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Report No. 18739

IMPLEMENTATION COMPLETION REPORT

REPUBLIC OF ZAMBIA

TRANSPORT ENGINEERING AND TECHNICAL ASSISTANCE PROJECT

(Credit 2515-ZA)

December 22, 1998

Transport 1
Eastern and Southern Africa Region

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CURRENCY EQUIVALENTS

(as of December 31, 1992)

Currency Unit = Zambia Kwacha (K)

K 1.0 = US\$0.007

US\$1.0 = K140

Average Annual Exchange Rates

Year K per US \$

1993 = 452.76

1994 = 669.37

1995 = 857.23

1996 = 1,203.71

1997 = 1,333.81

1998 = 1,634.50 (Jan. to June)

(as of June 30, 1998)

US\$1.0 = K1,903.38

WEIGHT AND MEASURES

1 Metric ton (tonne) = 1,000 kg or 2,205 pounds

1 Meter (m) = 3,2809 feet

1 Kilometer = 0.6214 miles

ABBREVIATIONS AND ACRONYMS

AfDB	=	African Development Bank
CAP 766	=	Roads and Road Traffic Act
DANIDA	=	Danish International Development Agency
DC	=	District Council (urban and rural)
DISS	=	Department of Infrastructure and Support Services
FRS	=	Feeder Roads Section
HMS	=	Highway Management System
IDA	=	International Development Association
ICR	=	Implementation Completion Report
MCT	=	Ministry of Communications and Transport
MLGH	=	Ministry of Local Government and Housing
MOF	=	Ministry of Finance
MWS	=	Ministry of Works and Supply
NCC	=	National Construction Council
NRB	=	National Roads Board
PSRP	=	Public Sector Reform Program
RD	=	Roads Department
RDC	=	Rural District Council
RMI	=	Road Maintenance Initiative
RMOT	=	Road Maintenance, Organization & Training Study
ROADSIP	=	Road Sector Investment Program
RRP	=	Roads Rehabilitation Project
SRP	=	Social Recovery Project
TETAP	=	Transport Engineering and Technical Project

FISCAL YEAR

January 1 - December 31

Vice President:	Mr. Callisto E. Madavo
Country Director:	Ms. Phyllis R. Pomerantz
Technical Manager:	Mr. Yusupha B. Crookes
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REPUBLIC OF ZAMBIA
TRANSPORT ENGINEERING AND TECHNICAL ASSISTANCE PROJECT
(CREDIT 2515-ZA)

IMPLEMENTATION COMPLETION REPORT

TABLE OF CONTENTS

	Page No.
Preface	
<i>EVALUATION SUMMARY</i>	i
PROJECT BACKGROUND	i
PROJECT OBJECTIVES	i
PROJECT IMPLEMENTATION	ii
PROJECT SUSTAINABILITY	ii
PROJECT OUTCOME	iii
PROJECT OPERATIONS	iii
KEY LESSONS LEARNED	iii
<i>PART I: PROJECT IMPLEMENTATION ASSESSMENT</i>	1
A. PROJECT BACKGROUND	1
B. PROJECT OBJECTIVES	1
C. EVALUATION OF OBJECTIVES AND RISKS	3
D. ACHIEVEMENT OF OBJECTIVES	5
E. IMPLEMENTATION RECORD AND MAJOR FACTORS AFFECTING THE PROJECT	6
F. PROJECT SUSTAINABILITY	8
G. IDA PERFORMANCE	9
H. BORROWER PERFORMANCE	9
I. ASSESSMENT OF OUTCOME	10
J. FUTURE OPERATIONS	11
K. KEY LESSONS LEARNED	12
<i>PART II: STATISTICAL ANNEXES</i>	13
TABLE 1: SUMMARY OF ASSESSMENTS	14
TABLE 2: RELATED BANK CREDITS	15
TABLE 3: PROJECT TIMETABLE	15
TABLE 4: CREDIT DISBURSEMENTS: CUMULATIVE ESTIMATES AND ACTUAL	16
TABLE 5: KEY INDICATORS FOR PROJECT IMPLEMENTATION	16
TABLE 6: KEY INDICATORS FOR PROJECT OPERATION	16
TABLE 7: STUDIES INCLUDED IN PROJECT	17
TABLE 8: PROJECT COSTS	20
TABLE 9: PROJECT FINANCING	21
TABLE 10: ECONOMIC COSTS AND BENEFITS	21
TABLE 11: STATUS OF LEGAL COVENANTS	22
TABLE 12: COMPLIANCE WITH OPERATIONAL MANUAL STATEMENT	24
TABLE 13: BANK RESOURCES – STAFF INPUTS	24
TABLE 14: BANK RESOURCES – MISSIONS	25
<i>PART III: AIDE MEMOIRE</i>	27
<i>PART IV: BORROWER CONTRIBUTION TO THE ICR</i>	34
<i>MAP: IBRD No. 29636</i>	41

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REPUBLIC OF ZAMBIA
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IMPLEMENTATION COMPLETION REPORT

PREFACE

This is the Implementation Completion Report (ICR) for the Transport Engineering and Technical Assistance Project, for which Credit 2515-ZA in the amount of SDR 6.2 million (US\$8.5 million equivalent) was approved on September 30, 1993 and became effective on November 29, 1993. The credit closing date was extended from June 30, 1997 the original closing date to June 30, 1998. Final disbursement was on December 16, 1998 at which date a balance of SDR 702,836.21 was canceled.

The ICR was prepared by Rosemary M. Cubagee (Consultant) and Subhash Seth (AFTT1) and finalized by the Task Team Leader, Stephen Brushett (AFTT1) and was reviewed by Yusupha Crookes, Sector Manager (AFTT1) and Phyllis Pomerantz, Country Director (AFCO2). Preparation of the ICR is based on materials in the project files, interviews with Government officials and on the findings of the ICR mission fielded July 13-26, 1998. The Borrower contributed to the preparation of the ICR by providing views reflected in the ICR mission's Aide-Memoire, and preparing its own evaluation of the project.

REPUBLIC OF ZAMBIA

TRANSPORT ENGINEERING AND TECHNICAL ASSISTANCE PROJECT (CREDIT 2515-ZA)

IMPLEMENTATION COMPLETION REPORT

EVALUATION SUMMARY

Project Background

1. After several unsuccessful efforts at economic reform in the 1970s and 1980s, in 1991 the Zambian government initiated a reform program to encourage movement to a full market economy, and to significantly reduce the role of government in productive and commercial economic activities. The reform program had relied in part on provision of increased incentives for agricultural production and the promotion of the private sector, both by supporting new entries and privatizing a large portion of the public sector. However, the creation of the necessary enabling environment for enhanced growth and productivity continued to be hampered by the existence of infrastructure, including the road network, which was poorly maintained and run down. Expenditures in the road sector had for some time remained well below the level needed for sustainable maintenance. The legislative framework for roads was outdated and responsibilities were not clearly defined. Road sector agencies did not generally have the requisite resources, staffing and tools to undertake their assigned responsibilities. The need was seen to restructure expenditures and to improve planning allied with new initiatives to strengthen the road sector institutional and financing framework. The project was to help lay the groundwork for this effort and to prepare a follow-on project to address priority investment needs.

Project Objectives

2. The project objectives were to: (a) design and implement transport sector policy reforms, in particular through: (i) a program of regulatory and institutional reform to improve the management of the national road network and to put the financing of roads on a sustainable long-term basis, and (ii) enhanced opportunities for private sector participation in the rehabilitation and maintenance of roads; to strengthen the Government's capacity to plan and coordinate public expenditures for roads, and to monitor sector performance; and (c) carry out the preparatory engineering work for the first year program of the proposed multi-year Roads Rehabilitation Project. The project components were: (i) Policy Support; (ii) Project Preparation; and (iii) Institutional Development and Studies. The project objectives were appropriate, realistic and relevant to the needs of Zambia and were consistent with the agenda for reform being developed by the RMI program. A wide range of institutional reforms were required as Zambia did not have the financial or technical capacity to rehabilitate and maintain a

well functioning network. The project was well designed to address the reforms required and provided for linkage between these reforms and investment program preparation. The only *proviso* is that the policy reform objective was possibly too ambitious to have been fully achieved in the timeframe of the project. Two objectives - design and implementation of policy reforms and preparation of the follow-on project - are judged to have been substantially achieved. One objective - strengthening planning and coordination capacity - is judged to have been achieved to a considerable extent.

Project Implementation

3. The project suffered from a slow start-up due to: (i) discontinuity in project management, (ii) weaknesses in coordination of the various implementing agencies, and (iii) delays in the planned strengthening of capacity of some of these agencies. Performance substantially improved from mid-1995 with the NRB given a pivotal role in project management and all components - save for one which was dropped from the project and financed by DANIDA - were completed with minor delay and with some cost savings compared to appraisal. A number of additional subcomponents were undertaken to refocus and help accelerate the achievement of project objectives from the time of the mid term project review held in October 1995 and to take advantage of the cost savings. This helped to enhance and expedite the preparation of the follow-on project. Action plans have been prepared for all studies completed under the project and implementation is under way on recommendations in most cases. From these plans has been developed the Government's letter of road sector policy of March 1997, containing agreed undertakings on actions and measures to be taken to advance road sector reform. IDA performance is judged as more than satisfactory during supervision where synergies with the RMI program were effectively utilized. Borrower performance is judged as more than satisfactory during implementation as early delays were overcome and capacity constraints were quite effectively addressed. The project was completed by April 1998 and the credit closing date had to be extended by one year to June 30, 1998. Final estimated project cost is US\$8.6 million and disbursements of IDA credit proceeds amounted to US\$7.9 million .

Project Sustainability

4. The project has laid a strong foundation for the management and sustainable financing of the road sector and played a very important role in designing and preparation of the follow-on ROADSIP. Substantial progress has already been achieved namely: setting up the Road Fund, the NRB and carrying out the PSRP based strengthening of MLGH and the RD. Sustainability depends though on Government's willingness to continue to implement reforms and to carry forward all the agreed recommendations of plans and studies executed under the project. The letter of sector policy and the agenda of actions to be undertaken under the follow-on project, which was developed after substantial internal stakeholder consultation, augurs well for the future in this regard. Sustainability is thus rated as likely.

Project Outcome

5. The project outcome is rated as satisfactory. Substantial progress has been achieved against three indicators of development impact developed during project supervision i.e., completion of studies and production of action plans for the implementation of key recommendations enjoying strong stakeholder support; restructured and strengthened road agencies having appropriate tools, personnel and resources to carry out planning and implementation of road works; and improvement in road maintenance performance measures by volume of expenditure and the quality of work carried out. Some high quality outputs were produced in the course of the project notably - the road safety action plan, road sector environmental guidelines, and the economic evaluation manual.

Project Operations

6. There are no future operations of the project as such. However, the project has helped future operations in the road sector in four ways - preparation of the follow-on project, Project to Support the Road Sector Investment Program (ROADSIP), which is a sector operation enjoying IDA and other external financial support; development of an agenda for further policy and institutional reform outlined in the Government's letter of sector policy of March 1997 and being monitored on an annual basis; development of specific sector performance targets under ROADSIP to better measure progress on improving network quality; and improvement in sector management organization and capacity.

