



THE UNITED REPUBLIC OF TANZANIA

PROGRAMME FOR TRANSPORT SECTOR RECOVERY

REPORT PREPARED BY

THE GOVERNMENT OF TANZANIA

FOR

THE TRANSPORT SECTOR DONORS' CONFERENCE

ARUSHA, DECEMBER 1987

FORWARD

This document is a result of a collaboration between the Government of Tanzania, the World Bank and DANIDA (Denmark). The document portrays the current state of the transport sector, the bottlenecks, and the direction in which we now must proceed to revitalize the sector. Tanzania is now at a crossroads. The Government's continued effort under the Economic Recovery Programme is beginning to show signs of success. Transport, the vital artery which carries the fruits of the Tanzanian economy, no longer functions adequately to serve the needs of the nation. Urgent recovery must be made in transport infrastructure and operations in order to maintain the momentum of economic development which has been generated. Support of the Donor Community has been invaluable to Tanzania, and we wish and require your strong support in our path to recovery. The past shortcomings and have caused severe deterioration in the transport infrastructure as well as the morale of the people who work in it. I believe sincerely that Tanzania is now turning the corner to a brighter future. We hope that this document will serve as a useful source in outlining the specific strategy and goals which we have set for this important sector, and will help to mobilize increased support for the sector.

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Minister for Communication and Works

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Arusha, Tanzania

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PROGRAMME FOR TRANSPORT SECTOR RECOVERY

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PROGRAMME FOR TRANSPORT SECTOR RECOVERY

EXECUTIVE SUMMARY

Introduction

1. Over the last decade, Tanzania has experienced severe economic problems. The down turn in the economy was caused in part by a series of external factors including successive droughts, rapid increases in oil prices, the collapse of the East African Community and the war with Uganda. But in part, the crisis was also due to structural problems. Output continuously declined, inflation accelerated, the fiscal situation deteriorated, and export and import levels fell significantly. By 1982, import volumes were 32% below the level in 1978, and external debt reached 55% of GDP, with annual debt service at 57% of exports. The adjustment measures such as the Structural Adjustment Programme (SAP) launched in 1982 fell short of the critical mass of reforms and resources needed to reverse the economic decline.

2. Against this background, the Government prepared and launched its Economic Recovery Programme (ERP) just over one year ago, to restore the balance and reverse the economic decline as quickly as possible. The specific objectives of the ERP are to: a) increase output of food and export crops; b) direct investment resources towards rehabilitating the physical infrastructure of the country in support of directly productive activities; and c) increase capacity utilization in industry. The focal points of the programme are: a) exchange rate, trade regime and foreign exchange allocation; b) public expenditure; c) parastatals; d) agricultural marketing and producer prices; e) industrial restructuring; and f) transport sector efficiency. Over the past year, the Government has introduced significant policy and institutional reforms in all the areas of the programme. At the Consultative Group Meetings of Tanzania held in Paris in June 1986 and July 1987, the Programme and its implementation were strongly endorsed by the international community.

3. There is clear evidence that the Programme is beginning to achieve its intended objectives. Over the last 12 months, GDP grew at between 3 and 4%, adequate to generate a modest growth in per capita income -- the first time in many years. At the same time, severe bottlenecks in the economy have arisen making it difficult for the country to fully capitalize on the strong supply response in agriculture during the last year. Transport and processing bottlenecks are impeding the transformation of the production gains in agriculture into higher export earnings; hence the significance of the proposed donor meeting for the transport sector.

Current State of the Transport Sector

4. The transport sector has deteriorated over a number of years. The Condition of most rural roads in Tanzania is poor and transport to villages is both difficult and costly. In many areas transport can be largely restricted to the dry season. Similarly, the trunk road network has deteriorated to such an extent that only about 40% of the network is in good condition, severely increasing the cost of transport and curtailing the movement of goods. Trucking, which carries over 70% of total domestic traffic, including haulage of all agricultural produce from the rural areas, has been allowed to deteriorate due to lack of foreign exchange to replace the aged fleet as well as to maintain the fleet in running condition with spare parts and tires. Inadequate trucking volume and low operational efficiency of parastatal trucking fleet have prevented the trucking sector from coping with the surge in agricultural production. The railways, which are strategically located to carry majority of long distance domestic and transit traffic, are only able to carry 15% of the goods movement in the country. The ports, with their deteriorated berths and equipment, are unable to adequately accommodate the import/export traffic of the country, nor compete effectively against other regional ports for transit traffic of the neighbouring landlocked countries. The deteriorated state of the transport infrastructure and the unsatisfactory operational efficiency of the sector are stalling the progress of the Government's Economic Recovery Programme (ERP). Given the encouraging response of the productive sector to the Government's reform initiatives, urgent improvements to the transport system must be made to translate effectively the efforts of the people into economic development of the country. It is in this context that the Transport Sector Donors' Conference has been convened.

5. Improvements, however, are beginning to be made. The recovery of the ports and railways sectors, with concerted effort from the donor community, is now well underway. With the successful implementation of the first phase of the Emergency Programme (EP) for Tanzania Railway Corporation (TRC), the Port Modernization Project for the port of Dar es Salaam, and the Ten-Year Development Programme (TYDP) for the Tanzania Zambia Railway Authority (TAZARA), the prospects for increased capacity for Tanzania to meet the expected demand in the 1990s on these facilities are now in place. These programmes will also create sufficient capacity to allow Tanzania to play an expanded role in providing transit access to the neighboring land-locked countries. With the expected infrastructural improvements to be derived from these ongoing programmes, the agenda in these sectors is to improve the operational efficiency and the management to effectively utilize these assets to their fullest potential and to manage these assets in a financially sound manner.

6. Attention must now be focussed on widening the programme of rehabilitating the transport sector to embrace the roads and trucking sectors, on which the domestic economy heavily depends. The importance of these two sectors is signified by the fact that nearly 70% of the total domestic movement use road and road transport. Woefully inadequate

resources devoted to them in the past and the lack of coherent policy directions had forestalled the development of these sectors. The situation would now be rectified through giving the roads and trucking sectors top priority in the recovery of the transport sector.

Strategy for Recovery

7. Inadequate maintenance, mainly as a result of inadequate funding, has resulted in extensive deterioration of the basic transport infrastructure in the country. The condition of the network is now in a state where a massive injection of funds is required to restore them. Given this serious situation, the Government undertook to prepare a National Transport Policy (NTP) document which, inter alia, recommends to i) concentrate the future efforts in rehabilitation and maintenance of the basic network; ii) increase resource allocation to the transport sector, particularly for roads; iii) improve the utilization of existing assets through improving the management and operations; and iv) adjust the institutional structure consistent with effectively carrying out the required rehabilitation, maintenance and operations. This implies that v) maintenance allocation for roads, which has fallen far short of requirements in the past, will need to be given top priority in the future; vi) foreign exchange allocation for road maintenance as well as recurrent operational requirements of the trucking, railways, and aviation sectors will need to be secured (albeit to the extent possible given the current shortage of foreign exchange); vii) systematic effort must be made to improve the operational efficiency of the sector; and viii) financial performance and cost recovery must also be improved throughout the sector. The transport sector recovery programme presented in this document is the action programme necessary to effectively implement the policy goals set forth in the NTP.

8. Trunk Roads: The goal in the trunk roads sector is to restore the paved and gravel road network to 70% in good condition by 1992 from the current 40%. To achieve this goal, financial allocation for rehabilitation will need to be expanded, maintenance allocation will need to be restored to an adequate level and certain institutional changes will need to be made to enable the expanded works to be carried out. Fundamental policy and institutional recommendations embodied in the NTP are summarized below:

- 1) allocation of road budget will be concentrated on road maintenance and rehabilitation with a goal of achieving 70% of the trunk paved and gravel roads in good condition by 1992;
- ii) adequate budget will be allocated for road maintenance, and will be adjusted on a quarterly basis to maintain the real value of the budget (creation of special road maintenance supplementary fund will be considered);

- iii) in order to meet the expanded work load of road maintenance, use of local contractors will be expanded to carry out periodic maintenance works;
- iv) in order to improve the availability of road maintenance equipment, servicing of all equipment will be consolidated under seven zonal workshops;
- v) in order to improve the cost effectiveness of equipment use, Plant Pools will be expanded and attached to the zonal workshops. These Plant Pools will be operated on a commercial basis, including, inter alia, hiring of equipment to local contractors engaged in road works; and
- vi) manpower training and development will also be strengthened, with the implementation of MCW manpower development programme along with the training of RRD and MCW regional office staff;

9. Allocation of trunk road investments in the past few years has averaged about 5% of the total Government investment programme. Given the current condition of the roads, as well as the urgency with which restoration will need to be made, the on-going rehabilitation programme for the trunk roads will need to be substantially expanded to restore the network. Based on a detailed assessment of the condition and traffic on the network, an expanded five-year (1988-1992) rehabilitation programme has been prepared. The programme calls for an increase in budget allocation for the rehabilitation of existing network from the current average of US\$17 million per annum (5.4% of the total public sector investment programme) to about US\$49 million per annum over the next five years (average of 15.6% of the public sector investment programme). Successful implementation of this programme will improve the condition of the trunk paved and gravel roads from the existing 40% to 70% in good condition by 1992. The financing requirement to carry out the expanded works, including maintenance, spare parts for equipment and rehabilitation of bridges and culverts, is US\$212.5 million in real terms over the period 1988-1992 (details in Attachment 1). This proposed programme will need to be reviewed against the actual financial resources available in the country as well as the needs of the other sectors. But unless the right level of financial resources are made available, together with the necessary institutional and policy changes as embodied in the NTP document, the country will continue to experience severe transport bottlenecks well into the 1990s.

10. In order to protect the roads already in good condition, as well as to maintain the roads once they are rehabilitated, the level of recurrent budget required for road maintenance will need to increase by 170% from the current allocation of US\$4.1 million per annum to US\$11.2 million. The impact of this increase on the Government's recurrent budget is negligible; i.e., less than 1%, although it will substantially improve the recurrent budget allocation to the Ministry of Communications and Works

(by 26%). Given the allocation of adequate budget, efforts will be concentrated upon increasing the periodic maintenance of the existing roads to eliminate the backlog of works. The proposed programme for trunk road rehabilitation and maintenance, including its impact on the Government budget, is summarized in Attachment 1.

11. Rural Roads: The rural road network in the country is in very poor condition. In the past, the efforts to improve the rural road network was too diffused and not coordinated sufficiently to ensure proper maintenance of the network. The institutional structure to support rural roads development was weak, financial allocations for both rehabilitation and maintenance were inadequate, and coordinated effort to institutionalize proper maintenance practices and administration fell short of the massive requirements to develop and upkeep the 72,000 km network. This has resulted in paralysis of the agricultural and other productive activities in the rural areas, effectively preventing the integration of fundamental economic activities of the country with the market economy. The strategy in the sector is to first tackle the immediate requirements of the country through concentrating the efforts in restoring and maintaining the critical roads required for evacuation of agricultural commodities, with particular emphasis on export crops. This effort will require significant amount of financial commitment as well as coordinated effort in strengthening the institutional structure for maintenance and management of these roads. The fundamental policy and institutional recommendations embodied in the NTP are detailed below:

- i) responsibility for the execution of rural roads development, rehabilitation and maintenance will be vested in MCW's Rural Roads Division (RRD). Physical execution will be managed by MCW's Rural Roads Engineer;
- ii) planning and budgeting for rural roads will remain with the Ministry of Local Government and Cooperatives and the Regional Administrations. The budgeted programmes will be contracted to MCW for execution;
- iii) use of contractors will be expanded to carryout most periodic maintenance and rehabilitation works;
- iv) streamlining planning and budgeting process at both the local and central Government level and develop an institutional structure to ensure proper execution of programmed works;
- v) consolidating servicing of all road maintenance equipment currently in possession of various road authorities under the Zonal Workshops of MCW;
- vi) allocating adequate budget levels for annual maintenance of rural roads;

- vii) promoting a more coordinated practice of labour-based construction and maintenance methods (para 1.41); and
- viii) developing a systematic strategy for manpower development and training. MCW will be responsible for planning and execution of the strategy.

12. A Core Rural Roads Rehabilitation and Maintenance Programme has been formulated to systematically improve the condition of rural roads. This Programme initially will concentrate on the part of the network which would assure access to agricultural areas producing export commodities and will be expanded in the second and successive phases to cover other productive areas in the country. The first phase of the Programme will install adequate maintenance on 6,000 km of essential roads in 7 regions involving 24 districts, and rehabilitate 1,400 km of priority agricultural roads. The rehabilitation will be undertaken over three years (1988/89-1990/91) at an estimated cost of US\$8.6 million. This will be followed up by a second phase covering 4,000-5,000 km in other regions and districts, and a further 1,000-1,200 km of rehabilitation. This second phase will be prepared and evaluated by June 1989 and will be implemented in the final two years of the Programme period (1990/91-1991/92). The estimated cost of the second phase rehabilitation will be about US\$7.4 million. The financial allocation to implement the Core Programme will total US\$16 million over the next five years. This will require an increase in the annual public investment budget of the Ministry of Local Government and Cooperatives and the Prime Minister's Office by 12% or 1.3% increase in the total public sector investment programme.

13. In order to protect these roads from deterioration, the annual budget allocation for maintenance of essential Core Programme roads will need to be increased to US\$175 per km in real terms (or about US\$1-1.8 million per annum). In addition, annual budget allocation to provide minimum maintenance of the remaining 40,000-44,000 km of rural roads will need to be increased from US\$66 per km to US\$80 per km in real terms (or about US\$4.5 million per annum). The level of recurrent budget required to sustain this level of maintenance is about US\$ 5.5-6.3 million per annum over the next five years; requiring 7% increase in the Ministry of Local Government and Cooperative and Prime Minister's Office recurrent budget, or a less than 0.7% increase in the total Government recurrent budget. The proposed Programme for rural roads investment and recurrent budget, including their impact on Government budget is summarized in Attachment 2.

14. Trucking Sector: The trucking sector plays a major role in the domestic transport industry, carrying 70% of the estimated 2.5 billion ton-km of freight movement in the country. The main feature until 1984/5 was a chronic shortage of replacement vehicles, spare parts, fuel and tires, and a consequently aging fleet and low vehicle availability. Freight movement by road appears to have declined by 2% per annum since the mid 1970s, but as the overall level of economic activity had stagnated, this did not result in persistent or widespread trucking capacity shortage. Between 1985 and 1987 the situation changed dramatically with the revitalization of

economic activity under the ERP. For the crop year 1986/87, cotton production increased by 60% over the previous four-year average, coffee production by 27%, maize production by 20%, and tobacco production by 17%. Given the introduction of the "own-funds imports programme" and donor assistance from import support programmes, the availability of inputs and replacement trucks has improved and the sector is in the process of being revitalized to cater to the rapidly expanding demand. The economy, however, continues to experience major problems in rural transport, particularly in the movement of publicly controlled marketing of agricultural commodities. It is clear that the trucking sector must be given priority in importing requirements, including an accelerated replacement programme for aged trucks, and continued support for importing spare parts, fuel and raw materials for tire production. Estimated annual foreign exchange requirement to maintain the current fleet of about 14,000 trucks is about US\$113 million per annum, consisting of: a) minimum annual import of 1800 replacement trucks¹ estimated to cost about US\$48 million per annum; b) US\$11 million per annum for tires and raw materials for tire production; c) US\$20 million per annum for spare parts; and d) US\$34 million per annum of diesel fuel.

15. Simple injection of trucks and associated input requirements will obviously not solve the major problem at hand. It is clear that in order to adequately tackle the trucking bottleneck, a multi-pronged approach to the problem is required. This means that i) the availability of the public sector trucks (accounting for 22% of the truck fleet in the country) must be improved; and ii) given that at least 75% of the effective trucking capacity is held by the private sector, greater incentives must be given to the private sector to mobilize their fleet for transport of agricultural commodities.

16. The Government is considering, under the NTP, the following short term measures to improve the operations of the trucking industry in general, and the intra-regional transport in particular:

- i) to allow the market to determine the appropriate level of intra-regional trucking tariffs with a view to allowing the operators to recover their operating costs and to realize a reasonable return on their assets;
- ii) public sector transport will continue to play its critical role in the future, but will be restricted to meeting the most immediate shortages with the existing size of fleet. Their activities will focus primarily on intra-regional transport;

¹/ currently about 1300-1400 trucks per annum are imported - particular needs are for 7-10 ton trucks which account for 50% of the national fleet, larger fuel tankers, and to a lesser degree 15 tons and up for long-distance haulage.

- iii) to undertake an inventory of all cooperative and public sector fleet in order to sell off all non-operational or 'uneconomic' vehicles; and
- v) to seek donor support to meet the annual requirement for increased truck inputs and replacements.

17. In the medium term (3-5 year period), the Government intends to review the role and the function of RETCO and other public transport agencies.

18. Rail, Ports and Aviation Sectors: The main rehabilitation requirements of TRC, TAZARA and the port of Dar es Salaam are now being implemented. Most of the works will be completed by 1989/90, resulting in significant improvement in capacity to meet the demand in the 1990s. Requirements of the civil aviation sector as well as the ports of Tanga and Mtwara will need to be further investigated.

