional Trunk Road Network. Upgrading work is in progress on the Lindi-Kibiti section of the onward connection in Tanzania.

Status : Terms of Reference for the study have been prepared.
ADB has expresses interest in financing the Technical and Economical Feasibility Study for this project.

September 1992

MOZ.1.06: Road Linking Southern Zimbabwe with the Maputo Area, Mozambique

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Estimated Costs
Total : USD 25.0 million
Foreign : USD 17.5 million
Local : USD 7.5 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 7.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 17.5 million

Executing Agency
Ministry of Construction and Water, Mozambique
Start : 1993
Duration: 3 Years

Objectives : To upgrade the earth track running parallel to the Limpopo railway line between Chicualacuala at the Mozambique/Zimbabwe border and Chokwe, and further to Manhica (approx. 410 Km altogether), to provide a service road for the railway rehabilitation and operation. In the second instance, to study the feasibility of a higher standard road transport link between Maputo and Zimbabwe.

Description: The first phase of the Limpopo railway rehabilitation is in progress. The requirements of the second phase have been studied, and the works are expected to continue into that phase upon completion of the first phase. An improved road running parallel to the railway is essential for the rehabilitation, maintenance and rescue operations of the railway line. The road should preferably be constructed to a minimum 3 m asphalted standard at this stage.

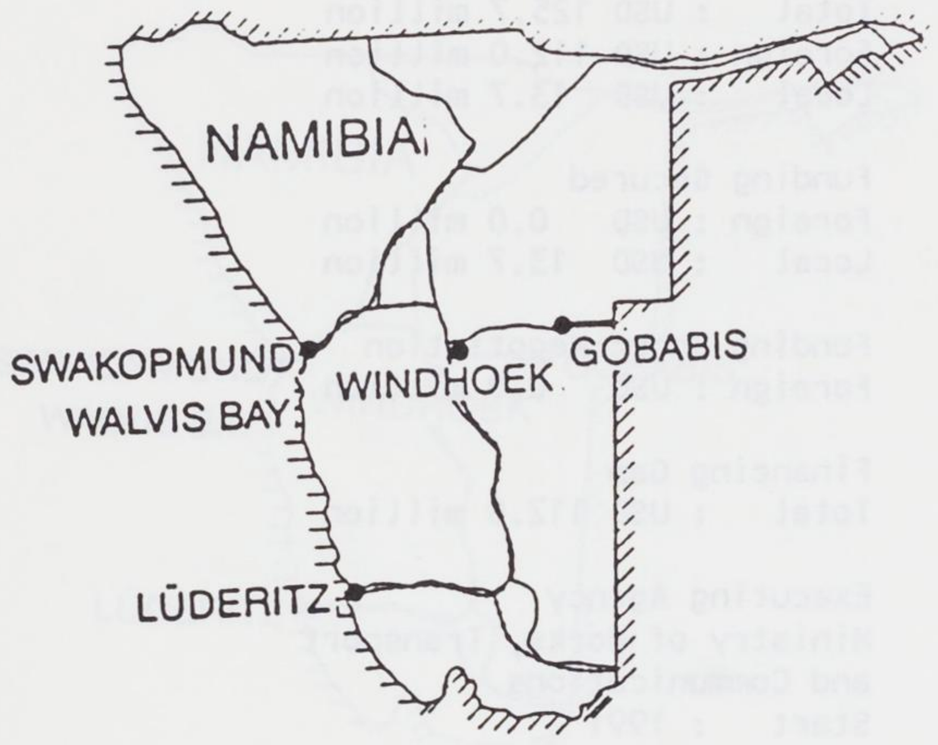
A feasibility study is also envisaged to establish the final desirable standard of a road transport link between Maputo and Zimbabwe.

The road will also be of great importance for agricultural development in the Limpopo Valley area.

Status : The construction of the service road is a new addition to the project. Its implementation is urgent in view of the needs of the Limpopo railway. Financing is sought in connection of the 2nd phase of the Limpopo line rehabilitation.

September 1992

NAM.1.01: Construction of the Gobabis to Buitepos Roads, Namibia.



Estimated Costs
Total : USD 21.3 million
Foreign : USD 10.7 million
Local : USD 10.6 million

Funding Secured
Foreign : USD 10.7 million
Local : USD 10.6 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Department of Transport

Start : 1992
Duration: 3 Years

Objectives : The construction of a bituminous surfaced road between Gobabis and Buitepos to provide an all-weather high standard road linking Namibia with Botswana. Both countries would reap the benefits of such a road link, especially in terms of co-operation, trade and transport. However the economic viability of the upgrading of the road sections in Botswana and Namibia are each dependent on the completion of the road in the other country.

Description : The road section forms part of the Trans Kalahari Highway, which route runs between the port of Walvis Bay and Buitepos (approximately 700 km) in Namibia, and in Botswana from Mamuno to Lobatse (approximately 750 km).

On the Namibian side a bitumen surfaced road has been provided from Walvis Bay to a point 16 km to the east of Gobabis. There thus remains a 103 km gravel section between Gobabis and Buitepos which has to be upgraded to a bitumen surfaced road. Based on the supposition that the Botswana section will be completed simultaneously with the Gobabis-Buitepos road, the feasibility study has shown a minimum 13% internal rate of return for the shortest alternative between Gobabis and Buitepos.

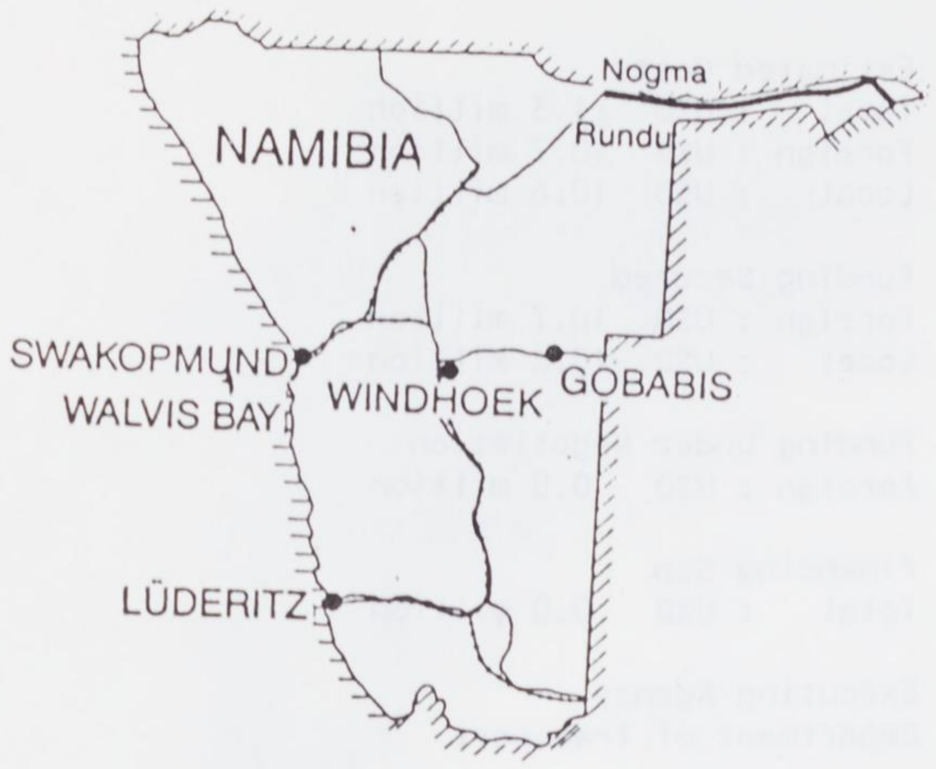
The Botswana Government has also carried out a feasibility study of the 588 km roadway to be constructed between Sekoma and Mamuno on the border with Namibia opposite Buitepos. An economic return of 20% is expected. The design of the roads in that country has been completed and it is the intention of the Botswana Government to commence with the construction in three sections to take place simulaneously in 1992. All three sections are to be completed in 1994.

A firm of consultants has been appointed to design the road between Gobabis and Buitepos Construction is to be done by a department construction unit. The road is to be completed in 1994.

Status : The feasibility study and detailed design have been completed. Construction commenced in January 1992. The project is being financed by the Government of Namibia. Co-financing by means of a soft loan from the African Development Bank is in the finalization stage.

September 1992

NAM.1.02: Improvement of the Trans- Caprivi Highway, Namibia



Estimated Costs
Total : USD 125.7 million
Foreign : USD 112.0 million
Local : USD 13.7 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 13.7 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 112.0 million

Executing Agency
Ministry of Works, Transport and Communications.
Start : 1991
Duration: 10 Years

Objectives : The completion of an all-weather bitumen surfaced road between Rundu, Katima Mulilo and Ngoma will provide a high standard link with neighbouring states, being Botswana, Zimbabwe and Zambia, promoting the development of trade and co operation between these countries and Namibia. A bitumen surfaced road will also reduce road maintenance and vehicle operating costs as well as the present high accident rate.

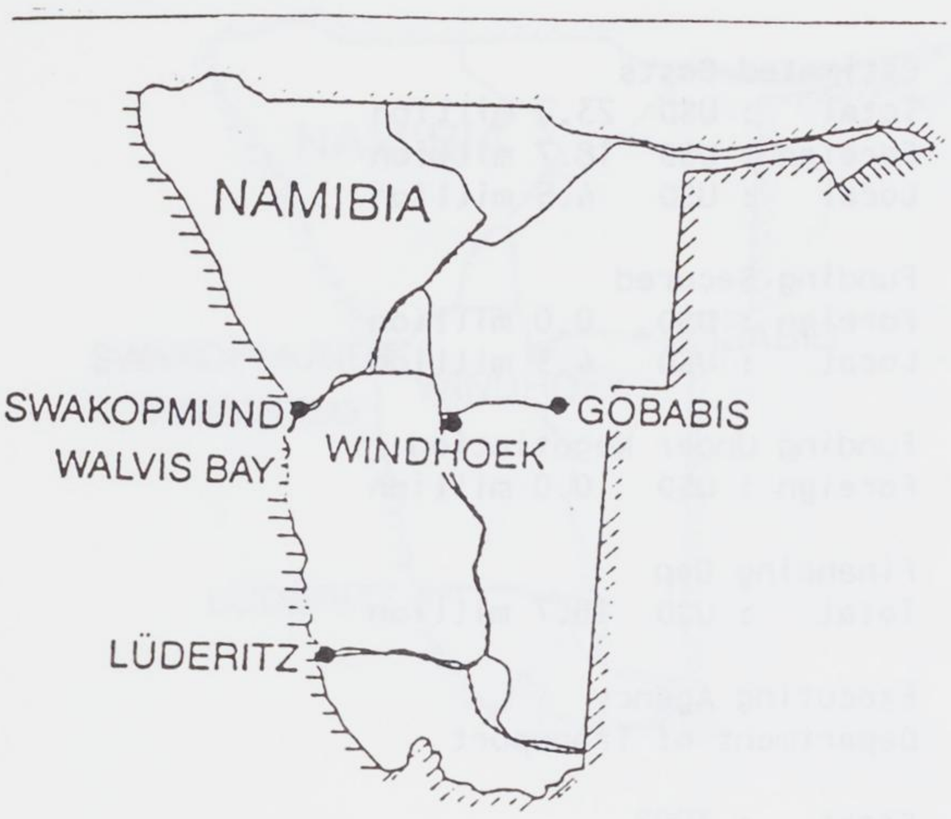
Traffic on this road varies from between 100 and 200 vehicles per day for some 50 km east of Rundu to between 50 and 100 vehicles between Divundu and Kongola, with a 15% heavy vehicle component. Deterioration of the gravel surface occurs fairly rapidly after grading and its conditions becomes unacceptable within a matter of days. The accident frequency on the Rundu Divundu section is particularly high, costing the country some USD 2,2 million per annum and is mainly attributable to a lack of visibility caused by the dusty conditions on the gravel road. Of the 521 km road length between Rundu in the Kavango and Katima Mulilo in the Caprivi, the first section of 52 km between Rundu and Takwasa and the section between the Kwando River close to Kongola and Katima Mulilo, totalling 176 km, have already been constructed and provided with a bituminous surfacing. Thus there remains a 345 km gravel section between Takwasa and Kongola whic needs to be replaced with a bitumen surfaced road. Progress with the planning, design and documentation of this section has already advanced to some degree.

The traffic volume on the Katima Mulilo to Ngoma road, a distance of 61 km, is about 400 vehicles per day at Katima Mulilo and decreases to around 10 to 15 vehicles crossing the border at Ngoma. During the rain season this road very often becomes impassable due to the softening of the gravel wearing course. From Katima Mulilo towards Ngoma, the Department is currently upgrading the first 12 km by providing it with a light bituminous seal. A preliminary investigation of the remaining 49 km to Ngoma has confirmed the acceptability of the existing road alignment for a high standard road.

Status : The feasibility study of the Trans Caprivi Highway (i.e. the route from Rundu to Ngoma) has been completed.
Phase two of the construction of the highway to bitumen surfaces standards, the 48 km section between Takwasa and Nyangana, is currently on programme. The site was handed over to the contractor in July 1991 and the works are expected to be completed by December 1992. Tender amount is ZAR 33,4 million.

Phase three of the construction of the highway, the 100 km section between Nyangana and Divundu, was commenced with by the contractor in January 1992 and the expected date of completion is December 1993. Tender amount is ZAR 57,3 million.
The first 12 km of road between Katima Mulilo and Ngoma is under construction to bitumen surfaced standards by the Ministry of Works, Transport and Communications and is expected to be completed by October 1992. All these projects are financed in their entirety by the Government of Namibia.

NAM.1.04: The Ovambo Road Network Improvement Master Plan,
Namibia



Estimated Costs
Total : USD 0.7 million
Foreign : USD 0.4 million
Local : USD 0.3 million

Funding Secured
Foreign : USD 0.4 million
Local : USD 0.3 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Department of Transport

Start : 1991
Duration: 1 Year

Objectives : To determine the priorities for construction and upgrading of roads in the area in order to provide Ovambo region with an adequate road network.

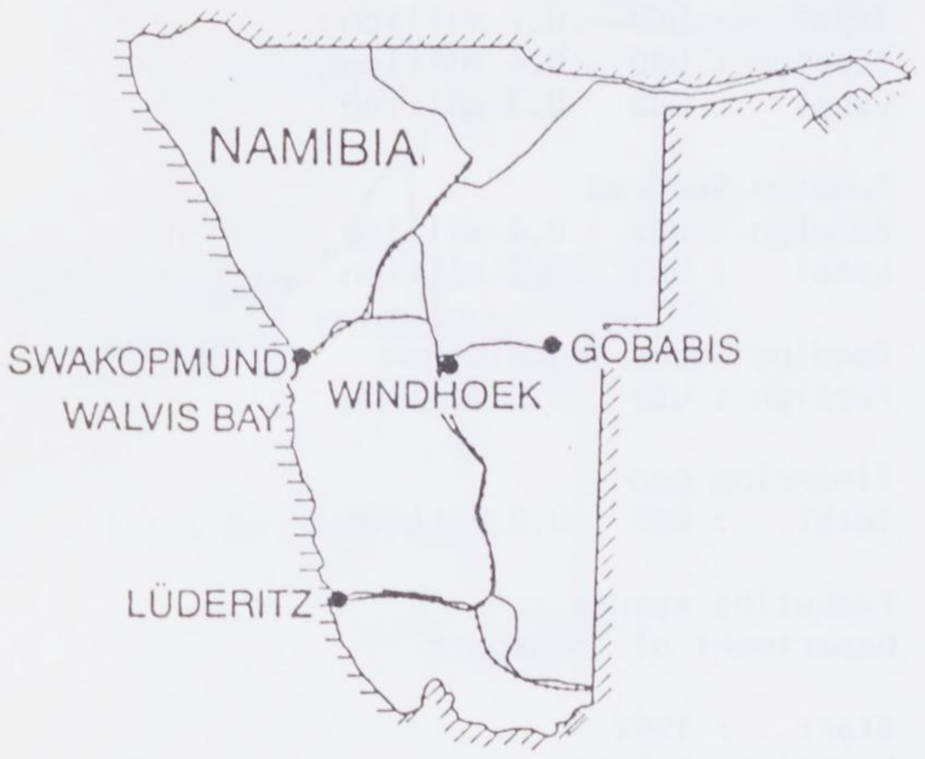
Description : A master plan according to which the road network of Ovambo region is to be improved and extended is urgently required. This study would need to determine priorities for construction of new roads and the upgrading of existing roads and the standards to be employed to provide this area with an adequate road network which would stimulate economic growth. The study should also concentrate on road links with other areas, for instance the necessity or otherwise for a road linking Ondangwa to Opuwa in the west and for a road linking Ondangwa via Nkurenkuru to Rundu in the Kavango.

The Ovamvo region which is the most densely populated area in Namibia (having approximately 50% of the country's population but occupying only 6% of its area) has shown one of the highest growths in vehicle registrations. Due to the war situation prior to Namibia's independence, little could be done to develop the road network in the region according to the needs of the population. The maintenance of gravel roads was a result seriously neglected and also virtually no new gravel roads were constructed in this area during the decade prior to independence. The road network of the Ovambo region presently consists of 446 km of reasonably well maintained bitumen surfaced roads and 733 km of gravel and earth roads

Status : The final report was submitted by the Namibian consultants in March 1992. The draft report was discussed in detail between the Ministry, SIDA and the consultants during May 1992, and is now to be finalized. Consideration is being given to organise a seminar on the Master Plan before final acceptance thereof. This study is financed jointly by SIDA and Government of Namibia. SIDA is the main financier.

September 1992

NAM.1.05: Construction of a bitumen surfaced road between Goageb and Aus, Namibia.



Estimated Costs
Total : USD 23.2 million
Foreign : USD 18.7 million
Local : USD 4.5 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 4.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 18.7 million

Executing Agency
Department of Transport

Start : 1992
Duration: 3 Years

Objectives : To provide an adequate road connection to the town of Luderitz, with its fishing and tourist industries, the mining town of Rosh Pinah and the diamond mines at Oranjemund. A decrease in road user costs and the present relatively high incidence of accidents is its also expected as a re sult.

Description : Of the total distance of 334km between Keetmanshoop and Luderitz, the sections Keetmanshoop-Goageb (106 km) and Aus-Luderitz (125) were upgraded to tarred road standards during the seventies. There now remains a 103 km gravel section between Goageb and Aus. The completion of this route was discontinued as a result of the scarcity of funds during the past decade, other priorities and, due to the low traffic volume, the economic justification of the project.

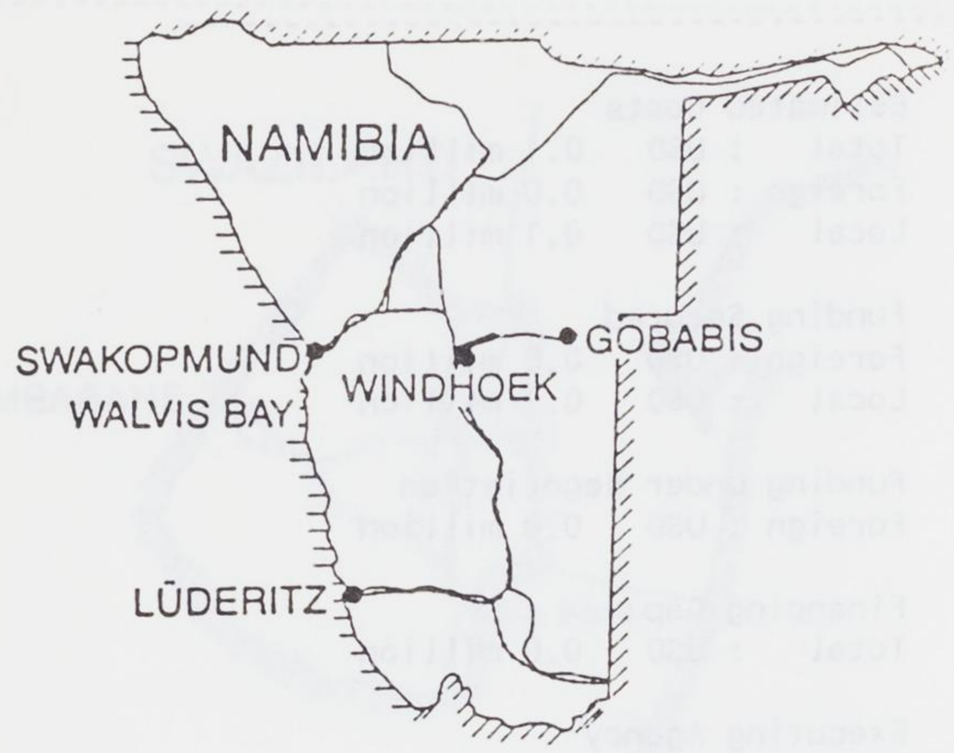
The proposed alignment of the new road between Goageb and Aus partly follows the existing route (59 km) and partly a new alignment (40 km) reducing the length to 99 km and eliminating certain existing drainage problems.

The completion of this last section to tarred roads standards will facilitate road transport between Luderitz and the rest of the country, which town is one of the two fishing harbours of Namibia and which industry has been identified as having potential of becoming one of the main foreign exchange earners of the country.
Aus being the junction to the mining town of the Rosh Pinah, the proposed project will also have a positive influence on the latter as this is the only route connecting the mine with the rest of Namibia. So too for the diamond mining town of Oranjemund which at present is connected via the Oppenheimer Bridge across the Orange River to South Africa. It is the Government's intention to directly link Oranjemund to the Namibian trunk road network either at Aus or at Luderitz which further emphasises the importance of the Goageb-Aus section.

Status : Construction of this 99 km section of trunk road was commenced with by the contractor in January 1992 and is expected to be completed by December 1994.
The tender amount is ZAR 65 million and financed entirely by the Government of Namibia.

September 1992

NAM.1.06: Climbing/passing lanes on road between Windhoek and Windhoek International Airport Namibia.



Estimated Costs
Total : USD 2.7 million
Foreign : USD 0.0 million
Local : USD 2.7 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 2.7 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Department of Transport

Start : 1992
Duration: 10 Months

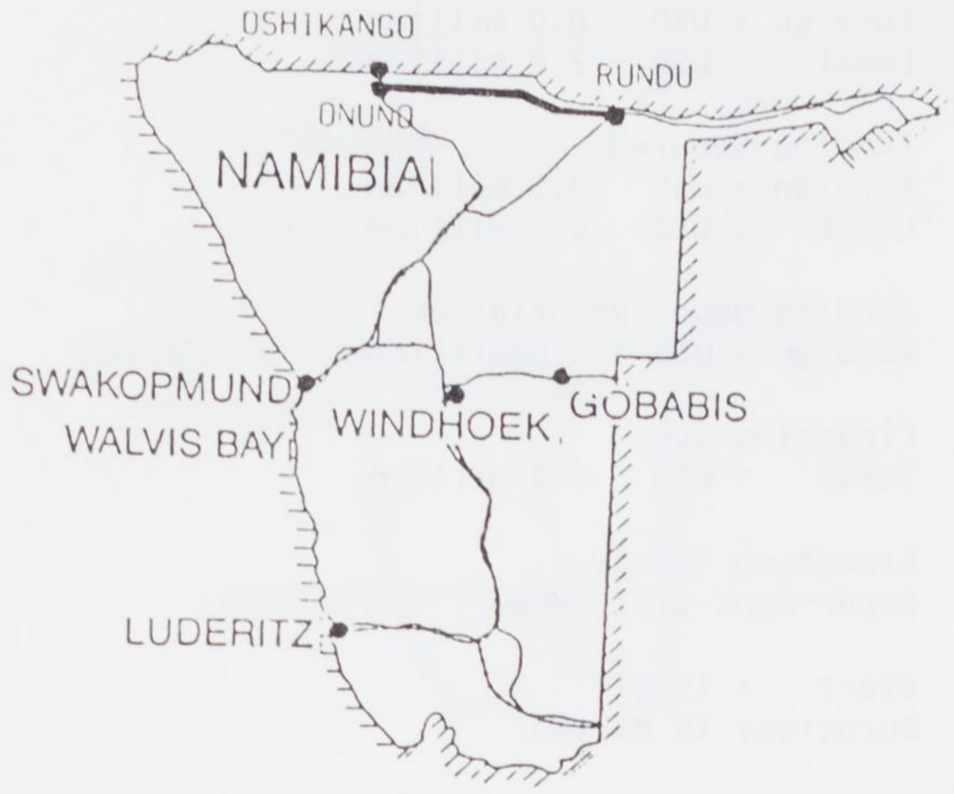
Objectives : To achiev a decrease in the accident rate on the road, and to improve the facility in anticipation of the imminent completetion of the Trans Kalahary Highway through Botswana and the concomitant expected increase in traffic, especially of heavy vehicles.

Description : The road between Windhoek and Windhoek International Airport passes through hilly to mountainous terrain and currently carries about 1 600 vehicles per day with peaks of around 300 vehicles per hour coinciding with aircraft movements at the airport. Accident costs on this section have been estimated to be in excess of USD 2,0 million per annum. The existing road is a two-lane two-way highway provided with an eight metre bituminous surfacing and one and a half metre gravel shoulders. It is considered essential that climbing and passing lanes be provided where necessary, that structures along the route be widened and that major at-grade intersections be improved.

Status : Construction of climbing and passing lanes, together with the widening of cuttings and the upgrading of junctions, along the first 22 km of this road from Windhoek, was commenced with by the contractor in January 1992 and is expected to be completed by the end of October 1992. The tender amount is ZAR 7,2 million and is financed entirely by the Government of Namibia.

September 1992

NAM.1.07: Kavango-Ovambo road link, Namibia.



Estimated Costs
Total : USD 0.1 million
Foreign : USD 0.0 million
Local : USD 0.1 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Department of Transport

Start :
Duration: 9 Months

Objectives : The execution of a feasibility and engineering study on the upgrading (and if necessary relocation) of the existing gravel road between Rundu in the Kavango and the Ondagwa - Oshikango trunk road in Ovambo. Such upgraded road would form a logical extension of the Trans Caprivi Highway linking the Kavango and Ovambo regions of Namibia whilst at the same time providing the shortes route between the port of Namibe in Angola with Botswana, Zimbabwe and Southern Zambia.

The proposed study should determine the economic viability of upgrading the road, the actual route that the road should follow, the basic design criteria that should be adopted and provide a programme according to which the road should be constructed.

Description : The existing road between Rundu and the Ondangwa - Oshikango trunk road, follows the Okavango River and immediately south thereof for a distance of approximately 80km after which it leaves the river area in a westerly direction to run via the villages of Nepara, Mpungu, Okongo and Eenhana to join the above mentioned trunk road some 13 km south of Oshikango. The total length of the road is 446 km.

During the rainy season this road is often impassable for both passenger vehicles as well as heavy trucks while during the dry season excessive dust is generated on the more trafficked sections. Traffic on the road varies from a few hundred vehicles per day near Rundu and the Ondangwa - Oshikango trunk road to less than fifty vehicles per day along the more remote sections.

The road link forms part of the Southern African Regional Trunk Road Network as proposed by the SATCC.

Status : The feasibility study for the construction of this proposed link road was awarded to Namibian consultants in October 1991 and is programmed to be completed by end of June 1992.

September 1992

SWA.1.01: Rehabilitation/Upgrading of the Road Mozambique Border at Lomahasha-Siteki-Big Bend

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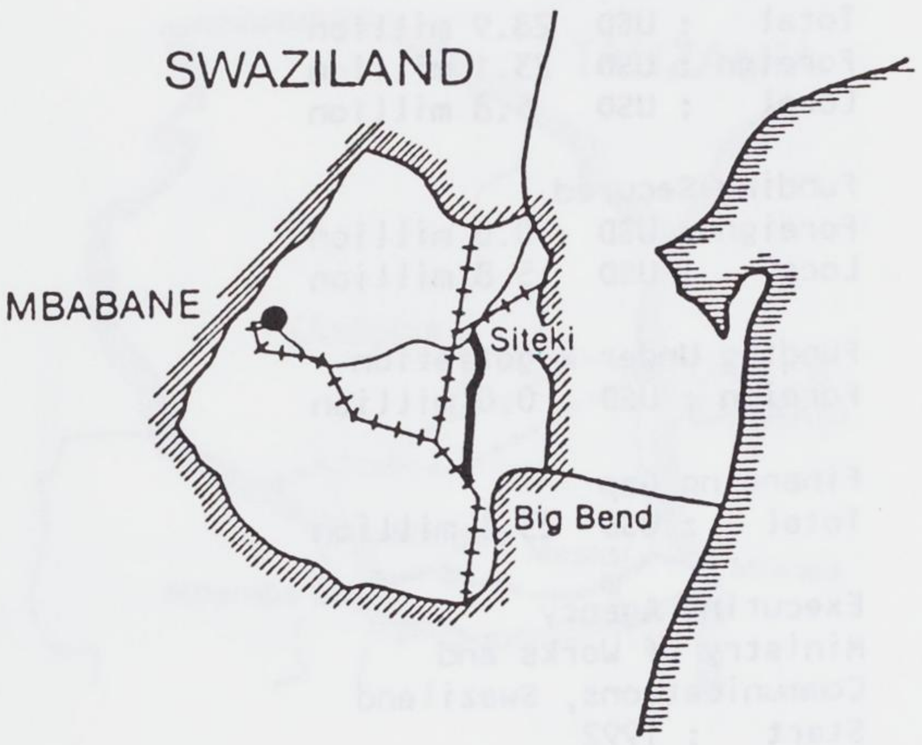

Estimated Costs
Total : USD 22.0 million
Foreign : USD 18.7 million
Local : USD 3.3 million

Funding Secured
Foreign : USD 8.9 million
Local : USD 3.3 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 9.8 million

Executing Agency
Ministry of Works and Communications, Swaziland
Start : 1992
Duration: 2 Years

Objectives : Upgrading and bitumenization of the gravel road sections :

1. Lomahasha - Lonhlupenko junction west of Siteki, 52.5 km.
2. Lonhlupenko - junction north-west of Big Bend, 39.5 km.

Description: The project is a part of a systematic improvement scheme for the main road network in Swaziland. It will improve Swaziland's road connections to the port of Maputo (see Project MOZ.1.04).

The improvement of the two road sections is also very important for the ongoing agricultural schemes in the eastern parts of Swaziland, sugar production, irrigation projects, small scale farming, cattle ranching and agriculture industry. Most of the existing and potential production is export orientated with Maputo as its natural sea outlet. Much of these export products is dependent on road transportation.

The upgrading includes widening to 6.7 m asphalted carriageway on a 10.3 m formation.

The road section Lomahasha - Siteki has traffic volumes between 175 and 700 vehicles per day.

The road section Siteki - Big Bend has traffic volumes between 150 and 300 vehicles per day. Internal rates of return for this section are rather low.

Status : The construction of the section Lomahasha-Siteki completed, financed by ADB, Sweden and Swaziland. Financing to be secured for the remaining section to Big Bend.
Siteki - Big Bend section under consideration for local funding in 1992/93.

September 1992

SWA.1.02: Improvement of the Mbabane- Manzini Road, Swaziland

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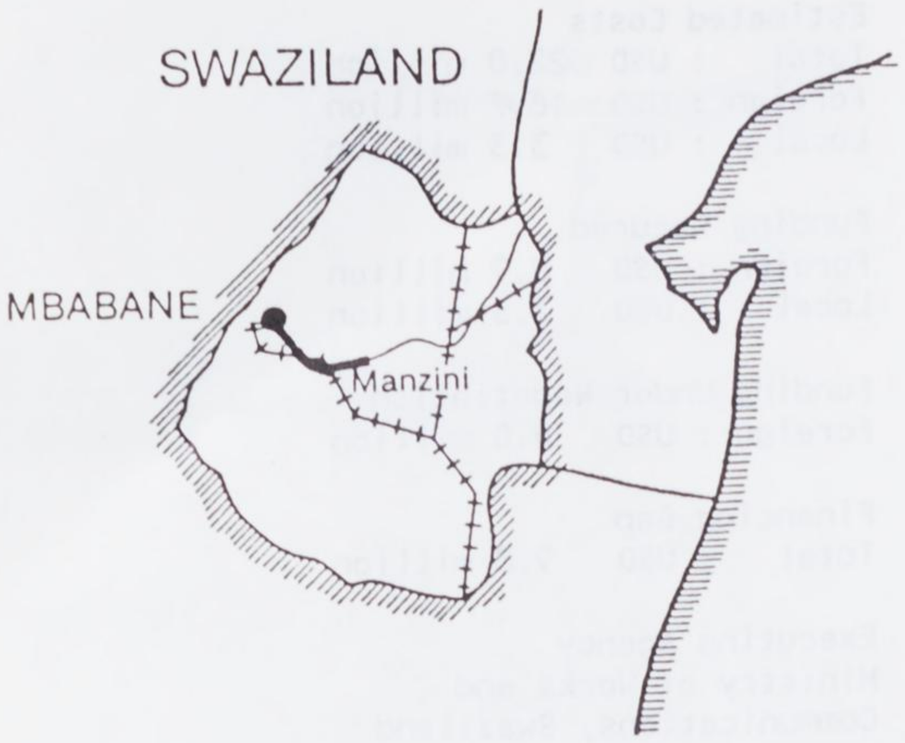

Estimated Costs
Total : USD 28.9 million
Foreign : USD 23.1 million
Local : USD 5.8 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 5.8 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 23.1 million

Executing Agency
Ministry of Works and
Communications, Swaziland
Start : 1992
Duration: 2 Years

Objectives : Improvement of the road between Mbabane and Manzini by widening of the existing road over 14.6 km and construction of a new road section of 19.4 km, as well as upgrading of a 15 km relief road between Lobamba and the Matsapha Industrial Area to dual carriageway standard.

Description: The road between Swaziland's capital Mbabane and Manzini, the main industrial centre, is one of the most heavily trafficked roads in the country, and part ofthe SADCC Regional Trunk Road Network. The 1986 traffic counts indicate some 8.000 vehicles per day between Matsapha Industrial Area and Manzini and 5.000 vehicles per day between Mbabane and Ezulwini Valley. Up to 25 per cent are heavy goods/timber vehicles. Due to volume of traffic and nature of the terrain serious capacity and safety problems exist on the present raod. The road also exhibits signs of distress and will require major rehabilitation in the very near future. Therefore a major improvement is envisaged, consisting of partly constructing a new road and partly widening the existing road to four lane standard, and constructing the relief road to dual carriageway standard.

Status : Partly under negotiation with EEC, under consideration by ADB. Costs to be updated soon.
Financing for implementation to be secured.

September 1992

TAN.1.01: Rehabilitation and Upgrading of the Mtwara- Songea- Mbamba Bay Road, Tanzania

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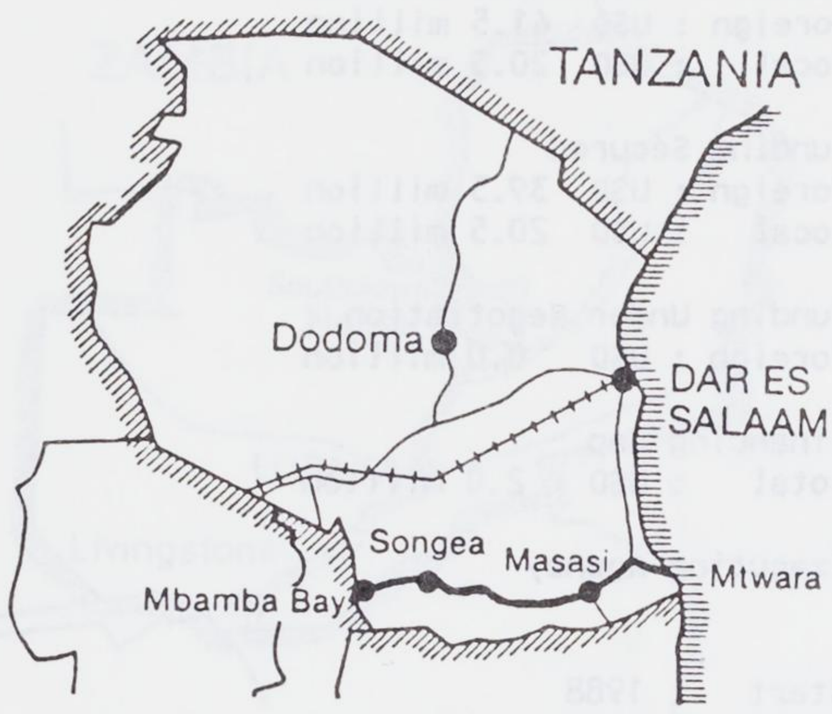


Estimated Costs
Total : USD 74.9 million
Foreign : USD 58.2 million
Local : USD 16.7 million

Funding Secured
Foreign : USD 56.9 million
Local : USD 16.7 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.3 million

Executing Agency
Ministry of Communications and Works, Tanzania
Start : 1991
Duration: 3 Years

Objectives :

1. Studies and design for the section between Masasi snd Songea, upgrading of section Masasi-Songea, 445 Km, to engineered gravel standard.
2. Upgrading of section Songea-Mbinga-Mbamba Bay, 160 Km, to bitumen standard.

The main aim of the Southern Trunk Road as a regional project is to carry traffic to and from the port of Mtwara and serve as a link to the port and shipping services on Lake Malawi at Mbamba Bay (c.f. project No.TAN.3.01).

The main importance of the road will be to serve the rich agricultural zone in the south and south-west of Tanzania.

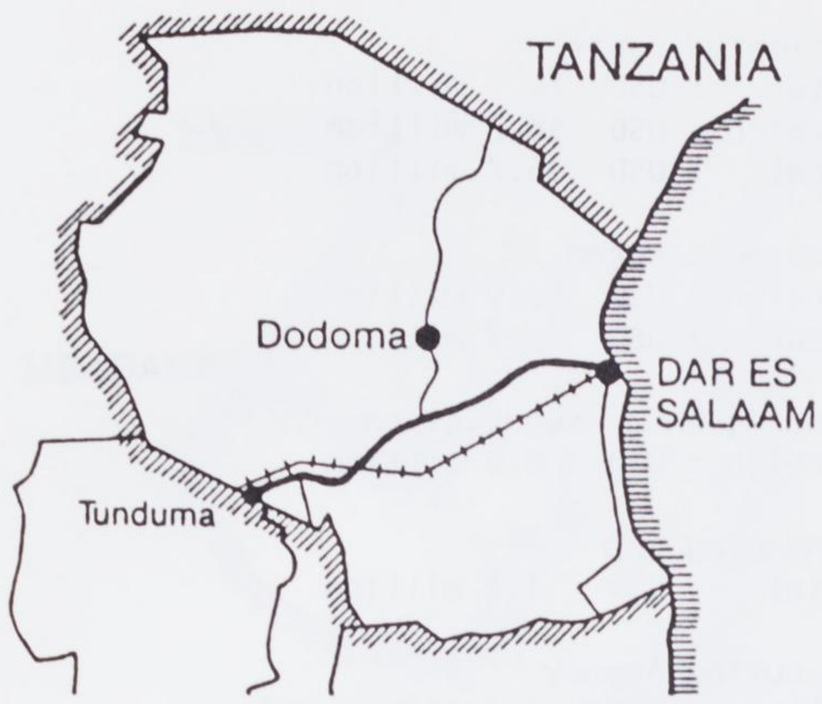
Description: The road section Mtwara-Masasi, 200 Km, has been upgraded to bitumen standard in 1978. The existing road Masasi-Tunduru-Songea, 445 Km, is partly earth, partly engineered gravel standard, 6.5-7 m wide, partly in a poor condition. The terrain is generally rolling to hilly. Some repair works have been carried out.

The existing road from Songea to Mbamba Bay, 169 Km, is gravelled on half of the length and the rest is earth. It is in poor condition due to low construction standards, e.g. lack of adequate drainage and unsafe wooden briedges across rivers. The terrain is rolling to hilly and includes a mountainous stretch at the escarpment to the lake shore plain. As a trunk road, it should be upgraded to at least surface dressed standard (6.5 m + 2 x 1.5 m). After realignment the road length will be reduced to 160 km.

Status : Rehabilitation works on Mtwara - Mingoyo - Masasi Section (200 km) to commence in July 92. Detailed Design of spot improvement for Masasi - Songea - Section awarded to Cowi Consult, (460 km) Works to upgrade the 1st 20 km from Songea to bitumen standars, and the next 50 km to gravel standards commenced July 91 and is exepcted to be completed in July 1993.
Mbinga - Mbamba bay Section (100 km): Construction by Force Accounts Unit (FAU) started July 1991 and expected to be completed in June 1994, so for only 30 km have been completed. Output is small because of dilapidated construction equipment fleet.

September 1992

TAN.1.03: Rehabilitation/Strengthening of the TANZAM Highway,
Tanzania



Estimated Costs
Total : USD 62.0 million
Foreign : USD 41.5 million
Local : USD 20.5 million

Funding Secured
Foreign : USD 39.5 million
Local : USD 20.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.0 million

Executing Agency

Start : 1988
Duration: 5 Years

Objectives : Rehabilitation and strengthening of the Tanzam Highway in Tanzania.

Description : The Tanzania section (925 km) of the Tanzam Highway connects the port of Dar es Salaam with Tunduma at the Tanzania/Zambia border via Morogoro, Iringa and Mbeya. The road was built to a two lane paved standards with 6.7m wide carriageway in 1972. Apart from the flat terrain in the section between Dar es Salaam and Mikumi, the road traverses mostly rolling terrain.

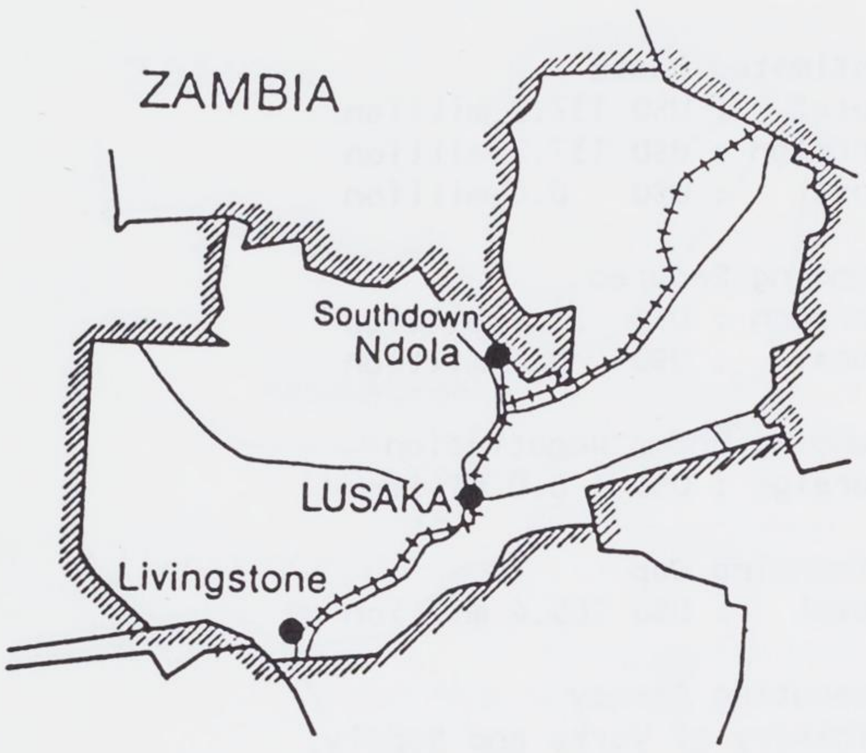
This road carries considerable heavy national and regional traffic. The section between Dar es Salaam and Morogoro carries also traffic for the Rwanda and Burundi. The traffic volume varies from about 900 vehicles per day between Dar es Salaam and Chalinze to 400 vehicles per day between Mbeya and Tunduma. About 70 per cent of this traffic consists of commercial vehicles.

The road pavement within certain sections has shown signs of distress in the form of potholes, surface cracks and surface deformation. At certain places, especially between Dar es Salaam - Mikumi (289 km) and Iyayi - Mbeya - Tunduma (228km), the road has failed completely, with the pavement destroyed.

Status : The project has been divided in four contract sections and the works started in September 1988.

September 1992

ZAM.1.01: Study on Angola-Zambia Road Link, Zambia



Estimated Costs
Total : USD 0.2 million
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.2 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Works and Supply, Zambia
Start :
Duration:

Objectives : Feasibility study on the construction of an all-weather heavy traffic road connecting Kaoma in Zambia with Lumbala in Angola, about 370 km.

The proposed road Kaoma - Borderpost at Caripande - Lumbala - Luenę will be one of the few road links between Zambia and Angola and will be essential for road transports to the Lobito Port.

Description : In Angola the road section Luene - Lucusse has been completed and the section Lucusse - Lumbala is under construction up to paved standard. About 50km to the Borderpost at Caripande remains to be upgraded.

In Zambia the road follows mainly existing unclassified gravel or earth roads.

Construction costs are estimated roughly at USD 129,5 million (1991 prices).

Status : The feasibility study financed by EEC was started in 1980. Preliminary findings based on work in Zambia were presented in 1981. Further work adjourned for the time being. The project to be reviewed in the context of the Lobito Port Transport System, as a pontential road connection between Angola and Zambia.

September 1992

ZAM.1.03: Rehabilitation of the Lusaka- Kafue-Livingstone-Kazungula-
Katima Mulilo, Road Zambia

Estimated Costs
Total : USD 137.2 million
Foreign : USD 137.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 31.8 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 105.4 million

Executing Agency
Ministry of Works and Supply,
Zambia
Start : 1991
Duration: 3 Years

Objectives : Rehabilitation and upgrading of the road Lusaka-Kafue-Livingstone-Kazungula Katima Mulilo, 591 km.

Description : Upgrading work has been completed in 1986 on the section Zimba-Livingstone (42 Km) with financing from Norway. This road section has been upgraded from a 3.5 m wide surface to a 6.1 m bitumen surface with 2 m shoulders (USD 5 million). The remaining sections are of varying standards and show signs of deterioration. The normal recurrent maintenance funds are not sufficient for the necessary works.

Status : The different road sections are as follows:-

1. Lusaka-Kafue Bridge 56 km. Contract for rehabilitation works awarded to Contractor. Contract US $ 18 million, USAID funding. Work due to commence June, 1992.

2. Kafue Bridge-Mazabuka-Monze 130 km. Rehabilitation works first phase Kafue Bridge-Mazabuka 69 km, in progress. Contract US $ 9 million, NORAD funding. Second phase Mazabuka-Monze estimated to cost US $ 12 million.

3. Monze-Zimba 210 km. Detailed engineering design and documentation completed by FINNIDA. Funds for rehabilitation being sought. Estimated cost US $ 27 million.

4. Livingstone-Kazungula-Katima Mulilo road. 195 km.
Awaited funds from UNDP for rehabilitation of 140 km not forth coming. Funds being sought for major rehabilitation. Meanwhile remedial works being undertaken by force account.

TRRL/ODA had indicated need to carry out research on link. TRRL expected to conclude funding details with the ODA.
Estimated cost for rehabilitation US $ 66 million.

5. New Kafue road bridge - Contractor is already on site. Japan funding project. Construction of temporary bridge crossing begun in September, 1991. Work onnew bridge expected to be completed in 1993. Contract cost is US$ 15 million.

September 1992

ZAM.1.05: Rehabilitation of the Lusaka- Kapiri-Chingola-Zaire Border Road, Zambia

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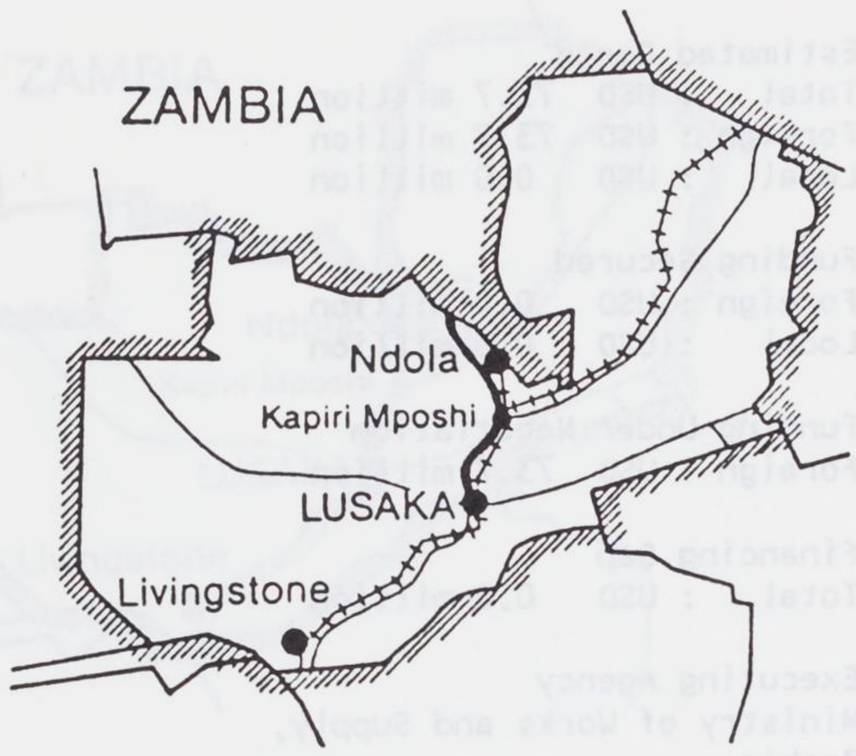

Estimated Costs
Total : USD 57.0 million
Foreign : USD 57.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 48.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 9.0 million

Executing Agency
Ministry of Works and Supply, Zambia
Start : 1992
Duration: 4 Years

Objectives : Strengthening/partial reconstruction of the road Lusaka - Kapiri Mposhi - Zaire border (460 km).

Description: This road was built more than 15 years ago and carries a heavy volume of traffic. Recent counts shows the flows to be above 2900 vehicles per day with 45% heavy vehicles. There is evidence of damage to the road due to overloading.

Rehabilitation works have been carried out over selected sections in the past including reconstruction, surface dressing and premix overlay. However, due to the lack of funds it has not been possible to keep up with the deterioration and it is now imperative to take urgent action.

Status : Denmark has financed feasibility and engineering studies (USD 0.6 million) together with 3 other roads in Zambia completed in early 1986.
The project is divided into three parts:

1. Lusaka-Kabwe 138 km; Contract for rehabilitation awarded to Contractor. Contract US $ 15 million, EEC funding. Work expected to start by June, 1992.

2. Kapiri Mposhi-Chingola 220 km; Contractor on site. Project being funded by DANIDA.
   Estimated cost USD 33.0 million.

3. Kabwe-Kapiri Mposhi 68 km;
   No donor pledge so far. It is hoped that it may be included in the Kapiri Mposhi-Chingola project.
   Estimated cost USD 9 million.

September 1992

ZAM.1.06: Rehabilitation of the Road Lusaka - Chipata, Zambia

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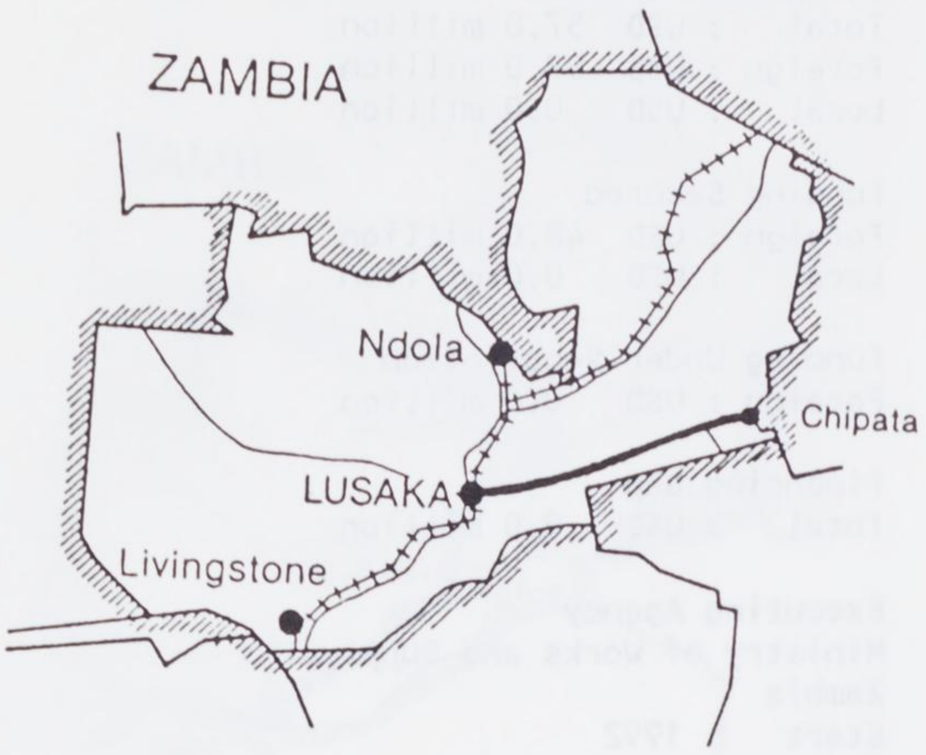


Estimated Costs
Total : USD 73.7 million
Foreign : USD 73.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 73.7 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Works and Supply, Zambia
Start : 1993
Duration: 3 Years

Objectives : Strengthening/partial reconstruction of demaged section of the road Lusaka Chipata.

Description : The Lusaka-Chipata road is some 569 km in length.
The road is the main transit route to Malawi.

Urgent rehabilitation works are required to arrest the rapid deterioration which may render it impassable.
At present only normal maintenance is being carried out as and when funds are available.

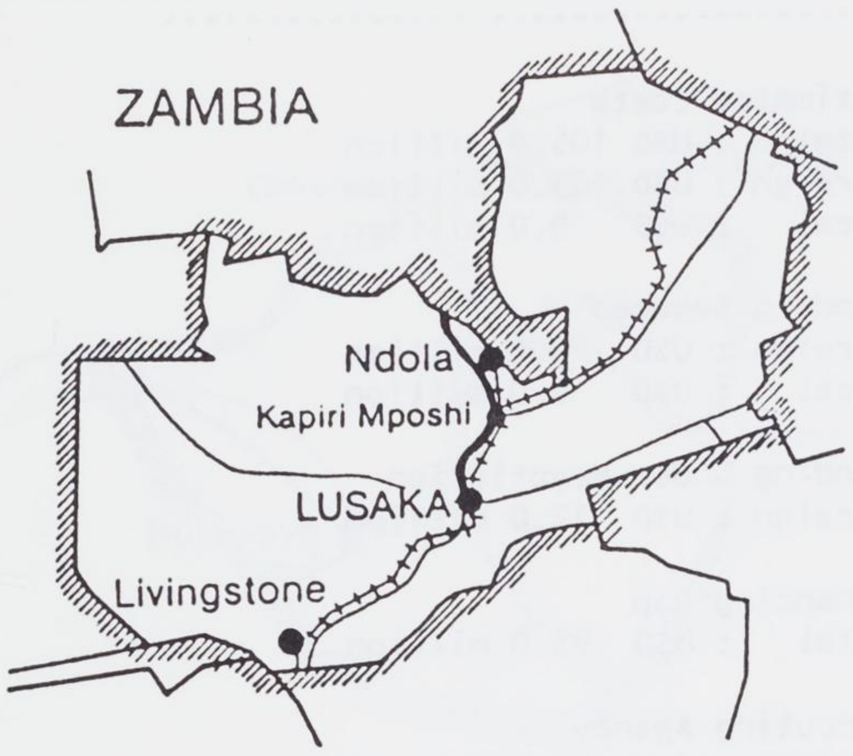
The average daily traffic is in the region of 200 to 250 vehicles with 70% of heavy vehicles.

Status : Denmark has financed feasibility and engineering studies (USD 0.7 million) together with three other roads in Zambia completed in early 1986. DANIDA has pledged to finance engineering design and supervision of works while the ADB has pledged to finance rehabilitation works.

Design work completed in January 1992.
Tender prequalification was carried out in November (1991) and Contractors have been shortlisted.

September 1992

ZAM.1.07: Improvement of the Road Lusaka -Mongu, Zambia



Estimated Costs
Total : USD 63.3 million
Foreign : USD 63.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 63.3 million

Executing Agency
Ministry of Works and Supply, Zambia
Start : 1988
Duration: 5 Years

Objectives : Rehabilitation/improvement of the road Lusaka-Mongu.

Description : The Lusaka-Mongu road, M9, is 583 km in length. The section between Lusaka and Kaoma was completed by a Chineese team in 1973, together with the bridge. The section from Kaoma to Mongu was finished by private contrators in the mid-1960's.

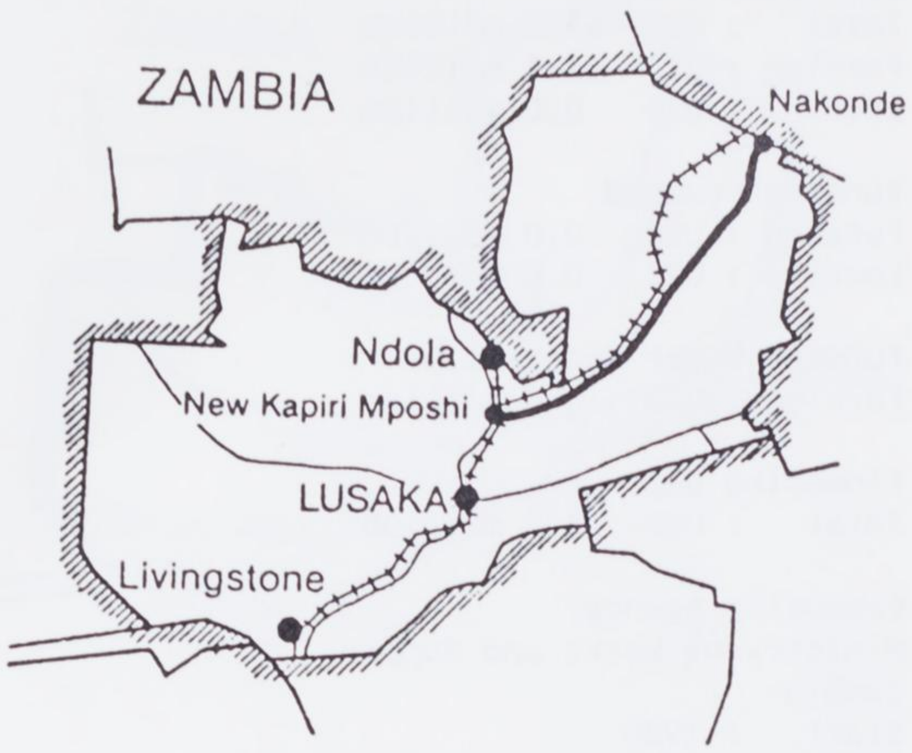
Traffic flows are approximately 200 vehicles per day with over 60 per cent heavy vehicles. Due to poor soils conditions, long sections of the road are showing signs of distress and already several kilometers have had to be reconstructed. Some surface dressing works have been made.

In order to avoid further deterioration, rehabilitation works of a large scale are required.

Status : Financing secured for the section Lusaka-Kaoma from P.R. China and Zambia and work on the second phase begun in April 1990 by a Chinese construction team. Kaoma-Mongu186 km requires funding. Estimated cost USD 63.3 million.

September 1992

ZAM.1.08: Rehabilitation of the TANZAM Highway, Zambia



Estimated Costs
Total : USD 105.0 million
Foreign : USD 105.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 12.0 million

Financing Gap
Total : USD 93.0 million

Executing Agency
Ministry of Works and Supply, Zambia
Start : 1993
Duration: 2 Years

Objectives : Strengthening/partial reconstruction of the damaged sections of the Tanzam Highway in Zambia between Kapiri Mposhi and Nakonde (800 km).

Description : The Kapiri - Nakonde road was built over 15 years ago and carriers a heavy volume of traffic. Recent counts show the flows to be 431 vehicles per day with 56% heavy vehicles. Efforts are being made to ensure that vehicles comply with axle load limits by the weighbridges at Kapiri and Nakonde, but there is evidence of damage to the road due to overloading.

Rehabilitation works have been carried out over sections in the past with surface dressing and slurry seal. However, due to the lack of funds it has not been possible to keep up with the deterioration and it is imperative to take urgent action.

At present, only normal maintenance is being carried out, and only when funds are available.

Status : Denmark has financed feasibility and engineering studies (USD 1.1 million, together with 3 other roads in Zambia which were completed in early 1986.

It is hoped that the section Kapiri Mposhi-Mkushi will be rehabilitated along side Kapiri Mposhi-Ndola in project ZAM.1.05 by DANIDA. Estimated cost USD 12.0 million.

There are no donors at present to take up rehabilitation of Mkushi-Nakonde section. No donors have been identified and no local funds allocated. Estimated cost USD 93.0 million.

September 1992

ZIM.1.03: Upgrading of Eastern end of Harare-Mutare-Mozambique Border Road, Zimbabwe

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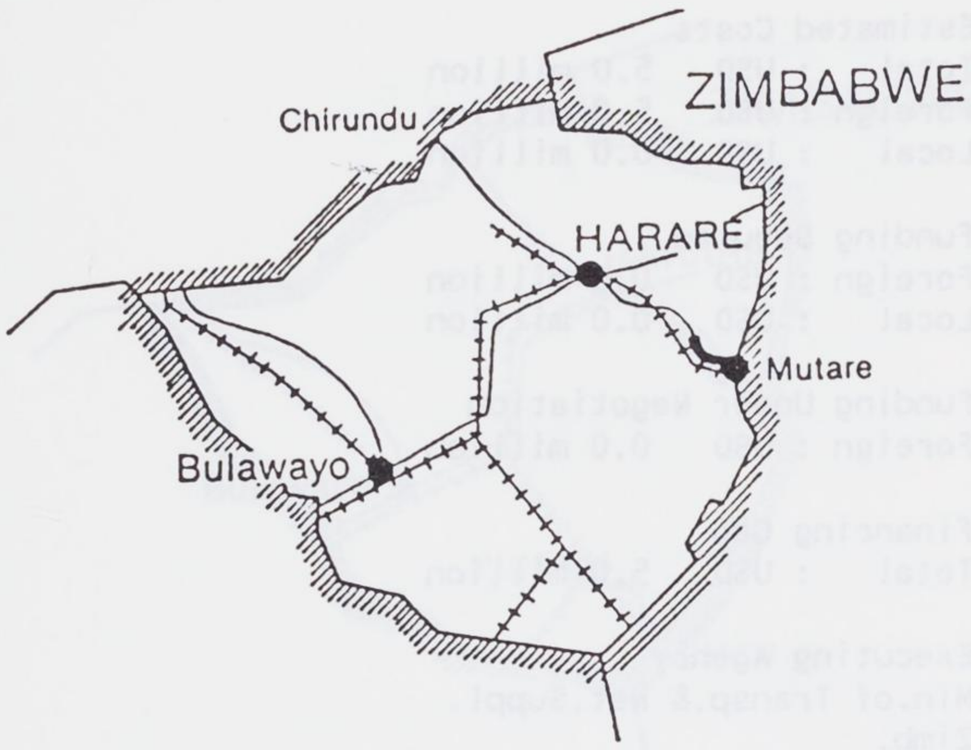

Estimated Costs
Total : USD 22.0 million
Foreign : USD 18.0 million
Local : USD 4.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 4.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 18.0 million

Executing Agency
Ministry of Transport,
Zimbabwe
Start : 1993
Duration: 2 Years

Objectives : Upgrading the last 41 Km of the Harare - Mutare - Mozambique Border Road to a standard consonant with the rest of the highway and capable of accommodating expected increased heavy traffic in the Beira Corridor, along the existing road alignment and a new by-pass route around the southern end of the City of Mutare.

Description: The project road is part of the principal road link in the Beira Corridor, connecting Zimbabwe with the Port of Beira. In addition, the link provides a road connection to Beira from Zambia, Malawi and potentially Botswana and South eastern Zaire. Emergency repair works on the road from Zimbabwe border to Beira are in progress.

In the national context, the project forms part of the Zimbabwean state road network providing the connection between the capital and the fourth largest city, Mutare, as well as the adjacent land use and Eastern/South-Eastern parts of the country.

The Harare-Mutare road is mostly a 6.7/9.7 metre wide bitumen surfaced road in a fair to good condition with few sections in need of strengthening. The present route passes through the commercial centre of Mutare, along the City's street network to the Mozambique Border along a 6 metre wide surfaced road.

The traffic volumes vary from 800 to 2000 vehicles per day west of Mutare and are less than 100 vehicles per day near the border. The terrain in the project area is mainly mountainous. The last 30 kilometres of the Harare-Mutare road were constructed some 30 years ago and require to be reconstructed and strengthened.

A feasibility and preliminary engineering study, funded by Finland, was carried out and the Final report produced in November, 1987.

The study recommends the construction of the Mutare by-pass.
The project comprises the construction of 16,8 Km of new road, upgrading of 8,2 Km of existing road and the construction of 6 new bridges. The internal rate of return of this option is approx. 18 percent (baseline traffic forecast).

Status : The detailed engineering design has been completed, and contract documentation has been prepared.

For the construction work, the ADB has expressed interest in the funding and has now received a formal request from the Government of Zimbabwe.
The Government of Zimbabwe and ADB are currently negotiating the funding of the constructions of the Bypass.

September 1992

ZIM.1.05: Rehabilitation of Harare - Nyamapanda Route 202.

Estimated Costs
Total : USD 5.0 million
Foreign : USD 5.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 5.0 million

Executing Agency
Min.of Transp.& Nat.Suppl.
Zimb.
Start : 1993
Duration: 2 Years

Objectives : Rehabilitation and reconstruction of the road Harare - Nyamapanda. The aim of the project is to provide a road link of suitable standard for transit traffic to/from Malawi and Northern Mozambique (Tete).

Description : The road is constructed with a 10 meters formation with a 7 meters surfaced carriage way.

A study into the deterioration of certain sections of the road was carried out by the Department of State Roads in early 1989.

The conclusion from the study were that some sections of the road show considerable failing and need rehabilitation.

Included in the project are the reconstruction of the section between 198-206 km (8km) and the strengthening of the remaining distressed sections (44km).

Status : Funds for the execution of the works has not yet been secured and subsequently the proportion of local currency and foreign currencies included in total cost not specified.

September 1992

ZIM.1.06: Upgrading of Rutenga-Boli- Sango Road Route 456, Zimbabwe

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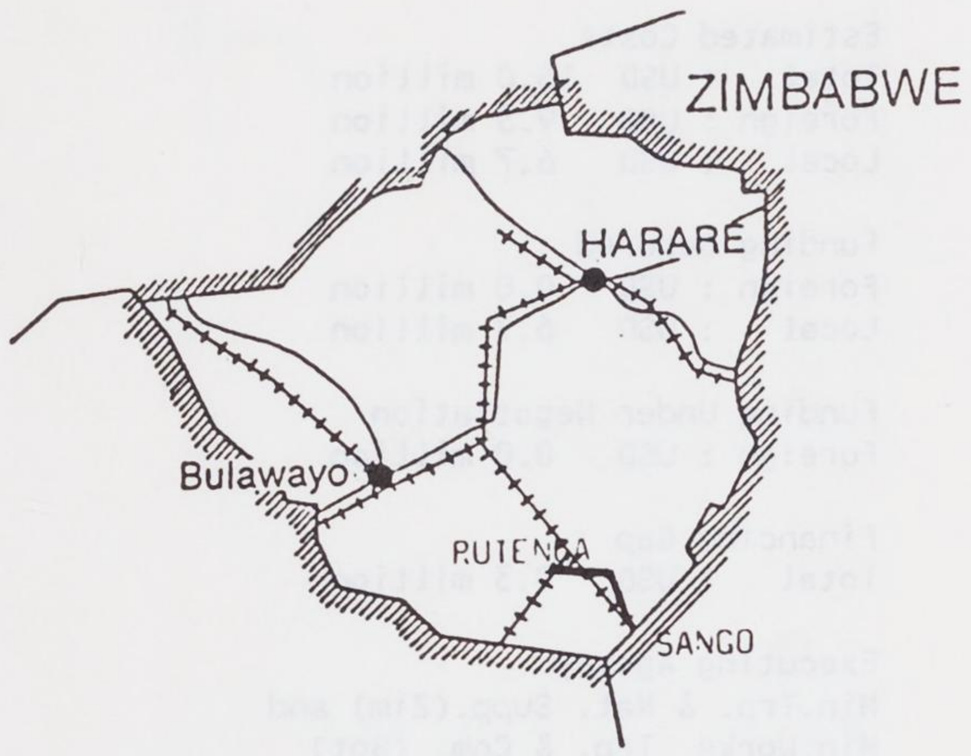


Estimated Costs
Total : USD 7.0 million
Foreign : USD 7.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 7.0 million

Executing Agency
Min. of Transp.& Nat.Suppl.
Zimb.
Start : 1993
Duration: 2 Years

Objectives : Upgrading of the Rutenga-Boli-Sango Road Route 456 a good all gravel road
The project will link to the Limpopo Corridor and Maputo, hence connecting the south est part of Zimbabwe with Mozambique.

Description : The road Rutenga-Boli-Sango connects the south east part of Zimbabwe with Mozambique.

The upgrading of the earth track running parallel to the Limpopo railway line between the Mozambique/Zimbabwe border and Chokwe, and further to Manhica is included in Project MOZ.1.06.

The upgrading of the Rutenga-Boli-Sango road to a good all weather gravel road will be a complement to that Project and also bring economic development to the area.

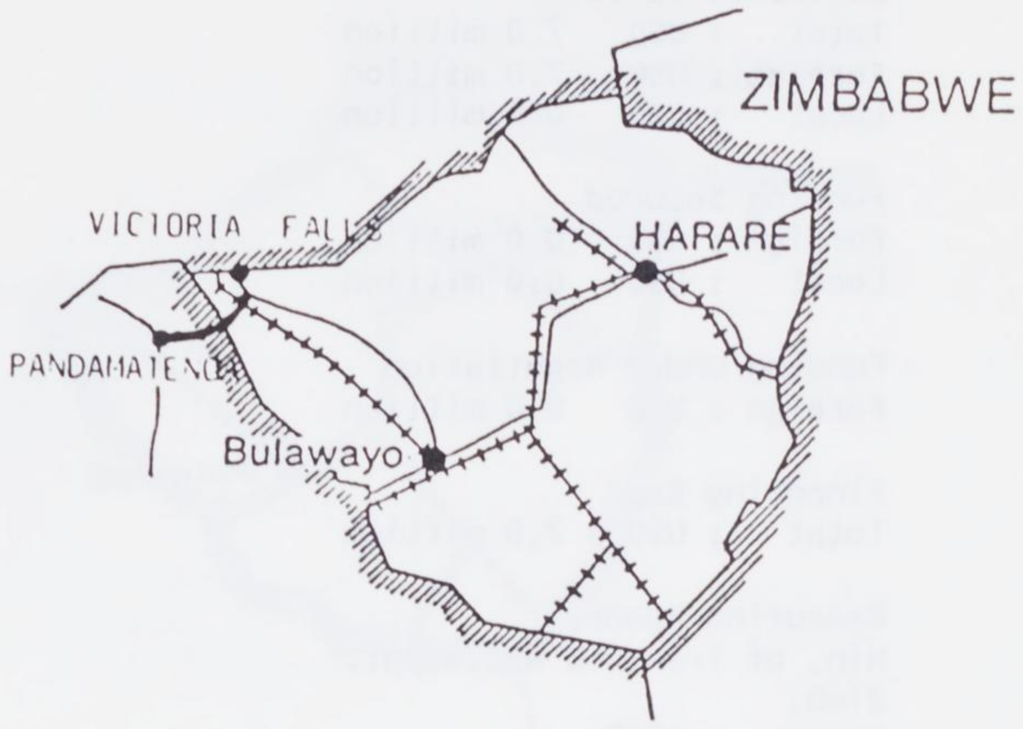
A feasibility study on the road was carried out in 1985.

Status : Due to economic and political developments that have taken place since 1985 the Ministry is going to carry out a new study with possible Kuwait funding.

No funds have been secured, and subsequently the proportion of local currency and foreign currencies included in total cost not specified.

September 1992

ZIM.1.07: Pandamatenga -Victoria Falls Road Junction, Route 746/745
(85 Km)



Estimated Costs
Total : USD 16.0 million
Foreign : USD 9.3 million
Local : USD 6.7 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 6.7 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 9.3 million

Executing Agency
Min.Trp. & Nat. Supp.(Zim) and
Min.Works, Trp. & Com. (Bot)
Start : 1993
Duration: 4 Years

Objectives : Upgrading of the road Padamatenga - Victoria Falls Road Junction, Route 746/745 (length approx. 85 km). The road will be connected to the recently completed Gaborone-Kasane road and will provide a much faster connection into Zambia.

Description : The present road connects the road junction of Nata-Kazungula with the National Primary Road from Bulawayo to Victoria Falls.

The road at present is of gravel standard and has to be upgraded to a surfaced standard to cater for the anticipated increase of traffic.
Construction work will be preceded by feasibility and engineering study.

In the regional context, the Pandamatenga-Victoria Falls Road will provide a vital link in the Botswana-Zambia link using the only fixed crossing over the Zambezi River. The Pandamatenga-Victoria Falls road will be connected to the recently completed Gaborone-Kasane Road and will provide a much faster connection into Zambia.

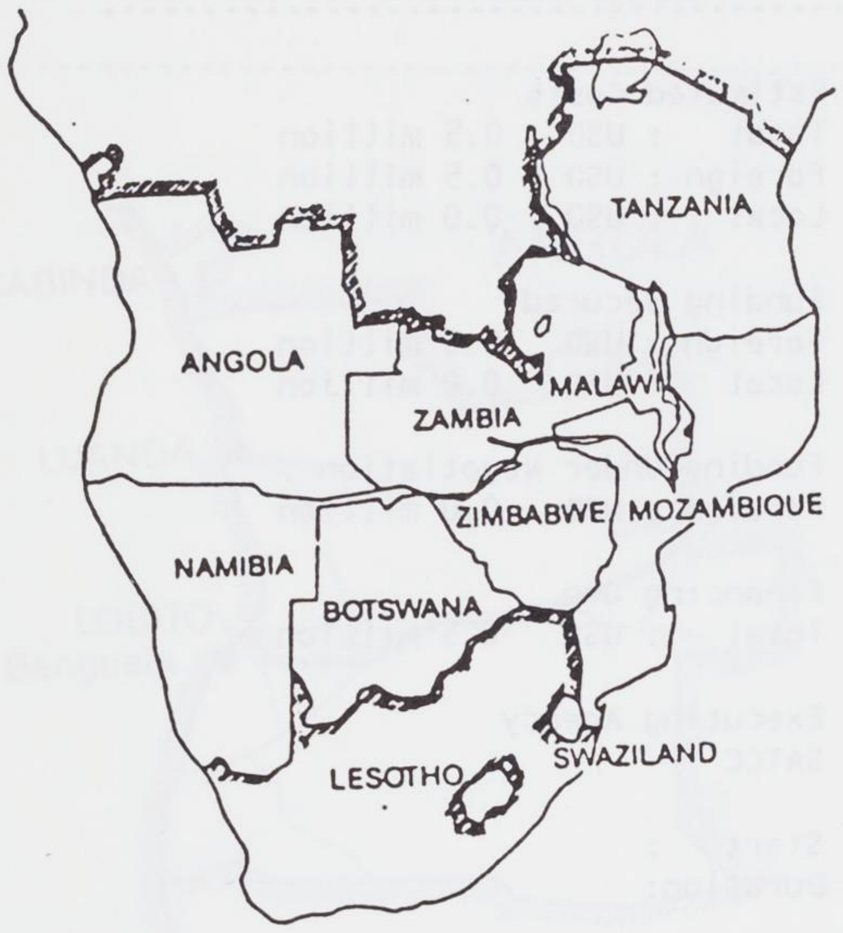
The road has to be upgraded to an all-weather tarmac road over its entire length and the cost for this project is estimated at USD 16.00 million at today's prices (Jan 1992).

Status : New Project.

September 1992

Railways

AAA.2.06: Development of Railway Training, Regional



Estimated Costs
Total : USD 8.6 million
Foreign : USD 8.6 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 8.6 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC Technical Unit.

Start : 1990
Duration: 3 Years

Objevtives : To organize regional railway management and technical training for SADCC railways in order to provide adequate skilled manpower to cope with the maintenance and operations of railways.

Description : The project consiste of the following sub-projects:

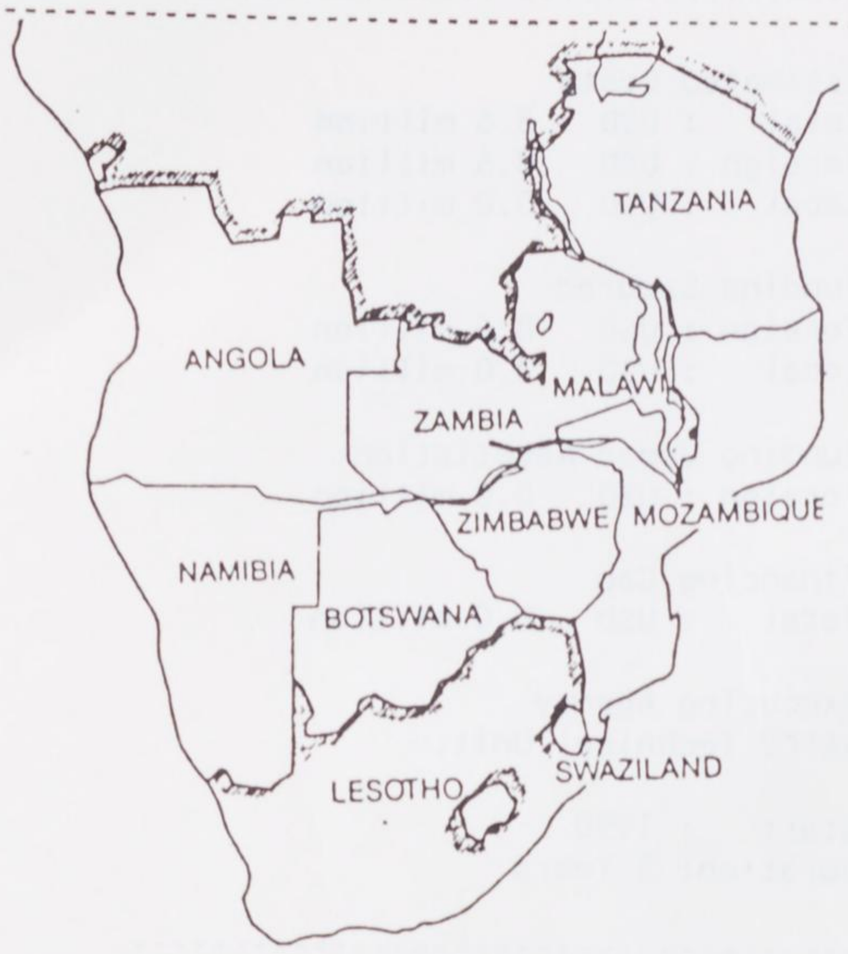
(i) Management Development Course
(ii) Instructions'Training
(iii) Language Training
(iv) Specialist Courses for Managers
(v) Technical Courses for Managers
(vi) Provision of Training Aids
(vii) Production of Hanbooks and Manuals
(viii) Support to Railway Training Subgroup Meetings
(ix) SATCC Railways Training Expert (for 3 years)

The plan includes 6 management development courses, 3 courses for instructors' training, language courses for portuguese speaking personnel to study English, 6 technical courses for engineers, 4 specialist courses for managers, plus support to these activities as listed under item (vi) above.
The cost estimates include consulting services related to the various items.

Status : Project descriptions have been prepared as a sequel to P. AAA.2.02, Study on Railway Training Programmes, carried out by DeConsult of German, financed by KFW. Pilot phase funded by GTZ conducted during 1989.
A Railway Training Expert has been recruited to coordinate the programme under the SATCC-TU.

September 1992

AAA.2.06: Updating of the Regional Railway Training Needs Survey
(02)



Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.5 million

Executing Agency
SATCC

Start :
Duration:

Objectives : To provide SATCC and relevant authorities in member countries with data and recommendations for policies and measures to be applied in order to develop and/or establish an institution for Railway Management Development and Training in the region on the basis of Demand and Supply.

Description : The Study shall assess training demand for management training in the SADCC railway administrations.

a) by defining middle and senior management training requirements for each country

b) by revealing the capacities at national and regional levels and other institutions and in Bilateral/Multilateral agreements

c) by specifying the correct alternatives for all training instruments in the region

Status : SATCC to draw up Terms of Reference and find source for funds to undertake this work.

September 1992

ANG.2.01: Benguela Railway Projects in the Ten Year Development Plan for Lobito Port Tran. System

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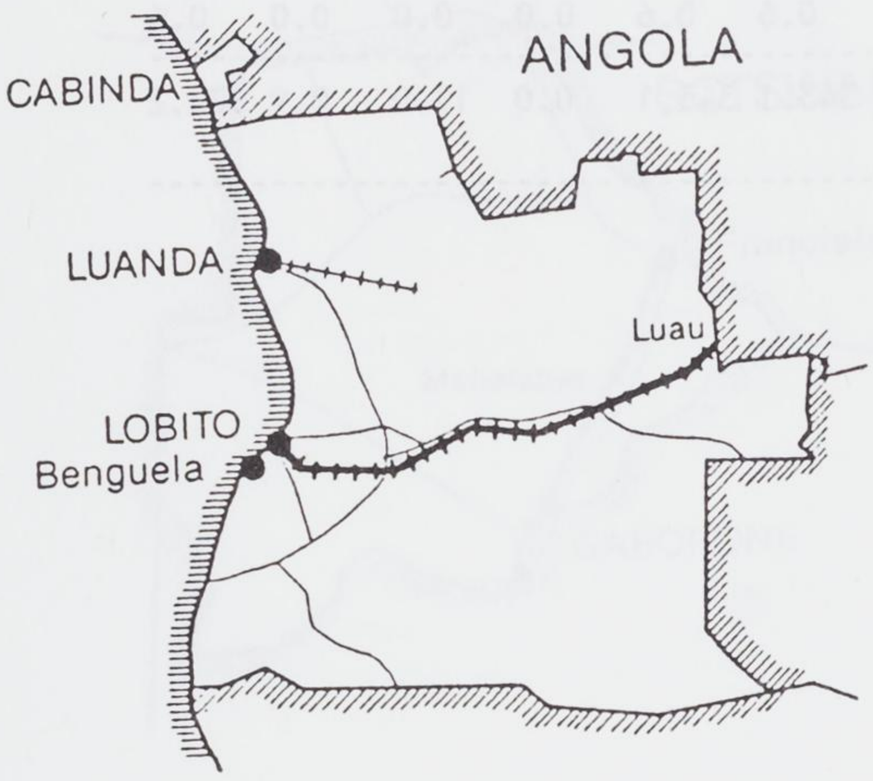


Estimated Costs
Total : USD 343.1 million
Foreign : USD 343.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 17.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.9 million

Financing Gap
Total : USD 325.2 million

Executing Agency
CFB

Start : 1989
Duration: 10 Years

Objectives : Rehabilitation and upgrading of the Benguela Railway to provide adequate capacity for future transport needs.

Description : The Ten Year Development Plan for the Lobito Port Transport System includes 24 railway subprojects (Benguela Railway) :

5	Manpower Development and Technical Assistance	(R-M)
1	Operational	(R-OP)
6	Civil Engineering	(R-CE)
2	Telecommunications	(R-ST)
3	Mechanical Engineering	(R-ME)
1	Energy	(R-E)

Project details have been published in the 10-Year development Plan for the Lobito Port Transport System.

Status : A Technical Co-ordination Conference to discuss the Plan was held in January 1989, and interest was expressed by donors for most of the projects in the Preparatory Phase of the 10-Year Plan. Follow-up contacts with donors concerned are in progress.

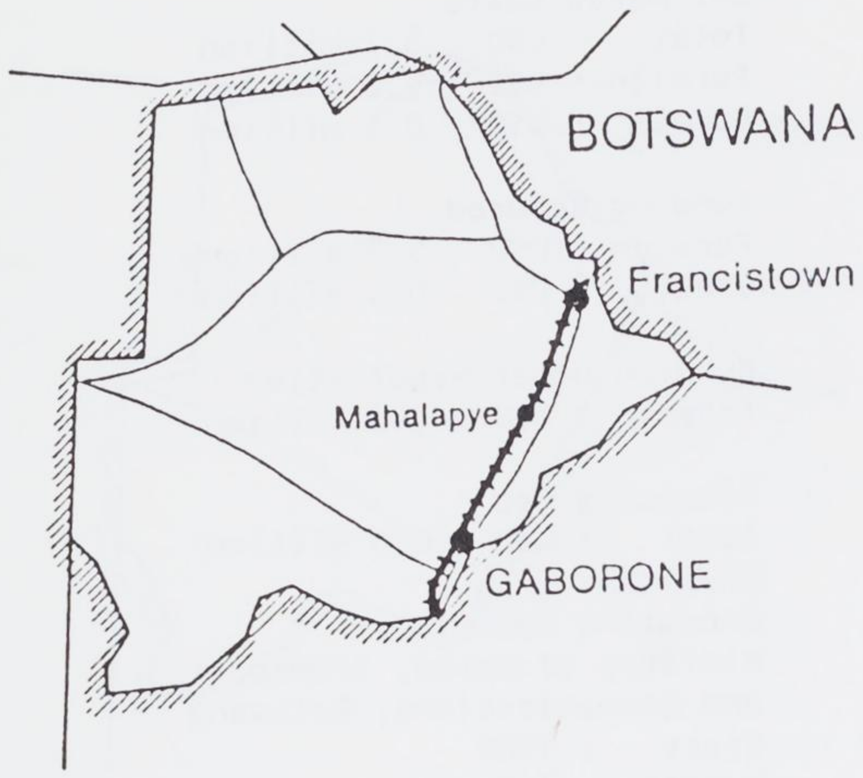
Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
R-CE-1	Track Repair and Upgrading	159.9	159.9	0.0	14.5	0.0	145.4
R-CE-2	Establishment of Quarries	3.5	3.5	0.0	0.0	0.9	2.6
R-CE-3	Sleeper Production Plants	3.0	3.0	0.0	0.0	0.0	3.0
R-CE-4	Track Maintenance Equipment	16.0	16.0	0.0	0.0	0.0	16.0
R-CE-5	Realignment Design Cubal to Huambo	0.6	0.6	0.0	0.0	0.0	0.6
R-CE-6	Realignment Study Huambo to Luau	0.4	0.4	0.0	0.0	0.0	0.4
R-E-1	Electric Supply and Distribu- tion Systems for Lobito, Huambo and Luena	1.8	1.8	0.0	0.0	0.0	1.8
R-M-1	Manpower Development Plan	1.5	1.5	0.0	0.5	0.0	1.0
R-M-2	Upgrading and Extension of Computer Facilities	0.9	0.9	0.0	0.3	0.0	0.6
R-M-3	Railway Training Assistance	15.0	15.0	0.0	1.5	0.0	13.5
R-M-4	Technical Assistance for Operation of the Railway	12.5	12.5	0.0	0.0	0.0	12.5
R-M-5	Improvement of Railway Hospitals	6.0	6.0	0.0	0.0	0.0	6.0
R-ME-1	Rehabilitation and Acquisition of Locomotives	20.0	20.0	0.0	0.0	0.0	20.0
R-ME-2	Rehabilitation and Acquisition of Rolling Stock	65.0	65.0	0.0	0.0	0.0	65.0
R-ME-3	Completion of Diesel Workshop and Re-equipment of Wheel Shop at Huambo	7.0	7.0	0.0	0.0	0.0	7.0
R-ME-4	Conversion of the Steam Depot at Luena to Diesel Maintenance Depot	1.0	1.0	0.0	0.0	0.0	1.0
R-ME-5	Workshop Facilities at Lobito	0.6	0.6	0.0	0.0	0.0	0.6
R-ME-6	Review and Acquisition of Spare Parts and Reorganization of Main Stores	10.3	10.3	0.0	0.0	0.0	10.3

R-ME-7	Rescue Equipment and Accident Prevention Programme	1.1	1.1	0.0	0.0	0.0	1.1
R-ME-8	Installation of 21 Automatic Barriers	1.6	1.6	0.0	0.0	0.0	1.6
R-ME-9	Study on Improvement of Specialist Workshops in Huambo	0.1	0.1	0.0	0.0	0.0	0.1
R-OP-1	Motive Power, Rolling Stock and Operation Plan	0.2	0.2	0.0	0.2	0.0	0.0
R-ST-1	Train Control System and Telecommunications	14.5	14.5	0.0	0.0	0.0	14.5
R-ST-2	Telephone Exchanges CFB and Lobito Port	0.6	0.6	0.0	0.0	0.0	0.6
		343.1	343.1	0.0	17.0	0.9	325.2

September 1992

BOT.2.01: Rehabilitation of the Main Railway Line, Botswana



Estimated Costs
Total : USD 101.3 million
Foreign : USD 75.3 million
Local : USD 26.0 million

Funding Secured
Foreign : USD 15.3 million
Local : USD 26.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 60.0 million

Executing Agency
Ministry of Works, Transport
and Communications, Botswana
Start : 1984
Duration: 12 Years

Objectives : Renewal of the track:

(1) Gaborone - Southern Border (120 Km),
(2) Francistown - Northern Border (85 Km), and
(3) Gaborone - Franscistown (435 Km)

Description : The railways in Botswana consist of a 640 Km main line which has two branch lines Serule - Selebi Pikwe (57 Km) and Palapye - Moropule (15 Km), in total 714 Km.

All rails and sleepers, with a few exceptions, were second -hand when laid in Botswana since 1961 from the Zimbabwe border southwards. After the track was constructed only normal maintenance were carried out but no systematic renewal of the track has been initiated. The track, especially some deteriorated sections, had reached a state where severe restrictions of speed and axle loads have to be applied. Therefore the renewal of the track or improvements of some bad sections were initiated in the following order of priority: (1) Gaborone - Southern Border (120 Km), (2) Franscistown - Northern Border (85 Km) and (3) Gaborone - Francistown. (435 Km)

The new track will consist of 50 kg/m longweld rails on monobloc concrete sleepers with fist-fastenings.

Status : An agreement has been signed signed between the People's Republic of China and Botswana to finance the acquisition of rails and equipment and for technical assistance. To being with, the costs of sleepers, ballast and works is being financed by the Government of Botswana. The rehabilitation of the Gaborone Southern Border (120 km) and the Francistow Northern Border (85 km) sections has been completed. The project amounts to USD 114,0 million including the cost of the completed track renewal.

A contract for USD 5.3 million covering cost of rails and technical assistance has been signed with the People of China for the 88 Km section Francistown Serule.
Funding is being sought for outstanding 347 Km.

Subprojects Included in Programme:		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
02	Section 2: Francistown to the Northern Border	0.0	0.0	0.0	0.0	0.0	0.0
03	Section 3: Francistown to Serule	21.3	15.3	6.0	21.3	0.0	0.0
04	Section 4: Gaborone to Serule	80.0	60.0	20.0	20.0	0.0	60.0
05	Improvement to Signals and Telecommunications System	0.0	0.0	0.0	0.0	0.0	0.0
		101.3	75.3	26.0	41.3	0.0	60.0

September 1992

BOT.2.07: Establishment of Dry Ports/ ICD's in Botswana

Estimated Costs
Total : USD 5.7 million
Foreign : USD 5.2 million
Local : USD 0.5 million

Funding Secured
Foreign : USD 5.2 million
Local : USD 0.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Works, Transport and Communications, Botswana
Start : 1989
Duration: 3 Years

Objectives : The establishment of dry ports/inland clearance depots in order to reduce transit transport costs and journey times through maritime ports and transit countries, achieve savings in foreign exchange payments, improve performance of the external trade and thereby contribute to economic development.