Key Lessons Learned

7. The key lessons learned from the project are as follows:
- (a) A satisfactory outcome for a technical assistance project, as in this case, is most likely where policy reform is effectively linked to investment support. Government and local stakeholders must be effectively engaged in the development of the reform agenda from the outset and should be able to perceive the consequent benefits from this reform in terms of improvements in the design and eventual implementation of the investment program.
 - (b) A significant number of activities not foreseen at appraisal were completed under the project whereas not all the specified outputs of studies identified at appraisal were carried through. The experience of this project underlines the value of flexibility in the development of project components - and specific activities - to achieve project objectives. Experience also demonstrates perhaps the need to avoid overspecifying the intended outputs from any given study, such as the anticipated creation of a national highways authority emanating from the transport policy study.
 - (c) Sector policy and institutional reform require political commitment, a clear timetable and a set of realistic and achievable steps in order to be successful as well as to be based on sound, well argued analysis of alternative approaches. All

such may not be achievable under the aegis of a single project. Effective involvement of stakeholders not only in the consultative stage but also in the decision making process will likely make it more sustainable in implementation, however long the process may take.

- (d) The effectiveness of IDA's performance was enhanced by the synergies between the preparation and implementation of the project and the development of the RMI program in Zambia. This experience points to the value of such synergies, and the associated incremental resources, for advancing a difficult policy agenda whilst helping build stakeholder understanding and commitment to reform.
- (e) Despite an overall satisfactory outcome, project implementation was delayed in the early stages. Early attention to project management and coordination arrangements in project processing and early remedial action where such arrangements are not performing for whatever reason may lead to considerable benefits in terms of more timely and effective implementation performance. Such action could cover *inter alia* appropriate institutional arrangements as well as payments and incentives for staff.

REPUBLIC OF ZAMBIA

TRANSPORT ENGINEERING AND TECHNICAL ASSISTANCE PROJECT (CREDIT 2515-ZA)

IMPLEMENTATION COMPLETION REPORT

PART I: PROJECT IMPLEMENTATION ASSESSMENT

A. Project Background

1. After several unsuccessful efforts at economic reform in the 1970s and 1980s, the Zambian government introduced new policies from 1991 to encourage movement to a full market economy, and to significantly reduce the role of government in productive and commercial activities. The reform program had relied in part on provision of increased incentives for agricultural production and the promotion of the private sector, both by supporting new entries and privatizing a large portion of the public sector. However, the creation of the necessary enabling environment for enhanced growth and productivity had continued to be hampered by the existence of infrastructure which had been poorly maintained and run down, which was particularly true of the roads sector.

2. In the road sector, expenditures had for some time remained well below the level needed to maintain the network in a stable condition over the long-term. At the time of project launch, the spending on roads under the jurisdiction of the Roads Department (RD) covered only 20 to 40 percent of the requirement for the 7,000 km of trunk and main roads, and only 10 to 20 percent for the 14,000 km of district roads. The nearly 16,000 km of roads under the jurisdiction of District Councils (DCs) were in worse condition and deteriorating at a faster pace than the RD-maintained roads. In addition, the existing regulations governing roads which dated back to 1969 no longer reflected current practices and policies. None of the ministries and agencies in the sector had the requisite resources, staffing and tools to undertake its assigned responsibilities in an adequate manner. The need was, therefore, seen to restructure the expenditures and improve planning in the roads sector to increase efficiency of use of scarce resources. This was to be allied with new initiatives to increase revenue mobilization from domestic and external sources. These measures were likely to require a number of policy reforms and strengthening of existing institutions or creation of new institutions for sustainability. The Government had shown a broad commitment to sectoral changes before project launch by participating in the Road Maintenance Initiative (RMI) program which has helped build a consensus among public and private sector stakeholders in Zambia on the nature and direction of changes that would be required.

B. Project Objectives

3. As stated in the Memorandum and Recommendation of the President for the project dated May 20, 1993, there were three main project objectives. The first was to design and implement transport sector policy reforms, in particular through (a) a program of regulatory and institutional reform to improve the management of the national road network and to put the

financing of roads on a sustainable long-term basis, and (b) enhanced opportunities for private sector participation in the rehabilitation and maintenance of roads. The second was to strengthen Government capacity to plan and coordinate public expenditures for roads, and to monitor sector performance. The third was to carry out the preparatory engineering work for the first year program of the proposed multi-year Roads Rehabilitation Project (RRP).

4. To achieve the above stated objectives, the project comprised the following components:

- (a) *Policy Support:* a national road transport policy study, which was aimed at carrying out administrative reclassification of the road network (much of which was not gazetted at the time), working out the detailed implications of establishing an autonomous Highway Authority to take over the responsibility for managing the entire road network in Zambia, proposing arrangements for road financing, including the possible introduction of an explicit road tariff, to be followed by preparing a draft Highway Authority Bill for consideration by Parliament.
- (b) *Project Preparation:* consulting services for carrying out detailed engineering studies for the first year of the five-year prioritized road rehabilitation program, which was under active consideration by the Government at the time of TETAP's appraisal. The five-year road program was prepared on the basis of an AfDB-financed Road Maintenance Organization and Training Study (RMOT). Under TETAP, it was agreed to carry out engineering design and preparation of bidding documents for the rehabilitation of the Kapiri-Nakonde road. In addition, it was agreed to finance the feasibility study and the subsequent preparation of tender documents for rehabilitation of the Luangwa Bridge, a major bridge on the Great East Road that was constructed in 1968 and that was showing signs of serious structural defects at the time of TETAP's appraisal.
- (c) *Institutional Development:* This component combined a range of studies and technical assistance to help the various institutions involved with some aspects of road planning and management to fulfill their responsibilities. These included the following: (i) The design and implementation of a highway management system (HMS) which was designed to assist the Government in adapting technical standards to levels that are economically sustainable and, based on an analysis of pavement structural strength, traffic data, environments, and technical options, to identify and assign priorities to road rehabilitation and periodic maintenance. The outcome of the HMS was aimed at strengthening the capability to develop annual and rolling programs of road works and expenditures that would optimize the net social benefits for any prevailing level of funding. (ii) The undertaking of an equipment management and maintenance study to explore how RD's large equipment, plant and vehicle fleet could be managed and maintained in an efficient manner, including what role the private sector might play in providing equipment and maintenance services to RD. (iii) A study of the local consulting and construction industry to establish the range and competence of domestic construction and consulting firms, identify any constraints hampering their development, and prepare an action plan for removing constraints to their development; (iv) The establishment of a feeder roads section within the Ministry of Local Government and Housing (MLGH) to cover roads managed by

the Rural District Councils (RDC). The key function of this section was to channel funds from the development budget to support construction and rehabilitation of RDC roads and, if required, implementing the collection of local revenues for maintenance of RDC roads. Also, this section was to annually recommend to the Ministry of Communications and Transport (MCT) the appropriate level of grant from the recurrent budget to support the maintenance of RDC roads. The FRS was assigned to carry out a comprehensive inventory of all RDC roads to prepare a prioritized maintenance program by placing emphasis on labor-based maintenance methods whenever possible. (v) A specialized private accounting firm to assist the implementing agencies in maintaining the project accounts and to carry out the annual audits.

5. During implementation, to refocus and accelerate project achievements (with particular regard to the preparation of the follow-on project) and to take advantage of project cost savings, a number of additional subcomponents of the project were undertaken under the framework of the original project objectives. These were as follows. Under Policy Support: (i) renumbering of the road system; (ii) preparation of background papers for a Roads 2001 workshop held February 1996 to launch the proposed sector investment program; (iii) preparation of a bankable document for soliciting domestic and external support for the program; (iv) preparation of an environmental mitigation plan and guidelines for the roads sector; (v) preparation of a road safety action plan; (vi) preparation of a program implementation manual and an economic evaluation manual for the program. Under Project Preparation: feasibility studies and preliminary design for Lusaka and seven other urban centers (Ndola, Kitwe, Livingstone, Kabwe, Kasama, Mansa and Solwezi) for the purposes of identifying a first year program of accelerated urban road rehabilitation. Under Institutional Development: (i) additional support for project management and capacity building through an adviser for MLGH and an Executive Secretary for the newly established National Roads Board (NRB); and (ii) support to the start-up of a community roads program under the Social Recovery Project (SRP).

C. Evaluation of Objectives and Risks

6. All the project objectives were appropriate, realistic, and relevant for the needs of road sector in Zambia, and were consistent with the agenda for national road policy reforms identified in the RMI seminar held in February 1993. Following many years of neglect, road expenditures remained well below the level needed to maintain the network in a stable condition. The RMI seminar helped the Government to build a consensus on the nature and directions of changes required. This helped the design of interventions under TETAP which was to be complementary to the RMI and which was aimed at supporting and assisting the reforms identified. In the roads subsector, a wide range of institutional reforms were required as the country at that time did not have the capacity, either technical or financial, to rehabilitate and maintain a well-functioning road network. TETAP was designed to address all the reforms needed and all its three objectives were stated in an order of priority.

7. The first objective emphasized the design and implementation of transport sector policy reforms to improve the management of the national road network and to put the financing of roads on a sustainable long term basis. The Roads and Traffic Act (CAP 766) gave the responsibility for roads to a single Ministry for Works, Transport and Communications. At the

time of project appraisal, this was no longer the case with no fewer than three separate ministries carrying out important roles in the road sector, i.e., MCT was responsible for setting overall transport policy; MWS was the designated authority for all trunk, main and district roads, and was responsible for the construction, rehabilitation and maintenance of these roads; the DCs under MLGH were responsible for the remainder of the road network. CAP 766 did not address the provision of any specific financing to support maintenance of urban and rural district councils roads. Therefore the project objective of bringing about institutional reforms linked to help the achievement of sector policy reforms was appropriate. The component of the project to support this objective was appropriately designed, but was in retrospect probably too ambitious to have been readily achieved with the timeframe and resources of the project. Even with the additional and complementary resources provided through the RMI program, it was always likely to be a lengthy and complex process to move from broad consensus about the need for reform to: consensus about the detailed institutional framework to be adopted and its subsequent implementation; and drafting and adoption of the necessary legislative instruments. The risk of Government's political ability not being sufficient to implement (at least some of) the requisite reforms was, however, recognized at project appraisal.

8. The second project objective relating to strengthening Government's capacity to plan and coordinate public expenditures for roads and to monitor sector performance, was appropriate and very important for the country and sector because of the weak institutional capacity of the road institutions, particularly in handling technical planning, financial monitoring and contract management. The project component for institutional development was designed to support enhanced capacity as the process of determining the best medium-term institutional framework for the road sector was being determined under the project's first objective. The component was appropriately designed in that it sought to address capacity constraints not only in the public sector - measures to strengthen and restructure the RD and to create a feeder road section in MLGH - but also the private sector through the construction industry study. A further risk had been correctly assessed at project appraisal that the capacity of various implementing agencies might build up more slowly than anticipated and that greater emphasis needed to be placed from the outset on the private sector, both external and domestic.