19. TRC: The result of the poor history of maintenance and use of assets has been a progressive decline in the effective freight haul capacity of TRC: from a peak of about 1.6 million tons in the early 1970s to 0.88 million tons in 1986. This decline can be attributed to a number of key inter-related factors: a) poor management; b) inadequate operations information system compounded by poor availability of timely information; and c) inadequate and obsolete telecommunications facilities. In an attempt to reverse this trend, a TRC Donors' Conference was held in February 1987 to formulate an integrated programme of rehabilitation and strengthening of the operating and management system. The result is the on-going TRC Emergency Recovery Programme (EP). The first phase of the EP, which will be completed in 1990, will increase the capacity of TRC by about 25% to enable it to carry 1.4-1.5 million tons per annum. The concept of the first phase is to rehabilitate the existing locomotives and wagons, as well as relaying of the Central line, improvement of telecommunications systems and strengthening the maintenance capacity. Along with this, TRC has committed to improve its operations, managerial and financial performance. The specific measures being pursued by TRC are embodied in the 10-point programme agreed to at the February Donors' Conference. Implementation of the programme, thus far, has been satisfactory. This first phase will be followed by further expansion of the capacity, details of which are being studied under the on-going TRC Development Study. Recent assessment of the progress of the EP has, however, identified items which were omitted from the EP and which are critical for the first phase programme to succeed. These include: bridge rehabilitation and hydrological studies, track maintenance and related technical assistance and procurement of five shunting locomotives. These items require immediate financing and their cost estimates (about US\$20 million in total) are detailed in Annex 6 of the Main Report.

20. TRC Lake Services plays a key role in the transport of passengers around Lake Victoria, Lake Tanganyika and Lake Nyasa areas where the road network is particularly underdeveloped. The importance of the service can

be seen in the high vessel occupancy rates enjoyed between the key lake ports (historical average of 100%), implying considerable excess demand in peak periods. The vessel fleet is generally aged but in maintainable condition. The strategy for this segment of TRC's operations is to defer new investments as much as possible, and to rehabilitate the existing fleet consistent with the maintenance of an acceptable level of service provision and complimentary efforts to improve operating and financial performance. An investment study has already been undertaken with donor assistance and the results of this study are being evaluated within the framework of the strategy of minimization of investments in new capital assets.

21. TAZARA: TAZARA, which started its operations only in 1976, is mainly a transit corridor for Zambia and other neighboring countries. TAZARA's line capacity was designed for 5.0 million tons per annum. The effective installed capacity, taking account of rolling stock at its establishment, was about 2.5 million tons. TAZARA's present haul capacity, however, is severely constrained by locomotive availability which has recently fallen to 50%. Within this level of availability, the capacity of TAZARA is about 1.18 million tons per annum. TAZARA has achieved 1.16 million tons in 1986, which is, under current constraints, a laudable performance. Taking into consideration the locomotive constraint, as well as other constraints and weaknesses noticed in the system, TAZARA embarked on a Ten Year Development Plan (TYDP) in 1984, and has mobilized donor support for the full US\$227 million programme. Given these investments, TAZARA's capacity will be enhanced to carry 1.57 million tons by 1990/91 (35% increase in capacity). Review of the progress of TYDP is now being undertaken to determine the expected demand in the 1990's and a strategy to further improve the capacity and the performance of TAZARA to meet such demand. In addition to the already financed TYDP, other necessary investments pertaining particularly to track and track maintenance amounting to about US\$21 million have been identified. These items, subject to further detailed investigation, are detailed in Annex 7 of the Main Report.

22. Tanzania Harbours Authority: The port of Dar es Salaam is a major regional port serving the neighbouring land-locked countries, but has not yet achieved its full potential. The volume of international transit cargo which can potentially be attracted to the port of Dar es Salaam is nearly double the current throughput of 1.7 million tons (dry cargo only in 1986). In order to modernize the port of Dar es Salaam to handle rapidly increasing containerized cargo, as well as to rehabilitate general cargo berth and cargo handling equipment, a major rehabilitation and modernization programme has been launched with expected completion in mid-1989 to 1990. This programme, once completed, will improve the port of Dar es Salaam's capacity to handle 3.7 million tons of dry cargo per annum (additional 2.0 million tons of capacity above current throughput). These physical works are being complemented by improvement in the management and efficiency of cargo handling, maintenance of equipment and infrastructure, and reduce the dwell time of cargo in the port to avoid congestion.

Additionally, measures are being taken to decentralize warehousing to reduce the congestion at the port. The requirement of workshop facilities for general cargo equipment maintenance has not been sufficiently met under the ongoing projects. Investment requirement, totaling US\$5.0 million, has been identified and will need to be financed urgently. Included in this is an urgent rehabilitation of the port of Tanga to arrest the rapidly deteriorating state of the port and a further study of the future development requirement of the port. Similarly, consideration will need to be given in the future to provide better road access to the port of Mtwara and improving the condition of the cargo handling equipment. The details of the short-term requirements and studies are presented in Annex 8 of the Main Report.

23. Civil Aviation: Given the poor road condition and substantial distances between major population centers, air transport is an important means of transport in the country. The available seat kilometer on Air Tanzania Corporation (ATC), the sole provider of domestic scheduled services, has grown from about 83 million in 1977 to about 332 million in 1986, reflecting a significant increase in service provision. The demand for ATC's services is high with average passenger load factor of 76% on all routes and 83% in the domestic market (1986), often resulting in a high turnaway rate for customers. Despite this favorable demand for its services, ATC's financial performance has been characterized by growing deficits; in 1986 its operating deficit amounted to TSh574 million. ATC faces perennial problems in acquiring minimum access to spare parts due to its inability to generate sufficient foreign exchange to finance its own recurrent requirements; it has constraints on fleet utilization due to lack of proper facilities (e.g. lack of night landing facilities and poor maintenance of runways). Furthermore, the sector is unable to properly train the staff in the civil aviation sector due to lack of foreign exchange for training abroad. It is clear that a systematic assessment of the sector is required to set a proper strategy for the sector, both in terms of improvements to the financial performance of ATC, improved cost recovery in the civil aviation sector in general, and a least cost strategy to meet the apparent unsatisfied demand in air travel.

24. Other Aspects of Transport: The detailed analysis of the sector has been concentrated upon major movements of freight traffic in the country with a view to formulating a coherent and action oriented programme to restore the major transport arteries in the country. This focus is dictated by the urgency in which transport system must be restored in the short term to cater to the rapid expansion of the economy under the ERP. There are, however, other sectors which play an important role in the transport system and require further assistance. These include, inter alia, coastal shipping, passenger transport, and telecommunications. Assessment will need to be made for these sectors in the future to enable the Government to provide a comprehensive perspective of the sector.

Transport Sector Recovery Programme (1987/88-91/92)

(1) Investment Requirements

25. The external financing requirements for the Five Year Transport Sector Recovery Programme is summarized in the following table. It should be noted that requirements for TRC, TAZARA and THA may need to be expanded in the outer years based on the ongoing reviews and studies. Details of the trunk and rural roads programmes are presented in Annex 2-4 of the Main Report.

<u>Transport Sector Recovery Programme</u>						
<u>(US\$ million)</u>						
	<u>87/88</u>	<u>88/89</u>	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>	<u>Total</u>
Trunk Roads <u>1/</u>	3.8	27.8	30.0	39.2	62.4	163.2
Rural Roads <u>2/</u>	6.3	9.0	9.0	11.3	11.2	46.8
Trucking <u>3/</u>	-	55.0	79.0	79.0	79.0	292.0
TRC <u>4/</u>	-	10.5	9.0	-	-	19.5
TAZARA <u>5/</u>	-	12.5	8.2	-	-	20.7
THA <u>6/</u>	-	5.0	-	-	-	5.0
TOTAL	10.1	119.8	135.2	129.5	152.6	547.2
	=====	=====	=====	=====	=====	=====

1/ includes both Government and external resource requirement for maintenance and rehabilitation works up to 1991/92: Government - US\$53.4 million equivalent; External financing - 109.8 million.

2/ includes both Government and external resource requirement for maintenance and rehabilitation works up to 1991/92: Government - US\$25.4 million equivalent; External financing - US\$21.4 million.

3/ excludes fuel requirements

4/ Development Study is being carried out to determine further requirements

5/ ongoing review will determine further requirements

6/ studies will be carried out to determine further requirements

(2) Policy and Institutional Considerations

26 Financing alone is not sufficient to achieve the level of recovery which is envisaged in the programme. In order to fully achieve the objective of the proposed investment programme, the Government is considering a number of policy and institutional adjustments as detailed in the NTP. Adjustments such as market determination of the intra-regional trucking rates, institutional changes for management of rural roads, and budgetary commitment to allocate adequate resources for recurrent maintenance are key considerations which need to be acted upon in order to reverse the current trend. The summary of the actions which the Government intends to implement are presented in the attached matrix.

(3) Implementation

27 Continuation of the severe transport problems as experienced in the past two years would be a major setback for the agricultural sector as well as to the whole economy. The Recovery Programme as set forth in this document will need to be put into action immediately. First is the immediate needs in the trucking sector, covering, inter alia, increasing the pace of truck replacement, and to supplement the on-going trucking spare parts and tire imports programme. Associated with this is the implementation of the proposed Action Programme detailed in the attached matrix to enable the trucking sector to maximize the use of existing assets as well as making the institutional changes necessary to execute the expanded roads programme. Second is the implementation of the five-year Roads Sector Rehabilitation and Maintenance Programme. Preparation of a detailed programme will commence immediately with a view to beginning implementation by the last quarter of 1988. Similarly, preparation for the second phase of the Emergency Programme for TRC as well as the additional requirements for the Tanzania Harbours Authority will begin in 1988 with a view to commencing implementation by second quarter 1989.

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Proposed Action Programme

<u>Sector</u>	<u>Issues</u>	<u>Comments</u>	<u>Targets</u>
I. <u>ROADS</u>	* allocation of road budget will concentrate on road maintenance and rehabilitation	* exception will be made when specific road projects dictate high economic priority	* accepted
	* increase trunk and rural roads maintenance budget allocation to required level	* --	* April 1988 (budget discussions for FY 1988/89)
	* formulation of an annual program to contract periodic maintenance activities to local contractors. Including a training course for MCW staff and local consultants to supervise contracts	* assistance to local construction industry is about to commence under the Sixth Highway project	* April 1988
	* creation of Rural Roads Division (RRD) in MCW. Including: - MLGC and Regional Administration to contract the management of all maintenance and rehabilitation works to MCW - delegation of technical responsibility to RRD to execute rural roads programmes - MCW regional office to be responsible for physical execution	* study to be undertaken to determine the workings of RRD and MCW regional offices and coordination with Regional Administration and Local Governments * RRD, through MCW regional office, to contract out most periodic maintenance and rehabilitation works	* June 1988
	* promotion of a coordinated labour-based construction and maintenance methods for rural roads	* continued training through study tours * requires on-the-job training for local contractors and MCW road brigades	* on-going * start by April 1988
	* training and manpower program for all roads staff	* requires study of proposed RRD staffing including MCW regional offices	* December 1988
	* undertake a physical inventory of rural roads network, and reclassification of roads	* requires contracting of specialized mapping service	* completion by December 1988
	* establish trunk and rural roads design standards in a roads manual	* study to be completed by MCW	* June 1988
	* upgrade and reequip Zonal Workshops. Including: - bringing servicing of all road equipment under the Department of Mechanical and Electrical Services - formulation of rehabilitation and replacement program	* the workshop technical assistance about to commence	* April 1988 * studies to be completed in June 1988

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<u>Sector</u>	<u>Issues</u>	<u>Comments</u>	<u>Targets</u>
<u>ROADS</u> (cont'd)	<ul style="list-style-type: none"> * expansion of plant pools to other Zonal Workshops. Including: <ul style="list-style-type: none"> - establishment of cost accounting and hiring system for each Plant Pool * creation of special road maintenance supplementary fund 	<ul style="list-style-type: none"> * details to be studied by MCW workshop consultants * study of the road user charges to be undertaken 	<ul style="list-style-type: none"> * execution in December 1988 * March 1988
II. <u>TRUCKING</u>	<ul style="list-style-type: none"> * Increase trucking capacity * allow market to determine intra-regional transport prices with a view to allowing operators to recover their operating costs and to realize reasonable returns on their investments * disposal of uneconomic RETCO trucks and sell off of non-operational vehicles of cooperatives and public sector fleet 	<ul style="list-style-type: none"> * immediate action required * -- * inventory must be taken of RETCO and other public sector vehicles 	<ul style="list-style-type: none"> * on-going * March 1988 * March 1988
III. <u>TRC</u>	<ul style="list-style-type: none"> * commitment to the concept that new investments outside of already defined project will be subject to cost/benefit analysis * commitment to adhere to the 15-point programme agreed to under the EP 	<ul style="list-style-type: none"> * -- * -- 	<ul style="list-style-type: none"> * accepted by TRC * accepted by TRC; ongoing
IV. <u>TAZARA</u>	<ul style="list-style-type: none"> * Joint TAZARA-Zambia Railways operational study of wagon utilization and exchange program * improve financial performance and cost recovery of TAZARA 	<ul style="list-style-type: none"> * -- * study being undertaken 	<ul style="list-style-type: none"> * December 1988 * ongoing
V. <u>THA</u>	<ul style="list-style-type: none"> * promotion of containerization and adoption of necessary measures to increase the throughput of containers * improve operational efficiency of cargo handling activities * long term development program for Port of Tanga and the Arusha-Tanga Corridor * improve utilization of the Port of Mtwara 	<ul style="list-style-type: none"> * study required * -- * feasibility study required for immediate rehabilitation and long term development of the port * improve accessibility and cargo handling 	<ul style="list-style-type: none"> * begin June 1988 * ongoing * begin June 1988 * on-going

X
7

<u>Sector</u>	<u>Issues</u>	<u>Comments</u>	<u>Targets</u>
VI. <u>AVIATION</u>	<ul style="list-style-type: none"> * rationalize ATC's overhead and support structure to improve its productivity 	<ul style="list-style-type: none"> * study required; to be undertaken shortly; technical assistance maybe required for implementation 	<ul style="list-style-type: none"> * to start shortly
	<ul style="list-style-type: none"> * formulate a staged programme to increase fares for the domestic market to ensure full cost recovery 	<ul style="list-style-type: none"> * to be undertaken alongst the study noted above 	<ul style="list-style-type: none"> * to start shortly
	<ul style="list-style-type: none"> * seek further donor support for <ul style="list-style-type: none"> a) financing of the training programme for both ATC and civil aviation; and b) financing of spare parts requirements for existing ATC fleet 	<ul style="list-style-type: none"> * to be done after above study has been completed 	<ul style="list-style-type: none"> * to start shortly
	<ul style="list-style-type: none"> * limit capital investments by ATC until such time as a rational development and financial strategy has been developed 	<ul style="list-style-type: none"> * being studied under the above noted study 	<ul style="list-style-type: none"> * accepted by ATC
	<ul style="list-style-type: none"> * adopt an "open-sky" policy for local charter airlines to provide domestic scheduled services to meet the additional domestic demand for air transport 	<ul style="list-style-type: none"> * -- 	<ul style="list-style-type: none"> * on-going

12

TANZANIA
Trunk Roads: Detailed Breakdown of the Financing Gap
 (US\$ million)

I. TRUNK ROAD INVESTMENTS

	<u>87/88</u>	<u>88/89</u>	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>	<u>TOTAL</u>
* Ongoing Three Year Programme	11.9	11.5	-	-	-	23.4
* Sixth Highway Project	3.6	23.1	23.7	24.2	-	74.6
* Recommended Addition <u>1/</u>	-	18.0	18.8	27.3	50.4	114.5
TOTAL TRUNK ROADS	15.5	52.6	42.5	51.5	50.4	212.5
=====						
Total Government Investment <u>2/</u>	316.4	316.1	316.0	316.0	316.0	1580.5
Roads as % of Total	4.9%	16.6%	13.4%	16.3%	12.8%	12.8%

1/ breakdown given in below table

2/ assumes constant US\$316 million per annum for Government investment programme beyond 1989/90

II. BREAKDOWN OF THE RECOMMENDED ADDITIONAL REHABILITATION PROGRAMME

		<u>87/88</u>	<u>88/89</u>	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>	<u>TOTAL</u>
<u>TANZAM:</u>	Government	-	-	-	1.0	3.5	4.5
	Donors	-	-	-	5.7	20.0	25.7
	sub-total	-	-	-	6.7	23.5	30.2
<u>PAVED:</u>	Government	-	0.9	1.0	1.0	1.0	3.9
	Donors	-	4.8	5.6	5.6	5.6	21.6
	sub-total	-	5.7	6.6	6.6	6.6	25.5
<u>GRAVEL/EARTH:</u>	Government	-	1.5	1.5	1.8	2.7	7.5
	Donors	-	-	-	1.5	6.9	8.4
	sub-total	-	1.5	1.5	3.3	9.6	15.9
<u>STRUCTURES:</u>	Government	-	2.6	2.6	2.6	2.6	10.4
	Donors	-	5.5	5.4	5.4	5.4	21.7
	sub-total	-	8.1	8.0	8.0	8.0	32.1
<u>EQUIPMENT:</u>	Donors	-	2.7	2.7	2.7	2.7	10.8
<u>TOTAL:</u>	Government	-	5.0	5.1	6.4	9.8	26.3
	Donors	-	13.0	13.7	20.9	40.6	88.2
	TOTAL	-	18.0	18.8	27.3	50.4	114.5
=====							

XV

TANZANIA
Trunk Roads: Detailed Breakdown of the Financing Gap
(US\$ million)

III. TRUNK ROAD MAINTENANCE

	<u>Current Budget</u>	<u>Recommended Allocation</u>	<u>Increase</u>
* Recommended Budget Increase:	4.1	11.2	173%
* MCW Recurrent Budget Increase:	29.0	36.1	26%
* Government Recurrent Budget Increase:	751.4	758.8	1%