Description : In Botswana, two dry ports/ICD's facilities will be established at Francistown and Gaboronne.

Dry port/inland clearance depot is a common used inland facility with public authority status equipment with fixed installations and offering services for handling and temporary storange of any applicable mode of transport, placed under customs control and with customs and other agencies competent to clear goods for home use, warehousing, temporary admission, re-export, temporary storage for onward transit and outright export. *

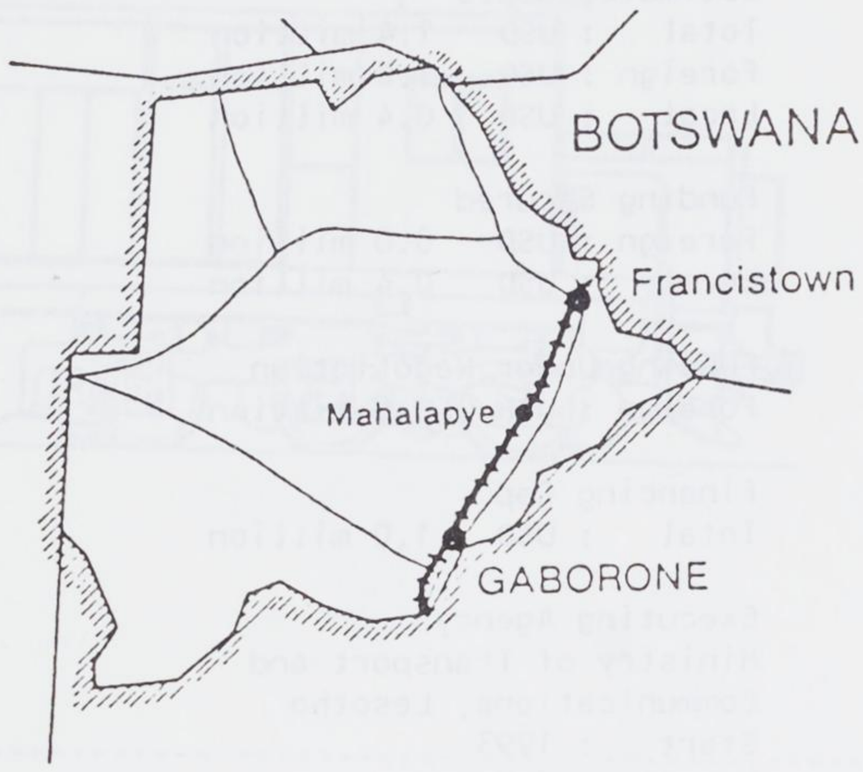
Not all these features are to be incorporated in Phase 1, which will concentrate on providing container handling facilities, temporary storage of containers and customs clearance (including full loads from road haulage).

Status : Project descriptions have been prepared by the UNDP/UNCTAD Transit Transport Project RAF/77/017, including cost estimates and supporting documents covering customs matters of dry ports/ICD's operations, management and operations of dry ports /ICD's and documentation and legal matters.
Training of dry port personel is being discussed with UNDP/UNCTAD.
Work on both in advanced stage of design, target date for operations late 1992.
DANIDA has agreed to Fund 80% up to DKK 30 million for Gaberone terminal.Balance of Gaberone and complete Francistown terminal to be funded by Botswana Government.

* This definition of a dry port has been prepared by UNCTAD, Geneva, and has been submited for clearence by the Customs Cooperation Council in Brussels.

September 1992

BOT.2.10: Equipment for Maintenance Depots for Botswana Railways.



Estimated Costs
Total : USD 4.1 million
Foreign : USD 4.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 4.1 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency

Start : 1990
Duration: 2 Years

Objectives : Equipment of the maintenance depots of the Botswana Railways.

Description : By the end of the first quarter of 1991, the Botswana Railways are scheduled to operate 40 diesel locomotives, 1085 wagons and 41 coaches, and one 95 tonnes rescue crane. The present facilities are not adequately equipped for maintenance purposes. The plan includes the following:

	USD million
WHEEL SHOP (underFlorr wheel lather, 300 tonne wheel press, vertical turret lathe, axle lathe, magnaflux axle tester, oil injection extractor equipment. white metal crucible 5kg moulds, fumace, shaping machine)	2.835
STRUCTURAL SHOP (guillotine, plate rolls, plate bending machine, milling machine, marking out table, ultra sonic crack detector, surface grinder, bogie straightening press 100 tonne)	0.840
CARPANIRY SHOP (vertical band saw, combined woodworking machine)	0.018
FORGING SHOP (pneumatic drop forge hammer 500kg anvil and blacksmith's tools)	0.180
TESTING EQUIPMENT (test benches for compressor/exhausters, vacuum brake cylinders and air brake valves, single car air brake testing device, spectrograph/flash point/viscosity analyser)	0.265
TOTAL	4.138

Status : Funding has been secured.

September 1992

LES.2.01: Establishment of Dry Port/ICD in Lesotho

LESOTHO

Estimated Costs
Total : USD 1.4 million
Foreign : USD 1.0 million
Local : USD 0.4 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.4 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.0 million

Executing Agency
Ministry of Transport and Communications, Lesotho
Start : 1993
Duration: 2 Years

Objectives : The establishment of a dry port/inland clearance depot in order to reduce transit transport costs and journey times through maritime ports, improve performance of the external trade sector and thereby contribute to economic development.

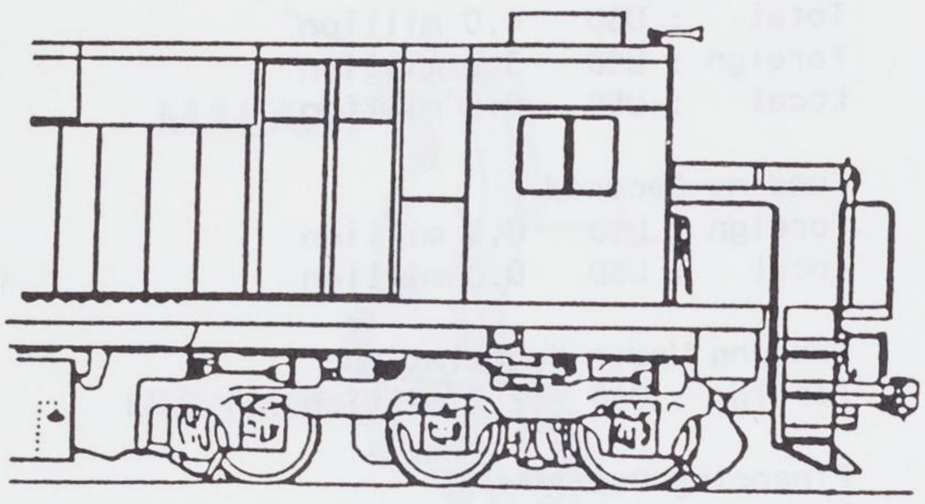
Description: Lesotho is connected to the South African railway system by a single track line which terminates at the Maseru station, 2 km inside the country. Goods traffic handled at Maseru station has averaged some 160 000 tonnes p.a. and has been estimated by consultants to increase to about 420 000 tonnes p.a. by the year 2000. Containerization is growing rapidly.

At present, overseas containers must be opened, regrouped and cleared at South African ports due to the absence of a customs terminal and the absence of adequate clearance procedures and handling facilities in Maseru. This results in delays and additional costs compared with possible through shipments to and from Maseru. The project ranks very high in the national plans, as it is very crucial to development efforts of Lesotho especially in view of the fact that is is geared towards promotion of Lesotho's trade links with SADCC member states by facilitating cargo handling and transportation and thereby reducing the country's overwhelming dependence on the Republic of South Africa. The project has been incorporated in the regional programme for the establishment of dry ports in the land locked countries of the Region.

Status : A feasibility study was completed in 1985. Design study has been made, financed by EEC.
Funding for implementation is being sought.

September 1992

MAL.2.02: Rehabilitation and Acquisition of Locomotives, Rolling Stock and Maintenance Equipment, MR



Estimated Costs
Total : USD 30.7 million
Foreign : USD 30.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 30.7 million

Executing Agency
Malawi Railways

Start : 1993
Duration: 2 Years

Objectives : Provision of adequate motive power rolling stock and track maintenance equipment for international traffic on the Nacala Line.

Description : International traffic on the Nacala-Malawi railway line has been interrupted for a few years. The rehabilitation works progressed so well that the line was re-opened to commercial traffic in December 1989. CFM motive power is inadequate to begin with since motive/power units are needed for rehabilitation works. Malawi will have to supply additional motive power. Since the piesent locomotive fleet is life expired and has become uneconomic to maintain it is necessary to replace these locomotives over the next 5 years. A total of 14 Diesel hydraulic locomotives is needed.

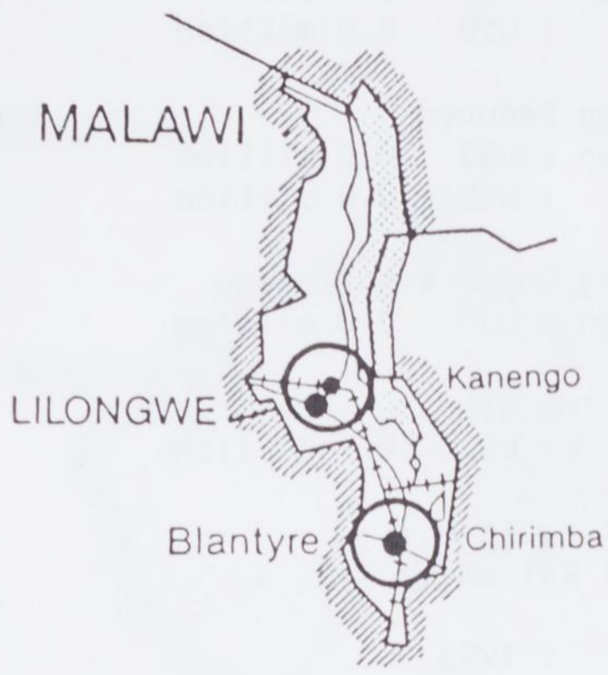
The project consists of the following parts:

	USD million
(i) Acquisition of 14 diesel hydraulic shunting locomotives	16.10
(ii) Rehabilitation 40 wagons	0.28
(iii)Acquisition of 180 goods wagons, passenger coaches and vans	11.65
(iv) One tamper	0.52
(v) 10 WP diesel generators and associated water pumps for outstations	0.20
	28.75
Contingencies	1.90
TOTAL	30.65

Status : Detailed project descriptions are available from Malawi Railways. Financing is being sought.

September 1992

MAL.2.03: Establishment of Dry Ports/ ICD's in Malawi



Estimated Costs
Total : USD 4.0 million
Foreign : USD 3.2 million
Local : USD 0.8 million

Funding Secured
Foreign : USD 0.5 million
Local : USD 0.8 million

Funding Under Negotiation
Foreign : USD 2.7 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Transport and Communications, Malawi
Start : 1989
Duration:

Objectives : The establishment of dry ports/inland clearance depots in order to reduce transit transport and costs and journey times through maritime ports and transit countries, achieve savings in foreign exchange payments, improve performance of the external trade sector and thereby contribute to economic development.

Description : In Malawi, one dry port/ICD facility will be established at Chirimba industrial site in Blantyre and one at the Canadian rail site at Kanengo in Lilongwe.

Dry port/inland clearance depot is a common user inland facility with public authority status equipped with fixed installations and offering services for handling and temporary storage of any kind of goods, including containers, carried under customs transit by any applicable mode of transport, placed under customs control and with customs and other agencies competent to clear goods for home use, warehousing, temporary admission, re-export, temporary storage for inward transit and outright export. *

Status : Project descriptions have been prepared by the UNDP/UNCTAD Transit Transport Project RAF/77/017, including cost estimates and supporting documents covering customs matters of dry ports/ICD's operations, management and operations of dry ports/ICD's and documentation and legal matters.
Study financed by Denmark. DANIDA has as well been approached for financing of the project.

In May 1991. the Government of Malawi secured two proposals for the establishment of a dry port/ICD's at Kanengo in Lilongue from the private sector.
The Government has approved one proposal which is scheduled to start construction in 1992.
However, the private sector has not secured all the financing required to complete the project.

* This definition of a dry port/ICD has been prepared by UNCTAD, Geneva, and has been submitted for clearance by the Customs Cooperation Council in Brussels.

September 1992

MAL.2.04: Improvement of Communications Systems, Malawi Railways

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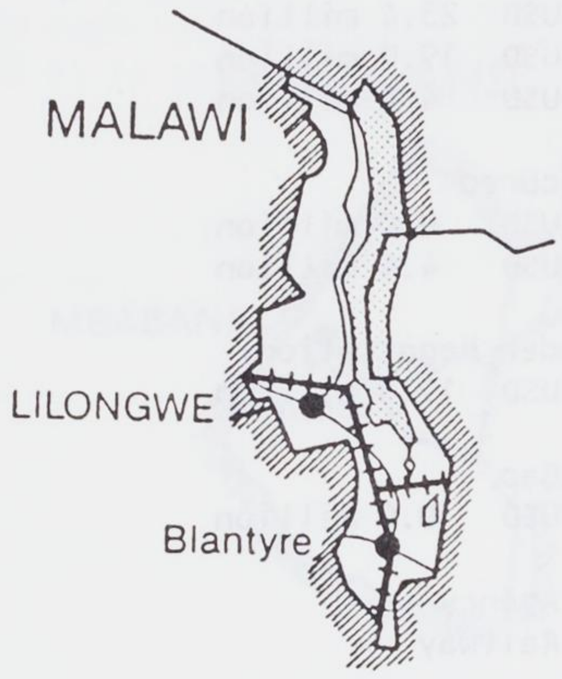


Estimated Costs
Total : USD 0.8 million
Foreign : USD 0.8 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.8 million

Executing Agency
Malawi Railways

Start : 1993
Duration: 1,5 Years

Objectives : Improvement of communication systems of Malawi Railways for efficient operations.

Decsription : The Project components are included in the Telecommunications Ten-Year Development Plan of 1987. The project consists of the following parts:

(i) Rehabilitation of Shipping Communications on Lake Niassa/Nyasa/Malawi, operated by Malawi Railways, USD 0.35 million;

(ii) Locomotive Radio Communication system for the Nkaya - Nacala route, USD 0.15 million;

(iii) Replacement of PABX for Malawi Railways headquarters, USD 0.25 million; and

(iv) Upgrading of an open wire carrier system, USD 0.05 million.

The current equipment for shipping communications on the Lake was installed in the late 1960's. It is practically unreliable and spares are difficult to obtain. Therefore it needs improvement to cope with the anticipated increase of lake traffic.

For safety and operational reasons, it is proposed to equip the four locomotives operating on the Nacala route with HF communications.

The existing PABX at Limbe is an obsolete Strowger exchange which has to be replaced.

The open wire system between Blantyre and Mozambique border will be upgraded from 5 channels to 12 channels.

Status : Funds are being sought for implementation.

September 1992

MOZ.2.01: Rehabilitation of Swaziland Railway, Matsapha - Mozambique
(03) Border

Estimated Costs
Total : USD 23.4 million
Foreign : USD 19.0 million
Local : USD 4.4 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 4.4 million

Funding Under Negotiation
Foreign : USD 19.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Swaziland Railway

Start : 1991
Duration: 5 Years

Objectives : To rehabilitate the original railway line which is essential for the economic transport of import and export goods and to reduce reliance on Republic of South Africa trade and transport.

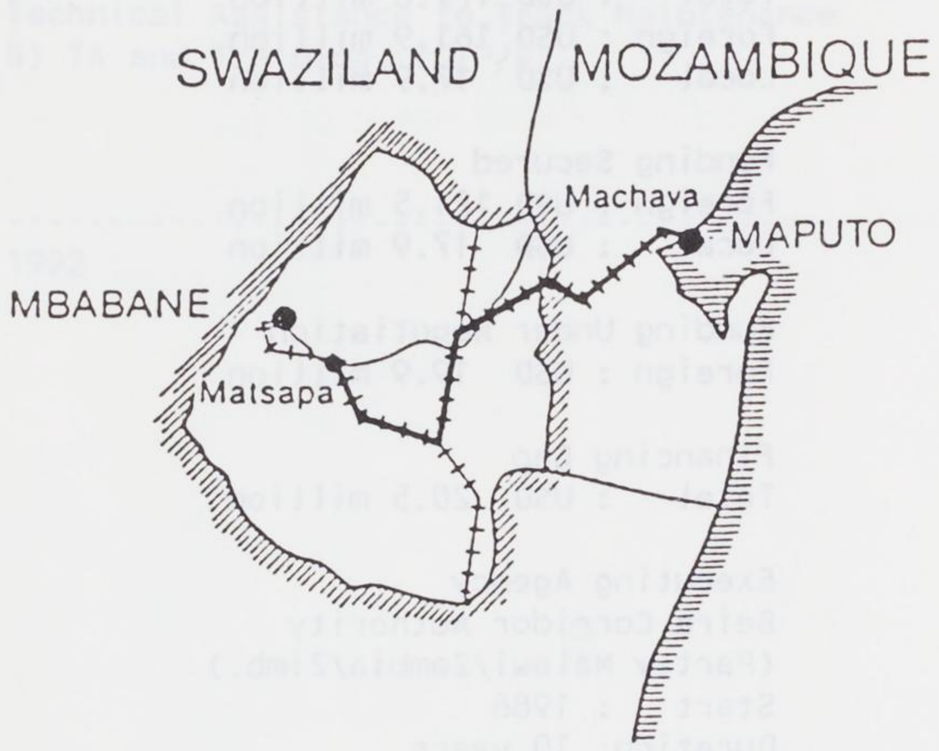
Description : The railway line between Matsapha and Phuzumoya and between Mpaka and the Mozambqiue border was constructed in the early 1960's. The deteriorating condition has resulted in speed restrictions which are adversely effecting generated revenue.

The project comprises detailed inspection of 9 bridges; rehabilitation of the bridges, formation and rail; replacement of approximately 165 000 sleepers and 115 kilometers of rail and changes to the train control system.

Status : The project is based on the recommendations of two studies. The Technical Study for Strengthing and Improvement of the Machava - Mtsapha Railway (P. MOZ.2.01) was carried out by Societa Tecnica Internazionale under financing by the Government of Italy. Also Matsapha - Mozambique Border Railway Line, Review of Existing Proposals and Identification of Alternative Implementation Strategies was carried out by Mott, Hay & Anderson International Limited under funding by the Commission of the European Communities.
Funding is sough for implementation.

September 1992

MOZ.2.01: Railway Rehabilitation
(PR-LG)



Estimated Costs
Total : USD 15.1 million
Foreign : USD 11.1 million
Local : USD 4.0 million

Funding Secured
Foreign : USD 11.1 million
Local : USD 4.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
CFM, Mozambique

Start : 1990
Duration: 2 Years

Objectives : Rehabilitation of the (Maputo) Machava - Matsapa (Swaziland) line between Machava and Swaziland border, Goba Railway Line.

Description : The project consists of the following parts :

(i) Earth works and drainage
(ii) Track, including ballast and sleepers
(iii) Protection works
(iv) Turnouts
(v) Signalling
(vi) Contingencies

The 64km long line Machava - Swaziland border consists of 45 kg/m rails on timber sleepers. The line has deteriorated to such an extent that major rehabilitation is needed on the Mozambique side of the border. It is expected that a rehabilitation on the Swaziland side of the border will be initiated also in 1990 (P.MOZ.2.01 (03).

The future standard consists of 45 kg/m longwelded rails on monobloc concrete sleepers with Pandrol fastenings.

Status : Final Report of a Technical Study on Improvement of the Machava Swaziland Railway (P.Moz.2.01 (01)) has been completed by SOTECNI Consultants, financed by Italy. Funding for implementation has been secured by Italy.

September 1992

MOZ.2.03: Railway Projects in Beira Port Transport System
Development Plan

Estimated Costs
Total : USD 179.8 million
Foreign : USD 161.9 million
Local : USD 17.9 million

Funding Secured
Foreign : USD 121.5 million
Local : USD 17.9 million

Funding Under Negotiation
Foreign : USD 19.9 million

Financing Gap
Total : USD 20.5 million

Executing Agency
Beira Corridor Authority
(Partly Malawi/Zambia/Zimb.)
Start : 1986
Duration: 10 years

Objectives : Rehabilitation and upgrading of the railway lines to the Port of Beira and provision of facilities to provide adequate transport capacity for the future traffic demand.

Description : The 10-Year Development Plan for the Beira Port Transport System includes the railway subprojects as listed below.

Project details have been published in the 10-Year Development Plan for the Beira Port Transport System.

Status : The projects are mostly being implemented.

Additional funds are being sought.

Subprojects Included in Programme:

	--- Cost ---			-- Funding --		
	Total	For'n	Local	Secu	Nego	Gap
R-CE-03 Track Rehabilitation Blantyre- Border.	15.5	12.4	3.1	3.1	12.4	0.0
*R-CE-04 Rehabilitation of the Sena Railway Line	81.4	68.5	12.9	73.9	7.5	0.0
R-CE-04 Phase 1) Quarry and Sleeper Factory	18.5	18.5	0.0	18.5	0.0	0.0
R-CE-04 Phase 2) Restoration of the Railway section Dondo- Inhamitanga (158 km)	62.9	50.0	12.9	55.4	7.5	0.0
R-CE-04 Phase 3) Rehabilitation of the Railway sections Inhamitanga- Vila Nova and Dona Ana-Moatize	0.0	0.0	0.0	0.0	0.0	0.0
R-CE-05 Study, Rail Link Kafue - Lions Den	0.8	0.8	0.0	0.0	0.0	0.8
R-CE-06 Line Doubling Beira to Dondo	0.0	0.0	0.0	0.0	0.0	0.0
R-CE-07 Track Maintenance Equipment CFM (C)	0.0	0.0	0.0	0.0	0.0	0.0
*R-ME-01 Rehabilitation of Wagons.	4.7	4.4	0.3	2.2	0.0	2.5
R-ME-01 C) Wagon Rehabilitation Programme	2.0	1.9	0.1	2.0	0.0	0.0
R-ME-01 D) Conversion of wagons to Roller Bearings	2.7	2.5	0.2	0.2	0.0	2.5
*R-ME-02 Procurement of Locomotive Power.	32.2	31.7	0.5	32.2	0.0	0.0
R-ME-02 B) Acquisition of new Main-Line Locomotives	25.3	25.3	0.0	25.3	0.0	0.0
R-ME-02 C) Acquisition of new Shunting Locomotives	6.9	6.4	0.5	6.9	0.0	0.0
R-ME-03 Replacement of Malawi Railway Wagons	2.0	2.0	0.0	0.0	0.0	2.0
R-ME-04 Rehabilitation of Locomotive Workshop CFM (C)	5.3	5.0	0.3	5.3	0.0	0.0
R-ME-05 Extension of Limbe Workshop	0.6	0.6	0.0	0.6	0.0	0.0
R-ME-06 Facilities, Spares, Equipment for CFM (C) Workshops	6.2	6.2	0.0	0.0	0.0	6.2
R-ME-07 Rescue Cranes and Rerailing Equipment.	0.0	0.0	0.0	0.0	0.0	0.0
R-OP-02 Electrification Study	0.7	0.7	0.0	0.0	0.0	0.7
R-ST-02 New Radio Telecommunication for Beira - Machipanda Railway	6.7	6.3	0.4	6.7	0.0	0.0
R-ST-03 Train Control System CFM (C)	5.1	4.7	0.4	0.4	0.0	4.7
R-ST-04 Wagon Control System CFM (C)	1.0	1.0	0.0	0.0	0.0	1.0

R-ST-05	Telephone Exchanges outside CFM (C) Beira	0.5	0.5	0.0	0.0	0.0	0.5
R-ST-06	Solar Power Panels, Blantyre to Border	0.1	0.1	0.0	0.0	0.0	0.1
R-TA-02	Technical Assistance to Malawi Railways	2.0	2.0	0.0	0.0	0.0	2.0
*TA-R-01	Technical Assistance to CFM-C Railway Division	11.1	11.1	0.0	11.1	0.0	0.0
TA-R-01	A)-Technical Departments (RENFE)	3.5	3.5	0.0	3.5	0.0	0.0
TA-R-03	Technical Assistance to Rehabilitation of Wagons	1.0	1.0	0.0	1.0	0.0	0.0
TA-R-05	Technical Assistance to Track Maintenance	2.9	2.9	0.0	2.9	0.0	0.0
TA-R1/2	B) TA and Training. (C/P/R).	7.6	7.6	0.0	7.6	0.0	0.0
		179.8	161.9	17.9	139.4	19.9	20.5

September 1992

MOZ.2.05: Rehabilitation of the Nacala - Entre-Lagos Railway, Mozambique

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Estimated Costs
Total : USD 181.5 million
Foreign : USD 152.1 million
Local : USD 29.4 million

Funding Secured
Foreign : USD 119.3 million
Local : USD 29.4 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 32.8 million

Executing Agency
DNPCF/BMN/MOZAMBIQUE

Start : 1983
Duration: 12 Years

Objectives : To rehabilitate and upgrade the line between Nacala and Cuamba and to improve the stretch between Cuamba and Malawi border (Entre Lagos) by heavy maintenance, and rehabilitation and acquisition rolling stock and other facilities in order to provide means for international traffic between Nacala and Malawi and for Mozambique's internal development.

Acquisition of new locomotives, wagons, coaches, additional maintenance equipment etc. are programmed after 1994 (not included in the above). Rehabilitation of wagons is included in P.MOZ.2.08 and acquisition of new locomotives for CFM as a whole, in P.MOZ.2.12.

Status : The 1st Phase of the track rehabilitation (USD 101.5 million) has been completed, and the 2nd phase is ongoing. The project amounts to USD 283 million including the cost of the completed part.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01-B	Track Rehabilitation (ii) 2nd Phase (Nampula - Cuamba, 346 Km)	143.6	121.4	22.2	141.5	0.0	2.1
01-C	Track Rehabilitation (iii) 3rd Phase (Cuamba - Entre Lagos, 77 Km)	18.7	12.8	5.9	5.9	0.0	12.8
02	Rehabilitation of locomotives.	3.5	3.5	0.0	0.0	0.0	3.5
03	Rehabilitation of 30 coaches	1.1	1.1	0.0	0.0	0.0	1.1
04	Railway Telecommunications	6.9	6.8	0.1	0.1	0.0	6.8
05	Workshops, equipment and material	7.7	6.5	1.2	1.2	0.0	6.5
		181.5	152.1	29.4	148.7	0.0	32.8

September 1992

MOZ.2.06: Rehabilitation of Maputo - Chicualacuala Railway

Estimated Costs
Total : USD 224.4 million
Foreign : USD 213.7 million
Local : USD 10.7 million

Funding Secured
Foreign : USD 81.8 million
Local : USD 10.7 million

Funding Under Negotiation
Foreign : USD 39.9 million

Financing Gap
Total : USD 92.0 million

Executing Agency
DNPCF/BMS Mozambique

Start : 1986
Duration: 15 Years

Objectives : Rehabilitation and upgrading of the track, motive power, rolling stock, workshops and other facilities to make it possible to reopen the line for international traffic and to provide adequate capacity for the future traffic demand.

Description : The first phase of the project was initiated in 1986, financed by UK and Mozambique, and continues until 1989. The second phase, based on the Study on Rehabilitation, Operation and Maintenance of Limpopo Line by Mott, Hay and Anderson of UK and SLI Consultants of Canada, has also been initiated.
Core programme (phase II-A): C - Projects.
Additional Support Programme (phase II-B): A-Projects.

Status : The first phase is fully financed by UK (USD 25.0 million) and Mozambique (USD 2.0 million).

Funds have been secured for the Core Programme of the second phase

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
*031	Phase I: Track Renewal, resleepering, welding plant, communications etc.	23.8	21.8	2.0	23.8	0.0	0.0
*032	Phase II-A: Completion of Rehabilitation, Core Programme	111.7	106.1	5.6	85.7	21.8	4.2
*033	Phase II-B: Additional Support Programme	90.7	89.8	0.9	0.9	0.0	89.8
A-BR1/3	Housing, Buildings incl. New Workers Housing (Mahotas)	6.4	5.2	1.2	1.2	0.0	5.2
A-LO1/4	Locomotives: spares, materials and technical assistance	55.7	55.5	0.2	0.2	0.0	55.5
A-WA1/3	Wagons: spares, materials and technical assistance	31.5	31.3	0.2	0.2	0.0	31.3
C-BG1/2	Bridge Repairs	2.8	2.7	0.1	0.6	2.2	0.0
C-BR1/3	Other buildings and services, water, power generation	3.7	3.7	0.0	0.0	3.7	0.0
C-FC-01	Technical Assistance for Financial Control	1.2	1.1	0.1	0.1	1.1	0.0
C-LO1-6	Locomotives : spares, tools, workshops, technical assistance	15.2	15.2	0.0	0.0	15.2	0.0
C-MD-01	Rail Depot: Equipment	2.0	0.8	1.2	2.0	0.0	0.0
C-OM-1	Workshop study	0.6	0.6	0.0	0.6	0.0	0.0
C-QO1/2	Quarry Equipment and Ballast	3.8	2.0	1.8	3.8	0.0	0.0
C-RC-01	Rescue Crane and Rerailing Equipment	5.3	5.3	0.0	5.3	0.0	0.0
*C-RD1/2	Road Maputo - Chokwe - Chicualacuala	0.0	0.0	0.0	0.0	0.0	0.0
C-RM1/4	Track Renewal by BMS	14.0	10.2	3.8	8.6	5.4	0.0
C-RZ1/5	Concrete sleepers, ballast, track renewal by NRZ	32.1	32.1	0.0	32.1	0.0	0.0
C-SC1/2	Stores and Inventory Control	1.5	1.5	0.0	0.0	1.5	0.0
C-SF1/2	Sleeper factory/sleepers.	5.0	3.7	1.3	5.0	0.0	0.0

C-ST1/2	Signal System Maputo-Machava	12.4	12.4	0.0	12.4	0.0	0.0
C-TA1-3	Technical assistance to BMS and CFM	7.7	7.5	0.2	7.7	0.0	0.0
C-TE1/2	Equipment and Tools for Track Maintenance	7.5	7.5	0.0	2.9	4.6	0.0
C-TL1/2	Telecommunications	3.3	3.1	0.2	3.3	0.0	0.0
C-TM1/3	Track materials.	6.1	6.1	0.0	6.1	0.0	0.0
*C-WA1-5	Wagons : spares, tools, buildings, technical assistance	0.0	0.0	0.0	0.0	0.0	0.0
MJ-RP	Maputo Junction .	6.6	6.2	0.4	0.4	6.2	0.0
		224.4	213.7	10.7	92.5	39.9	92.0

September 1992

MOZ.2.08: Rehabilitation and Maintenance of Wagons - CFM, Mozambique

Estimated Costs
Total : USD 30.1 million
Foreign : USD 27.0 million
Local : USD 3.1 million

Funding Secured
Foreign : USD 2.8 million
Local : USD 3.1 million

Funding Under Negotiation
Foreign : USD 4.2 million

Financing Gap
Total : USD 20.0 million

Executing Agency
DNPCF, Mozambique

Start : 1987
Duration:

Objectives : Rehabilitation of rolling stock, change over to roller bearings and provision of facilities for wagon maintenance.

Description: The project includes the following sub-projects :

		Cost (USD, million) Total	Foreign
(i)	Workshop for CFM-N (Nampula), repair tracks at key locations, spares, materials, tools, technical assistance;	6.4	5.9
(ii)	Rehabilitation and salvaging of wagons; provision of spare parts,equipment,building repair and Technical Assistance for Wagon Workshop,Maintenance Depots and Repair Tracks of CFM (S);	16.7	15.5
(iii)	Conversion of 1000 CFM-S and CFM-N wagons to roller bearings, and refurbishment	7.0	5.6
	Total	30.1	27.0

Corresponding projects for CFM-C are included in project No. MOZ.2.03, related to the 10-Year Development Plan for the Beira Port Transport System.
Workshop improvements, and spare parts, including technical assistance for CFM S have now been included under this project.
The above sub-projects are based on the findings of Project No. AAA.2.01, Study of Railway Rolling Stock, carried out by KAMPSAX SWEDRAIL.
Former Projects No. MOZ.2.08, Change Over to Roller Bearings and Reconditioning of Wagons; MOZ.2.09, Facilities, Materials, Spares and Equipment for Workshops; and MOZ.2.10, Wagon Rehabilitation CFM-S, have been combined under this project.

Status : Part of item (ii), Rehabilitation of 150 Wagons CFM-S, completed financed by Italy and Mozambique (USD 3.0 million).

Additional funding is being sought. USD 4.2 million under negotiation with Italy. CIDA, DANIDA and Japan have pledged participation in the project.

September 1992

MOZ.2.11: Computerized Wagon Control System for CFM, Mozambique

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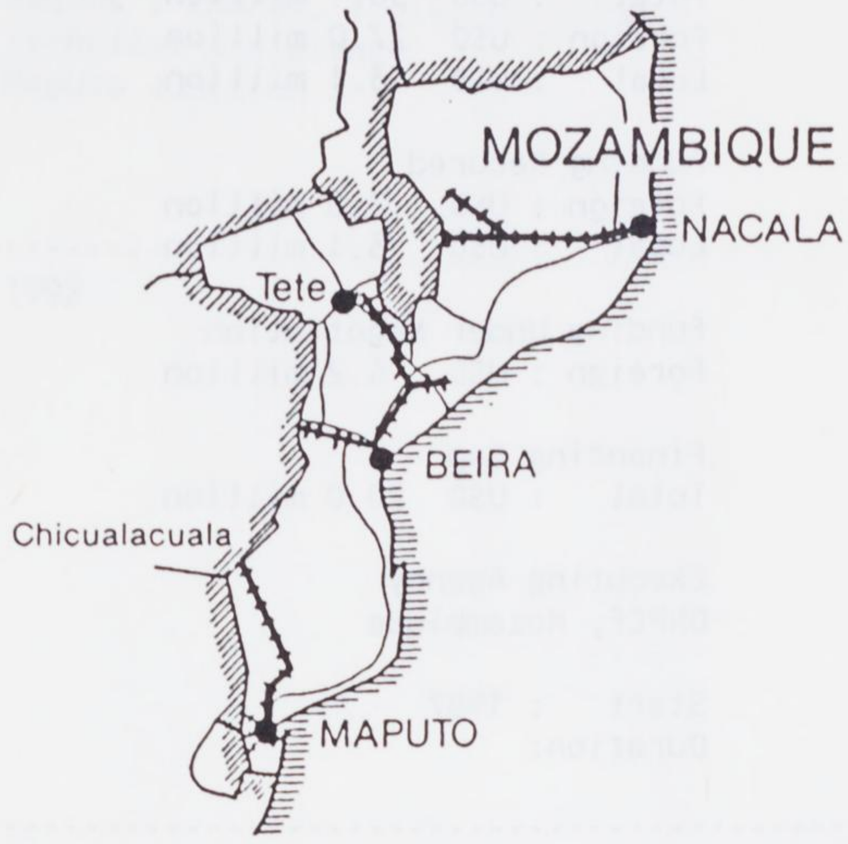


Estimated Costs
Total : USD 15.3 million
Foreign : USD 13.2 million
Local : USD 2.1 million

Funding Secured
Foreign : USD 6.4 million
Local : USD 2.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 6.8 million

Executing Agency
DNPCF, Mozambique

Start : 1989
Duration: 4 Years

Objectives : Introduction of computerized wagon control for Mozambique Railways (CFM), pilot project for CFM(S).

Description : Several studies for computerized wagon control have been made. The basic concepts proposed by RITES have been approved for implementation covering 10 sub-systems of CFM(S) (cost estimate USD 9.0 million). To begin with a pilot project (2.5 million) for CFM-South has been approved for implementation.

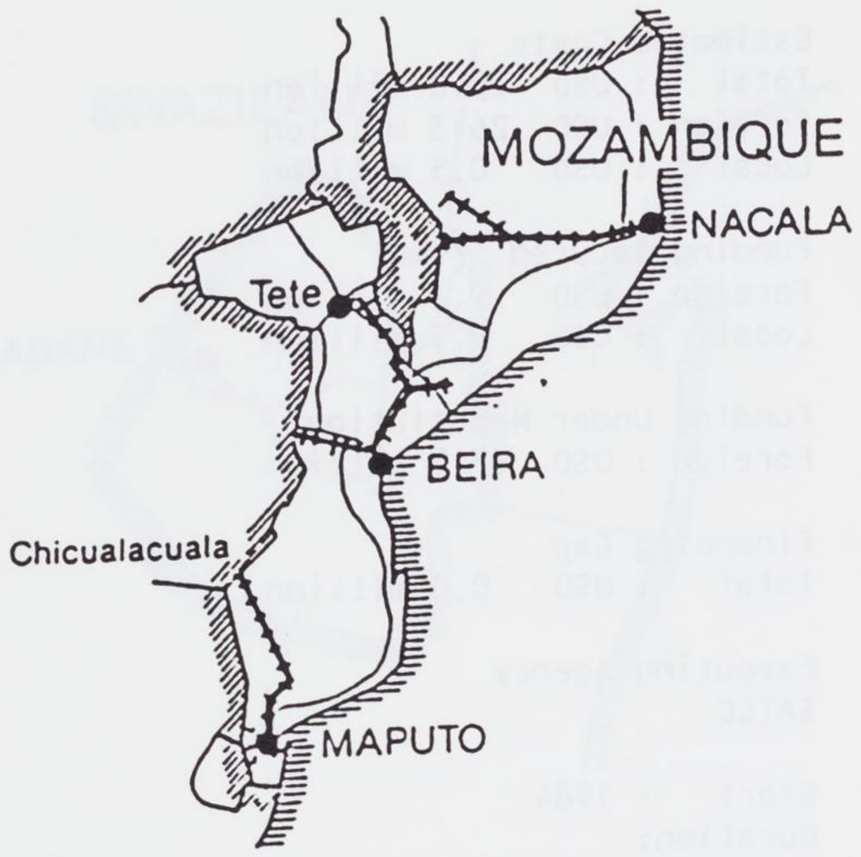
The long term project includes 10 sub-systems but the present pilot project only 3-4 such systems. It includes training of personnel and provision of expert services.

A computerized system is already in operation in Zimbabwe. Similar services should be available in Mozambique for the proper control of international operations. The advantages include better utilization of wagons, less hire charges, better maintenance, better customer services and proper accounting of hire charges.

Status : USD 6.4 million have been secured from Kuwait. Four software specialists have been contracted. A site has been allocated to the computer centre and a project office has been established.

September 1992

MOZ.2.12: Rehabilitation and Acquisition of Locomotives for CFM



Estimated Costs
Total : USD 65.7 million
Foreign : USD 61.4 million
Local : USD 4.3 million

Funding Secured
Foreign : USD 61.4 million
Local : USD 4.3 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
DNPCF, Mozambique

Start : 1989
Duration: 5 Years

Objectives : Provision of adequate motive power for main line operations for the Mozambique Railways to cope with the traffic.

Description : The project consists of the following parts :

(i)	Rehabilitation of 10 GE locomotives	USD	9.0 million
(ii)	Purchase of 45 new locomotives	USD	90.0 million
(iii)	4 GE locomotive power packs	USD	3.2 million
(iv)	Contingencies	USD	0.8 million

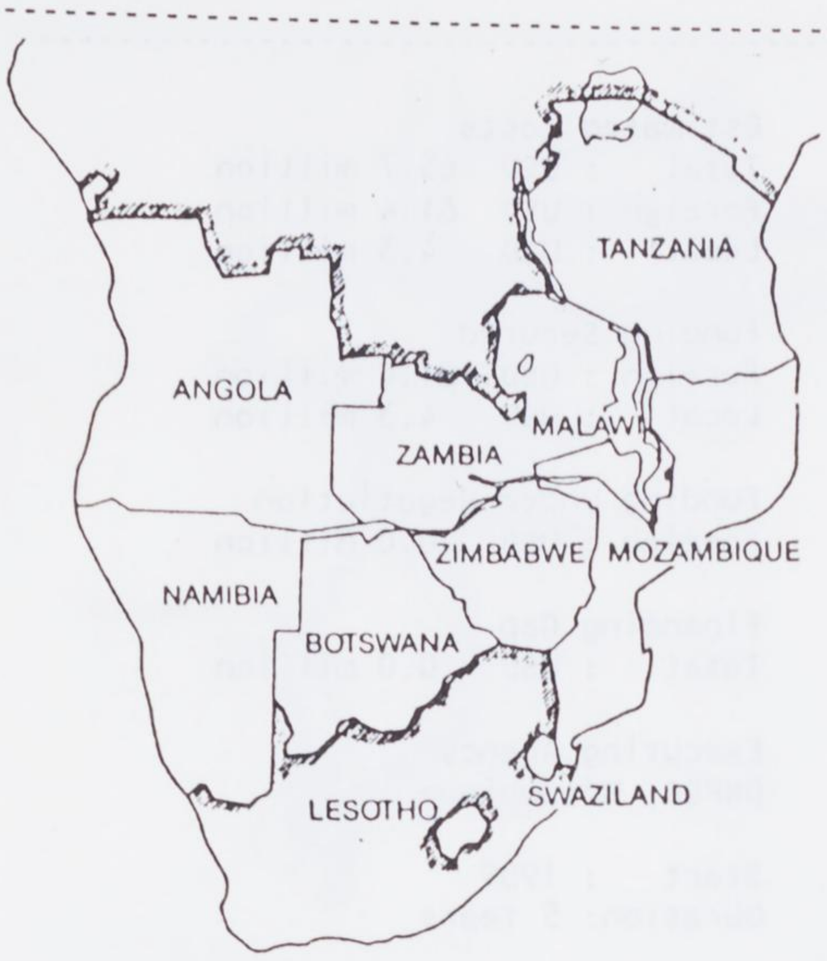
The above includes the initial supply of spare parts and tools, and provision of technical assistance.
At present the main line fleet consits of 63 GE and 2 AEI diesel electric locomotives. Altogether 34 units are operational and 22 planned for local repairs. Another 13 units are considered for rehabilitation. In addition 6 steam locomotives have been rehabilititated for main line operations. Other steam locomotives are not worth while to repair but will be scrapped. (A separate programme is going on to repair the fleet of diesel hydraulic shunting locomotives locally).
8-10 units are needed for track rehabilitation works on each of the following lines: Nacala-Malawi; Beira-Zimbabwe and Maputo-Zimbabwe. Similar needs will arise in the near future for the Beira-Malawi and Maputo-Swaziland lines.
In total 45 new main line locomotives are needed, based on the recent RITES Study of Locomotives for DNPCF-Mozambique, commisioned by the World Bank:
- 11 for CFM (S)
- 20 for CFM (C)
- 14 for CFM (N)

The shortage of motive power, to cope with the above works and present and anticipated traffic, will be covered in the first place by the above programme.

Status : Feasibility study carried out by Rites.

September 1992

MOZ.2.13: Development of Railway Training for Portuguese speaking Personnel



Estimated Costs
Total : USD 26.8 million
Foreign : USD 26.3 million
Local : USD 0.5 million

Funding Secured
Foreign : USD 9.1 million
Local : USD 0.5 million

Funding Under Negotiation
Foreign : USD 17.2 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start : 1984
Duration:

Objectives : Development of training of Portuguese speaking executives and personnel in Mozambique and Angola to provide them with basic professional knowledge for their work.

Description : When Mozambique gained independence an exodus of Portuguese railway personnel, especially of executives, took place. the personnel remaining in the railway service had to assume duties for which they had not been prepared. To overcome these problems a study was carried out by SOFRERAIL/NORMA/SEDES Consultants. The facilities will be available also for Angola.

Based on the recommendations of the consultants a 3-phase programme has been approved.

1st Phase
Development of the Railway School at Inhambane, short term courses and pedagogical training.

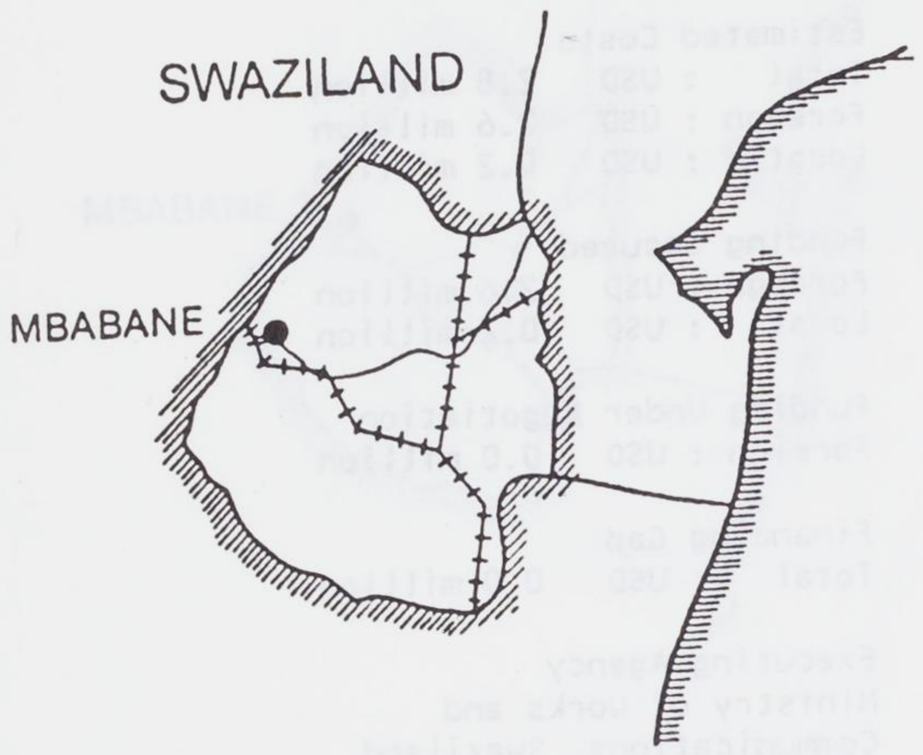
2nd Phase
Technical assistance, development of school activities and on the job training and rehabilitation of regional training centres.

3rd Phase
To be defined later on the above basis.

Status : Ongoing.

September 1992

SWA.2.01: Rolling Stock for Swaziland Railway



Estimated Costs
Total : USD 10.4 million
Foreign : USD 10.0 million
Local : USD 0.4 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.4 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 10.0 million

Executing Agency
Swaziland Railway

Start : 1993
Duration: 3 Years

Objectives : To provide Swaziland Railway with adequate rolling stock and maintenance facilities to cope with the traffic demand.

Description : The project consists of the following parts:

(i) Acquisition of 120 dropsided, 100 coal, 75 fruit, 48 timber, 24 covered, 15 flat, and 51 molasses tank wagons;

(ii) Conversion of 130 old iron ore wagons to high-sided wagons for bulk transport;

(iii) Wagon and machine workshop and equipment

At present the Swaziland Railway hires wagons from the neighbouring countries partly because the previous stock has been of wrong type and has deteriorated. In essence the project aims at replacing the hired wagons by their own and at providing maintenace facilities for their own fleet.

Only a small shelter at Sidvokodvo is available for wagon repairs with inadequate facilities. A new combined wagon workshop and repair track is urgently needed.

Status: Funding is sought for implementation.

September 1992

SWA.2.02: Establishment of Dry Port/ICD in Swaziland

Estimated Costs
Total : USD 2.8 million
Foreign : USD 2.6 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 2.6 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Works and Communications, Swaziland
Start : 1990
Duration: 2 Years

Objectives : The establishment of a dry port inland clearance depot in order to reduce transit transport costs and journey times through maritime ports, improve perforamcne of the external trade sector and thereby contribute to economic development.

Description : In Swaziland, one dry port/ICD facility will be established at the railway yard at Matsapha between Manzini and Mbabane.

Dry port/Inland clearance depot is a common user inland facility with public authority status equipped with fixed installations and offering services for handling and temporary storage of any kind of goods, including containers, carried under customs transit by any applicable mode of transport, placed under customs control and with customs and other agencies competent to clear goods for home use, warehousing, temporary admission, re-export, temporary storage for onward transit and outright export. *

Status : Project description has been prepared by the UNDP/UNCTAD Transit Transport Project RAF/77/017, including cost estimates and supporting documents covering customs matters for dry ports/ICD's operations, management and operations of dry ports/ICD's and documentation and legal matters.

Danish appraisal mission carried out. Report outstanding.

The Government of Swaziland has nominated Swaziland Railway as the local agency for implementation of the project.

September 1992

SWA.2.03: Provision of Technical Assistance and Management Training to Swaziland Railway

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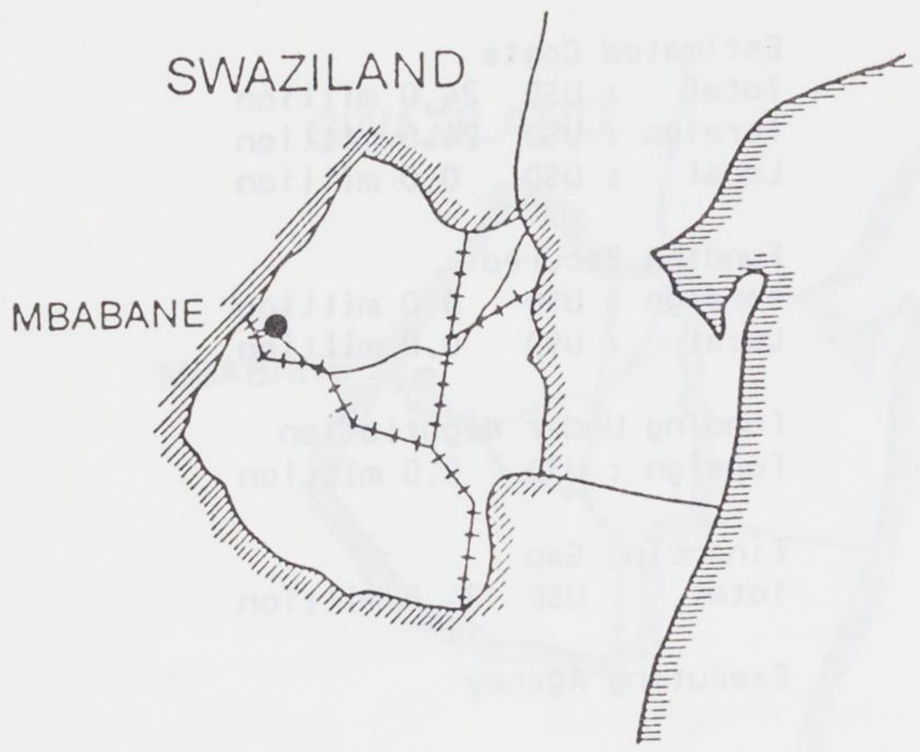

Estimated Costs
Total : USD 4.7 million
Foreign : USD 3.5 million
Local : USD 1.2 million

Funding Secured
Foreign : USD 3.5 million
Local : USD 1.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Swaziland Railway

Start : 1989
Duration: 4 Years

Objectives : Provision of technical assistance and management training to Swaziland Railway, forming part of a new regional rail transportation project whose ultimate aim is enhancing the efficiency and capacity of the rail system within the SATCC region.

Description : The project consists of provision of technical assistance for periods varying between two to four years in the areas of General Management, Operations, Financing, Management, Marketing, Personnel and Civil Engineering.

Particular emphasis is placed on the development of human resources, comprising short term training in the managerial functions identified above. Provision is also made for long term training for selected candidates who will eventually succeed the technical advisors in these functional areas.

Status : Ongoing.

September 1992

SWA.2.04: Dieselization of Swaziland Railway

Estimated Costs
Total : USD 24.0 million
Foreign : USD 24.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 24.0 million

Executing Agency

Start : 1993
Duration: 4 Years

Objectives : To replace the leased steam locomotives and to provide Swaziland Railway with their own diesel locomotives.

Description : Swaziland Railway is carrying most of Swaziland's bulk export like sugar, molasses, coal, pulp, citruc etc.
All these are new traffic demands and require additional motive power.

Steam Locomotives currently in use are to be phased out by 1992 because their life would have expired and can no longer cope with current traffic levels.

To provide security for the operations it is considered essential that the Swaziland Railway acquire their own locomotive fleet. It has been decided to modernize the operations by diesel power. It is estimated that 10 diesel electric locomotives are needed to handle the anticipated traffic, mostly to and from Maputo.

Immediate needs by the end of 1992, indicate that six diesel - electric locomotives plus augmentation of maintenance facilities are needed for stage 1 Of project. (USD 15 million).

Status : Funds are being sought for staged implementation.

September 1992

SWA.2.05: Provision of Operating, Security and Safety Related Equip. for Swaziland Railway

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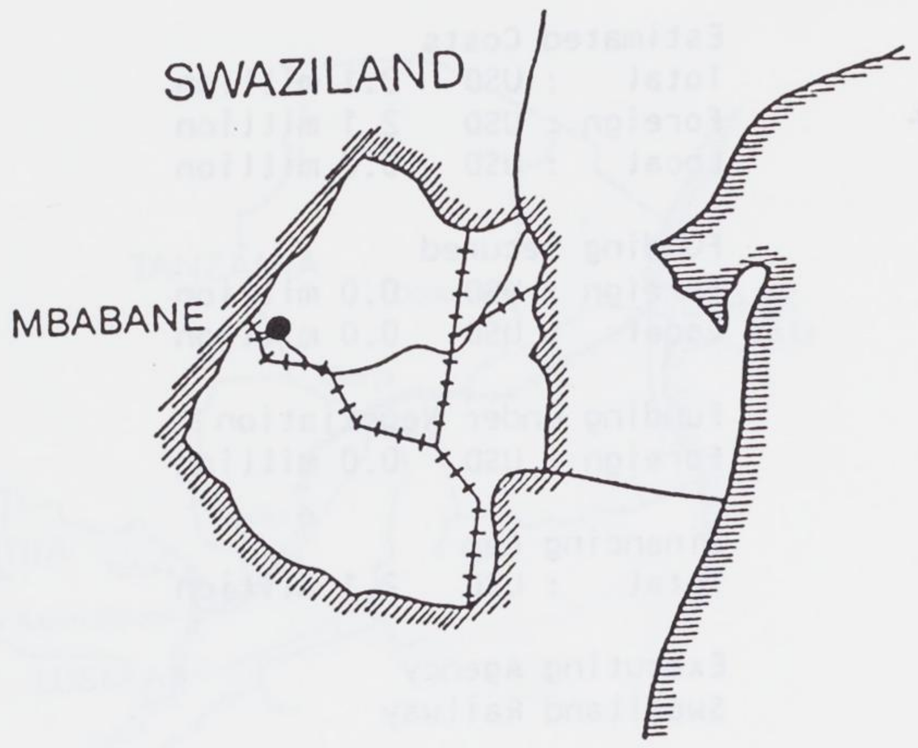

Estimated Costs
Total : USD 2.4 million
Foreign : USD 2.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.4 million

Executing Agency
Swaziland Railway

Start : 1993
Duration: 2 Years

Objectives : Acquisition of relevant equipment to reduce Swaziland Railways' dependence on RSA and to enhance the operating efficiency, security and safety of the railway operations between Swaziland and Maputo.

Description : The project is composed of the following parts :

		Cost (USD, million)
(ii)	Heavy track maintenance equipment	0.4
(iii)	Rescue equipment	0.3
(iv)	Weed control equipment	0.6
(v)	2 mechanical horses and 4x2 axle trailers (for containeir transport)	0.4
(vi)	Mobile clinic	0.1
(vii)	50 tonne portal container crane	0.6
	Total	2.40

Track maintenance equipment includes a bull-dozer, grader, sheepsfoot roller and vibrator grid roller. A 5-7 tonne lorry provided with a compressor, 4 air cotrolled 50-tonne jacks and a bull-dozer are needed as rescue equipment. The present mobile clinic vehicle was bought in 1982 and should be replaced with modern equipment.

Status : Funds are sought for implementation.

September 1992

SWA.2.06: Integrated Telecommunications for Swaziland Railway

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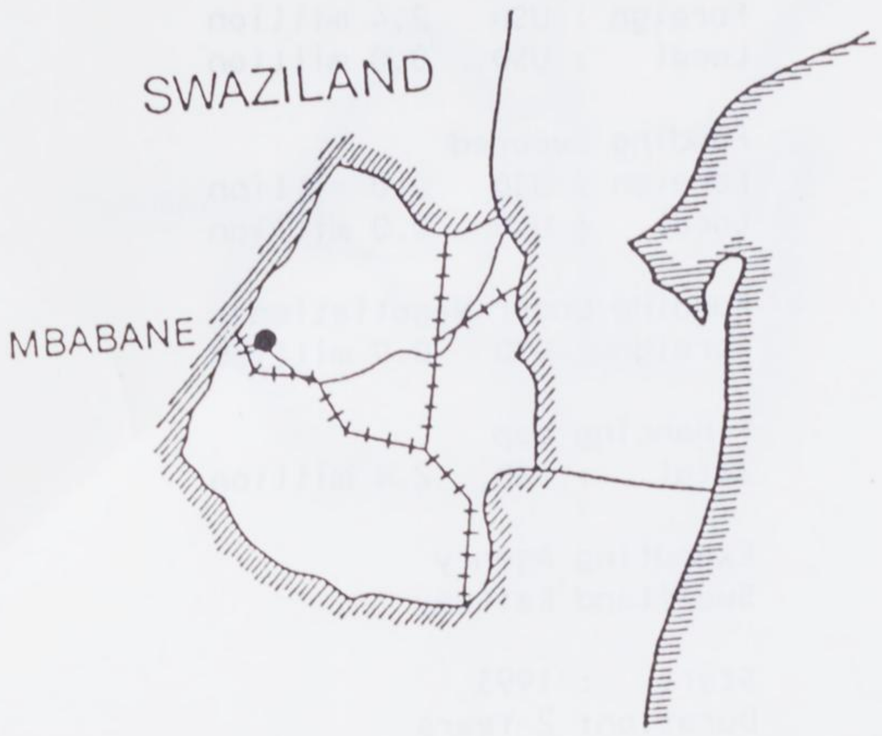

Estimated Costs
Total : USD 2.1 million
Foreign : USD 2.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.1 million

Executing Agency
Swaziland Railway

Start : 1993
Duration: 2 Years

Objectives : To provide Swaziland Railway with an adequate telecommunications system for operations and train control.

Description : Swaziland Railway operates its own trackside open-wire system for station-to station communications. An old 50 line Stronger PABX at Sidvokodvo is nearing the end of its useful life. Exchanges are necessary also at other sites.

The project comprises of six new PABX's, and two parralel VHF mobile radio systems for train control and wayside communications. Associated antennae, towers, power equipment, test equipment, spares, engineering, installation and commissioning and training services are to be included.

Status : The project is based on the recommendations of the Regional Study on Railway Telecommunications and Signalling (P.AAA.2.04) carried out by SLI Consultants Funding is sought for implementation.

September 1992

TAN.2.01: TAZARA 10 Year Development Plan and Malawi-Dar es Salaam Projects

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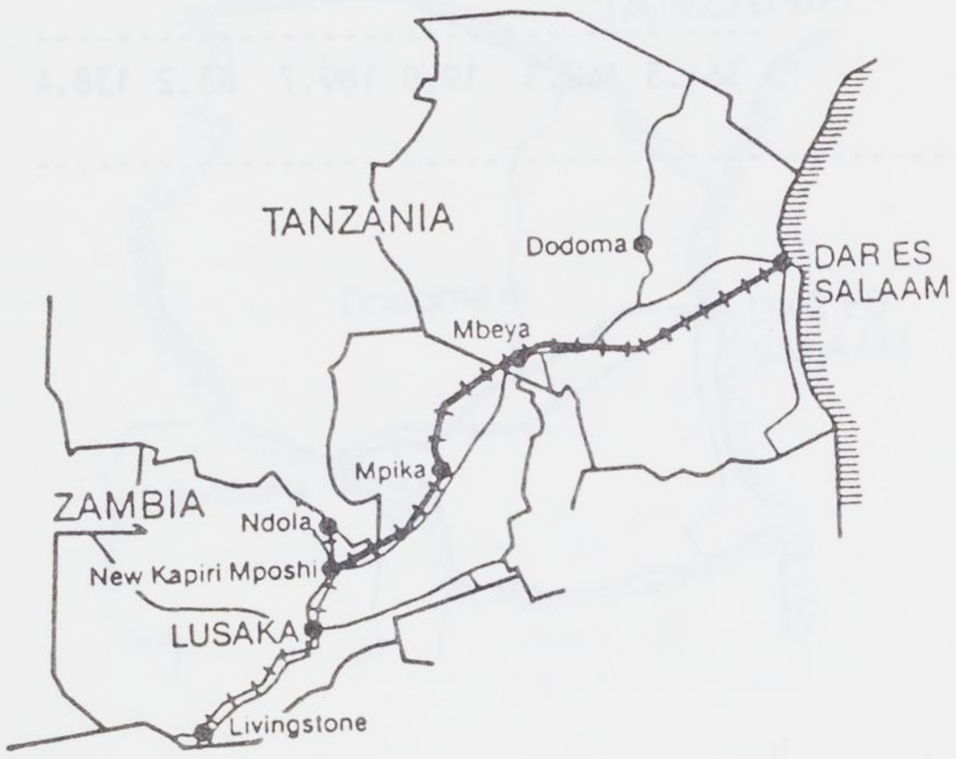


Estimated Costs
Total : USD 361.3 million
Foreign : USD 342.3 million
Local : USD 19.0 million

Funding Secured
Foreign : USD 170.7 million
Local : USD 19.0 million

Funding Under Negotiation
Foreign : USD 33.2 million

Financing Gap
Total : USD 138.4 million

Executing Agency
TAZARA

Start : 1985
Duration: 10 Years

Objectives : Rehabilitation and upgrading of the TAZARA to provide adequate capacity for future services.

Description : The Revised 10 Year Development Plan prepared by TAZARA with assistance from SATCC/TU includes permanent way and construction projects (CE Projects), signalling and telecommunication projects (ST Projects), motive power, rolling stock and mechanical equipment projects (ME Projects), and general management and training projects (GM Projects).

Projects to facilitate Malawi traffic to TAZARA have been added.
The projects are mostly being implemented. The status is described below.

Status : The following countries and organizations have pledged to finance TAZARA projects, Austria, Denmark, Federal Republic of Germany, Finland, Norway, People's Republic of China, Sweden, Switzerland, USAID, ADB and EEC. Related Malawi projects are financed by KfW, ODA and USAID.

Additional funds are being sought. The Plan has been reviewed and revised.

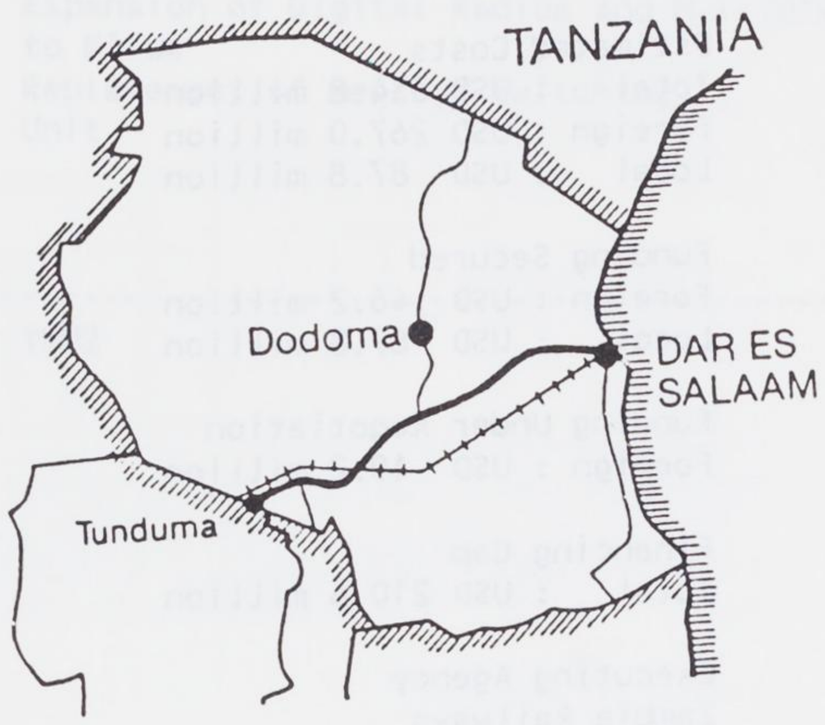
Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
CE:01	Rehabilitation of Quarries	23.9	22.2	1.7	23.9	0.0	0.0
CE:02	Permanent Rectification of Landslides	38.0	32.9	5.1	5.7	32.3	0.0
CE:03A	Mechanized Track Maintenance	22.0	21.9	0.1	11.2	0.0	10.8
CE:03B	Spare and Wear Parts	2.5	2.5	0.0	2.5	0.0	0.0
CE:03C	Manual Track Maintenance	18.0	15.0	3.0	3.0	0.0	15.0
CE:04	Rail Welding	31.7	27.0	4.7	31.7	0.0	0.0
CE:05	Rail Burn Repairs	8.4	7.9	0.5	8.4	0.0	0.0
CE:07	Railway Link TAZARA-Mpulungu Port (Study), Zambia	0.4	0.4	0.0	0.0	0.0	0.4
CE:08	Emergency Bridges	0.9	0.9	0.0	0.0	0.9	0.0
CE:09	Malawi Cargo Centre, Mbeya	6.4	6.4	0.0	6.4	0.0	0.0
CE:10	Malawi Cargo Centre, Dar es Salaam	8.6	8.6	0.0	8.6	0.0	0.0
GM:01A	Technical Assistance to Head Office	3.9	3.9	0.0	3.9	0.0	0.0
GM:01B	Job Evaluation	0.6	0.6	0.0	0.0	0.0	0.6
GM:02	Manpower Development Plan and Training	6.9	6.4	0.5	6.9	0.0	0.0
GM:03	Project Co-ordinating Unit	6.2	5.7	0.5	6.2	0.0	0.0
ME:01	Locomotives	104.3	101.8	2.5	53.0	0.0	51.3
ME:02A	Goods Wagons, Phase I	0.0	0.0	0.0	0.0	0.0	0.0
ME:02B	Phase II	30.0	30.0	0.0	0.0	0.0	30.0
ME:03	Trolleys and Trailers	12.5	12.5	0.0	3.2	0.0	9.3
ME:04	Handling Equipment for Goods Depots	0.5	0.5	0.0	0.0	0.0	0.5
ME:05A	Rescue Crane and Rerailing Equipment	6.8	6.6	0.2	6.8	0.0	0.0
ME:05B	Accident Prevention phase II.	4.0	3.8	0.2	1.9	0.0	2.1
ME:06A	Wheel Lattes.	0.0	0.0	0.0	0.0	0.0	0.0

ME:06B	Underfloor Wheel Lathe	2.4	2.4	0.0	2.4	0.0	0.0
ME:07	Mechanical Equipment for Work Shops	10.4	10.4	0.0	2.0	0.0	8.4
ME:08	Coaches	10.0	10.0	0.0	0.0	0.0	10.0
ME:09	Malawian Tank Wagons and Tank Containers	1.3	1.3	0.0	1.3	0.0	0.0
ST:01	Solar Power Panels.	0.0	0.0	0.0	0.0	0.0	0.0
ST:04	Feasibility Study of Future Telecommunications and Signalling System	0.7	0.7	0.0	0.7	0.0	0.0
		361.3	342.3	19.0	189.7	33.2	138.4

September 1992

TAN.2.02: Conversion from UIC to AAR airbrake standard for TAZARA and Malawi Railways.



Estimated Costs
Total : USD 1.9 million
Foreign : USD 1.9 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.9 million

Executing Agency

Start : 1992
Duration:

Objectives : To convert 350 wagons (TAZARA) and 22 tanks wagons (Malawi Railways) from UIC to SATCC approved AAR airbrake standard.

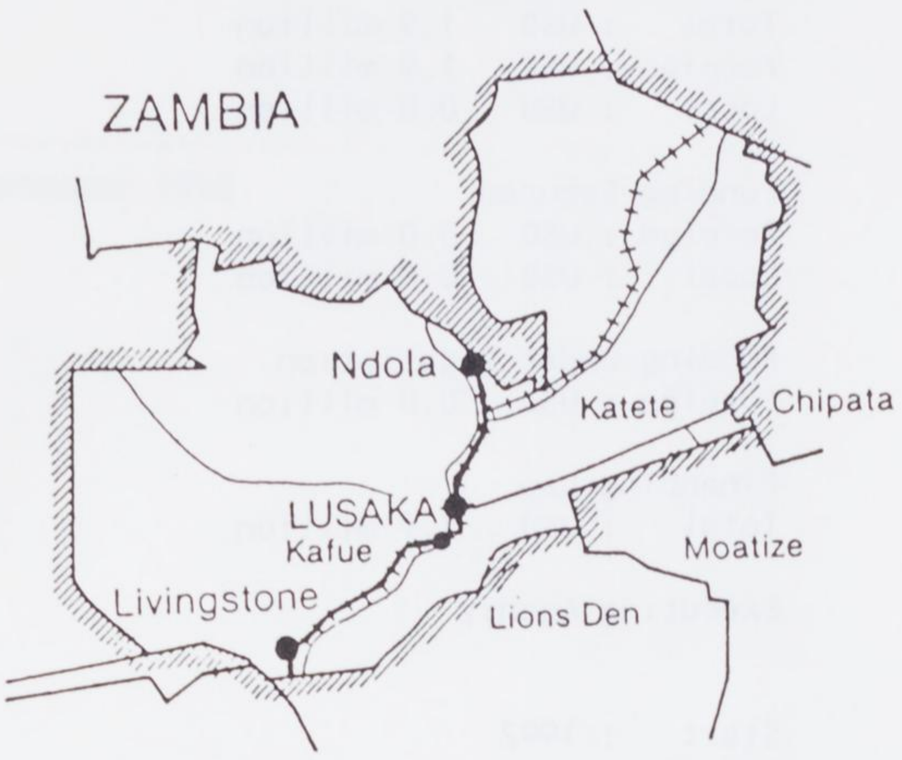
Description : The SATCC railway administrations as part of the strategy on Technical standardisation and harmonisation of rolling stock have adopted the AAR airbrake as a standard for the region. Consequentially railway administrations are required to ensure that their rolling stock conforms to this standard in order to ensure wagon interchangebility.
TAZARA and Malawi railways are therefore desirous to convert 350 general purpose wagons and 22 tanks wagons procured prior to the adoption of the AAR standard. The 22 tank wagons for Malawi will be utilised on the TAZARA route for transportation of fuel for Malawi.

To minimise technical problems in train operations and ensure wagon interchangeability it is necessary to ensure that SATCC railway rolling stock conforms to a uniform airbrake standard TAZARA presented a paper on operational and technical problems experienced when running combinations of UIC/AAR trains following tests.

Status : Funds for the project are being sought.

September 1992

ZAM.2.01: Zambia Railways 10-Year Development



Estimated Costs
Total : USD 354.8 million
Foreign : USD 267.0 million
Local : USD 87.8 million

Funding Secured
Foreign : USD 46.2 million
Local : USD 87.8 million

Funding Under Negotiation
Foreign : USD 10.2 million

Financing Gap
Total : USD 210.6 million

Executing Agency
Zambia Railways

Start : 1990
Duration: 10 Years

Objectives : A 10-Year Development Plan has been prepared for the Zambia Railways for rehabilitation and for the purposes to handle the future traffic.

Description : The Plan includes the following parts:
- 9 civil engineering projects
- 8 telecommunications projects
- 8 mechanical engineering projects
- 4 general management projects

The details of the projects have been given in the booklet Zambia Railways Limited, 10-Year Development Plan, of January, 1990.

Status : The plan has been approved by SATCC. A technical coordination conference was held in June 1990, as a result some pledges were made and are being followed up. Some aspect will be reviewed.

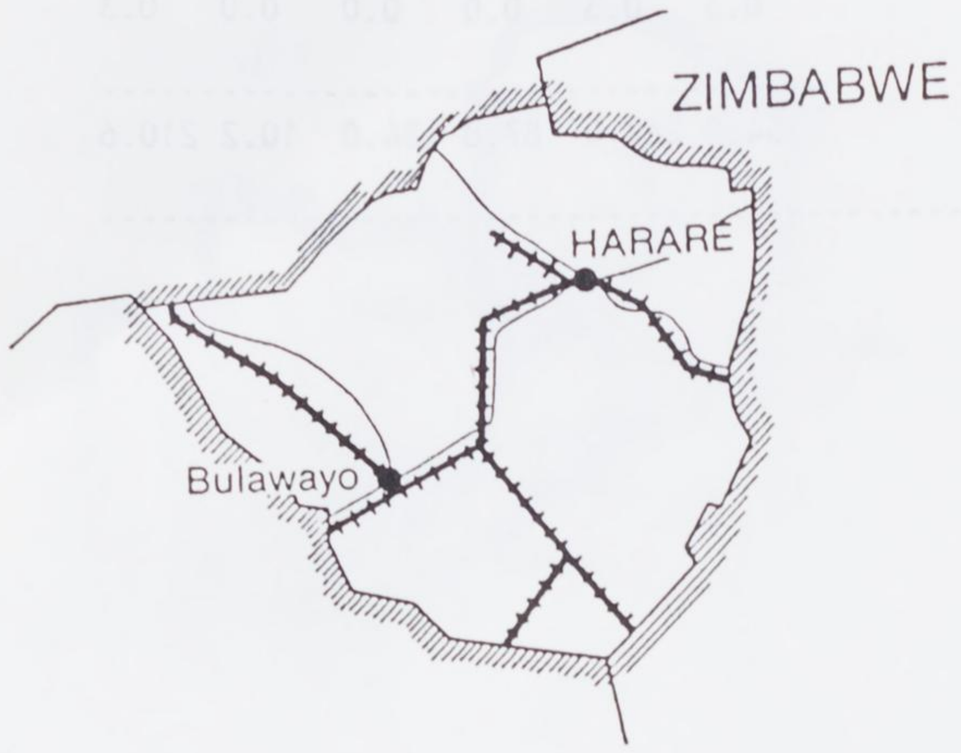
Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
CE:1	Track Renewal Sinwani to Livingstone	33.6	12.3	21.3	32.1	0.0	1.5
CE:2	Track Repair and Upgrading	75.0	30.0	45.0	45.0	0.0	30.0
CE:3	Establishment of Quarries	10.2	7.8	2.4	6.3	0.0	3.9
CE:4	Replacement of Kafue Railway Bridge	17.8	14.0	3.8	3.8	0.0	14.0
CE:5	Track Maintenance Equipment	3.2	2.6	0.6	0.6	0.0	2.6
CE:6	Realignments in the Kafue- Lusaka Section	3.2	2.6	0.6	0.6	0.0	2.6
CE:7	Replacement of the Itawa Bridge.	1.0	0.8	0.2	0.2	0.0	0.8
CE:8	Upgrading of Mulobezi Line to Branch Line Standard	5.3	1.5	3.8	5.3	0.0	0.0
CE:9	Const. of Mchinji-Chipata Rail Link & Feas. Stdy.for Rail Link connecting ZR or TZR w/MLW	8.5	4.5	4.0	4.0	0.0	4.5
GM:1	Technical assistant staff	19.3	19.0	0.3	0.3	0.0	19.0
GM:2	Training Facilities and Fellowship	3.5	3.4	0.1	0.1	0.0	3.4
GM:3	Performance Related Remuneration Scheme	1.2	1.0	0.2	0.2	0.0	1.0
GM:4	Study on the future of Mulobezi line	0.4	0.3	0.1	0.1	0.0	0.3
ME:1	Locomotives	92.4	91.7	0.7	30.7	0.0	61.7
ME:2	Goods Wagons	6.0	6.0	0.0	0.0	0.0	6.0
ME:3	Passenger Coaches	32.1	31.8	0.3	0.3	0.0	31.8
ME:4	Air Brakes	11.3	9.7	1.6	1.6	0.0	9.7
ME:5	Inspection and Gang Trolleys	1.7	1.6	0.1	0.1	0.0	1.6
ME:6	Breakdown Cranes and Rerailing Equipment	3.3	3.2	0.1	0.1	0.0	3.2
ME:7	Workshop Equipment	10.2	9.6	0.6	0.6	0.0	9.6
ME:8	Electric Arc Furnace and Steel rerolling Mill	2.0	1.8	0.2	0.2	0.0	1.8
ST:1	Replacement of Track circuit bond wires	0.7	0.5	0.2	0.2	0.0	0.5
ST:2	Repair and Replacement of Line Side and Exchange Equipment	9.4	8.4	1.0	1.0	8.4	0.0

ST:3	Radio Control System for the Choma-Masuku Branch Line	0.5	0.4	0.1	0.1	0.4	0.0
ST:4	Radio Communications System on the Mulobezi Branch Line	0.5	0.4	0.1	0.1	0.4	0.0
ST:5	Police Mobile Radio System	0.6	0.5	0.1	0.1	0.5	0.0
ST:6	Train Reporting System	0.6	0.5	0.1	0.1	0.5	0.0
ST:7	Expansion of Digital Radios and Multiplex to Kitwe	1.0	0.8	0.2	0.2	0.0	0.8
ST:8	Replacement of message Switching Unit	0.3	0.3	0.0	0.0	0.0	0.3
		354.8	267.0	87.8	134.0	10.2	210.6

September 1992

ZIM.2.03: Telecommunications, Signalling and Wagon Control, NRZ



Estimated Costs
Total : USD 20.0 million
Foreign : USD 13.9 million
Local : USD 6.1 million

Funding Secured
Foreign : USD 6.5 million
Local : USD 6.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 7.4 million

Executing Agency

Start : 1990
Duration: 4 Years

Objectives : Partial rehabilitation and upgrading of the telecommunications and signalling systems of NRZ to provide for efficient operations.

Description : The project components include:

(i) Replacement of obsolete CTC System from Bulawayo to Victoria Falls;

(ii) Replacement open wire carrier systems; and

(iii) Replacement of mobile radio equipment and PABC.

Status : Project descriptions for subprojects (i-iii) are included in the SATCC Telecommunications Ten Year Plan.

(i) Aid has been secured from KFW on a bilateral agreement and equipment is currently under manufacture.
(ii) Fund are being sought. (USD 7.4 million).
(iii) Funding has been secured from Finland under a bilateral agreement. The radios are currently under manufacture in Finland.

September 1992

ZIM.2.04: Acquisition and Rehabilitation of Locomotives, National Railways of Zimbabwe

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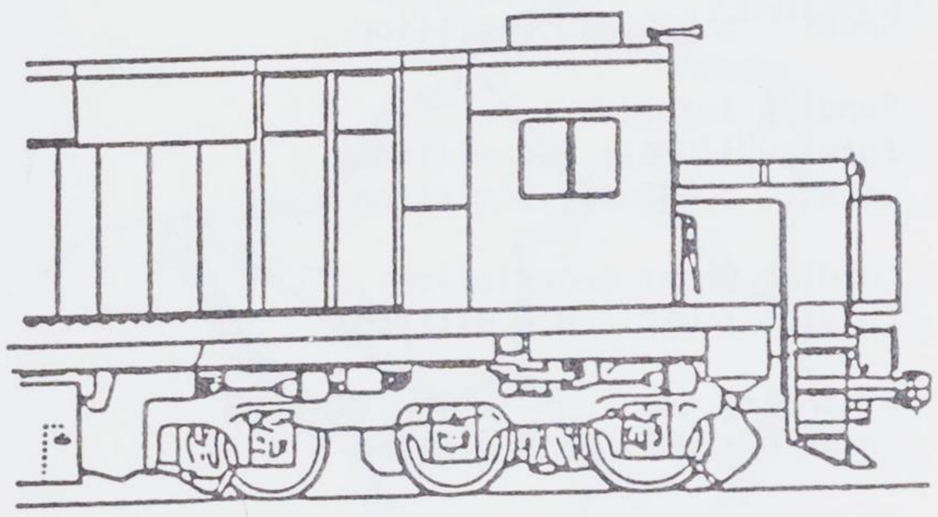

Estimated Costs
Total : USD 46.9 million
Foreign : USD 44.8 million
Local : USD 2.1 million

Funding Secured
Foreign : USD 44.8 million
Local : USD 2.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
National Railways of Zimbabwe

Start : 1990
Duration: 5 Years

Objectives : To provide the National Railways of Zimbabwe with adequate motive power to handle the existing and anticipated domestic and regional traffic.

Description : NRZ requires 13 new Diesel Electric Locomotives to enhance the railways' capacity to move traffic on offer, including transit traffic. Following World Bank reviews, 21 new locomotives will be provided under USAID, although however 13 locomotives will initially be provided in view of the proposed pipeline from Mutare to Harare.

NRZ moves an average of 11 to 14 million tonnes of traffic yearly of which about 10 million is local traffic, and 4 million is export, import and transit traffic. Transit traffic is around 1 million tonnes annually, of about 25% of the traffic flows along Zimbabwe's railway system destined to/from regional ports.

To consolidate NRZ's ability to move traffic on offer, a programme to re-engine 43 diesel electric locomotives (DE9A) is required as an ongoing exercise to improve NRZ's motive power. The total cost is USD 8.1 and forex is USD 6.0 million and local is USD 2.1 million.
The total cost for 13 locomotives is USD 38.8 million.

Status : Funding secured from USAID for both 13 new electric locomotives and locomotives repowering.

NRZ has received 26 re-engined locomotives.
Rehabilitation is ongoing.

The 13 new locomotives are due to be delivered in September 1992.

September 1992

ZIM.2.05: Acquisition of Coaches for the National Railways of Zimbabwe

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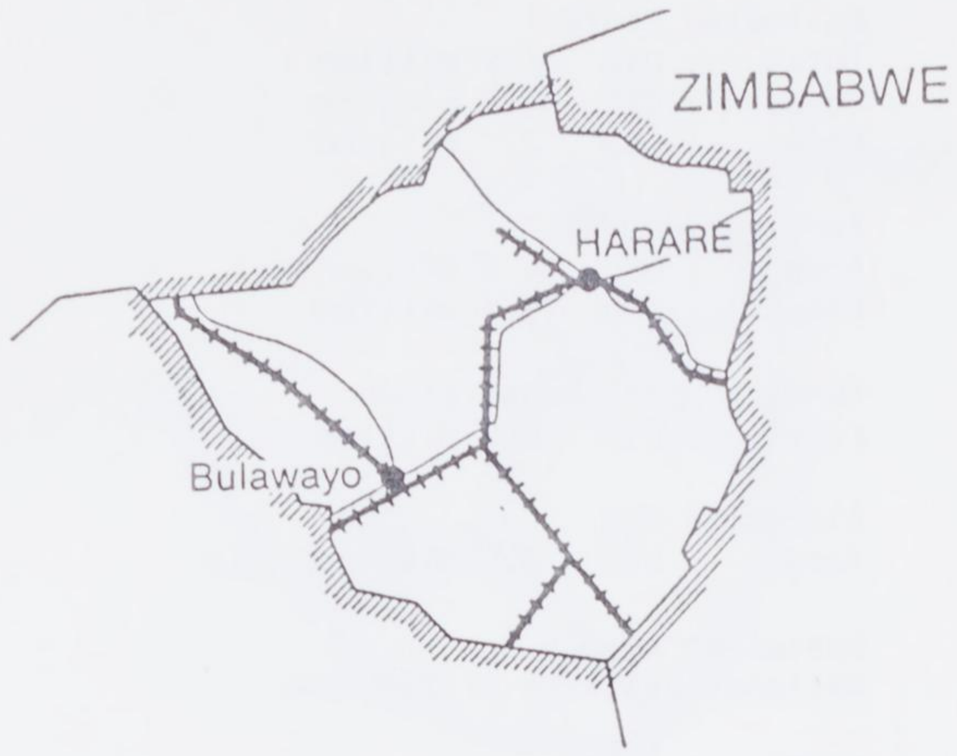


Estimated Costs
Total : USD 90.0 million
Foreign : USD 45.0 million
Local : USD 45.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 45.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 45.0 million

Executing Agency
National Railways of Zimbabwe

Start : 1993
Duration: 8 Years

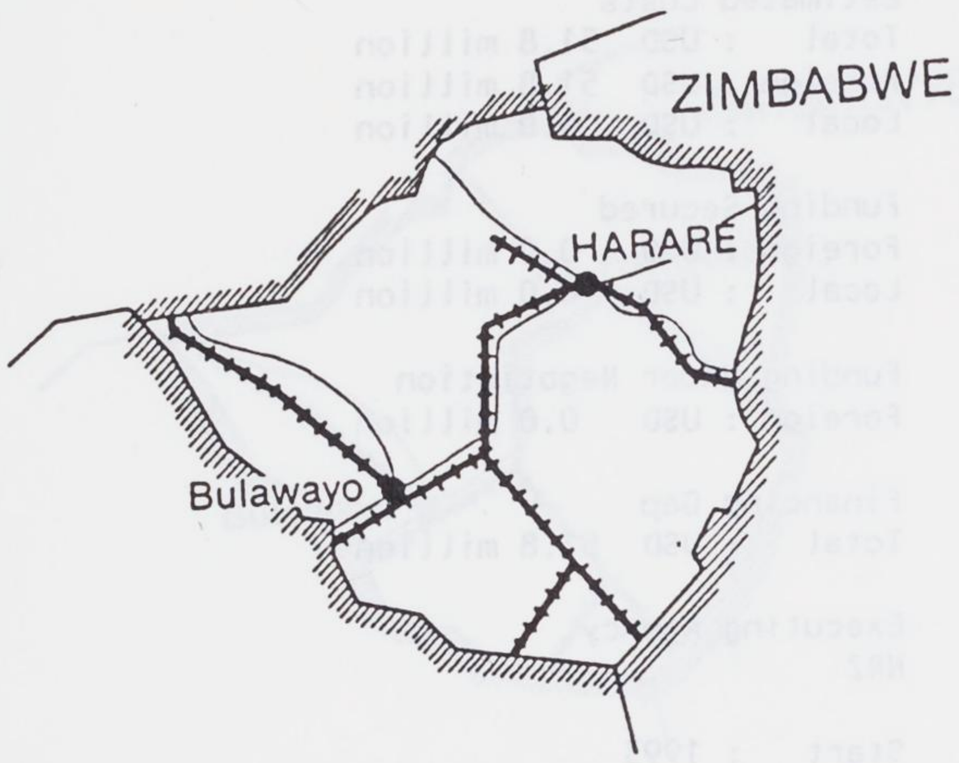
Objectives : To provide replacement of life-expired coaches to provide adequate passenger transport services. NRZ has the potential capacity to transport considerable number of passengers to Botswana, Zambia and Mozambique within the sub-region.

Description : About half of the NZR Coaching Stock will have life-expired by 1992. Approximately 50 per cent of the fleet is in workshops for maintenance. 155 coaches at a cost of USD 90.0 million are required.

Status : A project description has been prepared by NZR.
Financing is being sought.

September 1992

ZIM.2.07: Replacement of 1961 General Purpose Wagons



Estimated Costs
Total : USD 115.0 million
Foreign : USD 30.0 million
Local : USD 85.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 85.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 30.0 million

Executing Agency
NRZ

Start : 1993
Duration: 10 Years

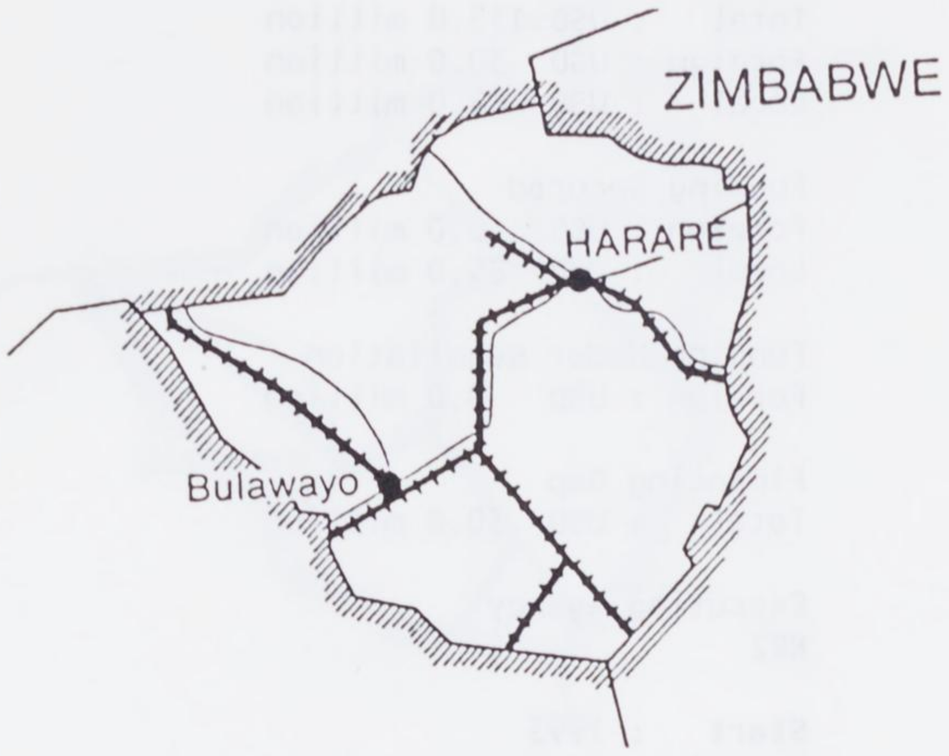
Objectives : To replace 1961 general purpose wagons to enhance NRZ's ability to move local, and transit import & export traffic.

Description : The new general purpose wagons will be rationalised to have an axle load of 18,6 tonnes, which will facilitate increasing the payload per wagon by about 30%.

Status : Funds are being sought. ADB has shown some interest to fund 1000 wagons.