9. The third project objective relating to carrying out the preparatory engineering work for the first year program of a proposed multi-year RRP, was timely and appropriate. The design of the project recognized that substantial resources would have to be put into the road network to address the backlog of maintenance and the rehabilitation of strategic routes if the new road sector policies were to have an impact on the overall quality of the network. The project component included the preparation of a manageable number of subprojects of the proposed program. The choice of these subprojects appears to have been consistent with the five-year work program which was an outcome of the RMOT study. The inclusion of these activities were justified by the need to reduce the risk of closure of the Great East Road due to bridge failure and of substantial increases in vehicle operating costs due to further deterioration on the Great North Road. These two roads assure international traffic, with the latter being particularly critical as the principal link of Zambia to the port of Dar-es-Salaam.

D. Achievement of Objectives

10. Of the three project objectives, two have been substantially achieved and one has been achieved to a considerable extent. The first on designing and implementing transport sector policy reforms is substantially achieved. Major progress has been made towards the design and implementation of transport sector policy reforms and achievements can be recorded with regard to reforms to strengthen management and financing of roads. An overarching national transport policy framework was drafted as far back as mid-1995, but is not expected to be finally adopted by Cabinet until early in 1999. A letter of road sector policy has though been prepared and signed in March 1997 as a basis for the follow-on project to TETAP (Project to Support a Road Sector Investment Program, Credit 2993). A Road Fund was established October 1993 under existing financial legislation followed by the establishment of a National Roads Board (NRB) in October 1994 under statutory instrument. These measures represent significant achievements in relation to putting financing on a sustainable long term footing and to enhancing opportunities for private sector participation in the roads sector. The Government has moved towards the establishment of an explicit road tariff. A fuel levy was introduced in 1993 at K 10 per liter, was subsequently raised to K 30 per liter and to K 40 per liter and has been since 1997 set at 15 percent of the wholesale price of fuel. The impact of this levy has been a steady increase in the resources available to the Road Fund for routine maintenance. The NRB has taken on the role of managing the Road Fund and has been an important catalyst for increasing financing and improving management in the road sector. The majority of Board members, including the Chairman, are from the private sector. Under the project, significant work has been accomplished, including the preparation of the necessary legislative instruments, on both road reclassification and on a national highways authority. The Government declined to pursue the latter reform during the life of the project, deciding instead *firstly* to strengthen the existing implementing agencies in line with the Public Sector Reform Program (PSRP) and *secondly* to reassess the case for further reform on the basis of experience.

11. The second objective with regard to strengthening the Government capacity to plan and coordinate public expenditure for roads and to monitor sector performance has been achieved to a considerable extent. Whereas significant achievements have been recorded in terms of strengthening the existing implementing agencies and the newly created NRB, follow-up on specific programs and action plans developed under the project to this end have been uneven. The main developments can be summarized thus: (a) The NRB has a fully functioning secretariat and now has in house capacity in procurement, financial management and highway engineering. (b) The Department of Infrastructure and Support Services (DISS) in MLGH has been restructured under the PSRP and is fully staffed to provide the feeder road support function, though with the continuing assistance of external consultants. (c) The restructuring of the RD under the PSRP is at an advanced stage and, despite implementation delays, remains on track for phasing out of force account and for increasing reliance on the management of works carried out on contract by the private sector; (d) The HMS has been designed and installed in the RD but this has suffered some implementation problems and the conditions for its financial and operational sustainability have not yet been attained. No decision has yet been taken to contract out management of the HMS though this had been agreed in principle at appraisal.

12. The third objective was substantially achieved with regard to carrying out the engineering design of the first year work program. The preparation of feasibility studies, detailed design and bidding documents for all of the four sections of the Great North Road have

been completed. The resulting civil works of three sections are to be funded out of the follow-on credit and are expected to start in early 1999. Work on one section of the road (Kapiri Mposhi-Serenje) was subsumed under DANIDA's assistance to the transport sector in Zambia and the civil works are nearing completion following the design financed by IDA. The rehabilitation of Luangwa Bridge on Great East Road was taken over by DANIDA "in toto" and thus no work was funded under the project. The preparation of the follow-on investment program, named Road Sector Investment Program (ROADSIP) was accelerated and the time frame extended to ten years duration following a Cabinet decision taken in February 1997. In line with this program, additional first year works under an accelerated urban road rehabilitation program were identified and preparation was financed out of credit proceeds.

E. Implementation Record and Major Factors Affecting the Project

13. The project suffered from a slow start-up due to delays in getting consultancy services' contracts up and running. This, in turn, seems to be related to discontinuity in project management which was the responsibility of the planning department in MCT. Much of this appears due to frequent changes of project coordinator. Much of this was beyond the control of MCT, however, as a number of coordinators left due to perceived low salaries and poor conditions of service in government or due to illness and death in two cases. Project management was rendered difficult in the first 18 months by the lack of effective arrangements for coordinating the inputs from the various implementing agencies. A number of implementing agencies, notably MLGH, were not fully up to speed in terms of the capacity needed to execute components of the project. There were significant overall improvements in project management and coordination from mid-1995 until the end of the project. It was decided to request NRB to carry out these functions on behalf of MCT from February 1995 and to provide more resources for project coordination and for project financial management. Adequate remuneration for the Project Coordinator was provided through the project. This facilitated the completion of all original components of the project, with some delay but with some cost savings. In addition, a number of additional subcomponents (see *para 5*) were undertaken. While this stretched implementation capacity at times, this did accelerate preparation of the follow-on project to be enhanced in terms of quality and expedited in terms of start-up over and above what had been anticipated at project appraisal.

14. *Factors not Generally Subject to Government Control:* In this project, there were no important factors which were not subject to control by the government in general and the implementing agencies in particular. The only exception in this regard may be that a contributory factor to the frequent changes of project coordinator was the illness and death of some key staff in the MCT after project start-up.

15. *Factors Generally Subject to Government Control:* The Government was able to determine the pace at which proposed reforms in the financing and management of roads were implemented. Policy in this regard was clarified in the letter of sector policy of March 1997 whose implementation is being monitored under the follow-on project. With regard to financing, the Government has supported the establishment of the Road Fund and the progressive adjustment of the fuel levy to reflect the increasing maintenance requirements of the network. Government has not though taken all steps necessary for a fully fledged road tariff to be put in place, e.g., fuel levy is not determined on the basis of the marginal cost of road

damage; fuel levy proceeds are not collected directly by the NRB and deposited directly into the Road Fund account; Government has not yet implemented the deposit of some or all other road user charges into the Road Fund. With regard to road management, the Government has fully supported measures to strengthen the capacity of RD and MLGH (DISS) and has supported additional measures to strengthen the NRB - since August 1997 the costs of the secretariat are met out of the proceeds of the Road Fund. The Government, however, declined to proceed at this stage with the establishment of a national highways authority and with certain other recommendations of the transport policy study. Two further factors were under Government's control. *Firstly*, there was the provision of counterpart funding, amounting over the life of the project to about 5% of total project cost. These funds were made available but with a delay in early years which contributed some to delays in the payment of consultants. *Secondly*, the provision of counterpart staff in MLGH/DISS was delayed in relation to the start-up of the feeder road support consultancy, as staff were recruited and confirmed under the PSRP much later than had been anticipated. Similar delays in the implementation of the restructuring of the RD under the PSRP had a lesser effect as counterpart staff were for the most part already in place under the existing structure.

16. Factors Generally Subject to Implementing Agency Control: The project relied to a large extent on the output of various consultancy services for the achievement of its objectives. The selection of consultants was carried out in accordance with Bank guidelines and the provisions of the credit agreement. In a number of cases, output from consultants was delayed in relation to anticipated delivery although for the most part this was due to the need for additional or revised work to be carried out, e.g., the proposed designs for three sections of the Great North Road were revised after review. In one case (the national transport policy study), two addenda had to be issued to the final report to address weaknesses and omissions in the consultants' work. In the case of the HMS, the implementing agency did not provide all the material and financial support necessary for successful implementation and as a result the full benefit of the consultancy services financed by the project has not been realized. The RD to date has taken no decision to contract out management services to the private sector although this had been agreed in principle at appraisal.

17. Cost Changes: The project achieved all of its agreed objectives and all the components were implemented within the appraisal estimate of cost. The total estimated actual cost of the project is US\$8.6 million compared to an appraisal estimate of US\$9.0 million. The estimated foreign exchange component is 79% compared to 70% at appraisal. Significant cost savings were obtained on the components originally identified for financing out of the credit proceeds. The total estimated actual cost of these components came to US\$7.5 mn. A major contributory factor though was the decision to finance the Luangwa bridge preparatory work (US\$0.8 million equivalent) out of other financing sources. The savings created the opportunity to finance additional subcomponents which helped to accelerate and deepen the process of preparation of the follow-on project.

18. Implementation Delays: The credit was signed on September 30, 1993 and became effective on November 29, 1993. There were some delays in processing and awarding of consultancy contracts at the start of the project. This was due to the aforementioned problems with project coordination and with the unfamiliarity of most implementing agencies with Bank procedures. As a result, there was a significant disbursement lag in the first two years of the project and disbursements only attained 24% of appraisal estimate. Project implementation gained momentum from mid-1995. Most components of the project were completed within the

expected timeframe, taking account of the delayed start - with the exception of the national transport policy study where some work had to be redone, and of the engineering studies for the three sections of the Great North Road where designs had to be modified and the economic viability had to be reassessed. The credit closing date had to be extended by one year, to June 30 1998, to facilitate completion of these components. With the exception of the continuing support to the feeder road program and to the HMS which have been absorbed under the follow-on project, all activities were essentially completed by the end of the first quarter of 1998 compared to the appraisal estimate of project completion of December 31, 1996.

19. *Changes in Project Scope*: A number of additional subcomponents were added to the project, i.e., preliminary engineering undertaken for the accelerated urban road rehabilitation program, additional policy work undertaken on road renumbering, road safety, environmental guidelines, preparation of working papers and a bankable document, additional feeder survey and inventory work carried out, and additional institutional support to MLGH and NRB (see also *para. 5*). In addition, one original component, the engineering for the Luangwa bridge was dropped.

F. Project Sustainability

20. The benefits derived from all the project components are substantial, and in general have laid a strong foundation for the management and sustainable financing of the road sector, and in particular had played a very important role in the designing and preparation of the follow-on project (ROADSIP). All project studies have been completed and the actions plans have been prepared. The degree of internal consultation in the development of recommendations for policy and institutional reform has been uniformly high. Government capacity to fully and effectively carry out all the identified reforms is, however, limited and there have been delays in following up on agreed action plans in some areas. There are also concerns about the sustainability of some of the institutional improvements supported by the project where there are continued concerns about both technical and financial capacity to manage operations. This is the case with the HMS whose sustainability is in question, unless and until more appropriate management and financing arrangements are put in place for system maintenance, data collection and analysis and operator training. Commitment to carry out reform, however, is indicated by the important steps already achieved. One important element of this agenda is completing the process of policy reform (in particular the process of commercializing the management of the road sector) and of carrying out concomitant changes to the legislative framework. In both these areas, the Government was not able to agree with all the proposal developed as a result of the national road transport policy study. Given though that Government has committed in the letter of sector policy to move forward to implement all the institutional reforms, and particularly these will be further pursued under the follow-on project, the sustainability of TETAP can be rated as "likely".