IV. BREAKDOWN OF THE RECOMMENDED ROAD MAINTENANCE PROGRAMME

		<u>87/88</u>	<u>88/89</u>	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>	<u>TOTAL</u>
<u>TANZAM:</u>							
Routine:	Government	0.3	0.4	0.4	0.4	0.4	1.9
Resealing:	Government	0.1	0.2	0.2	0.2	0.3	1.0
	Donors	-	-	-	0.7	0.8	1.5
	sub-total	<u>0.4</u>	<u>0.6</u>	<u>0.6</u>	<u>1.3</u>	<u>1.5</u>	<u>4.4</u>
<u>PAVED:</u>							
Routine:	Government	0.7	0.9	0.9	0.9	0.9	4.3
Resealing:	Government	0.2	0.8	1.0	1.0	0.9	3.9
	Donors	-	2.0	3.1	3.1	3.1	11.3
	sub-total	<u>0.9</u>	<u>3.7</u>	<u>5.0</u>	<u>5.0</u>	<u>4.9</u>	<u>19.5</u>
<u>GRAVEL/EARTH:</u>							
Routine:	Government	1.6	2.2	2.1	2.1	2.1	10.1
Regravelling:	Government	0.9	1.1	1.3	1.3	1.3	5.9
	sub-total	<u>2.5</u>	<u>3.3</u>	<u>3.4</u>	<u>3.4</u>	<u>3.4</u>	<u>16.0</u>
<u>EQUIPMENT:</u>	Donors	-	2.2	2.2	2.2	2.2	8.8
<u>TOTAL:</u>	Government	3.8	5.6	5.9	5.9	5.9	27.1
	Donors	-	4.2	5.3	6.0	6.1	21.6
	TOTAL	<u>3.8</u>	<u>9.8</u>	<u>11.2</u>	<u>11.9</u>	<u>12.0</u>	<u>48.7</u>
		=====	=====	=====	=====	=====	=====

XVII

BUDGETARY IMPACT OF THE RECOMMENDED RECOVERY PROGRAMMEB. Rural Roads
(US\$ million)Rural Roads Investments (1986/87-91/92)

<u>Rural Roads Investments</u>	<u>86/87</u>	<u>87/88</u>	<u>88/89</u>	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>
* Recommended Core Programme	-	-	3.0	3.0	5.0	5.0
* Ministry of Local Government Investment Programme <u>1/</u>	<u>22.8</u>	<u>24.0</u>	<u>25.2</u>	<u>25.2</u>	<u>25.2</u>	<u>25.2</u>
TOTAL MLGC INVESTMENTS	<u>22.8</u>	<u>24.0</u>	<u>28.2</u>	<u>28.2</u>	<u>30.2</u>	<u>30.2</u>
	=====	=====	=====	=====	=====	=====
% increase	-	-	12%	12%	21%	21%
* % increase in Government PSIP	-	-	1%	1%	2%	2%

1/ assumes MLGC investment programme to remain at US\$30.2 million per annum from 1990/91 onward.

Rural Roads Maintenance Budget (annual)

	<u>87/88</u>	<u>88/89</u>	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>	<u>Total</u>
* Core Programme Maintenance	-	1.0	1.0	1.8	1.8	5.6
* Other Rural Road Maintenance	4.8	3.5	3.5	3.2	3.2	18.2
* Imports (equipm't, spare parts)	<u>1.5</u>	<u>1.5</u>	<u>1.5</u>	<u>1.3</u>	<u>1.2</u>	<u>7.0</u>
TOTAL RURAL ROADS MAINTENANCE	<u>6.3</u>	<u>6.0</u>	<u>6.0</u>	<u>6.3</u>	<u>6.2</u>	<u>30.8</u>
	=====	=====	=====	=====	=====	=====
Current MLGC Recurrent Budget <u>1/</u>	82.2	82.2	82.2	82.2	82.2	411.0
* % increase required	8%	7%	7%	8%	8%	8%

1/ assumes MLGC recurrent budget to remain as US\$82.2 million per annum (1986/87 allocation).

XVI

TANZANIA

PROGRAMME FOR TRANSPORT SECTOR RECOVERY

The Main Report

A. Introduction

1.01 Over the last decade, Tanzania has experienced severe economic problems. The down turn in the economy was caused in part by a series of external factors including successive droughts, rapid increases in oil prices, the collapse of the East African Community and the war with Uganda. But in part, the crisis was also due to structural problems. Output continuously declined, inflation accelerated, the fiscal situation deteriorated, and export and import levels fell significantly. By 1982, import volumes were 32% below the level in 1978, and external debt reached 55% of GDP, with annual debt service at 57% of exports. The adjustment measures such as the Structural Adjustment Programme (SAP) launched in 1982 fell short of the critical mass of reforms and resources needed to reverse the economic decline.

1.02 Against this background, the Government prepared and launched its Economic Recovery Programme (ERP) just over one year ago, to restore the balance and reverse the economic decline as quickly as possible. The specific objectives of the ERP are to: a) increase output of food and export crops; b) direct investment resources towards rehabilitating the physical infrastructure of the country in support of directly productive activities; and c) increase capacity utilization in industry. The focal points of the programme are: a) exchange rate, trade regime and foreign exchange allocation; b) public expenditure; c) parastatals; d) agricultural marketing and producer prices; e) industrial restructuring; and f) transport sector efficiency. Over the past year, the Government has introduced significant policy and institutional reforms in all the areas of the programme. At the Consultative Group Meetings of Tanzania held in Paris in June 1986 and July 1987, the Programme and its implementation were strongly endorsed by the international community.

1.03 There is clear evidence that the Programme is beginning to achieve its intended objectives. Over the last 12 months, GDP grew at between 3 and 4%, adequate to generate a modest growth in per capita income -- the first time in many years. At the same time, severe bottlenecks in the economy have arisen making it difficult for the country to fully capitalize on the strong supply response in agriculture during the last year. Transport and processing bottlenecks are impeding the transformation of the production gains in agriculture into higher export earnings; hence the significance of the proposed donor meeting for the transport sector.

B. Current State of the Transport Sector

1.04 The transport sector has deteriorated over a number of years. The Condition of most rural roads in Tanzania is poor and transport to villages is both difficult and costly. In many areas transport can be largely restricted to the dry season. Similarly, the trunk road network has deteriorated to such an extent that only about 40% of the network is in good condition, severely increasing the cost of transport and curtailing the movement of goods. Trucking, which carries over 70% of total domestic traffic, including haulage of all agricultural produce from the rural areas, has been allowed to deteriorate due to lack of foreign exchange to replace the aged fleet as well as to maintain the fleet in running condition with spare parts and tires. Inadequate trucking volume and low operational efficiency of parastatal trucking fleet have prevented the trucking sector from coping with the surge in agricultural production. The railways, which are strategically located to carry majority of long distance domestic, are only able to carry 30% of the goods movement in the country. The ports, with their deteriorated berths and equipment, are unable to adequately accommodate the import/export traffic of the country, nor compete effectively against other regional ports for transit traffic of the neighbouring landlocked countries. The deteriorated state of the transport infrastructure and the unsatisfactory operational efficiency of the sector are stalling the progress of the Government's Economic Recovery Programme (ERP). Given the encouraging response of the productive sector to the Government's reform initiatives, urgent improvements to the transport system must be made to translate effectively the efforts of the people into economic development of the country. It is in this context that the Transport Sector Donors' Conference has been convened.

1.05 The Government's objective in the transport sector is to generate immediate improvements in the supply of transport services in the first instance, followed by a more sustained growth in the capacity and the volume of services commensurate with the expansion taking place under ERP. The basic infrastructure (roads, rail tracks, ports) and operational units (locomotives, wagons and trucks) already exist, but in varying degrees of disrepair. To generate immediate gains in the available capacity, resources must be targeted towards rehabilitating and replacing the operational units. This will need to be supplemented by infrastructural rehabilitation, particularly roads, which require longer lead time to improve. The policy framework must also be sharpened to remove pricing and operational controls from both the trucking and railways subsectors to maximize the use of the existing and improved operational units. The policy framework for the transport sector has been formulated in the National Transport Policy Paper and this conference document formulates the specific steps required to realize the policy goals outlined in the National Transport Policy (NTP) document.

1.06 In the past, the Government has applied various administrative mechanisms to improve the transport operations, but the results have fallen far short of the intended outcome. The foreign exchange shortage forced the Government to allocate essential transport inputs by an administrative

system which did not yield the expected benefits; tight fiscal budget resulted in inadequate allocations for the maintenance budget causing a precipitous deterioration of the road network; the administered tariff system for the trucking sector had resulted in lower transport supply for the publicly regulated sectors; and the lack of timely tariff adjustments has caused the railways to operate in deficit. To counter these negative effects, the Government has recently taken important steps to improve the situation by providing necessary inputs, spares and equipment, strengthening management, removing certain administrative controls and increasing tariffs. However, more policy measures as well as additional resources are required if the transport sector is to play the full role required of it under the ERP.

1.07 The main problem remains the massive financial requirements of physical rehabilitation and of extending rural roads to areas of high agricultural potential. A rehabilitation and modernization programme is in progress for the port of Dar es Salaam in order to increase its capacity and efficiency. An emergency relief and rehabilitation programme for Tanzania Railways Corporation (TRC) is being implemented, and is scheduled for completion in 1989; thereafter, a longer-term programme of improvements is planned. A ten year development programme is underway for the Tanzania-Zambia Railways (TAZARA) to increase the effective capacity of the railways to handle more traffic. Availability of trucks has improved in the past two years due to the introduction of the own-funds import programme and donor financed import support programme. But continued support is required to maintain the required level of truck fleet and their operations. Rehabilitation of the main roads is now getting underway, but the financial requirements for this are substantial and much more will need to be done over the next five years. A concentrated effort must also be made for the rural roads where the majority of the network is in poor condition.

1.08 This document presents the Government's priorities in the sector as well as a concrete strategy for the recovery of the sector. This main Conference Document introduces the transport sector, describes the role and function of the sector, illustrates the main areas of concern, maps out a strategy for recovery, and introduces the main policy adjustments required for recovery. This document is supplemented by a series of working papers on the main sub-sectors. Whereas the main document and the NTP provide the framework and strategy for sector recovery, the working papers provide the technical appraisal of each subsector and specific recommendations on investment requirements, institutional adjustments and policy changes as recommended in the NTP.

C. The National Transport Policy (NTP) Document:
Strategy for Recovery

1.09 Inadequate maintenance, mainly as a result of inadequate funding, has resulted in extensive deterioration of the basic transport infrastructure in the country. The condition of the network is now in a state where a massive injection of funds is required to restore them. Given this serious situation, the Government undertook to prepare a National Transport Policy (NTP) document which, inter alia, recommends to i) concentrate the future efforts in rehabilitation and maintenance of the basic network; ii) increase resource allocation to the transport sector, particularly for roads; iii) improve the utilization of existing assets through improving the management and operations; and iv) adjust the institutional structure consistent with effectively carrying out the required rehabilitation, maintenance and operations. This implies that v) maintenance allocation for roads, which has fallen far short of requirements in the past, will need to be given top priority in the future; vi) foreign exchange allocation for road maintenance as well as recurrent operational requirements of the trucking, railways, and aviation will need to be secured (albeit to the extent possible given the current shortage of foreign exchange); vii) systematic effort must be made to improve the operational efficiency of the sector; and viii) financial performance and cost recovery must also be improved throughout the sector. The transport sector recovery programme presented in this document is the action programme necessary to effectively implement the policy goals set forth in the NTP.

D. The Transport System

1.10 Tanzania's land area (945,000 sq km) is the tenth largest in Sub-Saharan Africa; economic activities are widely dispersed around the country and transport movements over long distances are characteristic of Tanzania's transport infrastructure. The transport sector plays a vital role in the economy, particularly in agriculture, for internal distribution and marketing of food crops as well as export of cash crops such as cotton, coffee, tea, sisal and sugar. The transport infrastructure also serves as an important corridor for the external trade of five neighbouring land-locked countries: Zambia, Burundi, Rwanda, Zaire and Malawi. Roads are the predominant transport mode overall with railways taking a major share of the important import/export and international transit traffic.

1.11 The transport system comprises i) a road network of about 80,000 kms; ii) two railway systems - TRC operating about 2,640 kms of track and TAZARA (jointly owned by Tanzania and Zambia) with 970 km of track within Tanzanian territory; iii) an ocean port system operated by the Tanzania Harbours Authority (THA), centered on Dar es Salaam port with smaller ports at Tanga and Mtwara on the Indian Ocean; and iv) lake ports operated by TRC on Lake Tanganyika, Lake Victoria and on Lake Nyasa. Additionally, there are two international airports (Dar es Salaam and Kilimanjaro), eleven other paved airports and over 50 unpaved air strips. A pipe line carries crude oil from Dar es Salaam to Ndola in Zambia.

E. Structure of Demand for Transport and Government Policy

1.12 The demand for transport services is generated along a number of axes, primarily to the west and north, all of which focus on the port of Dar es Salaam from Mbeya, Kigoma, Mwanza, and Arusha which cover the principal productive areas and the vital international transit routes. In 1985/86, total goods transported in the Tanzanian transport system was on the order of about 3.8 billion ton-km of which trucks handled about 55%, TRC about 20% and TAZARA the remaining 25%. Of this, over one-third is international transit traffic the majority of which are carried by the railways.

Tanzania Transport Volume: 1985/86
(`000)

	<u>tons</u>	<u>ton-km</u>	<u>% tons</u>	<u>% ton-km</u>
Tanzania-Zambia Railways *	1,043	959,605	12 %	25 %
Tanzanian Railways Corp.	952	761,600	11 %	20 %
Truck (domestic)	6,095	1,697,469	71 %	44 %
Truck (transit)	466	428,740	5 %	11 %
	<u>8,566</u>	<u>3,847,414</u>	<u>100 %</u>	<u>100 %</u>
	=====	=====	=====	=====

* not including Zambian local traffic
Source: MCW, IBRD and consultant studies

1.13 In terms of tonnage, about 1.4 million tons are international transit traffic and the remaining 7.2 million tons are traffic generated by domestic economic activities. The domestic activities are segmented into inter-regional (long distance) and intra-regional (short distance) traffic. These three types of traffic place varying demands on the transport system and require a distinct policy and strategic framework to cater adequately to the demand.

(1) International Transit Traffic

1.14 Tanzania is strategically located to play a major role in providing international transit route for the land-locked countries of Zambia, Malawi, Zaire, Burundi and Rwanda. The provision of these services are also an important source of foreign exchange for Tanzania. Currently, the volume of trade generated by these countries total about 7.4 million tons; of which 2.4 million tons are traded regionally (including South Africa) and 5.0 million tons traded overseas. Of the total overseas trade in the region, only 1.4 million tons (or less than 30%) currently use the Tanzanian route. We have, however, found that from a distance and cost point of view, Tanzania can potentially attract far greater volumes of traffic from these five landlocked countries than the current throughput. The potential traffic which can be attracted to Tanzania has been estimated to be nearly 2.7 million tons (2.3 million tons for TAZARA and 0.4 million for TRC) of the regional overseas trade, or double the current transit traffic through Tanzania.

Movement of Trade in the Neighboring Landlocked Countries (1985)
(`000 tons)

	Total Volume			Ports Used for Overseas Trade				
	Total	Regional	Overseas	MOZ	RSA	DAR	MOMB	TOTAL
ZIMBABWE	3,870	1,815	2,055	800	1,255	-	-	2,055
MALAWI	863	343	520	-	520	-	-	520
ZAMBIA	1,734	72	1,662	-	418	1,244	-	1,662
ZAIRE *	369	39	330	-	330	-	-	330
BURUNDI	263	29	234	-	-	136	96	234
RWANDA	326	146	180	-	-	5	175	180
TOTAL	7,425	2,444	4,981	800	2,523	1,385	271	4,981
	=====	=====	=====	=====	=====	=====	=====	=====

* Does not include traffic currently being routed through the port of Matadi in Western Zaire.

Source: IBRD

1.15 International transport, however, is a very competitive market and Tanzania must compete with over five neighboring ports; namely, Mombasa (Kenya); Beira, Maputo and Nacala (Mozambique); and Durban (South Africa). In order to successfully capture the traffic, Tanzania's transport system must have the capacity to offer efficient and reliable service to the potential customers. In this regard, Tanzania's ability to attract traffic in the short term is limited by the on-going rehabilitation of the port of Dar es Salaam. Currently, the spare capacity available at the port is only 150,000 tons against a potential additional demand of about 1.3 million tons. Once the on-going rehabilitation projects are completed (expected in 1990), total capacity will be increased to 3.7 million tons of general cargo per annum, or an additional available capacity of 2.0-2.3 million tons. In terms of the railway capacity, given the on-going rehabilitation programmes for both TRC and TAZARA, sufficient spare capacity will be generated to meet such potential demand.

1.16 Given this potential, the Government will press ahead with the rehabilitation of the port of Dar es Salaam, TRC and TAZARA with a view to improving their efficiency and reliability as well as to improve the documentation and facilitation of cargo movement through the system. In this regard, the Government will further promote its policy to encourage joint or independent investments by neighboring countries in transport installations in Tanzania (e.g. intermodal transshipment points, inland cargo centers) to facilitate the flow of traffic. The Government will also consider such measures as establishment of bilateral transit agreements to further facilitate the smooth flow of traffic. In addition, a sub-regional strategy for expanding the use of container transport will need to be developed in order to expedite traffic flows and improve service reliability.

1.17 The main areas of improvement, therefore, are:

- * completion of the go-going rehabilitation programme for the port of Dar es Salaam;
- * improvement of reliability, operational efficiency and management of the port and the two main railways;
- * improvement of the transit flow and documentation; and
- * sub-regional strategy for container transport.