September 1992

ZIM.2.08: Procurement of 39 Diesel Electric Locomotives



Estimated Costs
Total : USD 51.8 million
Foreign : USD 51.8 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 51.8 million

Executing Agency
NRZ

Start : 1993
Duration:

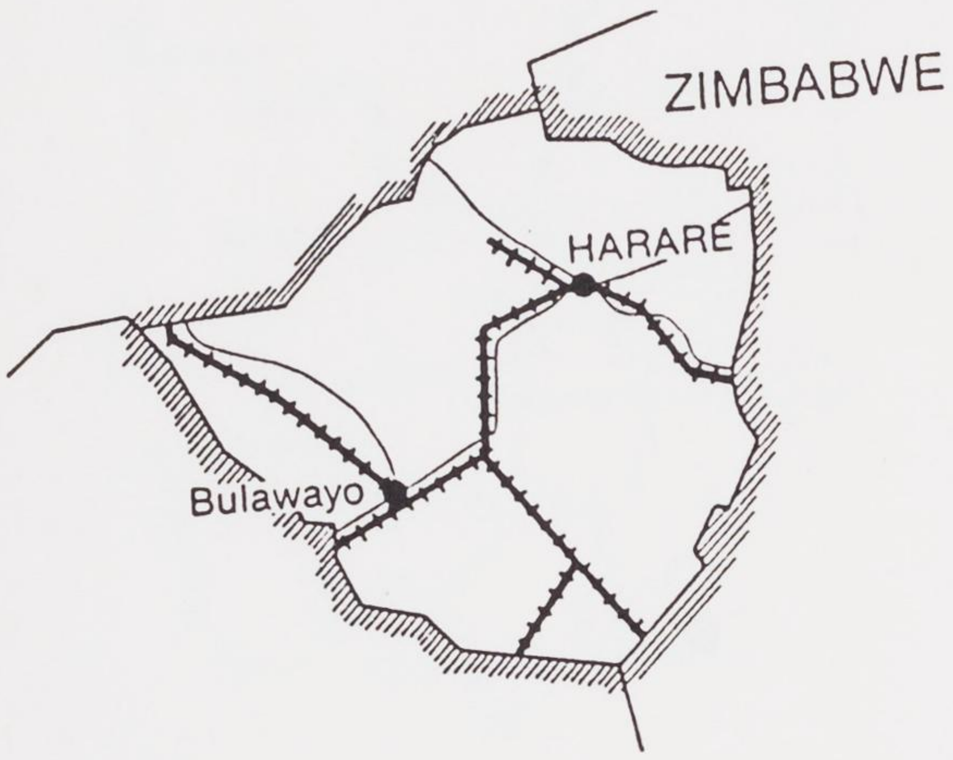
Objective : To replace steam locomotives that have reached their service life.

Description : The NRZ is currently facing a shortage of steam locomotives, because most of them have reached their service life, even though they are still utilised at a very low availability.
19 mainline and 20 shunting locomotives making a total of 39 diesel electric locomotives are required.
These locomotives are aimed at reducing the congestion of all NRZ yards.

Status : Funds for the project are being sought.

September 1992

ZIM.2.09: Replacement of CTC and Signalling System Harare - Mutare.



Estimated Costs
Total : USD 7.1 million
Foreign : USD 5.0 million
Local : USD 2.1 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 2.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 5.0 million

Executing Agency
NRZ

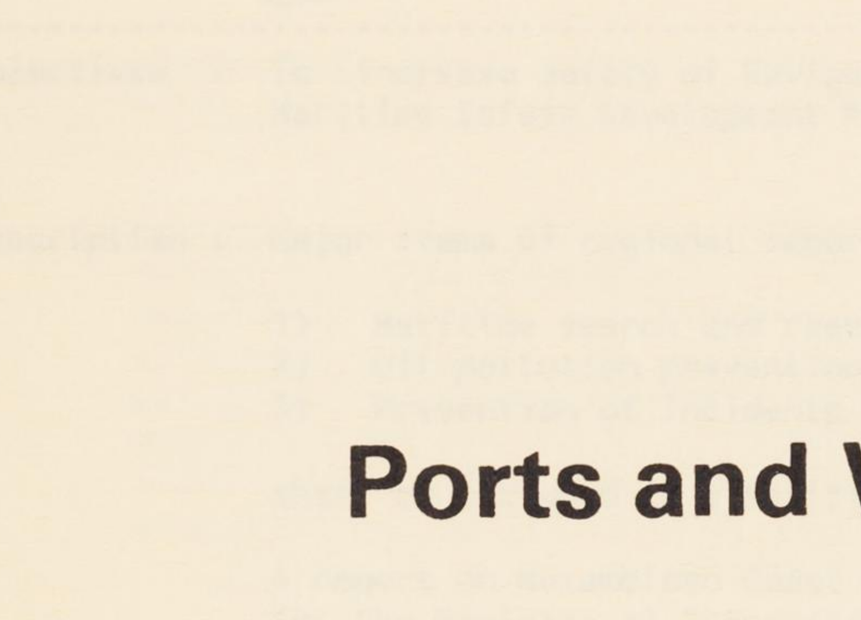
Start : 1993
Duration:

Objective : To improve train movements, safety and install a CTC that will be compatible with the extension of electrification from Harare to Msasa.

Description : The NRZ intends to replace the 30 years old CTC system between Harare and Mutare, which is life expired and unreliable. The replacement will improve train movements, safety and will be compatible with the extension of electrification from Harare to Msasa, due to start 1992. The CTC System will also assist transit traffic to and from the port of Beira.

Status : Funds for the project being sought.

September 1992



Ports and Water Transport

AAA.3.03: Marine Safety Development Programme for SADC Coastal States

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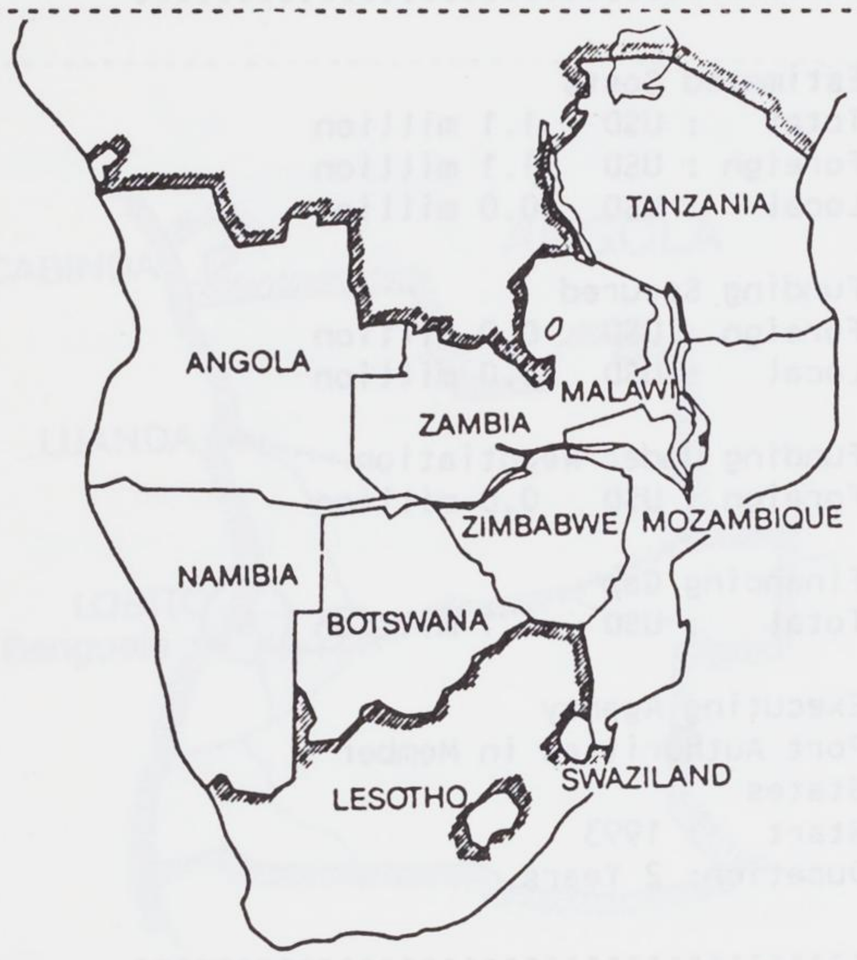


Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.5 million

Executing Agency
SATCC

Start : 1993
Duration: 1.5 Years

Objectives : To increase Safety of Navigation in SADC waters through the establishment of a Maritime Safety Development Programme.

Description : Major items of regional importance regarding safety at sea, namely:

1) Maritime search and rescue services;
2) Oil pollution prevention and combat services;
3) Prevention of incidents concerning hazardous cargo;

shall be included in a Maritime Safety Development Programme Study.

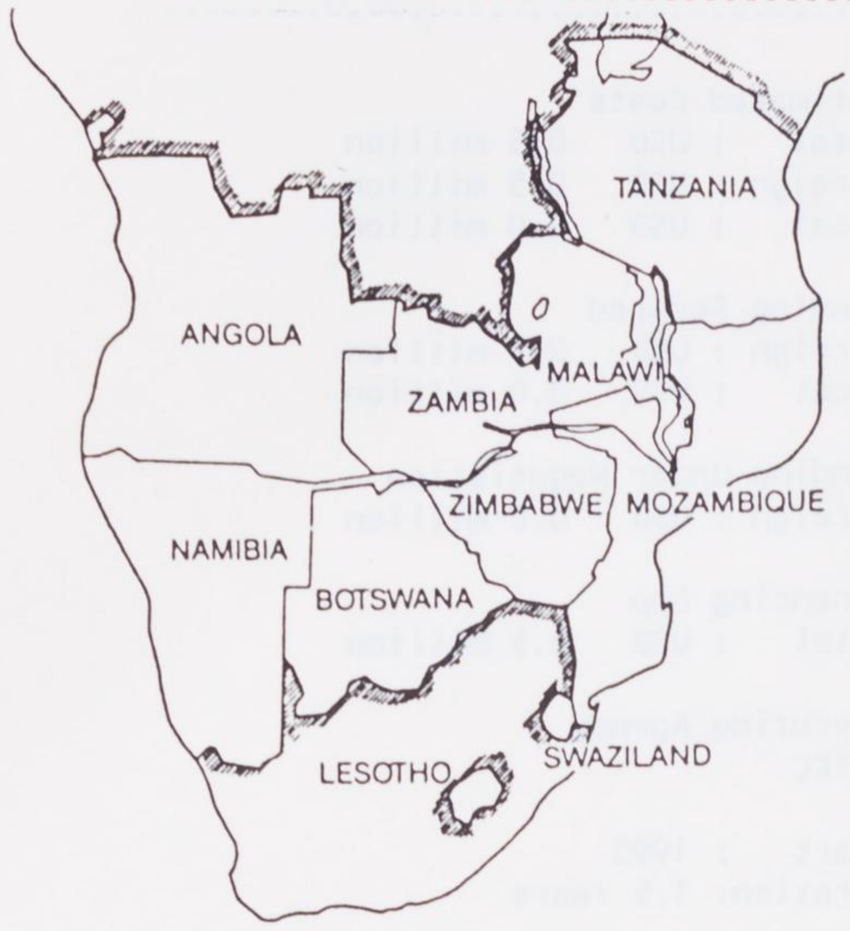
A report on Mozambican Coast Guard Requirements (January 1987) has been prepared for the Ministry of Transport and Communications under British aid agreements to the Government of Mozambique giving valuable background information for a study to cover all three SADC coastal areas.

Status : Terms of Reference for a Marine Safety Development Programme Study for Mozambique was presented to the SATCC Co-ordinating Committee and Meeting of Ministers in Mbabane, May 1987, and approved subject to amendment of the Terms of Reference to cover all SADC coastal states. Terms of Reference have been amended accordingly.

Implementation can commence once funding is secured.

September 1992

AAA.3.04: Package of Port Statistics Programmes



Estimated Costs
Total : USD 1.1 million
Foreign : USD 1.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.1 million

Executing Agency
Port Authorities in Member States
Start : 1993
Duration: 2 Years

Objectives : Introduction of a harmonized system for port statistics and performance indicators as adopted by SATCC in the regional sea ports and the main lake ports.

Description : Implementation of a uniform system for port statistics and performance indicators based on a manual prepared by UNCTAD is considered a priority matter to improve port statistics and provide the background for better operational performance in the ports. The project also aims at improving commodity statistics in the port sector based on a uniform commodity classification system for the region. A regional manual on port statistics in English and Portuguese will be prepared by SATCC with the assistance of the UNDP/UNCTAD Transit Transport Project. In addition a common software package will be developed on a regional basis to facilitate initiation of the project.

The project comprises five national projects, three covering the regional sea ports in Angola, Mozambique and Tanzania and two covering the lake ports in Malawi and Zambia. The project includes four main items, namely technical assistance, training, computer hardware and software.

Status : Project descriptions with detailed cost estimates have been prepared. Financing is being sought.

September 1992

ANG.3.01: Port & Water Tran. Projects in the Ten Year Dev. Plan for the Lobito Port Transport System

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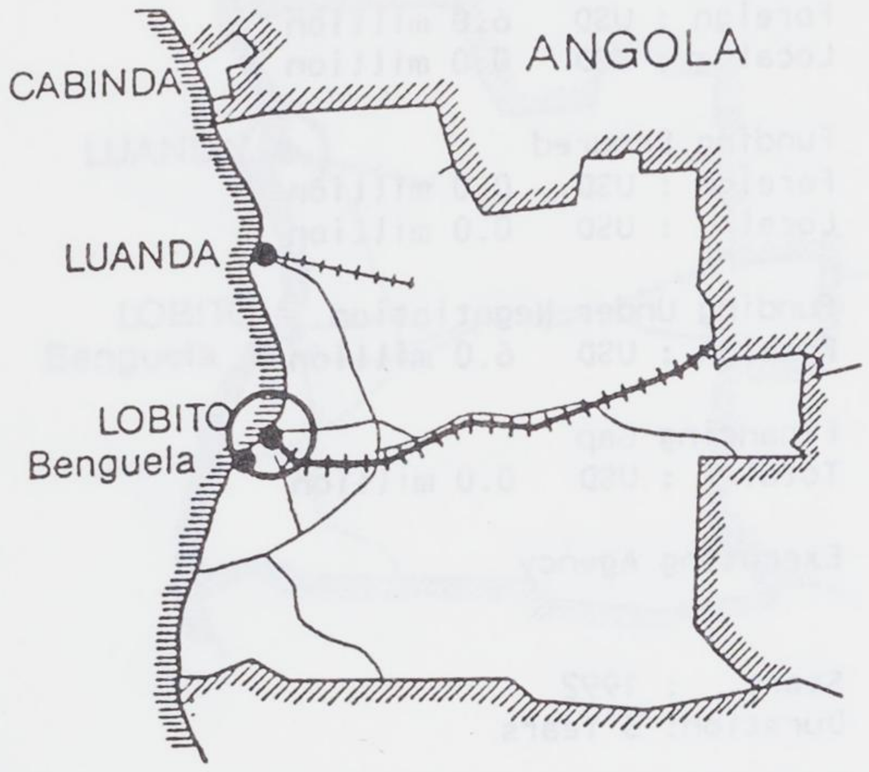


Estimated Costs
Total : USD 89.2 million
Foreign : USD 89.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 14.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 31.0 million

Financing Gap
Total : USD 44.2 million

Executing Agency
Lobito Port Authority

Start : 1992
Duration: 10 Years

Objectives : Rehabilitation and upgrading of the Lobito Port and related water transport facilities.

Description : The Ten Year Development Plan for the Lobito Port Transport System includes the subprojects listed below.

Included under this headling are in addition to the Lobito Port Projects also Rehabilitation of Lobito Shipyard, Improvement of the Capacity of the Coastal Shipping Company and a Maritime Security Programme.

Plan is subdivided in four phases, namely Preparatory, Emergency, Short Term and Long Term Phase.

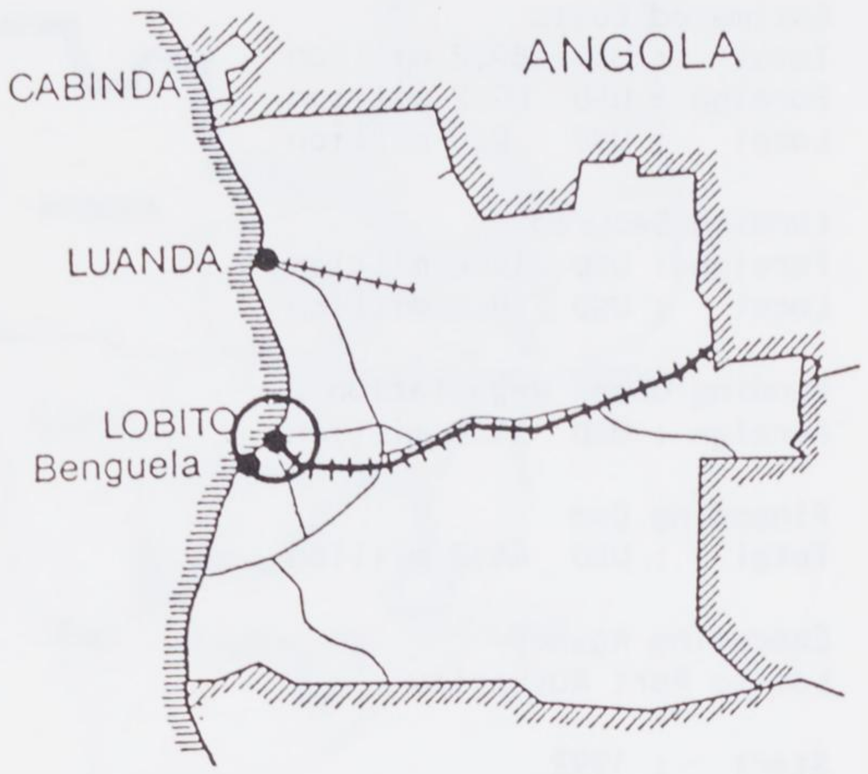
Status : A Technical Co-ordination Conference to discuss the Plan was held in January 1988, and expressions of interest pledges of support were received from donors concerning most of the projects in the Preparatory Phase. Follow up contacts with the donors concerned are in progress.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
P-CE-1	Inspection and Reinforcement of Quays	15.8	15.8	0.0	0.0	0.0	15.8
P-CE-2	Grain Bulk Facilities Improve ment	8.0	8.0	0.0	0.0	8.0	0.0
P-CE-3	New Coastal Terminal and Service Port Facilities	6.5	6.5	0.0	0.0	6.5	0.0
P-CE-4	Rehabilitation of Port Railways	2.5	2.5	0.0	2.5	0.0	0.0
P-CE-5	Study on Rehabilitation of Existing Ore Bulk Facilities	0.5	0.5	0.0	0.0	0.5	0.0
P-CE-6	New Multi-purpose Terminal (Study)	1.0	1.0	0.0	0.0	0.0	1.0
P-CE-7	New Container Terminal	1.0	1.0	0.0	0.0	0.0	1.0
P-CE-8	Coastal Protection Works.	1.3	1.3	0.0	0.0	0.0	1.3
P-M-1	Welfare and Office Facilities	3.5	3.5	0.0	0.0	0.0	3.5
P-M-2	Technical Assistance to the Port of Lobito	1.5	1.5	0.0	0.0	0.9	0.6
P-M-3	Port School at Lobito, Angola	6.0	6.0	0.0	0.0	6.0	0.0
P-ME-1	Rehabilitation of Power and Lighting System	3.5	3.5	0.0	2.5	0.0	1.0
P-ME-2	Purchase of General Port Equipment	2.6	2.6	0.0	0.0	2.6	0.0
P-ME-3	Port Maintenance Workshop and Store	3.5	3.5	0.0	0.0	3.5	0.0
P-ME-4	Mobile Cranes Rehabilitation and Scrapping Programme	3.0	3.0	0.0	0.0	3.0	0.0
P-ME-5	Floating Equipment	5.0	5.0	0.0	0.0	0.0	5.0
P-ME-6	Shipyard Rehabilitation	15.0	15.0	0.0	0.0	0.0	15.0
P-MS-1	Maritime Security Programme, Angola	1.0	1.0	0.0	1.0	0.0	0.0
P-S-1	Improvement of the Capacity of the Coastal Shipping Company, Angola	8.0	8.0	0.0	8.0	0.0	0.0
		89.2	89.2	0.0	14.0	31.0	44.2

September 1992

ANG.3.01: Port School at Lobito, Angola
(P-M-3)



Estimated Costs
Total : USD 6.0 million
Foreign : USD 6.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 6.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency

Start : 1992
Duration: 3 Years

Objectives : The need for professional training of staff and workers in the port is indisputable. SATCC has carried out a study on Port Staff Training Programmes P. AAA.3.02 completed in 1985. The study established the basis for port schools in Tanzania, Mozambique and Angola. Port schools have already been financed in Tanzania (Dar es Salaam) and in Mozambique (Maputo) and implementation is ongoing.

A similar school is to be established in Lobito, and earlier described as SATCC Project No.ANG.3.03.

Description : A proposal for a port school project is being worked out by the Angolan authorities.

The project should be divided into two phases, namely:
1) Establishment of a study team to assist the Angolan authorities in concerning both the hardware and the software part of the project.
2) Implementation.

PROJECT COMPONENTS

The project comprises the following components:

- Evaluation of training needs in order to establish the proper profile and duration of courses and training to be given,
- Design of school facilities, including classrooms, dormitories and equipment,
- Establishment of a management assistance team and provision of instructors, and
- Implementation

Status : It is envisaged that the study phase should start within the Emergency Phase and be completed within one year, and that the school premises will be established within three years.

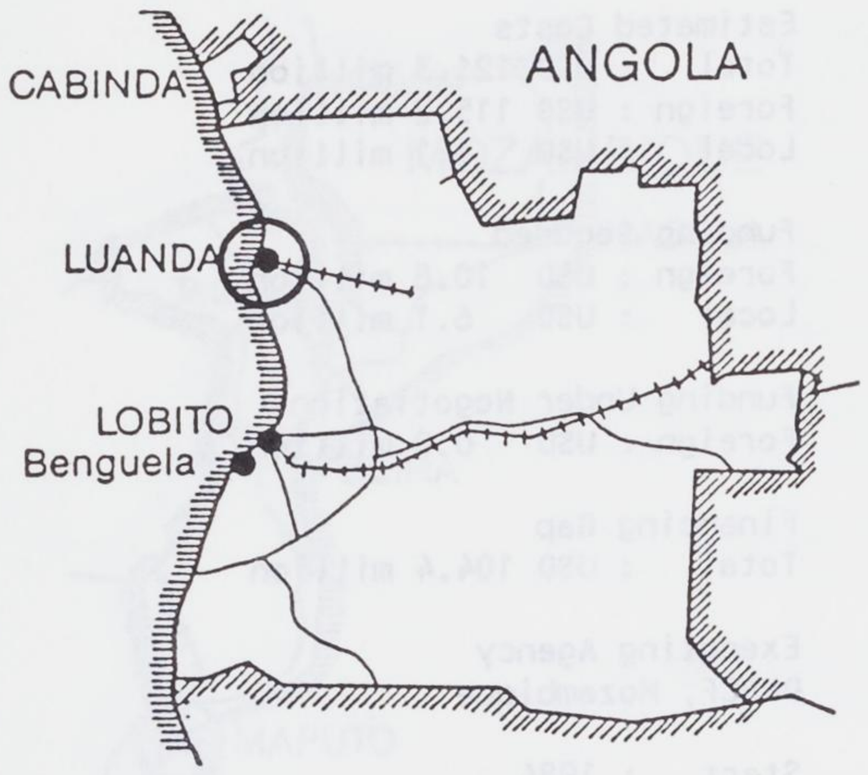
Management assistance and provision of instructors, are foreseen to be necessary for a period of three years after the school facilities have been made ready for use.

The overall of the project is estimated at 6.0 million. It is expected that about half this sum will be needed for development of the software part of the project, including management assistance and provision of instructors. The other half is expected to be used for the design and construction of school facilities.

Financing being sought. UNCTAD has been approached for the software part. Both Portugal and Norway have shown interest for the project.

September 1992

ANG.3.02: Development of the Port of Luanda



Estimated Costs
Total : USD 32.5 million
Foreign : USD 28.6 million
Local : USD 3.9 million

Funding Secured
Foreign : USD 6.7 million
Local : USD 3.9 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 21.9 million

Executing Agency
Ministry of Technologie and Construction
Start :
Duration:

Objectives : Development of the Port of Luanda to meet the future needs of the traffic in dry bulk commodities, pallets, containers and Ro/Ro and the demands for modern handling and to improve the working conditions of the labour force.

Description : The project comprises several sub projects consisting of civil works, procurement of equipment and technical assistance.

(1) Design and construction of a container and Ro/Ro terminal. The project is further elaborated as a sub-project on the following pages.

(2) Construction of a grain terminal, including silos, and 165 m of quay as well as equipment and conveyers.

(3) Modernization and enlergement of the electrical system of the ports. For this there is a contract covering the existing older parts of the port but this will have to be enlarged to cover the planned port extensions.

(4) Earthwork, compacting and paving of 100 000 m2 of backup area to the general cargo quay.

(5) Construction of canteen facilities for 2 500 workers.

For sub-project (1) negotiations with financiers are in progress. For (2) the larger part of the equipment is a already stored in the port and sub-soil investigations at the new site are underwy. For (3) the alargement must be planned in the contex of the new port extension. (4) is completed and for (5) there are proposals.

Status : Additional financing being sought.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01	Container and Ro/Ro Terminal	10.7	9.1	1.6	1.6	0.0	9.1
02	Construction of a Grain Terminal and Silos	12.7	10.8	1.9	5.6	0.0	7.1
03	Modernisation and Enlargement of Electrical Systems	5.5	5.5	0.0	3.0	0.0	2.5
04	Earth Works, Port of Luanda.	0.0	0.0	0.0	0.0	0.0	0.0
05	Construction of Canteen Facilities	3.6	3.2	0.4	0.4	0.0	3.2
		32.5	28.6	3.9	10.6	0.0	21.9

September 1992

MOZ.3.01: Maputo Port, Mozambique

Estimated Costs
Total : USD 121.3 million
Foreign : USD 115.2 million
Local : USD 6.1 million

Funding Secured
Foreign : USD 10.8 million
Local : USD 6.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 104.4 million

Executing Agency
DNPCF, Mozambique

Start : 1984
Duration:

Objectives : Rehabiliation and upgrading of the port of Maputo to provide proper and adequate capacity for future traffic demand.

Progress : Up to date only three of the projects in the port of Maputo has been described and reported through SATCC.

These projects are described in specific project briefs on the following pages.

In order to keep the Co-ordinating Committee, and the SATCC Committee of Ministers updated on the development of all the regional ports on an equal basis, a brief overview of other projects in the port of Maputo is also described in a separate project brief (3.05.04(04), Maputo Port Other Projects.

These other projects are:
- Steel Terminal
- Sugar Terminal
- Cold Storage Facilities
- General Cargo Berths
- Coastal Terminal
- Crane Rehabilitation Programme
- Rehabilitation and Fendering of Quays
- Rehabilitation of Oil Terminal at Matola
- Navigational Aids, Maputo
- Dredging of Existing Entrance Channel
- Sea Mapping, Entrance Channel

Cost estimates and detailed description of these other projects are not elaborated in this version of the Project Brief.

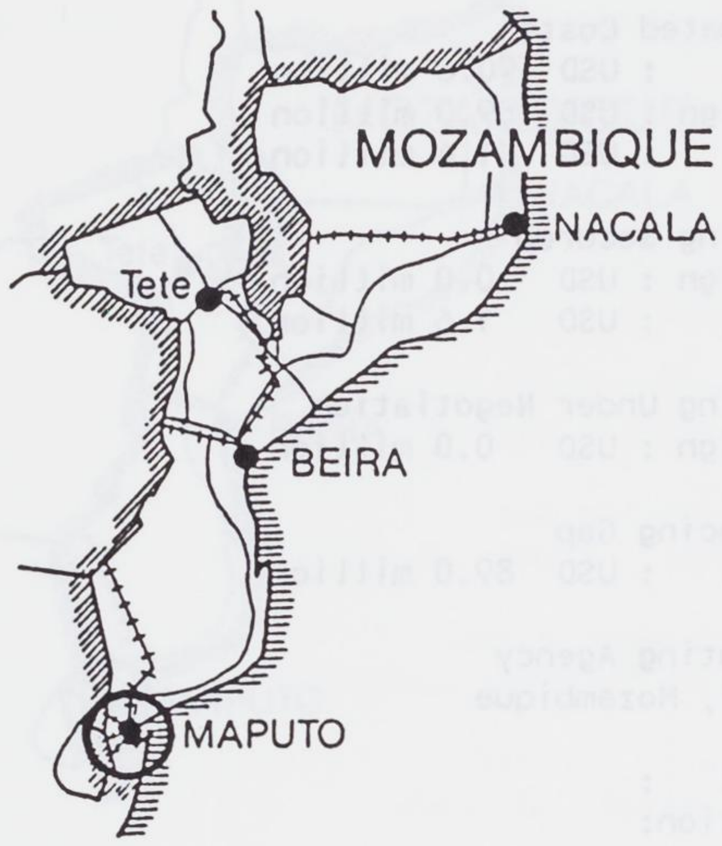
Status : Funding is still to be sought for the Study on Improvement on the Entrance Channel. Phase 1 of the Coal Handling Facilities in Matola is completed, and initiation of Phase 2 and 3 will first start when traffic increase demands. The technical and management assistance to the Container Terminal continues, and the British Team has also been engaged in the management of the Sugar Terminal, the Steel Terminal, and in Training in general.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01	Feasibility Study on Improvement of the Entrance Channel to Maputo Port	1.7	1.4	0.3	0.3	0.0	1.4
02	Matola Coal Terminal, Mozambique	90.6	89.0	1.6	1.6	0.0	89.0
03	Container Terminal Equipment and Management Assistance, Port of Maputo	29.0	24.8	4.2	15.0	0.0	14.0
		121.3	115.2	6.1	16.9	0.0	104.4

September 1992

MOZ.3.01: Feasibility Study on Improvement of the Entrance
(01) Channel to Maputo Port



Estimated Costs
Total : USD 1.7 million
Foreign : USD 1.4 million
Local : USD 0.3 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.3 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.4 million

Executing Agency
DNPCF, Mozambique

Start :
Duration:

Objectives : Study to provide recommendations regarding the economic and technical feasibility of improving the channel to permit the passage of large vessels to the Matola terminals on normal tides, and of container vessels to the Maputo Container Wharf at all tides.

Description: The first phase of the feasibility study includes the following topics:

- hydrographic, geotechnical and hydraulic investigation of the sea access to the port to provide a basis for realistic estimates of proposed improvement works;
- preliminary engineering studies including cost estimates of capital and maintenance dredging, etc.;
- cost analysis for three alternative, for channel depth and width;
- alternative time schedules for the implementation;

The studies are to be carried out to a level that will provide a sound basis for the final design and the preparation of contract documents.

In 1981 the project description and Terms of Reference for the comprehensive study were approved. The Terms of Reference were revised in April 1984.

Status : Hydrographic survey works have been carried out by Mozambique (SNHB) during 1986 under a bilateral agreement with Norway. This work is continuing. The rehabilitation for nav. aids in the channel is accomplished (ref. P. Moz.3.04 and MOZ.3.04 (1). A dredging scheme to estlish - 9.4 m CD as a minimum depth in the existing channel has been initiated by the port. Dreding started in July 1987. This will reestablish very good access to the port of Maputo.

Financing for the more comprehensive feasibility study is being sought.

September 1992

MOZ.3.01: Matola Coal Terminal, Mozambique
(02)

Estimated Costs
Total : USD 90.6 million
Foreign : USD 89.0 million
Local : USD 1.6 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 1.6 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 89.0 million

Executing Agency
DNPCF, Mozambique

Start :
Duration:

Objectives : Construction of a Coal Handling Terminal at Matola for coal export.

Description : The project is divided into three phases:

PHASE 1: Convertion of the present ore terminal to coal handling with a capacity of 1,5 million tons per year.
Estimated cost: USD 1.6 million

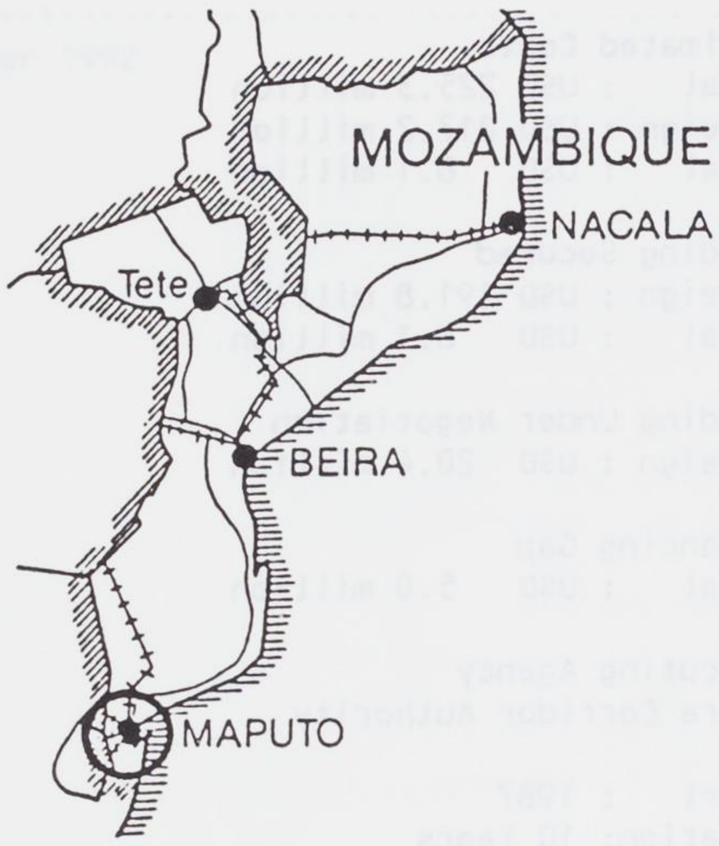
PHASE 2: Increase capacity to 3,5 million tons paer year.
Estimated cost: USD 9.0 million

PHASE 3: Increase capacity to 7 million tons per year.
Redesign and construction costs are estimated at USD 89 million.

Status : Rehabilitation of mechanical and electrical infrastructure has been ongoing since 1985, and such works were concluded in 1987, bringing the terminal up to a capacity of 1,5 million tons per year.
Loading capacity is now 7.000 tons per vessel per day, but throughput up to 12.000 tons per vessel per day has been achieved.
Rehabilitation works concerning dust suppression equipment, fire lighting equipment, purchase of spare parts and regular maintenance have been ongoing since June 1987, along with the reclaiming of stacker No.2.
Phase 1 completed.
Phase 2 and 3 will not be initiated before traffic figures allow.

September 1992

MOZ.3.01: Container Terminal Equipment and Management Assistance,
(03) Port of Maputo



Estimated Costs
Total : USD 29.0 million
Foreign : USD 24.8 million
Local : USD 4.2 million

Funding Secured
Foreign : USD 10.8 million
Local : USD 4.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 14.0 million

Executing Agency
DNPCF, Mozambique

Start : 1985
Duration:

Objectives : To provide adequate container handling facilities for the Port of Maputo.

Description : Maputo Container Terminal project comprises the purchases of two container cranes for the service of cellular container vessels, layout of the terminal area, introduction of handling system, purchase of shore side equipment for handling and retrieving containers and technical assistance to the terminal management. Cost assessed at USD 29 million. Additional need for 2 mobile 40 feet container handling equipment.

The first period for Operational and Management Assistance Agreement with ODA expited September 1987, and a second period lasting up to September 1989 was initiated.

The number of persons supplied under the new agreement has been reduced compared to the former agreement, which contained :

- 1 Terminal Manager
- 1 Operations Manager
- 1 Terminal Engineer
- 1 Administration Manager
- 1 Training Manager
- 1 Operations Superintendent

Progress reports from the project are produced on a quarterly basis. Training makes up an essential part of the assistance programme.

Status : Two container cranes have been erected, financed by Italy, as have been other shore side equipment at a combined cost of USD 9.0 million. The British Government has financed a feasibility study, which was submitted in November 1982, recommending a phased development plan. The first phase of which demands investments of roughly 12.1 million up to 1986. The technical assistance part is financed by UK. A team of technicians are assisting the container terminal management. Assessed cost is USD 1.8 million in operation, maintenance and training. The first period of the technical assistance agreement is up to September 1987. Agreement prolonged.
Additional funds are being sought.

September 1992

MOZ.3.02: Port Projects in the Beira Port Transport Development Plan

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Estimated Costs
Total : USD 225.3 million
Foreign : USD 217.2 million
Local : USD 8.1 million

Funding Secured
Foreign : USD 191.8 million
Local : USD 8.1 million

Funding Under Negotiation
Foreign : USD 20.4 million

Financing Gap
Total : USD 5.0 million

Executing Agency
Beira Corridor Authority

Start : 1987
Duration: 10 Years

Objectives : Increase of the capacity of the Port of Beira as provided for in the Beira Port Transport System 10-Year Development Plan.

Subprojects Included in Programme:		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
P-A-01	Channel Dredging to CD-8 metres, Beira Port	0.0	0.0	0.0	0.0	0.0	0.0
*P-A-02	Navigational Aids, Beira Port	1.6	1.6	0.0	0.9	0.7	0.0
P-A-03	Maintenance Dredging	10.6	10.6	0.0	0.0	10.6	0.0
*P-CE-01	Multipurpose and Container Handling Terminal	74.3	74.1	0.2	74.3	0.0	0.0
P-CE-01	A) Reconstruction of Berths 2-5	69.3	69.1	0.2	69.3	0.0	0.0
P-CE-01	B) Maintenance Building	0.0	0.0	0.0	0.0	0.0	0.0
P-CE-01	C) Construction of Transit Shed	3.8	3.8	0.0	3.8	0.0	0.0
P-CE-01	D) Provision of Port Administration Facilities	1.2	1.2	0.0	0.0	1.2	0.0
P-CE-02	New Oil Terminal	28.5	26.7	1.8	28.5	0.0	0.0
P-CE-03	Port Railways	22.2	19.2	3.0	22.2	0.0	0.0
P-CE-04	Sugar & Cereal Terminal	0.0	0.0	0.0	0.0	0.0	0.0
P-CE-05	Cols Storage Facilities	0.0	0.0	0.0	0.0	0.0	0.0
P-CE-06	Tobacco Terminal	0.0	0.0	0.0	0.0	0.0	0.0
P-CE-07	Cotton Termianl	0.0	0.0	0.0	0.0	0.0	0.0
P-CE-08	Grain Silos (combined with P-CE-4)	0.0	0.0	0.0	0.0	0.0	0.0
P-CE-09	Coastal Protection Scheme	0.0	0.0	0.0	0.0	0.0	0.0
P-CE-10	Service Port Facilities	5.6	5.0	0.6	0.6	0.0	5.0
P-CE-11	Port Roads	0.0	0.0	0.0	0.0	0.0	0.0
P-CE-12	High Capacity Coal Terminal	0.0	0.0	0.0	0.0	0.0	0.0
P-CE-13	Port Traffic Control and Communication Center	8.9	8.6	0.3	0.3	8.6	0.0
P-CE-14	Power Supply for Beira Port	10.7	10.1	0.6	10.7	0.0	0.0
P-CE-15	Fire Fighting System	0.7	0.7	0.0	0.7	0.0	0.0
*P-ME-01	Equipment for Multipurpose and Container Handling Terminal	28.1	26.5	1.6	28.1	0.0	0.0
P-ME-01	B) New Equipment for Temporary Container Handling Terminal	6.7	6.4	0.3	6.7	0.0	0.0
P-ME-01	C) Container Cranes for New Multipurpose and Container Handling Terminal	15.0	14.7	0.3	15.0	0.0	0.0
P-ME-01	D)Other Equipment for new Multipurpose and Container Handling Terminal.	6.4	5.4	1.0	6.4	0.0	0.0
P-ME-02	Tugs, Pilot Boats and Line Boats.	0.0	0.0	0.0	0.0	0.0	0.0
P-ME-03	Procurement of General Cargo Handling Equipment	2.0	2.0	0.0	2.0	0.0	0.0
P-ME-04	Deep-Sea Pilot Boat	0.0	0.0	0.0	0.0	0.0	0.0
P-ST-01	Telecommunications Network, Port and Railways Beira	2.0	2.0	0.0	2.0	0.0	0.0
TA-P-01	A)Technical Assistance to Beira Port.	0.0	0.0	0.0	0.0	0.0	0.0
TA-P-01	B)Technical Assistance to the Temporary Container Terminal	8.6	8.6	0.0	8.6	0.0	0.0
TA-P-02	A)Technical assistance to Beira Port	9.8	9.8	0.0	9.8	0.0	0.0

TA-P-02	B) Technical Assistance to (New) Container Terminal	6.8	6.8	0.0	6.8	0.0	0.0
TA-P-03	Technical Assistance to Port Training	2.6	2.6	0.0	2.6	0.0	0.0
TA-P-04	Techncial Assistance to Tugboat Operation	3.9	3.9	0.0	3.9	0.0	0.0
		225.3	217.2	8.1	199.9	20.4	5.0

September 1992

MOZ.3.03: Rehabilitation of the Port of Nacala

Estimated Costs
Total : USD 35.0 million
Foreign : USD 30.5 million
Local : USD 4.5 million

Funding Secured
Foreign : USD 24.0 million
Local : USD 4.5 million

Funding Under Negotiation
Foreign : USD 6.5 million

Financing Gap
Total : USD 0.0 million

Executing Agency
DNPCF, Mozambique

Start : 1984
Duration: 10 Years

Objectives : Design and construction of container facilities, purchase of container handling equipment and technical assistance to the management, general improvement of the port.

Description : The project is composed of the following parts:

		Costs (USD, Million)	
		Foreign	Local
Phases 1 and 2			
Improvement of old facilities, development of the container terminal, including equipment, maintenance facilities, management and training.		24.0	4.0
Phase 3			
(i)	Additional civil works	3.3	0.5
(ii)	Technical assistance and training, including studies on marketing and tariffs and on new oil handling installation	2.0	0.0
(iii)	Equipment for the Port Authority	1.0	0.0
(iv)	Contingencies	0.2	0.0
	Total	30.5	4.5

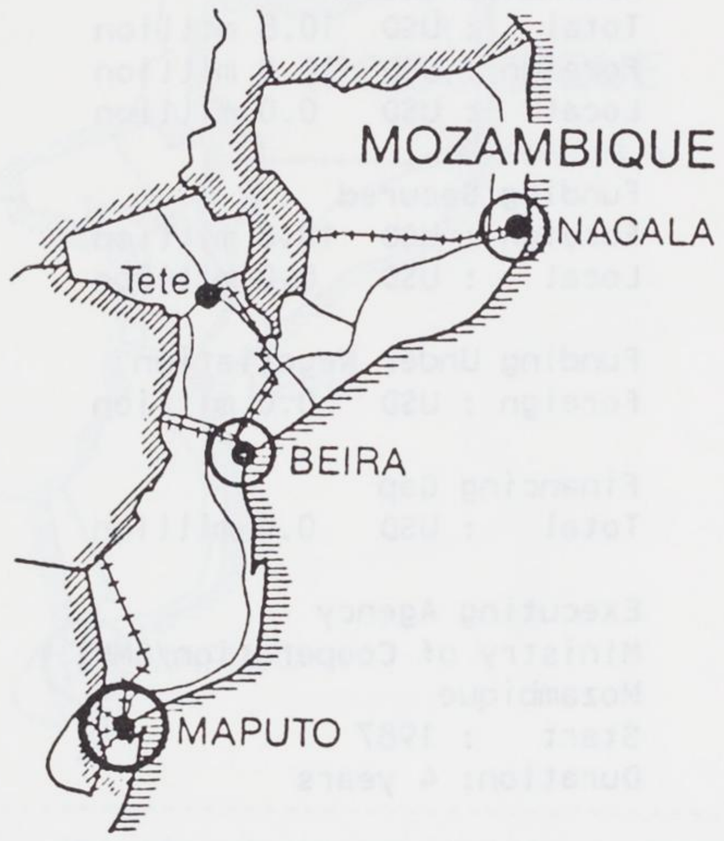
Phase 1 has been completed and Phase 2 is about to be completed.

Status : FINNIDA and Mozambique have financed Phases 1 and 2. Funds for Phase 3 are being negotiated with FINNIDA.

Ongoing project, progressing on schedule.

September 1992

MOZ.3.04: Navigational Aids, Mozambique
(01)



Estimated Costs
Total : USD 15.4 million
Foreign : USD 14.7 million
Local : USD 0.7 million

Funding Secured
Foreign : USD 14.7 million
Local : USD 0.7 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
DNCRI/BMM, Mozambique

Start : 1987
Duration: 8 Years

Objectives : To increase Safety of Navigation in Mozambique waters through restoring lights and buoys and improving intensity and ranges of navigational aids as well as providing workshops and training for repair and maintenance staff.

Description : The Project is divided into three phases i.e. rehabilitation of navigational aids of:

1) the regional port areas of Maputo, Beira and Nacala;
2) the coastal areas; and
3) small ports and inland waters.

Supportive projects such as repair and maintenance workshops, training of personnel and administrative and technical assistance are included.
Total current prices for phase 1, Stage I, SEK 55 million.
Phase 1 is estimated to require two years, and phase 2 three years, for implementation.
SIDA has agreed to finance Phase 1. The consultant for Phase 1 has been appointed and project organization was established in Maputo in February 1987, with backstop staffing in Sweden. The SIDA financed short term consultancy study of the future organization of the navaid sector in Mozambique has been completed and a Memorandum of Understanding on the future organization structure was signed between SIDA and the executing agency in June 1986.
The detailed design for rehabilitation works completed. A field mission has investigated the light houses onshore and tested the central workshops grounds. Documents for tendering completed March 1988. A Steering Committee has been established, meeting at regular intervals. Progress reports are prepared on a regular basis. Training programme established.

Status : Rehabilitation of navigation aids of the ports of Maputo and Beira completed. The port of Nacala in progress.

September 1992

MOZ.3.04: Buoy Handling and Maintenance Vessel, Mozambique
(02)

Estimated Costs
Total : USD 10.8 million
Foreign : USD 10.8 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 10.8 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Ministry of Cooperation/BMM,
Mozambique
Start : 1987
Duration: 4 years

Objectives : A suitable vessel is needed to implement project MOZ.3.04 Navigational Aids, and for the future maintenance of the navigational aids system. The aim of the project is to aid Mozambique in acquiring such vessel.

Description : The sub-project shall cover the purchase and commissioning of a buoy handling and maintenance vessel which will be used to support the lighthouse construction on islands and in other locations where transport is unfeasible. The vessel shall also be fit for salvage operations and for hydrographic survey work. The purchase of the ship includes a maintenance and spare parts fund for 3 years service and funds for contingencies.

A preappraisal mission visited Mozambique in March 1986 and produced the preappraisal report of April 1986.

An agreement between Denmark and Mozambique was signed in July 1987. Denmark shall make available funds up to D.Kr 50 million according to the following budget :

The vessel and its equipment	D.Kr 45 million	-	USD 6.5 million
Delivery of vessel to Mozambique	D.Kr 1 million	-	USD 0.1 million
Maintenance and spare parts fund for 3 years	D.Kr 1 million	-	USD 0.1 million
Contingencies	D.Kr 3 million	-	USD 0.5 million
Grand Total	D.Kr 50 million	-	USD 7.2 million

In order to assist the Mozambique counterpart in operations of the vessel, Denmark will, in addition to the grant, provide the services of a Captain, a Chief Engineer and a Chief Officer for the running of the vessel and for training purposes, for a period of three years.

Status : The contract was placed with a Danish Shipyard and the vessel was delivered in 1990.

September 1992

MOZ.3.05: Port Staff Training Institute, Mozambique

Estimated Costs
Total : USD 7.9 million
Foreign : USD 6.9 million
Local : USD 1.0 million

Funding Secured
Foreign : USD 6.9 million
Local : USD 1.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Nat'l Directorate of Ports and Railways, Mozambique
Start : 1987
Duration:

Objectives : The aim of the project is to establish a Port Staff Training Institute at Maputo with capacity to provide the Mozambican ports with adequately trained staff for all required port functions and levels and, in the longer term, to make the country self-sufficient in teachers and training capacity.

Description : In the context of the Regional Port Staff Training Programmes Study (P.AAA.3.02) an inventory of the needs for formal training in the different member countries has been carried out. For the ports of Mozambique, about 450 individuals per year during the next 10-year period will have to receive such training.
During the three year project period the Institute will be accommodated in an existing building in the Port of Maputo while the construction of a new school building and rehabilitation of dormitories takes place. At the end of the project period the Institute will be established and operating in the new building.

The Norwegian assistance for the establishment of the Institute will include activities distributed as follows:

- Technical assistance	NOK	11.0	million	USD	1.6 million
- Fellowship programme	NOK	2.0	"	USD	0.3 "
- Equipment	NOK	3.0	"	USD	0.4 "
- Administration Fee ILO	NOK	2.0	"	USD	0.3 "
- Construction/Rehabilitation Works	NOK	17.0	"	USD	2.5 "
- Cost Contingencies	NOK	3.0	"	USD	0.4 "
- Miscellaneous	NOK	3.0	"	USD	0.3 "
TOTAL	NOK	41.0	million	USD	5.8 million

An agreement on management and technical assistance has been entered into with the ILO, who prepare programmes of comprehensive training, staffing with compe tent teachers and trainers as well as administrative staff.

Status : Ongoing.
Administration and technical assistance through ILO with NORAD.

September 1992

TAN.3.01: Development of Navigation on Lake Niassa/Nyasa/Malawi, Malawi, Mozambique, Tanzania

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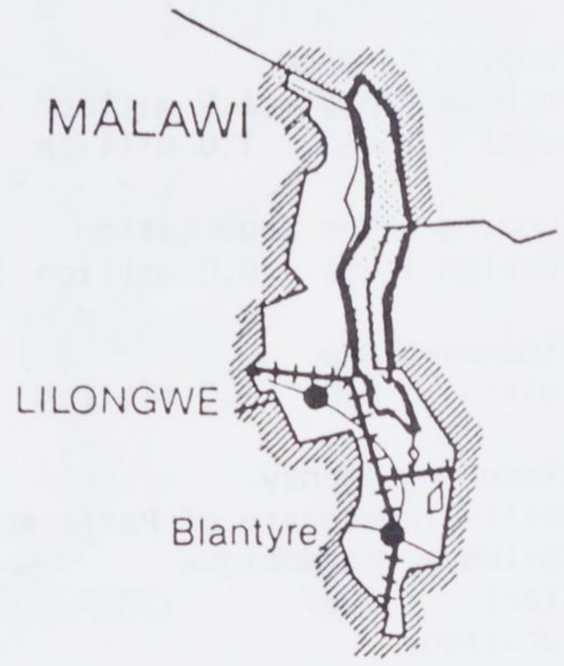


Estimated Costs
Total : USD 12.4 million
Foreign : USD 12.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 12.4 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Railway & Port Authorities in Malawi, Mozambique & Tanzania
Start : 1987
Duration:

Objectives : The objective is to achieve a co-ordinated transportation system for goods and passengers for the three countries bordering the lake. This will help to widen regional markets as well as provide access to the international markets through alternative outlets, in particular the port of Dar es Salaam.

Description : The project comprises several sub-projects in the field of water transport, port engineering and operation. At present the sub-projects listed below are defined:

Sub-project (1) is the original SATCC project TAN.3.01 for which Terms of Reference have been revised with reference to the findings of the "Transport System Study of the Blantyre - Dar es Salaam Corridor".

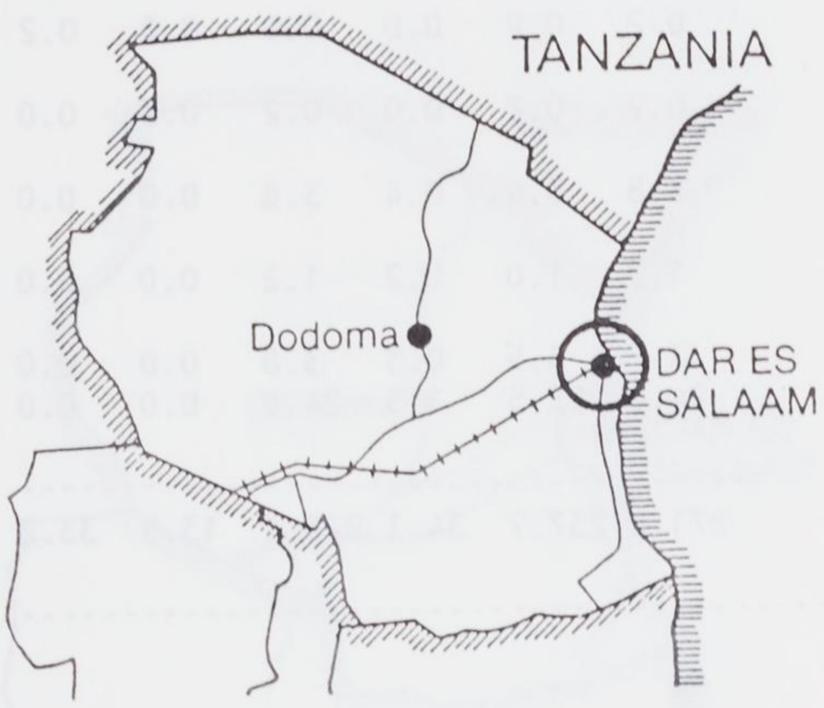
Status : A Steering Committee has been established for subproject (1) and it has convened three times, the last meeting was held in Dar es Salaam, 18-19 March 1992.
Phase A was completed in November 1989, and phase B1 in February 1991. The last phase - B2 - will be completed 1992.
Sub-projects (2), (3) and (4) have been completed.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01	Lake Navigation Study	0.6	0.6	0.0	0.6	0.0	0.0
02	Lake Ports, Chilumba and Chipoka.	5.9	5.9	0.0	5.9	0.0	0.0
03	Self Propelled Pontoons	3.7	3.7	0.0	3.7	0.0	0.0
04	Monkey Bay Shipyard	2.2	2.2	0.0	2.2	0.0	0.0
		12.4	12.4	0.0	12.4	0.0	0.0

September 1992

TAN.3.02: Development of the Port of Dar es Salaam, Tanzania



Estimated Costs
Total : USD 271.8 million
Foreign : USD 237.7 million
Local : USD 34.1 million

Funding Secured
Foreign : USD 191.0 million
Local : USD 34.1 million

Funding Under Negotiation
Foreign : USD 13.5 million

Financing Gap
Total : USD 33.2 million

Executing Agency
Tanzania Harbours Authority

Start : 1985
Duration:

Objectives : Rehabilitation and upgrading of the port of Dar es Salaam to provide adequate capacity for future traffic demand.

Description : The Development Plan for the Port of Dar es Salaam contains several sub projects. included in the SATCC catalogue of projects. A majority of the projects are included in a World Bank co-ordinated improvement programme which has been appraised the Bank in January 1988.

Status : Meetings with donors are being held once a year to monitor the financial status and progress of the World Bank coordinated improvement programme projects. Quarterly progress reports are now being submitted from THA to SATCC.

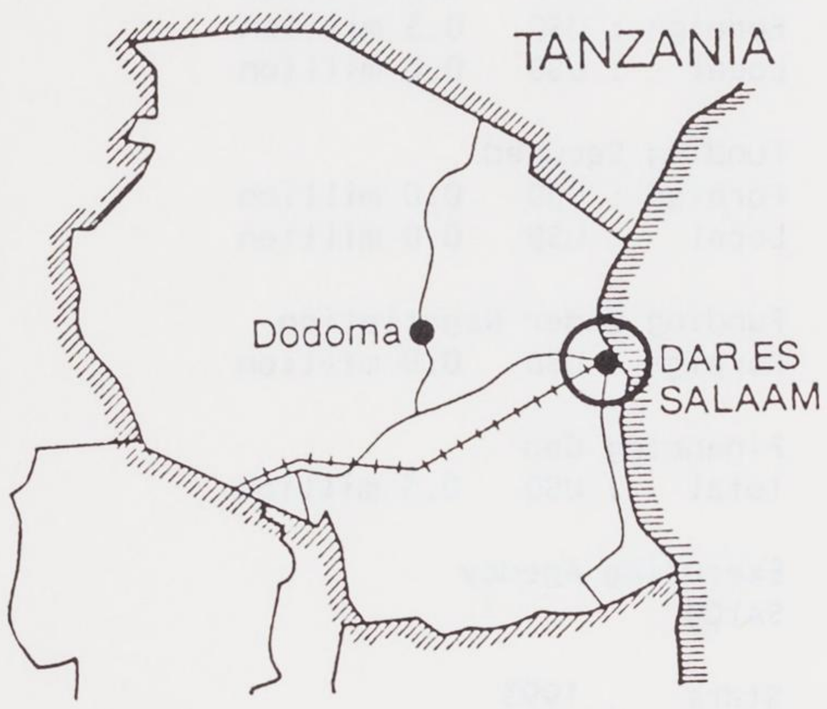
Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
01.1	Kurasini Oil Terminal Rehabilitation (Phase II), Port of Dar es Salaam.	0.0	0.0	0.0	0.0	0.0	0.0
01.2	Kurasini Oil Terminal Strenghtning (Phase III), Port of Dar es Salaam.	12.0	10.0	2.0	2.0	10.0	0.0
02	Improvement of Harbour Entrance Channel,Port of Dar es Salaam. (Phase I)	28.7	23.9	4.8	28.7	0.0	0.0
03.2	Expansion of Container Terminal,Ubungo ICD and Kurasini Warehouse,Phase II	24.3	17.9	6.4	24.3	0.0	0.0
03.3	Repairs to piles and fenders, Berths 9,10 and 11, Port of Dar es Salaam.	3.4	3.0	0.4	3.4	0.0	0.0
04	Construction of Grain Facility Port of dar es Salaam.	0.0	0.0	0.0	0.0	0.0	0.0
06.1	Belgian Wharf Reconstruction, Port of Dar es Salaam.	2.1	1.6	0.5	0.5	0.0	1.6
06.2	Modernization of Lighter Wharf, Phase 2; Paving and Services Port of Dar es Salaam	4.6	3.5	1.1	1.1	3.5	0.0
07	Construction of Tug Berth, Port of Dar es Salaam.	5.2	5.2	0.0	0.0	0.0	5.2
08.1	Purchase of Container Handling Equipment, Phase I, Port of Dar es Salaam.	42.4	42.4	0.0	42.4	0.0	0.0
08.11	Purchase of Container Handling Equipment, Phase II, Port of Dar es Salaam.	18.9	18.9	0.0	10.2	0.0	8.7
08.12	Stand by generators	2.9	2.6	0.3	2.9	0.0	0.0
08.2	Purchase of Copper Handling Equipment, Port of Dar es Salaam.	0.0	0.0	0.0	0.0	0.0	0.0
08.3	Purchase of General Cargo Handling Equipment,Phase I, Port of Dar es Salaam.	19.3	15.7	3.6	19.3	0.0	0.0
08.31	Purchase of General Cargo Handling Equipment, Phase II, Port of Dar es Salaam.	5.0	5.0	0.0	5.0	0.0	0.0
08.32	Purchase of office equipment, THA Headquarters and Port of Dar es Salaam.	1.2	1.2	0.0	1.2	0.0	0.0
09	Purchase of Floating Craft, Port of Dar es Salaam	17.5	17.5	0.0	0.0	0.0	17.5

10	Technical Assistance to THA and Improvement of Bandari College, Dar es Salaam	4.9	4.9	0.0	4.9	0.0	0.0
11	Rehabilitation of Berths 1-8, Port of Dar es Salaam.	46.4	33.8	12.6	46.4	0.0	0.0
12	Study on New Oil Terminal, Port of Dar es Salaam.	0.2	0.2	0.0	0.0	0.0	0.2
*13	Study on Increasing Port Capacity for SADCC Transit Goods, Port of Dar es Salaam.	0.2	0.2	0.0	0.2	0.0	0.0
15	Improvment of Central Workshop Port of Dar es Salaam.	3.8	3.4	0.4	3.8	0.0	0.0
16	Port Development Study Port of Dar es Salaam	1.2	1.0	0.2	1.2	0.0	0.0
17	Project Coordination Unit	3.8	3.5	0.3	3.8	0.0	0.0
18	Management Technical Assistance THA Headquarters and Port of Dar es Salaam	24.0	22.5	1.5	24.0	0.0	0.0
		271.8	237.7	34.1	225.1	13.5	33.2

September 1992

TAN.3.03: Coastal Navigational Aids, Tanzania



Estimated Costs
Total : USD 0.2 million
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Tanzania Harbour Authority

Start :
Duration:

Objectives : To increase the Safety of Navigation on the east coast of the SATCC countries through restoring lights and buoys and improving intensity and ranges of navigational aids, the SATCC project MOZ.3.04, Navigational Aids Mozambique, shall be followed-up with a similar study in the Tanzanian waters.

Description : The project is divided into two phases, a study phase and an implementation phase.

The study shall review existing studies made on navigational aids in Tanzania and through a mission collect the information to prepare the scope of work for the project implementation.

The mission shall look into the need of phasing of the project, including supportive projects such as buoy handling and maintenance vessels, repair and maintenance workshops, training of personnel and needs for administrative and technical assistance, and will work out cost estimates and time schedules for the project.

Status : Feasibility Study completed October 1989.

September 1992

ZAM.3.01: Study of the Navigability of the Zambezi and Shire Rivers

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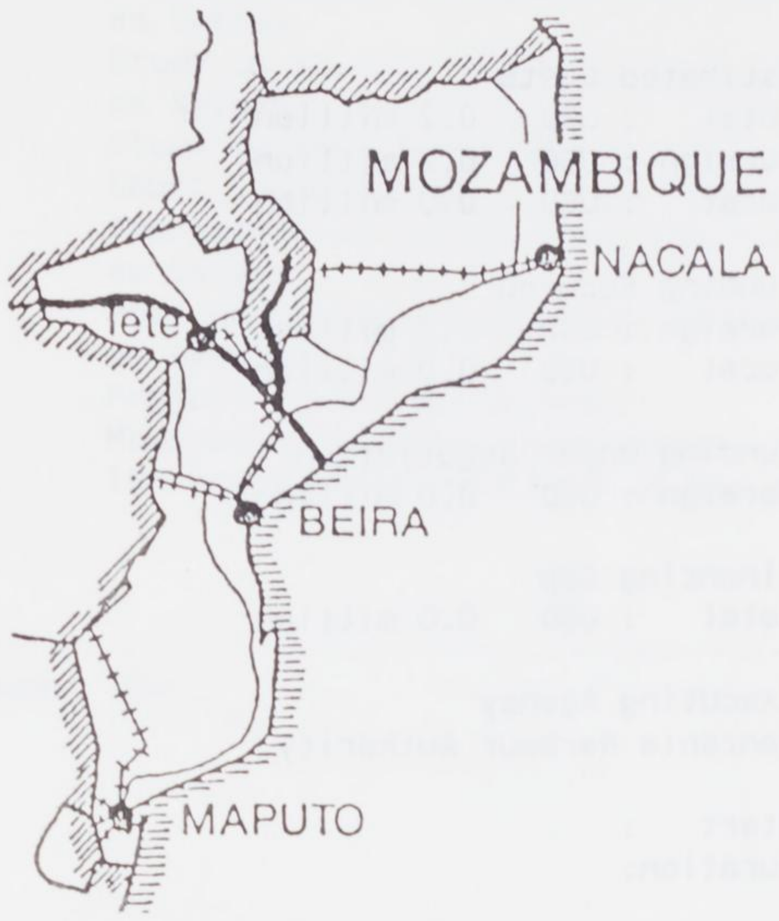


Estimated Costs
Total : USD 0.3 million
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.3 million

Executing Agency
SATCC

Start : 1993
Duration: 1 Year

Objectives : Prefeasibility study to establish the engineering feasibility of navigation on Lake Cahora Bassa, the Zambezi and the Shire Rivers.

Description : The aim of the project is to establish the feasibility of using Lake Cahora Bassa, the Zambezi and the Shire Rivers for the transport of cargo from and to Zambia, Zimbabwe, Malawi and Mozambique.

The project includes :

- Reviewing earlier studies made on the subject and evaluating their findings in the context of the latest knowledge of the transport needs in the influence region;

- An engineering study and cost appraisal of the structural works necessary necessary to make the river system navigable, and the type of ship possible to use for navigation on the system, or part of it. The study should be carried out at a prefeasibility level of detail;

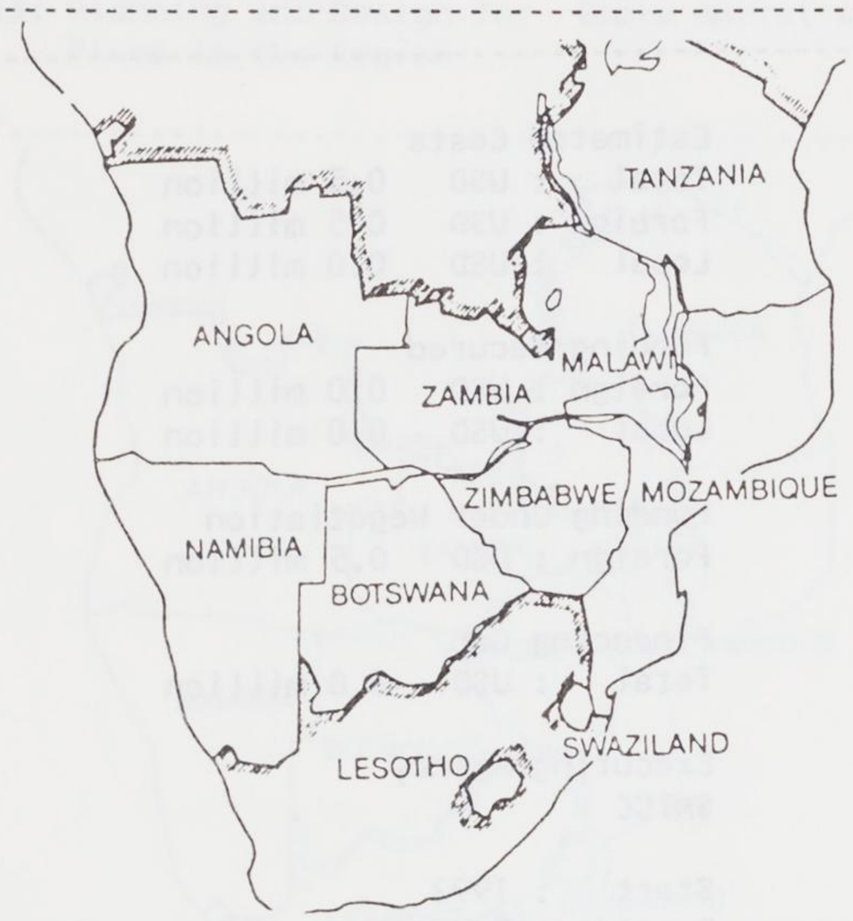
- A programme from more detailed investigations, should the appraisals indicate that there is a case for this.

Status : A Steering Committee for the project has been established, and has met twice. Subprojects under the overall study are being identified.

September 1992

Civil Aviation

AAA.4.03: Coordinated Use of Aircraft Maintenance Facilities



Estimated Costs
Total : USD 0.1 million
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.1 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start : 1993
Duration: 5 Months

Objectives : The objective of the project is to rationalize the use of existing aircraft maintenance facilities in the SADC region and to chart out how these facilities could be developed for future demand in aircraft maintenance work.

Description : Using the results of the 1991 "SADC Airline Industry Study" (World Bank) and the 1984 " Feasibility Study for the Establishment of a Coordinated Network of Aircraft Maintenance and Overhaul Centres" (ADB) as well as the experience gained in bilateral cooperation between the SADC Airlines and other related work in the region, the implementation plan shall cover the following:

- Assess the existing aircraft maintenance within the region.
- Estimate the volume and content of aircraft maintenance work in the SADC region in the next twenty years.
- Assess aircraft maintenance capability that exists in the region in terms of facilities, equipment and human resources. Furthermore, determine the level and extent of manpower development, facilities and equipment requirements needed to meet current and future maintenance work demand.
- Recommend optimum utilisation of resources for maintenance, overhaul and repair of airframes, engines and other components operated by aircraft operators in the SADC Member States, bearing in mind the existing and planned facilities and fleet development projections over a 20 year period.
- Propose a system facilitating the movement of repaired aircraft parts in and out of the repair centres.
- Indicate the magnitude of investment by location, estimate the operating costs and revenues;
- Recommend a system aiming at a distribution of gains and work load among the participating members;
- Prepare a cost/benefit analysis showing the economic improvements which the recommended system will achieve compared to current maintenance and overhaul practices.
- Assess and propose designation of specialised work to some identified capable centres.
- Prepare the legal framework and institutional requirements for effective utilisation of each selected maintenance centre.
- Determine costs and benefits of joint utilisation of the maintenance centres.
- Prepare a feasibility report for each maintenance centre indicating the modalities for joint operations and utilisation of the selected centres by the SADC Member States
- Prepare a loan application report for use in soliciting funding for the implementation of the major components of the programme.

Status : ADB has agreed to finance a Pre Feasibility Study for this project.
The pre feasibility aspects are, however, covered by the World Bank Study on SADC Airline Industry.
Concrete practical recommendations are not given in the Industry Study. Thus this part of the project remain to be done.

September 1992

AAA.4.10: Joint Use of Aircraft and Sub-Regional Cooperation

Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.5 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start : 1992
Duration: 9 Months

Objectives : The project aims carrying out of:

(i) Drawing out a comprehensive practical implementation plan for the operation of intercontinental aircraft under a joint-use programme.
(ii) Comprehensive analysis of all aspects of sub-regional airline cooperation.

Description : The studies shall using the results of the 1991 "SADCC Airline Industry Study" by World Bank and experiences from other initiatives in the region, cover following main elements taking varoius alternatives into consideration such as wet lease of aircraft, joint venture or pool agreement with suitable airline(s), establishment of an aircraft leasing company for the use of SADC Airlines.

(a) Traffic and Route Analysis.
(b) Aircraft and Crew Scheduling.
(c) Equipment Selection.
(e) Negotiation of Air Transport Agreements.
(f) Airline Traffic and Sales Management and Planning.
(g) Economic Analysis.
(h) Analysis of the legal, administrative and technical ramifications of joint-user activities.
(i) Rationalization and common utilization of the existing wide-body and other aircraft within SADC , for intercontinental or sub-regional routes choice or acquisition of aircraft suitable for joint-use.
(j) Financial and leasing arrangements, including revenue and cost - sharing formulae.
(k) All commercial aspects embracing:
  (i) Revenue accounting
  (ii) Reservations
  (iii) Sales and Traffic Documents
  (iv) Marketing and Customer Service
  (v) Financial Statements and Statistics.
(l) Equity share capital and initial pre-operative financial plan.
(m) Administrative, manpower and structural framework for the day to day activities of the joint-use agency.

Status : ADB has agreed to finance a Pre Feasibility study of this project.
The pre feasibility phase of this project is covered by the World Bank Study on SADC Airline Industry.
The implementation plan is not included in the Industry Study. Thus this part of the project remains to be done.

September 1992

AAA.4.13: Planning and Design for Imple mentation of the Rationalized Plans in the Region

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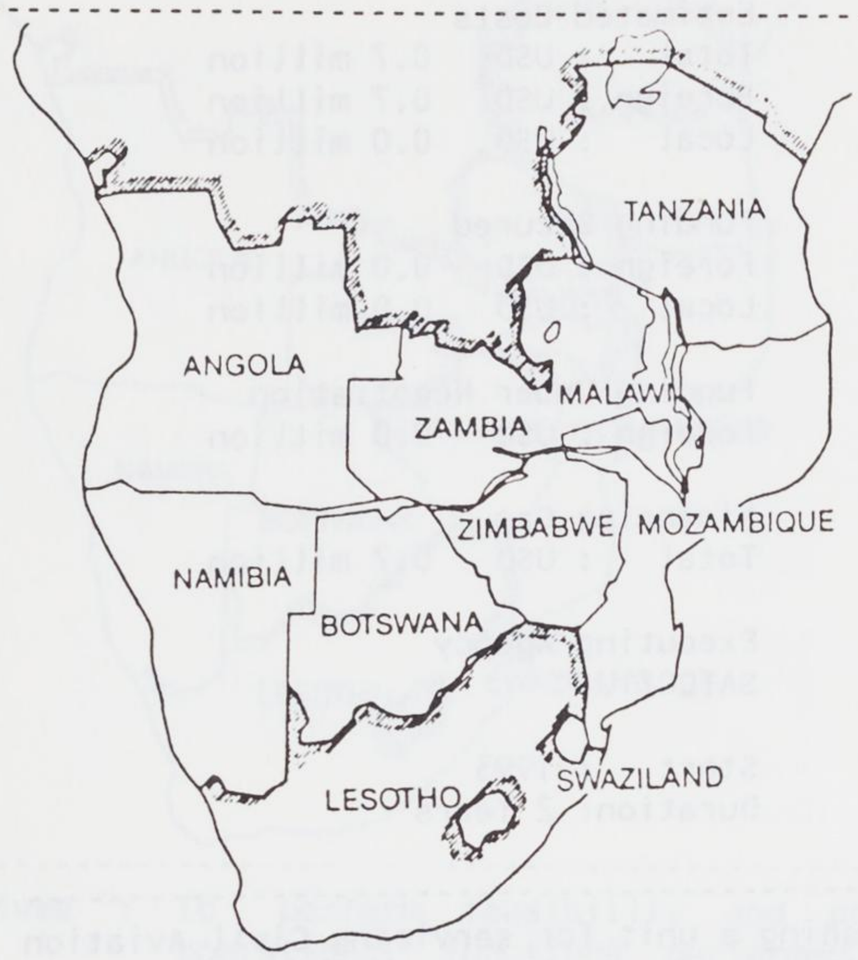


Estimated Costs
Total : USD 0.8 million
Foreign : USD 0.8 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.8 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC/TU

Start : 1993
Duration: 1 Year

Objectives : The project provides for operational, technical and economic planning and design to enable early implementation of the ICAO Rationalized Plans for the Aeronautical Fixed Services Network (AFTN) and the Air Traffic Services Direct Speech Network (ATS/DS) in the Region.

Description : In order to speed up the implementation of the Rationalized Plans, it is proposed to initiate a study which will both tackle the financing issues, and lead to the preparation of detailed plans for implementation of the AFTN centre in Lilongwe and the ATS/DS centres in Lusaka and Dar es Salaam. The Planning and preliminary design would be advanced to the stage where implementation could commence, and would thus include the mode of operating the centres and their staffing and training needs, and technical planning and preliminary design of equipment and installation works, including capital and operational cost estimates. The study would also cover the transitional phase between the existing and the new systems.

To carry out planning and preliminary design study, a project team comprising of the following experts will be required:
- Two telecommunications engineers,
- One organisation/administration expert, and
- One financial expert.

One member of the team would act as the project manager and would report to SATCC/TU, who would also be responsible for the administration of the contract. The project would be implemented under the supervision of a group comprising of the Directors of Civil Aviation in the Region.

Status : Funding sought. Replacing part of project AAA.4.12.

September 1992

AAA.4.14: Feasibility Study of an Inspection Services Unit

Estimated Costs
Total : USD 0.7 million
Foreign : USD 0.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.7 million

Executing Agency
SATCC/TU

Start : 1993
Duration: 2 Years

Objectives : To determine the feasibility of establishing a unit for servicing Civil Aviation Directorates with flight safety inspection services. The study would also cover the details of the unit's mode of operation, as well as a programme for establishing the unit.

Description : The proposed feasibility study would cover:

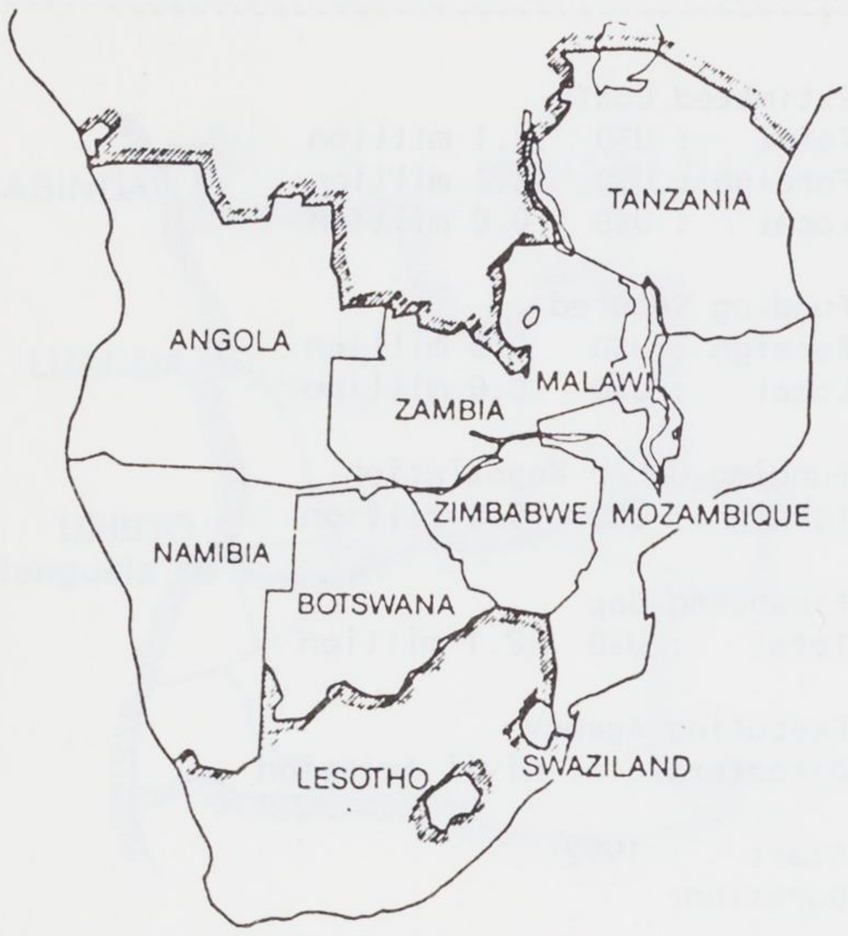
- Analysis of which kind of services the unit could supply;
- How the unit would operate;
- How it would be staffed;
- Analysis of charging structure;
- Analysis of the unit's viability;
- Review of experiences of similar kind of units elsewhere in the world;
- Analysis of the benefits to a typical country of procuring services from the unit;
- Ownership and financing issues.

It is found that the unit is likely to be viable and that it could offer significant benefits to individual states, the study would continue into a second phase, with the purpose of determining the details of the mode of operation, and to try to obtain an indication from the governments of a number of the Member States that they would be seriously considering the purchasing of services from the unit. Depending on the results of the feasibility analysis, the study would end with the preparation of an action programme,spelling out the details for making the unit operational.
The study would be carried out by a team comprising one experienced aviation safety inspector, and one person with experience in the development of businesses and organisations in the service industry. The team would be able to recruit short-term consultants for specific tasks, and would be guided by a reference group to be appointed by the DCAs/CEOs of the National Airlines. The administration of the study would be the responsibility of SATCC/TU in Maputo.
It is anticipated that it would take at least 2 years for the study to be completed, given that the proposed unit is likely to be viable.

Status : Funding sought. Replacing part of project AAA.4.12.

September 1992

AAA.4.15: Feasibility Study of Independent Operators



Estimated Costs
Total : USD 2.0 million
Foreign : USD 2.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.0 million

Executing Agency
DCA in Countries Concerned

Start : 1993
Duration: 3 Years

Objectives : To perform feasibility and preliminary design studies for transferring operational functions performed by a Department of Civil Aviation and other government departments to a separate statutory board or a corporation.

Description : The study would cover the following:

- Analysis of the costs of the present mode of operation, allocated to the various functions performed;
- Review of alternative models for establishing operative units, including legal framework, numbers and delegation of authority;
- Analysis of organisational structure and manning requirements of new units, including regulatory functions;
- Analysing of charges, and future revenue potential for operative units;
- Financial analyses of proposed new units and their viability in comparison with the present arrangements;
- Analysis of procedures of budgeting for and covering losses in the operative units to stimulate cost effective operations;
- Preparation of a strategy and timetable for implementating the proposed solution, including and identification of all measures required and associated costs for successful implementation.

Status : Funding sought. Replacing part of project AAA.4.12.

September 1992

ANG.4.01: Civil Aviation Projects in the Ten Year Development Plan for the Lobito Port Transp.System

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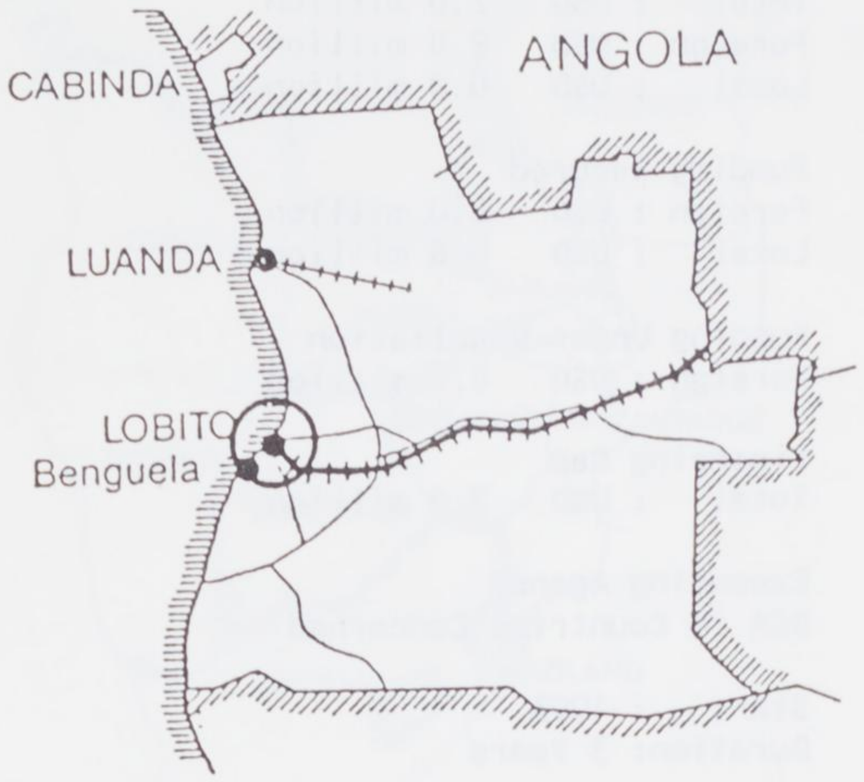


Estimated Costs
Total : USD 12.1 million
Foreign : USD 12.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 12.1 million

Executing Agency
Directorate of Civil Aviation

Start : 1992
Duration:

Objectives : Provision of adequate airport capacity related to the Lobito Port. Under the Ten Year Development Plan for the Lobito Port Transport System.

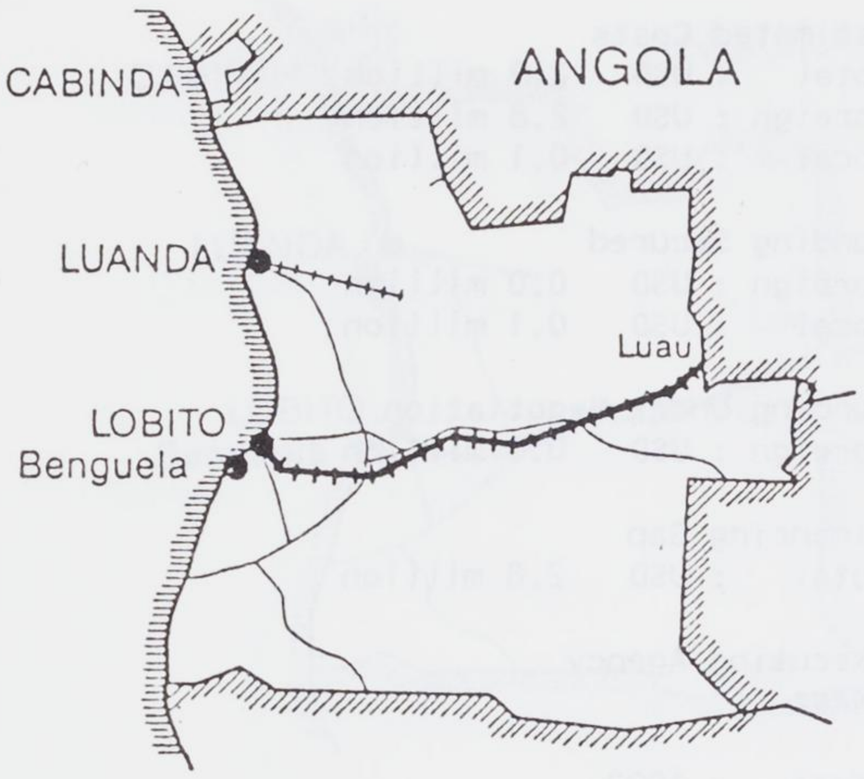
Status : A Techncial Co-ordination Conference to discuss the Plan was held in January 1989. Interest was expressed by financiers in the projects in the Preparatory Phase of the 10-Year Plan, including those concerning civil aviation. Italy has earlier shown interest for Project CA-CE-1.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
CA-CE-1	Upgrading of Benguela Airport	12.0	12.0	0.0	0.0	0.0	12.0
CA-CE-2	Study on New Airport between Lobito and Benguela	0.1	0.1	0.0	0.0	0.0	0.1
		12.1	12.1	0.0	0.0	0.0	12.1

September 1992

ANG.4.03: Technical Assistance to ENANA



Estimated Costs
Total : USD 3.1 million
Foreign : USD 2.4 million
Local : USD 0.7 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.7 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.4 million

Executing Agency
ENANA

Start : 1993
Duration: 3 Years

Objectives : The project comprises of technical assistance experts to strengthen and build up ENANA's maintenance and operations capability.

Description : It is envisage that the technical assistance team will comprise of an Aerodrome Engineer, an Airport Operations Specialist, a Telecoms/Navaids Equipment Specialist, and an Air Traffic Services Adviser. It is assumed that ENANA would also be assisted by a second air traffic services adviser, but that this person would be attached to the Directorate of Civil Aviation as ATS Expert; see project ANG.4.07. He would only assist at ENANA's training school by giving courses, reviewing curricula and training ENANA's own instructors.

The Aerodrome Engineer is presumed to act as the head of ENANA's newly established Aerodrome Maintenance Division in the Civil Engineering Department.

The Aerodrome Engineer would also be responsible for organising and executing a number of urgently required maintenance tasks at Luanda Airport.

The Airport Operations Specialist assumed to act as an adviser to the Manager of Luanda Airport.

The Telecoms/Navaids Equipment Specialist would be attached to ENANA's Department of Maintenance.

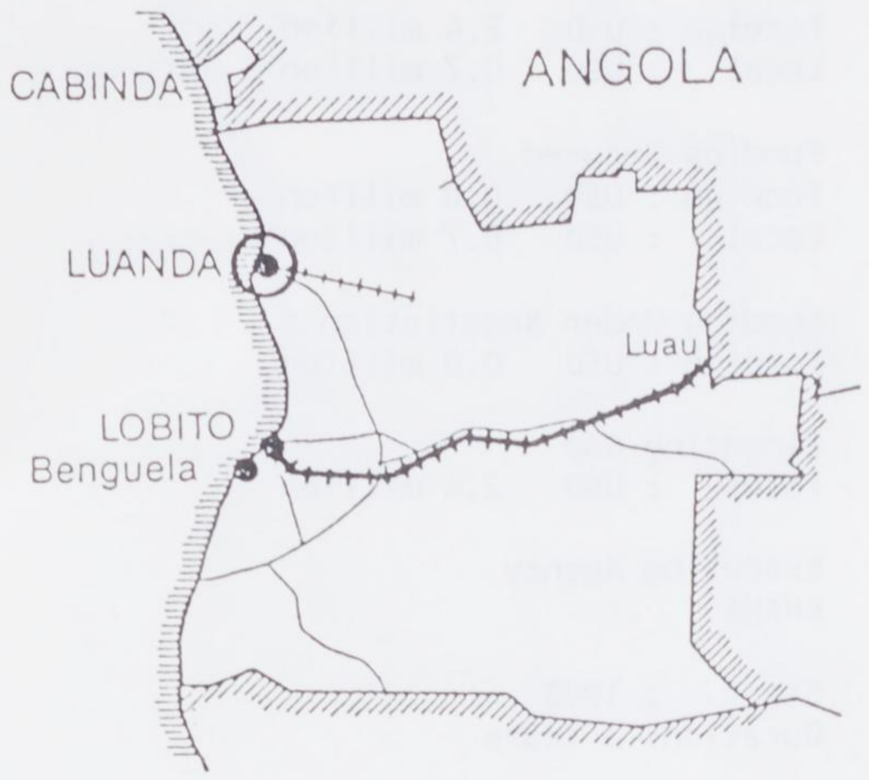
The ATS Adviser would be attached to the Department of Air Traffic Services and Communications.

A more detailed description is given in the Civil Aviation Safety Action Plan.

Status : ICAO has fielded an expert team to make detailed analysis of the needs of the aviation sector in Angola, including ENANA's technical assistance requirements (UNDP project ANG/89/036. Replacing part of project ANG.4.02.

September 1992

ANG.4.04: Telecoms and Navaids for Luanda Airport



Estimated Costs
Total : USD 2.9 million
Foreign : USD 2.8 million
Local : USD 0.1 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.8 million

Executing Agency
ENANA

Start : 1992
Duration: 1 Year

Objectives : The project provides for the replacement of the instrument landing system (ILS) and 6 HF transmitters at Luanda Airport.

Description : The minimum requirement for ensuring basic services is six HF radios, two for mobile services within the FIR, and four for fixed services to ACC/FIC Lusaka, Windhoek, Gaborone and Kinshasa/Brazzaville. While ENANA has eight units at present, and the receivers were replaced recently and are in good condition. it is necessary to replace the transmitters. These were originally installed in 1975.

The present ILS (Category) was originally installed in 1975.
It has not been operational for the last three years. ENANA has engaged two different consultants for assessing the future of the ILS. Their conclusions were that the present facility could be repaired, but in view of its age it would be cheaper in the long run to replace it immediately with a new one. An ILS is a standard feature at an airport of Luanda's size and is required according to ICAO's Air Navigation Plan.

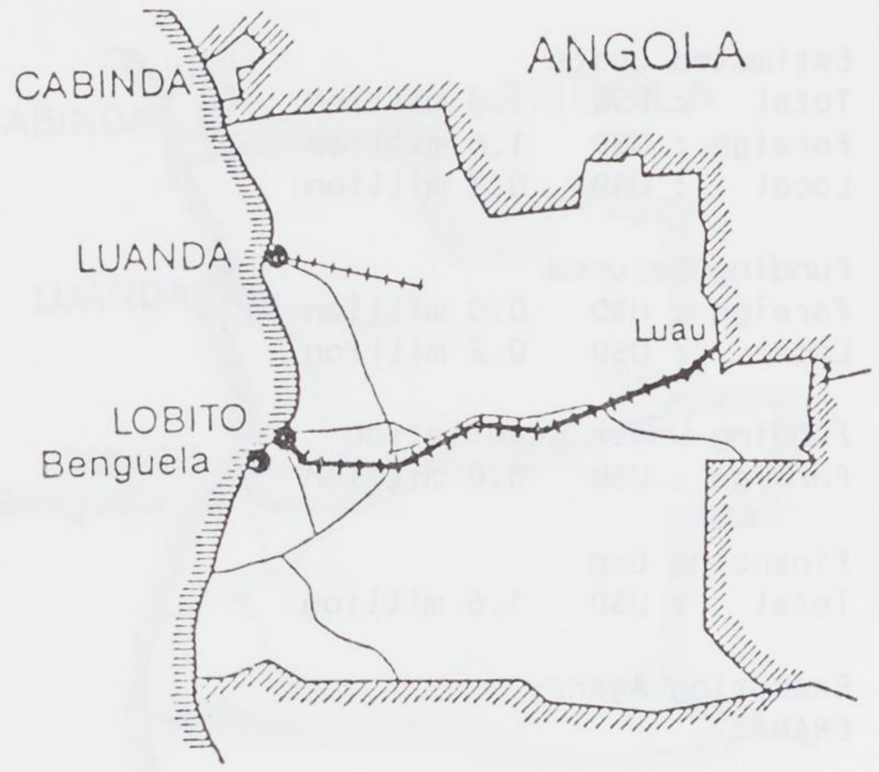
The items are urgently required to ensure that Luanda Airport and ACC/FIC can provide a minimum of services in accordance with the ICAO Regional Air Navigation Plan. The priority is immediate.