G. IDA Performance

21. Identification, Preparation and Appraisal: IDA's performance at project identification, during preparation and at project appraisal is rated as satisfactory. IDA played a critical role in helping Government identify a technical assistance project with a key focus on policy measures and institutional reform to initiate the process of commercialization the management of the road sector. Under preparation, IDA was instrumental in developing project components which were well matched with the proposed project objectives. The linkage to the RMI Program helped give the policy and institutional reform process a good impetus although the expectations of what could be achieved within the timeframe and the resources available under the project were possibly set too high. The appraisal process was well conceived and carried out with an appropriate mix of skills and experience represented on the team. One possible adverse comment is that more attention might have been given to project management and coordination arrangements and to the support that might be needed in this regard to the key implementing agencies.

22. Supervision: The IDA supervision was professional, objectively focused and based on solid understanding of the Borrower's institutional capabilities and the IDA's policies and procedures. Supervision performance is rated as more than satisfactory. During project implementation, the IDA and the Borrower relationship was effective and productive. The implementation problems were generally correctly assessed and were reported appropriately in the performance ratings. The timing of supervision missions was appropriate and the time spent in the field was sufficient. Although this may not appear to have been true of the first 18 months of the project during which there was only one formal supervision mission, frequent visits by the RMI program manager in that period were effective in addressing early implementation problems and the start-up of project studies. IDA supervision was particularly useful in assisting the Borrower improve: performance on financial management and accounting design; and implementation of additional subcomponents of the project which helped accelerate preparation of the follow-on project. While the Mid Term Review did not take place as planned by end-December 1994, the major review undertaken in October 1995 which gave rise *inter alia* to the foregoing was timely and appropriate in the project circumstances.

H. Borrower Performance

23. Identification, Preparation and Appraisal: The performance of the Borrower at identification, preparation and appraisal is rated as satisfactory. The depth and quality of Borrower involvement was evidenced by: (a) the active participation of not only the responsible policy ministry (MCT) but also the proposed implementing agencies (MLGH, RD) in these stages of the project; and (b) the environment fostered by the RMI program which helped bring additional public and private sector stakeholders into the process of the design and implementation of road maintenance programs in Zambia.

24. Implementation: The performance of the Borrower during project implementation is rated as more than satisfactory. The Borrower was able to overcome some initial problems with project coordination and lack of capacity in certain agencies which delayed the start-up of most components. Bringing the NRB into the project to play a pivotal role was instrumental in both addressing many of the capacity constraints and enabling the stakeholders represented on the

Board to have a say in the timing and content in the implementation of the project and in the preparation of the follow-on project. Project reporting improved during the course of implementation and this was very effective in focusing the effort of IDA supervision missions. Financial management, including the processing of consultant invoices and payments, and the production of accounts steadily improved during the project such that in the last two years of the project the audit could be carried out considerably in advance of the legal required date. The 1997 audit was, however, qualified as a portion of project funds had been diverted to non-project uses. The Borrower dealt with the issue in a timely and effective way, satisfactory to IDA, such that the qualification could be lifted in the subsequent audit and the funds were reimbursed to the project account in full.

I. Assessment of Outcome

25. The project achieved all of its objectives in full or in part and the outcome of project is rated as satisfactory. No indicators of development impact were given at appraisal. Three such indicators were developed by IDA during supervision to assess the progress of the project. These were: (i) completion of studies and the production of action plans for the implementation of key recommendations which have strong stakeholder support; (ii) restructured and strengthened road authorities which have appropriate tools, trained personnel and adequate financial resources to carry out planning and implementation of road works; and (iii) improvement in road maintenance performance measured by the volume of expenditure and the quality of work carried out. The project has very clearly allowed the Borrower to advance in all these areas although much is left to be achieved under the follow-on project and subsequent interventions:

- * *Firstly*, not only were all studies originally slated for financing completed and action plans prepared, the same can be said for all the additional subcomponents added after the review carried out in October 1995. For the most part the quality of the work produced was high and the essence of the agreed action plans have been captured in the Borrower's letter of road sector policy. Specific mention can be made of three documents: the Road Safety Action Plan which is considered to be one of the best of its kind yet produced in the region; the Guidelines for Environmental Management in the Road Sector which are similarly viewed and which are already in active use in Zambia; and the Economic Evaluation Manual which is in use and is helping implementing agencies design more appropriate maintenance interventions.
- * *Secondly*, considerable progress has been made on restructuring and strengthening road sector institutions although, as the Borrower's road sector policy letter recognizes, only a first stage in the process has yet been achieved. With the additional resources being provided under the follow-on project, it will be determined during the first years of implementation if further restructuring will be needed for capacity development and sustainable road sector management. The first review of the sector policy letter took place in October 1998 during which Government confirmed its intention to revise the Roads and Road Traffic Act *inter alia* to put NRB and the Road Fund on a firm legislative basis by June 2000.

- * *Thirdly*, road maintenance planning and implementation has been placed on a sounder and more sustainable footing with the reforms which gave rise to the NRB and the Road Fund. Disbursements on Road Fund financed maintenance programs have risen from K 10.5 billion in 1995 to an estimated K 15.6 billion in 1997. This should rise further to K 18.4 billion in 1998 although the programming of work in both the last two years has been adversely affected by late and erratic releases of fuel levy proceeds to the Road Fund. Thus, while a higher portion of maintenance requirements are being covered now compared to the situation before the project, this has still not reached the level of 50%. The relative rate of improvement has been quite sharp for urban and rural district roads, but much less so for main and trunk roads. Also, there remains some concern about the quality of road work carried out. More than 95% of work is now carried out by the private sector in line with policy to reduce force account, but the number of experienced, local contractors is still quite limited.

J. Future Operations

26. As a technical assistance project largely geared to the preparation of a road sector program, there are no future operations of the project as such. However, the project has helped future operations in the road sector in four important ways:

- (a) The implementation of this project has opened the door for other assistance in the roads sector including not only the follow-on IDA project but also financing from other donors as part of a sector wide approach to road policy and investment. Financing has thus been lined up for most of the estimated requirements of US\$450 million for the first five years of ROADSIP (1998-2003).
- (b) An agenda for follow-on policy and institutional reform building on what has been started under the project is clearly set out in a letter of road sector policy dated March 1997. This letter provides the policy underpinning for the follow-on project under which its implementation is being reviewed on an annual basis. The main elements of sector development strategy addressed in this letter concern: strengthening the institutional framework; rehabilitating priority roads; ensuring effective maintenance; managing maintenance; developing the construction and consulting industry; improving management of plant and equipment; mobilizing and allocating road sector revenues; improving community accessibility; mitigating environmental impacts; improving road safety; revising road sector legislation; and reviewing implementation of ROADSIP.
- (c) Specific performance targets have now been set for the road sector under the follow-on project which will help the Borrower better measure sector performance. Measures include: funding made available through the fuel levy and other road user charges; completion of road works (routine and periodic maintenance; rehabilitation); proportion of road network in respectively good, fair and poor condition; number and type of local contractors completing training.

- (d) Coordination of implementing agencies and strengthening of project management organization and capacity in the roads sector has been increased as a direct consequence of the project.

K. Key Lessons Learned

27. The key lessons learned from the project are as follows:

- (a) A satisfactory outcome for a technical assistance project, as in this case, is most likely where policy reform is effectively linked to investment support. Government and local stakeholders must be effectively engaged in the development of the reform agenda from the outset and should be able to perceive the consequent benefits from this reform in terms of improvements in the design and eventual implementation of the investment program.
- (b) A significant number of activities not foreseen at appraisal were completed under the project whereas not all the specified outputs of studies identified at appraisal were carried through. The experience of this project underlines the value of flexibility in the development of project components - and specific activities - to achieve project objectives. Experience also demonstrates perhaps the need to avoid overspecifying the intended outputs from any given study, such as the anticipated creation of a national highways authority emanating from the transport policy study.
- (c) Sector policy and institutional reform requires political commitment, a clear timetable and a set of realistic and achievable steps in order to be successful as well as to be based on sound, well argued analysis of alternative approaches. All such may not be achievable under the aegis of a single project. Effective involvement of stakeholders not only in the consultative stage but also in the decision making process will likely make it more sustainable in implementation, however long the process may take.
- (d) The effectiveness of IDA's performance was enhanced by the synergies between the preparation and implementation of the project and the development of the RMI program in Zambia. This experience points to the value of such synergies, and the associated incremental resources, for advancing a difficult policy agenda whilst helping build stakeholder understanding and eventual commitment.
- (e) Despite an overall satisfactory outcome, project implementation was delayed in the early stages. Early attention to project management and coordination arrangements in project processing and early remedial action where such arrangements are not performing for whatever reason may lead to considerable benefits in terms of more timely and effective implementation performance. Such action could cover *inter alia* appropriate institutional arrangements and payments and incentives for staff.

THE REPUBLIC OF ZAMBIA

TRANSPORT ENGINEERING AND TECHNICAL ASSISTANCE PROJECT

CREDIT 2515-ZA

IMPLEMENTATION COMPLETION REPORT

PART II: STATISTICAL ANNEXES

Table 1: Summary of Assessments

A. <u>Achievement of Objectives</u>	<u>Substantial</u> (✓)	<u>Partial</u> (✓)	<u>Negligible</u> (✓)	<u>Not applicable</u> (✓)
Macro Policies				✓
Sector Policies	✓			
Financial Objectives		✓		
Institutional Development	✓			
Physical Objectives	✓			
Poverty Reduction				✓
Gender Issues				✓
Other Social Objectives				✓
Environmental Objectives				✓
Public Sector Management		✓		
Private Sector Development	✓			
Other (specify)				✓

B. <u>Project Sustainability</u>	<u>Likely</u> (✓)	<u>Unlikely</u> ()	<u>Uncertain</u> ()

C. <u>Bank Performance</u>	<u>Highly Satisfactory</u> (✓)	<u>Satisfactory</u> (✓)	<u>Deficient</u> (✓)
Identification		✓	
Preparation Assistance		✓	
Appraisal		✓	
Supervision		✓	

D. <u>Borrower Performance</u>	<u>Highly Satisfactory</u> (✓)	<u>Satisfactory</u> (✓)	<u>Deficient</u> (✓)
Preparation		✓	
Implementation		✓	
Covenant Compliance		✓	
Operation (if applicable)			

E. <u>Assessment of Outcome</u>	<u>Highly Satisfactory</u> (✓)	<u>Satisfactory</u> (✓)	<u>Unsatisfactory</u> (✓)	<u>Highly unsatisfactory</u> (✓)
		✓		

Table 2: Related Bank Credits

Loan/Credit Title	Purpose	Date of Approval	Status
Highway Reconstruction, (Cr. 469-ZA)	To improve the Great East Road linking Lusaka, the capital, with the agriculturally-rich Eastern Province and Malawi, and of the Great North Road, linking the center of Zambia with the Northern Province and East Africa.	Sept. 1966	Closed
Second Highway project, (Ln. 563-ZA)	To improve the entire Tanzam Highway to suitable standards, with a view to developing transport capacity to the sea for landlocked Zambia	Sept. 1968	Closed
Third Highway Project, (Ln. 1566/Cr. 798-ZA)	To improve the maintenance of the rapidly deteriorating road network and plan for future extension of the network	May 1978	Closed
Project to Support a Road Sector Investment Program (Cr. 2993-ZA)	To facilitate economic growth and diversification (particularly in the agricultural sector) through appropriate investments in road infrastructure and through a sustainable system for the financing and management of the road network.	Oct. 1997	Active

Table 3: Project Timetable

Steps in Project Cycle	Date Planned	Date Actual/Latest Estimate
Identification/Preparation		February 1992
Appraisal	September 1992	September 1992
Negotiations	April 1993	April 1993
Board Presentation		June 17, 1993
Signing		September 30, 1993
Effectiveness	October 1993	November 29, 1993
Project Completion	December 31, 1996	March 31, 1998 ¹
Credit Closing	June 30, 1997	June 30, 1998

¹ Some components were absorbed under the follow-on project.