(2) Domestic Transport

1.18 (i) Inter-Regional Transport: The local movement of goods for Tanzania totaled about 7.2 million tons in 1985/86, of which trucks carry about 6.1 million tons (85% of total traffic) and remainder by rail (TRC - 11% and TAZARA - 4%). In view of the large land area and the location of the main productive areas in the country, it would be logical for a higher proportion of the traffic to be moved by rail, particularly by TRC (average truck haul is about 276 km). However, this has not materialized due to the limited carrying capacity of TRC. Many of the goods which are on offer at TRC, e.g. fuel, cotton and construction materials, have not been moved due to operational bottlenecks in the rail system (low locomotive availability and long wagon turn-around time) and unsatisfactory operational management practices.

Tanzania: Domestic Traffic
(`000)

	<u>tons</u>	<u>ton-km</u>	<u>% tons</u>	<u>% ton-km</u>
Tanzania-Zambia Railways	265	220,505	4 %	9 %
Tanzanian Railways Corp.	818	579,600	11 %	23 %
Truck (domestic)	<u>6,096</u>	<u>1,697,469</u>	<u>85 %</u>	<u>68 %</u>
	<u>7,172</u>	<u>2,497,574</u>	<u>100 %</u>	<u>100 %</u>
	=====	=====	=====	=====

Source: MCW, IBRD and consultant studies.

1.19 The Government considers the current situation as undesirable. The cost savings which the rail system can offer for long distance transport are of strategic importance to the country's economic well-being. Furthermore, some of the cost-sensitive commodities, such as cotton, must be transported by rail if it is to be sold profitably on the world market. The ongoing Emergency Recovery Programme for TRC should go a long way in expanding the TRC operational capacity and to capture a larger share of the long-distance market.

1.20 In terms of inter-modal competition, there are no legislative or administrative barriers regulating the competition between the two modes. As for competition within the trucking industry, ever since the effective deregulation of the inter-regional transport market, availability of trucks in this market has significantly increased (albeit at a higher price due to the poor condition of the roads). Occasional problems, however, have been experienced in obtaining transport whenever administered rates have been applied (e.g. haulage of maize for the National Milling Corporation). Contract rates, through competitive bidding, has yielded much more satisfactory results and will encourage public entities to further their use of such system. The Government intends to keep the current policy framework, but will further encourage the railways through active support of measures to increase its effective capacity to capture a larger part of the market. This will be done through operational improvements rather than through administrative directives.

1.21 We are aware that the vehicle operating cost of trucks in Tanzania and in consequence the general tariffs charged by truckers have been somewhat higher than the charges of neighboring countries. This is due to the generally poor condition of the road network in the country. Since the high transport costs have general implications for the competitiveness of Tanzanian commodities abroad, as well as domestically, the Government intends to expedite the trunk roads rehabilitation programme throughout the country to bring these costs down.

1.22 The main areas of improvements, therefore, are:

- * improvement of operational efficiency of the railways to carry greater share of the long distance inter-regional traffic;
- * expansion of the pace of trunk and rural roads rehabilitation to bring down the cost of truck transport; and
- * maintain, at minimum, the current level of imports for spare parts, fuel, tires and replacement trucks.

1.23 (ii) Intra-Regional Transport and Movement of Agricultural Products: The major shortage of transport capacity in the country is encountered in the intra-regional market (short-distance hauls) for movement of agricultural products. The intra-regional market is segmented into the private and the Government-regulated sectors. The main characteristics of these two segments are:

- * majority of short-distance transport is undertaken for the private sector; carrying, inter alia, privately traded maize, firewood, charcoal, basic building materials and consumer goods. Majority of transport is provided by traders and shop owners with their own vehicles. Availability of trucks for this market segment has significantly improved in the past year or so due to greater availability of spare parts, fuel and trucks

(through the import support and own-funds import programmes). When these are transported on contract, the prices are usually negotiated or tendered. Administratively set tariff rates do not apply to these movements and currently there are less problems in securing transport due to improved availability of trucks, spare parts and fuel, albeit at a higher cost.

- * movement of agricultural produce is controlled mainly by the cooperatives and marketing boards. The tariffs are administratively set and are often significantly lower than the private market rate (30-50% below), requiring other forms of incentives to entice transporter to haul the produce. The movement is highly seasonal, requiring large number of trucks to be mobilized in a short concentrated period (3-4 months) of the year. This situation has been further aggravated by the low availability and inefficiency of the public sector operated trucking fleet. There are significant problems in securing transport.

1.24 The problems experienced in the intra-regional movement of agricultural commodities are caused by a combination of the following factors:

- i) in response to increased producer prices under the ERP, publicly marketed agricultural produce increased significantly to 500,000 tons in 1986/87. For the crop year 1986/87, cotton production increased by 60% over the previous four year average, coffee production by 27%, maize production by 20% and tobacco production by 17% (additional 500,000 tons of maize was marketed through private traders);
- ii) total movement requirement of publicly marketed agricultural produce is small (500,000 tons as opposed to total surface transport movement of 7.2 million tons per annum), but due to pan-seasonal pricing,¹ farmers market their produce immediately after harvest. Given the short period between the harvest and the rainy season (3-4 months) the transport demand has a sharp peak, requiring mobilization of over 20% of the national fleet to move less than 7% of the annual movement;
- iii) the incentive to move the crops during the short period is intensified by the shortage of proper storage facilities, i.e. to avoid crop losses during the rainy season;

¹/ pan-seasonal pricing: single marketed price offered throughout the season

- iv) pan-territorial pricing² has contributed to nearly 80% of the agricultural production to be located in outer-perimeter of the country and far away (900 to 1,300km) from the main market and export center in Dar es Salaam. Majority of the truck fleet is based in Dar es Salaam where the relative availability of spares, fuel and tires are significantly better than the rest of the country;
- v) intra-regional rates for movement of Government controlled crops (for the majority of export crops) are set by the Regional Tender Boards, and the set rates have been far below (60-75% below) what would logically be required to transport the goods;
- vi) traders and shop owners own a large proportion of trucks available in the rural areas and they are not attracted to carrying Government controlled produce due to a) unrealistically low tariffs; b) seasonality of demand; c) low volume of goods scattered in a wide geographical areas; d) bad road condition; e) shortage of spare parts and tires; and f) market regulation prohibiting private trading of these produce;
- vii) due to increase in economic activities stemming from liberalization, there are other intra-regional activities, e.g. haulage of, privately marketed maize, construction materials, etc, which are more profitable;
- viii) low utilization of parastatal trucks, effectively reducing the available capacity for intra-regional transport;
- ix) apparent shortage of appropriate size trucks for intra-regional transport (7-10 ton capacity), reflected by the high prices being offered for second hand trucks of this type; and
- x) poor road condition.

1.25 Combination of these factors have discouraged many potential transporters from being active in this sector. On the other hand, in the privately traded intra-regional market, e.g. charcoal and maize, the transport prices are dictated by the market forces and the problem of securing transport has not been as severe.

^{2/} pan-territorial pricing: application of a single purchasing price at the whole sale level for a commodity throughout the country

1.26 The critical issues which need to be addressed in the intra-regional transport market are:

- * poor road condition which deter truckers from providing services;
- * existing impediments to private sector participation;
- * poor truck availability of public sector fleet due to poor vehicle management and shortage of vehicle inputs (replacement vehicles, spare parts, fuel and tire);
- * apparent shortage of appropriate size vehicles for intra-regional transport;
- * ensuring continued availability of spare parts, tires, fuel and replacement trucks;
- * pan-seasonal pricing and lack of storage facilities which create severe peaks in marketing;
- * pan-territorial pricing which encourages production without due regard for distance from the central market and cost of transport; and
- * lack of information regarding where the demand for transport are to enable truckers to make appropriate arrangements for backhauls.

(3) Civil Aviation

1.27 Given the poor road condition and substantial distances between major population centers, air transport is an important means of transport in the country. The available seat kilometer (ASK) on Air Tanzania Corporation (ATC), the sole provider of domestic scheduled services, have grown from about 83 million in 1977, at the time of incorporation, to about 332 million in 1986, reflecting a significant increase in service provisions. The demand for ATC's services is high with average passenger load factor of 76% on all routes and 83% in the domestic market (1986), often resulting in a high turnaway rate for customers. Over the same period, a significant degree of localization of key professional staff has been achieved.

1.28 Despite this favorable demand for their services, civil aviation in general and ATC in particular, face severe constraints and problems in adequately developing a sound civil aviation system. These include:

- i) inability of ATC to finance its operation and consequent growing deficit which require substantial financial support (e.g. loss of TSh516 million and requirement for financial support of TSh574 million in 1986);
- ii) perennial problems in acquiring minimum access to spare parts due to inability of ATC to generate sufficient foreign exchange to finance its own recurrent requirements;
- iii) apparent unsatisfied demand for domestic services;
- iv) inability to properly train the staff in the civil aviation sector due to lack of foreign exchange for training abroad;
- v) insufficient financing for proper maintenance of airports and related facilities; and
- vi) constraint on fleet utilization due to lack of proper facilities (e.g. lack of night landing facilities, poor runway maintenance preventing use of larger crafts).

1.29 It is clear that a systematic assessment of the sector is required to set a proper strategy for the sector, both in terms of improvements to the financial performance of ATC, improved cost recovery in the civil aviation sector in general, and a least cost strategy to meet the apparent unsatisfied demand in air travel.

F. Strategy for Recovery: 1988 - 1992

1.30 It is apparent that the transport sector must now take the lead in making the ongoing Economic Recovery Programme a success through improving the services the sector provides to the productive activities of Tanzania. The fundamental priorities critical to the recovery of the sector are clear. They are rehabilitation, maintenance of existing assets and improvement of the operational efficiency of parastatal transport entities.

1.31 For TRC, TAZARA and THA, recovery strategies have already been set, Government-Donor coordination group established and the key investment programmes have been formulated and are under implementation. There is still, however, a need to carry out the implementation within the framework outlined in paragraphs 1.10 to 1.13.

1.32 TRC, with its first phase of the Emergency Recovery Programme (EP) under implementation, is focusing on replacement of aged tracks (over 70 years old on certain sections), rehabilitation of locomotives, wagons and telecommunications systems, and improvement of its maintenance capacity. However, due to the severely deteriorated condition of the assets, the second phase will need to continue the track renewal programme as well as certain replacement/rehabilitation programme for locomotives. There is one aspect which TRC must emphasize as the EP is implemented. That is the strengthening of operational management and improvement of the operational efficiency.

1.33 For TAZARA, with its Ten Year Development programme (TYDP) under implementation, the nature of the problem is somewhat different. The infrastructure is new and the operational efficiency has improved significantly in the past several years. The primary constraint inhibiting increased traffic was locomotive availability and financing has now been secured under the TYDP. The relevant question which needs to be addressed is to the extent to which additional international transit traffic can be attracted to the corridor once the Dar es Salaam port rehabilitation is completed, and the best approach to expand the existing capacity to meet such traffic.

1.34 THA, with its Port Modernization Project, is significantly expanding its capacity to handle container traffic which is growing rapidly, and improving the general cargo handling area. The project will nearly double the cargo throughput capacity to over 4 million tons per annum. However, in order to realize the capacity throughput, major improvements must be made in cargo handling productivity, i.e. emphasis must be placed on training and operational management. Furthermore, maintenance capacity must be enhanced to properly care for the new equipment being brought in under the project. The other consideration which need to be explored is the question of container use in the region. Currently, most goods imported in containers are unstuffed at the port for onward movement, nullifying the basic advantage of container transport. This is due to the lack of container handling facilities and transshipment points at the destinations, be it in Tanzanian or in neighbouring countries. A coherent strategy will need to be developed on a regional basis, to maximize the use of container transport. Additionally, an appropriate strategy for the use of ports of Tanga and Mtwara will need to be developed to take advantage of the already existing infrastructure and to supplement the capacity of the Dar es Salaam port.

1.35 The main focus, however, must be placed on rehabilitation and maintenance of trunk and rural roads and the trucking sector. In terms of financial requirement, these three sectors comprise a large portion of the transport sector budget. Unlike TRC, TAZARA, and THA, no coherent strategies for maintenance of trunk and rural roads and the trucking sector is being developed. Such a strategy is urgently required by virtue of the fact that the roads and trucking industry carry nearly 70% of the total traffic in the country and are the only outlet for the agricultural commodities from the rural areas.

1.36 Under the current three-year public sector investment programme, only 4% of the programme has been allocated for roads. Neighbouring countries with far smaller land area and already possessing good road networks have consistently allocated about 15% of their national investment budget for roads. Given the deteriorated state of Tanzania's road network, a significant increase in the allocation for both rehabilitation works and for maintenance is a must. Similar considerations hold true for the trucking sector. Given that the sector carries the majority of traffic in the country, inadequate allocation of foreign exchange for spare parts, fuel, tires and replacement trucks will invariably lead to stagnation of

the domestic activities. In the past two years, financing has been made available through various import support programmes. This assistance must be maintained if the current economic recovery is to continue. The specific strategy for each of the sectors as well as the associated investment requirements and necessary policy adjustments as reflected in the NTP to achieve the goals set forth are presented below.

(1) Trunk Roads

1.37 Trunk Roads: The goal in the trunk roads sector is to restore the paved and gravel road network to 70% in good condition by 1992 from the current 40%. To achieve this goal, financial allocation for rehabilitation will need to be expanded, maintenance allocation will need to be restored to an adequate level and certain institutional changes will need to be made to enable the expanded works to be carried out. Fundamental policy and institutional recommendations embodied in the NTP are summarized below:

- i) allocation of road budget will be concentrated on road maintenance and rehabilitation with a goal of achieving 70% of the trunk paved and gravel roads in good condition by 1992;
- ii) adequate budget will be allocated for road maintenance, and will be adjusted on a quarterly basis to maintain the real value of the budget (creation of special road maintenance supplementary fund will be considered);
- iii) in order to meet the expanded work load of road maintenance, use of local contractors will be expanded to carry out periodic maintenance works;
- iv) in order to improve the availability of road maintenance equipment, servicing of all equipment will be consolidated under seven zonal workshops;
- v) in order to improve the cost effectiveness of equipment use, Plant Pools will be expanded and attached to the zonal workshops. These Plant Pools will be operated on a commercial basis, including, inter alia, hiring of equipment to local contractors engaged in road works; and
- vi) manpower training and development will also be strengthened, with the implementation of MCW manpower development programme along with the training of RRD and MCW regional office staff.

1.38 Maintenance Programme: In previous years, the maintenance budget has lagged substantially behind the requirement, the result of Government effort to restrain the overall expenditure growth, by the successive devaluations and the lack of available foreign exchange to purchase critical inputs such as spare parts, fuel and bitumen. Despite 34% nominal increase in maintenance allocation in 1987/88, the current allocation is only 64% in real terms compared to the 1986/87 allocation and only 35% of the required budget to properly maintain the network. This situation must be rectified immediately. This will require an annual allocation of TSh 762 million (US\$ 11.2 million) as oppose to the current level of TSh 279 million (US\$ 4.1 million) to support routine and periodic maintenance programmes. Details are presented in Annex 2. This action will be accompanied by following specific measures:

- i) given the expanded workload under the proposed five-year programme, additional capacity for executing road maintenance will be required. Based on the ongoing programme to assist the local construction industry, the Government will formulate a programme to expand the on-going use of contractors for carrying out periodic maintenance works;
- ii) given the high foreign exchange content of road maintenance operations, about 30-35% on average, allocations for maintenance will be assessed in real terms, with quarterly reviews to replenish loss of value. To achieve this, considerations will be given to creation of a special road maintenance fund through a study of the existing practice of road user charges;
- iii) in order to expeditiously execute the increased maintenance operations, the Government intends to formulate a programme to significantly increase the availability of road maintenance equipment and vehicles through consolidation of workshops and expansion of Plant Pools. This will entail a) consolidating the servicing of all road equipment and vehicles under seven zonal workshops, including equipment belonging to other road agencies under the Ministry of Local Government and Cooperatives and the Regional Administration; b) implementing a comprehensive equipment rehabilitation and replacement programme (technical assistance is about to commence); and c) upgrading and equipping of zonal workshops; d) establishing plant pools at each zonal workshops with necessary equipment and management, and operating them on a commercial basis; and e) hiring equipment in the Plant Pools to contractors involved in road maintenance and rehabilitation;

- iv) manpower training and development will also be strengthened. Training requirements for MCW are quite clear but further investigation is required to identify the needs of RRD and the MCW regional office staff. Training of all roads staff will be coordinated, consolidated, managed and executed by MCW and the orientation of the Morogoro Training Center will be revised to take in more students at different levels. Courses will be revised towards more practical training with emphasis on road maintenance management, and the existing facilities will be upgraded to meet the new demand; and
- v) given the emphasis being placed on maintenance, measures will be taken to a) ensure availability of necessary information to enable better plans and follow-up of maintenance effort; b) strengthen the maintenance teams by providing them with adequately skilled personnel and appropriate equipment; and c) ensure that maintenance works by force account teams is properly planned whereby work plans are commensurate with allocated resources, and outputs at any particular period, that matches the resources dispersed.