A more detailed description is given in the Civil Aviation Safety Action Plan, which is part of the 10-Years Development Plan.

Status : Funding sought. Replacing part of project ANG.4.02.

September 1992

ANG.4.05: Technical Assistance to DNAC



Estimated Costs
Total : USD 2.8 million
Foreign : USD 2.8 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.8 million

Executing Agency
DNAC

Start : 1992
Duration: 3 Years

Objectives : The project comprises of technical assistance experts to strengthen and build up the capacity and competence of the National Directorate of Civil Aviation (DNAC).

Decsription : It is envisaged that the technical assistance team will comprise of five experts:

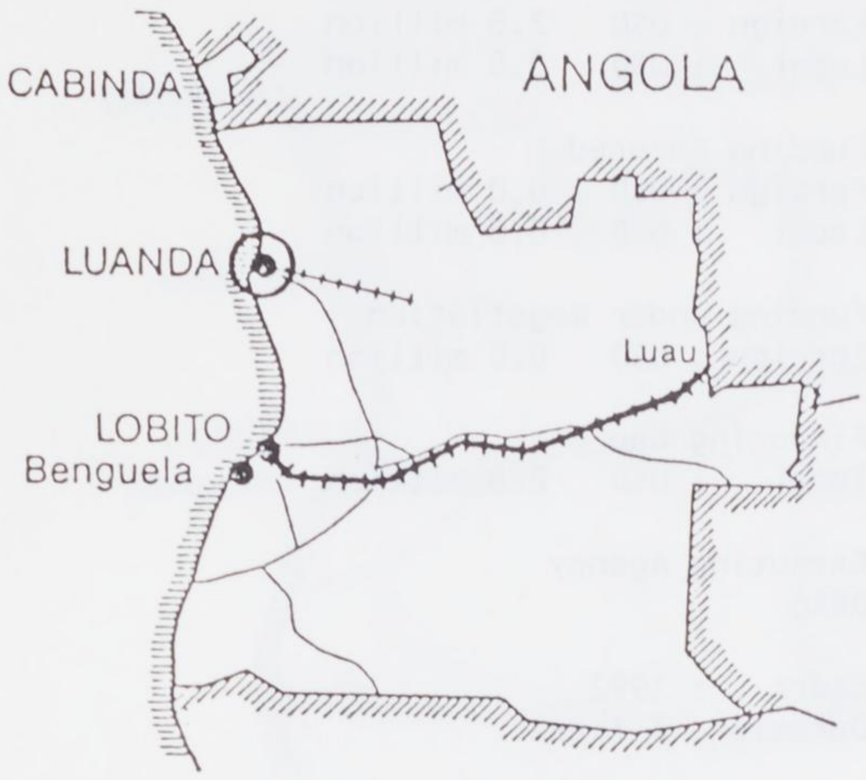
One Civil Aviation Adviser, who is proposed to have a background as an executive in civil aviation administration and would act as an adviser to the Director of DNAC in all matters.
One Air Traffic Services Adviser, who should have a background as a senior air traffic controller. He also needs to have experience as an instructor, as it is envisaged that he would be attached to ENANA's training school to give courses, review curricula and train ENANA's own instructors.
He would be responsible for updating the AIP.
One Flight Safety Specialist, who should have been a senior airline pilot and would act as chief of the Flight Safety Division, to build up the Division's operational and administrative procedures, and act as inspector and trainer of a local counterpart.
One Airworthines Specialist, who should have been a senior airworthiness engineer. He would act as chief of the Airworthness Unit, to build up the Unit's operational and administrative procedures, and act as inspector and trainer of a local counterpart.
One Aviation Law Specialist, who is envisaged to prepare a consolidate

legilation for civil aviation, including acts and regulations and prepare retification of civil aviation conventions and other international legal instruments.

Status : Funding sought. Replacing part of project ANG.4.02.

September 1992

ANG.4.06: Navigation Aids for Luanda FIR



Estimated Costs
Total : USD 1.8 million
Foreign : USD 1.6 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.6 million

Executing Agency
ENANA

Start : 1992
Duration: 1 Year

Objectives : The project provides for the most essential navigation aids required for international aviation in Luanda FIR, viz. two VOR/DMEs.

Description : The basic requirements in terms of navigation aids in Angola are identified in ICAO's Air Navigation Plan-Africa and Indian Ocean Region.
The project comprises of:

. One VOR/DME, with standby power facilities, to be located at Luena

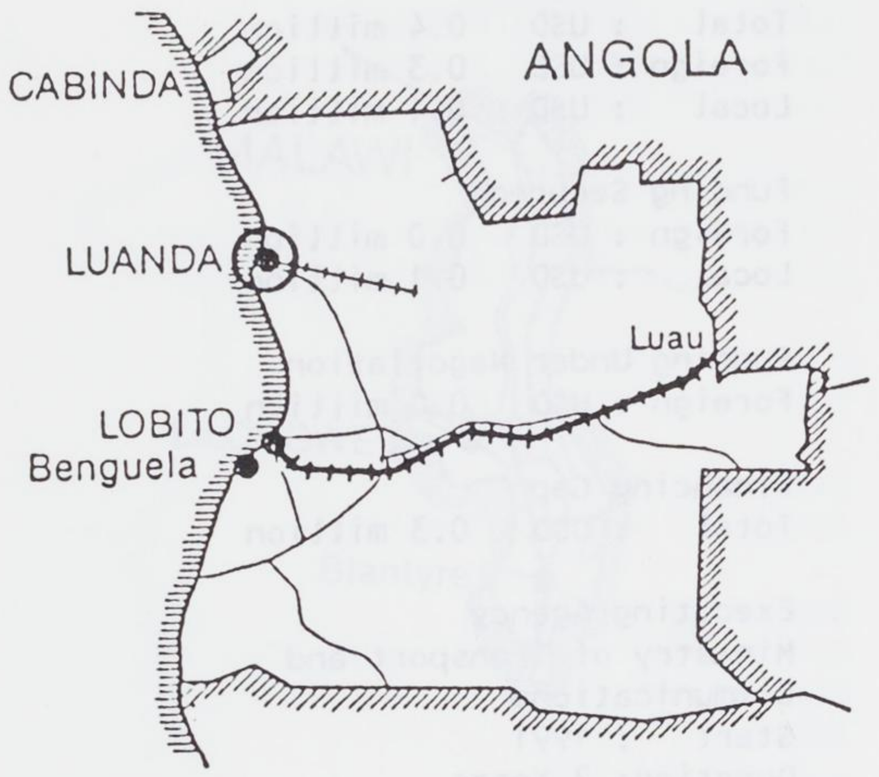
. one VOR/DME, with standby power facilities, to be located at Saurimo

The equipment will be of substantial assistance to aircraft flying over the eastern part of Angola, in particular regional flights en-route between Luanda and Lusaka/Harare. Today, these flights to some extent have to rely on their own instruments for navigation, which does not give the necessary precision.
(This does not apply to modern wide-body aircraft with their own navigation equipment.)
The project will also be important to flights making use of Angola air routes en-route from, for example, Europe to Southern Africa. At present, these air routes are closed because of the lack of navigation aids, and their aircraft are therefore required to take more circuitous routes. The project is seen as essential to guarantee minimum safety and to cater for efficient air traffic and should be implemented in the short term.

Status : Funding sought. Replacing part of project ANG.4.02.

September 1992

ANG.4.07: Luanda Airport Master Plan Study



Estimated Costs
Total : USD 0.7 million
Foreign : USD 0.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.7 million

Executing Agency
ENANA

Start : 1992
Duration: 2 Years

Objectives : To prepare a master plan for the development of Luanda Airport until the year 2010.

Decsription : The purpose of the study would be to prepare plans for the development of the airport over the period up to 2010, focusing on (i) the likely development of future traffic demand, (ii) the development of a strategy for land use within and in the vicinity of the present premises, including both military and civilian purposes, (iii) an identification of the need for new buildings or extension/rehabilitation of the existing building, based on least-cost or cost effectiveness analysis, and (iv) an identification of environmental issues and approaches for how to tackle them.

Status : Funding sought. Replacing part of project ANG.4.02.

September 1992

LES.4.06: Rehabilitation of Telecommunications for Lesotho

Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.3 million
Local : USD 0.1 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.3 million

Executing Agency
Ministry of Transport and Communications
Start : 1991
Duration: 2 Years

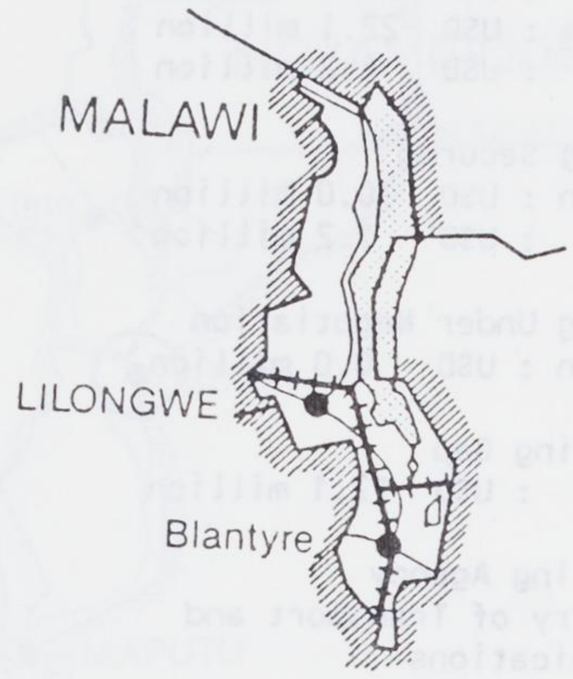
Objectives : To improve rural airfield communications and to expand range of Very High Frequency (VHF) transmission through one VHF repeater station and to improve the navigation aids at Thaba-Tseka airport, being a centre for search and rescue.

Description : The Civil Aviation Safety Action Plan, LES:1

Status : Funding sought. Renamed in order to agree with the Civil Aviation 10-Year Development Plan.

September 1992

MAL.4.02: Techncial Assistance to the DCA



Estimated Costs
Total : USD 0.7 million
Foreign : USD 0.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.7 million

Executing Agency
Ministry of Transport and Communications
Start : 1991
Duration: 1 Year

Objectives : The Project would provide technical assistance to the Department of Civil Aviation (DCA) to establish preventive maintenance programmes for its telecommunications equipment and radar, and fellowships for meeting urgent training needs in these areas as well as for air traffic controllers and the instructors at the School of Aviation.

Description : The Civil Aviation Safety Action Plan for Malawi, MAL:1

Status : Funding sought. Renamed in order to agree with the Civil Aviation 10-Year Development Plan.

September 1992

MOZ.4.03: Civil Aviation Projects in the Beira Port Transport System Development Plan

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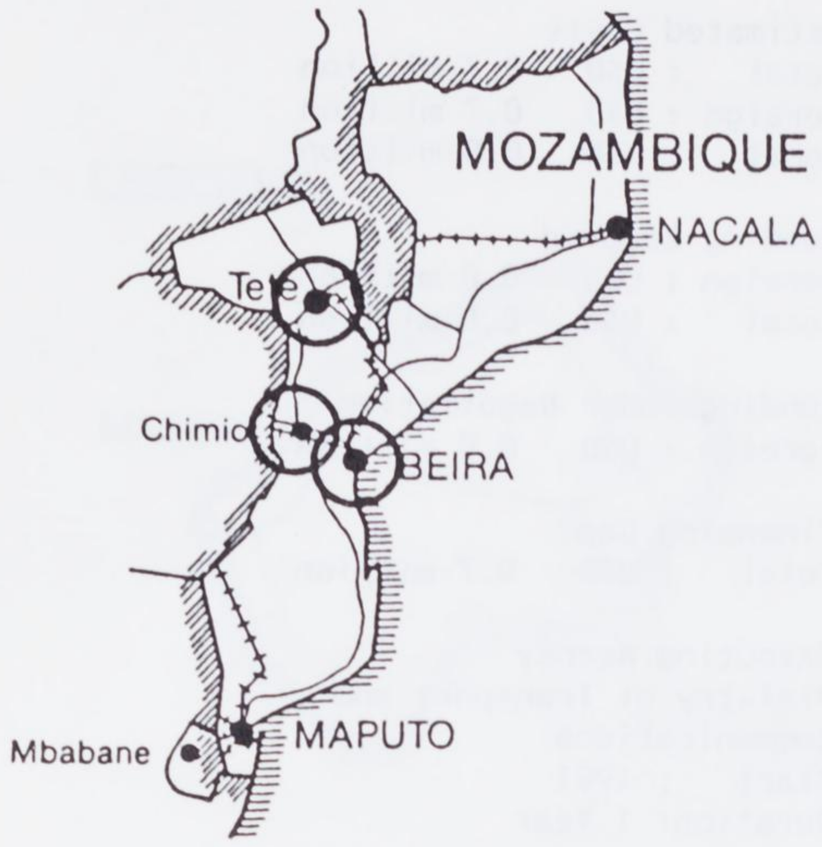

Estimated Costs
Total : USD 23.3 million
Foreign : USD 22.1 million
Local : USD 1.2 million

Funding Secured
Foreign : USD 10.0 million
Local : USD 1.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 12.1 million

Executing Agency
Ministry of Transport and Communications
Start : 1990
Duration: 5 Years

Objectives : To improve the flight traffic services in the Beira region by general rehabilitation and modernization of related civil aviation facilities.

For details see Beira Port Transport System 10-Year Development Plan.

Status : This project partly covered by P.Moz.4.09; MOZ:1 and MOZ:3.

Subprojects Included in Programme:		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
C-CE:1	Development of the Beira Airport Terminal	2.0	2.0	0.0	0.0	0.0	2.0
C-CE:2	Strengthening of Runways in Beira and Tete	4.5	3.6	0.9	0.9	0.0	3.6
C-CE:3	Airport Building, Chimoio	1.5	1.2	0.3	0.3	0.0	1.2
C-ME:2	Communication and Navigation at Beira, Chimoio and Tete	3.0	3.0	0.0	1.0	0.0	2.0
C-ME:3	Fire Fighting Equipment for Beira, Chimoio and Tete	2.5	2.5	0.0	2.5	0.0	0.0
C-ME:4	Maintenance Equipment	0.5	0.5	0.0	0.0	0.0	0.5
C-ME:5	Airport Lighting, Chimoio	6.5	6.5	0.0	6.5	0.0	0.0
C-TA:1	Technical Assistance	2.8	2.8	0.0	0.0	0.0	2.8
		23.3	22.1	1.2	11.2	0.0	12.1

September 1992

MOZ.4.08: Improvement of ATC Equipment in Beira FIR, Mozambique

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Estimated Costs
Total : USD 8.0 million
Foreign : USD 8.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 8.0 million

Executing Agency

Start : 1996
Duration: 1 Year

Objectives : In order to improve the flight safety standards, within Beira FIR (Flight Information Region) which covers the air space over the territory of Mozambique, major investments in air traffic control equipment and manpower training are required for radar coverage.

Description : In addition to improving the overall safety and reliability of air traffic control the project is required to increase the capability of Mozambique to detect and monitor flights and thus reduce the possibility of airspace violations.

With the proposed equipment two serious accidents in the last years in Mozambique could have been avoided.

The radar equipment must provide automatic aircraft identification of transponder equipped aircraft.

The capital investment components of this project are as follows :

- Installation of Surveillance Radar at Beira including spares, ancilliary and test equipment;

- Installation of primary and secondary radar at Maputo with inter-linking telecommunications to Beira;

- Provision of uninterruptible power supply and air conditioning at the radar transmitter sites; and

- Costs for training of needed air traffic control and maintenance manpower.

Status : Funding sought.

September 1992

MOZ.4.10: Telecoms and Navaids for Beira FIR

Estimated Costs
Total : USD 2.8 million
Foreign : USD 2.6 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.6 million

Executing Agency
Ministry of Transport and
Communications, Mozambique
Start : 1992
Duration: 1 Year

Objectives : The project comprises repairs and refurbishment of Beira Flight Information Centre and Beira and Maputo ATC towers, supply of new ATC and Telecommunications equipment plus spares, tools and test equipment at both airports, and replacement of the VOR at Beira with a VOR/DME for en-route, and approach and landing functions.

Description : The project consists of the following components at Maputo:

. Three ATC cnsoles complete with voice switching and other ancillary equipment, including SELCAL for fixed and mobile communications;

. VHF direction-finding equipment;

. Telephone exchange system

. Navaids monitoring equipment;

. Repair and refurbishment of the ATC tower and technical buildings;

. Spares, tools, test equipment, workbenches, etc. needed to establish a central telecom/navaids workshop at Maputo;

. Duplicate telecom equipment for maintenance training.

The following components are needed at Beira:

. ATC consoles for the control tower and FIC complete with voices switching and other ancillary equipment and navaids monitors, including SELCAL for fixed and mobile communications;

. One HF transmitter/receiver for ATS/DS circuit with Lusaka;

. Repair and refurbishment of the ATC tower and FIC;

. One VOR/DME;

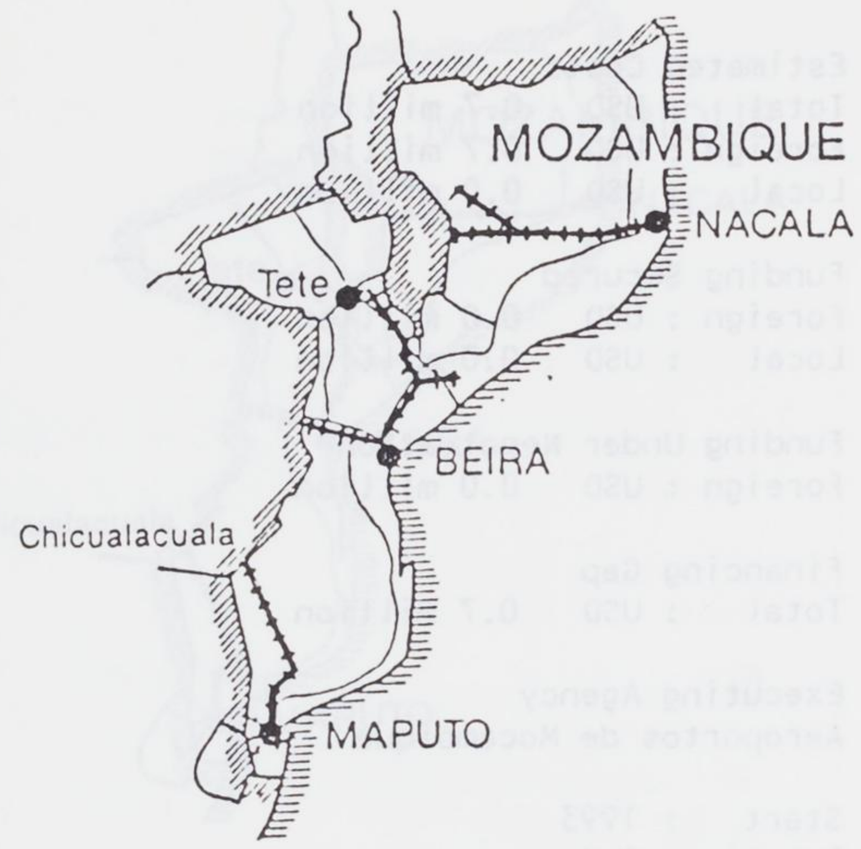
. Additional spares, tools and workshop facilities needed to maintain equipment in Beira.

In addition, engineering consulting services will be required to prepare specifications and supervise implementation.

Status : Funding sought. Replacing part of project MOZ.4.09.

September 1992

MOZ.4.11: Technical Assistance to ADM



Estimated Costs
Total : USD 2.2 million
Foreign : USD 1.9 million
Local : USD 0.3 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.3 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.9 million

Executing Agency
Aeroportos de Mocambique

Start : 1993
Duration: 3 Years

Objectives : The project would provide technical assistance to ADM to improve telecommunications/navaids maintenance, air traffic services, security at the airports and financial management, and fellowships for training abroad of ADM personnel.

Description : The technical assistance is proposed to comprise the following six experts:

One Telecommunications/Navaids Equipment Specialist for 24 months to assist ADM to set up a central workshop at Maputo and maintenance workshops at Beira and other major airports, to establish an inventory system for spares and tools, to develop and implement preventive maintenance procedures and schedules and to provide on-the-job training to ADM technicians.

One Senior Air Traffic Controller, to be attached to the chief of the operations unit in the ADM headquarters, to perform refresher training, proficiency checks, provide instruction at the aviation school (ENA), review airspace configuration, develop the operations manual for air traffic control, and review equipment and procedures at the operational units.
This expert will have to serve the DNAC and ENA as well for part of the time, and will be needed for two years.

Two Financial Management Experts for a total of 40 months to reorganise the finance unit and the accounts in the ADM headquarters and to establish new reporting procedures, based on the recommendations made by an ICAO mission. The experts should be attached to the Administrative Division.

One Aviation Security Expert to review security arrangements at the airports, train security staff, identify equipment needs and be responsible for the implementation of projects to improve security, including the completion of the fencing of Maputo Airport. The expert would serve in the Operations unit in the ADM headquarters for a period of 12 months.

It is proposed that the technical assistance be supported by a fellowship programme of finance training in related disciplines for ADM staff abroad.

Status : Funding sought. Replacing part of projects MOZ.4.05 and MOZ.4.09.

September 1992

MOZ.4.12: Maputo Airport Master Plan Study

Estimated Costs
Total : USD 0.7 million
Foreign : USD 0.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.7 million

Executing Agency
Aeroportos de Mocambique

Start : 1993
Duration: 1 Year

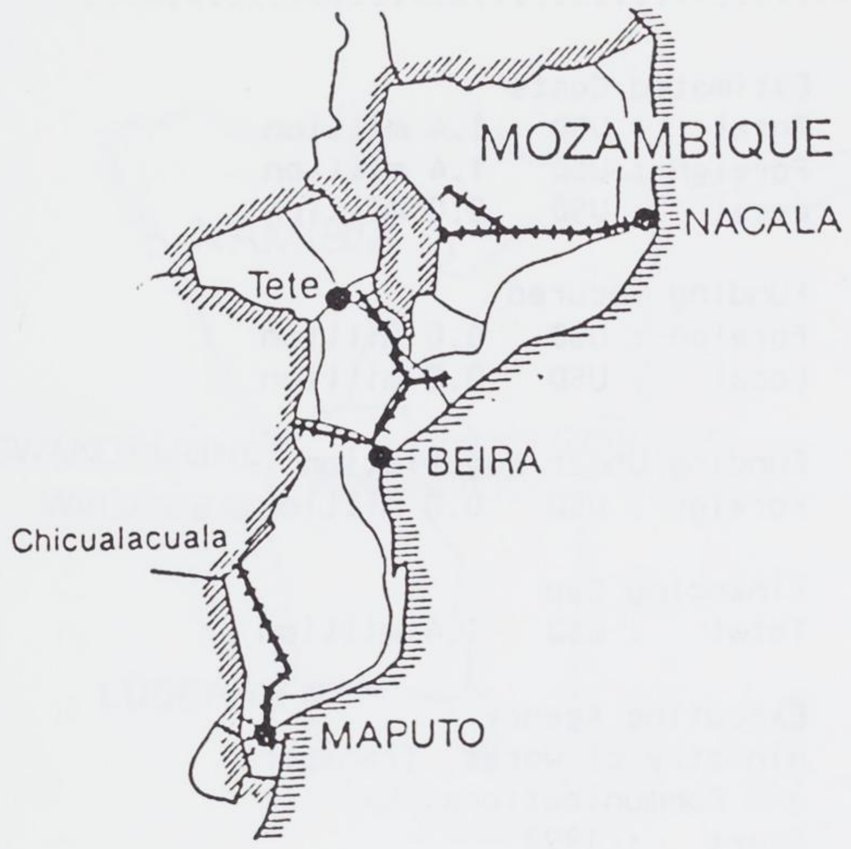
Objectives : The project comprises a study to prepare master plan for the phased development of airport facilities and equipment.

Description : The purpose of the study would be to prepare plans for the development of the airport over the period up to 2010 addressing the major issues which now face ADM. The likely development of international and domestic air traffic needs to be examined given possible changes in the internal security situation and relations with South Africa. The operations and space requirements of the passenger terminals for the short and longer term need to be assessed carefully.
The Condition of the secondary runway, taxiways, and apron needs to be assessed and rehabilitation measures identified.
The condition of the air cargo building and other aviation support facilities needs to be assessed.
The location of the ATC tower and fire fighting facilities should be examined.
The land requirements of ADM and other airport users such as LAM should be addressed.
The costs and feasibility of alternatives should be evaluated, priorities established and phased development plan and a land use plan prepared.
A high priority programme would be identified in the first phase of the master plan study to allow for early implementation of urgent items.

Status : Funding sought. Replacing part of projects MOZ.4.05 and MOZ.4.09.

September 1992

MOZ.4.13: Technical Assitance to DNAC



Estimated Costs
Total : USD 2.1 million
Foreign : USD 2.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.1 million

Executing Agency
National Directorate of Civil Aviation
Start : 1992
Duration: 3 Years

Objectives : The project would provide techncial assistance to the National Directorate of Civil Aviation (DNAC) to strengthen vital regulatory and planning functions and to build up the DNAC's capability to execute these functions on a self sustained basis in the future. The project also provides for fellowships for training abroad, where necessary to supplement the techncial assistance.

Description : It is proposed that the technical assistance comprise the following six experts:

One Flight Operations Expert, a senior commercial pilot, to establish the flight operations unit within the Department, to inspect air operators and to train a local counterpart. This expert is needed for 3 years and will serve as the chief of the flight operations unit.

One Airworthiness Expert, an aeronautical engineer, to strenghten the airworthiness unit and perform inspection of aircraft and maintenance workshops, and to develop policies in respect of inspection, including the roles to be played by operators and other outside units. This expert is needed for 2 years and will serve as the chief of the airworthiness unit.

One Search and Rescue (SAR) Expert to organise the SAR service in accordance with national and international requirements, to prepare the necessary SAR manual, to train personnel and to prepare letters of agreement with neighbouring countries and SAR-centres. This expert is needed for 12 months.

One Legal Expert to establish consolidated documents on air laws and regulations and to prepare ratification of conventions and protocols. This expert is needed for 12 months; he would serve as an adviser in the Air Traffic Department.

One Economist, an expert in air transport matters, to train a local counterpart in the economic regulation of civil air transport. This expert needed for 12 months.

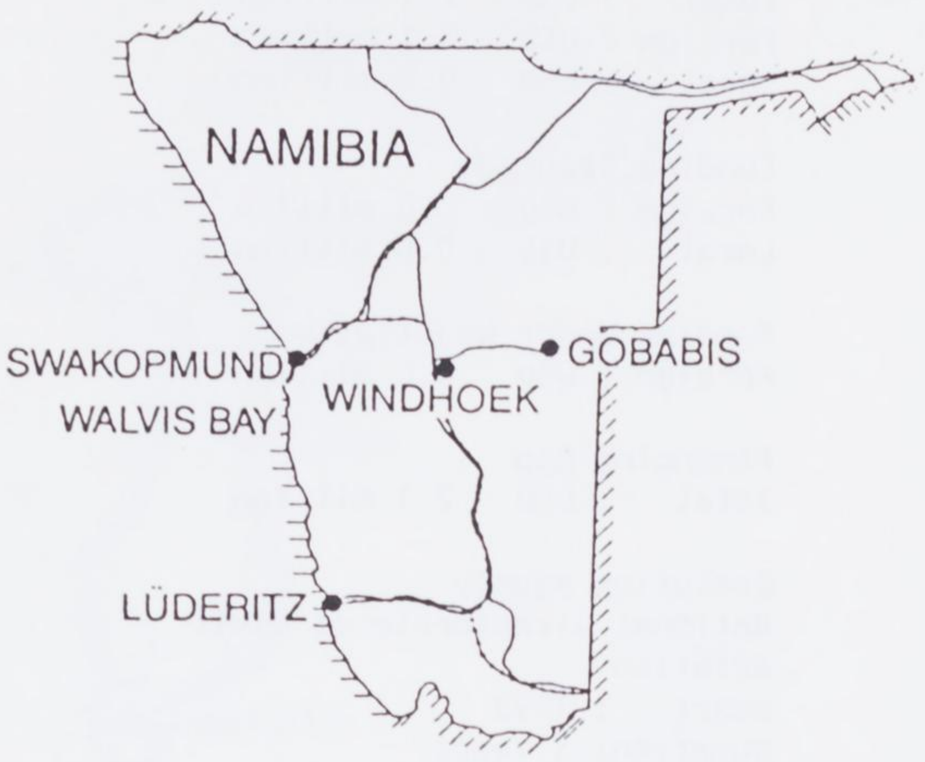
One Aeronautical Information Services (AIS) Expert to reorganise the AIS unit and train local counterpart staff. This expert will also assist ADM to develop the briefing services. The expert is needed for 12 months.

The technical assistance would be supplemented with a fellowship programme for allowing for training abroad in the areas covered by the technical assistance. The fellowship programme would thus constitute an integral part of the training provided by the technical assistance experts, and would be administered by them.

Status : Funding sought. Replacing part of projects MOZ.4.05 and MOZ.4.09.

September 1992

NAM.4.07: Techncial Assistance to DCA



Estimated Costs
Total : USD 1.4 million
Foreign : USD 1.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.4 million

Executing Agency
Ministry of Works, Transport and Communications
Start : 1992
Duration: 2 Years

Objectives : The project would provide the Department of Transport (DOT) in the Ministry of Works, Transport and Communication with 2 civil aviation experts over a period of 2 years each to assist with the establishment of a selfsustained unit within the DOT capable of performing functions related to international co-operation, the economic regulation of air transport, and aviation safety.

Description : The project comprises two civil aviation experts. It is also proposed that the project includes funds to make it possible to recruit consultants for short assignments and to organise training abroad of local staff in areas to the technical assistance.

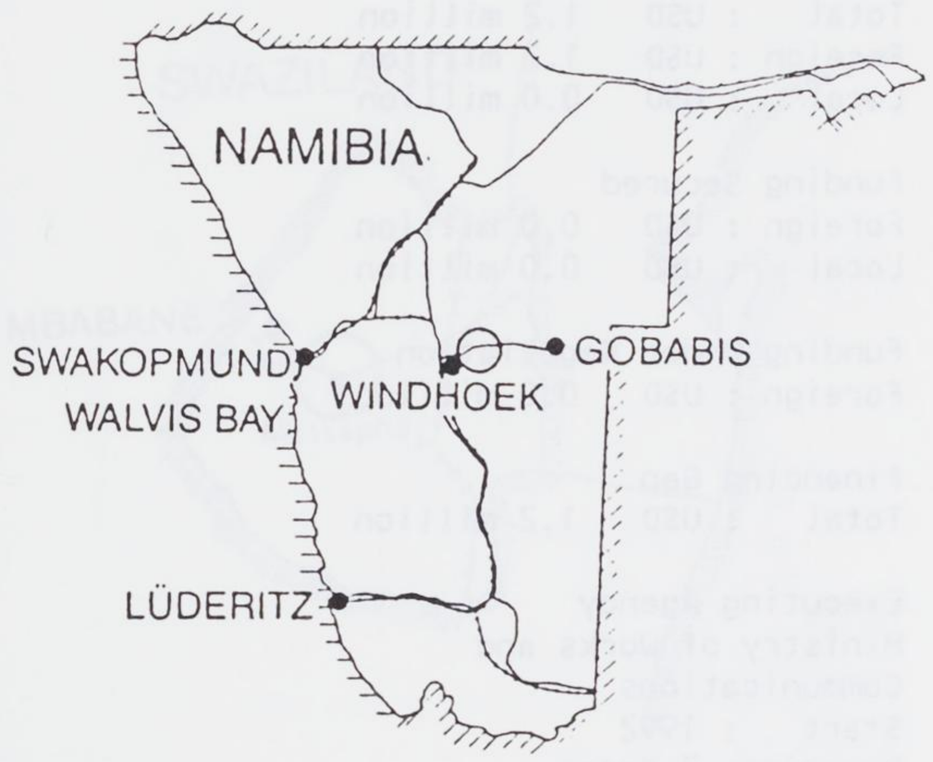
The technical assistance team is proposed to comprise: One Civil Aviation Adviser to assist with the establishment of flight safety standards in particular for large aircraft, including procedures for inspections, and for accident and incident investigations. He would also be involved in the formulation of policies for the future development of the Directorate, including manpower development policies and the definition of the roles to be played by operators and other external units in the flight safety work. The Civil Aviation Adviser would be an experienced pilot. He would report to the Director of Civil Aviation and serve for a period of about 24 months, with a possibility for an extension for another 6 to 12 months.

One Adviser in Air Transport Matters, who would have extensive experience in the economic regulation of air services through air services agreements and licences, as well as in the new regulatory policies for air transport which have been or are being implemented in Europe and North America. He would also have experience of air law, the international conventions underlying air laws, the planning of the aviation sector and the formulation of aviation policies. He would serve for a period of 24 months in the Air Transport Section, envisaged to be established as part of the regulatory Affairs Division.

Status : Funding sought. Replacing part of project NAM.4.06.

September 1992

NAM.4.08: En-Route Navigation Aids for Windhoek FIR



Estimated Costs
Total : USD 2.0 million
Foreign : USD 1.8 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.8 million

Executing Agency
Ministry of Works, Transport
and Communications
Start : 1992
Duration: 1 Year

Objectives : The project would provide for the preparation of an air navigation plan and the design installation of three VHF omnidirectional radio range beacons and distance measuring equipment (VOR/DME).

Description : Background to and the Need for the Project

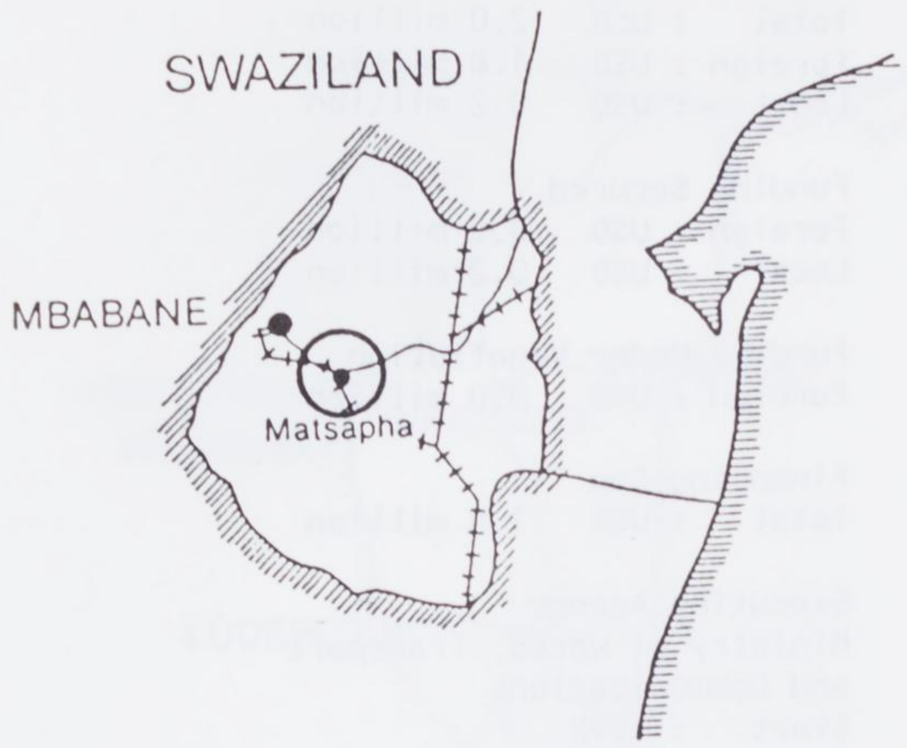
The internationally standardised radio navigation aid for civil aviation is VOR/DME. There are currently only three VORs and two DMEs in Namibia. Although this is basically in conformity with the ICAO Air Navigation Plan, the present number is not enough to provide navigation guidance to aircraft and to permit an efficient organisation of the airspace. The proposal of the Plan is based on the structure and magnitude of aviation several years ago. With the increase in aviation expected to develop after independence, including to and from SADC Member States, it will be necessary to establish VOR/DMEs along certain key air routes and to identify important entry/exit points of the controlled airspace.

In order to determine the optimal location of the beacons, it is necessary to update the existing navigation and airspace plan. It is likely that at least three VOR/DMEs will be required.

Status : Funding sought. Replacing part of project NAM.4.06.

September 1992

SWA.4.05: Technical Assistance to the Civil Aviation Branch



Estimated Costs
Total : USD 1.2 million
Foreign : USD 1.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.2 million

Executing Agency
Ministry of Works and Communications
Start : 1992
Duration: 3 Years

Objectives : The project would provide technical assistance to the Civil Aviation Branch (CAB) of the Ministry of Works and Communications to strengthen and build up competence in the execution of functions related to the regulation of air transport, flight safety, security and air navigation services. The project would also provide fellowships for ancillary training abroad.

Description : The technical assistance will comprise: One Flight Operations Expert, a senior commercial pilot, to man the flight operations unit and establish operational procedures for the unit, including defining the roles of operators and other external units in the flight safety work, and train a local counterpart. This expert is needed for 36 months.

One Senior Air Traffic Services Instructor/Adviser to perform refresher training proficiency checks and performance evaluation of all air traffic services personnel. This expert is needed for 12 months and should be assigned to assist the head of the Air Traffic Services Division.

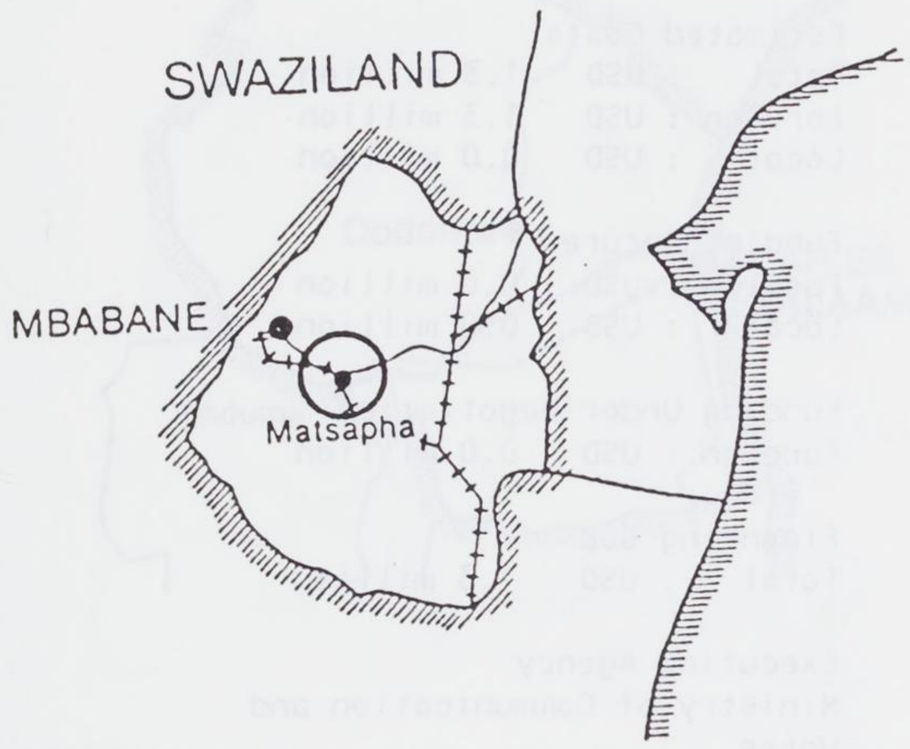
One legal expert to update aviation laws and regulations, and also to incorporate international conventions and protocols into the legislation. This expert is needed for a period of 6 months and should assist the head of the Air Transport Division.

One security expert to review security arrangements at Matsapha Airport, set up a separate unit to be concerned with security matters and to train the required staff. This expert will be required for a period of 6 months and will report to the Airport Manager.

Status : Funding sought. Replacing part of project SWA.4.04.

September 1992

SWA.4.06: Development of Matsapha Airport



Estimated Costs
Total : USD 15.0 million
Foreign : USD 13.0 million
Local : USD 2.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 2.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 13.0 million

Executing Agency
Ministry of Works and Communications
Start : 1992
Duration: 6 Years

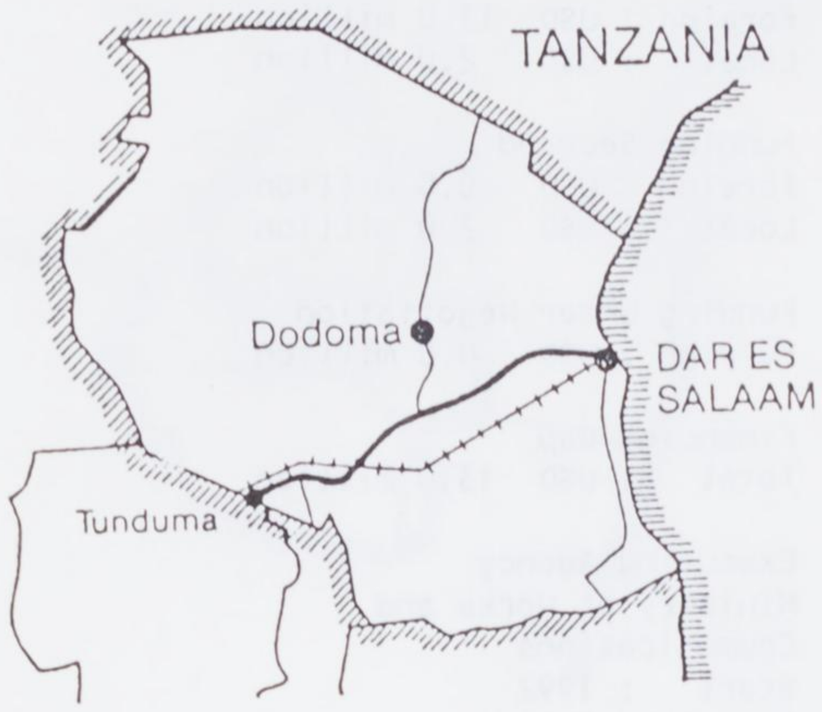
Objectives : To update Matsapha airport (Phase II) to include a new passenger terminal with car parking area and new apron and taxiways, a new cargo building and relocation of the fuel farm.

Description : The project comprises a detailed design phase and a construction phase. The total cost is estimated at USD 10.0 million in 1990 prices, of which about 20% is expected to be local costs. The detailed design contract is estimated at USD 0.3 million, while the construction supervision contract is estimated at USD 0.6 million. Both of these items are included in the total cost estimate. There will be a need to review the proposal for the updated master plan in the initial phase of the design period to establish whether the cost of the project can be reduced.

Status : Funding sought. Replacing project SWA.4.01 and part of project SWA.4.04.

September 1992

TAN.4.02: Technical Assistance to the DCA



Estimated Costs
Total : USD 1.3 million
Foreign : USD 1.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.3 million

Executing Agency
Ministry of Communication and Works
Start : 1992
Duration: 3 Years

Objectives : To provide technical assistance to the Directorate of Civil Aviation (DCA) (i)in electronic engineering to assist in the procurement and installation of new equipment planned for Dar es Salaam FIR and to continue and conclude ongoing efforts to establish a preventive maintenance programme for existing and new equipment, and (ii) in flight operations to continue and conclude an ongoing institution building programme in this field. The project also includes funds for short-term consultants and for financing fellowships in the areas covered by the technical assistance.

Description : It is proposed that the technical assistance comprise the following experts:

One Telecommunications/Navaids Equipment Specialist to assist the DCA's Air Navigation Services Division's engineering branch in implementing the preventive maintenance programmes formulated by previous specialists financed by UNDP/ICAO and by France. He will also assist in preparing specifications and tender document, evaluating tenders and supervising the installation of new radio navigation aids and telecommunications equipment included in project TAN:4.04 Following implementation, he will assist in instigating maintenance programmes for the new equipment.
The specialist will be required for 36 man-months.

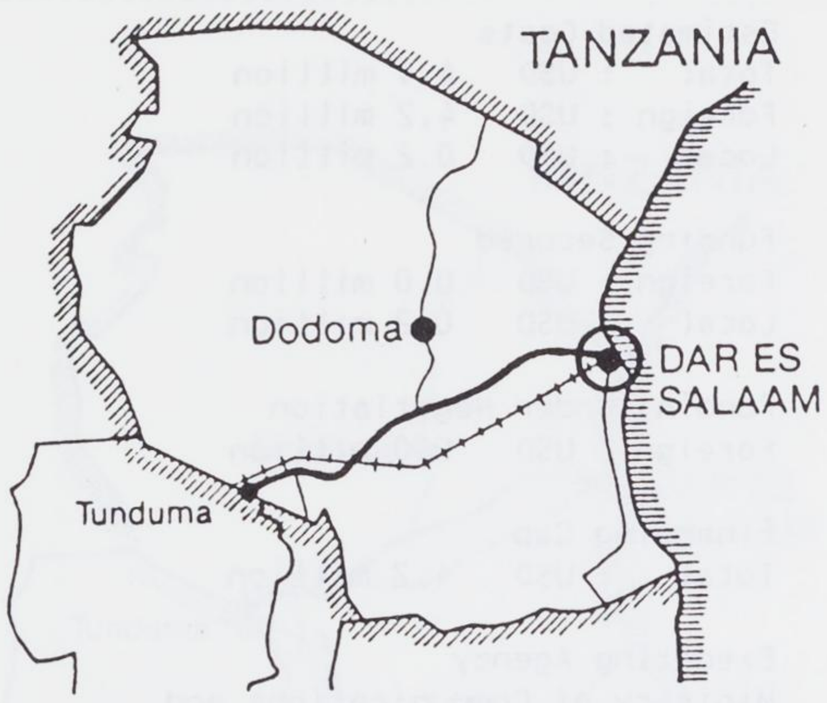
One Flight Operations Expert, an experienced commercial pilot, to train staff in the DCA's Flight Safety Division, and to assist the DCA and the Consultants to be recruited under TAN:4.05 in the formulation of appropriate policies for the flight safety work, and the identification of an appropriate institutional structure and its manning. This expert will be required for a period of 24 months.

The technical assistance would be supplemented with funds to allow for the recruitment of consultants for short term assignments and to finance a fellowship programme for providing training abroad. The fellowship programme would constitute an integral part of the training to be provided by the technical assistance experts and would be administered by them.

Status : Funding sought. Replacing part of project TAN.4.01.

September 1992

TAN.4.03: Dar-es-Salaam Airport Facilities Repairs



Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.5 million

Executing Agency
Ministry of Communications and Works
Start : 1992
Duration: 1 Year

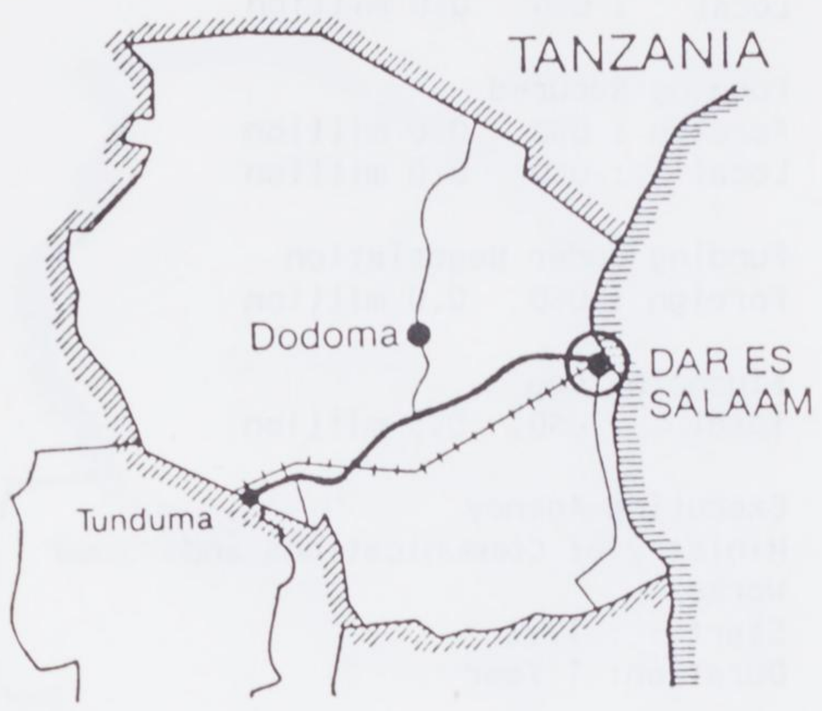
Objectives : To repair the power supply system at the airport.

Description : The most serious unresolved problem at the airport is the unreliable power supply. Voltage fluctuations in the mains supply are tripping the standby generators at frequent intervals and contributing to the difficulties being experienced with telecommunications, navigation and other electronic equipment at the airport. Three standby generators provide sufficient power for all the airport but the switchgear is wearing out from frequenct use and the airport is running out of spares. Remedial action is needed urgently.

Status : Funding sought. Replacing part of project TAN.4.01.

September 1992

TAN.4.04: Telecoms and Navaids for Dar-es-Salaam FIR



Estimated Costs
Total : USD 4.4 million
Foreign : USD 4.2 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 4.2 million

Executing Agency
Ministry of Communications and Works
Start : 1992
Duration:

Objectives : To provide telecommunications equipment for aeronautical fixed and mobile services, and replacement of old or unserviceable VOR/DMEs at Dar-es-Salaam, Kilimanjaro and Mbeya, and a new VOR/DME at Dodoma to ensure that the basic requirements for the ICAO Air Navigation Plan are met.

Description : The project comprises:

. Four HF transmitters/receivers for aeronautical mobile service

. Spares for repair of VHF/ER equipment at Lolkisale, Mtwara and Tabora.

. Replacement VOR/DME,s and ancillary equipmentat Dar-es-Salaam Kilimanjaro and Mbeya.

. New VOR/DME together with ancillary equipment and all necessary site development at Dodoma.

. Replacement locator NDB at Dar-es-Salaam.

Status : Funding sought. Replacing part of project TAN.4.01

September 1992

TAN.4.05: Study and Design of New Organizational structure for Civil Aviation Sector

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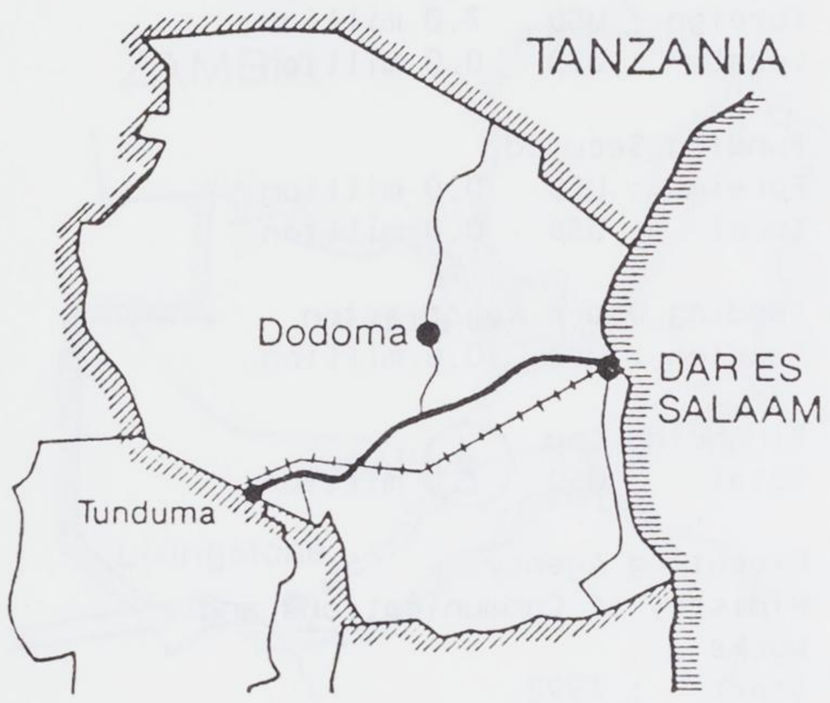


Estimated Costs
Total : USD 0.9 million
Foreign : USD 0.9 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.9 million

Executing Agency
Ministry of Communications and Works
Start : 1992
Duration: 1 Year

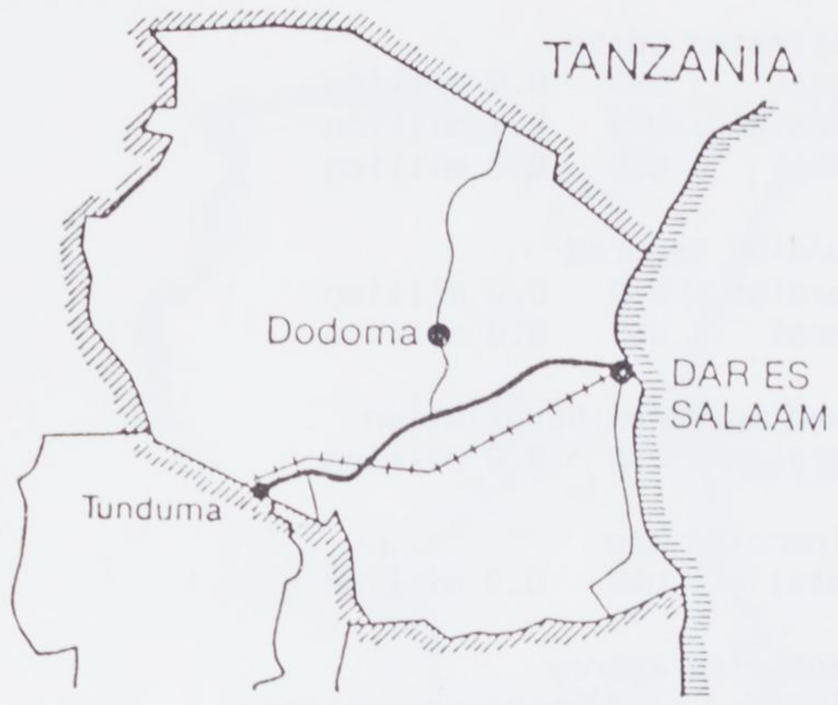
Objectives : To provide consultancy services to the Ministry of Works and Communications (MOWC) (i) to prepare the preliminary design of a new organisational structure to replace the Directorate of Civil Aviation (DCA) and to be responsible for the operations of airports and air navigation services, and to perform the regulatory functions in civil aviation in Tanzania, (ii) to formulate operational policies for the new unit (s) proposed to be established, and (iii) to propose a strategy and time schedule for the implementation of the new structure and policies.

Description : It is envisaged that the consultant's team would comprise one senior aviation expert, one management and organisation expert, one economist and one legal expert, plus short-term experts for accounting and specific aviation disciplines. The staff would be expected to work closely with the DCA's staff and with the technical assistance experts provided under separate projects (see TAN.4.02). The total inputs is estimated at 40 man-months, and to cost USD 0.9 million. The team leader for the project would report to the Permanent Secretary of the MOWC, and the MOWC would make available the required office space and office support.

Status : Funding sought. Replacing part of project TAN.4.01.

September 1992

TAN.4.06: Upgrading of the Flight Calibration Unit



Estimated Costs
Total : USD 7.0 million
Foreign : USD 7.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 7.0 million

Executing Agency
Ministry of Communications and Works
Start : 1992
Duration: 2 Years

Objectives : To upgrade the operations of the Flight Calibration Unit of the Directorate of Civil Aviation (DCA) to enable it to market cost-effective services in the Region and other neighbouring countries.

Description : It is envisaged that the following inputs will be needed to upgrade the Unit:

. Technical Assistance, on Flight Calibration Engineer for 3 years and one Navaids Maintenance Engineer for 2 1/2 years;

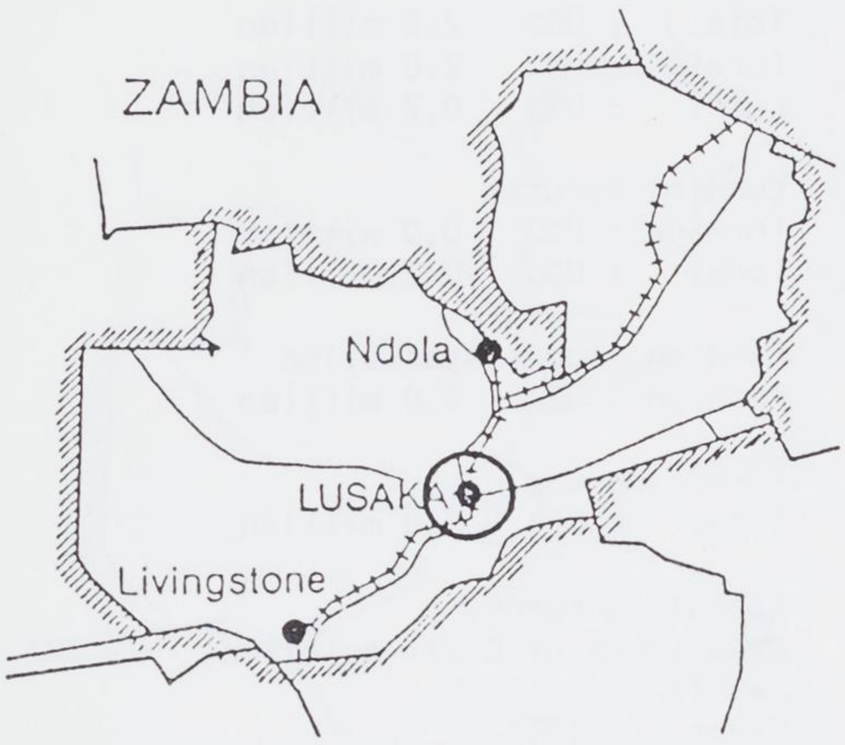
. Fellowships amounting to about 100 months, including training of navaids technicians at airports served by the unit;

. A new (turbo-prop) aircraft, expansion of the existing airborne calibration equipment, and additiopnal equipment for the ground electronics laboratory.

Status : With financing from FINNIDA, ICAO will undertake a feasibility study for the development of the Unit (Development of the Tanzania Flight Calibration Unit for use by the SADC States).
The preliminary cost estimate is USD 7.0 million, almost all of which in foreign exchange. The project and it priority are subject to the findings of the above mentioned feasibility study. The project will be implemented by the DCA.
Funding sought. Replacing part of project TAN.4.01.

September 1992

ZAM.4.07: Replacement of Lusaka Airport Airfield Lighting.
(ZAM:2)



Estimated Costs
Total : USD 2.6 million
Foreign : USD 2.5 million
Local : USD 0.1 million

Funding Secured
Foreign : USD 2.5 million
Local : USD 0.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency

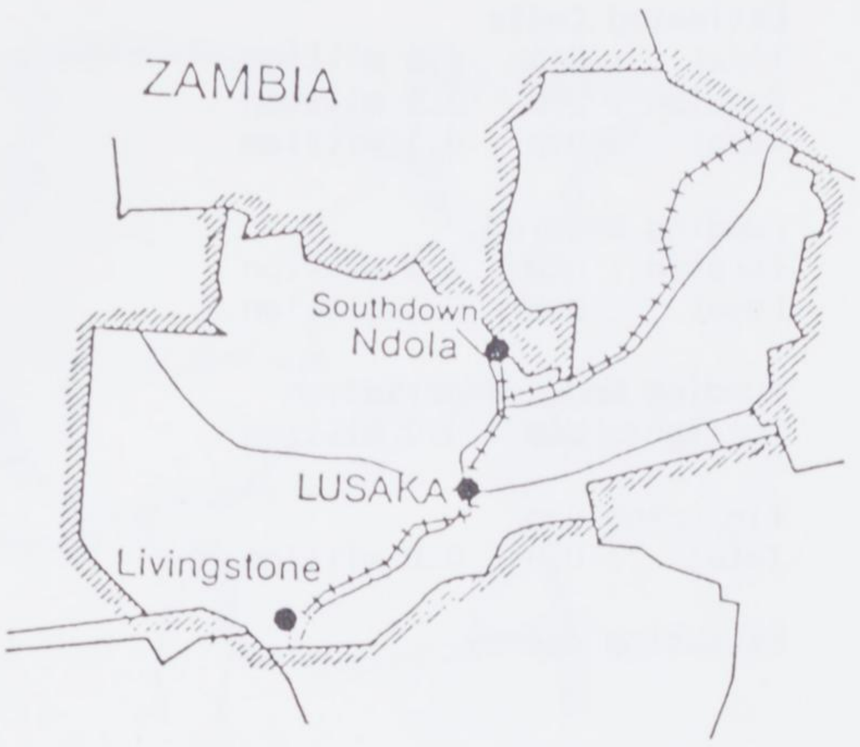
Start : 1991
Duration: 1 Year

Objectives : To replace the Lusaka Airport airfield lighting.

Status : Belgium is financing the project.
Implementation is ongoing

September 1992

ZAM.4.08: Technical Assistance to NACL



Estimated Costs
Total : USD 2.2 million
Foreign : USD 2.0 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.0 million

Executing Agency
Department of Civil Aviation, Zambia
Start : 1991
Duration: 10 Years

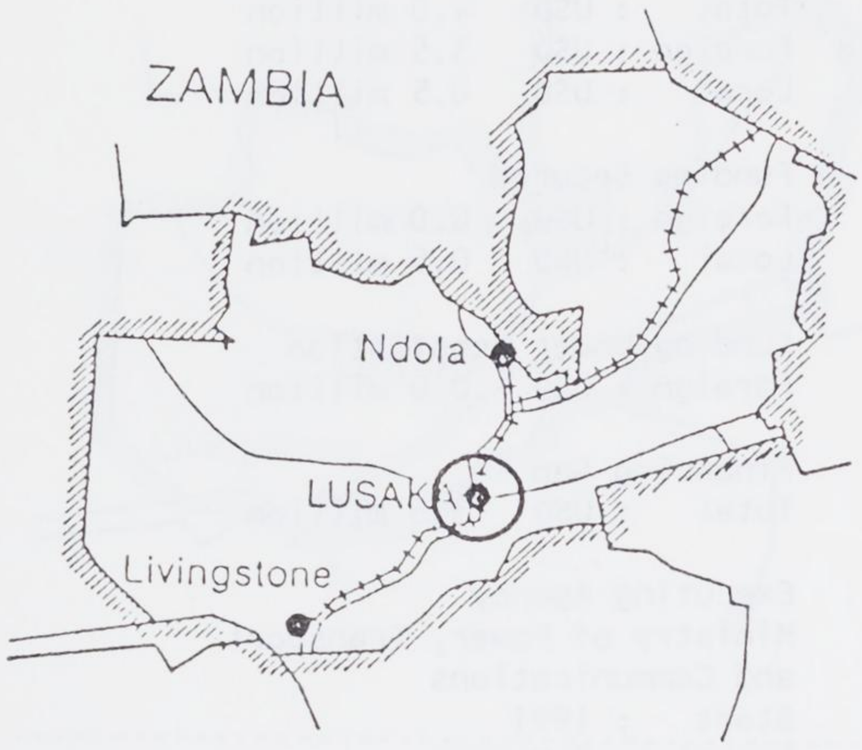
Objectives : To furnish NACL with technical assistance experts to strengthen and build up the maintenance operations capability of National Airports Corporation Limited. The project also includes fellowships for both NACL and the Department of Civil Aviation (DCA).

Description : The project comprises three techncial assistance experts. It is also proposed that the project should include funds to make it possible to recruit consultants for short assignments and to organise training abroad, where required, for staff working in the areas benefitting from the technical assistance. The project is furthermore proposed to include funds earmmarked for staff of the DCA working in the areas of ATS, telecoms operations and maintenance, and aerodrome operations and maintenance.

Status : Replacing part of project ZAM.4.07.

September 1992

ZAM.4.09: Rehabilitation of Lusaka Airport Runway



Estimated Costs
Total : USD 5.5 million
Foreign : USD 3.3 million
Local : USD 2.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 2.2 million

Funding Under Negotiation
Foreign : US 0.0 million

Financing Gap
Total : USD 3.3 million

Executing Agency
Ministry of Power Transport
and Communications
Start : 1991
Duration: 2 Years

Objectives : To carry out the resurfacing of the main runway, taxiways and the apron.

Description : The project comprises the following components:

- Resurfacing of the 1200 m section with a regulating course;
- Resurfacing of the remaining asphalt section of runway;
- Consulting services for prequalification of contractors, tendering, tender evaluation and construction supervision.

Status : Replacing part of project ZAM.4.07.

September 1992

ZAM.4.10: Telecoms and Navaids for Lusaka Airport and FIR

Estimated Costs
Total : USD 4.0 million
Foreign : USD 3.5 million
Local : USD 0.5 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 3.5 million

Executing Agency
Ministry of Power, Transport and Communications
Start : 1991
Duration: 3 Years

Objectives : To provide aeronautical telecommunications and navigation aids necessary to provide adequate air navigation services in Zambia and communications with adjacent FIRs.

Description : The project will comprise of supply and installation of the following categories of equipment:

. 1 NDB at Lusaka;

. 4 x 1 KW HF transmitters and receivers for ATS/DS circuits to Beira, Dar-es Salaam, Kinshasa and Luanda, and AMS within the Lusaka FIR;

. Teleprinters at Lusaka;

. Additional consoles at Lusaka;

. No break power supply at en-route VHF station at Ndola;

. 1 remote control air-ground VHF transmitter/receiver at Mfuwe linked to Lusaka FIC/ACC;

. 2 VORs at West Two and Kaoma for en-route navigation;

. 1 KW NDB at Kitwe for en-route navigation

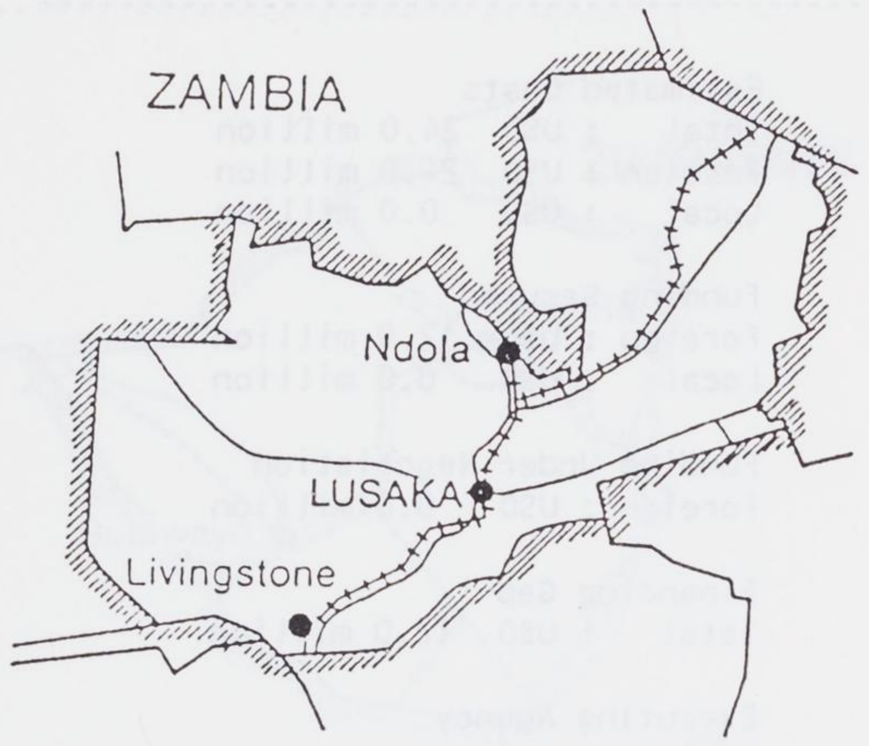
. Training VOR;

. Spares, training manuals tools and test equipment.

Status : Replacing part of project ZAM.4.07.

September 1992

ZAM.4.11: Technical Assistance to ZASTI



Estimated Costs
Total : USD 2.2 million
Foreign : USD 2.0 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.0 million

Executing Agency
Ministry of Power, Transport
and Communications
Start : 1991
Duration: 5 Years

Objectives : To provide techncial assistance to upgrade the training provided by the Zambia Air Services Training Institute (ZASTI) in airport operations and maintenance and air navigation services.

Decsription : The project prepared by ZASTI can be divided into (i) assistance for training in the operations and maintenance of airports and air navigation services, and (ii) assistance for aircraft-related training. Only the first part is included here.

The assistance required for airport operations and maintenance and air navigation services includes:

- Telecomm/Navaids Maintenance Instructor for 36 man-months;
- Aerodrome control simulator;
- Improvements to the telecomm/navaids laboratory and additional training equipment;
- Rehabilitation of equipment in the telecommunications operations and meteorology laboratories;
- Fellowships for training in the following courses:
  search and rescue, air traffic services instructor and meteorology.

Status : Replacing part of project ZAM.4.07.

September 1992

ZIM.4.04: Improvement and Expansion of Radar Coverage, Zimbabwe

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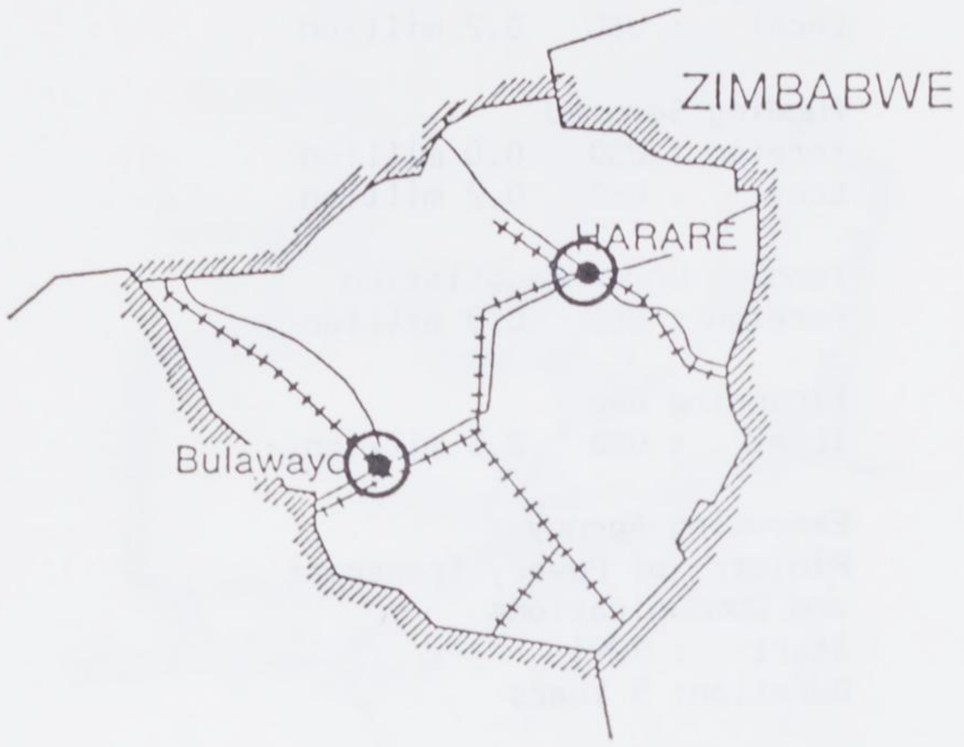


Estimated Costs
Total : USD 24.0 million
Foreign : USD 24.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 12.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 12.0 million

Executing Agency
Ministry of Transport,
Zimbabwe
Start : 1991
Duration: 2 Years

Objectives : In order to improve the safety standards within Zimbabwe's busy airspace and at the same time to increase the capability of the Department of Civil Aviation to reliably operate and maintain its radar equipment, major investments in additional equipment and manpower training are needed.

Description: In addition to improving the overall safety and reliability of air traffic control,the project is required to increase the capability of Zimbabwe to detect and monitor flights and thus reduce the possibility of airspace violation. The proposed new secondary equipment provides automatic aircraft identification of transponder equipped aircraft.

The project will include:

(a) primary and secondary radar for Harare International Airport;
(b) primary and secondary radar for Bulawayo Airport;
(c) a second dual channeel for Harare International Airport;
(d) air traffic control simulator at Harare International Airport;

(a) constitutes phase I of the project and (b), (c) and (d) is Phase II.

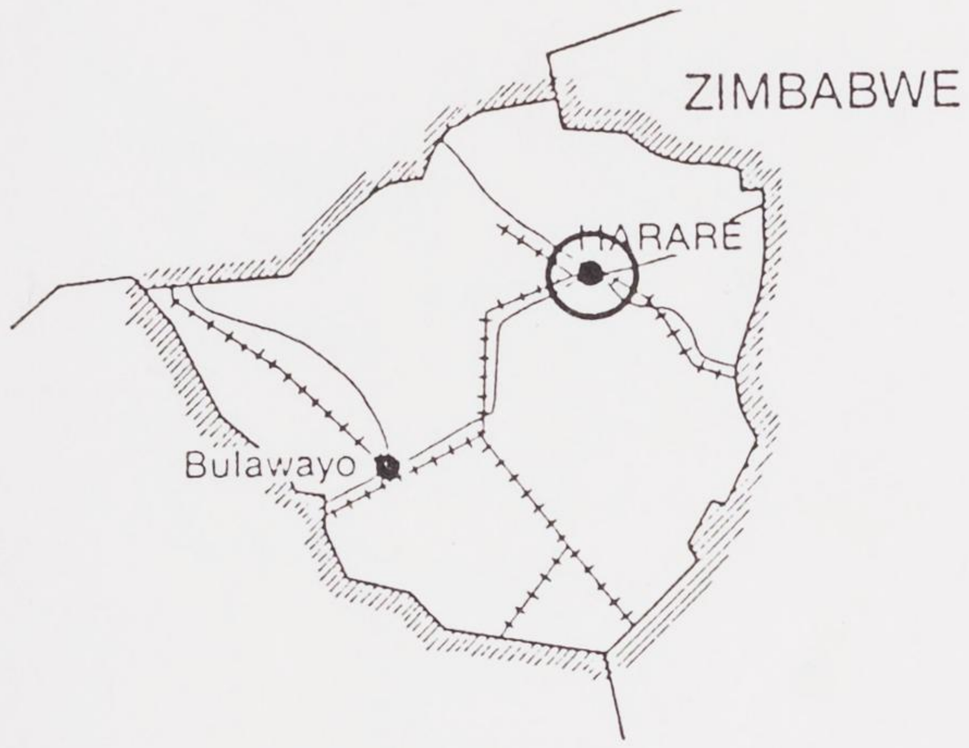
The total estimated project cost is USD 24.0 million.

Status : Phase one of the project (Harare Airport) was funded by the British at an estimated cost of USD 10.0 million.

Equipment for Phase II will be tendered when funding has been secured. The funding gap of USD 12.0 million is being solicited from the British.

September 1992

ZIM.4.05: Development of Harare Airport



Estimated Costs
Total : USD 100.0 million
Foreign : USD 30.0 million
Local : USD 70.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 70.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 30.0 million

Executing Agency
Ministry of Transport

Start : 1991
Duration: 5 Years

Objectives : To develop the Harare International Airport.

Decsription : Harare International Airport needs to be developed in order to:

(a) improve aviation safety with the introduction of air navigation facilities;

(b) improve airport capacity and achieve internationally accepted levels of service for passengers, cargo and aircraft;

(c) establish Harare International Airport as a gateway to the landlocked Zimbabwe and also as a main hub for the SADC region as a whole.

The Study was completed in 1988, culminating in a Master Plan for Harare International Airport.

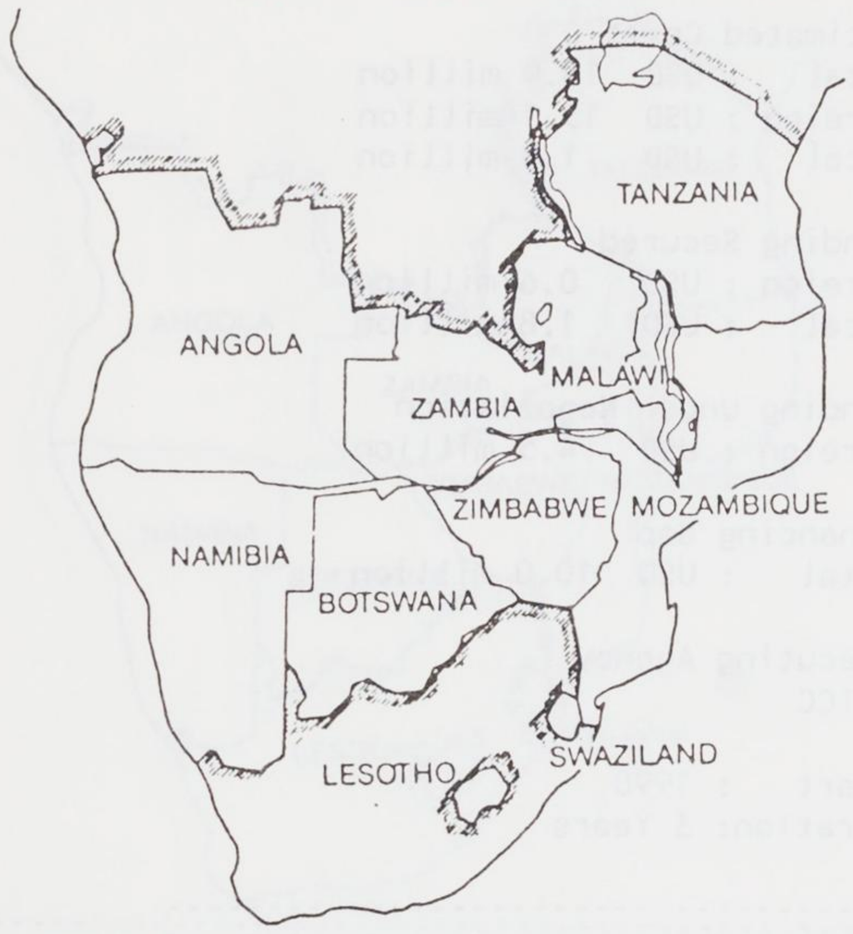
Contract for recommended urgent works costing Z$36.5 million include apron extension, catering, cargo and passenger terminal improvements was awarded. Works started in December 1990, and due for completion within 23 months. In Line with the development programme an Engineering Management Consultant has been appointed with main duties to design, plan, advise and coordinate the implementation of the development programme.

Status : Financing is being sought. The project has been renamed in order to agree with the Civil Aviation 10-Year Development Plan.

September 1992

Telecommunications

AAA.5.03: Study on AXE 10 Repair Centre



Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.3 million

Executing Agency
SATCC

Start : 1990
Duration: 3 Years

Objectives :
- To determine the feasibility of providing a telephone exchange equipment repair center in the region for the AXE 10, the cost involved, and advantages and disadvantages of such an investment.

- To provide software technical assistance to the maintenance of regional AXE ITSC's and national transits and exchanges.

Description: The AXE 10 switching system is now operating in the region in many of the countries and others are planned in the short term.

- The Telecommunication Administrations agreed on the necessity of a study for a central repair facility to reduce dependence on the manufacturers, delay in spare replacement and depletion of foreign currency. The study will consider, among others, type and number of faulty boards, the appropriate level of local repair, integration with existing or planned repairing facilities in the region, manpower requirements, financial and administrative matters.

- This part of the project aims at providing at least two AXE 10 software engineers to be based in the region for a period of two years to assist in the specialised software maintenance of the software switching systems and counterpart training of regional staff.

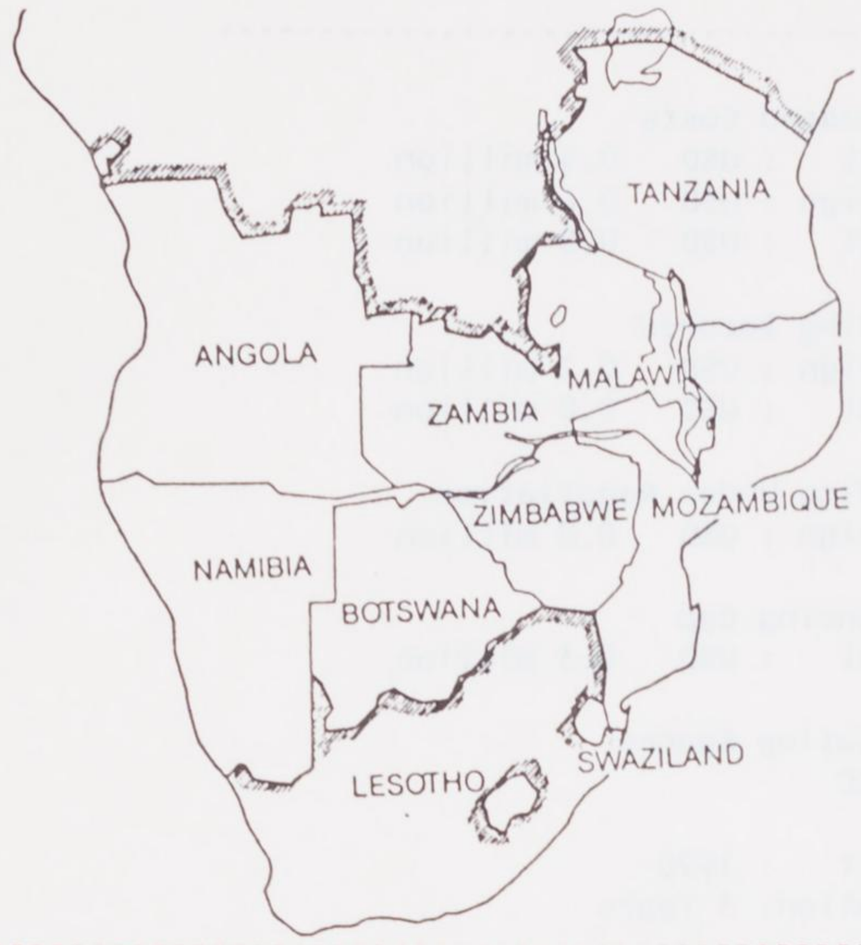
Status :
- Australia has financed the pre-feasibility study on AXE 10 Repair Centre under the SATCC/Australia Fund.

- INTECH with financing from SIDA has undertaken a pre-apraisal study for the establishment of Regional Software Maintenance Team.

Financing still required to implement the project.

September 1992

AAA.5.04: Implementation Plan for Regional Earth Station Connectivity Project (1989-93)



Estimated Costs
Total : USD 16.9 million
Foreign : USD 15.1 million
Local : USD 1.8 million

Funding Secured
Foreign : USD 0.6 million
Local : USD 1.8 million

Funding Under Negotiation
Foreign : USD 4.5 million

Financing Gap
Total : USD 10.0 million

Executing Agency
SATCC

Start : 1990
Duration: 3 Years

Objectives : Implementation study to permit smooth co-ordination of the introduction of Intermediate Data Rate (IDR) and Time Division Multiple Access (TDMA) technologies into the facilities of the Earth Stations in the Sub Region in order to permit regional satellite circuit interconnectivity.

Description: SADCC countries are increasingly moving towards digitilisation of the national networks and in pace with this trend international satellite systems are also introducing digital techniques that will offer users an increase in capacity and data rate over analogue systems.

With the launching of Intelsat VI 335.5 Satellite (Oct.1989) and in accordance with the Intelsat Operational plans, the regions Earth Stations will be facing the same Satellite for regional connectivity. Initial interconnectivity (1990 1992) is being realised through usage for conventional SCPC and FDM equipment at a total estimate cost of USD 200,000.

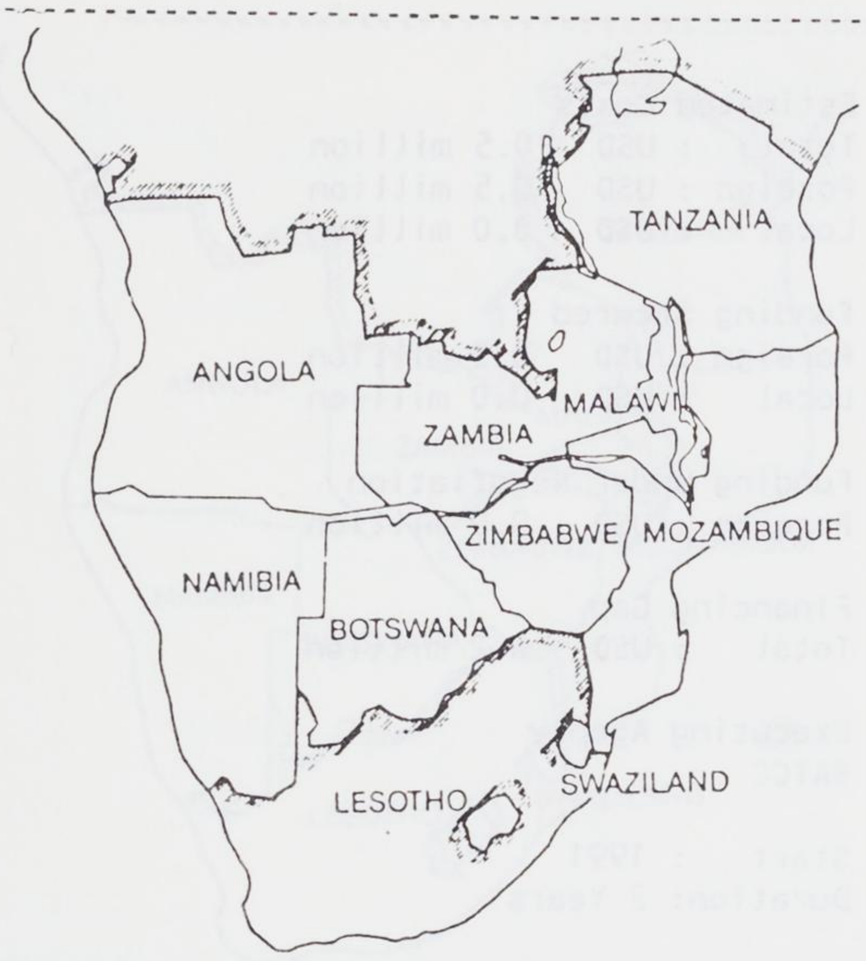
The survey study undertaken through CIDA SATCC Technical Services Fund has identified the following intermediate data rate (IDR) with digital circuit multiplication equipment (DCME):

COUNTRY	ITEM	COST (USD million)
ANGOLA, STBD	IDR/DCME	1.8
BOTSWANA, STDB	IDR/DCME	1.8
LESOTHO, STDB	IDR/DCME	2.0
MALAWI, STDB	IDR/DCME	1.5
MOZAMBIQUE, STDA	IDR/DCME/HPA/Digital link	3.2
SWAZILAND, STDB	IDR/DCME/LNA	2.0
TANZANIA, STDA	See SATCC Project 5.07.03	-
ZAMBIA, STDA	IDR/DCME/Digital link	2.7
ZIMBABWE, STDA	IDR/DCME -See SATCC P. 5.09.08	1.3
	TOTAL	15.5

Status : CIDA has financed the study survey under the auspices of SATCC Technical Services Fund.
USAID is financing the drawing up of detailed technical specification being undertaken by GTE for Earth Stations in Lesotho, Swaziland, Zambia and Zimbabwe.
BTI has provided proprietary IDR equipment in Zimbabwe and Tanzania.
Introduction of IDR equipment in Mozambique is on a planning stage.
Financing is sought for project implementation in Zambia, Angola and Malawi.

September 1992

AAA.5.05: Study on the Harmonization of Telephone and Telex Tariffs for the Sub-Region.



Estimated Costs
Total : USD 0.3 million
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.1 million

Executing Agency
SATCC

Start : 1991
Duration: 2 Years

Objectives : To investigate international tariffs pertaining in the Subregion with a view to achieveing a rational tariff harmonization which will be used for the establishment and implementation of common telephone and telex structure in the sub-region.

Description: Administrations in the sub-region use different types of accounting rates for the PANAFTEL intra-regional traffic. Some Administrations use the 1982 ARUSHA TARIFFS and in some relations the CCITT D200R and D201R are applicable. Bilateral tariff agreements are also being used in certain cases.

In order to harmonize the introduction of common telephone and telex tariff's SATCC and ITU undertook a study in consultation with the Administrations which determined:

- recommendations on the accounting-rate standards and accounting rate division structure to be adopted in the SADC countries,
- the impact of current Sub-regional alternative routing on the balance of payments between countries using the recommended accounting rates divisions,
- as a follow up the 9th SATA Conference recommended a further study survey to determine the reduction in collection charges for intra-SADC traffic in order to encourage the growth of regional traffic.

The ITU recommendations on accounting rate standards and accounting rate divisions for the SATCC countries were adopted by Administrations.
Further Administrations, with effect from 1st April, 1990 recommended adoption SKA (Sender Keeps All) accounting arrangements for intra-SADC relations.
The study on harmonization of collection charges for Intra-SADC traffic undertaken by HN Engineering financed by the CIDA-SATCC Technical Services Fund has been completed.

Status : Financing is required for further study on determination of extra-SADC accounting rate standards and divisions.

September 1992

AAA.5.06: Study on the Development of a Regional Manufacturing Strategy

Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.2 million

Executing Agency
SATCC

Start : 1991
Duration: 2 Years

Objectives : The project comprises a feasibility study to define a strategy on the establishment, development and or upgrading of local telecommunications manufacturing plants and associated industries in the region.

Description: The scope of work will involve visits and discussions with Administrations and Manufacturers and will include investigation of the following points which were indicated by the PATU, UNIDO and ITU findings :

- The market for various product types and ranges in the SADC and PTA region to the year 2000.

- The market factors such as changes in technology forecasts, the competitive supply situation, existing PTC purchase policies, and trading policies.

- Existing experience in manufacture of electronics and/or related products in each SADCC country, and the availability of manpower and material resources.

- Cost and technological requirements necessary to manufacture each product.

- Infrastructural and economic policy factors relevant to the development of local industry in each country.