Table 4: Credit Disbursements: Cumulative Estimates and Actual
(US\$ Million)

	FY93/94	FY94/95	FY95/96	FY96/97	FY97/98	FY98/99
Appraisal Estimate - Cumulative	2.12	5.1	7.6	8.5	8.5	8.5
Annual	2.1	3.0	2.5	0.9	0.0	0.0
Actual - Annual	0.0	1.2	3.3	1.5	1.5	0.4
Actual - Cumulative	0.0	1.2	4.5	6.0	7.5	7.9
Actual as % of Estimate	0.0	24	59	71	88	93
Date of Final Disbursement						12/16/1998

Table 5: Key Indicators for Project Implementation

No indicators for project implementation were defined in the President's Report. They were not required as standard procedure at the time of appraisal

Table 6: Key Indicators for Project Operation

No indicators for project operations were defined in the President's Report. They were not required as standard procedure at the time of appraisal.

² Including US\$1.0 million initial deposit into the Special Account.

Table 7: Studies Included in Project

Study	Purpose as Defined at Appraisal	Purpose as Redefined/and or as Added-on	Status	Impact of Study
<p><u>Part A:</u> 1. Policy Support A National Road Transport Policy Study.</p>	<p>a. Administrative reclassification of the road network; b. Establishment of an autonomous Highway Authority to take the responsibility for managing the entire road network; c. arrangement for road financing including introduction of an explicit road tariff and preparation of Cabinet Paper for the above arrangements; and d. preparation of a draft Highway Authority Bill for consideration by Parliament.</p>	<p>a. No change. b. At draft final report stage, Government determined that as a first step existing road sector institutions would be restructured and strengthened and that the creation of a semi-autonomous authority would come as a second step and be carried out as an extension to the mandate of the NRB. Final report was amended to reflect this policy decision. c. At draft final report stage, government clarified that road maintenance would be funded by fuel levy and by other road user charges channeled through the Road Fund. The study was to help determine ways to set these charges and how best to collect and allocate the proceeds. d. Not applicable, although some preparatory work was carried out.</p>	<p>Completed. draft final report submitted April 1996, final report September 1996 followed by two addenda to the final report.</p>	<p>Most recommendations were accepted by Government. Action on administrative reclassification of roads to be taken in 1999. Action on further institutional and financing reforms incorporated in Government's letter of road sector policy of March 1997.</p>
<p><u>Added on Studies under Part A</u> 2. Road Renumbering System.</p>		<p>Carry out renumbering of roads in line with SATCC standards.</p>	<p>Completed after delay.</p>	<p>Numbering system is to be installed on the HMS.</p>
<p>3. Preparation of a Road Sector Investment Program (ROADSIP).</p>		<p>Setting-up of National Task Force and commissioning of consultancies to prepare position papers to formulate project proposal to access donor funding to launch a medium term Road Sector Investment Program. Papers were presented at Roads 2001 workshop, February 1996 in Lusaka.</p>	<p>Completed with submission of final reports and holding of workshop in February 1996.</p>	<p>Workshop was extremely effective in generating stakeholder support for ROADSIP and for defining the broad parameters of ROADSIP. Workshop recommendations on institutional reform were not accepted in full by Government however.</p>
<p>4. Preparation of ROADSIP Bankable Document.</p>		<p>From the starting point of the communiqué of the above referenced workshop, a small group put together the bankable document which formed the basis of a Cabinet decision in favor of ROADSIP in February 1997 and which has been used to solicit donor interest in funding of ROADSIP.</p>	<p>Completed with submission of draft document in June 1996.</p>	<p>Report was instrumental in getting Cabinet approval and was the basis of the undertakings made by Government in the March 1997 letter of sector policy.</p>
<p>5. Preparation of an Environmental Mitigation Plan and Guidelines.</p>		<p>Committee prepared environmental (technical and operational) guidelines for road rehabilitation and maintenance works and helped determine work program for environment management unit to be set up in RD.</p>	<p>Completed. Guidelines finalized in July 1997 and formally adopted by government in September 1997.</p>	<p>Guidelines are available and are in use now. Environmental management unit is up and running.</p>
<p>6. Road Safety Action Plan.</p>		<p>Study of road safety situation, constraints to improvement, and preparation of a detailed time frame and cost estimate for a three year action program.</p>	<p>Completed. Workshop held October 1997 to discuss draft findings and final report sent out in March 1998.</p>	<p>Government has agreed with the study recommendations. Implementation and funding of major initiatives is to start in 1999.</p>

Study	Purpose as Defined at Appraisal	Purpose as Redefined/and or as Added-on	Status	Impact of Study
7. Miscellaneous Preparatory Activities for ROADSIP.		Certain activities for which financing was provided out of a PHRD grant (no. 29564) for the preparation of ROADSIP were completed using TETAP funding, i.e. the preparation of a project implementation plan and manual, and of an economic evaluation manual.	Completed, final documents submitted in draft in March 1998 finalized in April 1998.	Documents finalized after significant stakeholder input are being used in practice.
<u>Part B:</u> 1. <u>Project Preparation.</u> a. Detailed engineering of Road Rehabilitation Works; and b. Luangwa Bridge Feasibility and Engineering Study.	a. Detailed engineering and preparation of tender documents of road rehabilitation works to be carried out in the first year of the proposed multi year road rehabilitation program (RRP), i.e. rehabilitation of the Great North Road (Kapiri Mposhi to Nakonde) in four sections, i.e. Kapiri-Serenje (S1), Serenje-Mpika (S2), Mpika-Chinsali (S3), Chinsali-Nakonde (S4). b. Engineering and preparation of tender documents for Luangwa Bridge if rate of return is deemed satisfactory after feasibility study.	a. Additional economic analysis was carried out on the Great North Road to determine feasible rehabilitation and maintenance options. b. Luangwa Bridge rehabilitation was taken on for funding by DANIDA and was thus dropped from the project.	a. For Great North Road: Preliminary design reports completed Nov.-Dec. 1995. Final design reports completed September 1996, but subsequently revised in order to take account of additional options and cost savings. Draft tender documents completed in March 1998. b. Project completed with DANIDA funding.	Follow-up project to support ROADSIP provides funding for most elements of the Great North Road rehabilitation program. Works should be carried out from 1999. Bids were under evaluation in last quarter of 1998. S1 of the Great North Road is already under construction with DANIDA funding.
<u>Added on Studies under Part B</u> 2. Preliminary Engineering for Urban Road Rehabilitation Program.		Detailed engineering was carried out for the requirements of an accelerated urban road rehabilitation program added in April 1997, i.e. Lusaka Group A and B and seven other urban centers (Kitwe, Ndola, Kabwe, Livingstone, Solwezi, Mansa, Kasama).	Lusaka A and B design reports were completed in August 1997 and seven towns design reports completed April 1998	Road Fund resources were used for Lusaka Group A roads which were completed September 1998. IDA agreed to finance Ndola and Kitwe under follow on credit 2993 - Project to Support ROADSIP
<u>Part C:</u> 1. <u>Institutional Development.</u> a. Design and Implementation of a Highway Management System; b. Equipment Management and Maintenance Study;	a. To help Government adapt technical standards of road maintenance to sustainable economic levels based on traffic. b. To explore how RD's equipment could be managed and maintained in an efficient manner.	a. No change, except that project input into annual road condition surveys and data analysis was increased to compensate for government resource limitations. b. No change.	a. Interim report completed May 1996, survey update report completed March 1997. b. Final report submitted October 1996.	a. System has been installed, training carried out and about 11,000 kms of roads input. Sustainability of the system is still in question due to inadequate management and lack of budget resources. Management has not been contracted out to private sector as originally agreed. b. Key agreements on further action are contained in the letter of sector policy of March 1997. Some progress to date on implementation of recommendations.

Study	Purpose as Defined at Appraisal	Purpose as Redefined/and or as Added-on	Status	Impact of Study
<p>c. Study of Local Consulting and Construction Industry;</p> <p>d. Establishment of a Feeder Road Section (FRS) in the MLGH; and</p> <p>e. Assistance for project accounting and audit</p>	<p>c. To establish the range and competence of domestic construction and consulting firms.</p> <p>d. To establish the section, carry out a feeder road inventory and prepare prioritized maintenance programs.</p> <p>e. To ensure project accounts are properly maintained and that annual audits are carried out.</p>	<p>c. No change.</p> <p>d. Scope of work was increased to include: i) full feeder road surveys in all 9 provinces and the preparation of rehabilitation programs for IDA funding in 3 provinces (Western, Luapula and Northern); and ii) inventory of up to 3,000 kilometers of urban roads.</p> <p>e. NRB took over project accounting February 1995, audits undertaken by private firm.</p>	<p>c. Final report submitted July 1996.</p> <p>d. Mid Term reports submitted Dec. 1996, regular monthly progress reports submitted, feeder road surveys inventories completed, preparation of rehabilitation programs achieved.</p> <p>e. Reports submitted on or ahead of schedule.</p>	<p>c. Key agreements on further action are contained in the letter of sector policy of March 1997. Some progress on implementation of recommendations, establishment of a National Construction Council (NCC).</p> <p>d. FRS established and fully staffed as integral part of DISS in MLG. External assistance has been particularly effective.</p> <p>e. Accounting system and audits have helped accountability and transparency of use of project funds.</p>
<p><u>Added-on Studies under Part C</u></p> <p>2. <u>Project Management.</u></p>		<p>a. Payment of salary and benefits of Advisor in MLGH up to June 1994.</p> <p>b. Payment of salary and benefits of Executive Secretary of the NRB (TETAP Coordinator) January 1995 to December 1997.</p>	<p>a. Completed.</p> <p>b. Completed.</p>	<p>a. Effective.</p> <p>b. Effective.</p>
<p>3. Support to Community Roads Development.</p>		<p>Engineer recruited to launch the community road component of ROADSIP under the Social Recovery Project. TETAP proceeds used from October 1997 to effectiveness of follow-on credit for ROADSIP.</p>	<p>Ongoing since October 1997, will be absorbed by follow on credit.</p>	<p>Ongoing activity, at an early stage with first projects approved in Luapula province in mid-1998</p>

Table 8: Project Costs

Item	Appraisal Estimate (US\$M)			Actual (US\$M)		
	Local Costs	Foreign Costs	Total	Local Costs	Foreign Costs	Total
National Road Transport Policy Study	0.2	0.5	0.7	0.2	0.6	0.8
First Year Road Rehabilitation ^{/1}	0.2	1.0	1.2	0.2	1.9	2.1
Luangwa Bridge ^{/2}	0.2	0.6	0.8	0.0	0.0	0.0
Highway Management System	0.5	1.3	1.8	0.2	1.2	1.4
Equipment Management and Maintenance Study	0.1	0.3	0.4	0.1	0.3	0.4
Construction and Consulting Industry Study	0.1	0.2	0.3	0.1	0.2	0.3
Feeder Roads Section	0.9	1.4	2.3	0.6	1.7	2.3
Project Accounting and Auditing	0.0	0.1	0.1	0.0	0.1	0.1
Additional Policy Studies	0.0	0.0	0.0	0.3	0.2	0.5
Additional Project Preparation	0.0	0.0	0.0	0.1	0.2	0.3
Additional Institutional Development	0.0	0.0	0.0	0.1	0.3	0.4
Total Base Costs	2.2	5.4	7.6	1.9	6.7	8.6
Price Contingencies	0.2	0.5	0.7			
Physical Contingencies	0.2	0.5	0.7			
Total Project Cost	2.6	6.4	9.0	1.9	6.7	8.6

^{/1} TETAP did the engineering study for the Great North Roads - Sections I, II, III & IV. DANIDA took over rehabilitation of Section 1, 197 km at a cost of DKK 275 million or about US\$45.8 million equivalent.