1.39 Investment Programme: the current three year programme (1987-1989) is only a first step towards a full restoration of the trunk road network. Over the next five years, an expanded recovery programme will be considered to improve the existing trunk roads in good condition from the current 46% to 70% for paved roads, and from 37% to 70% for gravel roads. Rehabilitation of 295 km of the TANZAM highway and about 800 km of gravel roads will commence in 1988. Under the new five-year programme, further road rehabilitation will be added. Overall, the investment programme will be expanded to cover additional 1,640 km of roads over the next four years (TANZAM - 180km; paved roads - 580km; and gravel/earth roads - 850km). Successful execution of this programme will improve the condition of the trunk paved and gravel roads to 70% being in good condition by 1992. The financing requirement to carry out the works, including maintenance, spare parts for equipment and rehabilitation of bridges and culverts, is TSh 16,768 million (US\$246.6 million) in real terms over the period 1988-1992. The existing financing gap to carry out this programme is US\$109.8 million in foreign exchange, not including the Government local counterpart funds of TSh 3,631 million (US\$53.4 million equivalent). The details of the financing are presented in Annex 3 and the priority road links to be rehabilitated are shown on the attached map. Consistent with the strategy of recovery, new construction and upgrading will be accorded a low priority (unless the road dictates high economic priority) and that the Government will concentrate its allocation of road budget for the purposes of maintenance and rehabilitation.

(2) Rural (Regional and District) Roads

1.40 Rural Roads: The rural road network in the country is in very poor condition. In the past, the efforts to improve the rural road network was too diffused and not coordinated sufficiently to ensure proper maintenance of the network. The institutional structure to support rural roads development was weak, financial allocations for both rehabilitation and maintenance were inadequate, and coordinated effort to institutionalize proper maintenance practices and administration fell short of the massive requirements to develop and upkeep about 72,000 km of network. This has resulted in paralysis of the agricultural and other productive activities in the rural areas, effectively preventing the integration of fundamental economic activities of the country with the market economy. The strategy in the sector is to first tackle the immediate requirements of the country through concentrating the efforts in restoring and maintaining the critical roads required for evacuation of agricultural commodities, with particular emphasis on export crops. This effort will require significant amount of financial commitment as well as coordinated effort in strengthening the institutional structure for maintenance and management of these roads. The fundamental policy and institutional recommendations embodied in the NTP are detailed below:

- i) responsibility for the execution of rural roads development, rehabilitation and maintenance will be vested in MCW's Rural Roads Division (RRD). Physical execution will be managed by MCW's regional office;
- ii) planning and budgeting for rural roads will remain with the Ministry of Local Government Cooperatives and the Regional Administration. The budgeted programmes will be contracted to MCW for execution;
- iii) use of contractors will be expanded to carryout most periodic maintenance and rehabilitation works;
- iv) streamlining planning and budgeting process at both the local and central Government level and develop an institutional structure to ensure proper execution of programmed works;
- v) consolidating servicing of all road maintenance equipment currently in possession of various road authorities under the Zonal Workshops of MCW;
- vi) allocating adequate budget levels for annual maintenance of rural roads;
- vii) promoting a more coordinated practice of labour-based construction and maintenance methods; and
- viii) developing a systematic strategy for manpower development and training. MCW will be responsible for planning and execution of the strategy.

1.41 Within this context, the Government has formulated a first phase of a Core Rural Roads Improvement and Maintenance Programme which concentrates on developing the parts of the network which would assure access to agricultural areas producing export commodities. The first phase of the Core Rural Roads Improvement and Maintenance Programme will install adequate maintenance on 6,000 km of essential roads in 7 regions, and rehabilitate 1,400 km of priority agricultural roads. This will be followed up by a second phase covering 4,000 - 5,000 km including other regions and districts, of which 1,000 - 1,200 km are expected to be rehabilitated.

1.42 Planning and Budgeting: The Government is committed to continuing the current policy of decentralized planning and budgeting process through the Local Governments and Regional Administrations and intends to take measures to further consolidate and streamline the present arrangement. Further consideration will also be given to strengthening the self-reliance of Local Governments to fund their own road development and maintenance programmes. In streamlining the planning and budgeting process, the Government will give priority to i) improvement of roads which satisfy socio-economic criteria; ii) allocation of adequate resources at the local level to maintain the roads in satisfactory condition; and iii) developing the institutional capacity to adequately maintain, at least, all essential roads. Furthermore, construction of new roads, except for those forming parts of development projects, will be accorded low priority until the rehabilitation backlog has been significantly reduced, and an adequate level of funding for maintenance of essential roads has been achieved.

1.43 Execution: Given the pervasive problems encountered in executing rural roads programmes, particularly maintenance, the Government is considering an alternative framework which would allow greater utilization of technical expertise in MCW. MCW will be given the responsibility for execution of the approved rural roads programmes. This implies that i) MCW will strengthen its capacity at the regional level to programme, implement and control road maintenance and rehabilitation activities; ii) the Regional Administration and the Local Governments will contract MCW to carry out an agreed annual programme; and iii) MCW engineers in the regions will be directly responsible for executing or contracting out road rehabilitation and maintenance works. The equipment required for contractors to carry out such works can be hired from one of the Plant Pools which will be organized under MCW. Details of the organizational arrangements, staffing and equipment requirements for MCW to effectively manage the execution of the rural road rehabilitation and maintenance will be determined in a study to be undertaken shortly.

1.44 The present arrangement of having separate workshops at regional headquarters for trunk roads and regional roads is inefficient and costly. The current arrangement will need to be restructured to bring all workshops under the care of MCW Department of Mechanical and Electrical Services to service the equipment for trunk, regional and district road maintenance works in accordance with agreed work. Further expansion of the number of Plant Pools to key regions in order to provide more extensive and reliable services to contractors who should eventually execute most of the road

regravelling and rehabilitation works. Given the logistic difficulties in maintaining equipment in outlying districts, consideration will be given to increasing the use of mobile workshops and lubrication units operating under the control of regional workshop management, as well as provision of more low-bed tractor trailers to transport broken down equipment.

1.45 Institutional Actions: The strategy to improving the execution capacity, consolidating and streamlining workshop locations, equipment holdings, and management procedures, would require, inter alia, the following actions:

- i) commission a joint inter-Ministerial committee to prepare a) detailed organizational arrangements for execution of road works; and b) detailed training programme;
- ii) execute the recommendation of the committee and create a Rural Roads Division in MCW;
- iii) promote a more coordinated practice of labour-based construction and maintenance methods;
- iv) prepare an inventory of all equipment under the jurisdiction of the three road authorities, formulate a rehabilitation and replacement programme, prepare a plan of action to consolidate the equipment servicing under zonal workshops, and establish a cost accounting and hiring system for each plant pool;
- v) carry out a study to prepare a region-by-region physical inventory, mapping of the total rural road network in about 30 districts, and reclassification of roads; and
- vi) complete the on-going MWC study on trunk and rural roads design standards and produce a roads manual.

1.46 Investment Programme: The proposed Core Rural Roads Programme (1988/89-1991/92) will be implemented in two phases, covering over 10,000 km of roads throughout the country. The first phase will cover 24 districts, where 6,000 km of rural roads have been identified as being immediately essential to agricultural production (Agricultural Feeder Roads Study completed in September 1987). Of these roads, 1,415 km require urgent rehabilitation (see Roads Working Paper for the location of roads). The 1,415 km of road rehabilitation in the first phase of the five-year Programme will be undertaken over three years, 1988/89-1990/91. The estimated cost of this programme is TSh 585 million (US\$8.6 million). The location of the first phase roads are shown on the attached maps. The second phase will add a further 4,000-5,000 km of essential roads and rehabilitate 1,000-1,200 km of priority agricultural roads. The list of second phase will be prepared and evaluated by June 30, 1989 for implementation in the final two years, 1990/91-1991/92. At the end of the five-year programme, at least 10,000 km of essential roads should be

receiving regular maintenance of which some 2,600 km would have been rehabilitated. Adequate funds will need to be provided to maintain the essential rural roads through central budget votes, supplemented by local levies for district roads. The total annual allocation for routine maintenance operations of essential roads will be increased to US\$175 per km in real terms to cover the 10,000 km. In addition, annual budget allocation to provide minimum maintenance of the remaining 40-44,000 km of rural roads will need to be increased from the present TSh 4,480 (US\$66) per km to TSh 5,440 (US\$80) per km in real terms. The financing requirements and the five-year work programme are presented in Annex 4.

(3) Trucking Sector

1.47 The trucking sector plays a major role in the domestic transport industry, carrying nearly 70% of the estimated 2.5 billion ton-km of freight movement in the country. The existing fleet size is estimated to be about 14,000 trucks (over 3 ton capacity), of which 78% is owned by the private sector, 4% by the Regional Transport Corporation (RETCO) and 18% by other public sector organizations (marketing boards, cooperatives, etc.). The main feature until 1984 was a chronic shortage of replacement vehicles, spare parts, fuel and tires, and a consequently aging fleet and low vehicle availability. Fleet replacement was about 4% per annum, obviously inadequate in the Tanzanian conditions when over 15% would be optimal because of poor road conditions. Freight movement by road appears to have declined by 2% per annum since the mid 1970s, but as the overall level of economic activity had stagnated, this did not result in persistent or widespread capacity shortage. Between 1985 and 1987, the situation has changed dramatically with the revitalization of the economic activity under the ERP. Given the introduction of the "own-funds imports programme" and donor assistance from the import support programmes, the sector is in the process of being revitalized to cater to the rapidly expanding demand. The economy, however, continues to experience major problems in meeting the rapidly growing agricultural production and the economic activities in the rural areas. It is clear that the trucking sector must be given priority in importing its requirements, including accelerated replacement programme for trucks, and continued support for importation of spare parts, fuel and raw materials for tire production.

1.48 Simple injection of trucks and associated input requirements will obviously not solve the major problem at hand. It is clear that in order to adequately tackle the trucking bottleneck, a multi-pronged approach to the problem is required. This means that i) the rural road network must be rehabilitated quickly to improve the accessibility and lower the cost of transport; ii) the availability of the public sector trucks must be improved; iii) given that the bulk of agricultural transport is done by private sector operators, greater incentives must be given to the private sector to induce efficiency in the transport of agricultural products; iv) provision of storage facilities for agricultural produce; and v) importation of appropriate size trucks for rural operations.

1.49 Public Sector Transport: All vehicles have been affected by input problems but the availability record of public sector transport fleets is particularly poor and this is reflected in low average vehicle productivity. The performance of RETCO, however, illustrates that parastatal transport can achieve reasonable levels of productivity with relatively new vehicles which require little more than routine maintenance, but as the vehicles age and maintenance demands increase their productivity falls significantly. RETCO vehicles are considered uneconomic after 4 - 5 years, very much earlier than is normal in the private sector (10-15 years). Consideration will need to be given to recycling some of the non-operational public sector vehicles to other users to put them back into operation. Given that the rural transport, with its difficult road conditions, is unattractive to many of the private sector operators, current capacity of the public sector transport (particularly the RETCOs) will be maintained. The public sector transport, of course, will need to concentrate the majority of its activities in the intra-regional transport.

1.50 Private Sector Transport: The private sector accounts for at least 75% of effective capacity and transport shortages in the rural areas would be largely solved if more of this capacity were mobilized to assist with crop movement. In order to increase the involvement of the private sector, there are certain constraints which need to be removed. First is the administratively set rates for intra-regional rates. Second is the marketing system for agricultural products. Third is the barrier to use existing fleet of trucks to its maximum capacity. Fourth is the availability of replacement trucks.

- i) intra-regional rates are set by Regional Tender Boards and they have been found to set rates far below (sometimes 60-75% below) what would logically be required to transport the goods. Furthermore, it has been found that allowing market rates to prevail, as in the case of inter-regional transport, will not materially affect the producer prices (intra-regional transport cost only account for about 5 - 7% of producer price). Given these facts, it is desirable to allow the market to determine the appropriate levels of intra-regional trucking tariffs with a view to allowing the operators to recover their operating costs and realize a reasonable return on their investments;
- ii) simply raising transport rates may not be sufficient to generate the necessary additional private capacity as many of the truck owners are in private trading, including marketing of food crop;
- iii) many of the parastatal trucks are non-operational after 4-5 years for want of spare parts, but more importantly, due to lack of maintenance management and capacity. In the short term, effective capacity of the existing fleet can be expanded through recycling the non-operational trucks into the private sector, which may extract further work out of

the fleet. Current procedures being used for recycling will be streamlined. The additional advantage to this is that the rural area operation, which does short trips on poor roads, would preferably use second-hand trucks rather than new trucks; and

- iv) given the size and probable age structure of the fleet, about 1800 - 1900 new or rehabilitated trucks are required annually until 1990. Taking into consideration the recent and proposed rehabilitation projects, a minimum annual import programme of about 1800 trucks is necessary (currently about 1300 - 1400 per annum is being imported from various sources). However, credit restrictions, applied generally through out the economy has limited the capacity of the trucking industry to purchase new trucks. Further support to the trucking sector will need to be considered along with provision of credit for the purchase of new vehicles. The particular types of trucks required are i) 7 - 10 ton trucks for short and medium range transport (nearly 50% of the fleet in the country); ii) larger fuel tankers; and to a lesser extent iii) larger trucks for long-distance haulage.

1.51 In summary, the Government is considering, under the NTP, the following short-term measures to improve the operations of the trucking industry in general, and the intra-regional transport in particular:

- i) to allow the market to determine the appropriate level of intra-regional trucking tariffs with a view to allowing the operators to recover their operating costs and to realize a reasonable return on their assets;
- ii) consideration will be given to the possibility of introducing greater flexibility in crop marketing and movement;
- iii) public sector transport will continue to play its critical role in the future, but will be restricted to meeting the most immediate shortages with the existing size of fleet. Their activities will focus primarily on intra-regional transport;
- iv) the Government will undertake an inventory of all cooperative and public sector fleets to sell off all non-operational or 'uneconomic' vehicles; and
- v) the Government will seek donor support to meet the annual requirement for increased truck inputs and replacements. The annual requirements are summarized in Annex 5.

1.52 In the medium term (3-5 year period), it is expected that the measures taken above will improve the availability of transport in the rural areas. The Government intends to review the role and the function of RETCO and other public transport.

(4) Tanzania Railways Corporation (TRC)

1.53 TRC's performance has progressively declined from a peak of about 1.6 million tons in early 1970s, to 0.88 million tons in 1986. Given the strategic location of TRC network, traversing regions estimated to account for about 40% of Tanzania's agricultural output as well as the significant reliance of Tanzanian economy on long distance haulage of goods, and the potential for earning foreign exchange from transit traffic, TRC's performance must be substantially improved in the short term and capacity expanded in the medium and longer term to ensure that the increased economic activities in the country can properly be translated into development of the economy.

1.54 The source of problems for TRC stems from:

- * breakdown of maintenance systems and capability - relatively little maintenance facility and personnel inherited from the disintegration of the East Africa Railway Company;
- * severe resource constraint - lack of both foreign exchange resources to import spare parts and the domestic resources to acquire domestic goods and services for maintenance;
- * lack of experienced management and skilled manpower; and
- * old infrastructure and equipment - many sections of the Central Line are over 70 years old, a large number of wagons and locomotives, which after persistent deferral of necessary maintenance, are approaching the end of their useful lives.

As a result, the operational performance has deteriorated, the track has rundown, and the financial performance has continuously worsened.

1.55 In an attempt to reverse this trend, a TRC Donors' Conference was held in February 1987 to formulate an integrated programme of rehabilitation and strengthening of the operating and management system. The result is the on-going TRC Emergency Recovery Programme (EP). The strategy which has been adopted under the EP, which both the Government and TRC are committed to, is to concentrate all investments in the rehabilitation of key assets and the improve operating capacity through managerial improvements. The first phase of EP, which will be completed in 1990, endeavours to increase the capacity of TRC by about 25% to 1.4-1.5 million tons per annum. This will be followed by further expansion of the

capacity; the details of this phase are being studied under the TRC Development Study. The concept of the first phase is to rehabilitate the existing locomotives and wagons, as well as relaying of the Central Line, improvement of telecommunications systems and strengthening the maintenance capacity. Along with this, TRC has committed to improve its operations and management of the railways both in terms of physical and financial performance. According to the estimates of EP, TRC will need to make significant improvement in the wagon turn-around time in order to effectively utilize the rehabilitated locomotives and track. The Government is satisfied with its progress thus far and the actual impact of the programme should begin to show in the coming year.

1.56 Recent assessment of the progress of EP has identified items which were omitted from the EP. These items include: bridge rehabilitation and hydrological studies, track maintenance and technical assistance. The estimated cost of the additional works are detailed in Annex 6.

1.57 In order to achieve the necessary improvements in TRC operations, the Government and TRC are committed to implementation of the EP and will continue to implement the following agreed 10 point programme:

- i) Tariffs:
 - grant powers for tariff revisions to TRC;
 - maintenance of working ratio of 100.
- ii) Financial Management:
 - establishment of cost centers;
 - institution of financial management systems;
 - measures to ensure timely production of annual reports.
- iii) Operational Recovery Plan:
 - establishment of procedures for control and monitoring of maintenance and operating performance.
- iv) Disposal of Scrap:
 - effective measures to be taken to reduce the impediment to operations caused by accumulation of scrap.
- v) Rehabilitation of Locomotives and Wagons:
 - preparation of action programme for maintenance of rolling stock and appropriate periodic reporting procedures.
- vi) Availability of Locomotives:
 - preparation of periodic reports on locomotive availability.
- vii) Hotels:
 - institution of procedures to facilitate operations of hotels as profit centers.

- viii) Manpower Development and Training:
 - revision of corporate organization, definition of a recruitment, training and compensation policy;
- ix) Additional Investments:
 - commitment to the concept that new investments outside of already defined project will be subject to cost/benefit analysis acceptable to the financing group of the EP.
- x) Cash Flow:
 - institution of stringent cash management systems to avert liquidity problems.