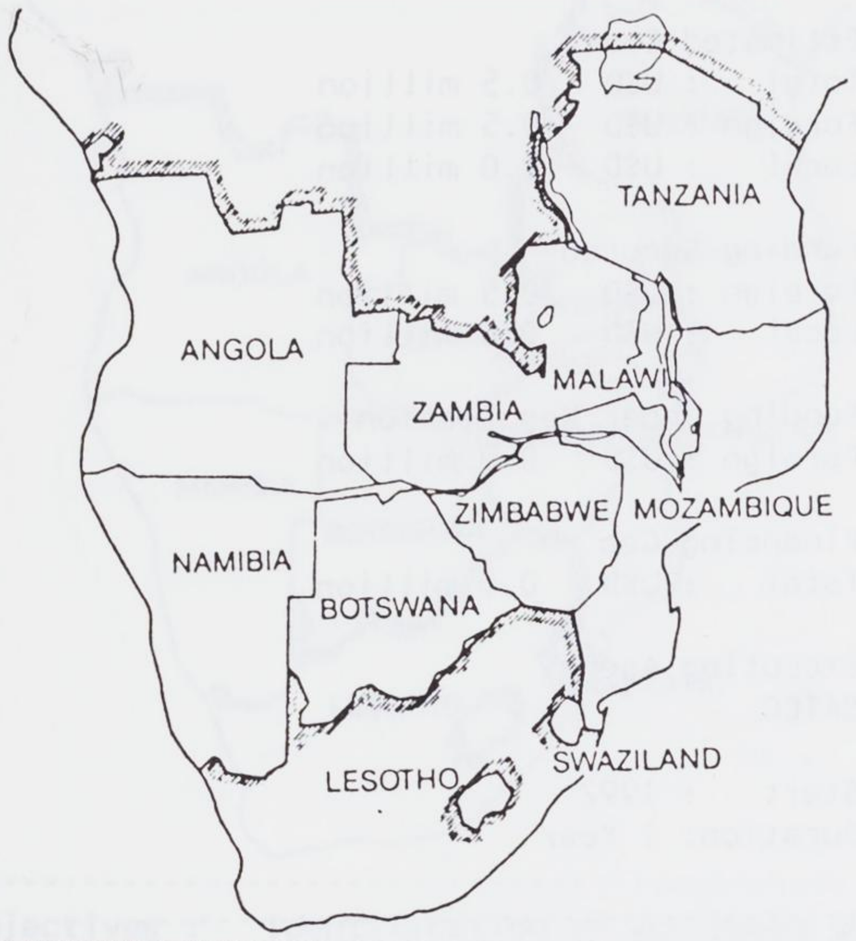
Taking into account the results of previous work by UNIDO, ITU and the current ITU/UNDP/RAF/87/170 project, the study would aim to set a strategic priority between products and locations for regional manufacturing, and to highlight the financial, industrial, and telecommunications policy issues which have a bearing on the growth of SADCC industries.

A pre-feasibility study financed by CIDA recommended the requirement for detailed technical specification for telephone cables and mechanical products. CIDA is to finance the follow-up study.
A pre-feasibility study is required to determine the strategies for the manufacture of electronic products.

Status : CIDA is financing study on cables and mechanical aids.
Financing is required for feasibility study on electronic products.

September 1992

AAA.5.07: Model Study on Maint.Procedure and Scheds.For PANAFTEL Terres
trial Microwave Radio Systems



Estimated Costs
Total : USD 0.1 million
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.1 million

Executing Agency
SATCC

Start : 1993
Duration: 1 Year

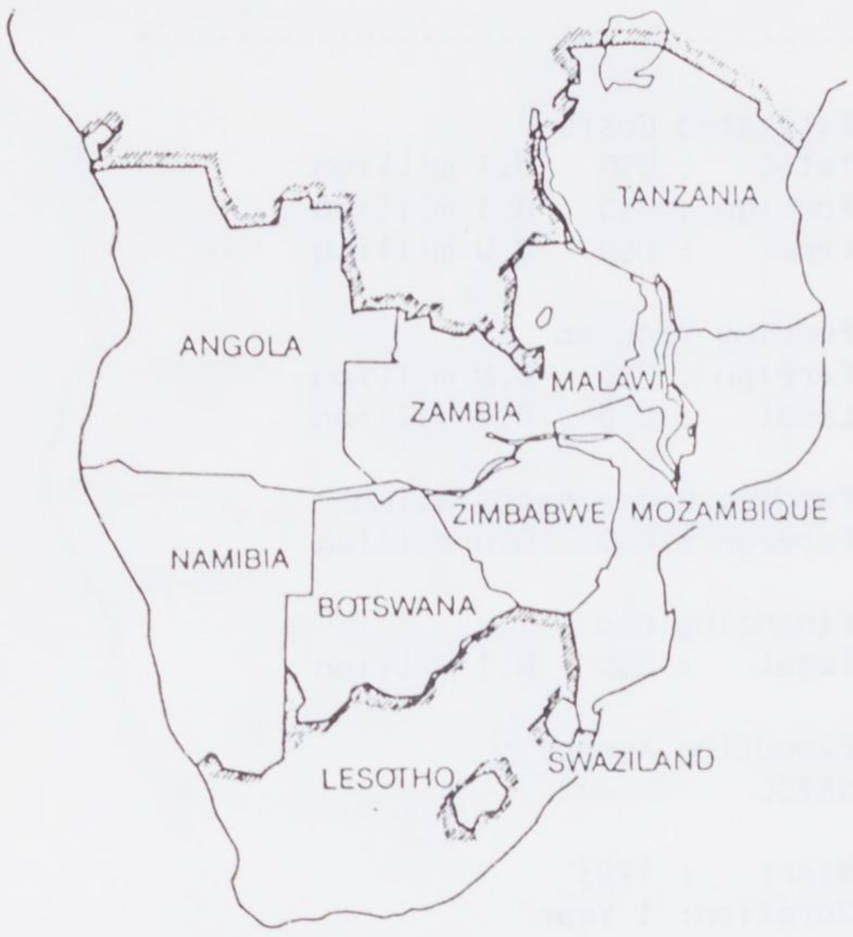
Objectives : Study to determine standardized maintenance procedures and schedules on the inter-country PANAFTEL microwave links.

Description : The study involves the collection of data and information from the tests carried out on the inter country links. The data will be analysed to determine maintenance procedures, tests and parameters which will be used to monitor the performance of the radio system.

Status : Financing is required to undertake the Study.

September 1992

AAA.5.08: Regional Data Communication Strategy Study



Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start : 1992
Duration: 1 Year

Objectives : To investigate the market and technical aspects of the implementation of a regional data communication and packet switching network.

Description : There is an increase demand and need for advanced telecommunications and informatics services. This demand necessitates the development of data switching networks. Zimbabwe Project No. ZIM.5.06, Packet Switching for data Network in Zimbabwe, aims to develop a Packet Switched network to cater for its advanced data and computer related telecommunications needs.

The regional study is necessary to take account of the following :

- the potential demand for packet switching and other data communication facilities in the SADC region;

- the technical and economic feasibility of meeting regional requirements in accessing the, and making use of Zimbabwe's proposed network facilities; and

- development of a rationalised regional network and proposals for encouragement of informatic services regionally.

Status : Belgium is financing the study.
BETELCOM is conducting the study.

September 1992

AAA.5.09: Study on Optimisation of Regional Switching and Signalling Facilities

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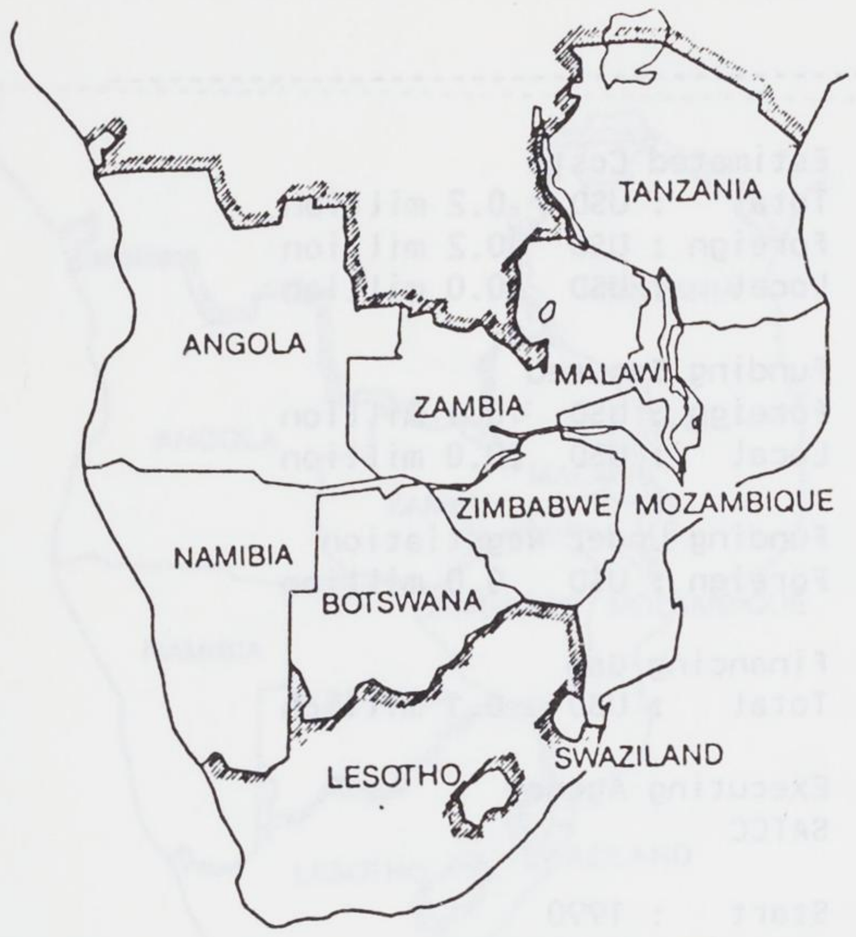

Estimated Costs
Total : USD 1.3 million
Foreign : USD 1.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.3 million

Executing Agency
SATCC

Start : 1993
Duration: 1 Year

Objectives : Identification of equipment and operational requirements to optimise the traffic handling capability of the regional network.

Description: The study will be undertaken to determine and make proposals for the following:

- The handling capability of the ITSC's in the SADC countries both for originating, transit and terminating traffic.
- Grade of service between the ITSC's and links comprising the regiuonal network, and
- Extent of ISD automatisation in each country for the SADC regional traffic.
- INTECH through financing by SIDA Undertook a pre-appraisal study and made recommendations, for feasibility study to determine improvement of present network, forecasting of future requirements, modification and expansio proposals and cost estimation for project implementation.

Status : Financing is required for the study and implementation of project elements emanating from the study.
Negotiations are underway with Sweden to undertake the study.

September 1992

AAA.5.10: Study for Establishment of Regional Maintenance/Repair Workshops

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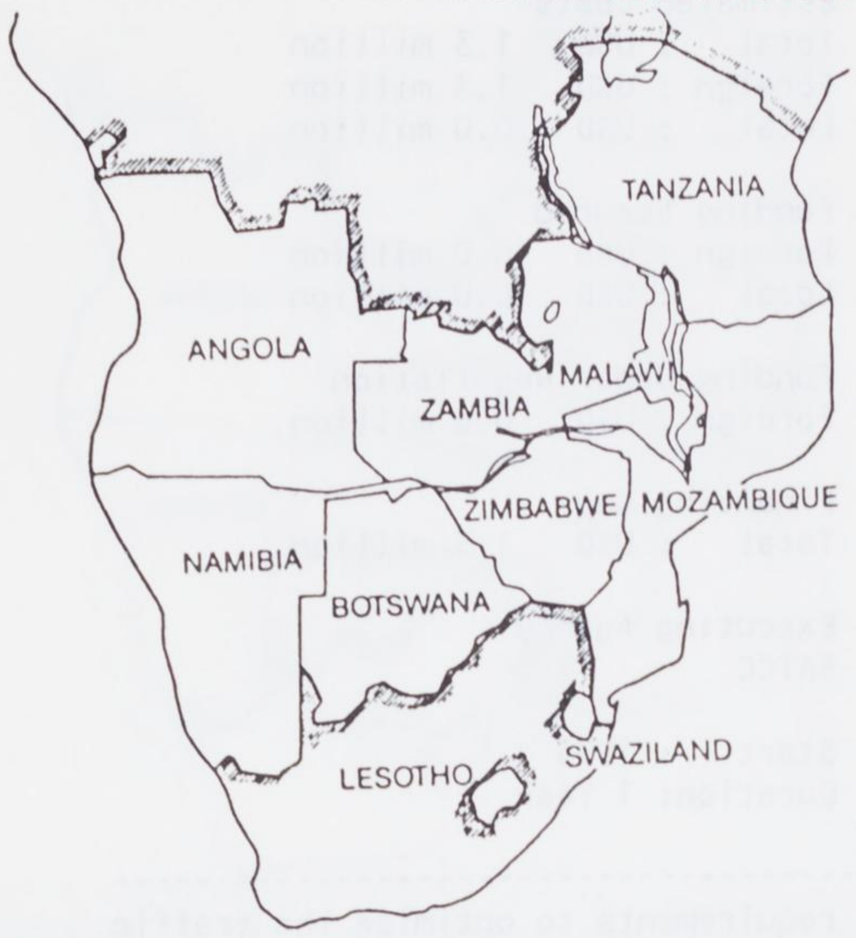

Estimated Costs
Total : USD 0.2 million
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.1 million

Executing Agency
SATCC

Start : 1990
Duration: 3 Years

Objectives : Provision of equipment for the optimization of existing repair centres and the establishment of regional repair centre/workshop in one of the SADC countries.

Description: The Study Survey will determine and make appropraite recommendations for:

- design model, establisment and improvement of national and regional repair centres,
- quantity levels of essential spares for regional storage and for maintenace of the regional network,
- procedures to be adopted for repaired assemblies from site to the regional repair centres, and
- manpower development for repair centres staffing requirements.

ITU/with funding from UNDP undertook a pre-feasibility study on the establishment of a Regional Repair Centre.

The study must be co-ordinated with P. AAA.5.03, study on the AXE 10 Repair Centre.

Status : Pre-feasibility study on Regional Repair Centre undertaken by ITU. Financing is required for project implementation.

September 1992

AAA.5.11: Workshop/Seminar on Digital Synchronisation Planning

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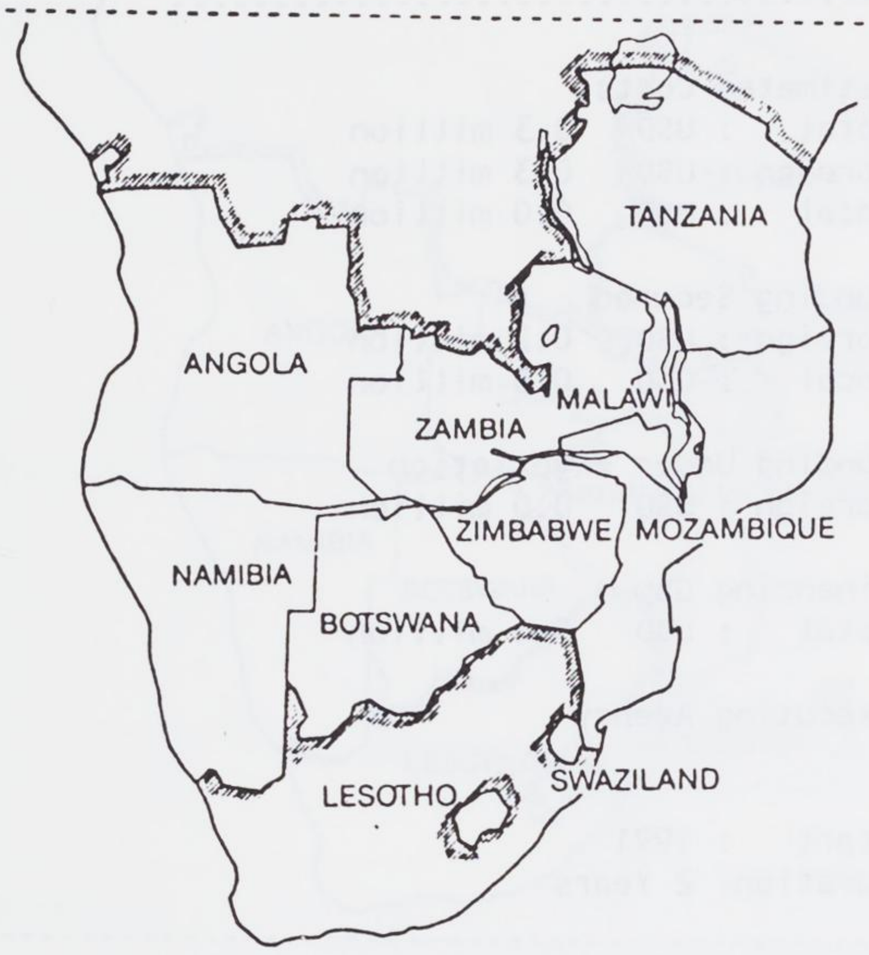

Estimated Costs
Total : USD 0.2 million
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
SATCC

Start : 1992
Duration: 3 Months

Objectives : To attain national, regional and international expertise in Synchronisation Planning in the introduction of digital equipment in the regional network and to to draw up a Synchronisation plan for the region.

Description : The digitalisation of the National Network in the SADC countries has already attained considerable range. The introduction of IDR/DCME equipment in the Earth Station of the region has necessitated the need for the digital network to be Synchronised. Synchronisation equipments is usually quite expensive and hence the need for harmonised and optimised synchronisation plan in the region which will also offer security to the availability of the network.

The project will involve the provision of financial and technical assistance for:

- Carrying out a training session on Network Synchronisation Planning,

- Preparation of national Master Synchronisation Plans,

- Preparation of a Co-ordinated and harmonised Synchronisation Plan for the SADC countries.

The Workshop/seminar will be attended by two participants from each SADC Administration.

Status : Finance has been provided by Sweden and the study undertaken by Intel from Norway.

September 1992

AAA.5.12: Establishment of Network Management Control Centres

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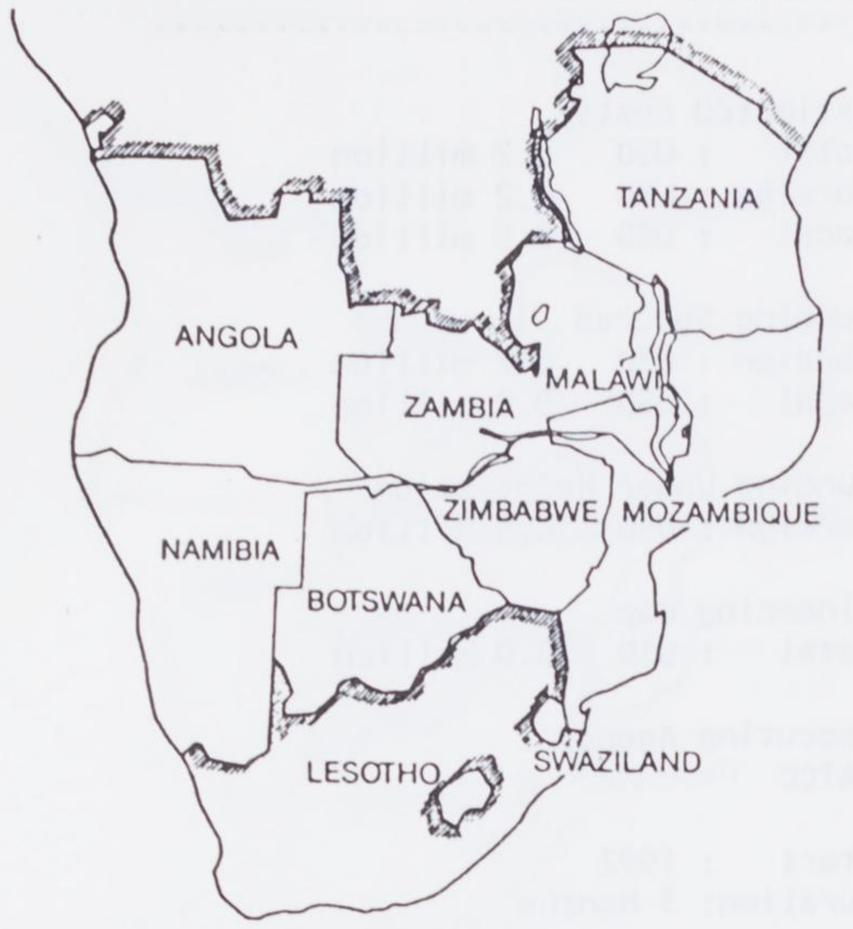


Estimated Costs
Total : USD 0.3 million
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.1 million

Executing Agency

Start : 1991
Duration: 2 Years

Objectives : To determine the establishment of Network Management Control Centres for the SADC Countries.

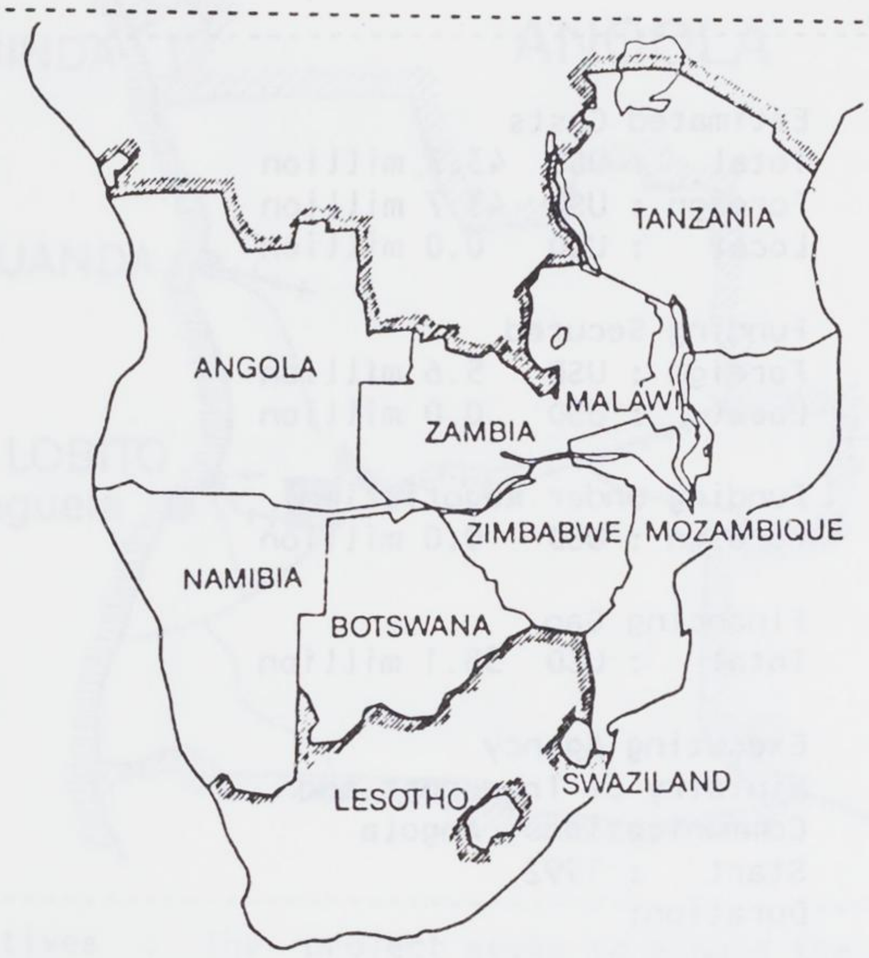
Description : Network engineered to handle normal traffic load become overloaded with large increase in customer ceeling. Means must be provided for network surveillance and control for efficient network performance under the modest range of conditions.
The project will consist of determining
- equipment requirements for NM facilities;
- design and develop actional and regional Network Management centres
- develop communication networks between the centres for real-time exchange of network data for co-ordination of network control actions.
- devise a regional organisation structure for the NM system.
- propose a training programme for the operation of the system

Status : Pre-feasibility Study, Executive Seminar and Regional Workshops undertaken with funding from SATCC Australis Trust Fund.

Financing is required for project implementation.

September 1992

AAA.5.13: Study on Establishment of satellite Land Based Mobile Service.



Estimated Costs
Total : USD 0.3 million
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.3 million

Executing Agency

Start : 1993
Duration: 1 year

Objectives : To determine the viability for the establishment of Satellite Based Land Mobile System to provide facilities for transborder communication in the SADC Countries.

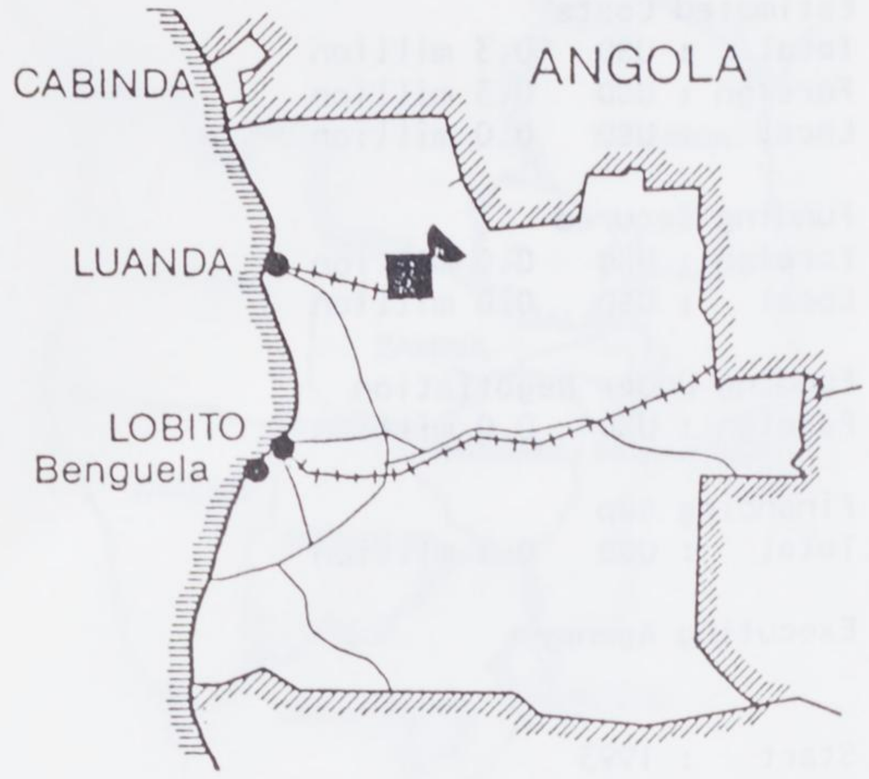
Description : The project will determine the technical parameters, network configuration and national regulatory policy issues for the establishment in the SADC Countries of Satellite Based Land Mobile Service for transborder communication in support of road/rail hauliers, ACIS etc. taking into account:

- Constraints due to HF Crossborder Communication;
- transborder use of Land Mobile earth stations
- developments and actions at regional level to facilitate the transborder use of the service
- tariff structure to be adopted for the service
- training programme needed for the successfull implementation of the programme.

Status : Financing is required to undertake the study.

September 1992

ANG.5.01: Telecommunication Projects in the 10 Year Development Plan
for Lobito Port Transp.System



Estimated Costs
Total : USD 43.7 million
Foreign : USD 43.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 5.6 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 38.1 million

Executing Agency
Ministry of Transport and
Communications, Angola
Start : 1992
Duration:

Objectives : Rehabilitation, upgrading and provision of telecommunication facilities serving the Lobito Port Transport System and the interconnection to the SADC Countries. Under the Ten Year Development Plan for the Lobito Transport System.

Status : A Techncial Co-ordination Conference to discuss the plan was held in February 1989. NORAD has financed the rpovision of HF Radio Maritime Communications to Lobito Harbour and provision of link Luena (Angola) - Zambezi (Zambia).

SIDA has financed the Technical Assistance to ENATEL and ADB has financed the Microwave Luanda-Benguela and expansion of telex exchange.

BTI (UK) has completed the Maritime Radio Communications Study. The project has been rescoped.

Financing is required to finance the other project elements.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
T-M-1	Technical Assistance to ENATEL	2.5	2.5	0.0	2.5	0.0	0.0
T-MC-1	Provision of HF Radio Maritime Communications to Lobito Harbour	0.8	0.8	0.0	0.8	0.0	0.0
T-MC-2	Expansion of Maritime Communi- cation Facilities	10.4	10.4	0.0	0.0	0.0	10.4
T-PT-1	Microwave Link Benguela/Lobito -Luau	11.4	11.4	0.0	0.0	0.0	11.4
T-PT-2	Spur Routes along the Benguela /Lobito-Luau Corridor	5.9	5.9	0.0	0.0	0.0	5.9
T-PT-3	Extension/Rehabilitation of Switching and Outside Plant Along the Corridor	9.1	9.1	0.0	0.0	0.0	9.1
T-PT-4	Rehabilitation of Troposcatter Link Malange-Saurimo-Luena- Zambia	1.3	1.3	0.0	0.0	0.0	1.3
T-PT-5	Microwave Link Luanda-Benguela /Lobito	2.3	2.3	0.0	2.3	0.0	0.0
		43.7	43.7	0.0	5.6	0.0	38.1

September 1992

ANG.5.02: Expansion of International Telecommunication Services, Angola

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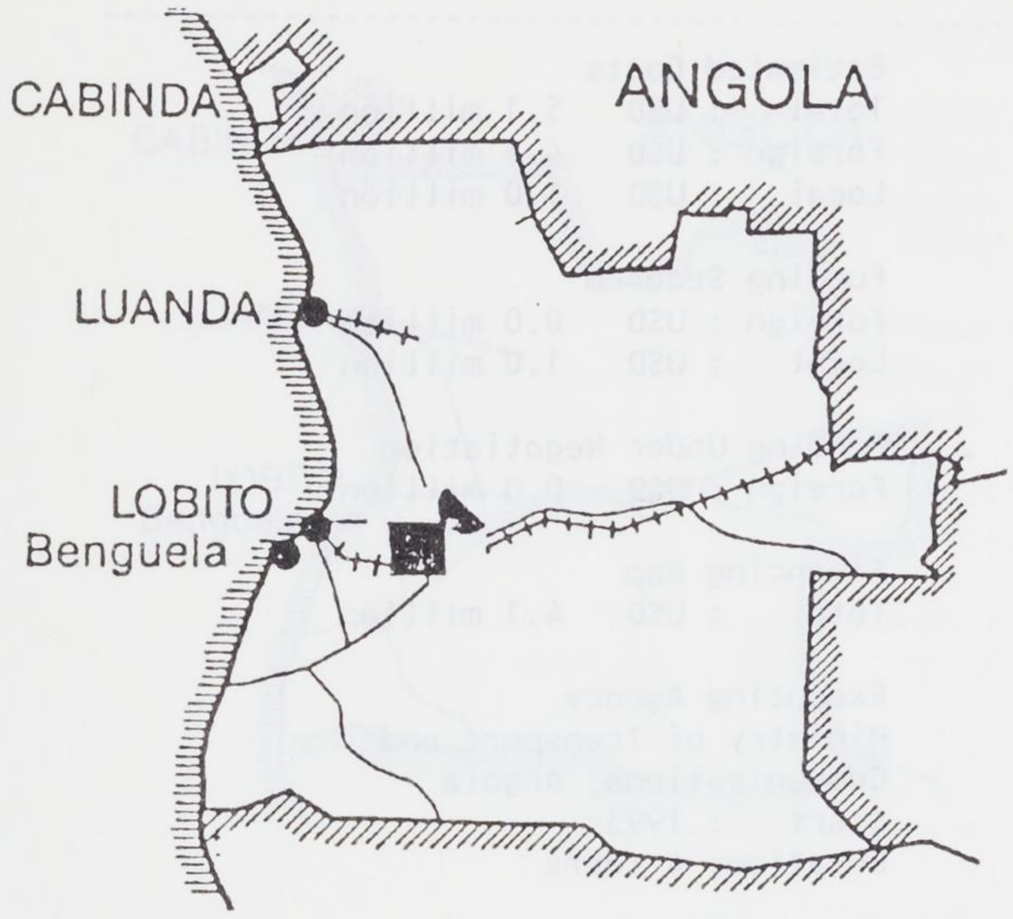


Estimated Costs
Total : USD 38.0 million
Foreign : USD 32.4 million
Local : USD 5.6 million

Funding Secured
Foreign : USD 32.4 million
Local : USD 5.6 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Empresa Publica de
Telecomunicacoes
Start : 1983
Duration:

Objectives : The project seeks to expand the capacity of the international telecommunication system which allow the establishment of direct circuits with African countries, namely Congo, Kenya, Tanzania, Zambia and Zimbabwe.

Description : The project involves the provision of :

- extension to the Standard A earth station at Cacuaco.
- equipment for the existing standard B antenna.
- new telex exchange, 600 trunks.
- extensions for the ITSC, from the existing 90 to 800 trunks.
- no-break power supply.

The project is to include also installation and civil works.

Status : The project is ongoing with the various parts at a different stage of implementation.

- the provision for no-break power supply is now completed.
- expansion and modification of the A Antenna is completed.
- equipment for the B Antenna not yet defined, still some decisions to be taken on the basic concept.
- telex exchange is under installation.

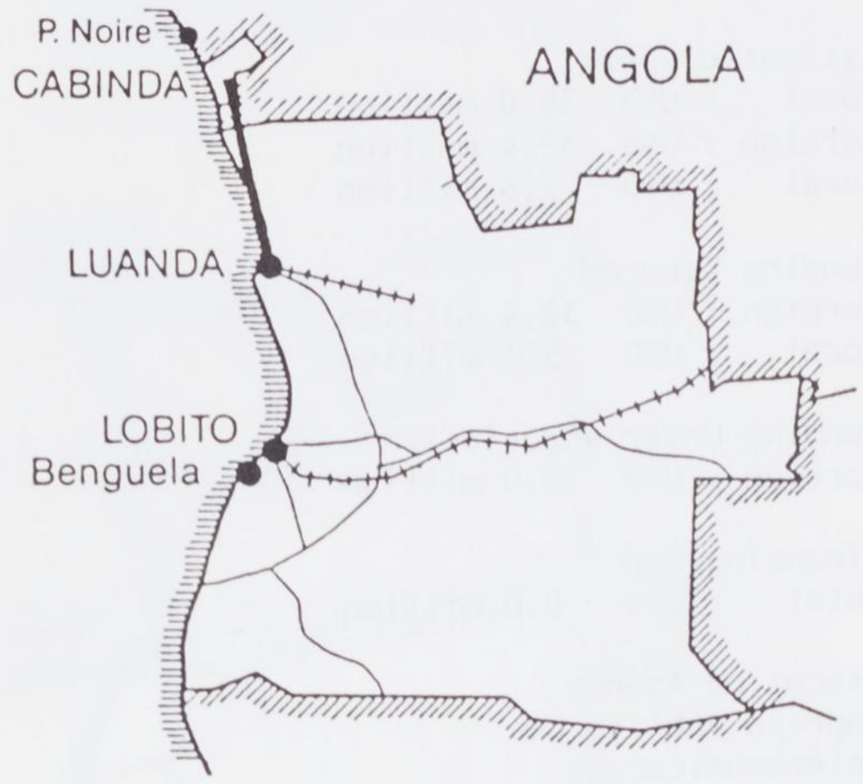
- Provision of Equipment for the International Switching Center in Luanda, is expected end 1992.

The project is envisaged to be completed 1992 and will improve regional connectivity and the provision of International Subscriber dialling within the SADC countries.

The project is financed by ADB for the foreign currency part and Angola for the local costs. The project is near completion.

September 1992

ANG.5.03: Microwave Link Luanda-Cabinda



Estimated Costs
Total : USD 5.1 million
Foreign : USD 4.1 million
Local : USD 1.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 1.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 4.1 million

Executing Agency
Ministry of Transport and Communications, Angola
Start : 1993
Duration: 4 Years

Objectives : The project seeks to provide a large capacity microwave system from Luanda to Cabinda, as part of the PANAFTEL terrestrial network which will give SADCC Countries access to the Central and Western African Subregion.

Description: Presently on the Panaftel section Luanda - Cabinda, a troposcater system is in operation.

The project calls for the implementation of large capacity system consisting of about 8 hops. The link will provide for the needs of the national, regional and international traffic, giving also access to the Panaftel network of the western countries of Africa.

Status : At a preliminary planning stage. Survey data and details of the link are required for preparation of technical specifications.

Financing is required for project implementation.

September 1992

ANG.5.06: Expansion of Telecommunication Training Centre, Angola

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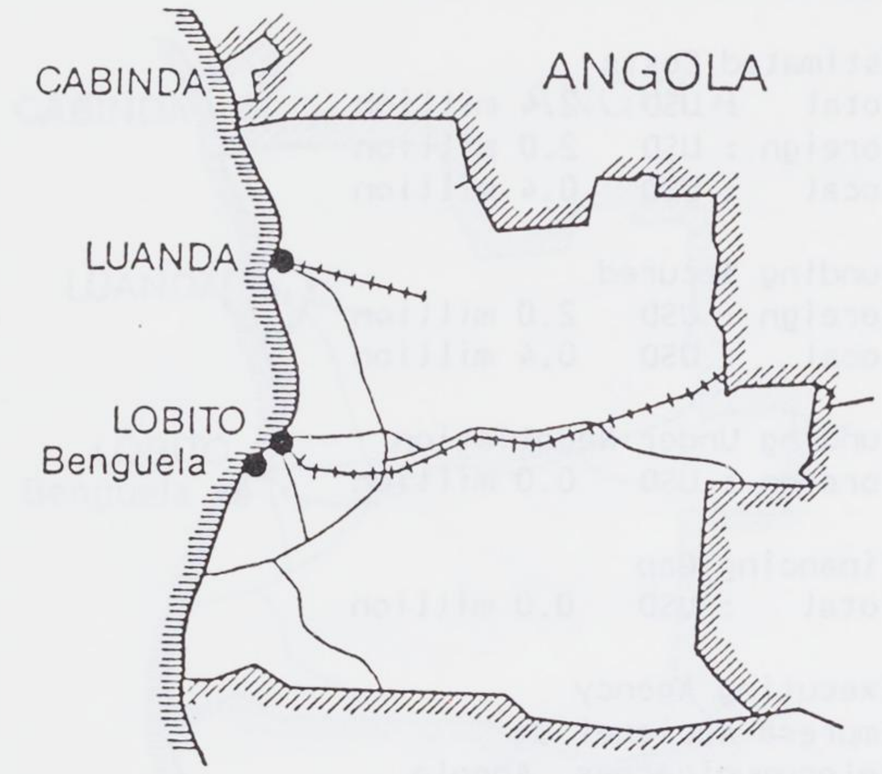

Estimated Costs
Total : USD 21.5 million
Foreign : USD 21.0 million
Local : USD 0.5 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 21.0 million

Executing Agency

Start : 1993
Duration: 2 Years

Objectives : The project consists of:

a) upgrading and expanding the existing National Telecommunications Training Centre to combined ENATEL and EPIEL training school in order to provide the much needed skilled staff for the operation of the telecommunication network;

b) establishemnt of the Telecommunication Training Institute to provide the necerrary manpower skills to the electronic and telecommunication enterprises.

Description : a) The ENATEL training centre had been operating since May, 1979 under funding from the UNDP in cooperation with the ITU. Training is given in Portuguese. The school is partially equipped with training equipment for illustrating switching, multiplexing and transmission principles.

The project is not yet fully defined but is to include:

- addition of several more classrooms to the training centre
- provision of boarding and lodging facilities to students
- provision of basic classroom equipment
- basic reorganisation of the training programme
- provision of instructors.

A more detailed survey of project requirements is necessary before proceeding to project implementation stage; this might include the relation of the site to allow for the buildings expansion and extensions.

b) This project is to be co-ordinated with the proposed Telecommunications Training Institute to be establish in the country. This part of the project involves

-Provision of Technical Assistance for course and syllabus development and instructors for three years	USD 8.0 million
-Construction of the Institute facilities	USD 12.0 million
TOTAL	USD 20.0 million

Status : Financing is required for project implementation.

September 1992

ANG.5.08: Provision and Expansion of National Telex Exchanges, Angola

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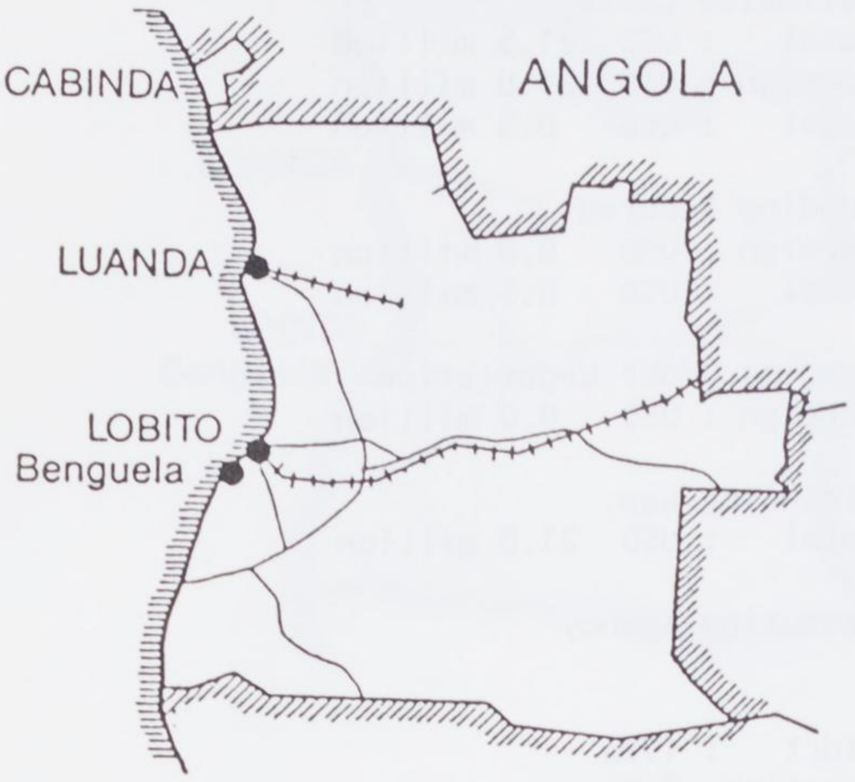


Estimated Costs
Total : USD 2.4 million
Foreign : USD 2.0 million
Local : USD 0.4 million

Funding Secured
Foreign : USD 2.0 million
Local : USD 0.4 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Empresa Nacional de
Telecomunicacoes, Angola
Start : 1992
Duration: 1 Year

Objectives : Provision of new (2000 lines) tlex exchanges in Luanda with concentrator extensions to the rest of the country.

Description: The existing telex network consist of old electromechanical exchanges, two in Luanda and one in Huambo, and concentrators located in Cabinda, Lobito and Benguela.

The equipment is 20 years old, obsolete and difficult to get the spares for maintenance and expansion and hence is not able to cater for future growth and expansion of the telex subscribers.

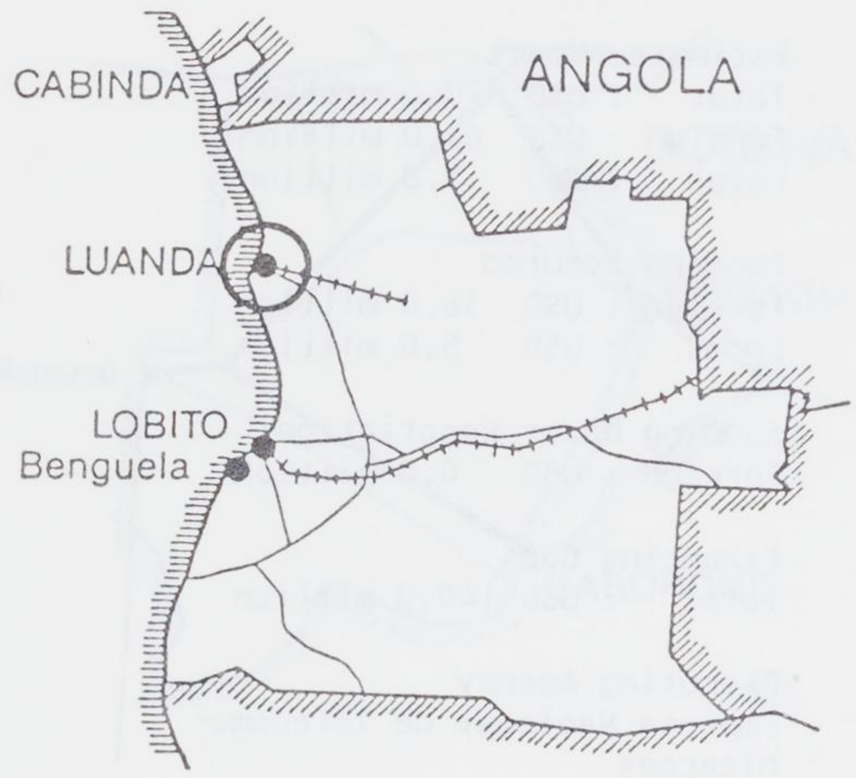
It was proposed to install new exchanges and concentrators at a total capacity of 2.000 lines at the following sites:

	Existing Capacity	New Capacity
Luanda	800	-
Huambo	200	-
Cabinda	-	-
Lobito	-	-
Benguela	-	-
Lubango	-	-
Total		2,000

Status : Financing is undertaken by ADB.

September 1992

ANG.5.09: Provision of digital exchanges for Angola Development Programme (1990-2000).



Estimated Costs
Total : USD 70.0 million
Foreign : USD 52.0 million
Local : USD 18.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 18.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 52.0 million

Executing Agency
Empresa Nacional de Telecomunicacoes (ENATEL)
Start : 1993
Duration: 10 Years

Objectives : Provision of digital telephone switching equipment for national, regional and international transit exchanges in Malanje, Huambo, Benguela, Lubango in order to provide high quality switching capacity along the PANAFTEL trunk network.

Description : Provision of digital exchange equipment and outside plant (local network) in each of the following national centres.

	Estimated Exchange lines	Estimated Trunks	Estimated costs USD in million
Luanda	20.000	247	14.0
Malanje	6.000	100	4.0
Cabinda	3.000	8	3.0
Huambo *	15.000	110	8.0
Kuito *	3.500	23	3.5
Benguela *	13.500	80	9.0
Lubango	8.000	74	5.0
Ondjiva	1.000	10	1.5
Luena *	1.000	6	1.5
Namibe	3.000	18	2.5
Vije			

The project consists of the following components

- Technical assistance for drawing up of the detailed technical specification;
- Switching, power and Test equipment;
- Installation commissioning and training;

ENATEL will cover costs towards some civil works, buildings and complementary projects.

Status : Financing is required for supply, installation and commissioning of exchanges.

September 1992

ANG.5.10: Provision of Domestic Satellite Network ANGOSAT for Angola

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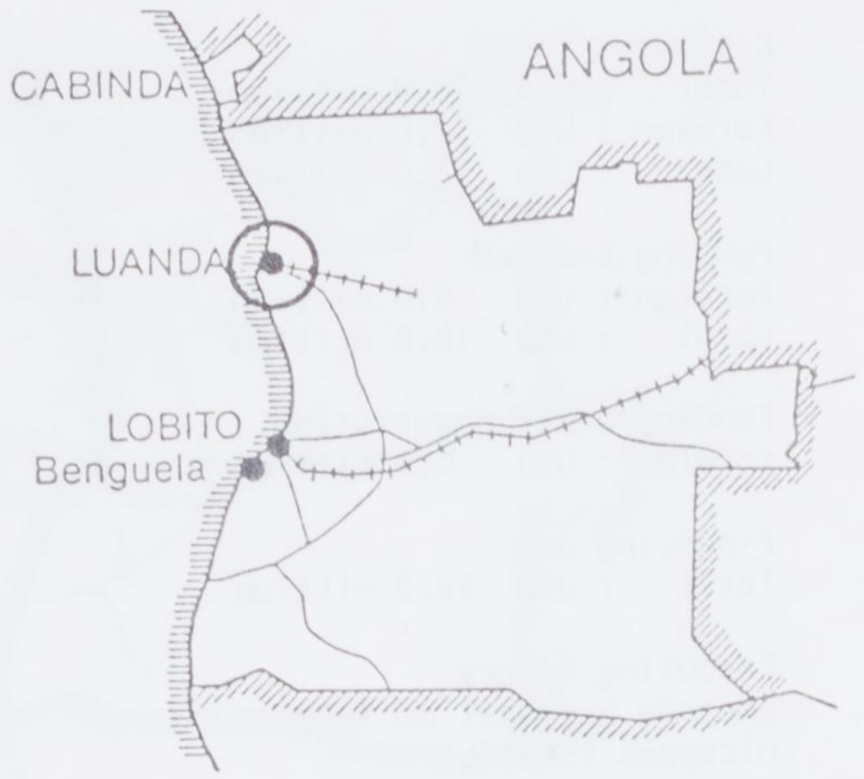


Estimated Costs
Total : USD 70.0 million
Foreign : USD 65.0 million
Local : USD 5.0 million

Funding Secured
Foreign : USD 16.0 million
Local : USD 5.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 49.0 million

Executing Agency
Empresa Nacional de Telecomunicacoes
Start : 1992
Duration: 10 Years

Objectives : Expansion of international, regional and national trunk telecommunication transmission systems which will enable Angola to imrpove its PANAFTEL and regional routes,by provision of domestic satellite and terrestrial links.

Description : Domestic Satellite System (ANGOSAT):

This part of the project involves the provision of dedicated earth stations to national provincial centres initially (1990-1995) to Luanda, Luena, Huila, Lubango and establish circuits between these locations.

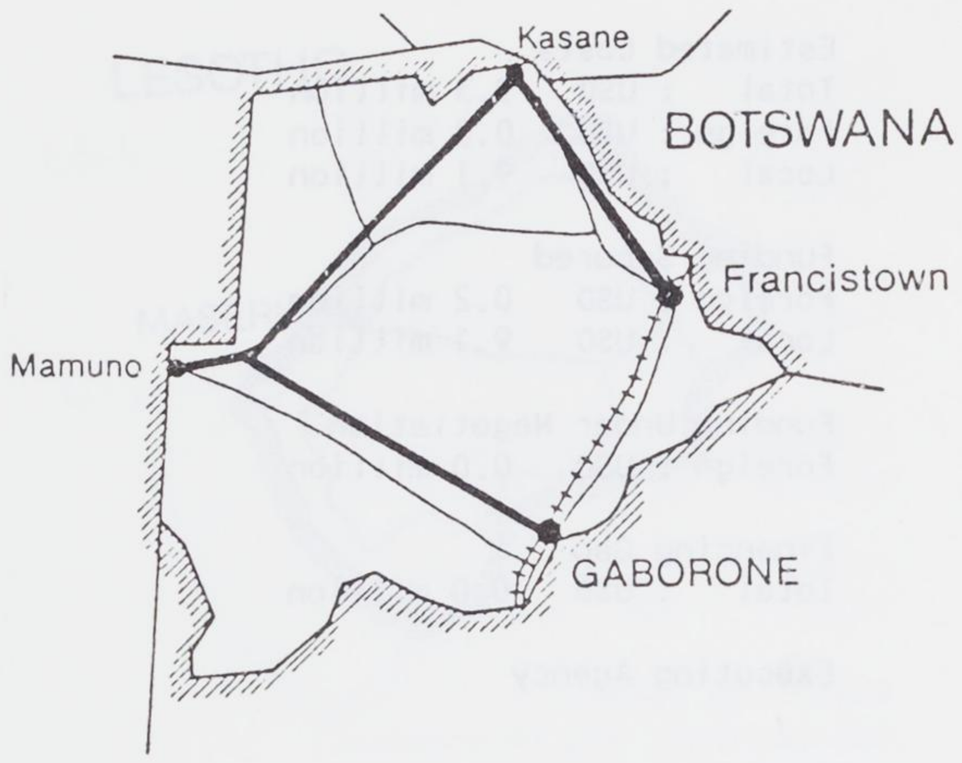
Terrestrial Links:

Feeder terrestrial links from the national centres of Luena to Zambia, Benguela, Lubango, Lubango-Namibe, Huambo-Kuito, Vige-Banza Congo, Mavinga Huambo, Malange-Saurimo, Saurimo-Luena, Ndjiva to Namibia for the provision of interconnection to the SADCC region, and possible provision of submarine cable along the Angolan Coastine.

Status : France has financed part of project.
Additional financing is required for remaining part.

September 1992

BOT.5.03: Expansion of the Microwave Trunk Network, Botswana
(Phase 3)



Estimated Costs
Total : USD 34.4 million
Foreign : USD 28.4 million
Local : USD 6.0 million

Funding Secured
Foreign : USD 15.5 million
Local : USD 6.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 12.9 million

Executing Agency
Botswana Telecommunications
Corporation, Botswana
Start : 1992
Duration: 3 Years

Objetives : To extend the Microwave Trunk Network with connections to neighbouring SADC Countries.

Description : Botswana has completed a microwave link between Francistown and Bulawayo. The country's telecommunications are undergoing a major National Main Development Programme which includes a new International Telephone Switching Centre (ITSC) in Gaborone.
The project comprises:

- Phase I (1987-1989)
  Expansion of the country's microwave trunk network with Francistown as Pilot Point stretching to Kasane via Tutume/Nata and Pandamatenga. This will provide direct regional connection to Zambia and Angola.

- Phase II (1988-1991)
  Extension of the microwave link from Kasane to Mamuno via Maun and Ghanzi to form the main backbone for future regional connection to Namibia.

- Phase III (1990-1993)
  Extension of the Microwave Trunk Network to the west and south of the country, between Ghanzi and Gaborone, via Jwaneng to complete a ring network and provide a route for the PANAFTEL link to Namibia. The project will integrate the Southern Kalahari Region into the national network as well as providing ring diversity for Botswana's switching network.

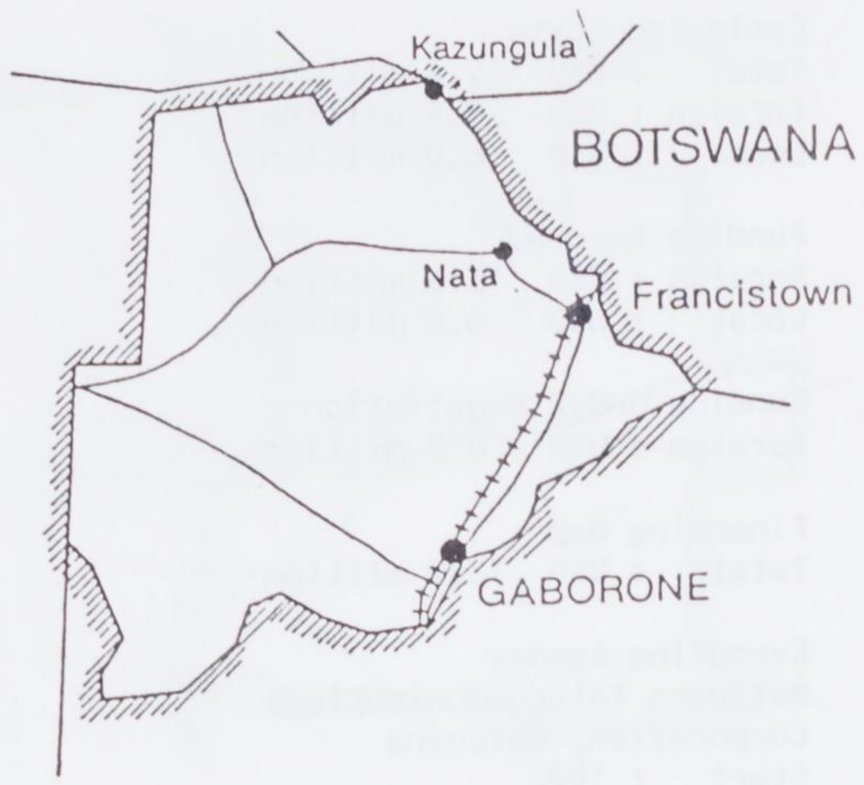
The provision of complementary telephone exchange equipment will be handled by the Botswana Telecommunications Corporation.

Status : Norad has provided USD 15.5 million to finance part of the project. Phase II was completed in early 1991. The portion of phase III, Ghanzi-Jwaneng microwave link, is under implementation, with NORAD funding.

Financing is required for implementation of remaining part of phase III.

September 1992

BOT.5.05: Rural Telecommunications Development for Botswana



Estimated Costs
Total : USD 9.3 million
Foreign : USD 0.2 million
Local : USD 9.1 million

Funding Secured
Foreign : USD 0.2 million
Local : USD 9.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency

Start : 1990
Duration: 4 Years

Objectives : The study seeks to determine and evaluate the technical and economic options for the development of rural telecommunications services throughout Botswana.

Description : Recent network developments in Botswana have been aimed at providing modern digital facilities to the main population centres of the country along the eastern rim of the Kalahari desert. The main trunk network is composed of the existing backbone from Gaborone to Francistown and the proposed project 5.2.3. In the next 5-10 years it is planned to extend the digital trunk network into the northern, western, central and southern regions in order to provide telecommunication services to the vast proportion of rural communities in these areas.

The study will aim to analyse and make recommendations on the following:

- settlements to be served or to receive upgraded service;
- expected level of demand;
- appropriate technical solutions;
- cost and phasing of investments;
- most suitable financial and operating policies.

The Study will consider the social and economic aspects of providing services into rural areas, as well as all possible technical approaches and the financial implications. A detailed Five Year Investment Plan will be produced with a general strategy for long term development.

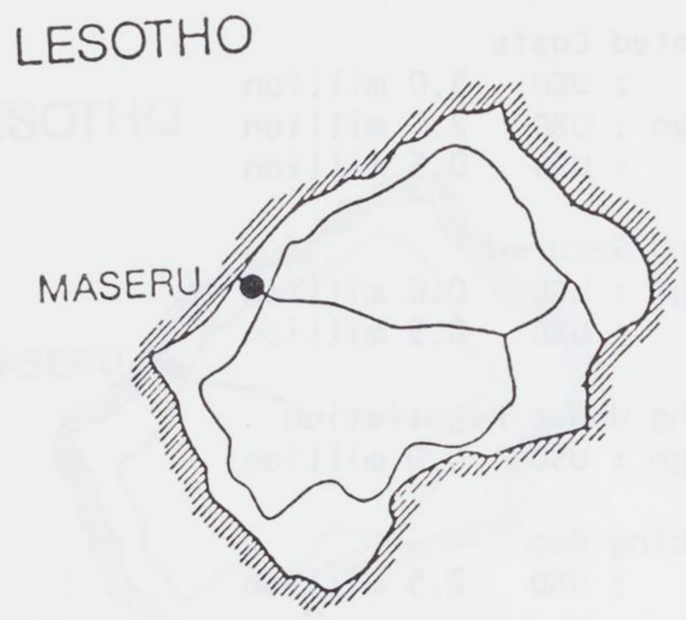
Terms of Reference for the study have been produced by the Botswana Ministry of Works and Communications.

Status : Study completed financed by ADB. The study has been accepted by Botswana Government. Botswana Telecommunications corporation is implementing the recommendations of the study, in that its development plans have activities similar to the study's recommendations.

Additional funds are sought to extend the project.

September 1992

LES.5.02: Rural Communication System, Lesotho



Estimated Costs
Total : USD 10.1 million
Foreign : USD 9.9 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 9.9 million

Executing Agency
Lesotho Post and Telecommunication Corporation
Start : 1993
Duration: 3 Years

Objectives : The project aims at providing communication to the Clinics / Health centres, Post Offices / Postal Agencies, Police Stations and small business in the rural areas of Lesotho most of which are situated in the mountains which are less accessible by road.

The first step is to conduct a short feasibility study to define the scope and the time scheudles of the various activities leading to implementation to be initiated in 1988. The project also includes training fellowships for technicians.

Description: The microwave backbone was installed and commissioned in July 1985 to provide telephone services to the district centres. But some scattered rural villages are not connected due to the mountainous nature of the terrain. It is very expensive to construct open wire carrier routes to these rural areas.

The rural system which is expected to be implemented consists of :

- central stations located at the main exchange of the districts;
- repeater stations capable to handle from 10 to 60 subscribers and connected to the central station with small capacity radio links (2 to 10 channels);
- remote stations located at the subscribers' premises in remote areas where there is no commercial power and in some cases difficult to reach by vehcile.

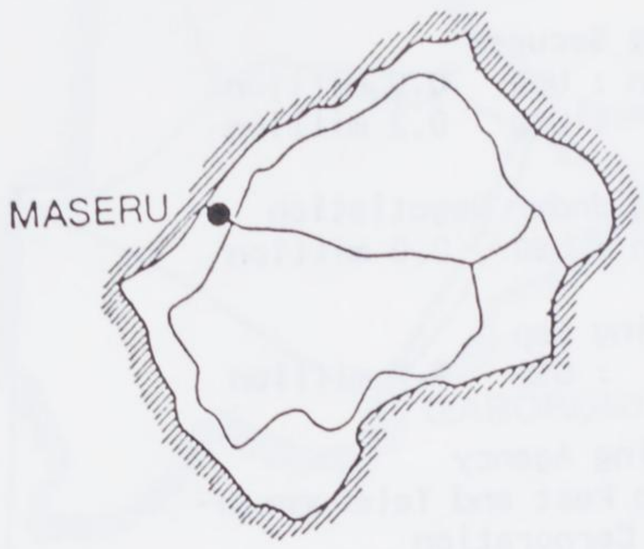
Status : Canadian International Development Agency has provided financing for the feasibility study under the auspices of the SATCC Technical Services Fund. Telletra of Spain has provided the technical and commercial offer for implementation.

Spain has been approached to finance the implementation of the project.

September 1992

LES.5.03: Rural Automatic Telephone Exchanges, Lesotho

LESOTHO



Estimated Costs
Total : USD 3.0 million
Foreign : USD 2.5 million
Local : USD 0.5 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.5 million

Executing Agency
Lesotho Post and Telecommunications Corporation
Start : 1993
Duration: 1 Year

Objectives : Provision of automatic rural telephone exchanges located at various rural centres in Lesotho.

Description : The project involves the provision of rural telephone exchange equipment to rural localities having a potential capacity of between 20 and 200 subscribers. Approximately 100 sites will be equipped throughout the country.

The project will provide :

- Solar panel power sources;
- Distribution frames and subscriber connections;
- Equipment installation and commissioning;
- Spare parts and
- Training of staff.

Lesotho Telecommunications Corporation will provide housing for the equipment.

Status : Financing is required for project implementation.

September 1992

LES.5.04: Fundamental Master Plan and Planning Unit, Lesotho

Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.3 million
Local : USD 0.1 million

Funding Secured
Foreign : USD 0.3 million
Local : USD 0.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Lesotho Telecommunications Corporation
Start : 1991
Duration: 1 Year

Objectives : The preparation of a Long Range Master Plan, 1989-2009, for the development of the national telecommunications infrastructure, and the setting up of a Fundamental Planning Unit for supporting future network and corporate planning activities.

Description: (1) Preparation of a switching network review, including:
- interim planning proposals for the period up to 1996, in order to recommend solutions for the most urgent outstanding expansion requirements.
- an integrated concurrant fundamental plan consisting of a medium and long range national demand study.
- preparation of a national switching and transmission plan covering the period to year 2009.

(2) Identify, define, configure and appraise expansion projects in order to meet:
- the technical and economic guidelines of the national network plan.
- the financial and economic criteria appropriate to the commercial requirements of the LTC and its obligations to the national social development.

(3) Set up a Fundamental Planning Unit to undertake the following functions:
- demand and traffic analysis,
- network development strategy,
- economic analysis, and
- investment plan preparation and project identification.

Status : Financing for the Technical assistance has been secured from UNDP.

September 1992

LES.5.05: Provision of New ITSC and Digitalization of National Exchanges, Lesotho

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Estimated Costs
Total : USD 7.1 million
Foreign : USD 6.6 million
Local : USD 0.5 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 6.6 million

Executing Agency
Lesotho Telecommunications Corporation
Start : 1993
Duration: 4 Years

Objectives : Provision of new digital International Telephone Switching Centre to replace the existing combined Local / Exchange / National Transit / International exchange and the replacement of some manual and electromechanical exchanges with digital systems in order to extend ISD facilities.

Description:

- New Digital International Telephone Switching Centre.

- The current ITSC (AXEIO) 4096 local lines and 248 International Trunks, is a combined International Exchange, National transit and local exchanges for the Maseru area. Due to the hybrid functions of the switch problems affecting the entiry network are more often experienced when new software facilities are introduced and hence the proposal for a new and separate stand alone ITSC to cater solely for international traffic with capacity of 500 International Trunks

- Digitalization of Manual and Electromechanical Exchanges.

- Provision and installation of digital exchanges and associated trunk transmiossion equipment to replace the manual and obsolote electromechanical exchanges as follows:

SITE	EXISTING TYPE	PLANNED CAPACITY (LINES)
Qacha's Nek	Electromechanical	640
Mapoteng	"	400
Mokho Hong	"	640
Morija	"	500
Van Royens Gate	"	400
Kukhune	Manual	640
Mantsonyane	"	400
Marakabei	"	256
Mpharane	"	180
Peka	"	500
Semonkong	"	256
Sekake	"	256
Sehlabathebe	"	180

The project components comprise:

(i) Switching and associated trunk transmission equipment, plus associated power and test equipment.

(ii) Installation, commissioning and training.

Status : Financing is required for both detailed definition and implementation of the project.

September 1992

MAL.5.03: Supply of Digital Equip. for the Expansion of Tele. Exchngs in Blantyre- Lilongwe-Zomba

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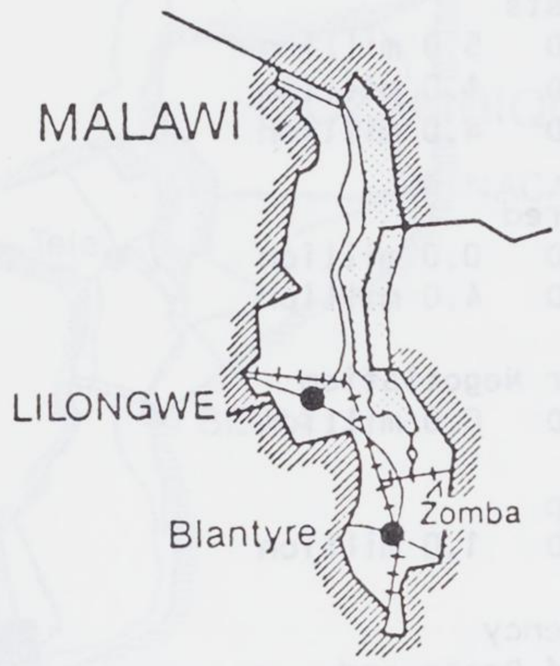

Estimated Costs
Total : USD 28.0 million
Foreign : USD 26.0 million
Local : USD 2.0 million

Funding Secured
Foreign : USD 26.0 million
Local : USD 2.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Malawi Dept. of Posts and Telecommunications
Start : 1992
Duration: 2 Years

Objectives : Digitilization and expansion ofthe national telephone exchange centers comprising Blantyre, Lilongwe and Zomba in order to provide high quality switching capacity to the national, regional and international traffic along the PANAFTEL trunk network.

Description : Provision of digital exchange equipment in each of the following national centres:

	Estimated Exchange Lines	Estimated Costs USD in Millions Total	Foreign	Local
PHASE I 1987-1990				
- Blantyre Implementation period 1989 - 1990	10.000	3.4	3.3	0.1
- Lilongwe Implementation period 1988 - 1990	9.000	7.6	7.4	0.2
- Zomba Implementation period 1988 - 1990	5.000	2.5	2.3	0.2
PHASE II 1990-1996				
- Blantyre	10.000	4.0	3.6	0.4
- Lilongwe	9.000	3.1	2.79	0.31

The project components comprise :
(i) Switching, PCM line equipment, plus associated power and test equipment, to cover expansion at the existing locations.
(ii) Installation, commissioning and training.
The Malawi Post Office will cover the costs of buildings and complementary projects.

Status : ADB has financed the project.

September 1992

MAL.5.04: Expansion of Telecommunications Training Centre, MPO, Malawi

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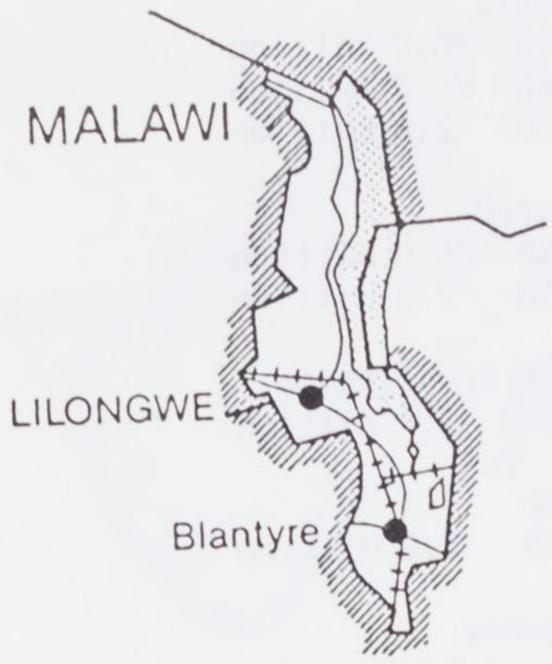

Estimated Costs
Total : USD 5.0 million
Foreign : USD 1.0 million
Local : USD 4.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 4.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.0 million

Executing Agency
Department of Posts and Telecommunications, MALAWI
Start : 1991
Duration: 2 Years

Objectives : Provision of basic and medium level training facilities to meet Malawi's Manpower requirements for its expanding telecommunications network infrastructure.

Description: During the past few years the total basic level training needs have moe than doubled. The existing buildings for classroom and equipment accommodation has been severely constrained and is insufficient.

The project involves:

- Construction of buildings and associated accommodation and facilities for a maximum of 60 trainees.

- Training aids and test equipment for external plant, subscribers apparatus, switching and transmission maintenance.

- Staff training and fellowships in advanced telecommunicatio technologies.

- Malawi Department of Posts and Telecommunication is undertaking the construction of the building all the local costs of the project at a total of USD 4.0 millions.

Status : Financing is required for procurement of training aids, test equipment, staff training and provision of fellowships.

September 1992

MOZ.5.01: National/Regional Satellite Communication System of Mozambique

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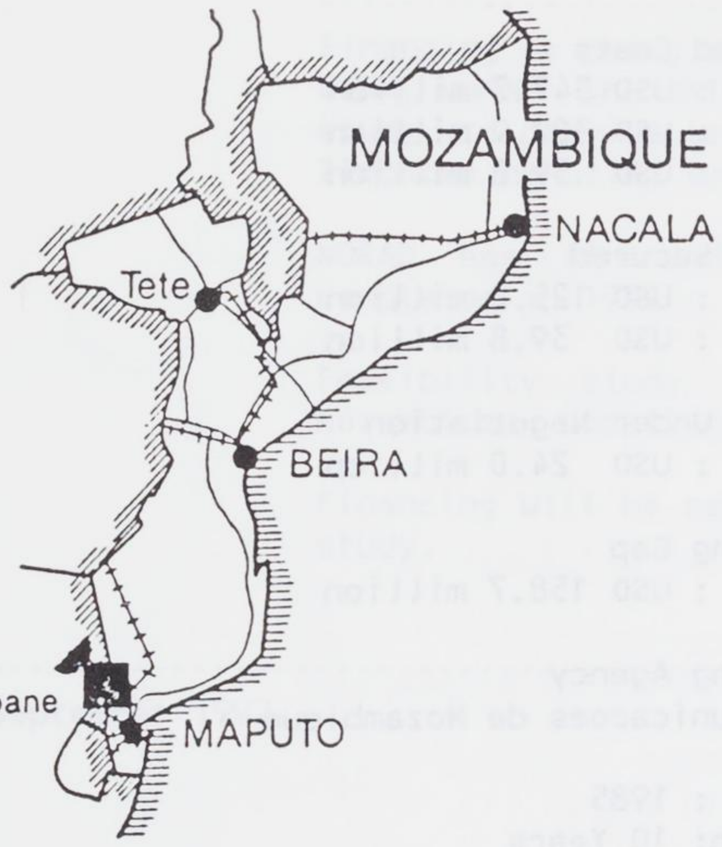


Estimated Costs
Total : USD 44.1 million
Foreign : USD 43.6 million
Local : USD 0.5 million

Funding Secured
Foreign : USD 43.6 million
Local : USD 0.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Telecommunications of Mozambique
Start : 1984
Duration: 10 Years

Objectives : The project seeks to expand the international, regional and national trunk telecommunications transmission systems which will enable Mozambique to improve its PANAFIEL and regional connectivity.

Description : Part 1. Basic domestic satellite system in Mozambique.

Provision of 3 dedicated type earth stations in MAPUTO, BEIRA and NAMPULA to establish circuits between these locations. Space segment capacity of initially 9 MHZ will be leased from INTELSAT on a pre-emptible basis.

Part 2. Dual polarisation for the Boane A antenna.

Retrofit of Boane A antenna to comply with the INTELSAT mandatory specifications for dual polarization. Due to cost implications a new revised SIDA was proposed for the Boane antenna. There is further need for the introduction of IDR/DCME to comply with INTELSAT digitalisation of the Space Segment.

Part 3. Additional domestic antenna Earth Stations.

Provision of two earth stations with small diameter antennas in Lichinga and Pemba, to be integrated in the basic system of part 1.
France undertook study to cover the rest of the domestic satellite requirements.

Status : Part 1
Financing was secured from France (13.2 million), Kuwait (4.3 million), local funds (8.4 million). The domestic satellite earth stations in Maputo, Beira and Nampula were comission in August 1986.

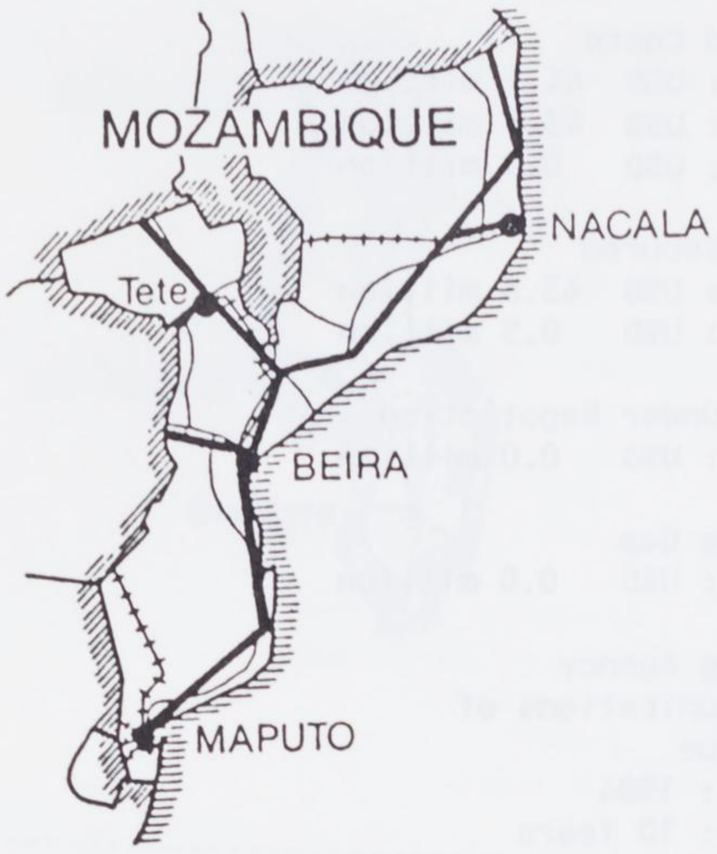
Part 2
Financing was secured from CIDA (USD 2.2 millions). The project was completed late 1987.
This part of the project should be co-ordinated with SATCC Project AAA.5.04.
France will finance the provision of IDR/DCME equipment.

Part 3
Feasibility study was undertaken by HN Engineering of Canada under the auspices of the SATCC Technical Services Fund. CIDA (Canada) will be financing the domestic satellite stations at Lichinga and Pemba
France financed the study for the provision of domestic satellite stations to cover the rest of the country.

France is to provide finance (108 MFF) for the implementation of the rest of the Domestic Satellite Stations.

September 1992

MOZ.5.03: National Telecomms Development Proj.with Connections to Neigh
bouring Countries (Reg. Part)



Estimated Costs
Total : USD 347.7 million
Foreign : USD 307.9 million
Local : USD 39.8 million

Funding Secured
Foreign : USD 125.2 million
Local : USD 39.8 million

Funding Under Negotiation
Foreign : USD 24.0 million

Financing Gap
Total : USD 158.7 million

Executing Agency
Telecomunicacoes de Mozambique

Start : 1985
Duration: 10 Years

Objectives : Expansion of the telecommunications system up to 1995 in order to provide switching and transmission capability to SADC' countries.

Description : The regional part of the programme consists of:

Phase I

Microwave backbone systems Maputo / Xai-Xai / Chokwe, Beira / Chimoio, Nampula / Nacala; International switching centre of Maputo and Beira;
Switching systems in Maputo, Beira, Nampula, Nacala, Chimoio with buildings and junctions.

As a separate project, a new telex exchange at Beira will be implemented so as to match the commissioning of the 1st phase of the present Telecommunication Development Project.

Phase II and III

The remaining part of the microwave backbone network, i.e. Xai-Xai / Massinga, Caia / Quelimane, Tete / Ulongwe, the possible provision of Submarine Cable System along the Mozambique Coastline, and the international extension Tete / Blantyre, Chimoio / Mutare, tete / Katete, Nampula / Mtwara.

A number of plantsof the National Telecommunications Development Plan, which are related to the Beira Corridor, have been extracted from the present project and group under the Project Moz.5.05. Telecommunication Projects in Beira Port Transport System Development Plan.

Study Surveys, Engineering design and technical specifications are yet to be defined for phase II and III before proceeding to the implementation stage.

Status : Phase I

Financing for the national and regional parts of the project have produced agreements with:

- Italy	USD 55.2	million, loan and grant
- ADB	USD 15.9	million, loan
- BADEA	USD 8.1	million, loan
- SWEDEN	USD 13.8	million, loan and grant
- NORWAY	USD 6.0	million, grant

Implementation of projects for provision of equipment in Phase I is at various stages of completion.

Negotiations for a further USD 24 million are ongoing with Italy part of which will provide financing for the extension of microwave link from Xai-Xai to Massinga.

Contract for the provision of a stand alone telex exchange in Beira been finalised with Germany.

Phase II and Phase III (1987-1994)

Financing is being sought for the implementation of this part of the project. CIDA, under the SATCC Technical Services Fund, is interested in carrying out a study to provide telecommunications Services to towns and locations bordering Zimbabwe by using some of the basic infrastructure in Zimbabwe.

NORAD has financed the microwave link Harare-Tete-Blantyre. Installation completed in 1989.

Feasibility study for the provision of Submarine Cable System along the Mozambican Coastline, has been financed by KFW (Germany).

Financing will be required for implementation of the projects emanating from the study.

September 1992

MOZ.5.05: Telecommunications Projects in Beira Port Transport System Development Plan

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Estimated Costs
Total : USD 22.1 million
Foreign : USD 20.1 million
Local : USD 2.0 million

Funding Secured
Foreign : USD 2.8 million
Local : USD 2.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 17.3 million

Executing Agency
Telecomunicacoes de Mozambique

Start : 1986
Duration: 10 Years

Objectives : To ensure international quality standard telecommunications to/from Beira for the correct operation of the port, railway and roads belonging to the Beira Port Transport System.

Description : The National Telecommunication Development Plan of Mozambique contains all the projects of the telecommunication system of the Corridor of Beira. A number of these projects are ongoing as specified in the SATCC Projects MOZ.5.01 and MOZ.5.03.

The following projects will complete the System, ensuring also a proper operation of the plants.

For details, see Beira Port Transport System 10-Year Development Plan.

Technical Assistance to TDM is being provided by SIDA.

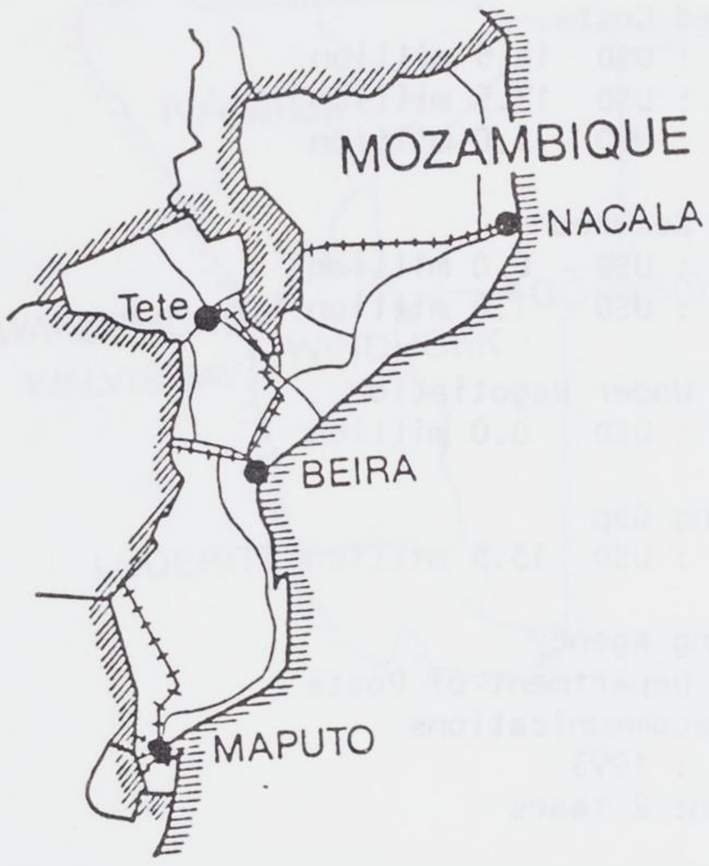
Status : Italy is providing support in financing the implementation of the Crossborder Section of the link Beira-Chimoio-Mutare (Zimbabwe). Financing is sought for the implementation of the other project items.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
T-CE-1	Spur Routes Beira-Machipanda, Mozambique	3.7	3.3	0.4	0.4	0.0	3.3
T-CE-2	Crossborder Section of the Beira-Chimoio-Mutare Digital Microwave Link.	2.8	2.7	0.1	2.8	0.0	0.0
T-CE-3	Digital Microwave Link Beira- Caia-Tete, Mozambique	8.7	7.8	0.9	0.9	0.0	7.8
T-CE-4	Spur Routes along Beira-Vila Nova da Fronteira, Malawi Corridor	6.3	5.7	0.6	0.6	0.0	5.7
T-TA-1	Technical Assistance to TDM, Mozambique	0.6	0.6	0.0	0.1	0.0	0.5
		22.1	20.1	2.0	4.8	0.0	17.3

September 1992

MOZ.5.06: Maritime Radio Communication Project, Mozambique



Estimated Costs
Total : USD 9.5 million
Foreign : USD 9.0 million
Local : USD 0.5 million

Funding Secured
Foreign : USD 0.3 million
Local : USD 0.5 million

Funding Under Negotiation
Foreign : USD 2.6 million

Financing Gap
Total : USD 6.1 million

Executing Agency
Telecomunicacoes de Mozambique

Start : 1987
Duration: 6 Years

Objectives : The project aims at establishment of communications for the operation of the major ports Mozambique (Maputo, Beira and Nacala) and for the users located in the neighbouring countires, i.e.:

- short and long distance ship to shore communication
- port to port communication
- access to the public network
- co-ordination with the existing HF stations of TDM

Description: The project comprises:

- 1 first category station for long distance connections;
- 2 second category stations for medium and short distance connections;
- 1 maintenance centre;
- on-board transceivers for 4 ships.

Each of the stations will be essentially formed by an HF transmitting centre (equipped with 2 HF KW transmitter) and a receiving centre (equipped with 3 HF receivers and 1 UHF 400 W transceiver). The stations will be equipped with proper antenna systems and will provide the following services:

- commercial telephony, telex, facsmile;
- marine services such as notice for ships, weather forecast, etc.

As a first step TDM is requesting consultancy services for:

- evaluation of the project in respect of the requirements and considering the existing facilities;
- preparation of the tender documents and evaluation of the proposals;
- supervision of the implementation of the contract;
- training;
- technical assistance.

Status : Existing Equipment Survey completed by Norway.
Italy financed the feasibility study.

Financing is sought for financing the projects emanating from the study.

September 1992

NAM.5.01: Extension of International Telecommunications Services, Namibia

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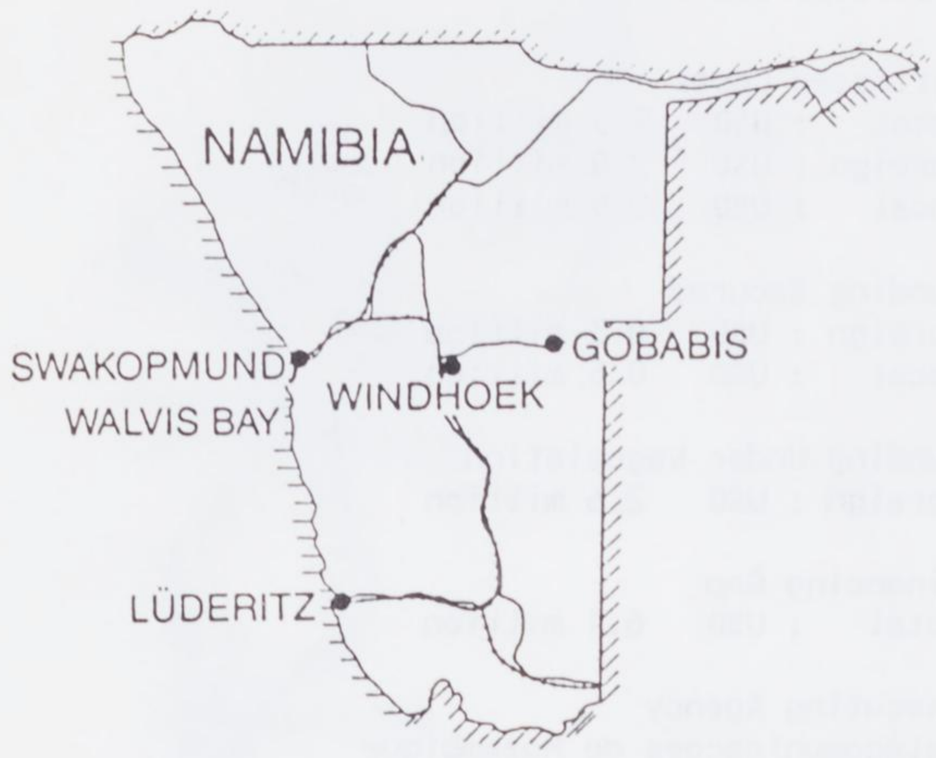


Estimated Costs
Total : USD 14.5 million
Foreign : USD 13.5 million
Local : USD 1.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 1.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 13.5 million

Executing Agency
Namibia Department of Posts
and Telecommunications
Start : 1993
Duration: 2 Years

Objectives : To improve international connectivity, diversity and a reduction of the level of reliance and financial out-payment for transit through South Africa for international services.

Description : All international services to and from Namibia are switched through South Africa international gateway exchanges and satellite earth stations via the single analogue microwave link from Windhoek to Upington.
The project consists of the provision of technical assistance and consulting services for feasibility studies, detailed techncial specifications and implementation of the following:

1.0 Standard A satellite earth station in Windhoek equipped with IDR/DCME equipment and SCPC circuits to work to Germany, America, Britain, Zambia and Angola via Intelsat AOR 335.5 satellite.
2.0 Digital backhaul link from earth station to gateway exchange.
3.0 International EWSD telephone gateway exchange in Windhoek with CCITT No.5, No 7 and R2 (blue book) signalling capabilities.
4.0 International EDX telex gateway exchange in Windhoek.

Status : A basic site determination survey has been done by ITU to determine a suitable site near Windhoek for a Standard A satellite earth station.
Preliminary traffic counts have been used to determine the following circuit requirements:

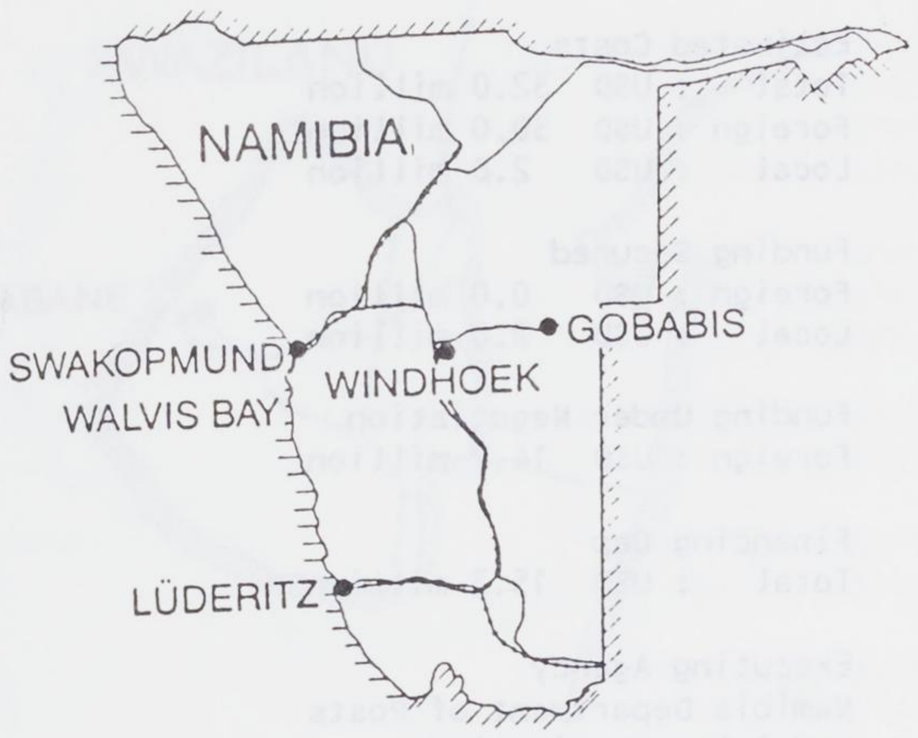
Europe	49 i/c	38 o/g
Britain	36 i/c	28 o/g
Americas	18 i/c	22 o/g
Zambia	13 i/c	12 o/g
Angola	4 i/c	3 o/g

The gateway exchange shall terminate the foregoing satellite traffic as well as 1400 analogue channels to other Namibian exchanges, 1400 to South Africa and 34Mbit/s to Botswana into the Panaftel Network.

Financing is now required to implement this project.

September 1992

NAM.5.02: Telecommunications Master Plan Study, Namibia



Estimated Costs
Total : USD 3.7 million
Foreign : USD 3.6 million
Local : USD 0.1 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.1 million

Funding Under Negotiation
Foreign : USD 1.8 million

Financing Gap
Total : USD 1.8 million

Executing Agency
Namibia Department of Posts
and Telecommunications
Start : 1993
Duration: 1 Year

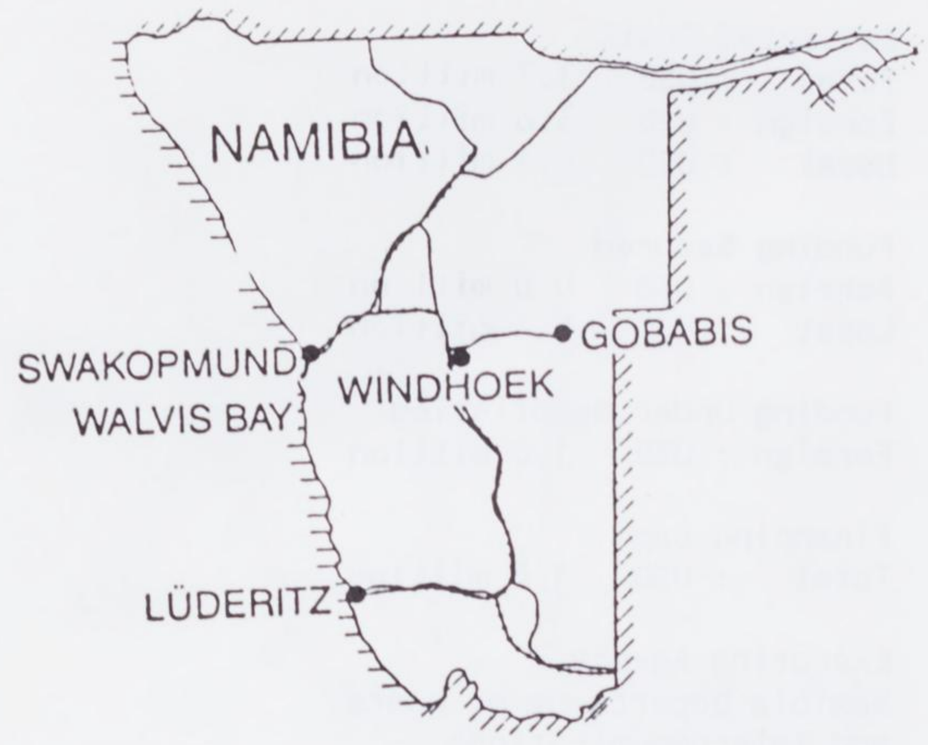
Objectives : To preparatio of a long Range Master Plan (1991-2011) for the development of the national telecommunications structure to operate as a public corporation and the setting up of the Planning Unit.