^{/2} This work was taken over by DANIDA at a cost of DKK 15 million or about US\$2.5 million.

Table 9: Project Financing

Source	Appraisal Estimate (US\$M)			Actual/Latest Estimate (US\$M)		
	Local Costs	Foreign Costs	Total	Local Costs	Foreign Costs	Total
<i>IDA (By Category)</i>						
1. Policy Support			0.8			1.3
2. Rural Roads Development			2.4			2.3
3. Institutional Development & Project Preparation			4.3			4.3
4. Unallocated			1.0			
IDA Total	2.1	6.4	8.5	1.4	6.5	7.9
Government Total	0.5	0.0	0.5	0.5	0.2	0.7
Grand Total	2.6	6.4	9.0	1.9	6.7	8.6

Table 10: Economic Costs and Benefits

No economic rate of rate of return was calculated at appraisal, as it was not appropriate for this type of project.

Table 11: Status of Legal Covenants

Credit Agreement	Section	Covenant Type	Present Status	Original Fulfillment Date	Revised Fulfillment Date	Description of Covenants	Comments
Credit	3.01(a)	10	C			The Borrower declares its commitment to the objectives of the Project as set forth in Schedule 2 to this Agreement and, to this end, shall carry out Parts A, B and C of the Project through MCT, MWS and MLG, respectively, with due diligence and efficiency and in conformity with appropriate technical, administrative, environmental and financial practices, and shall provide, promptly as needed, the funds, facilities, services and other resources required for the Project	
	3.01(b)	10	C			Without limitation upon the provisions of paragraph (a) of this Section and except as the Borrower and the Association shall otherwise agree, the Borrower shall carry out the Project in accordance with the Implementation Program set forth in Schedule 4 of this Agreement.	
	3.02	5	C			Except as the Association shall otherwise agree, procurement of the consultants' services required for the Project and to be financed out of the proceeds of the Credit shall be governed by the provisions of Schedule 3 of this Agreement.	
	3.03	5,9	CD	12/31/94	10/15/95	(a) The Borrower and the Association shall, not later than December 31, 1994, or at such later date as the Borrower and the Association shall agree upon, carry out a joint in-depth review of Project implementation (the Mid-term Review), as set out in paragraph 5 of Schedule 4 to this Agreement. (b) Not later than on month prior to the Mid-Term Review, the Borrower shall furnish to the Association a report in order to prepare for such review, commenting on project implementation, with a specific evaluation of the effectiveness of implementation procedure and proposals to change such, if any. (c) Following such review, the Borrower undertakes to act promptly and diligently to take any corrective action deemed necessary in order to remedy any shortcoming noted in the implementation of the Project, or to implement such other measures as may have been agreed upon between the Borrower and the Association in Furtherance of the objectives of the Project.	Review was delayed by slow start-up of project. During October 1995 mission, additional activities were agreed: (a) to refocus and accelerate project implementation; and (b) to utilize cost savings.

Credit Agreement	Section	Covenant Type	Present Status	Original Fulfillment Date	Revised Fulfillment Date	Description of Covenants	Comments
	3.04	5,9	CP			The Borrower shall: (a) promptly, and in any event not later than three months, after the receipt of any study carried out under the Project and Financed out of the proceeds of the Credit, submit to the Association one copy of such study together with: (i) the Borrower's detailed evaluation thereof; and (ii) the Borrower's assessment of the practicability of implementing the study's recommendations; and (b) implement the recommendations of such studies as mutually agreed upon between the Borrower and the Association.	As discussed in <i>Table 7</i> , follow-up action on study recommendations has yet to take place in some cases.
	4.01(a)	1,2,3	C			The Borrower shall maintain or cause to be maintained separate records and accounts adequate to reflect in accordance with sound accounting practices the operations, resources and expenditures, in respect of the Project, of the departments of the Borrower responsible for carrying out the Project or any part thereof.	Performance was generally sound, although audit of 1997 accounts revealed diversion of project funds. This was subsequently resolved in a manner satisfactory to IDA however.
	4.01 (b)	1,2,3	C			The Borrower shall: (i) have the records and accounts referred to in paragraph (a) of this Section including those for the Special Account, for each fiscal year audited, in accordance with appropriate auditing principles consistently applied, by independent auditors acceptable to the Association; (ii) furnish to the Association as soon as available but, in any case, not later than six months after the end of each such year, a certified copy of the report of such audit by said auditors of such scope and in such detail as the Association shall have reasonably request; and (iii) furnish to the Association such other information concerning said records, accounts and the audit thereof as the Association shall from time to time reasonably request	Over the period 1996/8, the borrower generally submitted audits well in advance of the covenanted target dates

Covenant Types: 1 = Accounts/Audits; 2 = Financial Performance/Revenue Generation from Beneficiaries; 3 = Flow and Utilization of Project Funds; 4 = Counterpart Funding; 5 = Management Aspects of the Project or Executing Agency; 6 = Environmental Covenants; 7 = Involuntary Resettlement; 8 = Indigenous People; 9 = Monitoring, Review and Reporting; 10 = Project Implementation not covered by categories 1-9; 11 = Sectoral or cross-sectional budgetary or other resource allocation; 12 = Sectoral or cross-sector policy regulatory/ institutional action; 13 = Other.

Present Status: C = Covenant complied with; CD = Complied with after delay; CP = Complied with partially; NC = Not complied with

Table 12: Compliance with Operational Manual Statement

There was compliance with all pertinent Bank Operations Manual statements throughout the project cycle.

Table 13: Bank Resources - Staff Inputs

Stage of Project Cycle	Planned		Revised		Actual	
	Weeks	US\$	Weeks	US\$	Weeks	US\$
Through Appraisal					35.8	4.6
Appraisal-Board					23.0	75.3
Board-Effectiveness					5.8	18.8
Supervision					92.1	355.6
Completion					3.8	8.0
TOTAL					160.5	462.3

Table 14: Bank Resources - Missions

Stage of Project Cycle	Mon./Year	Number of Persons	Days in Field	Specialized Staff Skills Represented	Participated in Previous Mission (yes/no)	Performance Rating		Comments
						Implementation Status	Develop. Objectives	
Through Appraisal								N.A.
Appraisal through Board approval								N.A.
Board approval through effectiveness								N.A.
Supervision 1	Oct. 93	2	4	PIE ECO/TM	Yes Yes	S	S	Credit not yet effective. This is the first supervision mission. Administrative problem (appointment of a new Project Coordinator) due changes in the Ministries; objections raised by local consulting firms the concern the probability of conflict of interest in awarding contracts.
Supervision 2	Jun 95	2	6	SR ECO/TM TE	Yes No	S	S	Cumbersome Government bureaucracy - the Zambia National Tender Board delay in signing the Tender Contracts; Unavailability of Government counterpart funds the 10% required for the consultancies managed by the Roads Department.
Supervision 3	Oct 95	4	10	SOPOF/TM Roads Adviser TP HE	No Yes No No	S	S	No major problem. Major progress has been made since the last supervision mission since NRB took over coordination of project.
Supervision 4	Mar 96	7	5	SOPOF/TM Roads Adviser TP HE ECO x 2 Environmentalist	Yes Yes Yes Yes No x 2 No	S	S	Use of credit proceeds to finance preparation work for ROADSIP as agreed.
Supervision 5	Jul 96	1	5	SOPOF/TM	Yes	S	S	Continued Progress being made in most areas; however lack of counterpart staff for consultants for capacity building was a problem.
Supervision 6	Mar 97	3	5	SOPOF/TM HE ECO	Yes Yes No	S	S	Delays in payment of contractors. Coordinator working without a contract, Follow-up on action plans needed
Supervision 7	Jun 97	2	4	SOPOF/TM TP	Yes No	S	S	Continued problem with lock or quality of counterpart staff
Supervision 8	Oct. 1997	5	5	SOPOF/TM TP HE ECO TA	Yes Yes No No No	S	S	Financial Problems. Diversion of project funds, delays in submitting disbursement applications being addressed however, follow-up on action plans needed
Completion	July 1998	2	10	SOPOF/TM ECO	Yes No	S	S	ICR Mission.

Status:

1 Problem Free HS Highly Satisfactory 2 Satisfactory S Moderate Problems U Unsatisfactory N/A Not available

Key to Supervision:

Economist : ECO
Senior Economist : SR. ECO
Transport Engineer : TE
Senior Operations Officer/Task Manager : SOPOF/TM
Transport Planner : TP
Highway Engineer : HE
PIE : Principal Infrastructure Engineer
Team Assistant : TA

THE REPUBLIC OF ZAMBIA
TRANSPORT ENGINEERING AND TECHNICAL ASSISTANCE PROJECT
IMPLEMENTATION COMPLETION REPORT

PART III: AIDE MEMOIRE

Introduction

1. A World Bank mission visited Zambia over the period July 13-26, 1998 for the purpose of reviewing with Government the preparation of the implementation completion report (ICR) for the Transport Engineering and Technical Assistance Project (TETAP) IDA Credit 2515. The mission comprised Mr. Stephen Brushett (Task Team Leader and Senior Operations Officer) and Ms. Rosemary Cubagee (Consultant).
2. The mission wishes to thank the Zambian Government for courtesies and cooperation extended throughout its stay. The mission wishes to particularly acknowledge the assistance provided by the Ministry of Communications and Transport (MCT), by the agency responsible for project coordination, the National Roads Board (NRB) and by the other implementing ministries, the Ministry of Works and Supply (MWS) and the Ministry of Local Government and Housing (MLGH).
3. The mission acknowledges receipt of the Government's contribution to the ICR in five parts that is: overview report from the TETAP Coordinator, detailed agency reports from MCT, MWS and MLGH, and summary financial information. The mission makes particular note of the fact that meetings were held with the TETAP Technical Committee under the chairmanship of the TETAP Coordinator and with the individual task managers to: review the Government's contribution and to mutually: identify the critical issues raised during project implementation; assess the outcome of the project and its impact on the transport sector; and to determine the key lessons learned from project experience.