1.58 TRC Lake Service: The Lake Service plays a key role in the transport of passengers around the Lake Victoria, Lake Tanganyika and Lake Nyasa areas where the road network is particularly underdeveloped. The importance of the service can be seen in the high vessel occupancy rates enjoyed between the key lake ports where they have historically averaged as high as 100%, implying considerable excess demand in peak periods. In addition, the Lake Service accounts for the transport of around 100,000 tons of cargo to and from areas that would otherwise be largely inaccessible. The Lake Services have enjoyed considerable financial and technical assistance support from the donor community. The vessel fleet is generally aged but in maintainable condition. The strategy for this segment of TRC's operations is to defer new investments as much as possible to rehabilitate the existing fleet consistently with the maintenance of an acceptable level of service provision and complementary efforts to improve operating and financial performance. TRC has already taken steps to ensure that the Lake Services management enjoys an acceptable degree of operating and financial autonomy. The Government supports these moves in strengthening the capability of this operation. An investment study has already been undertaken with donor assistance and the results of this study are being evaluated within the framework of the strategy of minimization of investments in new capital assets.

(5) Tanzania Zambia Railways Authority (TAZARA)

1.59 TAZARA, which started its operations only in 1976, is mainly a transit corridor for Zambia and other neighboring countries. Over 75% of the traffic is international transit traffic. TAZARA's line capacity was designed for 5.0 million tons per annum. The effective installed capacity, taking account of rolling stock at its establishment, was about 2.5 million tons. TAZARA's present haul capacity, however, is severely constrained by locomotive availability (due largely to mechanical difficulties of the locomotives). Recent overall availability of locomotives is only 50%. Within this level of availability and the current level of passenger service, the capacity of TAZARA, as limited by motive power, is about 1.18 million tons. TAZARA has achieved 1.16 million tons, which is, under current constraint, a laudable performance.

1.60 Taking into consideration the locomotive constraint, as well as other constraints and weaknesses noticed in the system, TAZARA embarked on a Ten Year Development Plan (TYDP) in 1984, and has been mobilizing donor support for 23 project items included in the TYDP. The entire TYDP, amounting to US\$ 227 million, has now been fully committed. These investments should enable TAZARA to meet the currently forecast traffic of 1.57 million tons for 1990/91 and 1.82 million tons for 1994/95. The TYDP is in the process of being reviewed and updated, including an update of the traffic forecast to take into consideration the extra traffic from Malawi anticipated after 1990. In addition to the already-financed TYDP, other necessary investments pertaining particularly to track and track maintenance amounting to about US\$ 20 million have been identified (see Annex 7 for details). After further detailed investigation, financial support will be sought from the donor community.

1.61 There are a few items of importance which TAZARA needs to be review in the immediate future. First is the relatively long turn around time of wagons. This arises largely because of problems in co-ordinating operations between TAZARA and Zambia Railways. Consideration should thus be given to carrying out a joint operational study with Zambia Railways to determine measures that can be taken to improve the utilization of wagon assets in the system before committing future investment resources to wagons. Second is the question of cost recovery and the financial performance of TAZARA. A study is being conducted and further consideration will be given to improving the costing and tariff system to take account of the need for adequate cost recovery. Third is to explore possibilities of introducing a freight forwarder system to promote further use of TAZARA for Tanzanian domestic movement of goods.

(6) Tanzania Harbours Authority

1.62 The port of Dar es Salaam is a major regional port, serving the neighboring landlocked countries, which has not yet achieved its full potential. The volume of international transit cargo which can potentially be attracted to the port of Dar es Salaam is nearly double the current throughput of 1.7 million tons (dry cargo only for 1986). The rehabilitation of the port is now being carried out with expected completion in mid-1989 to 1990. The ongoing works include, reconstruction of berths 9-11 for container handling; installation container handling cranes and other associated equipment; rehabilitation of container stacking area; paving of general cargo berths 1-8; and construction of container freight station outside the general port area. This rehabilitation, once completed, will substantially increase the capacity of the port to handle 3.7 million tons of dry cargo per annum (2.4 million tons of containerized cargo and 1.3 million tons of general cargo). This implies that the additional capacity available to attract both domestic and international traffic is 2.0 million tons, more than double the current throughput. There are, however, other elements which need to be improved in order to maximize the use of the improved facilities. These include:

- * cargo handling efficiency for both container and general cargo must be improved;
- * maintenance capacity of equipment must be improved; and
- * dwell time of cargo must be reduced to avoid congestion in the port.

1.63 The Government and THA are committed to improve the efficiency in cargo handling through systematic training and technical assistance. Substantial technical assistance is already in place and the training program in progress. Physical targets will be set to systematically evaluate the cargo handling performance, with a view to achieving progressive improvements. As for maintenance of equipment, THA will endeavour to achieve higher availability of cargo handling equipment with a target of downtime not exceeding 15%. Cargo dwell time can be a serious impediment to port operations, particularly in Dar es Salaam. The cargo holding area for both containers and general cargo is quite limited and if the current rate of cargo throughput were to be maintained, it would cause a serious congestion in the port. THA will take measures with TRC and TAZARA authorities to make wagons and shunting locomotives available on a timely basis to reduce the dwell time of the cargo. Additionally, a strategy to decentralize warehousing, using the port only as a transit point, will be considered. In this regard, the Government will continue to encourage neighboring landlocked countries to develop national cargo centers outside the port (similar to what has been proposed for Malawi).

1.64 The requirements of workshop facilities for general cargo equipment maintenance has not been sufficiently met under the ongoing projects. Investment requirement totaling US\$5.0 million has been identified (see Annex 8 for details). Apart from these urgent requirements, THA does not foresee further purchases of equipment or new investments until current rehabilitation program has been completed and situation reassessed.

1.65 As for the port of Tanga, it plays a significant role in the maritime trade of Tanzania because of its position at the northern end of Tanzania. The port, however, is disadvantaged in that there are no facilities for vessels to berth alongside, with all cargo being worked into lighters. Currently, the port's lighterage facilities are also in poor condition and require repairs/rehabilitation. Despite the poor condition of its facilities, the port handled 236,000 tons in 1986, down from its peak of 403,000 tons in 1978. No recent forecast of traffic has been made of Tanga and in the absence of such a forecast, it is not possible to determine the nature and the scope of development. It is, however, prudent to rehabilitate the existing facilities to prevent further deterioration and to restore the port's capacity to approximately 500,000 tons. The cost of the urgent repairs to the lighter wharf and fertilizer jetty is about US\$ 2.1 million. Along with this rehabilitation, a development study will be undertaken to determine the potential demand and development requirements of the port of Tanga (see Annex 8 for details). Similarly, consideration will need to be given to providing better road access to port of Mtwara and improving the condition of the cargo handling equipment.

(7) Civil Aviation and Air Tanzania Corporation (ATC)

1.66 The management of civil aviation is delegated amongst four departments in MCW: i) Air Tanzania Corporation (ATC) operates and manages the national airline; ii) the Department of Civil Aviation (DCA) regulates air traffic safety, communications services and navigation and operates and carries out routine maintenance for airports, airfields and related facilities; iii) Department of Construction and Maintenance constructs and rehabilitates airports, airfields and related facilities; and iv) Mechanical and Electrical Division installs and maintains electrical and mechanical installations and equipment.

1.67 Financial Problems: The financial performance of ATC continues to be poor with ATC generating a profit in only one of its 10 years in existence. In 1986, it required external support of US\$12 million equivalent to finance its cash short fall from operations and its interest obligations. Government, as the share holder, has effectively had to underwrite or directly support substantial part of this shortfall. The financial problems of ATC stems from: i) its high overhead costs relative to the traffic volume that it generates or can generate from its operations; ii) prevalence of uneconomic routes in the scheduled services; iii) lack of timely and sufficiency of adjustment of fare rates to reflect the increasing cost of operation; and iv) lack of effective financial and operations systems management. The other financial issues prevalent in the civil aviation sector is insufficient cost recovery for services provided: including, i) airport services (recovery from airport users - airlines); and ii) a division of responsibility for the operations, maintenance and construction of airdromes between DCA and the Department of MCW and a supporting accounting framework not conducive to an effective cost recovery policy.

1.68 Operational Problems: Recurrent foreign exchange requirement for airline operations is high. To a high degree ATC's flight scheduling is governed by its aircraft availability which in turn is determined both by its access to spare parts and the efficiency of its maintenance operation. Lack of foreign exchange for procurement of spare parts is a perennial problem which will not solve itself, particularly due to the fact that the ATC does not generate sufficient foreign exchange to meet its recurrent operational requirements. A clear strategy to overcome this problem needs to be developed. In terms of other operational problems, despite the fact that ATC and Civil Aviation place importance on proper training and have formulated a coherent training programme, implementation has been hampered by lack of foreign exchange to send the staff to proper training institutions abroad. An additional problem is the degree of accessibility of airports. Maintenance of airports has been neglected in the past and some airports are beginning to show signs of deterioration. Moreover, MCW has not been able to implement a programme to upgrade some airstrips to accommodate ATC's medium sized aircrafts because of budgetary restrictions. From the safety point of view, ATC has often been forced to cancel flights or use smaller aircrafts to prevent compromising safety standards. Lack of night landing facilities have also limited the use of the fleet (need to consider adding facilities at Dar es Salaam, Kilimanjaro and Mwanza airports).

1.69 Unsatisfied Domestic Demand: Given the high load factor of ATC for domestic flights (83%), there appears to be unsatisfied demand for domestic air travel. In the current financial condition of ATC as well as of the Government, it would not be prudent to finance an expansion of ATC. Other alternatives, such as continuing to allow local air charter companies to provide scheduled services, will be further promoted to improve the domestic air services. This option will provide a certain element of competition within the domestic airline industry.

i.70 In summary, the Government intends to consider the following measures to improve the current conditions in the civil aviation sector:

- i) carry out a study to rationalize ATC's overhead and support structure to improve its productivity, including possible need for technical assistance;
- ii) formulate a staged programme to increase fares for the domestic market to ensure full cost recovery in the provision of services by ATC and introduce a flexible mechanism to enable fare adjustment on a timely basis;
- iii) seek donor support for a) financing of the training programme for both ATC and civil aviation staff; and b) financing of spare parts requirement for existing ATC aircraft;
- iv) limiting capital investment by ATC until such time as a rational development and financial strategy can be developed (a study is being undertaken to determine the development strategy of ATC);
- v) to meet the additional domestic demand for air transport, the Government will continue to pursue an "open-sky" policy for local charter airlines to provide domestic scheduled services; and
- vi) improve and rehabilitate airdromes within the framework of the recommendations of a development study to be undertaken.

(8) Other Aspects of Transport

1.71 The detailed analysis of the sector has been concentrated upon major movements of freight traffic in the country with a view to formulating a coherent and action oriented programme to restore the major transport arteries in the country. This focus is dictated by the urgency in which transport system must be restored in the short term to cater to the rapid recovery of the economy under the ERP. There are, however, other sectors which play an important role in the transport system and require

further assistance. These include, inter alia, coastal shipping, passenger transport, and telecommunications. Assessment will need to be made for these sectors in the future to enable the Government to provide a comprehensive perspective of the sector.

G. Transport Sector Recovery Programme

(1) Investments

1.72 The transport sector is at a crossroad. The recovery of the ports and railways sectors, with concerted effort from the donor community, is now well underway. Attention must now be widened to embrace the roads and trucking sectors, on which the domestic economy of Tanzania heavily depend. The Government welcomes the formation of rural roads consultative group by the donor community and, as in the ports and railways sectors, encourages it to develop a close working relationship with the Government. Similar effort for the trunk road and trucking sectors is encouraged. Given the ambitious programme required to reverse the deteriorating trend of the road network and given the large resources required to keep the trucking sector in operation, the Government intends, with assistance from the donor community, to expeditiously implement the programme. The financial requirement to carry out the programme is estimated to be US\$ 547 million over the next five years. The summary of the programme is given below.

Transport Sector Recovery Programme
(US\$ million)

	<u>87/88</u>	<u>88/89</u>	<u>89/90</u>	<u>90/91</u>	<u>91/92</u>	<u>Total</u>
Trunk Roads <u>1/</u>	3.8	27.8	30.0	39.2	62.4	163.2
Rural Roads <u>2/</u>	6.3	9.0	9.0	11.3	11.2	46.8
Trucking <u>3/</u>	-	55.0	79.0	79.0	79.0	292.0
TRC <u>4/</u>	-	10.5	9.0	-	-	19.5
TAZARA <u>5/</u>	-	12.5	8.2	-	-	20.7
THA <u>6/</u>	-	5.0	-	-	-	5.0
TOTAL	<u>10.1</u>	<u>119.8</u>	<u>135.2</u>	<u>129.5</u>	<u>152.6</u>	<u>547.2</u>
	=====	=====	=====	=====	=====	=====

1/ includes both Government and external resource requirement for maintenance and rehabilitation works up to 1991/92: Government - US\$53.4 million equivalent; External financing - 109.8 million.

2/ includes both Government and external resource requirement for maintenance and rehabilitation works up to 1991/92: Government - US\$25.4 million equivalent; External financing - US\$21.4 million.

3/ excludes fuel requirements

4/ Development Study is being carried out to determine further requirements

5/ ongoing review will determine further requirements

6/ studies will be carried out to determine further requirements

(2) Budgetary Impact of Recommended Programme

1.73 The trunk roads programme calls for an increase in the rehabilitation of existing network from the current level of US\$17 million per annum (5.4% of the total public sector investment programme) to about US\$49 million per annum over the next five years (1987/88-91/92 - average of 15.6% of the public sector investment programme). The total cost of the rehabilitation programme is about US\$213 million of which US\$98 million is already funded by external sources and the Government. The remaining programme totals about US\$115 million, of which US\$26 will be sourced from Government budget and US\$89 million remaining to be financed from external sources. This proposed programme will need to be reviewed against the actual financial resources available in the country as well as the needs of the other sectors. But unless the right level of financial resources are made available, together with the necessary policy changes, the country will continue to experience severe transport bottlenecks well into the 1990s. In order to protect the roads already in good condition, as well as to maintain the roads once they are rehabilitated, the level of recurrent budget required for roads will need to be increased by over 170% from the current allocation of US\$4.1 million per annum to US\$11.2 million. The impact of this increase on the Government's recurrent budget is negligible, less than 1% of the total Government allocation for recurrent budget.

74. As for rural roads, the first phase of the Core Rural Roads Rehabilitation and Maintenance Programme will install adequate maintenance on 6,000 km of essential roads in 7 regions involving 24 districts, and rehabilitate 1,400 km of priority agricultural roads. The rehabilitation is estimated cost US\$8.6 million. This will be followed by a second phase covering 4,000-5,000 km in other regions and districts, and a further 1,000-1,200 km of rehabilitation. The estimated cost of the second phase rehabilitation will be about US\$7.4 million. The financial allocation to implement the two phase Core Programme will total US\$16 million over the next five years. This will require an increase in the annual public investment budget of the Ministry of Local Government and Cooperatives by 2%. In order to protect these roads from deterioration, the annual budget allocation for maintenance will be increased to US\$5.5-6.3 million per annum over the next five years; an increase of 7% in the Ministry of Local Government and Cooperative recurrent budget, or a less than 0.7% increase in the total Government recurrent budget.

(3) Policy and Institutional Considerations

1.75 Financing alone is not sufficient to achieve the level of recovery which is envisaged in the programme. In order to fully achieve the objective of the proposed investment programme, the Government is considering a number of policy and institutional adjustments as detailed in the NTP. Adjustments such as market determination of the intra-regional trucking rates, institutional changes for management of rural roads, and

budgetary commitment to allocate adequate resources for recurrent maintenance are key considerations which need to be acted upon in order to reverse the current trend. The summary of the actions which the Government intends to implement are presented in the attached matrix.

(4) Implementation

1.76 Continuation of the severe transport problems as experienced in the past two years would be a major setback for the agricultural sector as well as to the whole economy. The Recovery Programme as set forth in this document will need to be put into action immediately. First is the immediate needs in the trucking sector, covering, inter alia, increasing the pace of truck replacement, and to supplement the on-going trucking spare parts and tire imports programme. Associated with this is the implementation of the proposed Action Programme detailed in the attached matrix to enable the trucking sector to maximize the use of existing assets as well as making the institutional changes necessary to execute the expanded roads programme. Second is the implementation of the five-year Roads Sector Rehabilitation and Maintenance Programme. Preparation of a detailed programme will commence immediately with a view to beginning implementation by the last quarter of 1988. Similarly, preparation for the second phase of the Emergency Programme for TRC as well as the additional requirements for the Tanzania Harbours Authority will begin in 1988 with a view to commencing implementation by second quarter 1989.