Description :
1.1 Transformation into a Public Corporation.
1.1.1 Study and report on the most effective way in which to create a Posts and Telecommunications Corporation.
1.1.2 Prepare all the required legislation for incorporation.
1.1.3 Assist DOPAT with the transformation to a PTC by training personnel, putting financial and service structures in place and assisting with the transition phase.
2.1. Preparation of a Master Plan including:
2.1.1 Fundamental Plans for switching, numbering, routing, signalling,
2.1.1 Fundamental Plans for switching, numbering, routing, signalling, synchronisation and transmission;
2.1.2 Traffic, tariffs and subscriber forecasts;
Development and Investment Plans for short, medium and long term manpower and training requirements.
2.2 Identify and define expansion projects to meet:
technical and economic guidelines of the national network;
the financial and economic viability of the Posts and Telecommunications Corporation.
2.3 Set up Fundamental Planning Unit to undertake the periodic updating of the following:
2.3.1 demand, traffic and economicanalyses,
2.3.2 investment plans preparation and project identification.
2.4 Study the economic, financial and management viability of separate posts and telecommunications companies.

Status : SIDA is to finance study on establishment of Pand T Corporation.

September 1992

NAM.5.03: Extension of Backbone Trunk Network, Namibia



Estimated Costs
Total : USD 32.0 million
Foreign : USD 30.0 million
Local : USD 2.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 2.0 million

Funding Under Negotiation
Foreign : USD 14.7 million

Financing Gap
Total : USD 15.3 million

Executing Agency
Namibia Department of Posts
and Telecommunications
Start : 1993
Duration: 5 Years

Objectives : To extend high capacity digital transmission for interconnection to the north and east of the country with interconnection to Panaftel links to the neighbouring countries and provision of automatic switching and ISD facilities for national, regional and international services.

Decsription : The project involves the:

1. Supply, installation and commissioning of equipment identified through the detailed definition and determination of the following:

1.1 Digital trunk connection to Botswana through Gobabis with associated spurs and telephone exchanges at Windhoek International Airport, Omitara, Witvlei, Gobabis, Buitepos and the farming community along the route;

1.2 Digital link Tsumeb to Rundu with a spur to Tsumkue in Bushmanland; extension to Katima Mulilo and a spur to Botswana;

1.3 Associated digital EWS telephone exchanges at Tsumeb, Rundu, Tsumkwe and later at Katima Mulilo and Grootfontein;

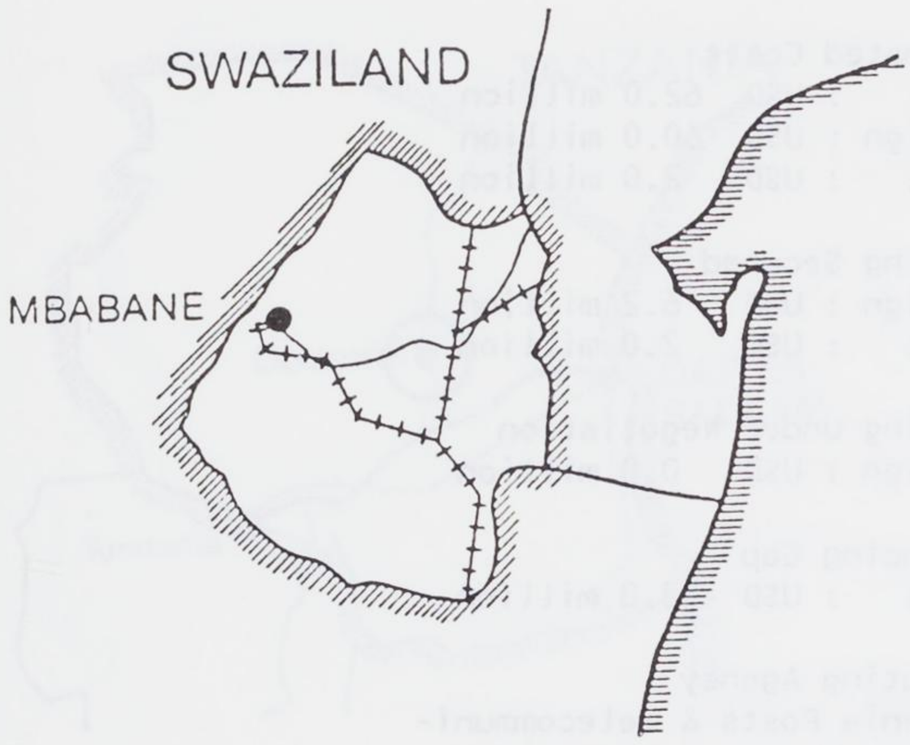
1.4 Digital microwave link from Keetmanshoop to Luderitz to serve the fishing and mining activities at this port.

2.1 Technical assistance for drawing up detailed technical requirements and specifications for above project elements.

Status : Financing is required for implementation of all these project elements. Norway is to finance the Namibia-Botswana Microwave Link.

September 1992

SWA.5.05: Extension of Nat. Switching Centre and Associated Network Digitalization, SWAZILAND



Estimated Costs
Total : USD 12.0 million
Foreign : USD 10.0 million
Local : USD 2.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 2.0 million

Funding Under Negotiation
Foreign : USD 10.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Swaziland Posts and
Telecommunication Corporation
Start : 1992
Duration: 3 Years

Objectives : Provision and digitalization of new regional / national transit switching centres and associated remote exchanges with ISD facilities to replace the present trunk switch which is congested and obsolete.

Description : The project involves the supply, installation and commissioning of digital switching and associated trunk transmission equipment as follows:

Switching	Estimated Exchange lines	Type	Estimated Cost USD millions
Mbabane	2048	Transit/Local	6.5
Bhunya	256	Local	
Malkerns	512	Local	
Manzini	1024	Transit/Local	
Ngwenya	512	Local	
- Radio and Transmission Six links, 2 MBits and 34 MBits			1.0
- Cables for local network			1.7
- Consultancy and Logistics			0.8

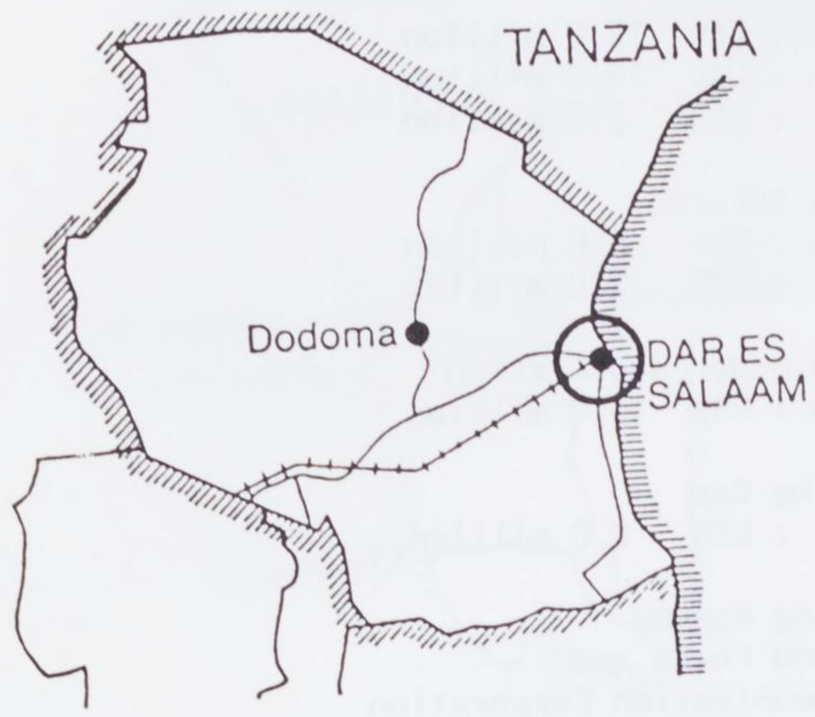
Detailed survey of requirements and technical specification is necessary before proceeding to the implementation stage.

Status : Finance is required for the drawing up of detailed specification and project implementation.

International tenders for equipment including financial arrangements under evaluation.

September 1992

TAN.5.02: Extension of ITSC Capacity,and Associated Telephone Exchanges
Dar es Salaam, Tanzania



Estimated Costs
Total : USD 62.0 million
Foreign : USD 60.0 million
Local : USD 2.0 million

Funding Secured
Foreign : USD 6.2 million
Local : USD 2.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 53.8 million

Executing Agency
Tanzania Posts & Telecommunications
Start : 1991
Duration: 5 Years

Objectives : Provision of a new digital international telephone Switching Centre, national transit centre and associated replacement, rehabilitation and expansion of telephone exchanges and local networks in Dar es Salaam to augment or replace the existing cross-bar exchange in order to:

(i) cater for continued growth of international, regional and national traffic and improve the grade of service available to the international callers and the traffic handling capability of the network.

(ii) allow expansion of PANAFTEL terrestrial circuit groups with neighbouring SADCC countries and improve calling facilities through the introduction of international subscriber dialing (ISD).

Description : The Dar es Salaam telecommunication Network which constitute 43% of the total national network consists of old obsolete step-by-step and crossbar equipment which create traffic congestion and is not capable of expansion to meet future demand due to non-availability of spares for maintenance and extension.

Tanzania Posts and Telecommunications Corporation proposes as a first priority to extend and rehabilitate the ITSC, national transit and three local exchanges in Dar es Salaam and associated local network.

The first phase of the project involves the supply, installation and commissioning of digital exchange and associated power and transmission equipment as follows:-

	Existing capacity	Estimated trunks	Lines
- Exchange:			
ITSC	150(Crossbar)	2,000	-
National/Local Transit		3,000	2,000
3 x Local Exch.	4,600	2,490	8,000
- External Plant (cable etc.)			240,000 p/K

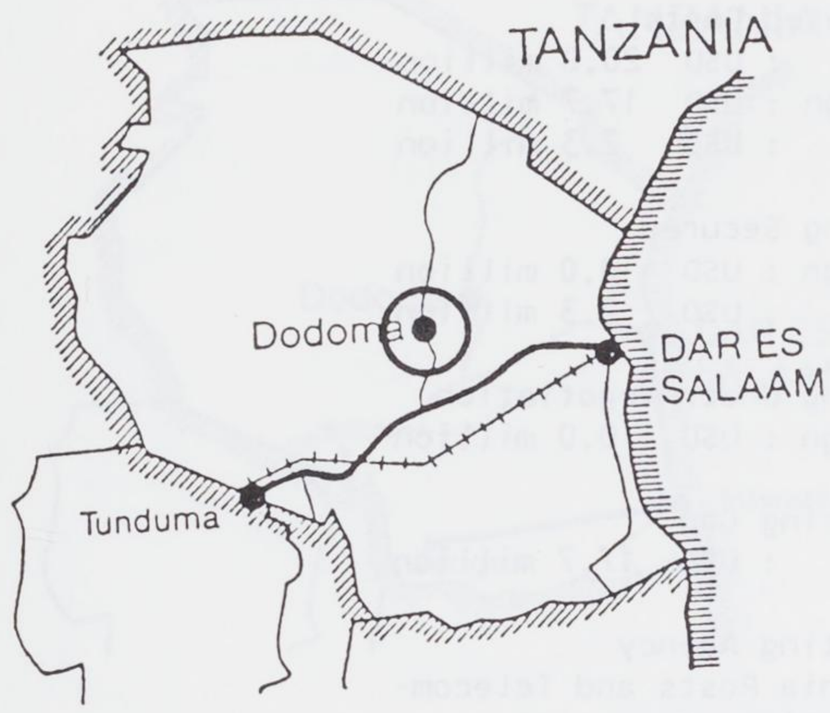
The ITSC in Dar es Salaam has been commissioned.
However a detailed survey and technical specification for the whole Dar es Salaam exchange requirements including local network is necessary before proceeding to the implementation stage.

Status : Belgium has financed ITSC; and other exchanges.

Financing is required for the turnkey rehabilitation and extension of the remaining portion of the project.

September 1992

TAN.5.04: New Transit Digital Telephone and Telex Exchanges for Dodoma
Tanzania



Estimated Costs
Total : USD 3.1 million
Foreign : USD 2.4 million
Local : USD 0.7 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.7 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.4 million

Executing Agency
Tanzania Posts and Telecommunications Corporation
Start : 1993
Duration: 2 Years

Objectives : The project is to provide new transit telephone and telex exchanges in Dodoma for routing international, national and local traffic. Dodoma is on the intersection of the PANAFTEL microwave network in Tanzania.

Description: PART I, Telephone Exchange :
At present the existing switch in Dodoma handles national traffic. The proposed exchange would be required to switch international traffic as well as national traffic at the important intersection of the PANAFTEL network. The sizing ofthe exchange is partly dependent on the implementation of the Dar es Salaam to Dodoma microwave system, Project TAN.5.05. The exchange has to interconnect with the new international exchange in Dar es Salaam, Project TAN.5.02.

The new digital telephone exchange will be equipped as follows :

- 2000 trunks;
- 6000 local lines;
- 18 position auto-manual board;
- a rectifier and battery plant sized up to the proposed switch.

Air conditioned accommodation and standby power would be provided by the Tanzania Posts and Telecommunications Corporation.

PART II, Telex Exchange :
The proposed new switch will be used initially to off load approximately 30-40% of the total subscribers from the existing single ESK telex switch in Dar es Salaam.

The new switch will serve subscribers in Dodoma, Mwanza, Arusha, Mbeya and also be capable of routing regional and international telex messages on the PANAFTEL routes through Dodoma.

The project will include supply and installation, all relevant spares and test equipment, and training for operations and maintenance staff.

Status : Financing is required for implementation of the project.

September 1992

TAN.5.05: Digital Microwave Link Dar - Dodoma - Zanzibar and Exp. of Multiplex Equip. at Dodoma

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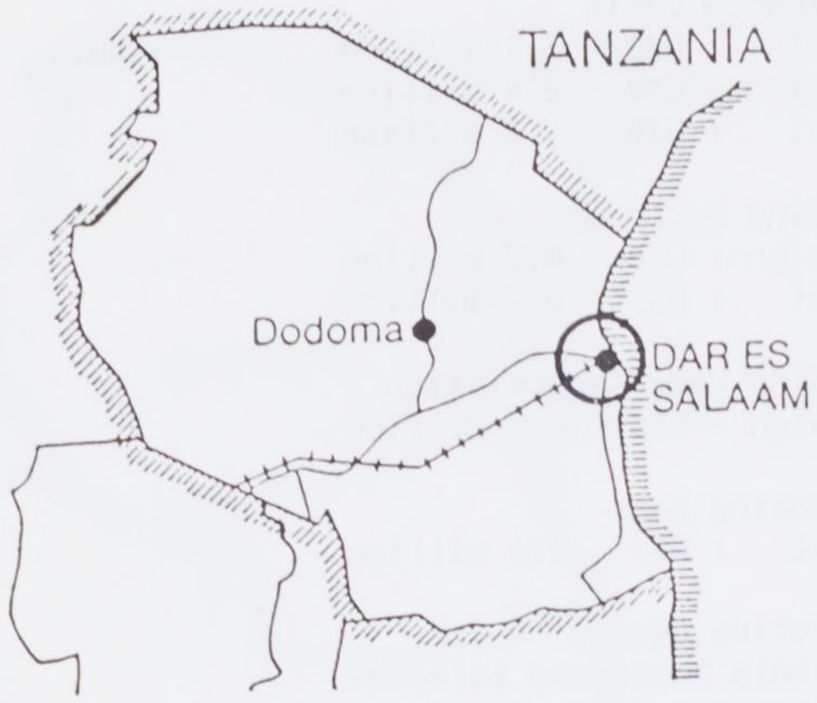


Estimated Costs
Total : USD 20.0 million
Foreign : USD 17.7 million
Local : USD 2.3 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 2.3 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 17.7 million

Executing Agency
Tanzania Posts and Telecommunications Corporation
Start : 1993
Duration: 2 Years

Objectives : The project conprises:

- the provision of a new digital radio system to parallel the existing analogue microwave system between Dar Es Salam and Dodoma on the PANAFTEL route, and extension of the link from Dar es Salaam to Zanzibar and Pemba.
- the study to determine the traffic, equipment and financial requirements necessary for the expansion of the multiplex circuits at Dodoma.

Description: Part I
The projects involve the provision, installation and commissioning of a new digital microwave system equipped initially with one bearer operating at 140 M bits. The equipment to be supplied is to include:

- radio and multiplex equipment;
- antenna systems;
- towers at the new sites;
- power systems (solar power systems are proposed at the new repeater sites).

The civil works including site preparations, buildings and road construction would be provided locally.

Part II
Dodoma is at the intersection of four major microwave trunk routes of the PANAFTEL network:

- the trunk from Zambia and South Western Tanzania;
- the trunk from Tabora, Mwanza and Western Tanzania with planned extensions to Rwanda, Burundi and Uganda;
- the trunk to the east through Morogora to Dar Es Salaam.

The microwave systems are all designed for 960 channel capacity but, except for the system to Dar Es Salaam, are currently not fully equipped. Congestion is experienced on most of these routes. Traffic is expected to increase as Dodoma further develops as a regional centre.

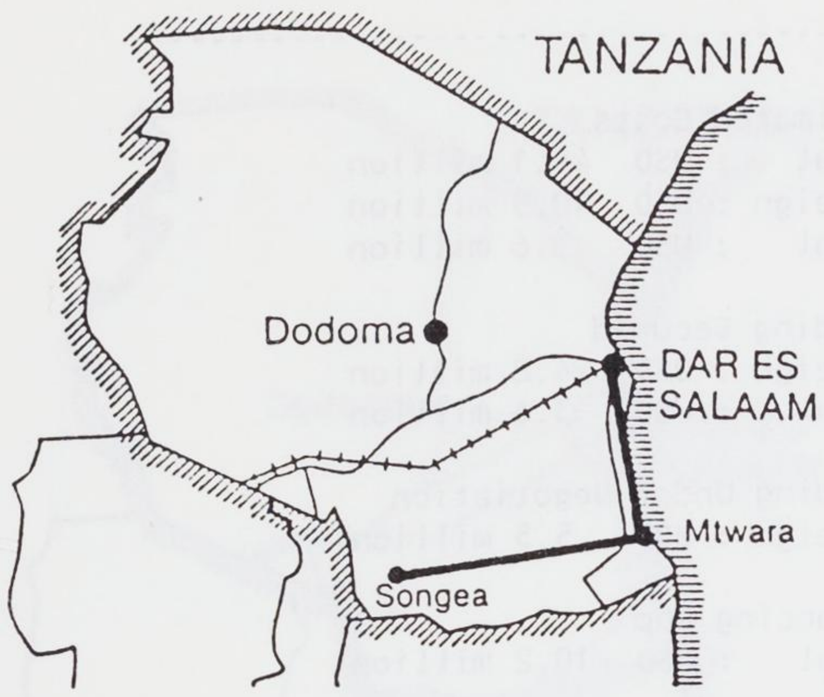
This part of the project involves a study:
- to determine the existing and projected traffic;
- to determine the equipmenttypes currently in use on these microwave systems;
- to define an overall multiplex plan;
- to determine the availability and cost of suitable multiplex equipment;
- to work out an implementation plan.

Tanzania Posts and Telecommunications Corporation has undertaken a survey of the route in Part I and a report is in preparation. The contractor will be required to verify the results of the route survey before project implementation.

Status : Telletra has undertaken a survey of requirements for the provision and instalation of equipment in collaboration with Tanzania Ports and Telecommunications Corporation.

September 1992

TAN.5.07: Provision of Digital Microwave Link Dar es Salaam-Mtwara-
Songea and Exchange at Songea



Estimated Costs
Total : USD 30.0 million
Foreign : USD 30.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 30.0 million

Executing Agency
Tanzania Posts and Telecom-
munications Corporation
Start : 1993
Duration: 3 Years

Objectives : The project aims to provide telecommunication services for PANAFIEL link along the coast to Mozambique and into the Southern Corridor consisting of:

PART I

- a new digital mivrowave link from Dar es Salaam South along the coast to the port of Mtwara.

PART II

- a new digital microwave link from the port of Mtwara to Songea into the PANAFIEL network; and
- a combined digital transit and local exchange at Songea for traffic routing from this new link into the PANAFIEL network.

Description : PART I
Telephone trunking between the Mtwara area and Dar-Es-Salaam is presently provided by 120 channel troposcatter system. Songea 500 Km to the east of Mtwara will be connected to the North-South network by a 2 ghz 960 channel microwave system.

PART II

A new digital exchange is proposed for Songea to replace the existing manual exchange. Transmission systems from other comunities in the area centre on Songea and hence the switch be equipped for both transit and local traffic in order for the Mbwara-Songea Link to interconnect with the North-South PANAFIEL system.

The proposal is to provide a new digital microwave system to link Dar-Es-Salaam, Mtwara and Sogea and thence from Songea to the main Noth-South PANAFIEL system, and also from part of the PANAFIEL network to interlink with Mozambique.

A survey of the proposed microwave routes with the analasys has been completed by the Tanzania Posts and Telecommunications Corporation. A traffic analysis for the System has been conducted as part of the national traffic survey. The proposal is for 34 Mbit digital microwave system.

Status : PART I

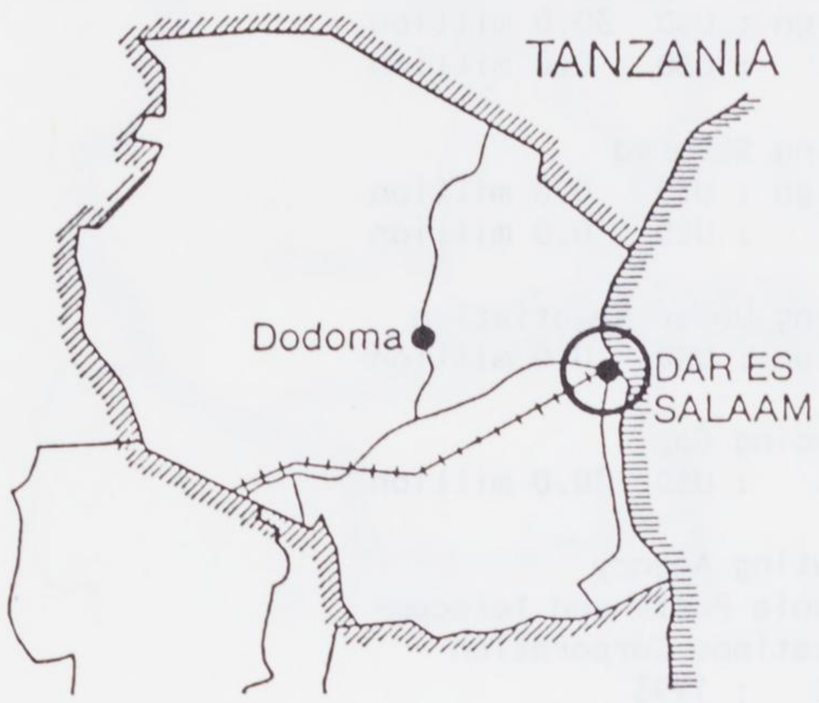
Financing is being sought for the propagation study survey for the Dar es Salaam - Mtwara Link and the envisaged projects wich will be developed from the study.

PART II

Financing is required to provide a digital exchange at Songea and the interconnecting Mtwara-Songea 34 MBit digital microwave link.

September 1992

TAN.5.08: Provision of Digital Exchanges, Tanzania.



Estimated Costs
Total : USD 44.1 million
Foreign : USD 40.5 million
Local : USD 3.6 million

Funding Secured
Foreign : USD 24.8 million
Local : USD 3.6 million

Funding Under Negotiation
Foreign : USD 5.5 million

Financing Gap
Total : USD 10.2 million

Executing Agency
Tanzania Posts and Telecom-
munication Corporation
Start : 1991
Duration: 3 Years

Objectives : Provision of digital exchanges to extend ISD facilities for national, regional and international traffic.

Description : The existing switching network in Tanzania consits of old strowger and cross bar analogue systems which in most cases is absolete and difficult to find spares for maintenance and repairs. It comprises of 181 analogue local exchanges, of which 144 are manual and 37 are automatic. The total installed capacity is 78,000 lines with about 60,000 connected subscribes. There are 74,000 waiting applicants due in most cases to lack of line plant.

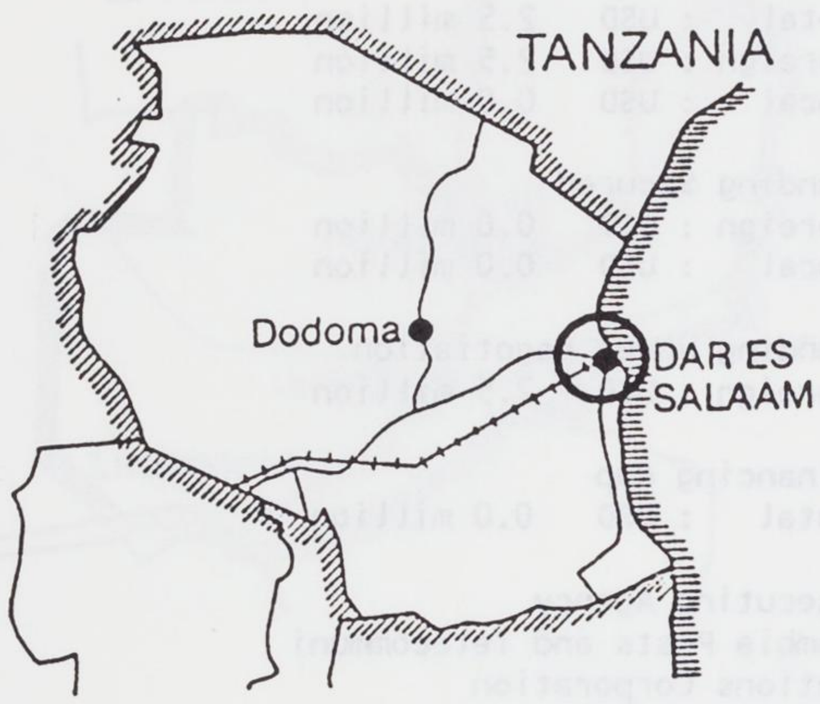
The project consists of the extension, rehabilitation of outside plant and provision of new digital exchanges with automatic ISD facilities to the following Tertiary Centres:

Exchange	Planned Capacity	Estimated Costs in millions USD Local	Foreign
Zanzibar	6,400	0.6	6.3
Arusha	7,200	0.6	6.3
Dodoma	8,700	0.2	7.1
Mwanza	13,800	1.2	11.6
Mbenya	6,000	0.5	5.8
Morogoro	3,200	0.5	3.4

Status : Additional financing is required for drawing up technical specification and project implementation.

September 1992

TAN.5.09: Rehabilitation of Trunk PENAFTEL Links, Tanzania.



Estimated Costs
Total : USD 20.9 million
Foreign : USD 18.9 million
Local : USD 2.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 2.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 18.9 million

Executing Agency
Tanzania Posts and
Telecommunications Corporation
Start : 1993
Duration: 3 Years

Objectives : Extension and rehabilitation of the digital backbone PANAFTEL links to provide high quality traffic to national, regional and international centres.

Description : Performed of the existing backbone analogue transmission network is very poor and congested due to aging of equipment, under-dimensioning and non-availability of spares for maintenance and operations.

The project consists of supply, installation and commissioning of equipment for rehabilitation and extension programme of the North-South and East-West trunk network as follows:

	Cost Estimate Forex USD millions
- 140 MBTIS digital links Dodoma-Arusha-Moshi to the north;	4.2
- 140 MBTIS digital links Dodoma-MBEYA-Sumbawanga to the South;	6.9
- 140 MBTIS digital links Dodoma-Mwanza-Nyamanyama to the West;	7.2
With 34 BTIS and 8 MBTIS Spurs for Mosh-Mkuu and Moshi-Mwanga respectively.	
- provision of technical assistance for drawing up of technical specification.	0.1
- training of technicians who will be operating and maintaining the system.	

TPIC will provide complementary civil works and buildings.

Status : Financing is required for project implementation.

September 1992

ZAM.5.01: Extension of the International Telephone Switching Centre (ITSC) in Lusaka, Zambia

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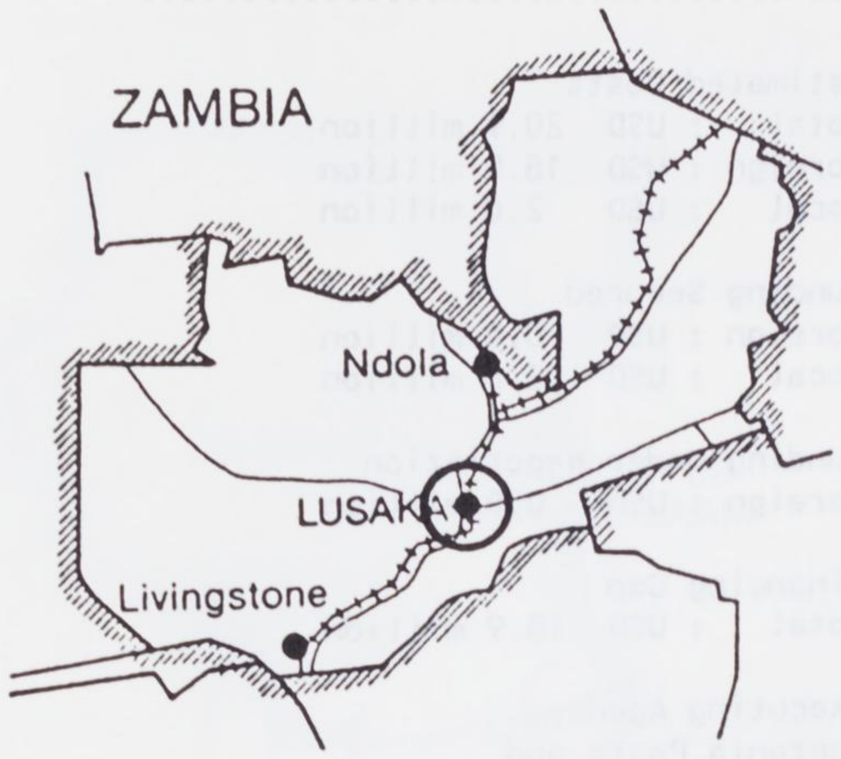

Estimated Costs
Total : USD 2.5 million
Foreign : USD 2.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 2.5 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Zambia Posts and Telecommunications Corporation
Start : 1992
Duration: 2 Years

Objectives : Provision of an extension unit and 10 modern computerized switchboards to the International Switching Centre in Lusaka.

Description : The project comprises of :

- Supply and installation of an extension unit for the AXE 10 digital international telephone exchange with an additional capacity of 500 trunks to augment the existing exchange capacity of 824 trunks.
- Provision of computerized switchboards with automatic change and information storage to replace the manual switchboards currently connected to older portion of the ARMIO International exchange.
- Interworking equipment for ITMC and other digital and analogue exchanges will also be required.

As Zambia is designated as a regional traffic collection centre, a detailed traffic analysis is required to determine the final capacity of the switch. The exchange should also be able to provide transit switching facilities to regional and inter^^national telephone traffic.

Status : SIDA (SWEDEN) has shown interest to finance the extension and modification of the AXE 10 ITSC.

September 1992

ZAM.5.02: Expansion of the Earth Station at Mwembeshi, Zambia

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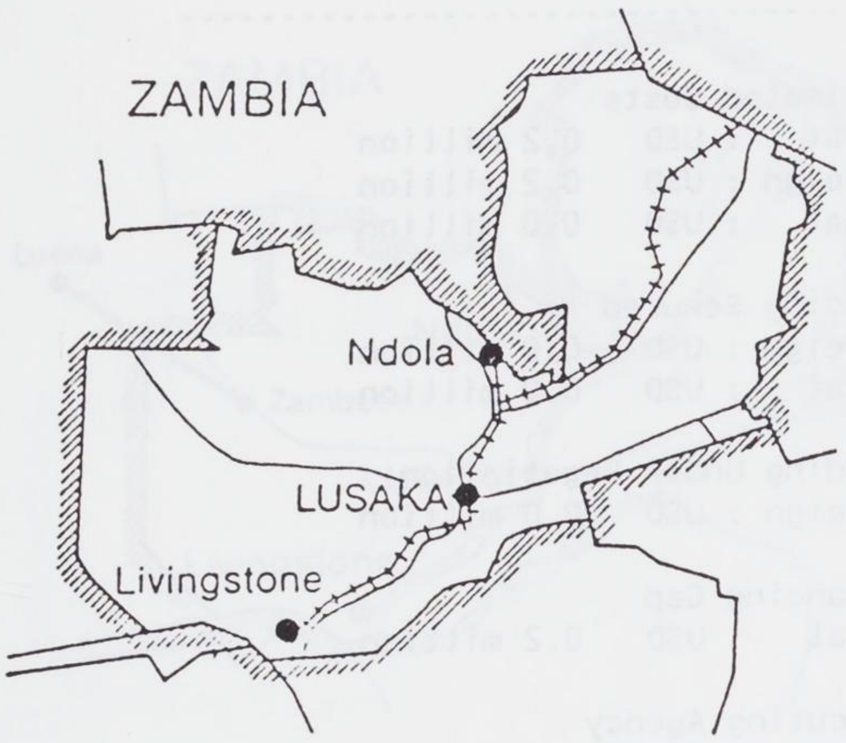

Estimated Costs
Total : USD 11.1 million
Foreign : USD 9.1 million
Local : USD 2.0 million

Funding Secured
Foreign : USD 7.1 million
Local : USD 2.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.0 million

Executing Agency
Zambia Posts & Telecommunications Corporation
Start : 1989
Duration: 4 Years

Objectives : Expansion of the capacity at the existing satellite earth station at Mwembeshi in order to :

- meet traffic growth on international routes
- free captive traffic handled by other transit centers
- improve diversity of routes out of Zambia
- improve the interconnectivity of the satellite earth stations in the region.

Progress : The project consists of :

PHASE I

- installation of a new standard A antenna (Mwambeshi II) antenna facing AOR primary satellite, with SCPC and CFDM carriers.

PHASE II

- Provision of IDR/DCME equipment in Mwembeshi II. This part of the programme should be co-ordinated with SATCC Project AAA.5.04.

- provision of new transmitting and receiving carriers FDM and CFDM for the existing standard A antenna (Mwembeshi I) facing IOR primary satellite; and also refurbishing of the antenna.

- provision of new high capacity digital Microwave backhaul link from Mwembeshi to the LUSAKA International Terminal Equipment Station.

Status : Canada has financed Phase I for Mwembeshi II.
Financing is required for provision of IDR/DCME equipment as per P AAA.5.04.

September 1992

ZAM.5.03: Microwave Terminal at Chingola to Complete the Link Zambia - Zaire

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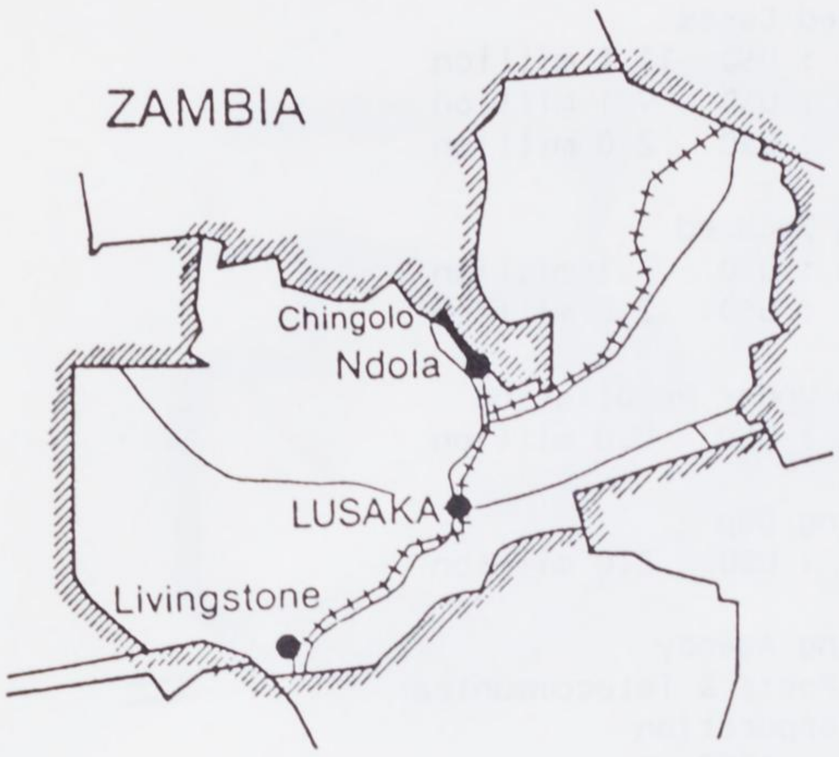


Estimated Costs
Total : USD 0.2 million
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.2 million

Executing Agency
Posts and Telecommunications Corporation
Start : 1993
Duration: 2 Years

Objectives : Provision of a microwave radio relay system between Zambia and Zaire to provide a gateway to Central and Western Africa subregion for the SADC countries.

Description: The project involved the supply, installation and commissioning of a 960 channel microwave link which is between Chingola (in Zambia) as part of the PANAFTEL Network. The project involves two terminal stations at each end and two repeater stations within Zaire.

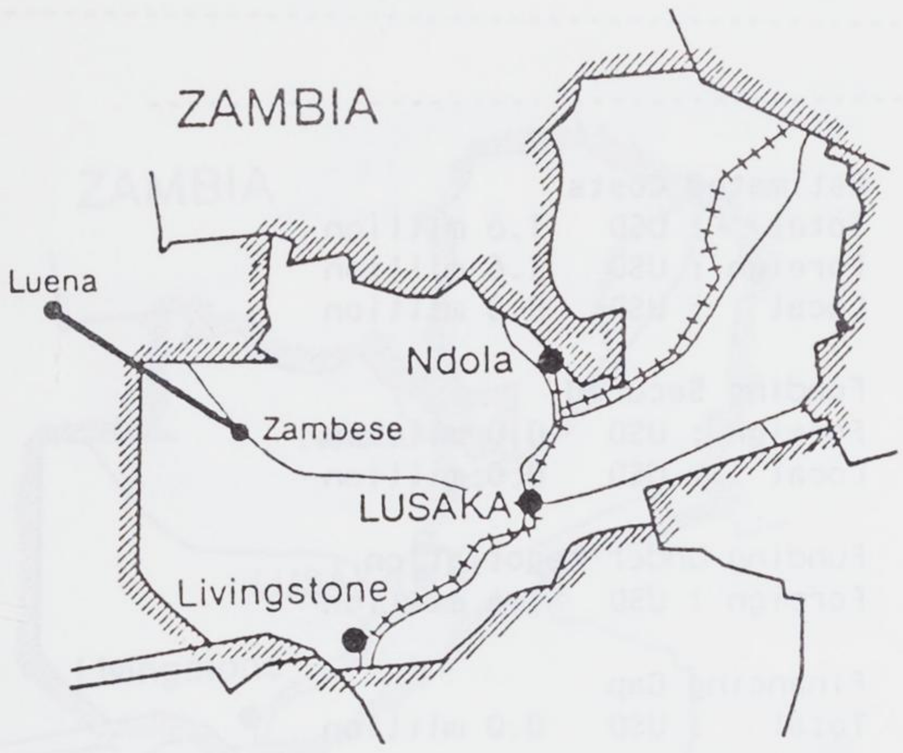
Technical specifications for the 960 channel microwave radio system has been prepared by ITU. A bilateral project agreement was signed late 1985 between Zambia and Zaire.

As an interim arrangement a 120 channel radio system between Chingola (Zambia) and Lubumbashi (Zaire) has been installed and commissioned in April 1987. Most of the circuit of the interim link are made for local Zairean and cross-border traffic and are not enough to carry regional and international traffic from SADC countries.

Status : Financing is required for project implementation.

September 1992

ZAM.5.04: Microwave Link Zambezi-Luene, Zambia



Estimated Costs
Total : USD 4.0 million
Foreign : USD 3.8 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 3.8 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Posts and Telecommunications Corporation, Zambia
Start : 1993
Duration: 2 Years

Objectives : The project aims to provide a microwave radio relay system between Zambia and Angola which will improve access of SADCC Countries to Angola through the Zambia PANAFTEL network.

Description : Installation of a microwave link with a capacity of 360 telephone channels from Zambezi to Luena, Angola, across the border to give Angola a direct access to the terrestrial PANAFTEL network.

Since the section east of Luena presents logistical problems, the implementation of a troposcatter system linking Luena and Zambezi is envisaged until such time that a multi-hop microwave system can be installed.

Status : On the Zambia side the network expansion programme in the north western areas provides high capacity 960 channel microwave link up to Zambezi funded by NORAD.

Angola is in the process of expanding the national network with microwave and domestic satellite systems up to Luena, see project ANG.5.10.

Financing is required to finance the provision of large capacity microwave radio system between Luena and Zambezi. NORAD has shown interest in financing the project. Decision postponed due to the security situation.

September 1992

ZAM.5.06: Microwave Link Kariba (Zimb.)- Siavonga (Zambia) - Lusaka

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Estimated Costs
Total : USD 1.6 million
Foreign : USD 1.6 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 1.6 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Posts and Telecommunications Corporation, Zambia
Start : 1993
Duration: 2 Years

Objectives : Provision of microwave system between Zambia and Zimbabwe, linking directly Harare and Lusaka, having also capacity for the future terrestrial traffic Mozambique - Zambia.

Description : The project involves the installation of a microwave link, 960 channels, from Lusaka to Siavonga and across the Zambia - Zimbabwean border to Kariba.

The existing backbone microwave link i.e. Lusaka - Livingstone which carries traffic to Zimbabwe, Botswana and other parts of Southern Africa is congested with the international traffic in the subregion. In order to meet the traffic demand and at the same time provide diversity, it is necessary to provide this terrestrial link.

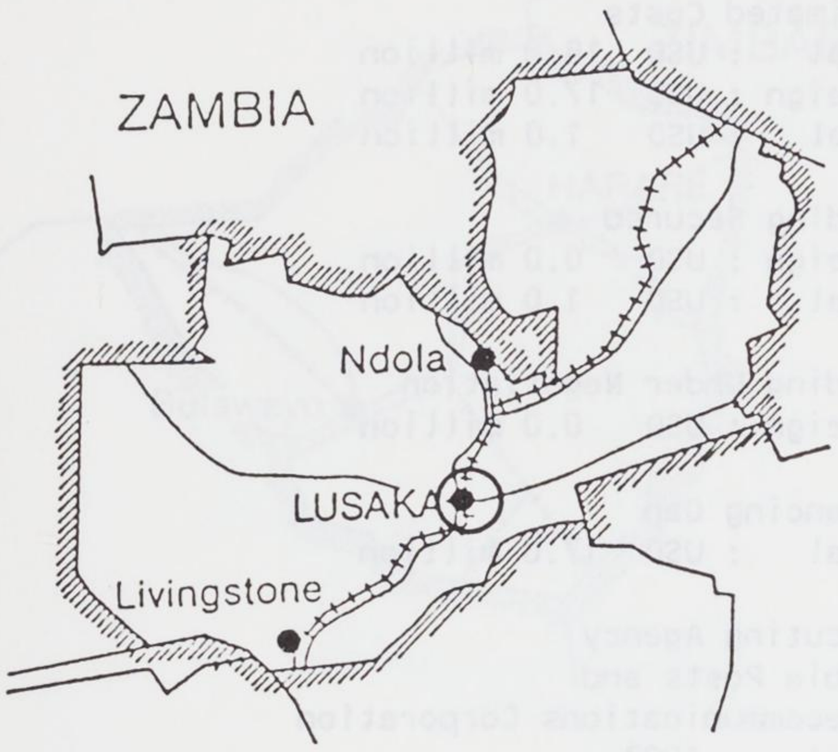
Currently there is a 120 Channel UHF radio link operating between Lusaka and Siavonga and no civil works are involved. A 300 Channel system has been installed between Kariba and Harare at the Zimbabwean end.

The cost of the Zambia part of the project is estimated at USD 1.5 million whereas Zimbabwe would need a terminal at Kariba.

Status : Italy has shown interest to fund the project.

September 1992

ZAM.5.09: Masterplan Study and Fundamental Planning Unit
for Zambia



Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.4 million

Executing Agency
Posts and Telecommunications
Corporation, Zambia
Start : 1993
Duration: 2 Years

Objectives : The preparation of a Long Range Master Plan for the development of the national telecommunications infrastructure, and the setting up of a Fundamental Planning Unit for supporting future network and corporate planning activities.

Description : (1) Preparation of a switching network review, including :

- interim planning proposals for the period to 1990, in order to recommend solutions for the most urgent outstanding expansion requirements
- an integrated concurrent fundamental planning consisting of a medium and long range national demand study
- preparation of a national switching network plan covering the period to year 2005.

(2) Identify, define, configure and appraise expansion projects in order to meet :

- the technical and economic guidelines of the national network plan
- the financial and economic criteria appropriate to the commercial requirements of the PTC and to the PTC's social responsibility of contributing to national development.

(3) Set up a Fundamental Planning Unit whose functions should include following activities :

- demand and traffic analysis
- network development startegy
- economic analysis
- investment plan preparation and project identification.

Status : Financing and technical assistance is sought in order to proceed with the study.

September 1992

ZAM.5.10: Upgrading Lusaka-Livingstone and Southern Ring Microwave Trunk Network, Zambia

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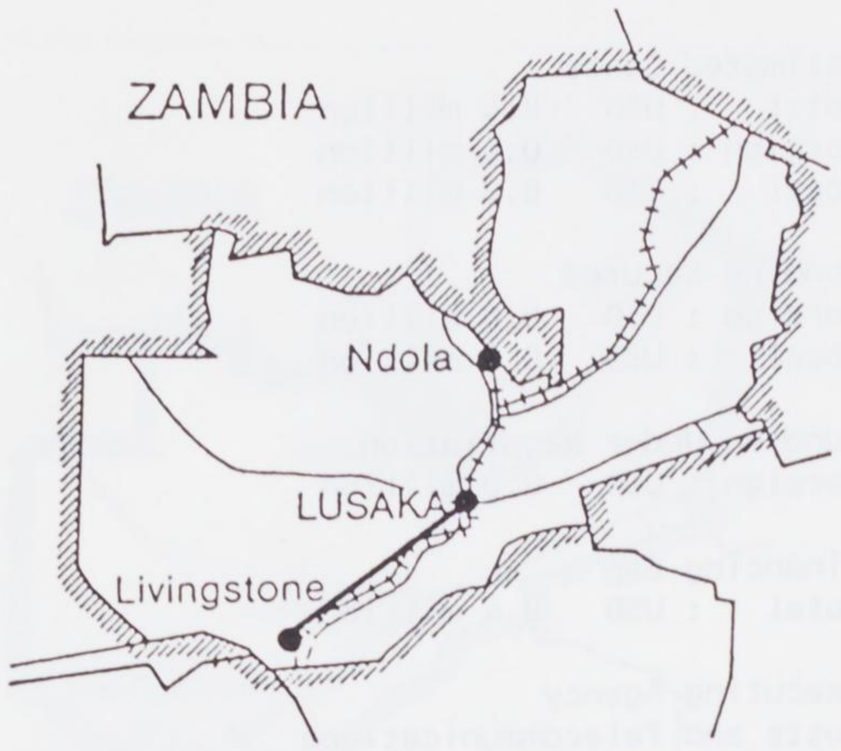

Estimated Costs
Total : USD 18.0 million
Foreign : USD 17.0 million
Local : USD 1.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 1.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 17.0 million

Executing Agency
Zambia Posts and
Telecommunications Corporation
Start : 1993
Duration: 2 years

Objectives : Upgrading and digitalization of the main Lusaka-Livingstone PANAFTEL microwave trunk network to provide high quality transmission capability for national regional and international traffic through to Zimbabwe, Botswana and Namibia.

Description: The existing 960 channel analogue microwave radio system is old and channel capacity is approaching saturation in the transmission of national, regional and international traffic. The system carries the main PANAFIEL traffic to Zimbabwe, Botswana as well as the intermediate national traffic.

Currently the multiplex part of the link is being upgraded by NORAD to allow limited growth of channel capacity for international and regional traffic.
The system is also planned to complete the Souther Trunk Network Ring (Livingstone-Sesheke-Mongu) with PANAFTEL extension to Namibia via Sesheke.
The project consists of:

Phase I

- 140 MBit digital radio equipment with appropriate spurs along the route.
- Expansion of power, housing and associated facilites.
- Provision of spares, test equipment, and training of maintenance technicians.

Phase II

- 34 MBit Digital radio equipment with associated spur along Livingstone-Sesheke-Mongu link;

- 34 MBit Digital radio equipment extension for the PANAFTEL link through Sesheke to Namibia;

- Provision of associated Rural exchanges, external plant, power, test equipment and spares.

A detailed propagation survey and technical specification of requirements is necessary for project implementation.

Status : Financing is required for project implementation.

September 1992

ZIM.5.06: Provision of Packet Switching for Data Network in Zimbabwe

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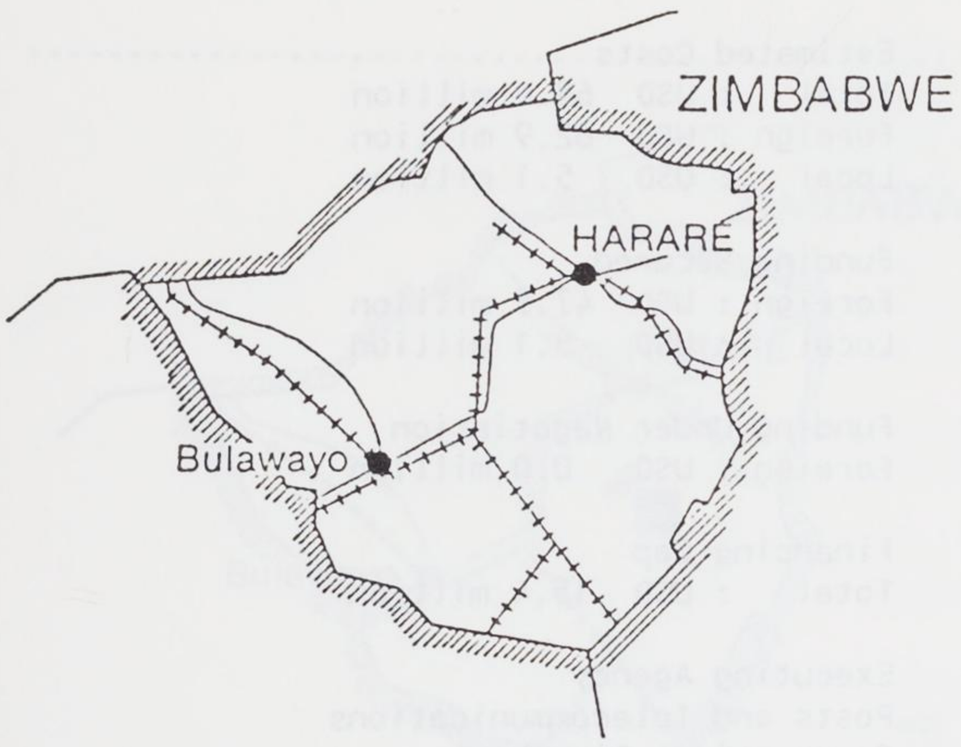


Estimated Costs
Total : USD 3.6 million
Foreign : USD 3.2 million
Local : USD 0.4 million

Funding Secured
Foreign : USD 3.2 million
Local : USD 0.4 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Posts and Telecommunications Corporation, Zimbabwe
Start : 1992
Duration: 1 Year

Objectives : The project is for the provision of DATA PACKET SWITCHING in order to cater for fast and low cost data communications for national, regional and international traffic.

Description : Zimbabwe has already established links with other international countries through the UK International Packet Switching System, (IPSS).

The development of data communication in Zimbabwe and traffic demand to Europe, America, SADC and non-SADC countries requires the eventual cost saving packet system.

The demand for data communication in Zimbabwe has doubled during 1989 and is expected to quadruple its current size by 1990.

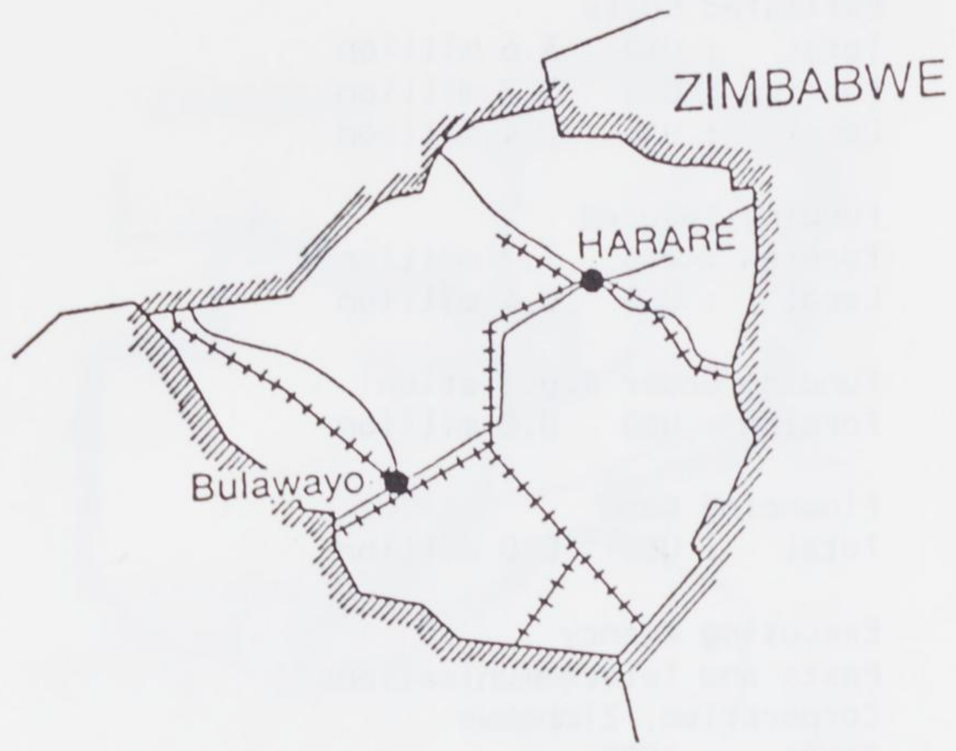
The project will involve the provision of a data Packet Switch and the associated modems in Harare and nodes in Bulawayo, Gweru, Mutare and Masvingo. Local staff training will form part of the project.

Status : The goverment of Belgium through Banque Indosuez Belgique, made available to the government of Zimbabwe BEF 53,711,560 USD1.897 million in June 1991 for the purchase of Data Packet Switch only. The Posts and Telecommunications Corporation also requested funding for the data modems simultaneously.

The government of Belgium entered into an agreement on 30 January 1992 with the government of Zimbabwe for the supply of data modem and flexible multiplexers (USD 3.21 million) BEF 110,000,000 and procurement is in progress.

September 1992

ZIM.5.07: Supply of Digital Telephone Exchanges in Zimbabwe



Estimated Costs
Total : USD 68.0 million
Foreign : USD 62.9 million
Local : USD 5.1 million

Funding Secured
Foreign : USD 47.5 million
Local : USD 5.1 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 15.4 million

Executing Agency
Posts and Telecommunications Corporation, Zimbabwe
Start : 1988
Duration: 7 Years

Objectives : Digitalization of the five national telephone exchange zone centers comprising Gweru, Bulawayo, Masvingo, Mutare and Harare in order to provide high quality switching capacity and capability to the national regional and international traffic along the PANAFTEL trunk network.

Description : Provision of digital telephone exchange equipment in each of the following regions:

Phase I, 1987-1992 :
- Mashonaland/Manicaland 65.000
  Implementation period
  1991-1992
- Matabeleland 10.000
  Implementation period
  1991-1992
- Midlands/Masvingo 18.000

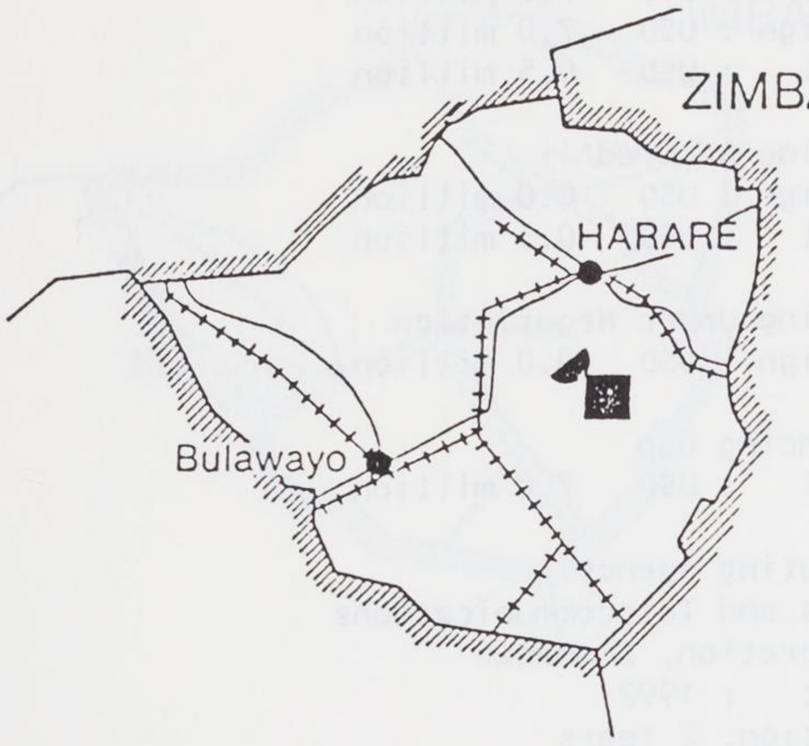
Phase II, 1992-1995 :
- Mashonaland/Manicaland 45.000
  Implementation period
  1993-1994
- Matabeleland 13.000
  implementation period
  1993-1994
- Midlands/Masvingo 9.000
  Implementation period
  1994-1995

Status : For the five year programme 1987-1992; three national exchanges at gweru, Bulawayo and Masvingo are either funded or completed. The funding of Mutare is required while Harare is partly financed. Bulawayo main digital exchange was funded (USD 7.5 million) by IEB, International European Bank with implementation by Fujitsu.

Japan is financing the Mashonal and/Manicaland project with implementation by Fujitsan.
Financing of digital exchanges in Matebeleland is sought.

September 1992

ZIM.5.08: Expansion of the Earth Station at Mazowe, Zimbabwe



Estimated Costs
Total : USD 11.5 million
Foreign : USD 10.5 million
Local : USD 1.0 million

Funding Secured
Foreign : USD 10.5 million
Local : USD 1.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Posts and Telecommunications Corporation, Zimbabwe
Start : 1990
Duration: 2 Years

Objectives : Expansion of the capacity at the existing satellite earth station at Mazowe in order to provide regional satellite connectivity by 1989 and improve diversity of routes outside Zimbabwe by taking into account :

- delays to the INTELSAT VI Satellite launches
- evolution of INTELSAT to a distributed system
- and the accelerating trend towards IDR and TDMA digital carrier technologies.

Description : PHASE 1

- reorientation of the Standard A earth station antenna at Mazowe, Zimbabwe onto the 335.5 E Atlantic Satellite, and progressive conversion to IDR, Intermediate Data Rates, carrier operation over the 1989-1993 time frame.

PHASE 2

- construction of a second revised Standard A earth station at Mazowe in the Indian Ocean region, with TDMA carrier operation in the 1992-1994 time frame.

Estimated Costs:	Total USD	Foreign USD
Phase 1	USD 1.5 million	USD 1.5 million
Phase 2	USD 10 million	USD 9 million

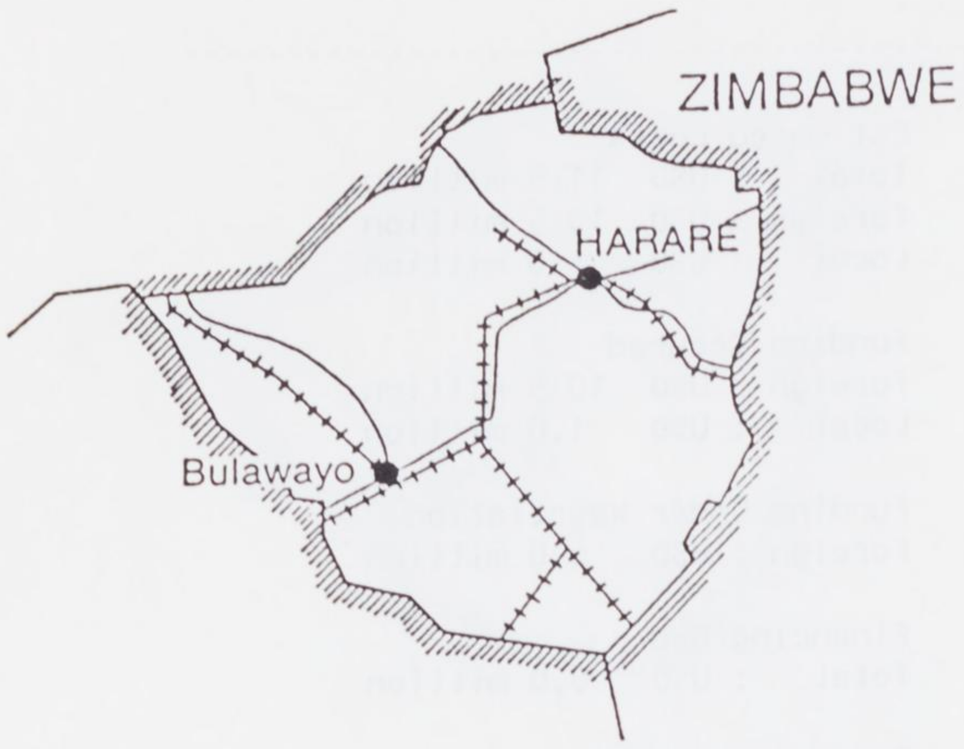
This project should be co-ordinated with Project AAA.5.04, Implementation Study for a regional Earth Station Connectivity Project.

Japan has provided detailed technical specification for the project; and USAID has provided planning specification as part of Project AAA.5.04.

Status : The first phase of the reorientation of the Standard A earth station and provision of IDR, Intermediate Data Rates was done in mid 1990.
Zimbabwe government is soliciting finance for the second earth station in the Indian Ocean region from the governments of Japan and United States of America. Negotiations are in progress.

September 1992

ZIM.5.09: Provision of Telex Exchange and Network, Zimbabwe.



Estimated Costs
Total : USD 7.5 million
Foreign : USD 7.0 million
Local : USD 0.5 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 7.0 million

Executing Agency
Posts and Telecommunications Corporation, Zimbabwe
Start : 1992
Duration: 2 Years

Objectives : Provision of telex and associated transmission equipment to meet national, regional and international service demand for telex traffic throughout Zimbabwe.

Description : The existing telex network consists of an EDX telex exchange in Harare with concentrators in Gweru and Bulawayo.

The capacity of the present network is inadequate to cover the demand forecast for up to the year 2000 covering the whole country and estimated at 16,000 subscribers.

The project consists of:

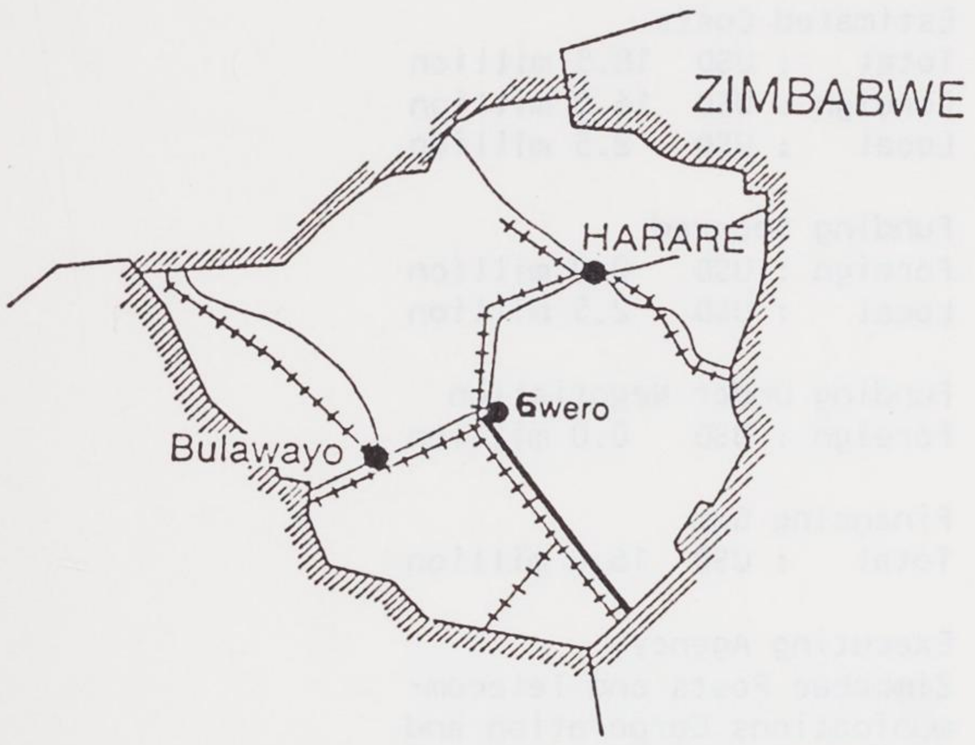
	Estimated trunks	Exchange
- Main telex exchange	1,896	3,200
- 6 x Concentrators	1,200	4,800

Project will include associated interconnecting transmission and power equipment, and training of maintenance technicians and engineers.

Status : Financing was secured under EIB but the project has been abandoned and financing is earmarked for telex transmission equipment and tendering is in progress.

September 1992

ZIM.5.10: Extension of ITSC GWERU, Zimbabwe



Estimated Costs
Total : USD 4.2 million
Foreign : USD 4.0 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 4.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
Posts and Telecommunications Corporation, Zimbabwe
Start : 1993
Duration: 1 Year

Objectives : Provision of extension and modification of the telecommunication system for international, regional and national interworking to the International Switching Centre in Gweru.

Description: The project comprises:
- Supply and installation of a large capacity APZ 212 processor, with CCTT Nr.7 and R2 International Swicthing Signalling Software packages, as a replacement to the existing APZ 210 processor which has a limited capacity for regional and international use.

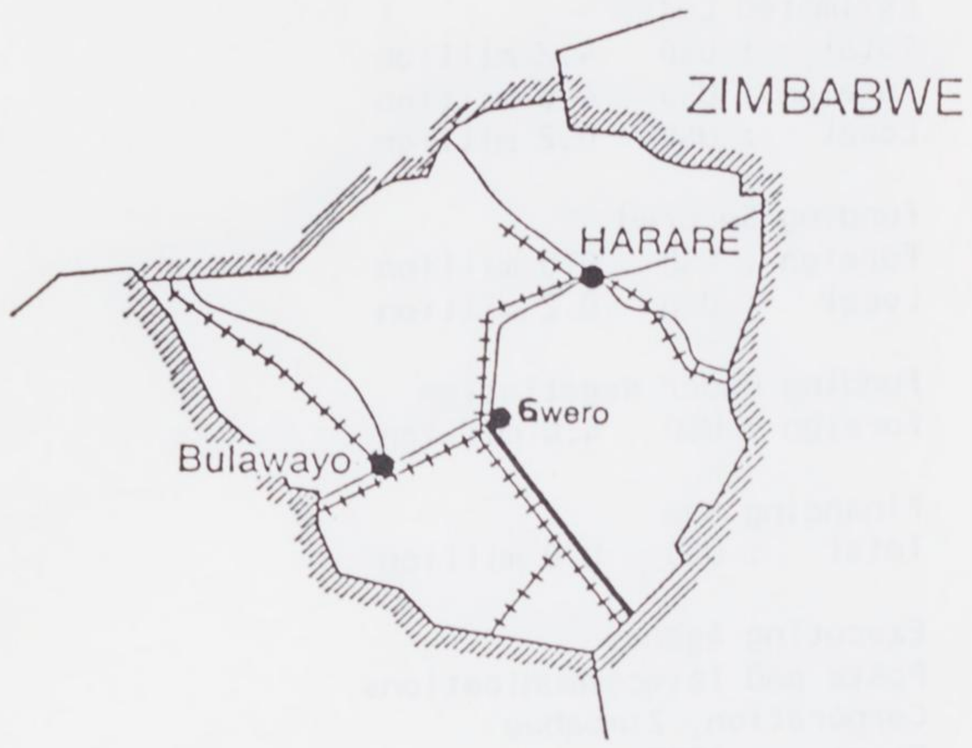
- Supply and installation of code senders and receivers, analogue and digital R2 International Signalling System for regional interworking along the PANAFTEL Network.

- Provision of technical assistance for management support and training of technicians for operating and maintainning the system.
A pre-appraisal study financed by SIDA reviewed for upgrading and rehabilitating the ITSC.

Status : SIDA is considering providing finance for project implementation.

September 1992

ZIM.5.11: Digital Microwave Link Gweru (Zimbabwe) to Maputo Mozambique.



Estimated Costs
Total : USD 18.5 million
Foreign : USD 16.0 million
Local : USD 2.5 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 2.5 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 16.0 million

Executing Agency
Zimbabwe Posts and Telecommunications Corporation and
Start : 1993
Duration: 2 Years

Objectives : Provision of digital radio microwave system from Gweru and Masvingo in Zimbabwe to Maputo, Mozambique, along the Limpopo Railway Line, to carry high quality and reliable PANAFTEL traffic between the two countries and Swaziland.

Description : The project will complete the PANAFTEL network between Mozambique and Zimbabwe. The existing rehabilitation of the Limpopo Railway Line between Maputo and Rutenga will require improved telecommunications in both Mozambique and Zimbabwe.
The project consists of:
(a) the provision of digital microwave radio equiment for:
- 140 Mbits system for Gweru-Masvingo-Beitbridge with 140 Mbits spur link between Rutenga and Sango in Zimbabwe.
- 140 Mbits digital crossborder link, Sango (Zimbabwe) to Chicualacuala and Macia in Mozambique.
- 140 Mbits digital radio link between Maputo-Macia-Chokwe-Chocualacuala with spur links to provide communication facilities to 9 towns and communities along the Limpopo Railway Line;

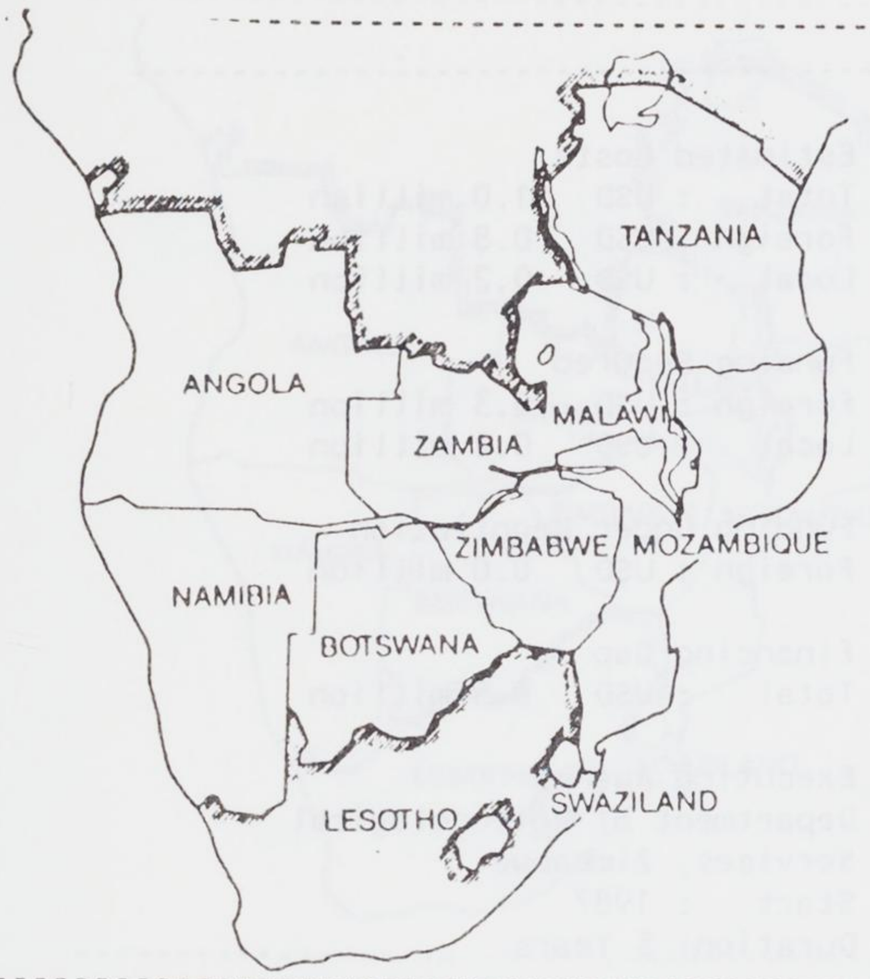
(b) Supply of associated civil works and power supplies;
(c) Supply of some digital rural exchanges along the route;
(d) Training of maintenance personnel;
(e) Technical assistance for detailed technical specification of the project and commissioning of the link.
Zimbabwe PTC and TDM will provide some financing for complementary civil enginering projects.

Status : Financing is required for project implementation.

September 1992

Meteorology

AAA.6.01: Meteorological Expert Services and Fellowships



Estimated Costs
Total : USD 6.7 million
Foreign : USD 6.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 5.5 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.2 million

Executing Agency
National Meteorological Services
Start : 1986
Duration: 7 Years

Objectives : The basic aim of the project is to increase the number of well educated and adequately trained staff members of the meteorological services in the Region.

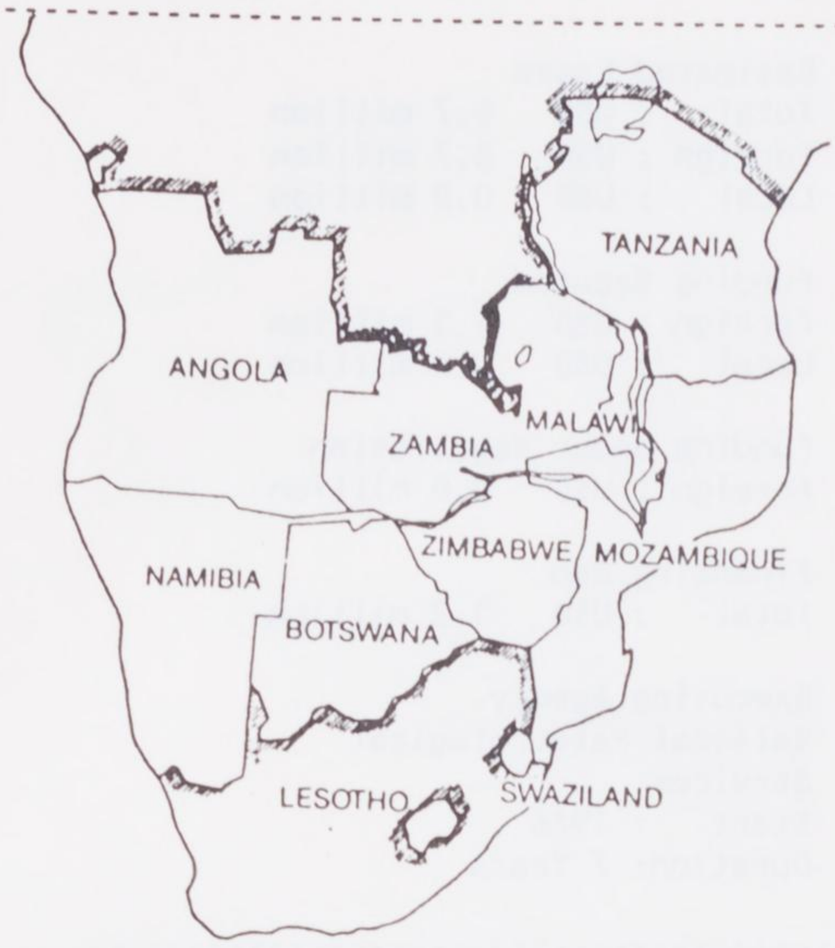
Description : Emphasis is, for the time being, placed on agrometeorology, data processing, telecommunications and equipment maintenance. In order to increase the ability of the services to produce more user oriented meteorological information of various kinds, the assistance of expatriate experts are required for a limited period of time. Training of personnel will be accomplished by the provision of fellowships

The cost figures above include the expert service and fellowship components of projects AAA.6.02 through to AAA.6.07, cf. the respective project briefs.

Status : Financing is to a large extent secured by Finland and UNDP, and the implementation is in progress.

September 1992

AAA.6.02: Regional Drought Monitoring Centre, Harare



Estimated Costs
Total : USD 1.0 million
Foreign : USD 0.8 million
Local : USD 0.2 million

Funding Secured
Foreign : USD 0.3 million
Local : USD 0.2 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.5 million

Executing Agency
Department of Meteorological Services, Zimbabwe
Start : 1987
Duration: 5 Years

Objectives : Being the Southern Africa part of the UNDP/WMO project "assistance to Drought Stricken Eastern and Southern African Countries in the Field of Agrometeorology and Hydrology" (RAF/84/002), its main objectives are to enable the preparation and dissemination of meteorological information etc. of vital importance to both planning and operational measures within the field of agriculture. The centre is supposed to cooperate closely with the SADCC/FAO "Regional Early Warning System for Food Security", also located to Harare.

Description : The establishment of the RDMC is expected to result in the following achievements:

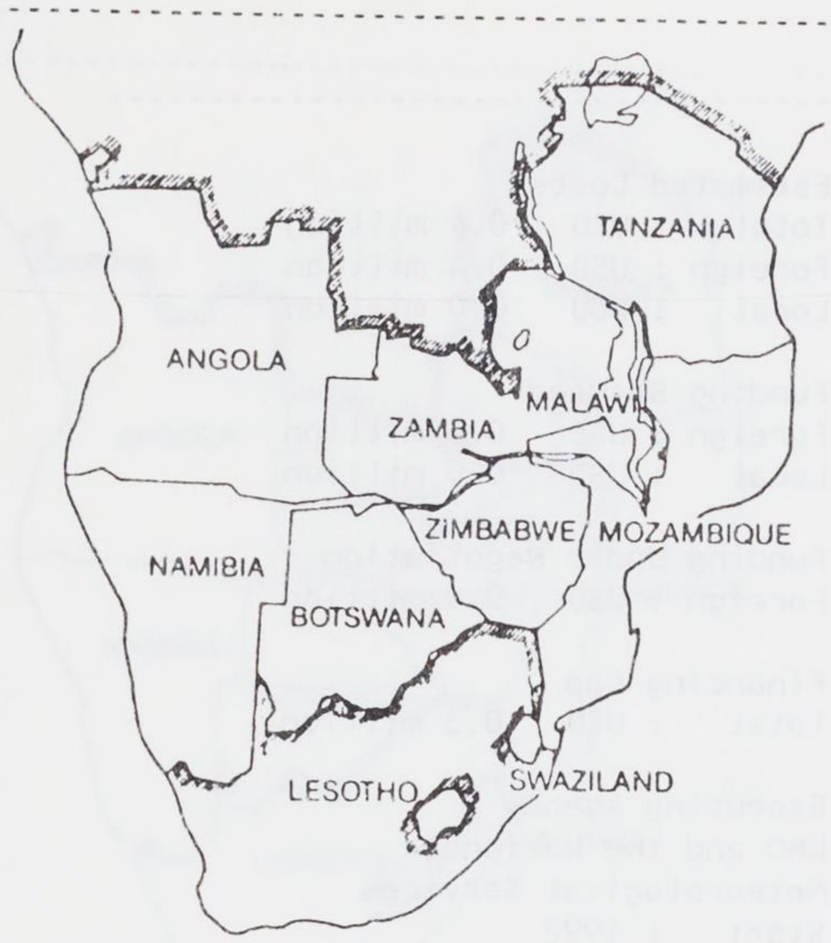
* Readily available meteorological, agrometeorological and hydrological information in data banks designed for computer processing;
* Development of drought monitoring and mitigation capabilities by assisting member services in establishing similar, national data banks. This will be done by providing both expert services and fellowships.

The above estimated costs are related mainly to the building construction and purchase of equipment. Necessary funds for the provision of expert services and fellowships (USD 1.5 million) are included in project AAA.6.01.

Status : The Centre is now operational, but both some more equipment and additional personel resources, training facilities etc. are still needed in order to bring the RDMC up to the intended level of operation.
The secured fundings so far have been made available by the Goverment of Zimbabwe, through Zimbabwe bilateral arrangements and by UNDP/WMO.
Additional fundings are being sought in order to guarantee continued operation as well as the scope and quality of the Drought Monitoring Information prepared at the Centre.

September 1992

AAA.6.03: Regional Meteorological Telecoms Hub and Data Exchange, Lusaka



Estimated Costs
Total : USD 2.0 million
Foreign : USD 1.3 million
Local : USD 0.7 million

Funding Secured
Foreign : USD 0.3 million
Local : USD 0.7 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.0 million

Executing Agency
Meteorological Department, Zambia
Start : 1988
Duration: 5 Years

Objectives : Lusaka has been designated by the WMO's Association for Africa as the location of a Regional Telecommunications Hub (RTH) for Southern Africa. The responsability of a RTH is to operate a system for rapid collection and dissemination of meteorological data for national, regional and intercontinental use.

Description: The development of the RTH Lusaka is proposed to be accomplished in three ways :

(i) Establishment of a computerised telecommunications message switching system;

(ii) Improvement of the telecommunications links between RTH and the National Meteorological Services (NMS) as well as with neighbouring RTH's for connection with the Global Meteorological Telecommunications System (GTS). (See also Project AAA.6.07).

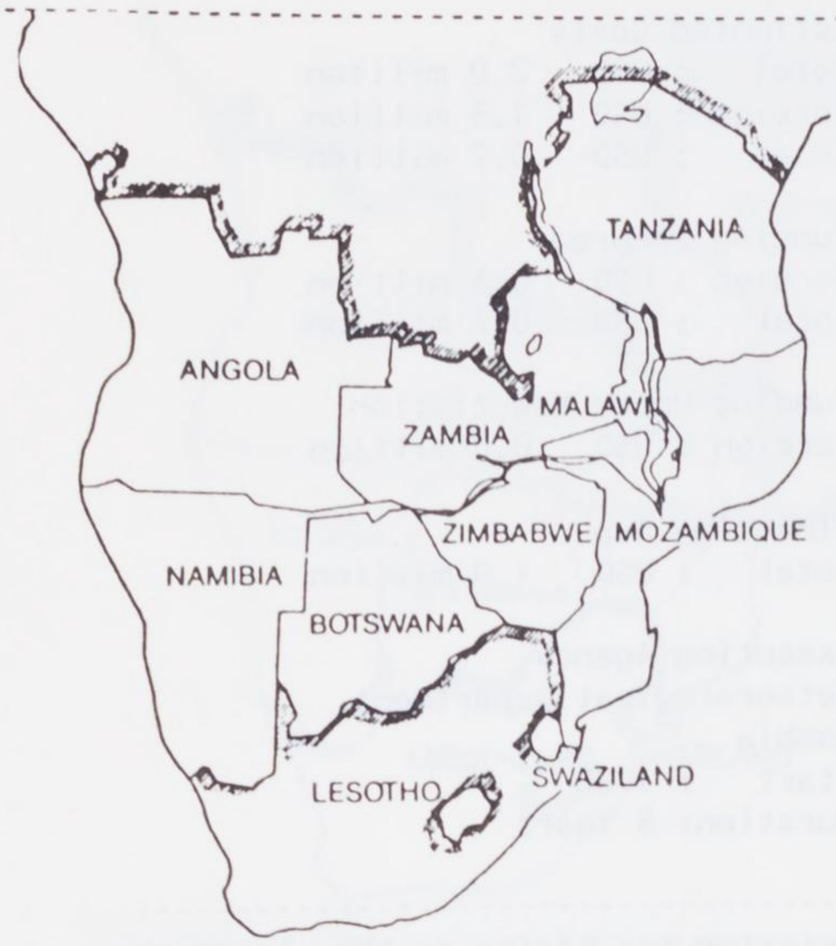
(iii) Training in the fields of telecommunications engineering and software maintenance.

The provision of Expert Services and fellowships at an estimated cost of USD 0.4 million is included in Project AAA.6.01.

Status : The Government of Zambia has allocated the necessary funds to the equivalent of approx. USD 0.7 million, for the construction and equipment of a building to house the RTH.
A joint Finnish/WMO Mission has recently finalized the specifications for the procurement of software and equipment needed for the establishment of the initial phase of a computerized message switching system at the RTH.
The cost of the proposed configuration is estimated at USD 250.000 and the financing has been secured by Finland.

September 1992

AAA.6.04: Regional Maintenance Support of Meteorological Services



Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.3 million

Executing Agency
WMO and the National
Meteorological Services
Start : 1992
Duration: 5 Years

Objectives : The main objective is to improve the possibility within the Region to maintain, repair and calibrate meteorological traditional measuring as well as high technology equipment.

Description : Rehabilitation and upgrading of the maintenance facilities at the National Meteo Services is in progress as a result of FINNIDA partial funding (project AAA.6.06).

However, at a meeting in 1988, the Directors of the SATCC Meteo Services decided, that a consultant should be hired to

- identify specific areas of maintenance and calibration of equipment , that could be undertaken cost-effectively at a Regional level,

and furthermore,

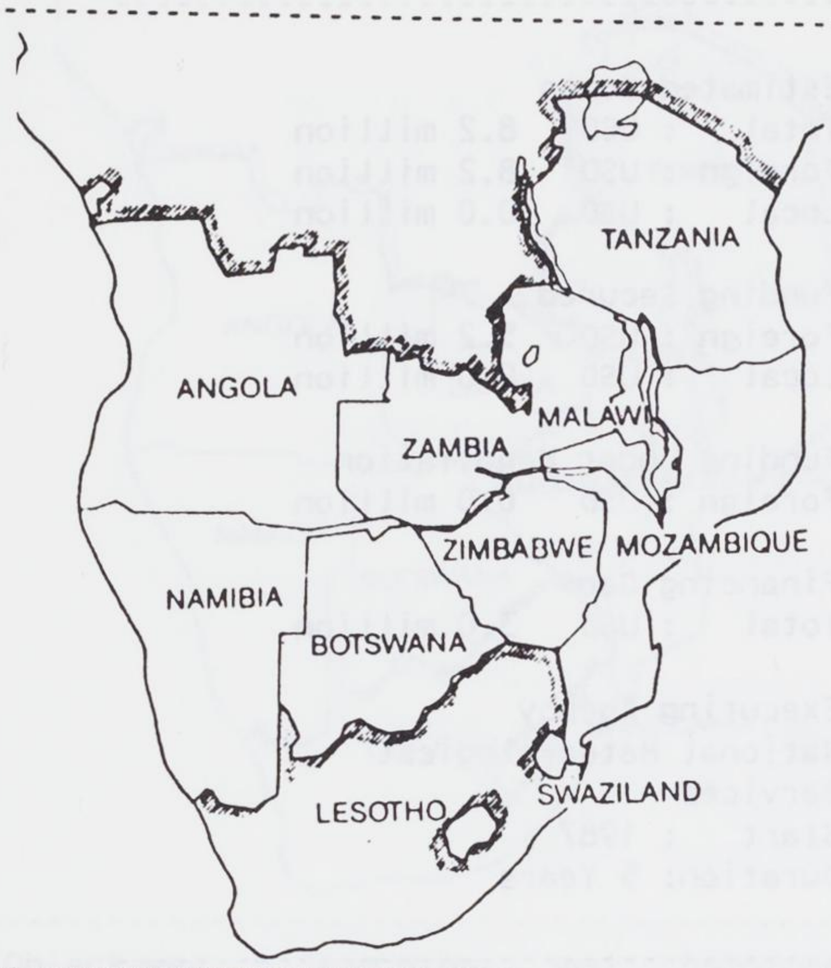
- to investigate the need for a Regional Maintenance Facility including proposals for its implementation.

So far, the cost of tools, spare parts etc. is estimated at USD 0.4 million. Another USD 0.4 million intended for training and expert services are included in Project AAA.6.01.

Status : The Phase II of the FINNIDA support is due to expire at the end of 1992. Lack of funds for completing other ongoing projects has forced the management to withdraw unused means intended for this project, leaving only a relatively small amount of money (approx. USD 50.000). It has now been agreed to utilize this sum to initiate activities towards the establishment of a Regional Calibration and Comparison Facility. The new unit is expected to be set up in Gaborone, Botswana.

September 1992

AAA.6.05: Data Processing in Meteorological Services



Estimated Costs
Total : USD 1.5 million
Foreign : USD 1.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.6 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.9 million

Executing Agency
National Meteorological Services
Start : 1987
Duration: 5 Years

Objectives : For various purposes in the society, such as urban extension and rural resettlement, agriculture, energy resources assessment etc., ready available meteorological data and statistics are of vital importance. This can be accomplished in an effective manner using computers in non-real-time applications.

Other sectors need rapid information on actual weather conditions as well as reliable forecasts. For this purpose suitable computer-programmes and computers directly accessible for real-time operations are required.

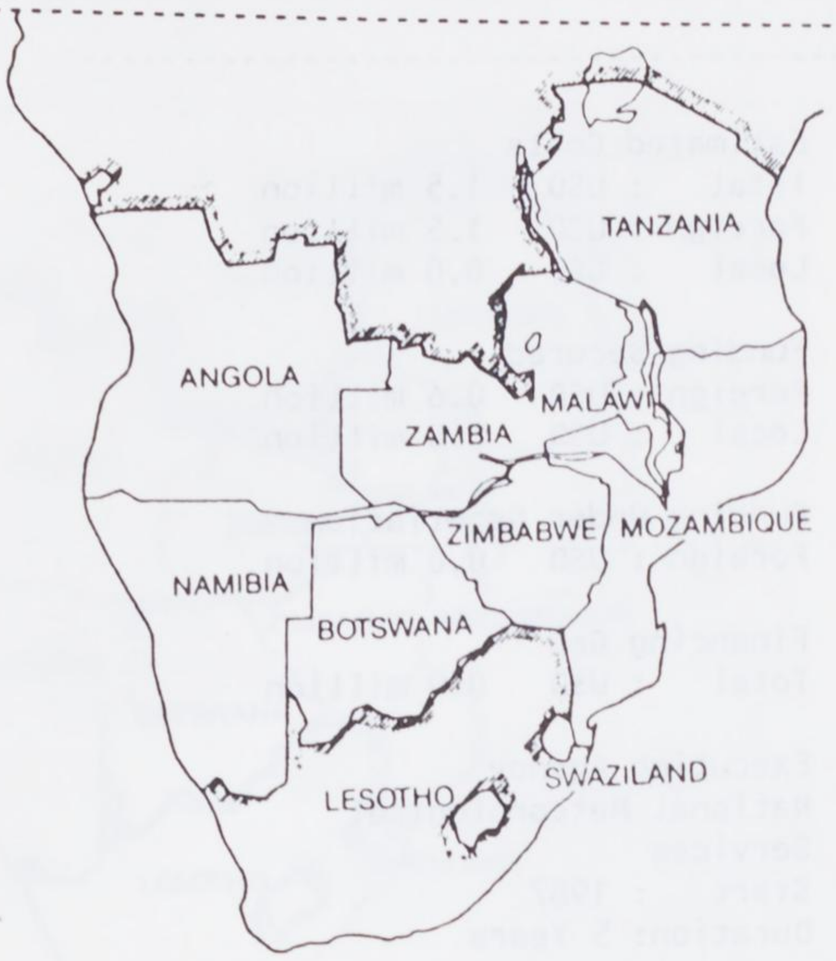
The main objective of this project is to provide the meteorological services of the Region with both trained manpower and equipment to facilitate these operations.