Development Objectives and Performance

4. The primary objectives of the project were to design and implement transport policy and institutional reforms necessary to create a sustainable, efficient system for managing roads. This included reforms to (i) put the financing of roads on a sustainable long-term basis and enhance opportunities for private sector participation in the road sector; and (ii) strengthen the Government's capacity to plan and coordinate public expenditures for roads and monitor sector performance. The project also provided for the preparation of the first year of a proposed follow-up road sector investment operation, that is ROADSIP. Key indicators of development impact included: (a) completion of studies and the production of action plans for the implementation of key recommendations which have strong stakeholder support; (b) restructured and strengthened road authorities and agencies which have appropriate tools, trained personnel and adequate financial resources to carry out planning and implementation of road works; and (c) improvement in road maintenance performance measured by the volume of expenditure and the quality of the work carried out.
5. Notwithstanding the results of the more detailed analysis to be included in the ICR, performance against these objectives is judged to have been satisfactory, with some provisos. All project studies have been completed and action plans have been prepared. The degree of internal consultation in the development of recommendations for policy and institutional reform has been uniformly high.

Government capacity to fully and effectively carry out all identified reforms is however limited and there have been delays in following up on agreed action plans in some areas. The mission signaled the particular concerns in the area of effective action to ensure the sustainability of improvements in the highway management system (HMS) and to accelerate the restructuring of the plant and vehicle pools. Commitment to carry out reform however is indicated by the important steps already achieved, notably the establishment of the Road Fund and the National Roads Board, and by the agenda outlined in the Government's letter of sector policy of March 21, 1997. One important element of this agenda is completing the process of policy reform (in particular the process of commercializing the management of the road sector) and of carrying out the concomitant changes to the legislative framework. In both these areas, the Government was not able to agree with all the proposals developed as a result of a project study.

Current Project Status, Issues and Problems

6. Project Completion and Credit Closing Dates. The mission noted that the Bank had agreed to the Government's request for a one year extension of the credit closing date to June 30, 1998. The extension was granted to facilitate completion of a number of ongoing activities. With the exception of the consultancy support to the feeder road program and to the HMS, which will be absorbed by the follow-on Project to Support ROADSIP (Credit 2993), all activities were essentially completed by the end of the first quarter of 1998.

7. Project Management and Accounting. The mission generally commended the exemplary performance of the Government, through the Coordinator, in providing regular reporting on the progress of the project. The mission noted that significant improvements had been obtained in project financial management since the last project review mission in October 1997. Strengthening of NRB accounting staff had facilitated a solution to the problem of delays in the preparation of satisfactory project accounts and related delays in the processing on invoices and submission of disbursement applications. Accounts had now been prepared up to June 30, 1998 and the recovery of all amounts remaining in the Special Account is expected to be realized by end July. The timely preparation of monthly accounts and of withdrawal applications, including Special Account replenishments, had now been achieved over the past six months. Performance on audit was very satisfactory with the report on the fiscal year to December 31, 1997 submitted well within the dates provided in the credit agreement. The mission learned that one qualification on this audit report, concerning the unauthorized disbursement of funds from the Special Account, had now been addressed and the funds had been reinstated. As of June 30, 1998, unaudited total disbursements are put at US\$7.66 million equivalent of which: Part A - US\$1.13 mn; Part B - US\$4.52 mn; and Part C - US\$2.01 mn. While the credit is nominally fully committed, it is anticipated that there will be cancellation of a portion of the credit proceeds.

8. Status of Implementation of Project Components. The following summarizes the status of project components according to the findings of the mission.

PART A

Transport Policy Study

The study was completed, with two addenda to the final report, in April 1997. Certain recommendations of the report are expected to be implemented. i.e. concerning road reclassification. Study output on road financing and management was however not satisfactory and significant progress is still to be made under the Project to Support ROADSIP to address the ongoing concerns about the institutional framework for roads.

Task Force Consultancies

These were successfully completed and were useful inputs to the February 1996 Roads 2001 Workshop and to a stakeholder driven process of preparation of ROADSIP.

Bankable Document

This was successfully completed in July 1996 and formed the basis of an eventual Cabinet decision in February 1997 in support of ROADSIP.

Environmental Management Support

Support to the Environmental Management Committee helped adoption of environmental guidelines of the road sector and of an environmental mitigation plan for ROADSIP. Terms of reference were prepared for an environmental management unit to be housed initially in MWS.

Road Renumbering System

Government has made a decision to adopt SATCC standard road numbering system based on the consultants' report submitted after a long delay. There will be implications for the amendment of the Roads and Road Traffic Act. The new numbering system should be installed on the HMS.

Road Safety Action Plan

The consultant completed the draft road safety action plan which has benefited from the outcome of a stakeholder workshop held early October 1997. The Government has reviewed the report and this has been adopted in final form in January 1998, incorporating also the views of the Bank. The mission noted that clarification of the institutional structure, strengthening of the National Road Safety Council (NRSC) secretariat and the development of a plausible local financing approach were the critical factors for a sustainable strategy for road safety. Funding of the various measures defined for Phase 1 of the plan, whose total cost is put at US\$ 6 mn, is in the process of identification.

PART B

Equipment Management and Maintenance Study

The study was successfully completed and many of its recommendations are incorporated in the Government's letter of sector policy. Follow-up on agreed actions has to be accelerated however.

Construction and Consulting Industry Study

The study was successfully completed and many of its recommendations are incorporated in the Government's letter of sector policy. Follow-up on agreed actions have to be accelerated however together with the effective establishment of the National Construction Council (NCC).

Serenje to Mpika (Section 2) engineering

The process of prequalifying contractors is essentially complete and, with the tender documents ready since March 1998, invitation to bid is imminent. The review of design and technical specification was completed after significant delays. A number of options were studied and additional engineering and economic analyses carried out.

Mpika to Chinsali (Section 3) and Chinsali to Nakonde (Section 4) engineering

The invitation to bid on these two sections was issued June 30, 1998. The review of design and technical specification was completed after significant delays. A number of options were studied and additional engineering and economic analyses carried out.

Accelerated urban road engineering

Design and tender document preparation for Lusaka A and B has been completed. Lusaka A civil works have been carried out under domestic financing, the scope of work having been increased to include certain elements under Lusaka B. Preliminary engineering and design for selected roads have been completed in seven other towns - Ndola, Kitwe, Livingstone, Kabwe, Kasama, Solwezi, Mansa. IDA financing may be provided under the Project to Support ROADSIP for Kitwe and Ndola.

Highway Management System

The Government is continuing to work on an action plan for the sustainability of the HMS including the need for further external support for training and equipment. This is discussed in more detail under the Aide Memoire for the Project to Support ROADSIP as the HMS is an ongoing element of the sector program.

PART C

Feeder Road Support Program

The contract of the consultant extends to December 31, 1998. Support provided has been satisfactory and objectives have generally been met, albeit with some delays. Consideration is now being given to what further support may be necessary to ensure sustainability and further capacity building in MLGH and in local authorities. The urban road inventories are underway under an amendment to the existing contract with the foreign consultant. The Government had requested an extension in the scope of work of the local consultants given that a larger number of feeder roads than originally expected had been identified for survey in the four provinces concerned. This work has now been satisfactorily completed.

Follow-up on Previously Agreed Actions

9. The current status of actions which were agreed at the time of the October 1997 mission are given below:

By the Government

- (a) Submit report on remedial action to be taken to restore project accounting and to replenish the Special Account by November 30. Complete accounting system improvements including contract execution monitoring function by December 31.

Status - Achieved

- (b) Produce provisional accounts to September 30, 1997 and submit to the Bank by November 30. Produce provisional accounts to December 31, 1997 and submit to the Bank by January 31, 1998.

Status - Achieved

- (c) Arrange audit of accounts to December 31, 1997 and submit to the Bank for review by March 31, 1998.

Status - Achieved

- (d) Prepare final revised disbursement forecast for credit proceeds and Government counterpart funds to the completion of the project by December 15. Prepare monthly project/financial status report and withdrawal/replenishment applications until further notice.

Status - Achieved, accounts should be closed and fully reconciled by October 1998

- (e) Prepare request to Bank by November 30 to amend the credit agreement to permit under Part B of the project works to be carried out by the MLGH (accelerated urban road engineering).

Status - Achieved, amendment has been signed

- (f) Submit revised tender documents for Serenje to Mpika for Bank no objection by January 16, 1998.

Status - Achieved, with some delay

- (g) Submit draft tender documents for Mpika to Chinsali and Chinsali to Nakonde engineering to Bank for no objection by January 15, 1998.

Status - Achieved, with some delay

- (h) Submit final version of the road safety action plan and agreed recommendations for follow-up by December 15.

Status - Achieved, final report dated January 1998

- (i) Follow-up on agreed action plan for strengthening operation of HMS.

Status - In progress, further action needed here

By the Bank

- (a) Provide support, *inter alia* through the Resident Mission, to accounting system improvements and to Special Account replenishment.

Status - Ongoing

- (b) Review provisional accounts to September 30, 1997 by December 15. Review provisional accounts to December 31, 1997 by February 15, 1998.

Status - Achieved, financial management specialist in Resident Mission is carrying out this task

- (c) Review audit of accounts to December 31, 1997 by April 15, 1998.

Status - Achieved, as above

- (d) Review request to amend the credit agreement to permit under Part B of the project works to be carried out by the MLGH (accelerated urban road engineering) by December 31.

Status - Achieved

- (e) Review for no objection the revised tender documents for Serenje to Mpika by January 30, 1998.

Status - Achieved, with some delay

- (f) Review for no objection proposals for completion of Mpika to Chinsali and Chinsali to Nakonde engineering by January 30, 1998.

Status - Achieved, with some delay

- (g) Provide comments on final version of road safety action plan and agreed recommendation by January 15, 1998.

Status - Achieved

- (h) Review for no objection by November 15 request for extension of scope of work of local consultants for feeder road survey in four provinces.

Status - Achieved, extended works have now been satisfactorily completed

- (i) Review follow-up on agreed action plan for strengthening operation of HMS.

Status - Ongoing, to be pursued under Project to Support ROADSIP

Agreements and Recommendations

10. The mission agreed with the Government on the following next steps for the project:

By the Government

- (i) Submit final project cost estimate and sources and sources of financing for the project, including Government counterpart funds, by July 31, 1998.
- (ii) Submit withdrawal applications to fully recover the Special Account

balance by July 31, 1998.

- (iii) Submit any other withdrawal applications for direct disbursement by September 1, 1998.
- (iv) Close project accounts and submit for final audit by September 30, 1998.
- (v) Submit final contribution to the ICR, including 10 page overview and executive summary, by September 30, 1998.
- (vi) Furnish comments on Bank's draft ICR documentation by October 31, 1998.

By the Bank

- (i) Complete preparation of draft ICR documentation and submit to government by September 30, 1998.
- (ii) Submit final ICR documentation to Board by December 31, 1998.

Conclusion

11. The mission is the final one for TETAP. The ICR package is to be completed in draft final form by October 31, 1998 and submitted to the Bank's Board no later than December 31, 1998. Project accounts are in the process of being closed, with the final disbursement of funds to take place no later than October 31, 1998.