Proposed Action Programme

<u>Sector</u>	<u>Issues</u>	<u>Comments</u>	<u>Targets</u>
I. <u>ROADS</u>	* allocation of road budget will concentrate on road maintenance and rehabilitation	* exception will be made when specific road projects dictate high economic priority	* accepted
	* increase trunk and rural roads maintenance budget allocation to required level	* --	* April 1988 (budget discussions for FY 1988/89)
	* formulation of an annual program to contract periodic maintenance activities to local contractors. Including a training course for MCW staff and local consultants to supervise contracts	* assistance to local construction industry is about to commence under the Sixth Highway project	* April 1988
	* creation of Rural Roads Division (RRD) in MCW. Including: - MLGC and Regional Administration to contract the management of all maintenance and rehabilitation works to MCW - delegation of technical responsibility to RRD to execute rural roads programmes - MCW regional office to be responsible for physical execution	* study to be undertaken to determine the workings of RRD and MCW regional offices and coordination with Regional Administration and Local Governments * RRD, through MCW regional office, to contract out most periodic maintenance and rehabilitation works	* June 1988
	* promotion of a coordinated labour-based construction and maintenance methods for rural roads	* continued training through study tours * requires on-the-job training for local contractors and MCW road brigades	* on-going * start by April 1988
	* training and manpower program for all roads staff	* requires study of proposed RRD staffing including MCW regional offices	* December 1988
	* undertake a physical inventory of rural roads network, and reclassification of roads	* requires contracting of specialized mapping service	* completion by December 1988
	* establish trunk and rural roads design standards in a roads manual	* study to be completed by MCW	* June 1988
	* upgrade and reequip Zonal Workshops. Including: - bringing servicing of all road equipment under the Department of Mechanical and Electrical Services - formulation of rehabilitation and replacement program	* the workshop technical assistance about to commence	* April 1988 * studies to be completed in June 1988

<u>Sector</u>	<u>Issues</u>	<u>Comments</u>	<u>Targets</u>
<u>ROADS</u> (cont'd)	<ul style="list-style-type: none"> * expansion of plant pools to other Zonal Workshops. Including: <ul style="list-style-type: none"> - establishment of cost accounting and hiring system for each Plant Pool * creation of special road maintenance supplementary fund 	<ul style="list-style-type: none"> * details to be studied by MCW workshop consultants * study of the road user charges to be undertaken 	<ul style="list-style-type: none"> * execution in December 1988 * March 1988
II. <u>TRUCKING</u>	<ul style="list-style-type: none"> * Increase trucking capacity * allow market to determine intra-regional transport prices with a view to allowing operators to recover their operating costs and to realize reasonable returns on their investments * disposal of uneconomic RETCO trucks and sell off of non-operational vehicles of cooperatives and public sector fleet 	<ul style="list-style-type: none"> * immediate action required * -- * inventory must be taken of RETCO and other public sector vehicles 	<ul style="list-style-type: none"> * on-going * March 1988 * March 1988
III. <u>TRC</u>	<ul style="list-style-type: none"> * commitment to the concept that new investments outside of already defined project will be subject to cost/benefit analysis * commitment to adhere to the 10-point programme agreed to under the EP 	<ul style="list-style-type: none"> * -- * -- 	<ul style="list-style-type: none"> * accepted by TRC * accepted by TRC; ongoing
IV. <u>TAZARA</u>	<ul style="list-style-type: none"> * Joint TAZARA-Zambia Railways operational study of wagon utilization and exchange program * improve financial performance and cost recovery of TAZARA 	<ul style="list-style-type: none"> * -- * study being undertaken 	<ul style="list-style-type: none"> * December 1988 * ongoing
V. <u>THA</u>	<ul style="list-style-type: none"> * promotion of containerization and adoption of necessary measures to increase the throughput of containers * improve operational efficiency of cargo handling activities * long term development program for Port of Tanga and the Arusha-Tanga Corridor * improve utilization of the Port of Mtwara 	<ul style="list-style-type: none"> * study required * -- * feasibility study required for immediate rehabilitation and long term development of the port * improve accessibility and cargo handling 	<ul style="list-style-type: none"> * begin June 1988 * ongoing * begin June 1988 * on-going

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<u>Sector</u>	<u>Issues</u>	<u>Comments</u>	<u>Targets</u>
VI. <u>AVIATION</u>	* rationalize ATC's overhead and support structure to improve its productivity	* study required; to be undertaken shortly; technical assistance maybe required for implementation	* to start shortly
	* formulate a staged programme to increase fares for the domestic market to ensure full cost recovery	* to be undertaken amongst the study noted above	* to start shortly
	* seek further donor support for a) financing of the training programme for both ATC and civil aviation; and b) financing of spare parts requirements for existing ATC fleet	* to be done after above study has been completed	* to start shortly
	* limit capital investments by ATC until such time as a rational development and financial strategy has been developed	* being studied under the above noted study	* accepted by ATC
	* adopt an "open-sky" policy for local charter airlines to provide domestic scheduled services to meet the additional domestic demand for air transport	* --	* on-going

TANZANIA

Programme for Transport Sector Recovery

Annexes

1. Three-Year Transport Sector Public Investment Program: 1986/87 - 1988/89
2. Proposed Five Year Trunk Road Rehabilitation and Maintenance Program
3. Financing and Budgetary Requirements for Five Year Trunk Roads Program
4. Proposed Five year Rural Road Rehabilitation and Maintenance Program
5. Proposed Annual Trucking Sector Support Program
6. Proposed Additional Investments for TRC
7. Proposed Additional Investments for TAZARA
8. Proposed Additional Investments for THA

TANZANIA
THREE-YEAR PUBLIC SECTOR INVESTMENT PROGRAM: 1986/87 - 1988/89 (Million TShs)
VOTE 47 - COMMUNICATIONS AND WORKS

#	LIST OF SUBHEADINGS	1986/87			1987/88			1988/89			GRAND TOTAL			% MCW	%PSIP
		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL		
4701	Roads	406.2	277.9	685.1	477.8	415.5	893.3	528.0	451.5	979.5	1412.0	1144.9	2556.9	37	5
4701	Civil Aviation	120.1	31.8	151.9	102.4	0.0	102.4	92.1	30.0	122.1	314.8	61.8	376.6	0	1
4701	Others	144.8	13.1	157.9	159.3	44.5	203.8	144.8	48.0	192.8	448.9	105.6	554.5	0	1
4768	Air Tanzania	17.3	35.8	53.1	15.0	0.0	15.0	0.0	14.0	14.0	32.3	55.8	88.1	1	-
4769	National Transport Corporation	0.0	69.2	69.2	0.0	227.6	227.6	0.0	319.0	319.0	0.0	615.2	615.2	9	1
4770	Posts and Telecommunications	0.0	101.3	101.3	0.0	47.5	47.5	0.0	112.0	112.0	0.0	200.8	200.8	4	1
4771	TRC	88.3	422.4	510.7	60.0	257.0	317.0	90.8	234.0	324.8	239.1	913.4	1152.5	17	2
4772	THA	0.0	437.7	437.7	0.0	470.2	470.2	0.0	332.5	332.5	0.0	1240.4	1240.4	18	3
	Grand Total - MCW	776.7	1389.2	2165.9	814.7	1467.7	2282.4	855.7	1541.0	2396.7	2447.1	4397.9	6845.0	100	--
	Investment Program Grand Total	6787.1	8879.7	15666.8	7865.4	7659.5	15524.9	7748.3	7747.9	15496.2	22957.9	24518.4	47476.3	--	14
	% MCW of Total Investment	11.4%	15.6%	13.6%	10.4%	19.2%	14.5%	11.0%	19.9%	15.2%	10.7%	17.9%	14.4%		

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INVESTMENT PROGRAM REVIEW: 1986/87 - 1988/89 (Million TShs)
VOTE 47 - COMMUNICATIONS AND WORKS
(Sub-Heading 4701)

A. ROAD PROJECTS

#	LIST OF PROJECTS	1986/87			1987/88			1988/89			GRAND TOTAL			DONOR
		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	
057	DSM - Tunduma Road	26.5	0.0	26.5	28.0	0.0	28.0	33.0	0.0	33.0	87.5	0.0	87.5	MCW
058	Kibiti - Lindi Road	97.1	0.0	97.1	80.0	20.0	100.0	90.0	40.0	130.0	267.1	60.0	327.1	Saudi
059	Mwanza Musoma Road	35.3	23.3	58.6	32.4	0.0	32.4	0.0	0.0	0.0	67.7	23.3	91.0	EEC
060	Mkomazi - Mombo Road	24.7	0.0	24.7	31.7	0.0	31.7	42.9	35.0	77.9	99.3	35.0	134.3	FRG
062	T.R.M. - I	14.1	0.0	14.1	38.2	0.0	38.2	49.5	0.0	49.5	101.8	0.0	101.8	MCW
063	T.R.M. - II	17.7	29.1	46.8	25.8	0.0	25.8	49.5	0.0	49.5	93.0	29.1	122.1	MCW
064	S.P.M. Access Road	44.1	39.1	83.2	4.0	14.9	18.9	0.0	0.0	0.0	48.1	54.0	102.1	MCW/EEC
066	Mombo - Lushoto Road	0.9	29.1	30.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	29.1	30.0	FRG
067	Lusahunga - Bukombe Road	30.0	87.4	117.4	38.0	103.6	141.6	12.0	38.0	50.0	80.0	229.0	309.0	EEC
068	Pyrethrum Roads	5.3	0.0	5.3	0.0	0.0	0.0	7.0	0.0	7.0	18.3	27.7	46.0	IDA
069	Morogoro Road (DSM)	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	JAPAN
070	Road Surveys and Designs	10.1	5.8	15.9	10.1	0.0	10.1	5.0	0.0	5.0	31.2	5.8	37.0	-
071	Kilombero Crossing	5.3	0.0	5.3	7.0	22.0	29.0	0.0	0.0	0.0	12.3	22.0	34.3	SWISS
092	Songea - Mkambako	5.8	0.0	5.8	6.1	0.0	6.1	14.4	14.0	28.4	26.3	14.0	40.3	ODA
093	Tanzania - Malawi Road	0.0	5.8	5.8	0.0	0.0	0.0	0.0	12.0	12.0	0.0	23.8	23.8	EEC/NETH
094	Kirumi Bridge	0.0	4.4	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.4	ADF
095	6 th Highway Project - TSM III	64.3	45.2	109.5	98.0	240.0	338.0	104.7	302.5	407.2	267.0	587.7	854.7	IDA
096	Songea - Mabinaga Road	17.7	0.0	17.7	26.5	0.0	26.5	45.0	0.0	45.0	89.2	0.0	89.2	MCW/EEC
097	Border Roads	7.1	0.0	7.1	40.0	0.0	40.0	75.0	0.0	75.0	122.1	0.0	122.1	MCW
	TOTAL ROAD	406.2	277.9	684.1	477.8	415.5	893.3	528.0	451.5	979.5	1412.0	1144.9	2556.9	

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B. CIVIL AVIATION

#	LIST OF PROJECTS	1986/87			1987/88			1988/89			GRAND TOTAL			DONOR
		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	
061	Government Aircraft Payment	31.8	0.0	31.8	32.0	0.0	32.0	33.0	0.0	33.0	96.8	0.0	96.8	
072	Mwanza Airport	35.3	0.0	35.3	20.3	0.0	20.3	18.6	0.0	18.6	74.2	0.0	74.2	
073	Kilimanjaro International Airport	7.0	0.0	7.0	8.7	0.0	8.7	10.5	20.0	30.5	20.2	20.0	40.2	
074	Kilwa Airport	1.0	0.0	1.0	1.7	0.0	1.7	1.0	0.0	1.0	4.5	0.0	4.5	
075	Kigoma Airport	7.0	0.0	7.0	4.4	0.0	4.4	3.0	0.0	3.0	14.4	0.0	14.4	
076	Mafia Airport	8.0	0.0	8.0	7.5	0.0	7.5	5.0	0.0	5.0	20.5	0.0	20.5	
077	Zonal Workshops	7.1	0.0	7.1	4.0	0.0	4.0	6.0	0.0	6.0	17.1	0.0	17.1	
078	Morogoro Workshop	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	
088	Dar es Salaam Airport	3.0	31.0	35.1	4.0	0.0	4.0	6.0	10.0	16.0	13.3	41.8	55.1	FRANCE
089	Tabora Airport	5.5	0.0	5.5	6.7	0.0	6.7	6.0	0.0	6.0	18.2	0.0	18.2	
090	Airport Surveys and Design	11.3	0.0	11.3	11.0	0.0	11.0	1.0	0.0	1.0	24.1	0.0	24.1	
091	Dodoma Airport	1.0	0.0	1.0	1.3	0.0	1.3	2.0	0.0	2.0	5.1	0.0	5.1	
	TOTAL CIVIL AVIATION	120.1	31.0	151.9	102.4	0.0	102.4	92.1	30.0	122.1	314.8	61.8	376.6	

C. OTHERS

#	LIST OF PROJECTS	1986/87			1987/88			1988/89			GRAND TOTAL			DONOR
		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	
002	Transport Planning	7.1	5.0	12.9	8.0	0.0	8.0	9.0	7.0	16.0	24.1	18.8	42.9	DANIDA
003	National Inst. of Transport	15.9	0.0	15.9	19.0	5.0	24.0	7.0	15.0	22.0	41.9	20.0	61.9	
042	Aeronaut'li Fixed Telecom Network	1.0	0.0	1.0	2.0	4.0	6.0	0.0	0.0	0.0	3.0	4.0	7.0	
047	Staff Housing	17.7	0.0	17.7	10.0	0.0	10.0	0.0	0.0	0.0	27.7	0.0	27.7	
049	Meteorological Equipment	1.0	0.0	1.0	10.0	0.0	10.0	15.0	0.0	15.0	26.0	0.0	26.0	
050	Meteorological Tools	6.0	0.0	6.0	8.0	0.0	8.0	10.0	0.0	10.0	24.0	0.0	24.0	
052	Basic Network	9.0	0.0	9.0	7.0	0.0	7.0	10.0	0.0	10.0	26.0	0.0	26.0	
053	Upper Air Zonal Stations	4.4	0.0	4.4	6.0	0.0	6.0	2.0	0.0	2.0	12.4	0.0	12.4	
054	Telecommunications	3.5	0.0	3.5	5.0	0.0	5.0	7.0	0.0	7.0	15.5	0.0	15.5	
055	Meteorology Godown	7.1	0.0	7.1	0.0	0.0	0.0	2.0	0.0	2.0	17.1	0.0	17.1	
056	Kigoma Training Institute	3.0	0.0	3.0	5.0	0.0	5.0	8.0	0.0	8.0	16.0	0.0	16.0	
079	Ferries	15.9	0.0	15.9	15.0	0.0	15.0	5.0	0.0	5.0	35.9	0.0	35.9	
080	Staff Housing	9.0	0.0	9.0	2.0	0.0	2.0	0.0	0.0	0.0	11.0	0.0	11.0	
083	Staff Housing - Zanzibar	0.8	0.0	0.8	1.0	0.0	1.0	3.0	0.0	3.0	4.8	0.0	4.8	
084	Govt Aircraft Dept Office	0.5	0.0	0.5	1.5	0.0	1.5	2.0	0.0	2.0	4.0	0.0	4.0	
085	Strengthening MECCO	0.0	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	FINLD
086	Strengthening NCC	12.0	5.0	17.0	15.0	7.0	22.0	10.0	7.0	17.0	43.0	19.8	62.8	IDA
087	Building Materials Lab.	0.8	0.0	0.8	2.5	0.0	2.5	0.0	0.0	0.0	11.3	0.0	11.3	
098	Construction Equipment - Transp.	8.0	0.0	8.0	10.0	0.0	10.0	10.0	0.0	10.0	28.0	0.0	28.0	
099	Government Staff Housing II	2.0	0.0	2.0	10.4	0.0	10.4	20.0	0.0	20.0	33.0	0.0	33.0	
100	Civil Aviation Training Center	2.0	0.0	2.0	5.0	0.0	5.0	7.0	0.0	7.0	14.0	0.0	14.0	
101	Airport Lighting Facility	4.1	0.0	4.1	5.4	12.5	17.9	8.8	6.0	14.8	18.3	18.5	36.8	
102	Radio & Navigational Aids	2.0	0.0	2.0	3.5	10.0	13.5	3.0	13.0	16.0	9.1	23.0	32.1	ITALY
	TOTAL OTHERS	144.0	13.1	157.9	169.3	44.5	203.8	144.8	48.0	192.8	448.9	105.6	554.5	

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D. AIR TANZANIA CORPORATION

#	LIST OF PROJECTS	1986/87			1987/88			1988/89			GRAND TOTAL			DONOR
		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	
006	Kilimanjaro Maintenance Facility	17.3	0.0	17.3	15.0	0.0	15.0	0.0	0.0	0.0	32.3	0.0	32.3	IRELAND DUTCH
103	Assistance to ATC	0.0	0.8	0.8	0.0	1.0	1.0	0.0	2.0	2.0	0.0	3.8	3.8	
104	ATC Spare Parts	0.0	35.0	35.0	0.0	5.0	5.0	0.0	12.0	12.0	0.0	52.0	52.0	
	TOTAL ATC	17.3	35.8	53.1	15.0	6.0	21.0	0.0	14.0	14.0	32.3	56.8	88.1	

E. NATIONAL TRANSPORT CORP.

#	LIST OF PROJECTS	1986/87			1987/88			1988/89			GRAND TOTAL			DONOR
		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	
005	Experts and Equipment	0.0	5.8	5.8	0.0	0.0	0.0	0.0	8.0	8.0	0.0	19.8	19.8	FRG
105	Experts & Equip. (TACOSHILI)	0.0	40.5	40.5	0.0	50.0	50.0	0.0	0.0	0.0	0.0	90.5	90.5	NORWAY
106	Vehicle Rehabilitation	0.0	2.9	2.9	0.0	150.0	150.0	0.0	304.0	304.0	0.0	462.9	462.9	EEC
107	Technical Assistance - NTC	0.0	5.8	5.8	0.0	7.0	7.0	0.0	7.0	7.0	0.0	19.8	19.8	FRG
108	Maritime Training - TACOSHILI	0.0	5.8	5.8	0.0	8.0	8.0	0.0	0.0	0.0	0.0	13.8	13.8	NORWAY
109	NORAD Staff Housing	0.0	5.8	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8	5.8	NORWAY
110	Ship-Yard Training	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.6	NORWAY
	TOTAL NTC	0.0	69.2	69.2	0.0	227.0	227.0	0.0	319.0	319.0	0.0	615.0	615.0	