Description : A computarized system for non-real-time application has been developed under WMO auspices (CLICOM).
It contains both hardware and software adapted to the need for uncomplicated but yet advanced data processing facilities enabling the services to handle the national observational data in a rational manner, and also to prepare various kinds of statistcs and calculations.
It is, furthermore, proposed that microcomputers for real-time data processing should be made available for some of the weather services.

Status : The installation of CLICOM has been finished and training of staff members is ongoing under FINNIDA funding arrangements.
Financing is being sought for the provision of microcomputers for real-time data processing.

September 1992

AAA.6.06: Meteorological Observational Networks



Estimated Costs
Total : USD 8.2 million
Foreign : USD 8.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 5.2 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 3.0 million

Executing Agency
National Meteorological Services
Start : 1987
Duration: 5 Years

Objectives : The project has two main objectives :

(i) upgrading and rehabilitation of certain facilities at observing sites in order to secure better and more reliable meteorological data;

(ii) strengthening and extension of the regional observing network to meet certain prerequisite inputs for the preparation of required meteorological end-user products.

Description : During phase I of the FINNIDA support, a partial rehabilitation of observing as well as maintenance facilities took place. This process has been continued during phase II, and the network extended by adding some new facilities. The project includes the following components :

(1) Establishment of approx.20 new stations in the Region (some of these equipped with radiosonde facilities).

(2) Establishment of agrometeorological and automatic weather observing stations, and provision of instruments for a continued rehabilitation process.

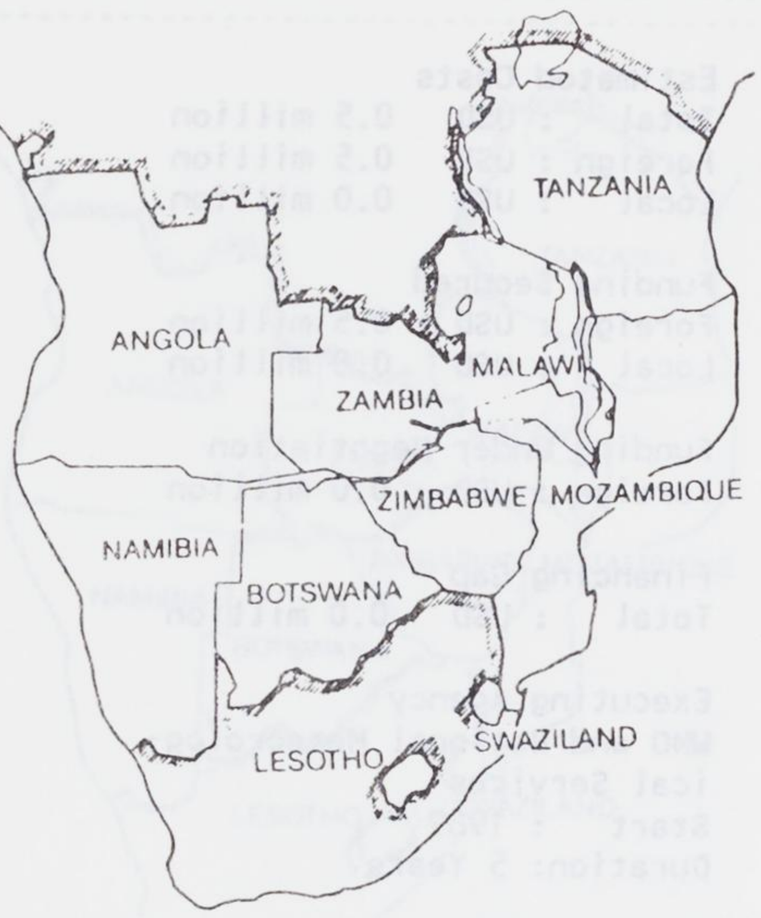
(3) Provision of vehicles for inspection of meteorological observing sites.

Financing of expert services and fellowships at an estimate cost of USD 0.4 million is included in project AAA.6.01.

Status : Financing is to a large extent secured by Finland and the implementation is in progress.

September 1992

AAA.6.07: Meteorological Telecommunications



Estimated Costs
Total : USD 4.7 million
Foreign : USD 4.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 1.9 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.8 million

Executing Agency
National Meteorological Services
Start : 1987
Duration: 5 Years

Objectives : Upgrading and improvement of the telecommunications facilities at the Meteorological services in order to ensure a fast and reliable collection of meteorological observations as well as dissemination and exchange of meteorological data. The project is strongly connected to the RTH, Lusaka. (see Project AAA.6.07).

Description: A substantial rehabilitation and upgrading of the various national meteorological telecommunications facilities is in progress as a result of FINNIDA financing arrangements. However, additional external funding is required to complete the modernization and strenghtening of the telecommunication units at most of the services.

The Directors of the Met. Services have adopted a three step implementation plan, in which provisions been made for this modernization as well as for the development of the RTH, Lusaka.
The estimated total cost is expected to be revised during the second step of the implementation phase.

Cost of the required provision of expert services and fellowships, USD 0.6 million, is included in Project AAA.6.01.

Status : Financing is partly secured by Finland and the implementation is in progress.

At the 10th SATA Conference in Livingstone, Zambia, in Feb. 1990, the Telecommunications Administrations agreed to assist the Meteo Services of their resp. Countries in establishing the data network within the Region for inter connection to the RTH, Lusaka, and similarly for the RDMC, Harare AAA.6.02.

September 1992

AAA.6.08: Data Rescue Project

Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.0 million

Executing Agency
WMO and National Meteorological Services
Start : 1989
Duration: 5 Years

Objectives : In many countries a large part of the meteorological data are in highly perishable form and rapidly deteriorating due to poor storage conditions. The prime aim of the global DARE Project, launched by WMO, is to microfilm the original data manuscripts in order to save this irreparable information for the future.

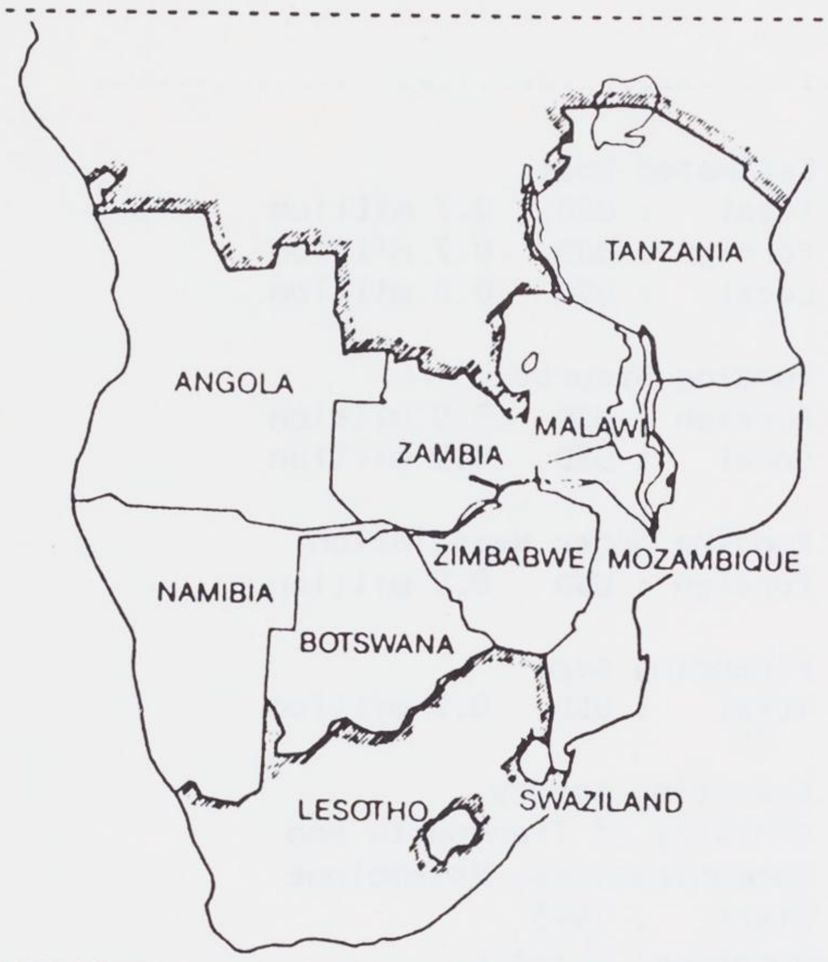
Description : The global project will be implemented during the years 1987-1992, and comprises 42 countries in Africa. In addition to regional and national components, an International Data Resque Co-ordinating Centre (IDCC), located in Brussels, should be responsible for the overall supervision of the project jointly with WMO.
The SATCC project covers the regional and national components of the SADCC Region. The regional centre is planned to be established in Harare covering the SADCC countries and Comores, Madagascar and Mauritius. The cost of establishing and operating this centre during the period 1987-1992 is estimated to aproximately 320.000 USD.

At the national level certain microfilm equipment should be provided for the national meteorological services at a cost of approximately 20.000 USD for each, or for the nine SADCC countries together, 180.000 USD.

Status : The project is fully financed by Belgium and project officials are working in the Region from time to time.

September 1992

AAA.6.09: Meteorological Buoys.



Estimated Costs
Total : USD 1.8 million
Foreign : USD 1.8 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.8 million

Executing Agency
National Meteorological Services
Start : 1993
Duration: 2 years

Objectives : Mozambique and Tanzania are responsible for safety in the Mozambique channel and Tanzania coast line and have to issue warnings for shipping purposes. The lack of data from the sea is one of the major problems and effects the quality of forecasts, mainly during cyclone seasons.

Acquisition and location of meteorological observing buoys in the Mozambique Channel and Tanzania Coast Lines would greatly help in obtaining necessary data from this area.

Description : The intention is to equip the buoys with sensors that will provide measured data on air temperature, atmospheric pressure, wind speed and direction, and water temperature.

The project also comprises

- training
- adequate telecommunications for data transmission
- spare parts.

Status : The original intention was to acquire moored, meteorological buoys located to the Mozambique Channel. This type of equipment has, however, turned out to be very expensive. New technique has instead made it more convenient to utilize drifting buoys (at a considerable lower cost).
Measuring as well as current position data is received via a satellite connection.
(Replacing projects MOZ.6.01 and TAN.6.01.)

September 1992

MOZ.6.02: Aeronautical, Meteorological Equipment for Airports in Mozambique

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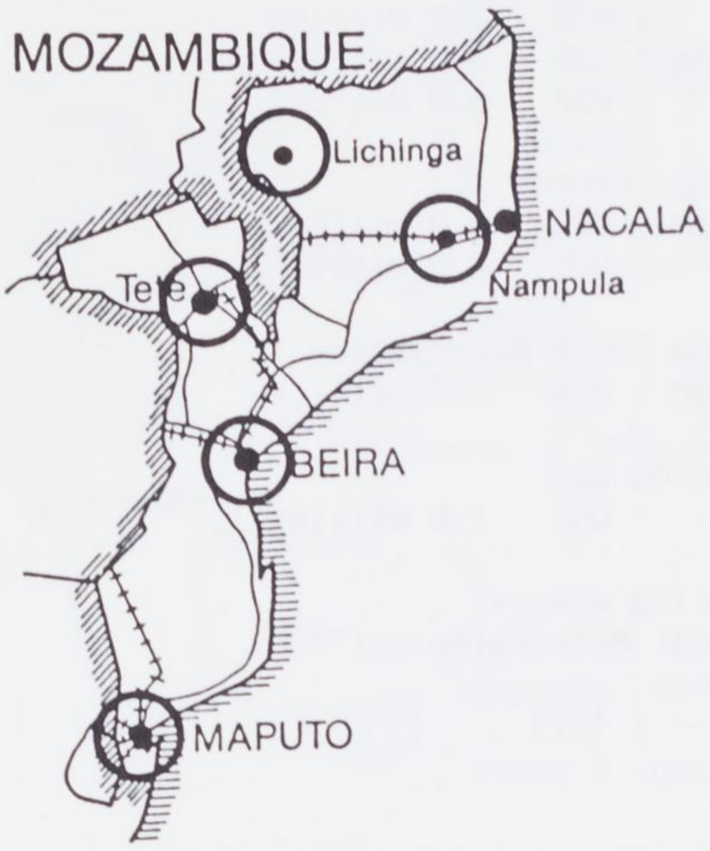


Estimated Costs
Total : USD 0.7 million
Foreign : USD 0.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.7 million

Executing Agency
Ministry of Transports and Communications, Mozambique
Start : 1993
Duration: 3 Years

Objectives : Old and partly obsolete meteorological measuring eqipment at the main airports of Mozambique have to be replaced in order to safeguard the quality of the meteorological information provided for aviation.

Description: The project includes the following aeronautical, meteorological equipment :

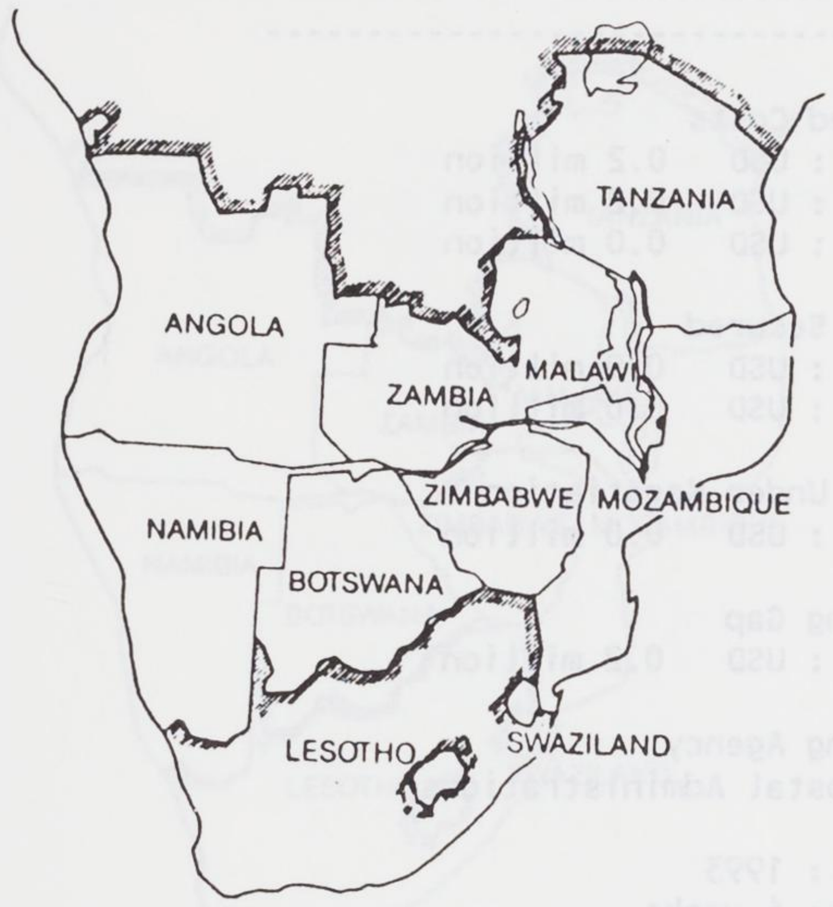
- Two devices for measuring the Runway Visibility Range at the international/regional airports of Maputo and Beira
- Three ceilometers for measuring the cloud base
- Four pieces of equipment for measuring the visibility
- Two pieces of equipment for detection of wind shear in the lowest 1000 metres
- Miscellaneous components

Status : Financing is being sought.

September 1992

Postal Services

AAA.7.05: Management Projects



Estimated Costs
Total : USD 4.5 million
Foreign : USD 4.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 4.5 million

Executing Agency
SATCC/Postal Administrations

Start : 1993
Duration: 4 years

Five management projects are proposed in the plan. Two of them, GM-1, General Policies for Management of Autonomous Postal Administrations, and GM-2, Organisational Restructuring of Postal Administrations, are closely linked. GM-1 is proposed to be carried out as a common effort executed by SATCC, in order to form a basis for GM-2. GM-1 can also be carried out directly by a Member State. Project GM-2 is proposed to be executed by the Member States.

The reason for not combining these two projects into one project is that it is of the outmost importance to establish regulatory policies for a Government owned Postal Corporations as a basis for incorporation of Postal Administrations. It is envisaged that this approach will reduce the risk for failures resulting from incoherent regulatory policies, as been experienced elsewhere in the World in the operation of Government regulated Corporations.

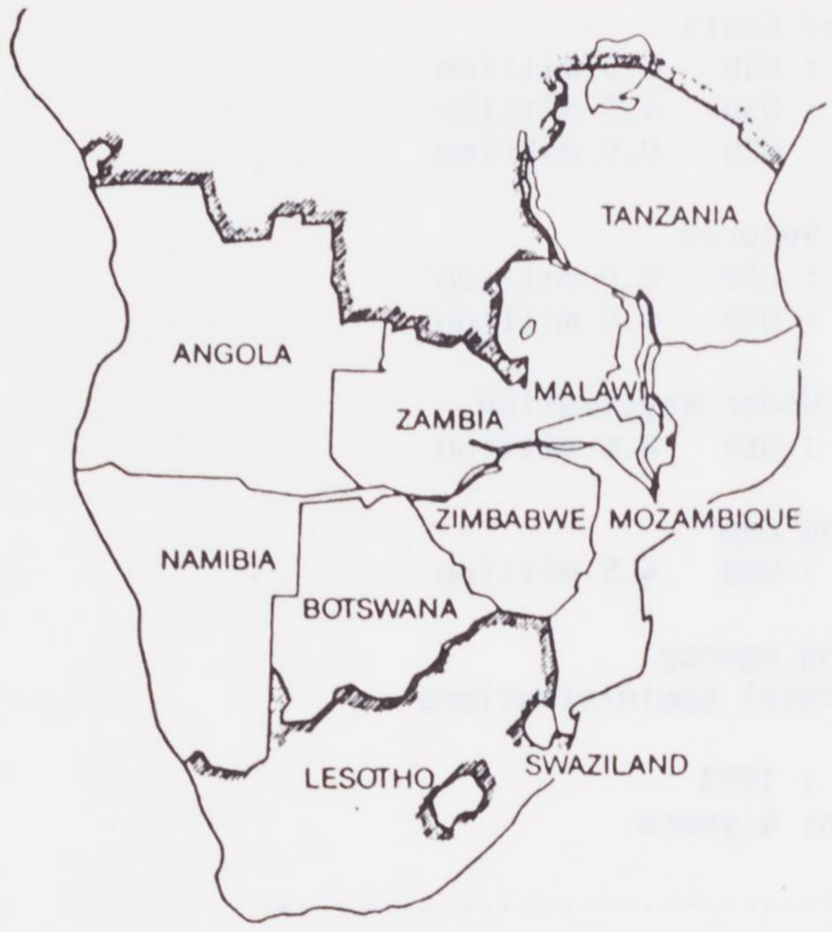
The other three projects; GM-3, National Postal Master Plans, GM-4, Financial Information Systems, and GM-5, Statistical Systems, are necessary components for improving the overall Management level.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
GM-1	General Policies for Management of Autonomous Postal Administrations.	0.2	0.2	0.0	0.0	0.0	0.2
GM-2	Organisational Restructuring of Postal Administrations	1.7	1.7	0.0	0.0	0.0	1.7
GM-3	National Postal Master Plans.	1.0	1.0	0.0	0.0	0.0	1.0
GM-4	Financial Information Systems	1.1	1.1	0.0	0.0	0.0	1.1
GM-5	Statistical Systems.	0.5	0.5	0.0	0.0	0.0	0.5
		4.5	4.5	0.0	0.0	0.0	4.5

September 1992

AAA.7.05: General Policies for Management of Autonomous
(GM-1) Postal Administrations.



Estimated Costs
Total : USD 0.2 million
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.2 million

Executing Agency
SATCC/Postal Administrations

Start : 1993
Duration: 6 weeks

Objectives : It is generally agreed that the Postal Administrations should be given more autonomy in order to act in a more businesslike manner, and to take better care of the interests of the customers. Efforts in this direction are being made in industrialised countries as well as in Southern Africa.
Corporations that have been established are, however, often facing economic and operational problems. One cause of these problems is, that the role of the Government vis a vis a corporation, has not been sufficiently well defined. This project is needed in order to serve as the basis for preparing regulatory policies to be applied by the Governments.

Description : The project comprises the preparation of recommendations on the role of the Government vis a vis an autonomous and self supporting postal administration. The recommendation shall include policies for the operation of the Postal Administration and guidelines on how the Government shall act in order to make sure that social aspects, as well as commercial interests of the services are taken care of.

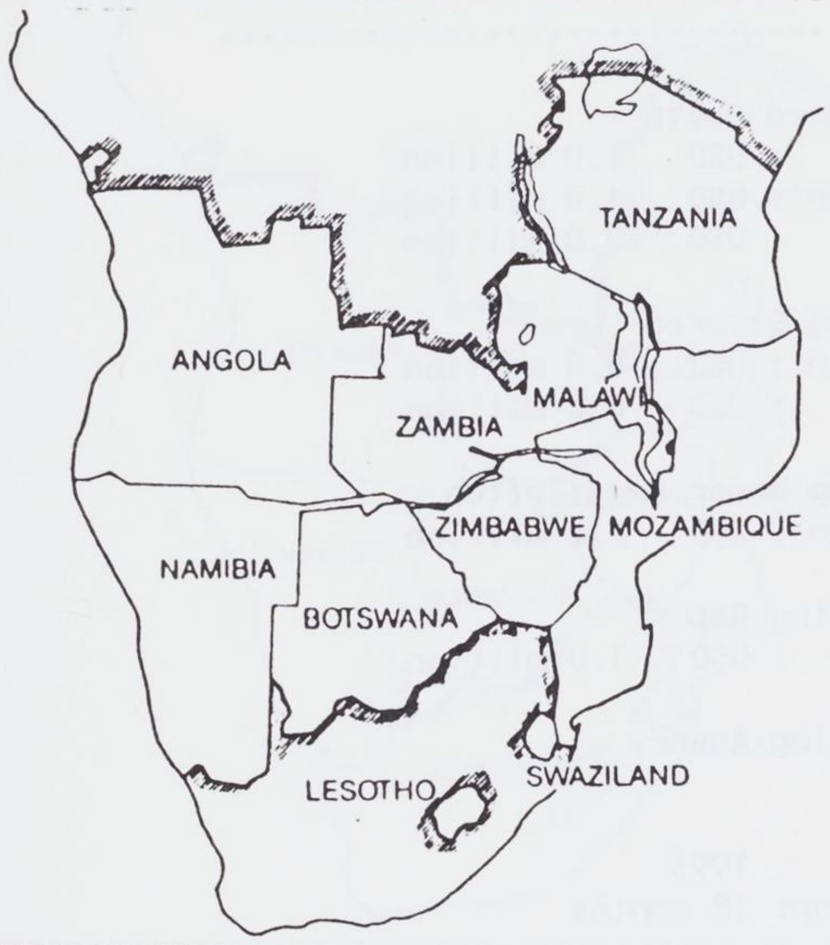
The scope of work for the expert assistance shall include the following issues related to an autonomous postal administration:

* definition of the service to be performed; commercial and social,
* principals for financing of the services,
* proposal on type of autonomy and structure of the administrations,
* proposal for regulatory policies to be applied by the Government, taking into account their impact on pricing investment, quality of service and ability to compete on the market,
* preparation of policies for the operation of the Organisation, and
* proposal on implementation process.

Status : New project

September 1992

AAA.7.05: Organisational Restructuring of Postal Administrations
(GM-2)



Estimated Costs
Total : USD 1.7 million
Foreign : USD 1.7 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.7 million

Executing Agency
Postal Administration

Start : 1993
Duration: 2 years

Objectives : The Postal Administrations are in seven of the ten SADCC Member States operated as divisions within post and telecommunications departments or within a corporation of post and telecommunications, as shown below:

Government department:	
- of its own	Lesotho
- together with telecommunications corporation	Angola,Malawi,Namibia
Corporation:	
- of its own	Botswana,Mozambique
- together with telecommunications	Swaziland,Tanzania, Zambia,Zimbabwe.

In Malawi and Namibia, work is in progress on changing the status of the post and telecommunications administrations into corporations.

In Tanzania, the World Bank is financing a study on how to improve the performance of the Telecommunications Department within the Post and Telecommunications Corporation. It is envisaged that telecommunications and postal services will form separate corporations.

In accordance with the UPU, Washington General Action Plan, the goal is that all Postal Services should gain legal status as independent management systems. Thus this project aims at incorporation of the postal organisations.

Description : The project comprises technical assistance to the Member States to undertake all necessary preparatory work for incorporation and restructuring of the Postal Administrations.

The scope of work for a technical assistance team will include the following components, observing that as a basis for the work the outcome of Project GM-1 should be used;

* review of current situation and envisaged future development,
* services to be performed, letter, parcel and financial services,
* financial targets and ways and means to meet them,
* appropriate organisational structures, including the design of a nationwide structure for operations, allowing for decentralised management,
* draft legislation and regulations, including Postal Act, and creation of a Board,
* demands to be met by management systems such as; accounting systems, statistics, short and long term planning, quality of service measure and forecasts. (see also projects GM-3, 4 and 5),
* pricing policies, and
* salary policies, manpower and manpower development policies, including job descriptions.

Status : New project

September 1992

AAA.7.05: National Postal Master Plans.
(GM-3)

Estimated Costs
Total : USD 1.0 million
Foreign : USD 1.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.0 million

Executing Agency
SATCC

Start : 1993
Duration: 18 months

Objectives : Plans for medium and long-term postal services normally form part of the National Development Plan.

Autonomous Postal Administrations need to have more elaborate Plans in order to be able to plan their operations in more detail than is normally presented in the national plans.

Description : The project comprises technical assistance to the Member States to prepare Master Plans for medium and long-term development of the postal services. The Master Plan shall include a review of the expected development in traffic, staffing, infrastructure networks and investments.

The Master Plans should focus on strategic and longer term aspects, and be prepared in such a way that they could be updated regularly by the Postal Administration staff.

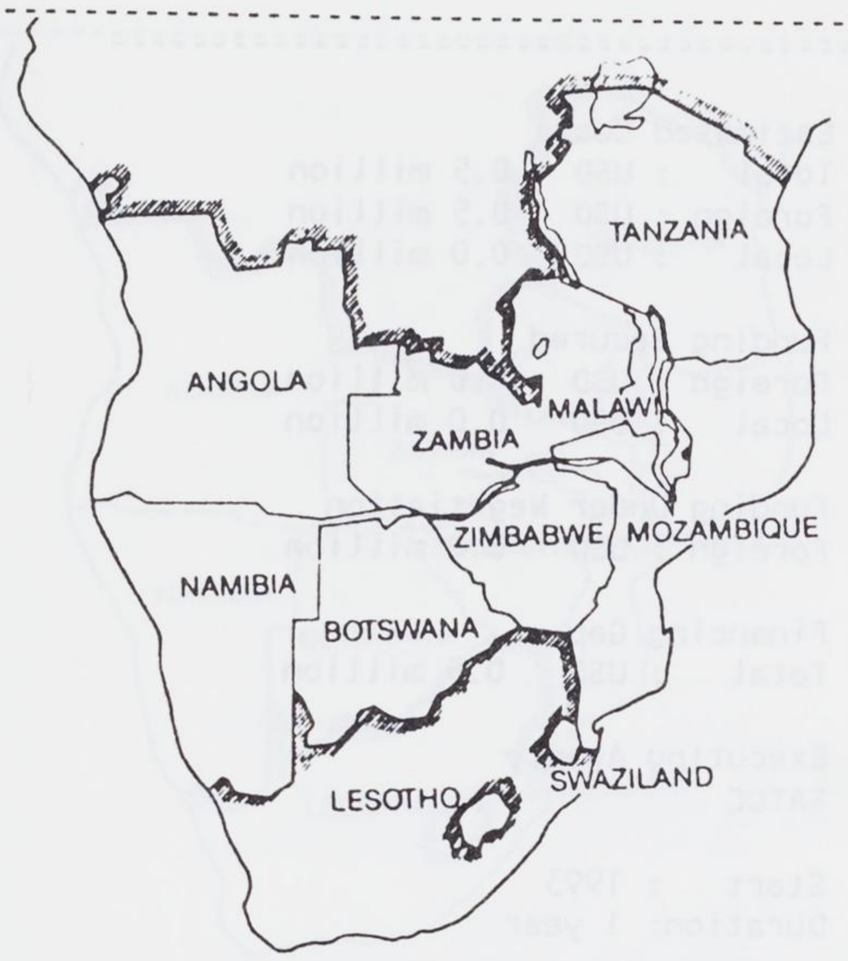
The Master Plan, which would be based on clear objectives and embody government policies, would comprise the following components:

* objectives for standard of services, (access, speed, reliability, queueing, etc),
* traffic forecasts,
* plans for mail distribution and routing,
* development of post office networks in urban and rural areas,
* need for increased manpower,
* overall training needs,
* investment plans: short, medium and long-term,
* financial targets and postage rates, and
* review of the economic and financial viability of the Plan.

Status : New project

September 1992

AAA.7.05: Financial Information Systems
(GM-4)



Estimated Costs
Total : USD 1.1 million
Foreign : USD 1.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.1 million

Executing Agency
Postal Administration

Start : 1993
Duration: 1 year

Objectives : In most Member States, post and telecommunications are organized in one unit with common departments for e.g. personnel, supplies and finance. The financial statements for such an organisation do not give a clear indications of the costs and benefits related to postal services.

Where the Postal Administration is a part of a Government department, its income goes direct to the treasury and costs are drawn from the Government budget.

For the Postal Administration to be able to develop as a service enterprise, regardless of its status, it is essential for the management to be able to determine:

- if the postal business, or parts of it, is running at a profit or loss,
- if the profitability is improving or not, and
- if measures taken are contributing favourably to the financial result.

Description : The project comprises the establishment of a comprehensive financial system suitable for an autonomous organisation.

Technical assistance is primarily needed for establishing a financial information system and the development of work routines for handling the system.

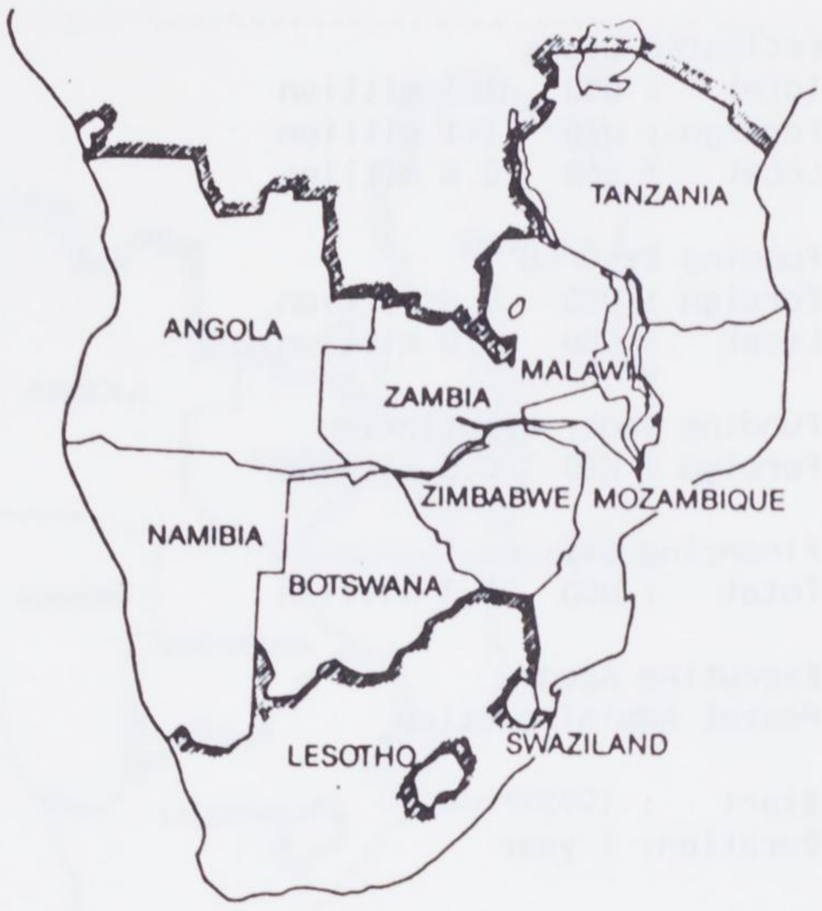
The following major issues should be dealt with:
* preparation of annual budgets,
* Balance Sheet
* Profit and Loss Account,
* invoicing,
* introduction of a computerized modern accounting system, and
* terminal fees for international mail.

In some countries (Tanzania and Zimbabwe) projects aiming at developing accounting systems have already started. In other countries systems have to be introduced.

Status : New project

September 1992

AAA.7.05: Statistical Systems.
(GM-5)



Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.5 million

Executing Agency
SATCC

Start : 1993
Duration: 1 year

Objectives : In several Member States, the statistics available are often misleading. In a survey from 1989 it was found that reported mail volumes were often two to three times higher than could be reasonably expected from postage revenues.

For successful implementation of its tasks, the management needs reliable statistical information on:
- mail volumes
- average postage rates for major types of mail
- mail conveyance times
- market shares
- mail sorted (volume, hours used).

Since 1990, Tanzania has been a pilot country for the development and implementation of improved statistical systems. Task forces have been sent out to large post offices to check data collection procedures. Seminars on statistics have been held in which problems and difficulties have been discussed.

In Mozambique, a statistical system has been designed and partly implemented.

In both countries, there is still a need for further assistance.

In general, statistics are needed for calculating productivity and staffing standards. Reviews of grading levels will also benefit from reliable information statistics.

A costing system (calculation of the average cost of a service or a product over all its production steps) can be introduced. Finally, the profitability of various services can be calculated and rate fixing methods, based on costs and revenues, can be introduced.

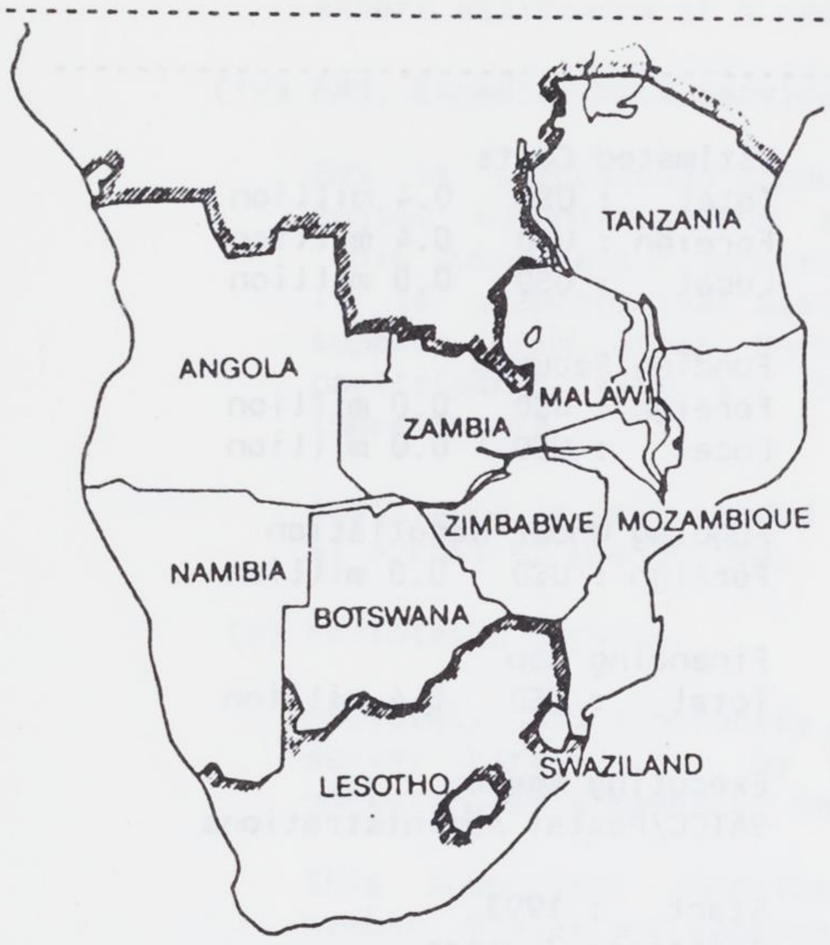
Description : The project comprises technical assistance to the Postal Administration for introducing reliable statistical information systems.
A first step should be devoted to basic statistics:
- complementary survey of the present situation covering available statistics, methods and quality,
- design of new statistical systems,
- implementation of new systems (including training),
- introduction of control methods such as;
  * task forces to check data gathering, and
  * comparisons between mail volume and postage revenues.

In a second step, the need for further statistical information will be dealt with. This includes:
- time and costs spent in the introduction cycle,
- operational standards (time needed for different production steps),
- the issue of periodical statistical reports, and computerization.

Status : New project

September 1992

AAA.7.06: General Postal Projects.



Estimated Costs
Total : USD 3.2 million
Foreign : USD 3.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 3.2 million

Executing Agency
SATCC/Postal Administrations

Start : 1993
Duration: 4 years

This group of four projects, GP-1 Marketing, GP-2 Mail Conveyance, GP-3 Counter Service, and GP-4 Postal Financial Services, is designed to:

* improve the quality of service to the customers,
* develop new products, and
* increase the market

The projects can be implemented regardless of the type of organisation that is eventually developed for the Postal Administration.

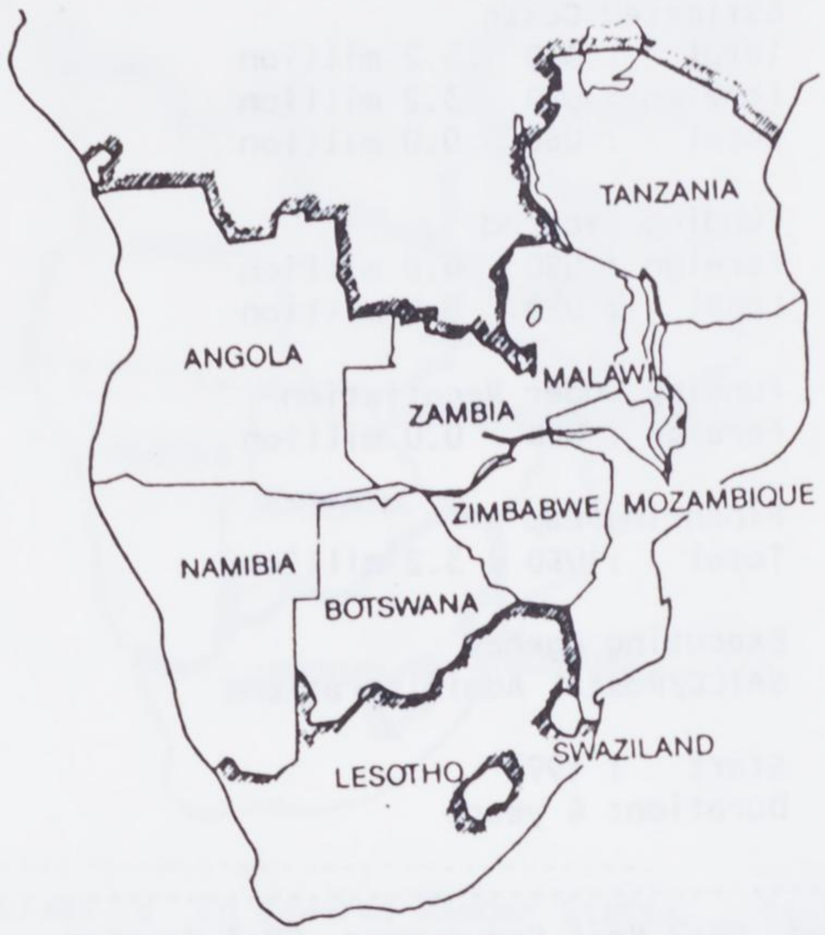
All projects shall be implemented on a national level. The technical assistance should preferably be coordinated by SATCC Technical Unit as common activity.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
GP-1	Marketing.	0.4	0.4	0.0	0.0	0.0	0.4
GP-2	Mail Conveyance	0.6	0.6	0.0	0.0	0.0	0.6
GP-3	Counter Service	0.2	0.2	0.0	0.0	0.0	0.2
GP-4	Postal Financial Services	2.0	2.0	0.0	0.0	0.0	2.0
		3.2	3.2	0.0	0.0	0.0	3.2

September 1992

AAA.7.06: Marketing.
(GP-1)



Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.4 million

Executing Agency
SATCC/Postal Administrations

Start : 1993
Duration: 2 years

Objectives : A modern business-oriented enterprise has to market its products and services in order to promote the market or increase its market shares.

The Postal Administrations need to become more customer-oriented and to strengthen their marketing functions. As basis for these efforts a market survey should be carried out, in which customers'opinions, preference and demands on the services offered by the postal administrations should be analysed. The analyses should be followed by marketing campaigns for the products. A basic precondition for the success of the project is that an acceptable level of service can be offered to the customers.

Description : The project comprises technical assistance for improving the marketing of the postal products mail, financial service, EMS and philatelic service, as well as market survey.

The project includes five sub-projects;

(i) Market Survey

This sub-project comprises the following components;

- exchange of experience between the Postal Administrations for preparation of survey methods, and interview questionnaires, etc,
- carrying out of surveys,
- analysis of the practical implication of findings on cooperation between the Postal Administrations and the main customers, improvement of staff attitudes, etc.,
- preparation of a marketing strategy and an implementation programme.

The technical assistance shall include expert assistance for the preparation of survey methods, analysis of the survey, and in holding a series of seminars, interchanged with survey work. Finally the expert shall assist the Member States in preparing the marketing strategy.

The assistance is expected to include three two-week seminars and to cover a total time of six months. A total of six manmonths of assistance will be needed at a cost of USD 160,000.

(ii) Marketing of Mail Distribution

Assistance is needed for preparing information to the customers on mail distribution services conveyance times, reliability, postage rates etc. The assistance should include the holding of two-week seminars alternated with practical work.

A total of two manmonths of assistance are needed at a cost of USD 50,000.

(iii) Financial Services

The assistance should comprise the holding of three two-week seminars. The first should be on the concept of financial services, presenting methods and strategy for the marketing, and the second should discuss marketing activities proposed by the Member States. The third seminar will be held for the exchange of experience during the implementation period. The project will be carried out over a 12-month period with three manmonths of expert assistance at a cost of USD 120,000.

(iv) EMS, Expedite Mail Service

EMS is a spearhead product. Its success has actually proved that the Postal Administrations are able to compete with private courier firms. This subproject covers the implementation of EMS in Angola and Namibia. It is proposed that assistance implementing EMS should be given through support from other Member States, and that a seminar be held with participants from all Member States at which and EMS should discuss improvements.

Assistance is only needed for the seminar held by an EMS expert, estimated at a cost of USD 30,000.

(v) Philatelic Service

Philately has a priority position in all SADC Postal Administration. A survey carried out by SATCC Technical Unit suggested cooperation in marketing as a means of improving profitability.

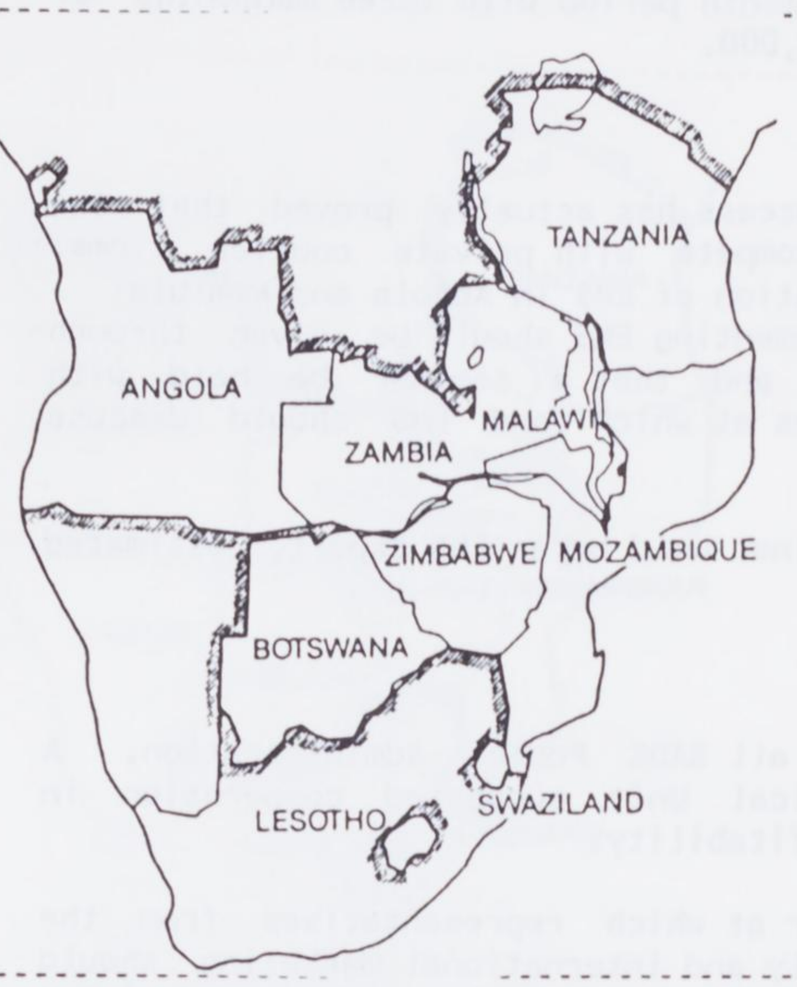
This subproject comprises a seminar at which representatives from the Member States and experts on philately and international marketing should discuss possibilities for cooperation on, for example sales, advertizing and participation in stamp exhibitions.

A task force consisting of members from the Postal Administrations should be formed to prepare a joint marketing programme. The expert assistance is estimated to be required for two manmonths at a cost of USD 70,000.

Status : New project

September 1992

AAA.7.06: Mail Conveyance
(GP-2)



Estimated Costs
Total : USD 0.6 million
Foreign : USD 0.6 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.6 million

Executing Agency
SATCC/Postal Administrations

Start : 1993
Duration: 2 years

Objectives : With only very few exceptions, post office customers in SADCC Member States have reason to be dissatisfied with the present quality of service. It is not fast enough nor reliable enough to satisfy their demands. The effect is that customers try to find other suppliers, e.g. private courier companies or use own messengers. This results in loss of income from mail.

Considerable improvements in the standard of mail conveyance are needed. The following tentative targets are suggested as guidelines.

. EMS, according to bilateral agreements and UPU guidelines.

. Letters. The following conveyance times are proposed.

Domestic service:	
Within a city and surrounding suburbs	1 day
Between provincial capitals	1-2 days
Other areas	3-5 days
International: (to and from the capitals)	
Europe and USA/Canada	4-7 days
SADC Member States	4-7 days
Other countries	4-10 days

These standards apply to air mail letters. It is recommended that the SAL (Surface Air Lifted) concept should be used whenever possible.

. Parcels
A standard similar to the one for letters should be adopted for air mail parcels making allowance for additional time needed for custom procedures. Surface parcels will need a longer conveyance time, and in some cases, (overseas boat transport) a substantially longer time.

Description : The project comprises assistance for holding a series of seminars on how to improve quality of service for mail conveyance.

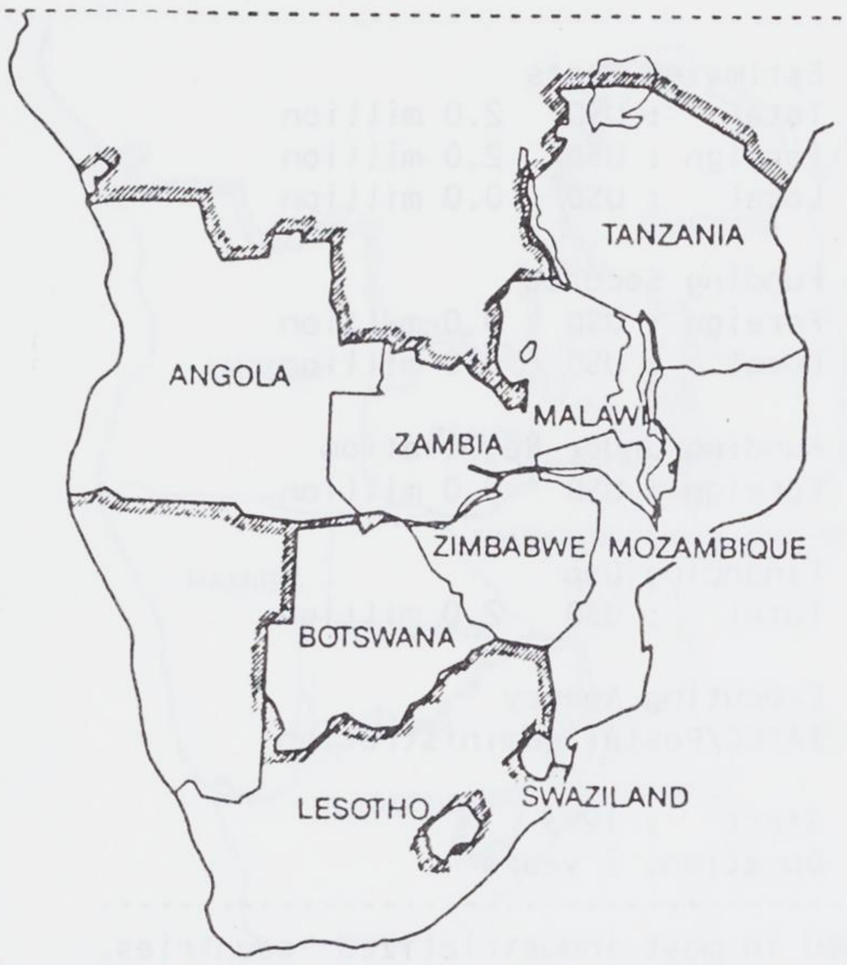
The technical assistance comprises the holding of seminars covering the following main issues:
- present mail handling procedures,
- present conveyance times, transport situation, staff skills and attitude, (see also Project SI-3),
- analysis of major causes for delays and possible improvement measures,
- setting of appropriate targets,
- steps to be taken for implementation of improvement measures,
- methods for control of mail conveyance time, and
- manuals for mail handling

The seminars will be interchanged with practical work and assistance from experts.

Status : New project

September 1992

AAA.7.06: Counter Service
(GP-3)



Estimated Costs
Total : USD 0.2 million
Foreign : USD 0.2 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.2 million

Executing Agency
SATCC/Postal Administrations

Start : 1993
Duration: 6 months

Objectives : Generally, mail distribution services are combined with simple forms of financial services including savings bank transactions. The network of post offices is well suited for providing these services. However, only limited consideration has been given to counter service.

The main problems are;

- complicated working routines,
- limited scope of services offered,
- poor staff attitudes, and
- long queueing times.

Description : The project comprises technical assistance with the development of financial services, with the aim of achieving the following objectives: improved customer services, rationalized counter procedures, and improved profitability of counter services.

Expert assistance is needed for studying:
- production conditions, such as working routines, possibilities for multipurpose counters, including security with regard to money, parcels and registered letters,
- measures to be taken to reduce queueing time, and
- proposal for improved counter services.

Seminars should be held on the basis of the findings and recommendations of this study.

Status : New project

September 1992

AAA.7.06: Postal Financial Services
(GP-4)

Estimated Costs
Total : USD 2.0 million
Foreign : USD 2.0 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.0 million

Executing Agency
SATCC/Postal Administration

Start : 1993
Duration: 3 years

Objectives : Financial service systems are well developed in most industrialized countries. Improved financial service is an important component for the development of trade and commerce in the Member States.

Efforts are thus currently being made by several of the SADÇC states to introduce some form of postal giro system.

In some SADC states, post office savings banks already exist, while in other countries they need to be introduced.

Description : The project consists of expert assistance for a study on the feasibility of introducing improved financial services in the Member States.

The study shall deal with savings bank transactions and modern payment systems, such as a postal giro system.

Expert assistance is needed for a feasibility study covering all Member States and including;

- review of existing financial services and banking systems,
- present market potentials for:
  - savings bank transactions (deposits and withdrawals) at post office counters
  - payment systems including prospects for postal giro systems
- evaluation of necessary conditions for financial services:
  - fast conveyance of payment forms
  - accounting routines and froms
  - security measures
  - legal matters
- analysis of the capacity of the Postal Administrations to handle a giro system and need to introduce a postal giro system,
- preparation of a cost benefit analysis, and
- recommendation of alternative financial services and products to be introduced.

Based on the feasibility study, one or two pilot countries should be chosen for implementation of the proposed services.

The assistance will comprise 12 manmonths of consultancy services for the feasibility study. (If deemed feasible the introduction of postal giro systems could be studied as a separate task. Terms of Reference for such a study have been prepared by SATCC.)
The implementation work is estimated to take about ten manmonths in each of the two pilot countries.

The intention is that, after due evaluation of the results in the pilot countries, implementation should take place in the remaining Member States. Assistance for this work is estimated to require six manmonths for each country.

Status : New project

AAA.7.07: Manpower Development

Estimated Costs
Total : USD 0.9 million
Foreign : USD 0.9 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.9 million

Executing Agency
SATCC/Postal Administration

Start : 1993
Duration: 4 years

The manpower development activities are divided into three projects: MP-1 Human Resources Development Programme, MP-2 Various Training Projects, and MP-3 Development of the Multi-Country Training Centre in Malawi.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
MP-1	Human Resources Development Programme	0.5	0.5	0.0	0.0	0.0	0.5
MP-2	Urgent Training Projects	0.3	0.3	0.0	0.0	0.0	0.3
MP-3	Development of the Multi Country Training Centre in Malawi	0.1	0.1	0.0	0.0	0.0	0.1
		0.9	0.9	0.0	0.0	0.0	0.9

September 1992

AAA.7.07: Human Resources Development Programme
(MP-1)

Estimated Costs
Total : USD 0.5 million
Foreign : USD 0.5 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.5 million

Executing Agency

Start : 1993
Duration: 1 year

Objectives : All Postal Administrations have their own national training schools for basic education.

The proposals made in the Postal Development Programme on improved management and quality of service increase the need for qualified staff. Thus the standard of training has to be improved. It is foreseen that the number of employees will increase with increasing economic standard, population and literacy in the Member States.

The human resources development programme is therefore needed in order to secure staffing of the administrations with qualified personnel.

Description : The project comprises assistance to the Postal Administrations in preparing comprehensive human resources development programmes, and aims at assessing the need for instructors and training facilities.

Thechnical assistance is needed for the preparation of the programme. The assistance should preferably be divided into two subprojects:

(i) Development programme for basic education and training of instructors

A preliminary survey in this respect was carried out by SATCC Technical Unit in 1986. This work has to be updated and extended in order to form a firm basis for improving the training capacities in the Member States.

The total manpower input for this subproject is estimated at 12 manmonths at a cost of USD 0.3 million.

(ii) Regional development plan for managment, supervisory and clerical personnel

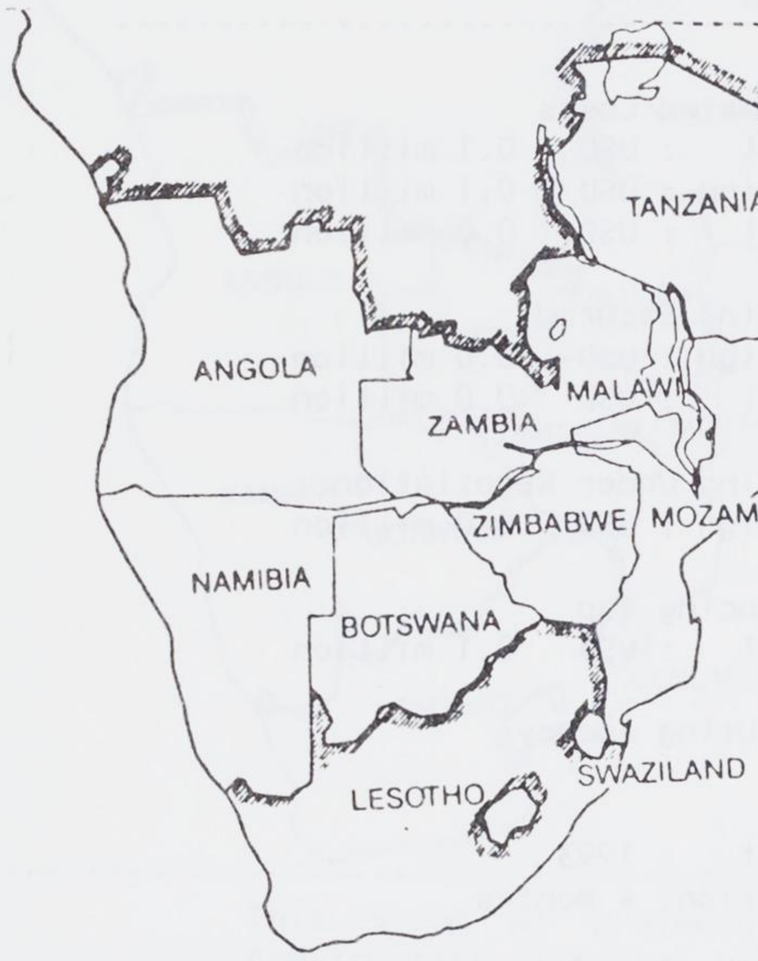
Technical assistance is needed for the following main issues in the plan.
- assessment of future manpower by type of skill,
- appraisal and assessment of training needs,
- review of development and operations of training facilities and indication as to which training could best be implemented on national level and which at a regional level,
- establishment of procedures for training candidate selection,
- development of curricula,
- preparation of guidelines for evaluating the effectivness of training programmes,
- determination of requirements for teaching aids, and
- preparation of project packages.

Detailed Terms of Reference for the plan have been prepared by SATCC.

Status : New project

September 1992

AAA.7.07: Urgent Training Projects
(MP-2)



Estimated Costs
Total : USD 0.3 million
Foreign : USD 0.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.3 million

Executing Agency

Start : 1993
Duration: 1 year

Objectives : The success of most of the development activities suggested in this programme is dependent on the ability and willingness of the staff to understand and adapt to a new situation. This project thus addresses the most urgent training needs in this respect. Almost all projects in the development programme contain a component of training. This specific project is designed to give the operative staff complementary training in order to create new attitudes towards customers in meeting their demands.

Description : This project aims at obtaining technical assistance and financial support for a number of specific training needs, such as the training of:

- supervisors,
- instructors,
- accounting staff, and
- language training, (english for Portuguese-speaking countries).

Assistance is needed for the following training activities:

(i) Training of Supervisors

Supervisors and supervisors-to-be are the key staff when building a new postal organisation.

Common courses for all Member States are proposed to be held with the purpose of improving their ability to:
- train and inform their subordinates,
- identify and solve problems arising, and
- fulfil their day-to-day duties.

(ii) Instructors courses

There will be a substantial increase in the volume of training that should be given at the national training schools.

Consequently their will be an urgent need for training of instructors.

(iii)Accounting courses

The need for traing courses for accountants is strongly linked to the introduction of modern financial systems.

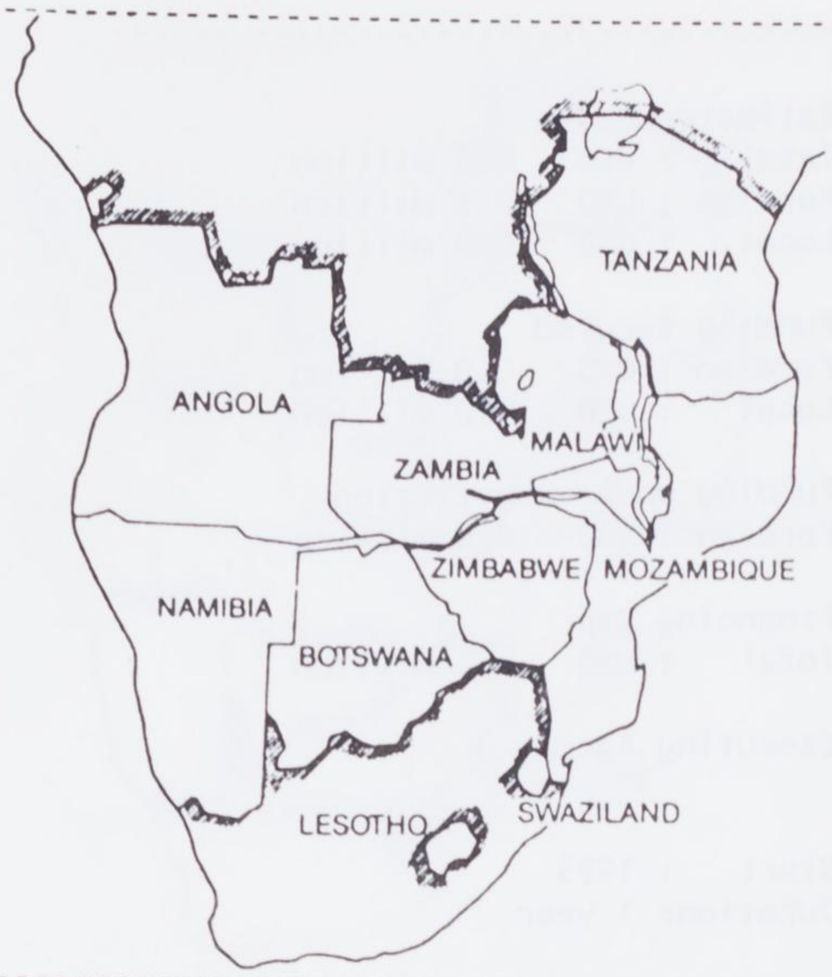
This training activity will consist of a number of seminars, courses and follow up activities.

(iv) Language courses

Status : New project

September 1992

AAA.7.07: Development of the Multi Country Training Centre in Malawi
(MP-3)



Estimated Costs
Total : USD 0.1 million
Foreign : USD 0.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.1 million

Executing Agency

Start : 1993
Duration: 4 months

Objectives : The Multi-Country Training Centre was established under a United Nations Development Programme (UNDP) in 1972 as a training project for the posts and telecommunications administrations of the governments of Botswana, Lesotho, Malawi and Swaziland (BLMS). At that time training was designed to cater for the needs of BLMS governments in maintenance, planning and improvement of posts and telecommunications services.

During 1973-1984 MCTC was a donor run institution under the auspices of the Malawi Posts and Telecommunications Administration.

During 1985-1987, it was assisted by EEC under Lome I and II aid agreements.

On 24th July 1987, the governments of Botswana, Lesotho, Malawi and Swaziland signed an Inter-Governmental Agreement (IGA).

The Agreement was put into force on 1st July 1988 and the MCTC was thereafter registered with the SADCC secretariat. The IGA contains a provision that any SADCC member country can become party to this Agreement.

Since 1st April 1989, the centre has been funded and managed by the BLMS countries.

The principal objectives of the centre are:

To provide training in posts and telecommunications in order to meet:

- training requirements for newly recruited staff,
- training needs for staff engaged on maintenance and provision of existing services,
- required training for staff engaged on the planning and implementation of development projects,
- training needs for MCTC Instructional personnel to keep abreast of developments in technology and related skills, and
- requirements that satisfy ITU training levels 1,2,3 and 4

In order to cater for new course and to be able to accommodate participants from all SADC member states, new training wings and extended facilities are needed.

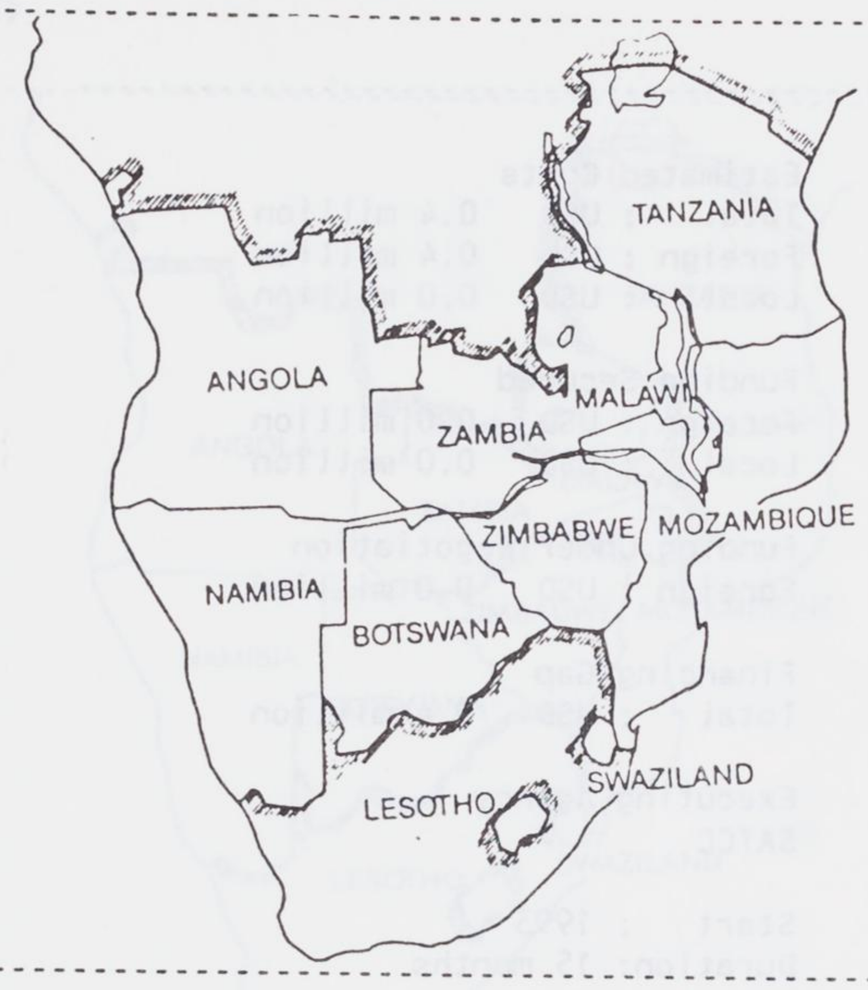
Description : The project aims at converting the Multi Country Postal Training Centre in Malawi (MCTC) into a higher level Regional Training Centre for SADC Postal Administrations.

Technical assistance is needed for the preparation of a development programme, for financing of new training wings and upgrading of the facilities as determined in the programme.

Status : New project

September 1992

AAA.7.08: Strengthening of Infrastructure



Estimated Costs
Total : USD 2.1 million
Foreign : USD 2.1 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 2.1 million

Executing Agency
SATCC/Postal Administration

Start : 1993
Duration: 4 years

This group of projects includes projects related to improvement and the construction of postal terminals (SI-1), the provision of equipment (SI-2) and improvements in transport (SI-3).

Generally there is a need to improve the postal terminals in order to make provision for better services to the customers and to create conditions for better working routines and environment.

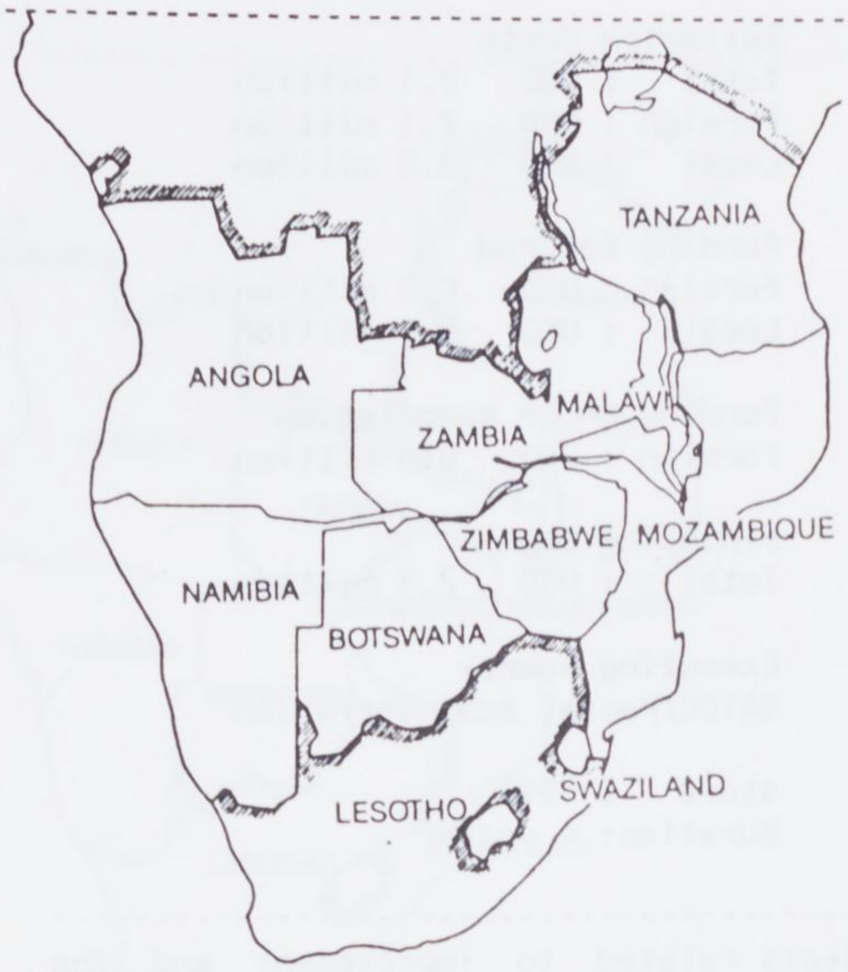
The transport of mail is in several Member States hampered by the low availability of vehicles and unreliable service by contracted transporters.

Subprojects Included in Programme:

		--- Cost ---			-- Funding --		
		Total	For'n	Local	Secu	Nego	Gap
SI-1	Postal Terminals	0.4	0.4	0.0	0.0	0.0	0.4
SI-2	Purchase of Equipment	1.3	1.3	0.0	0.0	0.0	1.3
SI-3	Transport Plans and Vehicles	0.4	0.4	0.0	0.0	0.0	0.4
		2.1	2.1	0.0	0.0	0.0	2.1

September 1992

AAA.7.08: Postal Terminals
(SI-1)



Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.4 million

Executing Agency
SATCC

Start : 1993
Duration: 15 months

Objectives : Several Member States have old postal terminals unsuitable for modern mail handling and service to the customers. There is a lack of post office boxes, resulting in both individuals and companies having to share the limited number available. With increasing mail volumes the need for improvement will be further accentuated.

A feasibility study on the construction of a new sorting centre in Harare has been carried out financed by Sweden in 1989. Similar studies are needed in several Member States.

There will also be a need for improving and/or constructing new facilities in towns and rural areas in most of the Member States.

Investment programmes for new facilities have been prepared in most countries, but have not been followed by implementation due to lack of funds.

Description : The project provides expert assistance in the preparation of implementation programmes for new postal terminals.

Technical assistance is needed for the preparation of national investment plans for postal terminals.

The existing facilities should be examined in light of the future need for improved service, and increased access to postal service.

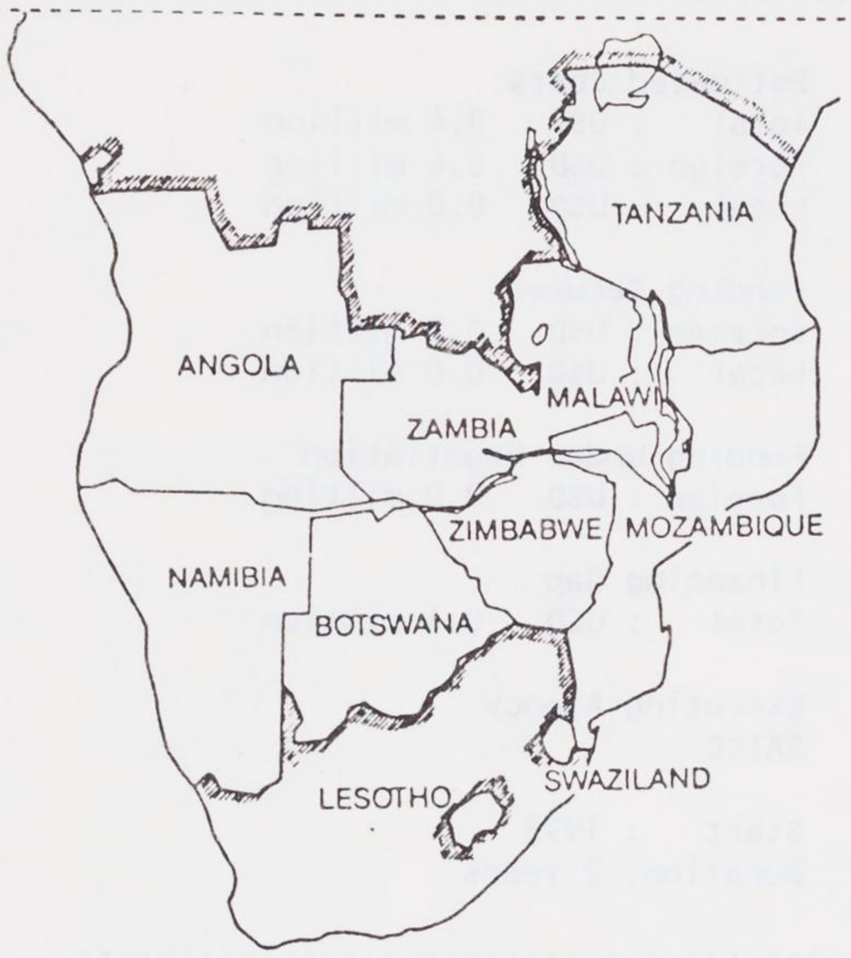
On the basis of these examinations feasibility studies and programmes should be prepared for the upgrading of existing facilities and the construction of new facilities.

Costs for implementing the programme should be calculated taking into account the ability of the Postal Administrations to raise there owns funds, and the need for donor financing.

Status : New project

September 1992

AAA.7.08: Purchase of Equipment
(SI-2)



Estimated Costs
Total : USD 1.3 million
Foreign : USD 1.3 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 1.3 million

Executing Agency
Postal Administration

Start : 1993
Duration: 1 year

Objectives : Most of the Postal Administrations suffer from a lack of equipment in sorting centres and at counters. Sometimes very basic equipment is not available, such as typewriters, calculators, stamp pads, bags or sorting frames.

Some equipment is produced within the Member States. Other more advanced equipment, such as computers, needs to be imported and paid for in foreign currency.

In many developed countries rationalisation of the postal services has resulted in smaller offices and sorting centres being closed. There is consequently a large second hand supply of postal equipment. Such equipment is especially useful for smaller post offices in the Member States.

Description : This project comprises assistance in the purchase of general postal equipment.

The Postal Administrations should themselves survey their need for additional equipment and suitable sources for purchasing this equipment. Minor assistance may be needed in order to assess the need for new modern equipment.

Industrial countries with excess equipment that can be supplied at low costs or as grants to the Member States,should be asked to list the equipment. Based on these lists, the postal services should be able to select material needed for their services.

Status : New project

September 1992

AAA.7.08: Transport Plans and Vehicles
(SI-3)

Estimated Costs
Total : USD 0.4 million
Foreign : USD 0.4 million
Local : USD 0.0 million

Funding Secured
Foreign : USD 0.0 million
Local : USD 0.0 million

Funding Under Negotiation
Foreign : USD 0.0 million

Financing Gap
Total : USD 0.4 million

Executing Agency
SATCC

Start : 1993
Duration: 2 years

Objectives : Mail is transported by the Postal Administrations own vehicles, by contracted transporters and by public transport services (rail, road, waterway and air services).

Mail transport is not always given sufficiently high priority, resulting in the fact that mail is delayed and that the first available transport opportunity is not used.

This is the case especially for national and regional conveyance based on low tariff contracts. As these contracts are less attractive for the transporters they often result in low priority for postal consignments and integrity problems in the form of frequent losses and tampering with mail.

It is necessary to prepare policies for the conveyance of mail to be applied by public and private transporters. The agreements between Postal Administrations and transporters need to be reviewed and amended if necessary. The demand for vehicle fleets for the Postal Administrations need to be determined.

Description : The project comprises technical assistance to the Postal Administrations for preparing postal transport plans.

Expert assistance is needed to survey the current transport situation, its deficiencies and need for improvement.

The expert shall also assess whether it is feasible for the Postal Administrations to have their own vehicle fleet and bus-services, as is the case in Zambia.

Policies for the shipment of mail should be prepared for approval by the SATCC bodies concerned.

Status : New project

September 1992

Criteria and Procedures for the Selection and Approval of Projects

CRITERIA AND PROCEDURES FOR THE SELECTION AND APPROVAL OF PROJECTS

1. Introduction

These criteria and procedures for the selection and approval of projects are intended to safeguard the coherence and integrity of the SATCC programme within the framework of the objectives of SADCC. They shall,therefore, guide the SADCC member States, the Sector Coordinator and Cooperating Partners in the preparation and presentation of project proposals for inclusion in the SATCC programme.

2. General Criteria

The Sector of Transport and Communications has been identified as a key element in achieving the overall objectives of SADCC. Projects in this Sector play a vital role in national and regional economic development. Hence, the first requirement for a project to be eligible for inclusion in the SATCC programme is that it is consistent with the overall objectives of SADCC, and that it contributes to the solution of national and regional transport and communications problems.

The following general criteria shall be applied in assessing projects for inclusion in the SATCC programme:

i) in keeping with overall SADCC objectives, projects should aim at the reduction of economic dependence of the member States, and/or the enhancement of genuine and equitable regional integration;

ii) reflecting the regional character SADCC, projects should be able to benefit more than one member State;

iii) to ensure consistence with national development objectives, and to assure government commitment, projects proposed for regional cooperation should also be part of the National Development Plans of the member States concerned;

iv) to ensure the comprehensiveness of the overall programme, all projects of regional benefit should be included in the programme, even if additional outside financing is not required;

v) in specific transport modes, projects should generally aim at improvement of facilities and services defined as regional (e.g. regional ports, railways, trunk road network, etc.);

vi) minor transport elements of projects in other sectors should generally be dealt with as integral parts of the projects of those sectors, and thus not included in the SATCC programme.

3. Guidelines for Project Preparation

While the project proposals should first satisfy the above general criteria, they should further be assessed in terms of their specific objectives, priority status in the regional system of transport and communications, potential benefits and probability of successful implementation. To permit such an assessment to be made in an adequate manner, the following criteria should be considered in the course of preparation of projects:

i) cost reduction, improvement of service and institutional strengthening;

ii) relationship and compatibility with existing or planned national transport an communications systems;

iii) relationship and compatibility with existing or planned regional transport an communications systems;

iv) financial implications of the project, including costs of both implementation and subsequent operation, and the measures for securing the necessary funds, particularly member States' provision for local costs;

v) manpower requirements, both for implementation and subsequent operation, and where inadequate manpower is anticipated, provisions should be made to accommodate this deficiency.

4. Procedures

4.1 Admission of New Projects

i) The member State/Entity proposing a new project should, as a rule, present the project to SATCC at least six months in advance of the meeting where it will be considered, with adequate documentation and information to cover the aspects set out in Sections 2 and 3 above;

ii) The project proposal should be presented in the standard form used for SATCC project documentation, and circulated to the member States by SATCC well in advance of the meeting where it is to be considered;

iii) Only in exceptional circumstances, such as in case of emergency projects, could the procedures in (i) and (ii) above be waived;

iv) Member States/Entities proposing new projects may request technical assistance from the SATCC Technical Unit for the preparation of project documentation, if required;

v) All proposals presented to SATCC should include an evaluation and recommendations by the SATCC/Technical Unit;

vi) Each proposal shall be considered by the Coordinating Committee, which shall make appropriate recommendations to the Committee of Ministers, taking into account the information presented, the recommendations of the Technical Unit, and the concrete circumstances relevant to the project;

vii) The final decision on the admission of a new project shall rest with the Council of Ministers, on the recommendation of the SATCC Committee of Ministers.

4.2 Review of Existing Projects

i) All projects already in the programme, which are not being implemented, should be reviewed from time-to-time on the basis of the criteria in Sections 2 and 3 above.

ii) Projects considered to be no longer fulfilling the criteria should be withdrawn from the programme. The decision on the removal of projects from the programme shall rest with the Council of Ministers, on the recommendation of the SATCC Committee of Ministers.

iii) Concerning on-going projects where major changes are occurring, e.g. increases in costs, such changes should be communicated to SATCC by the member State(s) concerned, to facilitate new funding and other appropriate arrangements.

5. Procedure for Contacts with the Cooperating Partners

5.1 Sectoral programmes and projects are, generally communicated through the sectoral programme document produced for the Annual Consultative Conference. However, in between Annual

Consultative Conferences, specific projects may be communicated to interested cooperating partners directly.

In the case of a project located in one country, the member State which is host for the project, assisted by the SATCC Technical Unit, will coordinate contact with interested cooperating partners. Both the SATCC Technical Unit and other interested member States must be kept fully informed of progress in consultations on the implementation of projects, either by direct contact or usually through progress reports submitted to Sectoral meetings. In the case of projects involving more than one country, and general coordination activities or projects involving all member States, the SATCC Technical Unit, assisted as appropriate, by the member States, will coordinate contacts.

6. Agreement and Contract Procedures

The Council of Ministers has agreed that as a matter of general principle, SADCC project agreements should be signed by the member States directly involved and cooperating partners, and witnessed by the SATCC. Such agreements should spell out the rights and obligations of all parties and, in particular, should indicate clearly the reporting and monitoring procedures.

7. Project Implementation, Operation and Monitoring

Implementation refers to the preparation and execution of a project, but does not include subsequent operation and maintenance (e.g. of a plant).

Member States involved in each project, with the assistance of the SATCC Technical Unit, are responsible for its implementation and operation, through their appropriate institutions.

The SATCC Technical Unit will provide the required assistance to member States in all stages of the project.

Financial responsibility for each project will be of the member State(s) involved, and each member State will be responsible for servicing its financial commitments.

It will, in a number of cases, be necessary to have a project steering committee, which is responsible for overseeing and monitoring the implementation of the project and serves to give policy guidance and control. The steering committee would have the following members:

- representatives of the Member Government(s) responsible and involved;

- a representative of the cooperating partners supporting the project;

- and, a representative of SATCC Technical Unit.

The executing agency, implementing the project, will not be a member of the committee, but will participate in the meetings for reporting and liaison purposes.

When a project involves simultaneous and inter-dependent implementation in more than one country, the steering committee will ensure the overall coordination of the implementation of the various parts of the project.

The Sector Coordinating country is responsible for reporting on the status and progress of sectoral programme and project implementation and related activities to the Coordinating Committee and the Committee of Ministers; and to the Council of Ministers and Summit of Heads of State and Government, at the scheduled meetings.

Funding Status of Projects

TRANSPORT AND COMMUNICATIONS

TABLE 2 (A): REGIONAL OPERATIONAL COORDINATION PROJECTS

MULTIMODAL

Project	Project Title	Estimated Cost US$ Million Total	Foreign	Local	Funding Secured & Source US$ Million	Funding under Negotiation US$ Million	Financing Gap US$ Million	Comments/Status
AAA.0.01	Technical Assistance to the SATCC	7.80	7.20	0.60	6.90 (Nordics) 0.30 (ITU) 0.60 Regional		-	Financing for the following period; Nordics 1 March 1990-31 March 1994, Regional 1992-1993 budget, ITU 1990-93.
AAA.0.02	Operational Coordination Development Programme	(7.40)	(7.40)	-	(1.90)	(5.20)	(0.30)	
(01)	Road Infrastructure	0.70	0.70	-	0.70 (DEN)	-	-	New Agreement, June 1991. Financing for the period 1991-93
(02)	Road Traffic & Transport	0.70	0.70	-	0.70 (NOR)	-	-	Financing for the period 1991-93
(03)	Railway Administrations	5.00	5.00	-	-	5.00 (USA)	-	Including: (i) Study on Train Operations improvement; (ii) Reg. Rolling Stock Info. System; (iii) TA for Railways Restructuring.
(04)	Civil Aviation Administrations Techn. Assist. for the Implem. of the Yamoussoukro Declarat.	0.30	0.30	-	-	-	0.30	
(05)	National Airlines	-	-	-	-	-	-	Financed under Project AAA.0.01.
(06)	Port Administration	-	-	-	-	-	-	Included in NORAD financing of project AAA.0.05.
(07)	Shipping, Clearing and Forwarding	-	-	-	-	-	-	Included in NORAD financing of project AAA.0.05.
(08)	Telecommunications	(0.50)	(0.50)	-	(0.50) (CAN)	-	-	SATA Annual Review financed under P.AAA.0.05.
(09)	Meteorology	-	-	-	-	-	-	Financed under Project AAA.0.01.
(10)	Postal Services	-	-	-	-	-	-	Financed under Project AAA.0.01.
(11)	Survey for Regional Frequency Management and Radio Monitoring	0.50	0.50	-	0.50 (AUS)		-	Feasibility study and detail specifications and requirements undertaken through the SATCC-Australia Trust Fund.
(12)	Workshop/Seminar on Telecommunication Policy, Regulation and Restructuring	0.20	0.20	-	-	0.20 (USA)	-	
AAA.0.04	Transit Transport Project	10.30	10.30	-	3.70 (UNDP) 1.30 (USA)	1.40 (USA)	3.90	First phase 1987-1991. Second phase 1992-1996.
AAA.0.05	SATCC Technical Services Fund	17.40	17.40	-	10.50 (CAN) 1.00 (NOR) 1.90 (GER)	3.20 (USA)	-	Ongoing. Canadian part ended June 1992.

					0.80 (AUS)			
AAA.0.06	SATCC Statistics Data System	(0.40)	(0.40)	-	(0.10)	-	(0.30)	
(01)	Telecommunications Statistics Data Base System	0.40	0.40	-	0.10 (SWE)	-	0.30	Studies financed under project AAA.0.1 Financing required to complete the project.
AAA.0.07	SATCC Housing in Maputo	2.20	2.20	-	1.00 (NOR)	-	1.20	Project documents in progress.
AAA.0.08	Regional Transport Operation Plan.	-	-	-	-	-	-	Completed.
AAA.0.09	Package of Transport Statistics Programmes	6.20	6.20	-	-	-	6.20	
AAA.0.10	Update on the Adoption of a Common Freight Nomenclature System within the SADCC region	-	-	-	-	-	-	A.I.R. has been presented to CIDA.
AAA.0.11	Regional Transport & Communications Intergration Study for Southern Africa	5.00	5.00	-	-	5.00 (EEC)	-	New Project 1992.
ROADS								
AAA.1.01	Package of Road Safety Programmes	(16.10)	(16.10)	-	(7.40)	-	(8.70)	Preparation of country programmes is ongoing.
(01)	Road Safety Programme, Angola	2.00	2.00	-	-	-	2.00	
(02)	Road Safety Programme, Lesotho	2.00	2.00	-	-	-	2.00	Programme prepared.
(03)	Road Safety Programme, Malawi	2.00	2.00	-	2.00 (IDA/IBRD)	-	-	Programme prepared.
(04)	Road Safety Programme, Mozambique	1.90	1.90	-	-	-	1.90	Programme prepared.
(05)	Road Safety Programme, Swaziland	1.80	1.80	-	-	-	1.80	Programme prepared.
(06)	Road Safety Programme, Tanzania	1.60	1.60	-	1.60 (IDA/IBRD)	-	-	Programme prepared.
(07)	Road Safety Programme, Zambia	3.80	3.80	-	3.80 (FIN)	-	-	Programme prepared.
(08)	Road Safety Programme, Zimbabwe	1.00	1.00	-	-	-	1.00	Programme prepared.
AAA.1.02	Package of Weighbridge Programmes	(2.20)	(1.80)	(0.40)	(0.50)	-	(1.70)	Descriptions have been prepared.
(01)	Weighbridge Project, Angola	0.40	0.30	0.10	0.10 (ANG)	-	0.30	
(02)	Weighbridge Project, Botswana	0.10	0.10	-	-	-	0.10	
(03)	Weighbridge Project, Lesotho	0.10	0.10	-	-	-	0.10	
(04)	Weighbridge Project, Malawi	0.20	0.20	-	-	-	0.20	
(05)	Weighbridge Project, Mozambique	0.20	0.20	-	-	-	0.20	
(06)	Weighbridge Project, Swaziland	0.30	0.20	0.10	0.10 (SWA)	-	0.20	
(07)	Weighbridge Project, Tanzania	0.30	0.20	0.10	0.10 (TAN)	-	0.20	
(08)	Weighbridge Project, Zambia	0.30	0.20	0.10	0.10 (ZAM)	-	0.20	

(09)	Weighbridge Project, Zimbabwe	0.30	0.30	-	0.10 (SWE)	-	0.20	Funding for an additional 10 weighbridges are sought.
AAA.1.03	Implementation of Harmonized Road Maintenance Management System in SADCC Countries	1.20	1.20	-	-	-	1.20	TOR completed. Financing is being sought.
RAILWAYS								
AAA.2.09	Study of interchange Rules for Rail Operations in the SADCC Region.	-	-	-	-	-	-	Draft Final Report has been prepared.
AAA.2.10	Study, of the Joint Acquisition of Spare Parts for Wagons and Locomotives	-	-	-	-	-	-	Draft Final Report has been prepared.
AAA.2.11	Update of the SADCC Railway Rolling Stock Study	-	-	-	-	-	-	TOR for the study has been approved.
AAA.2.12	Development of Railway Accident Investigation Procedures and Courses for SADCC Railways	-	-	-	-	-	-	TOR for the study has been approved.
BOT.2.10	Equipment for Maintenance Depots for Botswana Railways	4.10	4.10	-	3.00 (JAN) 1.10 (BOT)	-	-	
PORTS AND WATER TRANSPORT								
AAA.3.03	Marine Safety Development Programme for SADCC Coastal States	0.50	0.50	-	-		0.50	TOR revised to cover all SADCC Coastal Countries.
AAA.3.04	Package of Port Statistics Programmes	1.10	1.10	-	-	-	1.10	Detailed project descriptions prepared.
CIVIL AVIATION								
AAA.4.03	Coordinated Ude of Aircraft Maintenance Facilities	0.10	0.10	-	-	0.10 (ADB)	-	Partly covered by an ADB study in combination with P.AAA.4.10.
AAA.4.05	Study on General Aviation Activities	-	-	-	-	-	-	Deleted 1992.
AAA.4.10	Joint Use of Aircraft and Sub-Regional Cooperation	0.50	0.50	-	-	0.50 (ADB)	-	See P.AAA.4.03.
AAA.4.11	Review of SADCC Airline Industry	0.60	0.60	-	0.60 (IDA/IBRD)	-	-	Completed, Final Report March 1992.
AAA.4.12	Civil Aviation Safety Action Plan Regional	-	-	-	-	-	-	Replaced by projects AAA.4.13, AAA.4.14 and AAA.4.15.
AAA.4.13	Planning and Design for Implementation of the Rationalized Plans in the Region.	0.80	0.80	-	-	0.80 (AUS)	-	Replacing part of project AAA.4.12.
AAA.4.14	Feasibility Study of an Inspection Services Unit	0.70	0.70	-	-	-	0.70	Replacing part of project AAA.4.12.
AAA.4.15	Feasibility Study of Independent Operators	2.00	2.00	-	-	-	2.00	Replacing part of project AAA.4.12.

TELECOMMUNICATIONS

AAA.5.03	Study on AXE 10 Repair Centre	0.40	0.40	-	0.10 (AUS)	-	0.30	Australia provided prefeasibility on AXE 10 Repair Centre. Funding is sought for the centre.
AAA.5.04	Implementation Plan for Regional Earth Station Connectivity Project, (1989-1993)	16.90	15.10	1.80	0.50 (CAN) 0.10 (USA) 1.80 (BOT)	1.30 (ZIM) 3.20 (MOZ)	10.00	Study financed under project AAA.0.05 Financing is required for project implementation.
AAA.5.05	Study on the Harmonization of Telephone and Telex Tariffs for the Sub-region	0.30	0.30	-	0.10 (CAN) 0.10 (ITU)	-	0.10	Undertaken by ITU and CIDA with financing from Project AAA.0.05.Financing required to complete the study.
AAA.5.06	Study on the Development of a Regional Manufacturing Strategy	0.50	0.50	-	0.30 (CAN)	-	0.20	CIDA is financing study on cables and mechanical aids. Financing is required for Feasibility Study on Electronic Products.
AAA.5.07	Model Study on Maintenance Procedures and Schedules for PANAFTEL Terrestrial Microwave Radio Systems	0.10	0.10	-	-	-	0.10	
AAA.5.08	Regional Data Communication Strategy Study	0.50	0.50	-	0.50 (BEL)	-	-	Belgium is financing the study.
AAA.5.09	Study on Optimisation of Regional Switching and Signalling Facilities	1.30	1.30	-	-	-	1.30	Negotiations are underway with SWEDEN to undertake the study.
AAA.5.10	Study for Establishment of Regional Maintenance/Repair Workshops	0.20	0.20	-	0.10 (ITU)	-	0.10	Prefeasibility study on Regional Repair Centre undertaken by ITU. Financing is required for project implementation.
AAA.5.11	Workshop/Seminar on Digital Synchronisation Planning	0.20	0.20	-	0.20 (SWE)	-	-	Sweden is financing the study.
AAA.5.12	Establishment of Network Management Control Centres	0.30	0.30	-	0.20 (AUS)	-	0.10	Prefeasibility Study undertaken through the SATCC-Australia Trust Fund.
AAA.5.13	Study on Establishment of Satellite land based Mobile Service	0.30	0.30	-	-	-	0.30	Funding sought.
	Sub-total	107.60	104.80	2.80	46.60	20.70	40.30	

TABLE 2(B): TRAINING PROJECTS

MULTIMODAL

AAA.0.03	Training Development Programme	(2.80)	(2.80)	-	(2.00)	-	(0.80)	
(04)	Training Course in National Telecommunications Network Planning	0.80	0.80	-	0.50 (SWE)	-	0.30	First course run by SIDA in 1989 and follow-up course in 1990. Financing is required for two more follow-up courses.
(05)	Satellite Communications Technology Course	0.40	0.40	-	0.40 (CAN)	-	-	

	Switching Signalling Systems in the Sub-region							
(08)	Local Network (External Plant) Planning	0.40	0.40	-	0.20 (ITA)	-	0.20	Italy financed the first course in 1988.
	Course							Financing is required for follow-up courses in 1992.
(09)	Telecommunications Training Needs Survey	0.40	0.40	-	0.40 (NOR)	-	-	
(10)	Telecommunications Course in Traffic, Tariffs & Accounting Procedures	0.40	0.40	-	0.20 (CAN) 0.10 (ITU)	-	0.10	Courses in traffic, tariff and accounting procedures financed by Canada and ITU respectively. Financing is required for follow-up courses in 1992.
(11)	Seminar on Rural Telecommunications and Planning	0.10	0.10	-	0.10 (AUS)	-	-	
ROADS								
AAA.1.04	Task Group for the Road Transport Training Plan	49.60	49.60	-	-	-	49.60	Task Group Study completed, financed under Project AAA.0.05. Financing sought covers estimated project cost.
RAILWAYS								
AAA.2.06	Development of Railway Training, Regional	8.60	8.60	-	5.50 (GER) 3.10 (SWITZ)	-	-	Based on Study on Railway Training Programmes, project AAA.2.02.
(01)	Study into the Establishment and Location of a Regional Railway Management Development Centre	-	-	-	-	-	-	See project AAA.2.06 (02).
(02)	Updating of the Regional Railway Training Needs Survey	0.50	0.50	-	-	-	0.50	
MOZ.2.13	Development of Railway Training for Portuguese speaking Personnel	26.80	26.30	0.50	9.10 (EEC) 0.50 (MOZ)	17.20 (EEC)	-	Ongoing.
SWA.2.03	Provision of Technical Assistance and Management Training to Swaziland Railway	4.70	3.50	1.20	3.50 (USA) 1.20 (SWA)	-	-	
PORTS AND WATER TRANSPORT								
MOZ.3.05	Port Staff Training Institute, Mozambique	7.90	6.90	1.00	6.90 (NOR) 1.00 (MOZ)	-	-	In progress. Administration and technical assistance through ILO with NORAD funding.
CIVIL AVIATION								
AAA.4.06	Civil Aviation Manpower & Training Requirements Survey	-	-	-	-	-	-	Transferred to ICAO.
MOZ.4.04	SADCC Boeing 737 Flight Training Centre	-	-	-	-	-	-	Deleted 1992.
NAM.4.01	ATC Training, Namibia	-	-	-	-	-	-	Deleted 1992.
TELECOMMUNICATIONS								

ANG.5.06	Expansion of Telecommunication Training Centre, Angola	21.50	21.00	0.50	0.50 (ANG)	-	21.00	
MAL.5.04	Expansion of Telecommunication Training Centre, MPO, Malawi	5.00	1.00	4.00	4.00 (MAL)	-	1.00	
METEOROLOGY								
AAA.6.01	Meteorological Expert Services and Fellowships	6.70	6.70	-	5.50 (FIN)	-	1.20	
POSTAL SERVICES								
AAA.7.01	Postal Training Development Programmes	-	-	-	-	-	-	Deleted 1992.
ANG.7.02	Development of Postal Training in Angola	-	-	-	-	-	-	Deleted 1992.
LES.7.01	Postal Training School, Lesotho	-	-	-	-	-	-	Deleted 1992.
MAL.7.02	Upgrading of Postal Wing of the MCTC in Blantyre, Malawi	-	-	-	-	-	-	Deleted 1992.
MOZ.7.02	Developmnt of Postal Training in Mozambique	-	-	-	-	-	-	Deleted 1992.
	Sub-total	134.10	126.90	7.20	42.80	17.20	74.10	

TABLE 2(C): MAPUTO PORT TRANSPORT SYSTEM PROJECTS

ROADS

LES.1.01	Upgrading of the Road Mohales Hoek - Quthing - Qachas Nek, Lesotho	121.00	106.00	15.00	14.50 (EEC) 15.00 (LES) 34.00 (USA) 6.00 (DEN)	-	51.50	Additional funding required to complete the project. Sengu River bridge financed separately by DANIDA.
LES.1.02	Upgrading and Reconstruction of the Road Taung - Mokhotlong - Sani Top, Lesotho	84.00	67.00	17.00	17.00 (LES)	-	67.00	Feasibility study & engineering design completed (financed by UK). Financing is being sought.
LES.1.03	Upgrading of the Road Thaba Tseka-Taung-Mpiti, Lesotho	116.00	93.00	23.00	23.00 (LES)	-	93.00	Feasibility study has been completed.
LES.1.04	Construction of a Road Ramabanta-Semokong-Sekake, Lesotho	45.00	36.00	9.00	9.00 (LES)	-	36.00	Engineering design of the Ramabanta-Semonkong section completed, financed by Germany.
LES.1.05	Upgrading of the Road Mokhotlong-Oxbow, Lesotho	70.00	60.00	10.00	10.00 (LES) 20.30 (ADB) 10.00 (BADEA) 2.00 (OPEC) 9.00 (Kuwait)	18.70	-	Construction scheduled to commence in October 1992.
MOZ.1.04	Rehabilitation of the Road Maputo -	21.00	17.00	4.00	0.80 (SWE)	-	16.20	Works in the Matola bridge completed.

								Reopening in progress. Additional funding being sought.
MOZ.1.06	Road Linking Southern Zimbabwe with the Maputo Area, Mozambique	25.00	17.50	7.50	7.50 (MOZ)	-	17.50	Financing sought urgently for upgraded service road for Limpopo Railway (cf. Project MOZ.2.06 (C-RD-01)
SWA.1.01	Rehabilitation/Upgrading of the Road Mozambique border at Lomahasha-	22.00	18.70	3.30	5.70 (ADB) 3.20 (SWE)	-	9.80	Work completed on the Lomahasha-Siteki section.
	Siteki-Big Bend.				3.30 (SWA)			
SWA.1.02	Improvement of the Mbabane-Manzini Road, Swaziland	28.90	23.10	5.80	5.80 (SWA)	-	23.10	Studies financed by ADB.
ZIM.1.06	Upgrading of Rutenga-Boli-Sango Road Route 456, Zimbabwe	7.00	7.00	-	-	-	7.00	Funding sought.
RAILWAYS								
BOT.2.01	Rehabilitation of the Main Railway Line Botswana	(101.30)	(75.30)	(26.00)	(41.30)	-	(60.00)	
(02)	Section 2: Francistown to the Northern Border	-	-	-	-	-	-	Completed.
(03)	Section 3: Francistown to Serule	21.30	15.30	6.00	5.30 (PR China) 6.00 (BOT) 10.00 (BOT)	-	-	Works on 88km are ongoing. Expected completion date is June 1992. Work of more than 55km completed.
(04)	Section 4: Gaborone to Serule	80.00	60.00	20.00	20.00 (BOT)	-	60.00	Negotiations commencing with Pr. of China for support of a further 100km.
(05)	Improvement to Signals and Telecommunications System	-	-	-	-	-	-	No estimated costs available.
MOZ.2.01	Rehabilitation of the Mozambique Swaziland Railway	(38.50)	(30.10)	(8.40)	(19.50)	(19.00)	-	
(03)	Rehabilitation of Swaziland Railway Matsapha-Mozambique Border	23.40	19.00	4.40	4.40 (SWA)	19.00 (ITA)	-	Study completed, financed by Italy.
(PR-LG)	Railway Rehabilitation	15.10	11.10	4.00	11.10 (ITA) 4.00 (MOZ)	-	-	Goba Railway Line.
MOZ.2.06	Rehabilitation of the Maputo - Chicualacuala Railway	(224.40)	(213.70)	(10.70)	(92.50)	(39.90)	(92.00)	
(031)	Phase I: Track Renewal, Resleepering, Welding Plant, Communications, etc.	(23.80)	(21.80)	(2.00)	(23.80)	-	-	
(032)	Phase II-A: Completion of Rehabilitation, Core Programme	(117.70)	(106.10)	(5.60)	(85.70)	(21.80)	(4.20)	Ongoing project.
(033)	Phase II-B: Additional Support Programme	(90.70)	(89.80)	(0.90)	(0.90)	-	(89.80)	
(A-BR1/3)	Housing, Buildings including new workers housing (Mahotas)	6.40	5.20	1.20	1.20 (MOZ)	-	5.20	Phase II-B.

(A-LO1/4)	Locomotives: Spares, Materials and Technical Assistance	55.70	55.50	0.20	0.20 (MOZ)	-	55.50	Phase II-B.
(A-WA1/3)	Wagons: Spares, Materials & Technical Assistance	31.50	31.30	0.20	0.20 (MOZ)	-	31.30	Phase II-B.
(C-BG1/2)	Bridge Repairs	2.80	2.70	0.10	0.10 (MOZ) 0.50 (UK)	0.80 (EEC) 1.40 (JAP)	-	Phase II-A.
(C-BR1/3)	Other Buildings and Services, Water, Power Generation	3.70	3.70	-	-	3.70 (EEC)	-	Phase II-A.
(C-FC-01)	Technical Assistance for Financial Control	1.20	1.10	0.10	0.10 (MOZ)	1.10 (USA)	-	Phase II-A. Waiting financing details and costs from CFM(S).
(C-LO1-6)	Locomotives: Spares, Tools, Workshops, Technical Assistance	15.20	15.20	-	-	15.20 (USA)	-	Phase II-A. USD 6.4 million under MOZ.2.12 waiting financing details and costs from CFM(S).
(C-MD-01)	Rail Depot: Equipment	2.00	0.80	1.20	0.80 (UK) 1.20 (MOZ)	-	-	Phase II-A.
(C-OM-1)	Workshop Study	0.60	0.60	-	0.60 (DEN)	-	-	Phase II-A. Study ongoing.
(C-QO1/2)	Quarry Equipment and Ballast	3.80	2.00	1.80	2.00 (UK) 1.80 (MOZ)	-	-	Phase II-A.
(C-RC-01)	Rescue Crane and Rerailing Equipment	5.30	5.30	-	5.30 (GER)	-	-	Phase II-A.
(C-RD1/2)	Road Maputo-Chokwe-Chicualacuala	-	-	-	-	-	-	Phase II-A. USD 25 million under Project MOZ.1.06.
(C-RM1/4)	Track Renewal by BMS	14.00	10.20	3.80	3.80 (MOZ) 0.80 (CAN) 4.00 (UK)	5.40 (EEC)	-	Phase II-A. C-RM-03 deleted.
(C-RZ1/5)	Concrete Sleepers, Ballast, Track Renewal by National Railways of Zimbabwe	32.10	32.10	-	9.30 (CAN) 5.50 (UK) 3.60 (BOT) 11.00 (GER) 1.20 (AUS) 1.50 (SWE)	-	-	
(C-SC1/2)	Stores and Inventory Control	1.50	1.50	-	-	1.50 (USA)	-	Phase II-A. Waiting financing details and costs from CFM(S)
(C-SF1/2)	Sleeper Factory/Sleepers.	5.00	3.70	1.30	1.30 (MOZ) 3.70 (UK)	-	-	Phase II-A.
(C-ST1/2)	Signal System Maputo-Machava	12.40	12.40	-	12.40 (GER)	-	-	Phase II-A.
(C-TA1/3)	Technical Assistance to BMS and CFM	7.70	7.50	0.20	5.20 (UK) 0.80 (POR) 0.20 (MOZ) 1.50 (IDA/IBRD)	-	-	Phase II-A.
(C-TE1/2)	Equipment & Tools for Track Maintenance	7.50	7.50	-	2.90 (CAN)	4.60 (EEC)	-	Phase II-A.

(C-TM1/3)	Truck Materials	6.10	6.10	-	4.90 (CAN) 1.20 (EEC)	-	-	Phase II-A.
(C-WA1-5)	Wagons: Spares, Tools, Buildings, Technical Assistance	-	-	-	-	-	-	Phase II-A. USD 10.6 million under P. MOZ.2.08.
(MJ-RP)	Maputo Junction	6.60	6.20	0.40	0.40 (MOZ)	6.20 (ITA)	-	
SWA.2.01	Rolling Stock for Swaziland Railway	10.40	10.00	0.40	0.40 (SWA)	-	10.00	
SWA.2.04	Dieselization of Swaziland Railway	24.00	24.00	-	-	-	24.00	
SWA.2.05	Provision of Operating, Security and Safety Related Equipment for Swaziland Railway	2.40	2.40	-	-	-	2.40	
SWA.2.06	Integrated Telecommunications for Swaziland Railway	2.10	2.10	-	-	-	2.10	
PORTS & WATER TRANSPORT								
MOZ.3.01	Maputo Port, Mozambique	(121.30)	(115.20)	(6.10)	(16.90)	-	(104.40)	Estimates of costs and funding represent the total of the sub-projects listed below.
(01)	Feasibility Study on Improvement of the Entrance Channel to Maputo Port	1.70	1.40	0.30	0.30 (MOZ)	-	1.40	Dredging of existing channel to 9.4m started July 87, going on.
(02)	Matola Coal Terminal, Mozambique	90.60	89.00	1.60	1.60 (MOZ)	-	89.00	Phase 1 (US$ 1.6 million) completed. Phases 2 and 3 (USD 89.0 million) will be initiated when warranted by foreseen increase in traffic.
(03)	Container Terminal Equipment and Management Assistance, Port of Maputo	29.00	24.80	4.20	1.80 (UK) 9.00 (ITA) 4.20 (MOZ)	-	14.00	Scheme over 5 years.
	Sub-total	1064.30	918.10	146.20	370.70	77.60	616.00	

TABLE 2(D): BEIRA PORT TRANSPORT SYSTEM PROJECTS

MULTIMODAL								
MOZ.0.01	Multimodal projects in Beira Port Transport System Development Plan	(46.60)	(41.00)	(5.60)	(46.60)	-	-	
(MS-G-03)	Procurement of MIS - Hardware	-	-	-	-	-	-	Tender preparation. Costs included in project TA-C-3.
(PR M-02)	Support to Workers	(18.30)	(12.70)	(5.60)	(18.30)	-	-	
(PR-M-02)	B) Workers Transport	1.10	1.10	-	1.10 (SWE)	-	-	Ongoing project (partly terminated).

(PR-M-02)	C) Workers Housing	17.20	11.60	5.60	11.60 (FIN) 5.60 (MOZ)	-	-	Ongoing project.
(PR-M-04)	Core Staff for Beira Corridor Authority	11.70	11.70	-	11.70 (NORDICS)	-	-	Ongoing project.
(PR-M-06)	Training Facilities	1.20	1.20	-	1.20 (IDA/IBRD)	-	-	Tender preparation
(PR-M-10)	Housing for Technical Assistance Personnel	2.30	2.30	-	2.30 (IDA/IBRD)	-	-	Ongoing Project.
(PR-M-11)	Studies A) Private Sector Involvement B) Incentive Scheme	-	-	-	-	-	-	Closed project.
(TA-C-3)	Technical Assistance to Implementation of Management Information System (MIS)	5.90	5.90	-	5.90 (IDA/IBRD)	-	-	Tender preparation.
(TA-C1/2)	Technical Assistance to CFM (C) Central Services	7.20	7.20	-	7.20 (IDA/IBRD)	-	-	Mobilization.
(TA-PR01)	External Training	-	-	-	-	-	-	Ongoing project. Costs included in project PR-M-06.
ROADS								
MOZ.1.01	Road Projects in Beira Port Transport System Development Plan	(25.80)	(25.00)	(0.80)	(11.90)	-	(13.90)	
(RD-CE-1)	Road Rehabilitation Beira-Machipanda	(25.80)	(25.00)	(0.80)	(11.90)	-	(13.90)	
(RD-CE-1)	A)2 Emergency Repairs, Manica Province	5.40	5.40	-	5.40 (EEC)	-	-	Expected to be finalized by the end of June 1992.
(RD-CE-1)	B) Equipment and Technical Assistance to Road Maintenance Units	5.50	4.70	0.80	0.80 (MOZ) 4.70 (ADB)	-	-	Ongoing project.
(RD-CE-1)	C) Reinforcement of the Road	-	-	-	-	-	-	Project documents under elaboration. Financing under negotiation with SIDA.
(RD-CE-1)	D) Reconstruction of the Road	14.90	14.90		1.00 (ADB)	-	13.90	Tender Documents under elaboration.
ZAM.1.04	Rehabilitation of Kafue-Chirundu Road, Zambia	0.70	0.40	0.30	0.40 (USA) 0.30 (ZAM)	-	-	Completed April 1992.
ZIM.1.01	Rehabilitation of Harare-Chirundu Road, Zimbabwe	2.90	1.30	1.60	1.30 (IDA/IBRD) 1.60 (ZIM)	-	-	Completed 1991.
ZIM.1.03	Upgrading of Eastern end of Harare-Mutare-Mozambique Border Road, Zimbabwe	22.00	18.00	4.00	4.00 (ZIM)	-	18.00	The detailed engineering design has been completed, with FINNIDA financing.
RAILWAYS								
MOZ.2.03	Railway Projects in Beira Port Transport System Development Plan	(179.80)	(161.90)	(17.90)	(139.40)	(19.90)	(20.50)	
(R-CE-03)	Track Rehabilitation Blantyre - Border	15.50	12.40	3.10	3.10 (MAL)	12.40 (UK)	-	

(R-CE-04) Rehabilitation of the Sena Railway Line	(81.40)	(68.50)	(12.90)	(73.90)	(7.50)	-	
(R-CE-04) Phase 1) Quarry and Sleeper Factory	18.50	18.50	-	18.50 (ITA)	-	-	Substantially completed during 1990.
(R-CE-04) Phase 2) Restoration of the Railway section Dondo-Inhamitanga (158km)	62.90	50.00	12.90	42.50 (ITA) 12.90 (MOZ)	7.50 (OPEC)	-	Detailed engineering design awaiting signing of country agreement with Italy.
(R-CE-04) Phase 3) Rehabilitation of the Railway sections Inhamitanga-Vila Nova and Dona Ana-Moatize	-	-	-	-	-	-	Project reprogrammed.
(R-CE-05) Study, Rail Link Kafue - Lions Den	0.80	0.80	-	-	-	0.80	
(R-CE-06) Line Doubling Beira to Dondo	-	-	-	-	-	-	No longer included in the Beira Corridor Programme.
(R-CE-07) Track Maintenance Equipment CFM(C)	-	-	-	-	-	-	Completed August 1991.
(R-ME-01) Rehabilitation of Wagons	(4.70)	(4.40)	(0.30)	(2.20)	-	(2.50)	
(R-ME-01) C) Wagon Rehabilitation Programme	2.00	1.90	0.10	1.90 (DEN) 0.10 (MOZ)	-		Ongoing project. See also project TA-R-03.
(R-ME-01) D) Conversion of Wagons to Roller Bearings	2.70	2.50	0.20	0.20 (MOZ)	-	2.50	Awaiting pledge for financing.
(R-ME-02) Procurement of Locomotive Power	(32.20)	(31.70)	(0.50)	(32.20)	-	-	
(R-ME-02) B) Acquisition of new Main-Line Locomotives	25.30	25.30	-	7.60 (JAP) 17.70 (CAN)	-	-	Ongoing Project.
(R-ME-02) C) Acquisition of new Shunting Locomotives	6.90	6.40	0.50	6.40 (IDA/IBRD) 0.50 (MOZ)	-	-	Ongoing Project.
(R-ME-03) Replacement of Malawi Railway Wagons	2.00	2.00	-	-	-	2.00	
(R-ME-04) Rehabilitation of Locomotive Workshop CFM(C)	5.30	5.00	0.30	5.00 (USA) 0.30 (MOZ)	-	-	Ongoing project.
(R-ME-05) Extension of Limbe Workshop	0.60	0.60	-	0.60 (UK)	-	-	
(R-ME-06) Facilities, Spares, Equipment for CFM(C) Workshops	6.20	6.20	-	-	-	6.20	
(R-ME-07) Rescue Cranes and Rerailing Equipment	-	-	-		-	-	Completed.
(R-OP-02) Electrification Study	0.70	0.70	-	-	-	0.70	
(R-ST-02) New Radio Telecommunication for Beira - Machipanda Railway	6.70	6.30	0.40	6.30 (ITA) 0.40 (MOZ)	-	-	Tender procedure.
(R-ST-03) Train Control System CFM(C)	5.10	4.70	0.40	0.40 (MOZ)	-	4.70	Planning phase.
(R-ST-04) Wagon Control System CFM(C)	1.00	1.00	-	-	-	1.00	System analysis/design ongoing.
(R-ST-05) Telephone Exchanges outside CFM(C) Beira	0.50	0.50	-	-	-	0.50	Planning phase.

(R-ST-06)	Solar Power Panels, Blantyre to Border	0.10	0.10	-	-	-	0.10	
(R-TA-02)	Technical Assistance to Malawi Railways	2.00	2.00	-	-	-	2.00	
(TA-R-01)	Technical Assistance to CFM-C Railway Division	(11.10)	(11.10)	-	(11.10)	-	-	
(TA-R-01)	A) Technical Departments (RENFE)	3.50	3.50	-	3.50 (SPA)	-	-	Ongoing project.
(TA-R-03)	Technical Assistance to Rehabilitation of Wagons	1.00	1.00	-	1.00 (DEN)	-	-	Ongoing Project. See also Project R-ME-1 (C).
(TA-R-05)	Technical Assistance to Track Maintenance	2.90	2.90	-	2.90 (AUS)	-	-	Ongoing.
(TA-R1/2)	B) TA and Training. (C/P/R)	7.60	7.60	-	7.60 (IDA/IBRD)	-	-	Mobilization.
PORTS AND WATER TRANSPORT								
MOZ.3.02	Port Projects in Beira Port Transport Development Plan	(225.30)	(217.20)	(8.10)	(199.90)	(20.40)	(5.00)	Estimates of costs & funding represent the total of the sub-projects listed below.
(P-A-01)	Channel Dredging to CD-8 metres, Beira Port	-	-	-	-	-	-	Completed.
(P-A-02)	Navigational Aids, Beira Port	(1.60)	(1.60)	-	(0.90) (SWE)	(0.70) (SWE)	-	Ongoing project. Included in Project MOZ.3.04.
(P-A-03)	Maintenance Dredging	10.60	10.60	-	-	10.60 (EEC)		Ongoing project. Cost increase expected.
(P-CE-01)	Multipurpose and Container Handling Terminal	(74.30)	(74.10)	(0.20)	(74.30)	-	-	
(P-CE-01)	A) Reconstruction of Berths 2-5	69.30	69.10	0.20	64.70 (EEC) 0.20 (MOZ) 4.40 (NET)	-	-	Completed March 1992.
(P-CE-01)	B) Maintenance Building	-	-	-	-	-	-	Completed.
(P-CE-01)	C) Construction of Transit Shed	3.80	3.80	-	3.80 (FIN)	-	-	Completed.
(P-CE-01)	D) Provision of Port Administration Facilities	1.20	1.20	-	-	1.20 (FIN)	-	Project document under elaboration.
(P-CE-02)	New Oil Terminal	28.50	26.70	1.80	1.80 (MOZ) 26.70 (NOR)	-	-	Ongoing project.
(P-CE-03)	Port Railways	22.20	19.20	3.00	19.20 (ITA) 3.00 (MOZ)	-	-	Tender procedure.
(P-CE-04)	Sugar & Cereal Terminal	-	-	-	-	-	-	No longer included in the Beira Corridor Programme.
(P-CE-05)	Cols Storage Facilities	-	-	-	-	-	-	No longer included in the Beira

(P-CE-06) Tobacco Terminal	-	-	-	-	-	-	No longer included in the Beira Corridor Programme.
(P-CE-07) Cotton Terminal	-	-	-	-	-	-	No longer included in the Beira Corridor Programme.
(P-CE-08) Grain Silos (combined with P-CE-4)	-	-	-	-	-	-	No longer included in the Beira Corridor Programme.
(P-CE-09) Coastal Protection Scheme	-	-	-	-	-	-	No longer included in the Beira Corridor Programme.
(P-CE-10) Service Port Facilities	5.60	5.00	0.60	0.60 (MOZ)	-	5.00	No funding pledged.
(P-CE-11) Port Roads	-	-	-	-	-	-	No longer included in the Beira
(P-CE-12) High Capacity Coal Terminal	-	-	-	-	-	-	No longer included in the Beira Corridor Programme.
(P-CE-13) Port Traffic Control and Communication Centre	8.90	8.60	0.30	0.30 (MOZ)	8.60 (DEN)	-	Financing in negotiation.
(P-CE-14) Power Supply for Beira Port	10.70	10.10	0.60	0.60 (MOZ) 10.10 (SWE)	-	-	Tendering procedure.
(P-CE-15) Fire Fighting System	0.70	0.70	-	0.70 (NET)	-	-	Ongoing project.
(P-ME-01) B) New Equipment for Temporary Container Handling Terminal	6.70	6.40	0.30	0.30 (MOZ) 3.80 (FIN) 2.60 (SWE)	-	-	Completed.
(P-ME-01) C) Container Cranes for New Multipurpose and Container Handling Terminal	15.00	14.70	0.30	14.40 (ADB) 0.30 (FIN) 0.30 (MOZ)	-	-	Completed.
(P-ME-01) D) Other Equipment for new Multipurpose and Container Handling Terminal.	8.40	5.40	1.00	2.70 (FIN) 2.70 (SWE) 1.00 (MOZ)	-	-	In preparation.
(P-ME-02) Tugs, Pilot Boats and Line Boats	-	-	-	-	-	-	Completed.
(P-ME-03) Procurement of General Cargo Handling Equipment	2.00	2.00	-	2.00 (BEL)	-	-	Completed.
(P-ME-04) Deep-Sea Pilot Boat	-	-	-	-	-	-	Specifications under elaboration. Cost estimate not yet available.
(P-ST-01) Telecommunications Network, Port and Railways Beira	2.00	2.00	-	2.00 (SWE)	-	-	Tender procedure.
(TA-P-01) A) Technical Assistance to Beira Port.	-	-	-	-	-	-	Completed. Covers the period 1987-1990.
(TA-P-01) B) Technical Assistance to the Temporary Container Terminal	8.60	8.60	-	4.30 (SWE) 4.30 (FIN)	-	-	Covers the period 1988 - June 1992.

(TA-P-02)	B) Technical Assistance to (New) Container Terminal	6.80	6.80	-	3.40 (SWE) 3.40 (FIN)	-	-	In preparation. 2nd. Contract, 1992-94.
(TA-P-03)	Technical Assistance to Port Training	2.60	2.60	-	2.60 (IDA/IBRD)	-	-	Mobilization.
(TA-P-04)	Technical Assistance to Tugboat Operation	3.90	3.90	-	3.90 (DEN)	-	-	Ongoing project.
CIVIL AVIATION								
MOZ.4.03	Civil Aviation Projects in the Beira Port Transport System Development Plan	(23.30)	(22.10)	(1.20)	(11.20)	-	(12.10)	
(C-CE:1)	Development of the Beira Airport Terminal	2.00	2.00	-	-	-	2.00	
(C-CE:2)	Strengthening of Runways in Beira and Tete	4.50	3.60	0.90	0.90 (MOZ)	-	3.60	
(C-CE:3)	Airport Building, Chimoio	1.50	1.20	0.30	0.30 (MOZ)	-	1.20	
(C-ME:2)	Communication and Navigation at Beira, Chimoio and Tete	3.00	3.00	-	1.00 (FRA)	-	2.00	
(C-ME:3)	Fire Fighting Equipment for Beira, Chimoio and Tete	2.50	2.50	-	2.50 (FRA)	-	-	
(C-ME:4)	Maintenance Equipment	0.50	0.50	-	-	-	0.50	
(C-ME:5)	Airport Lighting, Chimoio	6.50	6.50	-	6.50 (DEN)	-	-	
(C-TA:1)	Technical Assistance	2.80	2.80	-	-	-	2.80	
	Sub-total	516.60	477.10	39.50	406.80	40.30	69.50	

TABLE 2(E): NACALA PORT TRANSPORT SYSTEM PROJECTS

ROADS								
MAL.1.01	Study on Upgrading of the Road Mangochi-Mandimba-Mitande, Malawi/Mozambique	0.20	0.20	-	-	-	0.20	An inhouse design for 42km has been completed up to Masuku. Estimated const. cost USD 13.24 million.
ZAM.1.06	Rehabilitation of the Road Lusaka-Chipata, Zambia	73.70	73.70	-	-	73.70	-	Denmark has pledged to finance design and ADB to finance rehabilitation works.
RAILWAYS								
MAL.2.02	Rehabilitation & Acquisition of Locomotives, Rolling Stock & Maintenance Equipment, MR	30.70	30.70	-	-	-	30.70	To provide capacity for the reopening of the Nacala line.
MOZ.2.05	Rehabilitation of the Nacala-Entre-Lagos Railway, Mozambique	(181.50)	(152.10)	(29.40)	(148.70)	-	(32.80)	
(01-B)	Track Rehabilitation (ii) 2nd Phase (Nampula-Cuamba, 346 km)	143.60	121.40	22.20	45.20 (FRA) 30.00 (EEC)	-	2.10	Ongoing.

					26.00 (CAN) 22.20 (MOZ) 12.60 (PORT) 4.00 (ITA) 1.50 (FIN)			
(01-C)	Track Rehabilitation (iii) 3rd Phase (Cuamba-Entre Lagos, 77 km)	18.70	12.80	5.90	5.90 (MOZ)	-	12.80	
(02)	Rehabilitation of Locomotives	3.50	3.50	-	-	-	3.50	Acquisition of new locomotives is included in Project MOZ.2.12
(03)	Rehabilitation of 30 coaches	1.10	1.10	-	-	-	1.10	
(04)	Railway Telecommunications	6.90	6.80	0.10	0.10 (MOZ)	-	6.80	
(05)	Workshops, Equipment and Material	7.70	6.50	1.20	1.20 (MOZ)	-	6.50	Rehabilitation of Wagons is included in P. MOZ.2.08.
PORTS & WATER TRANSPORT								
MOZ.3.03	Rehabilitation of the Port of Nacala	35.00	30.50	4.50	24.00 (FIN) 4.50 (MOZ)	6.50 (FIN)	-	Ongoing project, progressing on schedule.
	Sub-total	321.10	287.20	33.90	177.20	80.20	63.70	

TABLE 2(F): DAR-ES-SALAAM PORT TRANSPORT SYSTEM PROJECTS

ROADS								
MAL.1.03	Road Link Balaka-Salima-Karonga-Uyole, Malawi/Tanzania	47.60	47.60	-	23.30 (EEC) 12.00 (GER) 8.00 (NET) 4.30 (EIB)	-	-	
MAL.1.04	Road Shuttle Service Malawi-TAZARA	1.40	1.40	-	1.40 (USA)	-	-	
TAN.1.03	Rehabilitation/Strengthening of the TANZAM Highway, Tanzania	62.00	41.50	20.50	13.20 (IDA/IBRD) 19.40 (ADB) 6.90 (NOR) 20.50 (TAN)	-	2.00	Ongoing.
ZAM.1.08	Rehabilitation of the TANZAM Highway, Zambia	105.00	105.00	-	-	12.00 (DEN)	93.00	Funding is being sought for implementation.
RAILWAYS								
TAN.2.01	TAZARA 10 Year Development Plan and Malawi-Dar es Salaam Projects	(361.30)	(342.30)	(19.00)	(189.70)	(33.20)	(138.40)	A revised 10-Year Plan has been completed in 1988.
(CE:01)	Rehabilitation of Quarries	23.90	22.20	1.70	17.50 (SWE) 4.70 (EEC) 1.70 (TAZARA)	-	-	

(CE:02)	Permanent Rectification of Landslides	38.00	32.90	5.10	5.10 (TAZARA) 0.60 (AUS)	32.30 (ADB)	-	Implementation to start in March 1992.
(CE:03A)	Mechanized Track Maintenance	22.00	21.90	0.10	2.40 (SWI) 4.80 (EEC) 3.90 (AUS) 0.10 (TAZARA)	-	10.80	Financing sought for two tampers, 1 ballast cleaners, ballast regulators, trolleys and small equipment.
(CE:03B)	Spare and Wear Parts	2.50	2.50	-	2.50 (AUS)	-	-	
(CE:03C)	Manual Track Maintenance	18.00	15.00	3.00	3.00 (TAZARA)	-	15.00	
(CE:04)	Rail Welding	31.70	27.00	4.70	4.70 (TAZARA) 27.00 (AUS)	-	-	Cost related to Phase I. Section Dar es Salaam-Makambako financed. EEC has shown interest to finance remaining part of the track, Phase II.
(CE:05)	Rail Burn Repairs	8.40	7.90	0.50	5.70 (SWE) 2.20 (SWI) 0.50 (TAZARA)	-	-	
(CE:07)	Railway Link TAZARA-Mpulungu Port (Study), Zambia	0.40	0.40	-	-	-	0.40	Study being prepared by TAZARA
(CE:08)	Emergency Bridges	0.90	0.90	-	-	0.90 (YUG)	-	Design of bridges in progress.
(CE:09)	Malawi Cargo Centre, Mbeya	6.40	6.40	-	6.40 (USA)	-	-	Malawi - Dar es Salaam corridor project.
(CE:10)	Malawi Cargo Centre, Dar-es-Salaam	8.60	8.60	-	8.60 (USA)	-	-	Malawi - Dar-es-Salaam corridor project.
(GM:01A)	Technical Assistance to Head Office	3.90	3.90	-	3.90 (USA)	-	-	
(GM:01B)	Job Evaluation	0.60	0.60	-	-	-	0.60	
(GM:02)	Manpower Development Plan & Training	6.90	6.40	0.50	3.00 (NOR) 0.50 (TAZARA) 2.20 (GER) 1.20 (USA)	-	-	
(GM:03)	Project Coordinating Unit	6.20	5.70	0.50	5.70 (NORDICs) 0.50 (TAZARA)	-	-	
(ME:01)	Locomotives	104.30	101.80	2.50	2.50 (TAZARA) 40.70 (USA) 9.80 (GER)	-	51.30	Includes USD 60.0 million for Phase II. USA delivered 17 locomotives in 1990.
(ME:02A)	Goods Wagons, Phase I	-	-	-	-	-	-	Completed.
(ME:02B)	Phase II	30.00	30.00	-	-	-	30.00	
(ME:03)	Trolleys and Trailers	12.50	12.50	-	3.20 (SWI)	-	9.30	39 inspections trolleys delivered.
(ME:04)	Handling Equipment for Goods Depots	0.50	0.50	-	-	-	0.50	
(ME:05A)	Rescue Crane and Rerailing Equipment	6.80	6.60	0.20	6.60 (FIN) 0.20 (TAZARA)	-	-	Agreements on an extention have been concluded.
(ME:05B)	Accident Prevention phase II.	4.00	3.80	0.20	1.70 (FIN)	-	2.10	Includes studies and equipment.

(ME:06A)	Wheel Lathes	-	-	-	-	-	-	Completed.
(ME:06B)	Underfloor Wheel Lathe	2.40	2.40	-	2.40 (EEC)		-	
(ME:07)	Mechanical Equipment for Workshops	10.40	10.40	-	2.00 (EEC)	-	8.40	For German and USA part see ME:01.
(ME:08)	Coaches	10.00	10.00	-	-	-	10.00	
(ME:09)	Malawian Tank Wagons and Tank Containers	1.30	1.30	-	1.30 (USA)	-	-	Malawi - Dar es Salaam corridor project.
(ST:01)	Solar Power Panels	-	-	-	-	-	-	Completed.
(ST:04)	Feasibility Study of Future Telecommunications and Signalling System	0.70	0.70	-	0.70 (DEN)	-	-	Study report submitted in January 1991.
TAN.2.02	Conversion from UIC to AAR Airbrake standard for TAZARA and Malawi Railways	1.90	1.90	-	-	-	1.90	Funding sought.
PORTS AND WATER TRANSPORT								
TAN.3.01	Development of Navigation on Lake Niassa/Nyasa/Malawi, Malawi,Mozambique,Tanzania	(12.40)	(12.40)	-	(12.40)	-	-	Estimates of costs and fundings represent the total of the sub-projects listed below.
(01)	Lake Navigation Study	0.60	0.60	-	0.60 (DEN)	-	-	Last Phase estimated to be completed 1992.
(02)	Lake Ports, Chilumba and Chipoka	5.90	5.90	-	5.90 (USA)	-	-	Completed 90/91.
(03)	Self Propelled Pontoons	3.70	3.70	-	3.70 (GER)	-	-	Completed 90/91.
(04)	Monkey Bay Shipyard	2.20	2.20	-	2.20 (USA)	-	-	Completed 90/91.
TAN.3.02	Development of the Port of Dar es Salaam, TANZANIA.	(271.80)	(237.70)	(34.10)	(225.10)	(13.50)	(33.20)	Estimates of costs and fundings represent the total of the sub-projects listed below.
(01.1)	Kurasini Oil Terminal Rehabilitation (Phase II),Port of Dar es Salaam	-	-	-	-	-	-	Completed.
(01.2)	Kurasini Oil Terminal Strengthening (Phase III), Port of Dar es Salaam	12.00	10.00	2.00	2.00 (TAN)	10.00 (NOR)	-	Financing being sought, discussions are held with Norway.
(02)	Improvement of Harbour Entrance Channel, Port of Dar es Salaam. (Phase I)	28.70	23.90	4.80	14.90 (TAN) 4.80 (TAN) 9.00 (BEL)	-	-	Tender documents ready. Implementation planned to commence 1st quarter of 1992.
(03.2)	Expansion of Container Terminal, Ubungo ICD and Kurasini Warehouse, Phase II	24.30	17.90	6.40	17.50 (IDA/IBRD) 0.40 (FIN) 6.40 (TAN)	-	-	Tender documents under preparations. Implementation planned to commence 1st quarter 1992.
(03.3)	Repairs to piles and fenders, Berths 9, 10 and 11, Port of Dar es Salaam	3.40	3.00	0.40	3.00 (DEN) 0.40 (TAN)	-	-	Studies completed. Implementation planned to commence 1st quarter 1992.

(04)	Construction of Grain Facility, Port of Dar es Salaam	-	-	-	-	-	-	Completed.
(06.1)	Belgian Wharf Reconstruction, Port of Dar es Salaam	2.10	1.60	0.50	0.50 (TAN)	-	1.60	Tender documents ready. Financing being sought.
(06.2)	Modernization of Lighter Wharf, Phase 2; Paving and Services, Port Dar es Salaam	4.60	3.50	1.10	1.10 (TAN)	3.50 (NET)	-	Tender documents ready. Financing being sought, discussions are held with the Netherlands.
(07)	Construction of Tug Berth, Port of Dar-es-Salaam	5.20	5.20	-	-	-	5.20	Tender documents ready. Financing is being sought.
(08.1)	Purchase of Container Handling Equipment, Phase I, Port of Dar es Salaam	42.40	42.40	-	18.90 (FIN) 20.00 (DEN) 3.50 (AUS)	-	-	Equipment started to arrive in June. Commissioning of most of the Equipment completed in January, 1989.
(08.11)	Purchase of Container Handling Equipment, Phase II, Port of Dar es Salaam	18.90	18.90	-	10.20 (FIN)	-	8.70	Financing being sought.
(08.12)	Stand by generators	2.90	2.60	0.30	2.60 (FIN) 0.30 (TAN)	-	-	
(08.2)	Purchase of Copper Handling Equipment, Port of Dar es Salaam	-	-	-	-	-	-	Completed.
(08.3)	Purchase of General Cargo Handling Equipment, Phase I, Port of Dar es Salaam	19.30	15.70	3.60	8.[illegible] (ITA) 2.50 (UK) 0.90 (SWE) 1.30 (CAN) 2.60 (IDA/IBRD) 3.60 (TAN)	-	-	Tenders for Italian equipment evaluated. ODA financed equipment delivered in 1988. Swedish financed equipment delivered in 1987.
(08.31)	Purchase of General Cargo Handling Equipment, Phase II, Port of Dar es Salaam	5.00	5.00	-	5.00 (IDA/IBRD)	-	-	Specifications under preparation.
(08.32)	Purchase of Office Equipment, THA Headquarters and Port of Dar es Salaam	1.20	1.20	-	1.20 (IDA/IBRD)	-	-	Tender documents under preparation.
(09)	Purchase of Floating Craft, Port of Dar es Salaam	17.50	17.50	-	-	-	17.50	Financing being sought.
(10)	Technical Assistance to THA and Improvement of Bandari College Dar es Salaam	4.90	4.90	-	4.10 (NOR) 0.80 (IDA/IBRD)	-	-	
(11)	Rehabilitation of Berths 1-8, Port of Dar es Salaam	46.40	33.80	12.60	26.00 (SWE) 7.80 (NOR) 12.60 (TAN)	-	-	
(12)	Study on New Oil Terminal, Port of Dar es Salaam	0.20	0.20	-	-	-	0.20	
(13)	Study on Increasing Port Capacity	(0.20)	(0.20)	-	(0.20) (CAN)	-		Financing under P.AAA.0.05

	for SADCC Transit Goods, Port of Dar es Salaam							Draft final report submitted in August 1990.
(15)	Improvement of Central Workshop, Port of Dar es Salaam	3.80	3.40	0.40	2.40 (IDA/IBRD) 0.20 (FIN) 0.80 (SWE) 0.40 (TAN)	-	-	
(16)	Port Development Study, Port of Dar es Salaam	1.20	1.00	0.20	1.00 (IDA/IBRD) 0.20 (TAN)	-	-	
(17)	Project Coordination Unit	3.80	3.50	0.30	1.10 (FIN) 0.40 (NET) 1.60 (SWE) 0.40 (IDA/IBRD) 0.30 (TAN)	-	-	Work started in 1985 and the Unit is to be kept on site until end 1993.
(18)	Management Technical Assistance THA Headquarters and Port of Dar es Salaam	24.00	22.50	1.50	7.10 (FIN) 8.60 (IDA/IBRD) 2.00 (NET) 4.20 (SWE) 0.60 (NOR) 1.50 (TAN)	-	-	Work started in 1986 and will be completed in 1993.
	Sub-total	863.40	789.80	73.60	536.20	58.70	268.50	

TABLE 2(G): LOBITO PORT TRANSPORT SYSTEM PROJECTS

MULTIMODAL								
ANG.0.01	Multimodal Projects in the 10-Year Plan for Lobito Port Transport System	(125.90)	(125.90)	-	(64.60)	(3.50)	(57.80)	
(G-CE-1)	Development of the Town of Lobito	60.00	60.00	-	60.00	-	-	Co-financed by Sweden, Norway and the World Bank.
(G-CE-2)	Rehabilitation of Cement Factory	3.00	3.00	-	0.10 (IEB)	-	2.90	Contract for feasibility study awarded.
(G-E-1)	Repair & Extension of Lumaum Hydroelectric Power Plant	42.00	42.00	-	-	-	42.00	Financing to be arranged by Angola.
(G-M-1)	Project Coordination Unit	2.90	2.90	-	2.90 (EEC)	-	-	Tender for technical assistance under preparation.
(G-M-2)	Support to Workers and their Families	7.00	7.00	-	-	3.50 (POR)	3.50	
(G-M-3)	Housing for Technical Assistant Staff in Lobito and Huambo	9.40	9.40	-	-	-	9.40	
(G-M-4)	Rehabilitation of Hotel Terminus	1.60	1.60	-	1.60 (POR)	-	-	Contract awarded.
ROADS								
ANG.1.03	Roads & Road Transport Projects in the 10-Year Development Plan for Lobito Port Transport System	(24.40)	(24.40)	-	-	-	(24.40)	

(RD-CE-1)	Benguela-Lobito Road & Access Roads to the Port and Railway in Lobito	17.40	17.40	-	-	-	17.40	Portugal interested in design of Catumbela Bridge, BADEA interested in co-financing works.
(RD-TR-1)	Reinforcement of the Capacity of the Road Transport Company	7.00	7.00	-	-	-	7.00	
RAILWAYS								
ANG.2.01	Benguela Railway Projects in the 10-Year Development Plan for Lobito Port Transport System	(343.10)	(343.10)	-	(17.00)	(0.90)	(325.20)	
(R-CE-1)	Track Repair and Upgrading	159.90	159.90	-	14.50 (FRA)	-	145.40	See project ANG.3.01 (P-CE-4)
(R-CE-2)	Establishment of Quarries	3.50	3.50	-	-	0.90 (EIB)	2.60	Feasibility study completed financed by E.I.B.
(R-CE-3)	Sleeper Production Plants	3.00	3.00	-	-	-	3.00	Feasibility study completed financed by E.I.B. (see P. R-CE-2)
(R-CE-4)	Track Maintenance Equipment	16.00	16.00	-	-	-	16.00	
(R-CE-5)	Realignment Design Cubal to Huambo	0.60	0.60	-	-	-	0.60	
(R-CE-6)	Realignment Study Huambo to Luau	0.40	0.40	-	-	-	0.40	
(R-E-1)	Electric Supply & Distribution Systems for Lobito, Huambo and Luena	1.80	1.80	-	-	-	1.80	
(R-M-1)	Manpower Development Plan	1.50	1.50	-	0.50 (SPA)	-	1.00	Evaluation ongoing.
(R-M-2)	Upgrading & Extension of Computer Facilities	0.90	0.90	-	0.30 (UNDP)	-	0.60	First phase (training of Angolan programmers) completed, financed by UNCTAD.
(R-M-3)	Railway Training Assistance	15.00	15.00	-	1.50 (SPA)	-	13.50	
(R-M-4)	Technical Assistance for Operation of the Railway	12.50	12.50	-	-	-	12.50	UNCTAD interested.
(R-M-5)	Improvement of Railway Hospitals	6.00	6.00	-	-	-	6.00	Sweden interested.
(R-ME-1)	Rehabilitation & Acquisition of Locomotives	20.00	20.00	-	-	-	20.00	
(R-ME-2)	Rehabilitation & Acquisition of Rolling Stock	65.00	65.00	-	-	-	65.00	France interested.
(R-ME-3)	Completion of Diesel Workshop and Re-equipment of Wheel Shop at Huambo	7.00	7.00	-	-	-	7.00	
(R-ME-4)	Conversion of the Steam Depot at Luena to Diesel Maintenance Depot	1.00	1.00	-	-	-	1.00	
(R-ME-5)	Workshop Facilities at Lobito	0.60	0.60	-	-	-	0.60	Belgium interested.
(R-ME-6)	Review & Acquisition of Spare Parts and	10.30	10.30	-	-	-	10.30	

	Reorganisation of Main Stores							
(R-ME-7)	Rescue Equipment & Accident Prevention Programme	1.10	1.10	-	-	-	1.10	
(R-ME-8)	Installation of 21 Automatic Barriers	1.60	1.60	-	-	-	1.60	
(R-ME-9)	Study on Improvement of Specialist Workshops in Huambo	0.10	0.10	-	-	-	0.10	
(R-OP-1)	Motive Power, Rolling Stock & Operation Plan	0.20	0.20	-	0.20 (SPA)	-	-	Evaluation ongoing.
(R-ST-1)	Train Control System and Telecommunications	14.50	14.50	-	-	-	14.50	
(R-ST-2)	Telephone Exchanges CFB and Lobito Port	0.60	0.60	-	-	-	0.60	
PORTS AND WATER TRANSPORT								
ANG.3.01	Port & Water Tran. Projects in the Ten Year Development Plan for the Lobito Port Transport System	(89.20)	(89.20)	-	(14.00)	(31.00	(44.20)	
(P-CE-1)	Inspection and Reinforcement of Quays	15.80	15.80	-	-	-	15.80	
(P-CE-2)	Grain Bulk Facilities Improvement	8.00	8.00	-	-	8.00 (ITA)	-	Action suspended.
(P-CE-3)	New Coastal Terminal and Service Port Facilities	6.50	6.50	-	-	6.50 (EEC)	-	Evaluation mission assigned to consultant.
(P-CE-4)	Rehabilitation of Port Railways	2.50	2.50	-	2.50 (FRA)	-	-	See Project ANG.2.01 (R-CE-1).
(P-CE-5)	Study on Rehabilitation of Existing Ore Bulk Facilities	0.50	0.50	-	-	0.50 (EEC)	-	Evaluation mission assigned to consultant.
(P-CE-6)	New Multi-purpose Terminal (Study)	1.00	1.00	-	-	-	1.00	
(P-CE-7)	New Container Terminal	1.00	1.00	-	-	-	1.00	
(P-CE-8)	Coastal Protection Works	1.30	1.30	-	-	-	1.30	Financing to be arranged by Angola.
(P-M-1)	Welfare and Office Facilities	3.50	3.50	-	-	-	3.50	
(P-M-2)	Technical Assistance to the Port of Lobito	1.50	1.50	-	-	0.90 (EEC)	0.60	
(P-M-3)	Port School at Lobito, Angola	6.00	6.00	-	-	6.00	-	Funding under consideration by NORAD, Portugal and UNDP.
(P-ME-1)	Rehabilitation of Power and Lighting System	3.50	3.50	-	2.50 (SPA)	-	1.00	Project being reviewed and reevaluated for immediate implementation.
(P-ME-2)	Purchase of General Port Equipment	2.60	2.60	-	-	2.60 (EEC)	-	
(P-ME-3)	Port Maintenance Workshop and Store	3.50	3.50	-	-	3.50 (EEC)	-	

(P-ME-4)	Mobile Cranes Rehabilitation and Scrapping Programme	3.00	3.00	-	-	3.00 (EEC)	-	
(P-ME-5)	Floating Equipment	5.00	5.00	-	-	-	5.00	
(P-ME-6)	Shipyard Rehabilitation	15.00	15.00	-	-	-	15.00	
(P-MS-1)	Maritime Security Programme, Angola	1.00	1.00	-	1.00 (ANG)	-	-	Under implementation.
(P-S-1)	Improvement of the Capacity of the Coastal Shipping Company, Angola	8.00	8.00	-	8.00 (ANG)	-	-	Under implementation.
CIVIL AVIATION								
ANG.4.01	Civil Aviation Projects in the Ten Year Development Plan for the Lobito Port Transp. System	(12.10)	(12.10)	-	-	-	(12.10)	
(CA-CE-1)	Upgrading of Benguela Airport	12.00	12.00	-	-	-	12.00	Italy interested.
(CA-CE-2)	Study on New Airport between Lobito and Benguela	0.10	0.10	-	-	-	0.10	Portugal interested.
	Sub Total	594.70	594.70	0.00	95.60	35.40	463.70	

TABLE 2(H): INTRA-REGIONAL SURFACE TRANSPORT SYSTEM PROJECTS

ROADS								
AAA.1.05	Improved Ferry Service at Kazungula, Botswana/Zambia	3.00	2.00	1.00	1.00 (BOT)	-	2.00	Awaiting the outcome of the study incl. in project AAA.1.06.
AAA.1.06	Feasibility Study for a Bridge Across the Zambezi	0.30	0.30	-	0.30 (CAN)	-	-	Replacing project NAM.1.03.
ANG.1.01	Study on the Road N'Zeto-Soyo	1.10	1.10	-	-	-	1.10	Terms of Reference for feasibility and engineering study have been drafted.
ANG.1.02	Studies of Four Roads in Angola	1.60	1.60	-	-	-	1.60	
BOT.1.01	Partial Reconstruction of Nata-Kazangula Road	16.90	12.00	4.90	3.30 (SWE) 4.90 (BOT)	-	8.70	Works in progress now extended to include further 50 km of reconstruction within the project. Completion due during 1993.
BOT.1.02	Construction of Jwaneng-Mamuno Road Link, Botswana	109.90	84.80	25.10	8.50 (BADEA) 25.10 (BOT) 9.70 (KUW) 36.30 (ADB) 24.70 (JAP)	2.60	3.00	The road has been divided into 3 sections.
BOT.1.04	Study on Maun - Ghanzi Road, Botswana	0.80	0.80	-	-	-	0.80	Pre-appraisal carried out.
BOT.1.05	Rehabilitation of the Lobatse-	60.00	45.00	15.00	1.50 (BOT)	-	43.50	New Project 1992.

MAL.1.02	Upgrading of the Blantyre- Milanje Mocuba Road, Malawi/Mozambique	(40.20)	(36.20)	(4.00)	(4.30)	(35.70)	(0.20)	
(01)	Study on the Upgrading of the Road Blantyre-Milange-Mocuba (Feasibility Study)	0.20	0.20	-	-	-	0.20	
(02)	Study on the Upgrading of the Road Biantyre-Milanje-Mocuba (Design)	0.30	0.30	-	0.30 (EEC)	-	-	The joint venture design consultant has completed all the documents for the Malawi Section.
(03)	Study on the Upgrading of the Road Blantyre-Milanje-Mocuba (Construction)	39.70	35.70	4.00	4.00 (MAL)	35.70 (EEC)	-	EEC has advised in early 1992 for the project to be postponed.
MAL.1.05	Study on the Upgrading of Karonga -Chitipa-Nakonde-Mpulungu Road, Malawi/Zambia	0.60	0.60	-	0.60 (ADB)	-	-	Funding relates to Phase I.
MOZ.1.02	Rehabilitation of the Zimbabwe-Tete-Malawi Road, Mozambique	18.60	12.60	6.00	12.60 (KUW) 6.00 (MOZ)	-	-	Expected to be completed by the end of 1993.
MOZ.1.05	Study on Unity Bridge and Access Roads, Mozambique/Tanzania	0.90	0.90	-	-	-	0.90	TOR have been prepared.
NAM.1.01	Construction of the Gobabis to Buitepos Roads, Namibia	21.30	10.70	10.60	10.60 (NAM) 10.70 (NAM)	-	-	
NAM.1.02	Improvement of the Trans-Caprivi Highway, Namibia	125.70	112.00	13.70	13.70 (NAM)	-	112.00	
NAM.1.04	The Ovambo Road Network Improvement Master Plan, Namibia	0.70	0.40	0.30	0.40 (SWE) 0.30 (NAM)	-	-	
NAM.1.05	Construction of a bitumen surfaced road between Goageb and Aus, Namibia	23.20	18.70	4.50	4.50 (NAM)	-	18.70	
NAM.1.06	Climbing/Passing Lanes on Road between Windhoek and Windhoek International Airport, Namibia	2.70	-	2.70	2.70 (NAM)	-	-	
NAM.1.07	Kavango-Ovambo road link, Namibia	0.10	-	0.10	0.10 (NAM)	-	-	New Project 1992.
TAN.1.01	Rehabilitation and Upgrading of the Mtwara-Songea-Mbamba Bay Road, Tanzania	74.90	58.20	16.70	33.00 (FIN) 17.50 (EEC) 6.40 (IDA/IBRD) 16.70 (TAN)	-	1.30	Ongoing.
ZAM.1.01	Study on Angola-Zambia Road Link, Zambia	0.20	0.20	-	-	0.20 (EEC)	-	Further work adjourned for the time being. Construction costs are estimated roughly at USD 129.5 million.
ZAM.1.03	Rehabilitation of the Lusaka-Kafue-Livingstone-Kazungula-Katima Mulilo Road, Zambia	137.20	137.20	-	22.80 (USA) 9.00 (NOR)	-	105.40	
ZAM.1.05	Rehabilitation of the Lusaka-Kapiri-	57.00	57.00	-	15.00 (EEC)	-	9.00	

	Chingola-Zaire Border Road, Zambia				33.00 (DEN)			
ZAM.1.07	Improvement of the Road Lusaka-Mongu, Zambia	63.30	63.30	-	-	-	63.30	Estimated costs relate to Kaoma-Mongu.
ZIM.1.05	Rehabilitation of Harare-Nyamapanda Route 202	5.00	5.00	-	-	-	5.00	Funding sought.
ZIM.1.07	Pandamatenga-Victoria Falls Road Junction, Route 746/745 (85 km)	16.00	9.30	6.70	6.70 (ZIM)	-	9.30	New Project 1992.
RAILWAYS								
BOT.2.07	Establishment of Dry Ports/ ICD's in Botswana	5.70	5.20	0.50	5.20 (DEN) 0.50 (BOT)	-	-	Denmark has financed study and will finance terminal in Gaborone.
LES.2.01	Establishment of Dry Port/ICD in Lesotho	1.40	1.00	0.40	0.40 (LES)	-	1.00	Study completed financed by EEC.
MAL.2.03	Establishment of Dry Ports/ICD's in Malawi	4.00	3.20	0.80	0.50 (DEN) 0.80 (MAL)	2.70 (DEN)	-	Study financed by Denmark.
MAL.2.04	Improvement of Communications Systems, Malawi Railways	0.80	0.80	-	-	-	0.80	
MOZ.2.08	Rehabilitation and Maintenance of Wagons - CFM, Mozambique	30.10	27.00	3.10	2.80 (ITA) 3.10 (MOZ)	4.20 (ITA)	20.00	
MOZ.2.11	Computerized Wagon Control System for CFM, Mozambique	15.30	13.20	2.10	6.40 (KUW) 2.10 (MOZ)	-	6.80	
MOZ.2.12	Rehabilitation and Acquisition of Locomotives for CFM, Mozambique.	65.70	61.40	4.30	21.00 (USA) 40.40 (JAP) 4.30 (MOZ)	-	-	Feasibility study carried out by RITES.
SWA.2.02	Establishment of Dry Port/ICD in Swaziland	2.80	2.60	0.20	2.60 (DEN) 0.20 (SWA)	-	-	Danish appraisal mission carried out. Report outstanding.
ZAM.2.01	Zambia Railways 10-Year Development	(354.80)	(267.00)	(87.80)	(134.00)	(10.20)	(210.60)	
(CE:1)	Track Renewal Sinwani to Livingstone	33.60	12.30	21.30	10.80 (ITA) 21.30 (ZAM)	-	1.50	
(CE:2)	Track Repair and Upgrading	75.00	30.00	45.00	45.00 (ZAM)	-	30.00	
(CE:3)	Establishment of Quarries	10.20	7.80	2.40	3.90 (ITA) 2.40 (ZAM)	-	3.90	
(CE:4)	Replacement of Kafue Railway Bridge	17.80	14.00	3.80	3.80 (ZAM)	-	14.00	
(CE:5)	Track Maintenance Equipment	3.20	2.60	0.60	0.60 (ZAM)	-	2.60	
(CE:6)	Realignment in the Kafue-Lusaka Section	3.20	2.60	0.60	0.60 (ZAM)	-	2.60	Study in phase I USD 0.2 million.
(CE:7)	Replacement of the Itawa Bridge	1.00	0.80	0.20	0.20 (ZAM)			
(CE:8)	Upgrading of Mulobezi Line to Branch Line Standard	5.30	1.50	3.80	3.80 (ZAM) 1.50 (ZAM)			

(CE:9)	Construction of Mchinji-Chipata Rail Link and Feasibility Study for Rail Link connecting ZR and TZR w/MLW	8.50	4.50	4.00	4.00 (ZAM)	-	4.50	
(GM:1)	Technical Assistant Staff	19.30	19.00	0.30	0.30 (ZAM)	-	19.00	
(GM:2)	Training Facilities and Fellowship	3.50	3.40	0.10	0.10 (ZAM)	-	3.40	
(GM:3)	Performance Related Remuneration Scheme	1.20	1.00	0.20	0.20 (ZAM)	-	1.00	
(GM:4)	Study on the future of Mulobezi Line	0.40	0.30	0.10	0.10 (ZAM)	-	0.30	
(ME:1)	Locomotives	92.40	91.70	0.70	0.70 (ZAM) 30.00 (ZAM)	-	61.70	Study USD 0.5 million financed under P.AAA.0.05. Draft Final Report prepared. 15 locomotives being procured using own resources.
(ME:2)	Goods Wagons	6.00	6.00	-	-	-	6.00	
(ME:3)	Passenger Coaches	32.10	31.80	0.30	0.30 (ZAM)	-	31.80	
(ME:4)	Air Brakes	11.30	9.70	1.60	1.60 (ZAM)	-	9.70	Study to be carried out in Phase I.
(ME:5)	Inspection and Gang Trolleys	1.70	1.60	0.10	0.10 (ZAM)	-	1.60	
(ME:6)	Breakdown Cranes and Rerailing Equipment	3.30	3.20	0.10	0.10 (ZAM)	-	3.20	
(ME:7)	Workshop Equipment	10.20	9.60	0.60	0.60 (ZAM)	-	9.60	
(ME:8)	Electric Arc Furnance and Steel Rerolling Mill	2.00	1.80	0.20	0.20 (ZAM)	-	1.80	
(ST:1)	Replacement of Track Circuit Bond Wires	0.70	0.50	0.20	0.20 (ZAM)	-	0.50	
(ST:2)	Repair and Replacement of Line Side and Exchange Equipment	9.40	8.40	1.00	1.00 (ZAM)	8.40 (AUS)	-	
(ST:3)	Radio Control System for the Choma - Masuku Branch Line	0.50	0.40	0.10	0.10 (ZAM)	0.40 (AUS)	-	
(ST:4)	Radio Communications System on the Mulobezi Branch Line	0.50	0.40	0.10	0.10 (ZAM)	0.40 (AUS)	-	
(ST:5)	Police Mobile Radio System	0.60	0.50	0.10	0.10 (ZAM)	0.50 (AUS)	-	
(ST:6)	Train Reporting System	0.60	0.50	0.10	0.10 (ZAM)	0.50 (AUS)	-	
(ST:7)	Expansion of Digital Radios and Multiplex to Kitwe	1.00	0.80	0.20	0.20 (ZAM)	-	0.80	
(ST:8)	Replacement of Message Switching Unit	0.30	0.30	-	-	-	0.30	
ZIM.2.01	Track Repair & Wagon Maint. Equipment NRZ, Zimbabwe	1.10	0.60	0.50	0.60 (UK) 0.50 (ZIM)	-	-	Completed.
ZIM.2.02	Equipment for Central Elect. Workshop, NRZ, Zimbabwe	0.40	0.40	-	0.40 (AUS)	-	-	Completed.

ZIM.2.03	Telecommunications, Signalling and Wagon Control, NZR	20.00	13.90	6.10	6.10 (ZIM) 4.80 (GER) 1.70 (FIN)	-	7.40	
ZIM.2.04	Acquisition and Rehabilitation of Locomotives, National Railways of Zimbabwe	46.90	44.80	2.10	44.80 (USA) 2.10 (ZIM)	-	-	13 new locomotives are due to be delivered in Sept.92. 26 locomotives have been rehabilitated. Rehabilitation is ongoing.
ZIM.2.05	Acquisition of Coaches for the National Railways of Zimbabwe	90.00	45.00	45.00	45.00 (ZIM)	-	45.00	Funding sought.
ZIM.2.06	Procurement of Rail Trolleys for the National Railways of Zimbabwe	1.00	1.00	-	1.00 (ZIM)	-	-	Completed.
ZIM.2.07	Replacement of 1961 General Purpose Wagons	115.00	30.00	85.00	85.00 (ZIM)	-	30.00	Funding sought.
ZIM.2.08	Procurement of 39 Diesel Electric Locomotives	51.80	51.80	-	-	-	51.80	Funding sought.
ZIM.2.09	Replacement of CTC and Signalling System Harare-Mutare	7.10	5.00	2.10	2.10 (ZIM)	-	5.00	Funding sought.
PORTS AND WATER TRANSPORT								
ANG.3.02	Development of the Port of Luanda	(32.50)	(28.60)	(3.90)	(10.60)	-	(21.90)	Estimates of costs and funding represent totals for the sub-projects listed below.
(01)	Container and Ro/Ro Terminal	10.70	9.10	1.60	1.60 (ANG)	-	9.10	TOR of a study have been prepared.
(02)	Construction of a Grain Terminal and Silos	12.70	10.80	1.90	1.90 (ANG) 3.70 (ANG)	-	7.10	Financing being sought for civil works.
(03)	Modernisation and Enlargement of Electrical Systems	5.50	5.50	-	3.00 (ANG)	-	2.50	Financing being sought for remainder.
(04)	Earth Works, Port of Luanda	-	-	-	-	-	-	Completed. Financed by Angola.
(05)	Construction of Canteen Facilities	3.60	3.20	0.40	0.40 (ANG)	-	3.20	
MOZ.3.04	Navigational Aids, Mozambique	15.40	14.70	0.70	14.70 (SWE) 0.70 (MOZ)	-	-	
(02)	Buoy Handling and Maintenance Vessel, Mozambique	10.80	10.80	-	10.80 (DEN)	-	-	Agreement signed June 1987. Vessel delivered in 1990.
TAN.3.03	Coastal Navigational Aids, Tanzania	0.20	0.20	-	0.20 (NOR)	-	-	Feasibility study completed October 1989.
ZAM.3.01	Study of the Navigability of the Zambezi and Shire Rivers	0.30	0.30	-	-	-	0.30	Steering Committee has been established.
	Sub-total	1654.30	1298.40	355.90	812.30	55.60	786.40	

TABLE 2(I): CIVIL AVIATION PROJECTS

	Plan, Angola	-	-	-	-	-	-	Replaced by projects ANG.4.03,ANG.4.04, ANG.4.05, ANG.4.06 and ANG.4.07.
ANG.4.03	Technical Assistance to ENANA	3.10	2.40	0.70	0.70 (ANG)	-	2.40	Replacing part of project ANG.4.02.
ANG.4.04	Telecoms and Navaids for Luanda Airport	2.90	2.80	0.10	0.10 (ANG)	-	2.80	Replacing part of project ANG.4.02.
ANG.4.05	Technical Assistance to DNAC	2.80	2.80	-	-	-	2.80	Replacing part of project ANG.4.02.
ANG.4.06	Navigation Aids for Luanda FIR	1.80	1.60	0.20	0.20 (ANG)	-	1.60	Replacing part of project ANG.4.02.
ANG.4.07	Luanda Airport Master Plan Study	0.70	0.70	-	-	-	0.70	Replacing part of project ANG.4.02.
BOT.4.02	Contingency Improvement to Gaborone Airport	8.00	5.00	3.00	3.00 (BOT) 5.00 (BOT)	-	-	Project completed.
BOT.4.03	Flight Information Region for Botswana	-	-	-	-	-	-	Project completed. FIR became operational in Ocotober 1991.
LES.4.03	Acquisition of New Aircraft for Air Lesotho	-	-	-	-	-	-	Withdrawn.
LES.4.05	Extension of Moshoeshoe I, International Airport, Lesotho	-	-	-	-	-	-	Withdrawn.
LES.4.06	Rehabilitation of Telecommunications for Lesotho	0.40	0.30	0.10	0.10 (LES)	-	0.30	
MAL.4.01	New Airport at Mzuzu, Malawi	-	-	-	-	-	-	Deleted 1992.
MAL.4.02	Technical Assistance to the DCA	0.70	0.70	-	-	-	0.70	
MOZ.4.05	Development of Maputo Airport	-	-	-	-	-	-	Replaced by projects MOZ.4.11, MOZ.4.12, and MOZ.4.13.
MOZ.4.06	Development of Inhambane Airport	-	-	-	-	-	-	Deleted 1992.
MOZ.4.07	Development of Vilanculos Airport	-	-	-	-	-	-	Deleted 1992.
MOZ.4.08	Improvement of ATC Equipment in Beira FIR, MOZAMBIQUE	8.00	8.00	-	-	-	8.00	
MOZ.4.09	Civil Aviation Safety Action Plan, Mozambique	-	-	-	-	-	-	Replaced by projects MOZ.4.10, MOZ.4.11, MOZ.4.12, and MOZ.4.13.
MOZ.4.10	Telecoms and Navaids for Beira FIR	2.80	2.60	0.20	0.20 (MOZ)	-	2.60	Replacing part of project MOZ.4.09.
MOZ.4.11	Technical Assistance to ADM	2.20	1.90	0.30	0.30 (MOZ)	-	1.90	Replacing part of projects MOZ.4.05 and MOZ.4.09.
MOZ.4.12	Maputo Airport Master Plan Study	0.70	0.70	-	-	-	0.30	Replacing part of projects MOZ.4.05 and MOZ.4.09.
MOZ.4.13	Technical Assistance to DNAC	2.10	2.10	-	-	-	2.10	Replacing part of projects MOZ.4.05 and MOZ.4.09.
NAM.4.02	Installing of an Air Traffic Control	-	-	-	-	-	-	Deleted 1992.

	Radar at Windhoek Airport, Namibia							
NAM.4.06	Civil Aviation Safety Action Plan, Namibia	-	-	-	-	-	-	Replaced by projects NAM.4.07 and NAM.4.08.
(NAM:1)	Instruments Landing System at Windhoek Airport	1.90	1.80	0.10	0.10 (NAM) 1.80 (BEL)	-	-	Under implementation.
NAM.4.07	Technical Assistance to DCA	1.40	1.40	-	-	-	1.40	Replacing part of project NAM.4.06.
NAM.4.08	En-route Navigation Aids for Windhoek FIR	2.00	1.80	0.20	0.20 (NAM)	-	1.80	Replacing part of project NAM.4.06.
SWA.4.01	Development of Matsapha Airport, Swaziland	-	-	-	-	-	-	Replaced by project SWA.4.06.
SWA.4.03	Development of Royal Swazi National Airways	-	-	-	-	-	-	Included in project AAA.4.10.
SWA.4.04	Civil Aviation Safety Action Plan, Swaziland	-	-	-	-	-	-	Replaced by project SWA.4.05 and SWA.4.06.
SWA.4.05	Technical Assistance to the Civil Aviation Branch	1.20	1.20	-	-	-	1.20	Replacing part of project SWA.4.04.
SWA.4.06	Development of Matsapha Airport	15.00	13.00	2.00	2.00 (SWA)	-	13.00	Replacing project SWA.4.01 and part of project SWA.4.04.
TAN.4.01	Civil Aviation Safety Action Plan, Tanzania	-	-	-	-	-	-	Replaced by projects TAN.4.02, TAN.4.03, TAN.4.04, TAN.4.05 and TAN.4.06.
TAN.4.02	Technical Assistance to the DCA	1.30	1.30	-	-	-	1.30	Replacing part of project TAN.4.01.
TAN.4.03	Dar Es Salaam Airport Facilities Repairs	0.50	0.50	-	-	-	0.50	Replacing part of project TAN.4.01.
TAN.4.04	Telecoms and Navaids for Dar es Salaam FIR	4.40	4.20	0.20	0.20 (TAN)	-	4.20	Replacing part of project TAN.4.01.
TAN.4.05	Study and Design of New Organisational Structure for Civil Aviation Sector	0.90	0.90	-	-	-	0.90	Replacing part of project TAN.4.01.
TAN.4.06	Upgrading of the Flight Calibration Unit	7.00	7.00	-	-	-	7.00	Replacing part of project TAN.4.01.
ZAM.4.01	Study on the Improvement of Livingstone, Ndola & Southdown Airports, Zambia	-	-	-	-	-	-	Deleted 1992.
ZAM.4.04	Study on New Hangar at Lusaka International Airport, Zambia	-	-	-	-	-	-	Included in project AAA.4.03.
ZAM.4.07	Civil Aviation Safety Action Plan, Zambia	-	-	-	-	-	-	Replaced partly by projects ZAM.4.08, ZAM.4.09, ZAM.4.10 and ZAM.4.11.
(ZAM:2)	Replacement of Lusaka Airport Airfield Lighting	2.60	2.50	0.10	2.50 (BEL) 0.10 (ZAM)	-	-	Under implementation.
ZAM.4.08	Technical Assistance to NACL	2.20	2.00	0.20	0.20 (ZAM)	-	2.00	Replacing part of project ZAM.4.07.
ZAM.4.09	Rehabilitation of Lusaka Airport Runway	5.50	3.30	2.20	2.20 (ZAM)	-	3.30	Replacing part of project ZAM.4.07.

ZAM.4.10	Telecoms and Navaids for Lusaka Airport and FIR	4.00	3.50	0.50	0.50 (ZAM)	-	3.50	Replacing part of project ZAM.4.07.
ZAM.4.11	Technical Assistance to ZASTI	2.20	2.00	0.20	0.20 (ZAM)	-	2.00	Replacing part of project ZAM.4.07
ZIM.4.03	Modernisation of AFTN Message Switching Centre at Harare International Airport	2.10	2.10	-	2.10 (GER)	-	-	Completed December 1991.
ZIM.4.04	Improvement and Expansion of Radar Coverage, Zimbabwe	24.00	24.00	-	12.00 (UK)	-	12.00	Phase I completed.
ZIM.4.05	Development of Harare Airport	100.00	30.00	70.00	70.00 (ZIM)	-	30.00	
	Sub-total	214.40	134.10	80.30	103.70	0.00	110.70	
TABLE 2(J): TELECOMMUNICATIONS PROJECTS								
ANG.5.01	Telecommunication Projects in the 10-Year Development Plan for Lobito Port Transport System	(43.70)	(43.70)	-	(5.60)	-	(38.10)	
(T-M-1)	Technical Assistance to ENATEL	2.50	2.50	-	2.50 (SWE)	-	-	Funded by SIDA.
(T-MC-1)	Provision of HF Radio Maritime Communications to Lobito Harbour	0.80	0.80	-	0.80 (NOR)	-	-	Funded by NORAD.
(T-MC-2)	Expansion of Maritime Communication Facilities	10.40	10.40	-	-	-	10.40	Study by BTI (UK) completed. Project rescoped.
(T-PT-1)	Microwave Link Benguela/Lobito-Luau	11.40	11.40	-	-	-	11.40	
(T-PT-2)	Spur Routes along the Benguela/Lobito-Luau Corridor	5.90	5.90	-	-	-	5.90	
(T-PT-3)	Extension/Rehabilitation of Switching & Outside Plant along the Corridor	9.10	9.10	-	-	-	9.10	
(T-PT-4)	Rehabilitation of Troposcatter Link Malange-Saurimo-Luena-Zambia	1.30	1.30	-	-	-	1.30	Postponed due to security situation. Funding under consideration by NORAD.
(T-PT-5)	Microwave Link Luanda-Benguela/Lobito	2.30	2.30	-	2.30 (ADB)	-	-	Funded by ADB.
ANG.5.02	Expansion of International Telecommunication Services, Angola	38.00	32.40	5.60	32.40 (ADB) 5.60 (ANG)	-	-	Near completion.
ANG.5.03	Microwave Link Luanda-Cabinda	5.10	4.10	1.00	1.00 (ANG)	-	4.10	
ANG.5.08	Provision and Expansion of National Telex Exchanges, Angola	2.40	2.00	0.40	0.40 (ANG) 2.00 (ADB)	-	-	Funded by ADB.
ANG.5.09	Provision of Digital Exchanges for Angola Development Programme (1990 - 2000)	70.00	52.00	18.00	18.00 (ANG)	-	52.00	

ANG.5.10	Provision of Domestic Satellite Network ANGOSAT for Angola	70.00	65.00	5.00	5.00 (ANG) 16.00 (FRA)	-	49.00	France has financed part of project.
BOT.5.03	Expansion of the Microwave Trunk Network, Botswana (Phase 3)	34.40	28.40	6.00	6.00 (BOT) 15.50 (NOR)	-	12.90	Ghanzi-Jwaneng contract signed. Ghanzi-Mamuno is likely to be financed by Norway as well in conjunction with Project NAM.5.03.
BOT.5.05	Rural Telecommunications Development for Botswana	9.30	0.20	9.10	0.20 (ADB) 9.10 (BOT)	-	-	Study completed financed by ADB, and accepted by Botswana Govet. Botswana Tele Corp. is implementing the recommendations of the study. Add. financing is sought.
LES.5.02	Rural Communication System, LESOTHO	10.10	9.90	0.20	0.20 (LES)	-	9.90	CIDA has provided USD 0.1 million for study under P. AAA.0.05. Financing is required for project implementation.
LES.5.03	Rural Automatic Telephone Exchanges, Lesotho	3.00	2.50	0.50	0.50 (LES)	-	2.50	
LES.5.04	Fundamental Master Plan and Planning Unit, Lesotho	0.40	0.30	0.10	0.30 (UNDP) 0.10 (LES)	-	-	
LES.5.05	Provision of New ITSC and Digitalisation of National Exchanges, Lesotho	7.10	6.60	0.50	0.50 (LES)	-	6.60	
MAL.5.03	Supply of Digital Equip. for the Expansion of Tele. Exchanges in Blantyre-Lilongwe-Zomba	28.00	26.00	2.00	2.00 (MAL) 26.00 (ADB)	-	-	Financed by ADB.
MOZ.5.01	National/Regional Satellite Communication System of Mozambique	44.10	43.60	0.50	33.70 (FRA) 4.30 (KUW) 5.60 (CAN) 0.50 (MOZ)	-	-	CIDA will provide funds for the installation of the stations between Pemba and Lichinga. France will finance the other Provincial Stations.
MOZ.5.03	National Telecomms Development Proj. with Connections to Neighbouring Countries (Regional Part)	347.70	307.90	39.80	55.20 (ITA) 15.90 (ADB) 13.80 (SWE) 8.10 (BADEA) 6.00 (NOR) 39.80 (MOZ) 26.20 (GER)	24.00 (ITA)	158.70	Parts of the proj. related to BCA are presented under P.MOZ.5.05.
MOZ.5.05	Telecommunication Projects in Beira Port Transport System Development Plan	(22.10)	(20.10)	(2.00)	(4.80)	-	(17.30)	
(T-CE-1)	Spur Routes Beira-Machipanda, Mozambique	3.70	3.30	0.40	0.40 (MOZ)	-	3.30	
(T-CE-2)	Crossborder Section of the Beira-Chimoio-Mutare Digital Microwave Link	2.80	2.70	0.10	2.70 (ITA) 0.10 (MOZ)	-	-	Ongoing project.
(T-CE-3)	Digital Microwave Link Beira-Caia-Tete, Mozambique	8.70	7.80	0.90	0.90 (MOZ)	-	7.80	
(T-CE-4)	Spur Routes along Beira-Vila Nova da Fronteira, Malawi Corridor	6.30	5.70	0.60	0.60 (MOZ)	-	5.70	

MOZ.5.06	Maritime Radio Communication Project, Mozambique	9.50	9.00	0.50	0.50 (MOZ) 0.30 (NOR)	2.60	6.10	Existing equipment Survey completed by Norway. Italy financed the feasibility study. Financing is required for implementation.
NAM.5.01	Extension of International Telecommunications Services, Namibia	14.50	13.50	1.00	1.00 (NAM)	-	13.50	
NAM.5.02	Telecommunications Master Plan Study, Namibia	3.70	3.60	0.10	0.10 (NAM)	1.80 (SWE)	1.80	SIDA is to finance study on establishment of P and T Corporation.
NAM.5.03	Extension of Backbone Trunk Network, Namibia	32.00	30.00	2.00	2.00 (NAM)	11.00 (NOR) 3.70 (BEL)	15.30	Norway is to finance the Namibia/Botswana Microwave link.
SWA.5.05	Extension of Nat. Switching Centre and Associated Network Digitalization, Swaziland	12.00	10.00	2.00	2.00 (SWA)	10.00	-	Tenders for equipment incl. financing under evaluation.
TAN.5.02	Extension of ITSC Capacity, and Associated Telephone Exchanges Dar es Salaam, Tanzania	62.00	60.00	2.00	6.20 (BEL) 2.00 (TAN)	-	53.80	Belgium has financed the Provision of the ITSC and other exchanges. Financing required for remaining part of the project.
TAN.5.03	Standard A Earth Station Satellite Station at Dar-es-Salaam, Tanzania	12.00	11.50	0.50	11.50 (ITA) 0.50 (TAN)	-	-	Completed in 1991.
TAN.5.04	New Transit Digital Telephone and Telex Exchanges for Dodoma, Tanzania	3.10	2.40	0.70	0.70 (TAN)	-	2.40	
TAN.5.05	Digital Microwave Link Dar-Dodoma-Zanzibar and Exp. of Multiplex Equip. at Dodoma	20.00	17.70	2.30	2.30 (TAN)	-	17.70	
TAN.5.07	Provision of Digital Microwave Link Dar es Salaam-Mtwara-Songea and Exchange at Songea	30.00	30.00	-	-	-	30.00	
TAN.5.08	Provision of Digital Exchanges, Tanzania	44.10	40.50	3.60	1.80 (CAN) 12.00 (JAP) 2.00 (ADB) 3.60 (TAN) 4.00 (BEL) 5.00 (IDA/IBRD)	5.50	10.20	Additional funds required to complete the project.
TAN.5.09	Rehabilitation of Trunk PENAFTEL Links, TANZANIA	20.90	18.90	2.00	2.00 (TAN)	-	18.90	
ZAM.5.01	Extension of the International Telephone Switching Centre (ITSC) in Lusaka, ZAMBIA	2.50	2.50	-	-	2.50 (SWE)	-	
ZAM.5.02	Expansion of the Earth Station at Mwembeshi, Zambia	11.10	9.10	2.00	7.10 (CAN) 2.00 (ZAM)	-	2.00	Canada has financed Phase I for Mwembeshi II. Financing is required for provision of IDR/DCME equipment as per P. AAA.5.04.
ZAM.5.03	Microwave Terminal at Chingola to	0.20	0.20	-	-	-	0.20	An interim 120 channel link is in operation.

	complete the Link Zambia-Zaire							Financing is required for a large capacity system.
ZAM.5.04	Microwave Link Zambezi-Luene, Zambia	4.00	3.80	0.20	0.20 (ZAM)	3.80 (NOR)	-	Postponed because of the security situation.
ZAM.5.06	Microwave Link Kariba (Zimbabwe)-Siavonga (Zambia) - Lusaka	1.60	1.60	-	-	1.60 (ITA)	-	
ZAM.5.09	Masterplan Study and Fundamental Planning Unit for Zambia	0.40	0.40	-	-	-	0.40	
ZAM.5.10	Upgrading Lusaka-Livingstone and Southern Ring Microwave Trunk Network, Zambia	18.00	17.00	1.00	1.00 (ZAM)	-	17.00	Project to include extension to Namibia via Livingstone-Sesheke-Katima Mulilo.
ZIM.5.06	Provision of Packet Switching for Data Network in Zimbabwe	3.60	3.20	0.40	0.40 (ZIM) 3.20 (BEL)	-	-	
ZIM.5.07	Supply of Digital Telephone Exchanges in Zimbabwe	68.00	62.90	5.10	47.50 (JAP) 5.10 (ZIM)	-	15.40	
ZIM.5.08	Expansion of the Earth Station at Mazowe, Zimbabwe	11.50	10.50	1.00	1.00 (ZIM) 10.50 (JAP)	-	-	
ZIM.5.09	Provision of Telex Exchange and Network, Zimbabwe	7.50	7.00	0.50	0.50 (ZIM)	-	7.00	
ZIM.5.10	Extension of ITSC GWERU, Zimbabwe	4.20	4.00	0.20	0.20 (ZIM)	4.00 (SWE)	-	SIDA is considering funding the implementation.
ZIM.5.11	Digital Microwave Link Gweru (Zimbabwe) to Maputo, Mozambique	18.50	16.00	2.50	0.50 (ZIM) 2.00 (MOZ)	-	16.00	
	Sub-total	1150.30	1030.00	120.30	501.00	70.50	578.80	

TABLE 2(K): METEOROLOGY PROJECTS

AAA.6.02	Regional Drought Monitoring Centre, Harare	1.00	0.80	0.20	0.30 (FIN) 0.20 (ZIM)	-	0.50	Implementation is going on and first stage of operation has started. Foreign funding from UK and UNDP.
AAA.6.03	Regional Meteorological Telecomms Hub and Data Exchange, Lusaka	2.00	1.30	0.70	0.70 (ZAM) 0.30 (FIN)	-	1.00	
AAA.6.04	Regional Maintenance Support of Meteorological Services	0.40	0.40	-	0.10 (FIN)	-	0.30	Initial establ. expected end of 1992.
AAA.6.05	Data Processing in Meteorological Services	1.50	1.50	-	0.60 (FIN)	-	0.90	Installation of equipment finished. Training is ongoing.
AAA.6.06	Meteorological Observational Networks	8.20	8.20	-	5.20 (FIN)	-	3.00	Implementation is in progress.
AAA.6.07	Meteorological Telecommunications	4.70	4.70	-	1.90 (FIN)	-	2.80	Implementation is progress.
AAA.6.08	Data Rescue Project	0.50	0.50	-	0.50 (BEL)	-	-	Implementation is in progress.
AAA.6.09	Meteorological Buoys	1.80	1.80	-	-	-	1.80	Replacing projects MOZ.6.01 and TAN.6.01.

MOZ.6.01	Meteorological Buoys for Mozambique	(0.90)	(0.90)	-	-	-	(0.90)	Replaced by project AAA.6.09.
MOZ.6.02	Aeronautical, Meteorological Equipment for Airports in Mozambique	0.70	0.70	-	-	-	0.70	
TAN.6.01	Meteorological Buoys for Tanzania	(0.90)	(0.90)	-	-	-	(0.90)	Replaced by project AAA.6.09.
	Sub-total	20.80	19.90	0.90	9.80	0.00	11.00	

TABLE 2(L): POSTAL SERVICES PROJECTS

AAA.7.02	Feasibility Study on the Introduction of a Postal Giro System in the SADCC Countries	-	-	-	-	-	-	Deleted 1992.
AAA.7.03	Technical Assistance to Postal Services	-	-	-	-	-	-	Deleted 1992.
AAA.7.04	Regional Programme for the Development of Postal Terminals	-	-	-	-	-	-	Deleted 1992.
AAA.7.05	Management Projects	(4.50)	(4.50)	-	-	-	(4.50)	New Project 1992.
(GM-1)	General Policies for Management of Autonomous Postal Administrations	0.20	0.20	-	-	-	0.20	New Project 1992.
(GM-2)	Organisational Restructuring of Postal Administrations	1.70	1.70	-	-	-	1.70	New Project 1992.
(GM-3)	National Postal Master Plans	1.00	1.00	-	-	-	1.00	New Project 1992.
(GM-4)	Financial Information Systems	1.10	1.10	-	-	-	1.10	New Project 1992.
(GM-5)	Statistical Systems	0.50	0.50	-	-	-	0.50	New Project 1992.
AAA.7.06	General Postal Projects	(3.20)	(3.20)	-	-	-	(3.20)	New Project 1992.
(GP-1)	Marketing	0.40	0.40	-	-	-	0.40	New Project 1992.
(GP-2)	Mail Conveyance	0.60	0.60	-	-	-	0.60	New Project 1992.
(GP-3)	Counter Service	0.20	0.20	-	-	-	0.20	New Project 1992.
(GP-4)	Postal Financial Services	2.00	2.00	-	-	-	2.00	New Project 1992.
AAA.7.07	Manpower Development	(0.90)	(0.90)	-	-	-	(0.90)	New Project 1992.
(MP-1)	Human Resources Development Programme	0.50	0.50	-	-	-	0.50	New Project 1992.
(MP-2)	Urgent Training Projects	0.30	0.30	-	-	-	0.30	New Project 1992.
(MP-3)	Development of the Multi Country Training Centre in Malawi	0.10	0.10	-	-	-	0.10	New Project 1992.
AAA.7.08	Strengthening of Infrastructure	(2.10)	(2.10)	-	-	-	(2.10)	New Project 1992.
(SI-1)	Postal Terminals	0.40	0.40	-	-	-	0.40	New Project 1992.
(SI-2)	Purchase of Equipment	1.30	1.30	-	-	-	1.30	New Project 1992.

(SI-3)	Transport Plans and Vehicles	0.40	0.40	-	-	-	0.40	New Project 1992.
MOZ.7.01	Stamp Printing Facilities in Maputo, Mozambique	-	-	-	-	-	-	Deleted 1992.
	Sub-total	10.70	10.70	0.00	0.00	0.00	10.70	
	TOTAL	6652.30	5791.70	860.60	3102.70	456.20	3093.40	