F. TANZANIA RAILWAYS CORP.

#	LIST OF PROJECTS	1986/87			1987/88			1988/89			GRAND TOTAL			DONOR
		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	
026	Telecommunications Tabora-Kigoma	0.0	5.8	5.8	0.0	3.8	3.8	0.0	0.0	0.0	0.0	9.6	9.6	FRG
028	Locomotives and Spares	0.0	58.3	58.3	0.0	80.0	80.0	0.0	52.0	52.0	0.0	190.3	190.3	CANADA
029	Rolling Stock	35.3	0.0	35.3	30.0	0.0	30.0	20.0	0.0	20.0	85.3	0.0	85.3	INDIA
031	Railway Technical Assistance	0.0	36.4	36.4	0.0	43.8	43.8	0.0	20.0	20.0	0.0	100.2	100.2	CANADA
117	Manyoni-Singida Railway	53.0	0.0	53.0	30.0	0.0	30.0	70.8	0.0	70.8	153.8	0.0	153.8	TRC
118	TRC Building Materials	0.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	AUSTRIA
119	TRC Workshop	0.0	3.2	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	3.2	CANADA
120	Telecommunications	0.0	5.8	5.8	0.0	18.0	18.0	0.0	112.0	112.0	0.0	135.8	135.8	CANADA
121	Signaling DSM-M'goro-D'dma-Tb	0.0	54.0	54.0	0.0	57.0	57.0	0.0	30.0	30.0	0.0	141.0	141.0	ITALY
122	TRC Rehabilitation	0.0	52.5	52.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.5	52.5	CANADA
123	Floating Dock - Mwanza	0.0	16.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	16.0	BELGIUM
124	Program Management	0.0	11.7	11.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	11.7	CANADA
125	TRC Marine Department	0.0	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	8.7	DENMARK
126	Diesel Workshop	0.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	FRG
127	Morogoro Supplies Depot	0.0	6.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0	CANADA
128	Isaka Inland Terminal	0.0	37.9	37.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.9	37.9	EEC
	TOTAL TRC	80.3	427.4	510.7	60.0	257.0	317.0	90.8	234.0	324.8	239.1	913.4	1152.5	

G. TANZANIA HARBORS AUTHORITY

#	LIST OF PROJECTS	1986/87			1987/88			1988/89			GRAND TOTAL			DONOR
		LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	LOCAL	FOREIGN	TOTAL	
035	Conversion of Berth No. 9-11	0.0	8.7	8.7	0.0	42.2	42.2	0.0	0.0	0.0	0.0	50.9	50.9	WB
036	Rehabilitation: Kurasini Oil Jetty	0.0	8.7	0.0	30.3	30.3	0.0	0.0	0.0	0.0	0.0	39.0	39.0	WB
037	Grain Terminal (DSM)	0.0	29.9	29.9	0.0	51.7	51.7	0.0	91.1	91.1	0.0	172.7	172.7	WB
039	Ubungu Container-Terminal	0.0	5.8	5.8	0.0	9.6	9.6	0.0	0.0	0.0	0.0	15.4	15.4	WB
040	Small Ports: Kilwa/Mafia/Lindi	0.0	37.3	37.3	0.0	40.3	40.3	0.0	0.0	0.0	0.0	77.6	77.6	NORWAY
041	Tacoshili Terminal (DSM)	0.0	38.4	38.4	0.0	15.0	15.0	0.0	0.0	0.0	0.0	53.4	53.4	NORWAY
129	General Cargo Handling Equipment	0.0	26.5	26.5	0.0	54.0	54.0	0.0	115.5	115.5	0.0	196.0	196.0	KUWAIT
130	Harbors Management Service Prog.	0.0	27.1	27.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.1	27.1	BELGIUM
131	DSM Harbors Rehabilitation	0.0	197.0	197.0	0.0	100.1	100.1	0.0	0.0	0.0	0.0	303.1	303.1	FINLAND
132	DSM Harbors Improvement	0.0	58.3	58.3	0.0	01.0	01.0	0.0	125.9	125.9	0.0	245.2	245.2	NETHERLANDS
	TOTAL THA	0.0	437.7	437.7	0.0	470.2	470.2	0.0	332.5	332.5	0.0	1240.4	1240.4	
Vote 47: GRAND TOTAL		776.7	1389.2	2165.9	814.7	1467.7	2282.4	855.6	1541.0	2396.6	2447.0	4397.9	6844.9	

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TANZANIA
ROADS SECTOR
TENTATIVE 5-YEAR TRUNK ROAD REHABILITATION AND MAINTENANCE PROGRAM

ACTIVITY	US\$ UNIT COST	TOTAL LENGTH KM	DISTANCE (KM)					ESTIMATED COST (US\$ THOUSANDS)					Actual Road Conditions (1987)			Expected Road Conditions (1992)		
			1/					1/					Good	Fair	Poor	Good	Fair	Poor
			87/88	88/89	89/90	90/91	91/92	87/88	88/89	89/90	90/91	91/92						
Asphalt Concrete Roads (TANZAM)		990											34	43	23	65	25	10
Routine	500		600	880	880	800	800	360	528	528	480	480						
Resealing	22,000		10	10	10	50	50	220	220	220	1,100	1,100						
Rehabilitation	168,000		2	100	100	140	140	336	18,800	18,800	23,520	23,520						
Subtotal	190,500							916	17,548	17,548	25,100	25,100						
Surface Dressed Roads		2,300											52	17	31	74	17	9
Routine	700		1,000	1,520	1,800	1,800	1,800	700	1,344	1,260	1,280	1,280						
Resealing	12,000		20	250	350	350	350	240	3,000	4,200	4,200	4,200						
Rehabilitation	44,000		20	130	150	150	150	880	5,720	6,800	6,600	6,600						
Subtotal	56,700							1,820	10,064	12,060	12,060	12,060						
Gravel Roads		2,120 in 1987 3,300 in 1992											37	40	23	70	19	11
Routine	500		1,000	1,900	1,900	1,900	1,900	800	1,140	1,140	1,140	1,140						
Regraveling	7,000		100	200	200	200	200	700	1,400	1,400	1,400	1,400						
Rehabilitation	22,000		30	120	120	120	120	660	2,840	2,840	2,840	2,840						
Subtotal	29,500							1,960	5,180	5,180	5,180	5,180						
Earth Roads		4,590 in 1987 3,410 in 1992											20	37	43	10	45	45
Routine	450		2,300	4,320	4,240	4,140	4,140	1,035	1,944	1,900	1,863	1,863						
Reshaping	4,000		50	50	100	100	100	200	200	400	400	400						
Rehabilitation	22,000		10	220	250	350	350	220	4,840	5,500	7,700	7,700						
Subtotal	26,450							1,455	6,984	7,800	9,963	9,963						
Structures rehab/const																		
Bridges	Lump							300	1,400	1,400	1,400	1,400	60	30	10	90	10	0
Culverts	Lump							300	5,700	5,700	5,700	5,700	40	40	20	80	15	5
Maint. Facilities/Camps	Lump							150	2,000	2,000	2,000	2,000						
Subtotal								750	9,100	9,100	9,100	9,100						
Equipment Replacement	Lump							480	2,000	2,000	2,000	1,000						
TOTAL		10,000						7,381	50,876	53,638	63,403	62,403						

1/ Estimated km. of roads expected to be fully covered under current budget allocations

2/ Current budget allocation (approximate)

TANZANIA
Roads Sector
Financing and Budgetary Requirements For Trunk Roads Program
(US\$ Millions)

Description	87/88 ^{2/}	88/89	89/90	90/91	91/92		Comments
Asphalt Concrete Roads							
Committed financing	0.3	16.8	16.8	16.8	-	50.7	IDA Hwy 6 (68% cost)
GOT budget	0.4	0.6	0.6	1.6	4.2	7.4	
Financing gap	-	-	-	6.5	20.8	27.3	Donors (85% cost)
Sub-total	0.7	17.4	17.4	24.9	25.8	85.4	
Surface Treated Roads							
Committed financing	0.9	-	-	-	-	0.9	
GOT budget	0.9	2.6	2.9	2.9	2.8	12.1	
Financing gap	-	0.8	8.7	8.6	8.7	32.9	Donors (85% cost)
Sub-total	1.8	9.4	11.6	11.5	11.5	45.8	
Gravel and Earth Roads							
Committed financing	0.9	5.8	5.9	6.4	-	18.5	IDA Hwy 6 (62% cost)
GOT budget	2.5	4.8	4.9	5.2	6.1	23.5	
Financing gap	-	-	-	1.5	6.9	8.4	Donors (85% cost)
Sub-total	3.4	10.1	10.8	13.1	13.8	50.4	
Structures							
Committed financing	0.8	-	-	-	-	0.8	
GOT budget	-	2.6	2.6	2.6	2.6	10.4	
Financing gap	-	5.5	5.4	5.4	5.4	21.7	Donors (85% cost)
Sub-total	0.8	8.1	8.0	8.0	8.0	32.9	
Imported Equipment, Parts & Materials for MCW^{1/}							
Committed financing	0.7	1.0	1.0	1.0	-	3.7	IDA Hwy 6
GOT budget	-	-	-	-	-	-	
Financing gap	-	4.9	4.9	4.9	4.9	19.6	Donors (100% cost)
Sub-total	0.7	5.9	5.9	5.9	4.9	23.3	
Totals							
Committed financing	3.6	23.1	28.7	24.2	-	74.6	IDA Hwy 6
GOT budget	3.8	10.6	11.0	12.3	15.3	53.4	
Financing gap	-	17.2	19.0	26.9	46.7	109.8	Donors
TOTAL	7.4	50.9	53.7	63.4	62.4	237.8	

^{1/} 30% of cost of force account road maintenance and rehabilitation activities will require imported spare parts, petroleum products, etc.
40% of cost of force account structural work will require imported materials.

^{2/} Current budget allocation (approximate)

TANZANIA
ROADS SECTOR
TENTATIVE 5-YEAR RURAL ROAD REHABILITATION AND MAINTENANCE PROGRAM^{1/}

ACTIVITY	Distance (km)					Estimated Cost (US\$ thousand)				
	87/88	88/89	89/90	90/91	91/92	87/88	88/89	89/90	90/91	91/92
Core Program										
Maintenance	-	6,000	6,000	10,000	10,000	-	1,000	1,000	1,800	1,800
Rehabilitation	-	500	500	800	800	-	2,000	3,000	5,000	5,000
Other Rural Roads										
Maintenance	50,000	44,000	44,000	40,000	40,000	4,800	3,500	3,500	3,200	3,200
Imports (equipment, spareparts and materials)						1,000	1,000	1,000	1,000	1,000
Technical Assistance (20 man-years)						500	500	500	300	200
TOTAL (total US\$46.8 million)						6,300	9,000	9,000	11,300	11,200
Financing										
GOT Budget (total US\$25.4 million)						4,800	4,800	4,800	5,500	5,500
Financing Gap (total US\$21.4 million)						1,500	4,200	4,200	5,800	5,700

1/ Ongoing donor-supported rural road programs and their financing requirements have not been included in these estimates

TANZANIA

PROPOSED ANNUAL TRUCKING SECTOR SUPPORT PROGRAMME

<u>Items</u>	<u>Annual Support Requirement</u> (US\$ million)
1. Fuel	34.0
2. Tires	11.0
3. Spare Parts	20.0
4. Replacement Trucks	<u>48.0</u>
TOTAL	US\$ 113.0 million

Notes:

- Fuel : annual fuel consumption for fleet of 13,700 trucks = 170,000 metric tons; cost of diesel \$200 per metric ton
- Tires : average demand per truck = 9 tires
foreign exchange cost of materials \$90 per tire
- Spares : average cost per truck \$2,500
costs of new and rehabilitated trucks negligible year 1
- Replacements : 1,600 trucks annually at average cost of \$30,000 per truck

TANZANIA

PROPOSED ADDITIONAL INVESTMENTS FOR TRC

<u>Items</u>	<u>Estimated Cost</u> <u>(US\$ million)</u>
* Shunting Locomotives (5)	3.5
* Bridge Rehabilitation (Central Line)	9.0
* Bridge Surveys	0.2
* Track Maintenance Equipment	1.5
* Technical Assistance (Operations)	0.4
* Technical Assistance (Management Information System)	0.3
* Additional Track Renewal	4.3
* Ballast Quarry Study	0.1
* Permanent Way Workshop	0.1
* Study of Telecommunication (Link and Tanga-Moshi Line)	<u>0.1</u>
TOTAL	19.5

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TANZANIA

PROPOSED ADDITIONAL INVESTMENTS FOR TAZARA

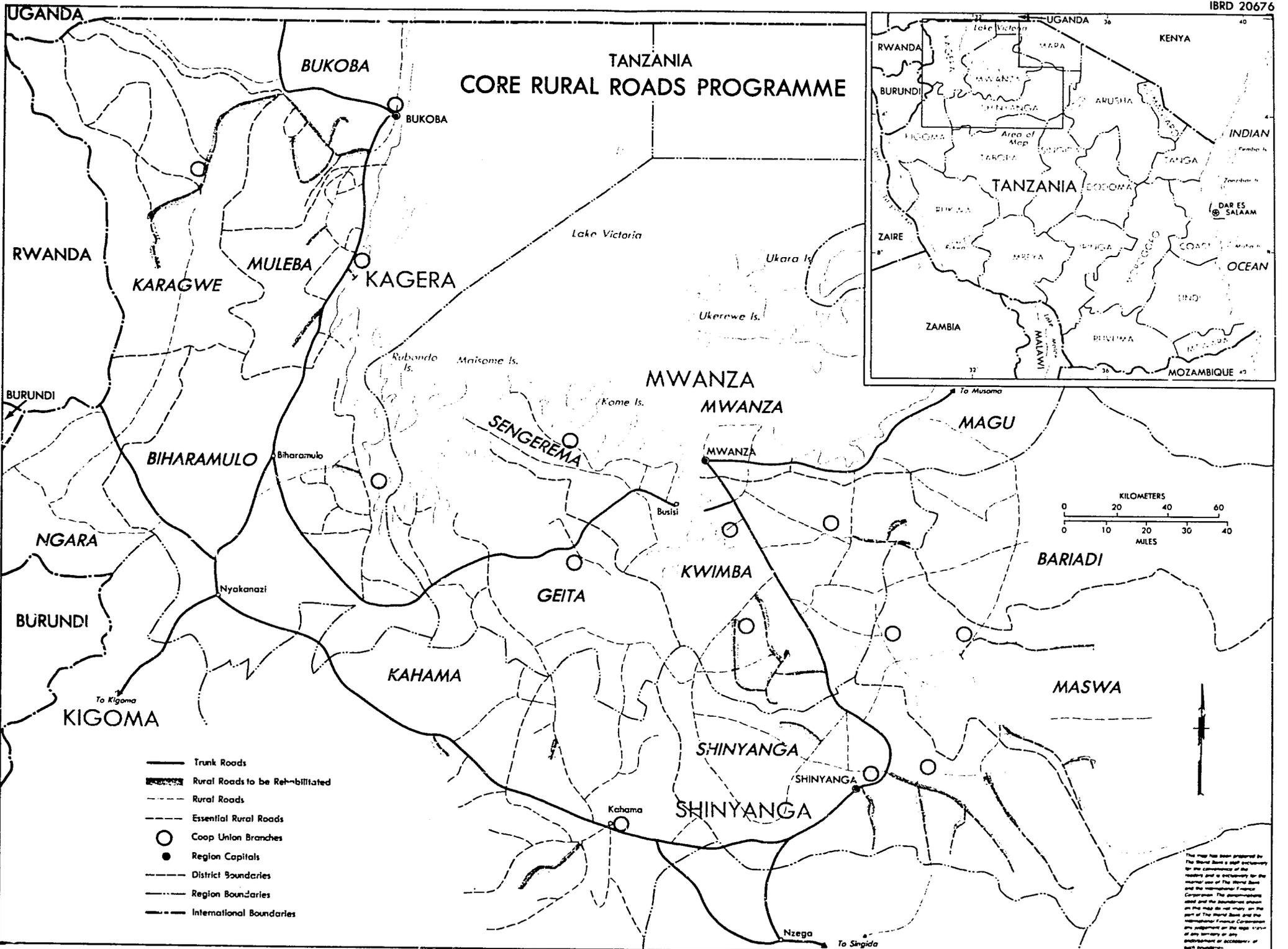
<u>Items</u>	<u>Esimated Cost</u> <u>(US\$ million)</u>
* Insepction Trolleys and Trailers	1.6
* Mechanized Track Maintenance Equipment	1.7
* Rail Welding and Repair	16.4
* Technical Assistance for Work Studies/ Mgmt Info Sytm	<u>1.0</u>
TOTAL	US\$ 20.7 million

TANZANIA

PROPOSED ADDITIONAL INVESTMENTS FOR THA

<u>Items</u>	<u>Estimated Cost</u> <u>(US\$ million)</u>
* Construction of Satellite Workshops	0.70
* Equipment for Satellite Workshops	0.50
* Additional Equipment for Central Workshop	0.20
* Technical Assistance to Satellite Workshop	0.53
* Technical Assistance to Central Workshop	0.41
* Urgent Repair of Port of Tanga	2.10
* Feasibility Study of Port of Tanga Development	0.30
* Regional Containerization Development Study	<u>0.30</u>
TOTAL	US\$ 5.04 million

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- Trunk Roads
- Rural Roads to be Re-bilitated
- ... Rural Roads
- - - Essential Rural Roads
- Coop Union Branches
- Region Capitals
- · - · District Boundaries
- - - Region Boundaries
- · · International Boundaries

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