THE REPUBLIC OF ZAMBIA
TRANSPORT ENGINEERING AND TECHNICAL ASSISTANCE PROJECT
(CREDIT 2515-ZA)

IMPLEMENTATION COMPLETION REPORT

PART IV: BORROWER CONTRIBUTION TO THE ICR

1.0 INTRODUCTION

Transport Engineering and Technical Assistance Project (TETAP) was financed through a Development Credit Agreement signed between the Republic of Zambia and World Bank (IDA) International Development Association on September, 30, 1993 for an amount in various currencies equivalent to 6,200,000 Special Drawing Rates (SDR), to help finance an engineering and technical assistance project for road and transport infrastructure.

2.0 OBJECTIVES

The project had three main objectives. The first was to design and implement transport sector policy reforms, in particular through (a) a program of regulatory and institutional reform to improve the management of the national road network and to put the financing of roads on a sustainable long term basis, and (b) enhanced opportunities for private sector participation in the rehabilitation and maintenance of roads. The second objective was to strengthen the Government's capacity to plan and co-ordinate public expenditures for roads and to monitor sector performance. The third was to carry out the preparatory engineering work for the first year program of a proposed multi year Roads Rehabilitation Project (RRP).

3.0 IMPLEMENTATION

Under this project there were three parts. Part A was on Policy Support under the Ministry of Communications and Transport. Part B was on Institutional Development and Project Operation under the Ministry of Works and Supply and Part C was on Rural roads Development under the Ministry of Local Government and Housing.

The implementation of the Project was delayed until February, 1995. The Committee of Ministers charged the National Roads Board with the responsibility for co-ordinating the implementation of the Project in March, 1995, with Task Managers in each of the three Ministries managing component of projects under respective Ministries.

4.0 PROJECT DESCRIPTION

Project Description as per staff appraisal report is reproduced below:-

4.1 Policy Support

Project description as per staff Appraisal report is reproduced below:-

A national transport Policy study, which will carry out an administrative reclassification of the road network (much of which was ungazetted), work out the detailed implications of establishing an autonomous Highway Authority to take over responsibility for managing the entire road network in Zambia, propose arrangements for road financing, including the possible introduction of an explicit tariff, followed by preparation of a cabinet paper summarising the above arrangements and the subsequent preparation of a draft Highway Authority Bill for consideration by Parliament. US \$ 0.8 million or 9% of total project cost was allocated.

4.2 **Project Preparation**

Detailed engineering of road rehabilitation works will be carried out under the proposed RRP first year program ,based on the five year priority program identified in the recently completed Road Maintenance, Organization and Training Study (RMOT),and the Luangwa bridge feasibility and engineering study. US\$2.4 Million or 27 % of total project cost was allocated.

4.3 **Institutional Development**

Design and implementation of a highway management system ,including reclassification of roads as mentioned above; an equipment management and maintenance study to explore how Road's department equipment could be managed and maintained in an efficient manner; a study of the local consulting and construction industry to establish the range and competence of domestic construction and consulting firms, identify any constraints hampering their development, and prepare an action plan for removing constraints to industry development; establishment of a feeder roads section (FRS) within MLG, which will cover roads managed by Rural District Councils (RDCs),including channelling funds from the development budget and improving generation of local revenues for maintenance of RDC roads; and assistance to the implementing agencies in maintaining the project accounts and to Ministry of Finance (MOF) for auditing the accounts. US\$5.8 Million or 64 % of total project costs was allocated.

Studies included in the project under three areas are detailed in annexes 1,2, and 3 attached.

5.0 ***PROJECT PERFORMANCE***

5.1 **Policy support**

A National Transport policy was carried out with following outcome:

5.1.1 **Road Classification**

Administrative reclassification of road network recommended by the Consultant was accepted by the Government but is yet to be implemented.

5.1.2 **Highway Authority Bill**

Detailed implications of establishing an autonomous Highway Authority (NHA) managing the entire road network in Zambia was worked out by the Consultant through stake holder consultation A Highway Authority Bill was also prepared but the Cabinet did not approve .Instead the Government decided to strengthen the National Roads Board established by Government in 1994 by giving it more functions including those that would have been performed by NHA. By mid term review the Government will assess whether there will be a need to establish the NHA.

5.1.3 **Introduction of an explicit road tariff**

The Government introduced fuel levy in May 1993 as an explicit road tariff which was increased gradually from K10 per litre in 1993 to K 30 per litre in 1994 ,to K40 per litre in 1996 and to 15 % of whole sale price in 1997.

The Government did therefore implement transport sector policy reforms through regulatory and Institutional reforms by setting up of National Roads Board with private sector participation, and strengthening it by vesting additional functions to improve the management of National road network. The Government did put the financing of roads on a sustainable long term basis through the introduction of fuel levy as an explicit tariff dedicated for Maintenance and gradually increasing it with a vision to make it self financing Maintenance. The Government has constituted a Task Force to revise the Road Act Cap 464 which will incorporate the reclassification of roads , Institutional and Financial reforms accepted by the Government .The total cost of the study was US\$0.66M as against allocation of US\$0.8 Million .

5.2 **Project Preparation**

Detailed engineering Study of Great North Road from Kapiri Mposhi to Nakonde under the proposed RRP first year Program was undertaken by four Consultants at a cost of US\$2.12 Million compared to US \$ 2.7 Million allocated.

In addition to the above, one of the most outstanding outcome was the preparation of a ten year Road Sector Investment Programme (ROADSIP). A National Task Force was set up with private and public sector partnership under the leadership of National Roads Board to prepare a Bankable Document to access funding from Road Users, Government, World Bank and Donors for a multi year Road Rehabilitation Program. The Project aimed at addressing all the facets of Road Sector in order to bring about total quality management. Thus an Environmental Management Study, Road Safety Management Study, and Road Numbering and Mapping Study were undertaken as part of project preparation at a cost of US\$ 335,710 bringing the total cost of project preparation to US \$ 2.46 M. These four studies were outside the original project design and were additional studies undertaken within the project cost.

The Government has launched the first five year phase of a ten yearROADSIP with pledged funds to the tune of US\$450 Million from Road Users, Government, World Bank and Donor Community. Government has initiated action to implement the action plan on environmental Management, Road Safety, Road numbering and Mapping System, and also commission civil works in the four sections of the Kapiri Nakonde Road designed under this study. TETAP has therefore been managed to give birth to a longer term, Multi Million Dollar Road Sector Management Programme for greater sustainability.

6.0 ***INSTITUTIONAL DEVELOPMENT***

6.1 **Highway Management System**

Highway Management System was designed and implemented and is now being used as a tool for planning and management of road Maintenance and rehabilitation. The problem of sustainability of the System remains to be addressed.

6.2 **Reclassification, Numbering and Mapping**

Reclassification, numbering and Mapping of road network in Zambia has been undertaken. Revision of the Act is to be undertaken to incorporate the recommended classification and numbering system.

6.3 **Equipment Management and Maintenance Study**

Equipment Management and Maintenance study was completed and the recommendation to sale Road Equipment, gradual phasing out of Force Account restructuring of Roads Department to plan and supervise road works by contract Account with greater involvement of private sector is being undertaken at a slower pace due to the delayed implementation of public service reform Programme.

6.4 **Study on Construction and Consulting Industry**

Study on Construction and Consulting Industry was completed and the recommendations are being implemented. A private sector driven National Council for Construction has been established with public sector partnership. National Construction Policy has been formulated by the Government. Procurement and Tender Procedures have been decentralised and streamlined to be more transparent and accountable. Plant Pools, credit facilities for small scale contractors, training and development of small scale contractors, instituted. Contracts packaged ceiling limits for National Competitive bidding increased and weightage given for local contractors consultants and collaborative ventures to implement recommendations for sustainability.

6.5 **Feeder Roads Section**

Feeder Roads Section established and strengthened in the Ministry of local Government and Housing. Survey of all feeder roads undertaken and inventory published. 40 % of road fund channelled for maintenance of feeder roads on sustainable basis. In addition inventory of urban roads undertaken and engineering design of selected priority roads undertaken in 8 of the 10 Provincial towns. Priority roads in the

Lusaka City designed under TETAP have been rehabilitated and road works in the second and third cities of Zambia designed under the study are to be rehabilitated under ROADSIP before end of the year.

Training and development of staff at MLGH and Councils were not achieved fully and is an ongoing process.

Detailed reports from each of the three implementing Ministries are enclosed as annexures 4, 5, and 6. (See Project File).

6.6 **Financial Performance**

6.6.1 **Project Accounting** - Accounts were audited by Auditor General and External Auditors, Deloitte and Touche on quarterly basis and audit reports submitted. However a sum of US \$ 115,820 was debited to the account through wrong instructions, which the Bank absorbed and credited the account.

6.7 **Bank Performance**

The performance of the World Bank need to be commended for guidance and facilitation provided to move the project forward despite the initial delay of 18 Months and the concomitant problems. Special mention must be made of the Task Manager for the project at World Bank without whose guidance and timely interventions the project could not have succeeded to the extent it did.

6.8 **Borrowers Performance**

Borrowers performance could be evaluated in relation to lessons from previous Bank /IDA involvement. By undertaking reforms in Institutional reforms in the Road Sector through the setting up of National Roads Board; Mobilising additional revenues to support road maintenance and channelling these revenues to various road authorities through the setting up of road fund and National Programme of road Maintenance allocating 40 % to Main Roads, 40 % to rural roads and 20% to urban roads on an annual basis; and by creating more opportunities for the private sector to participate in the design, construction and maintenance of roads through phasing out force account and restructuring of roads department, the Borrower had performed very well and overcome the shortcomings identified in the earlier IDA projects.

6.9 **Sustainability**

The sustainability of the project is assured through the draft Transport Policy, road sector Policy approved by the Government and communicated to the World Bank. Institutional fiscal and legal reforms already undertaken as well as proposed initiatives under way.

7.0 **ACHIEVEMENTS**

7.1 **All Components commissioned**

Although the project was commissioned 18 months late all the components of the project were commissioned and completed.

7.2 **Saving of US \$2.1 million made**

After having commissioned all the 9 components of the Project and 7 additional consultancies the project was managed to bring about a saving of US \$2.1 million despite the delayed start-up of the project.

7.3 **Additional Consultancies commissioned**

About twenty additional consultancies were commissioned to provide the input into the preparation of a Bankable Document to access donor funding to launch a medium term Road Sector Investment Programme (ROADSIP) within the total cost of the project and beyond the original conceptualisation of the Project.

7.4 **Credit Agreement extended to 30 June, 1998**

The Credit was extended by one year up to 30 June, 1998.

7.5 Auditors' Performance

Audit Report on the TETAP Account were submitted by Auditors Deloitte & Touche, on a quarterly basis.

8.0. **OUTCOME**

Outcome of the TETAP Project is given below:-

- 8.1 Transport Sector Policy formulated.
- 8.2 Road Sector Policy promulgated.
- 8.3 Institutional reform undertaken for management of road network.
- 8.4 Institutional responsibilities defined.
- 8.5 Sustainable financing arrangement for maintenance of road network established.
- 8.6 Additional funds mobilised to finance road sector.
- 8.7 Highway Management System installed for planning the management of road network.
- 8.8 Reforms initiated in the Equipment Management System.
- 8.9 Intervention undertaken to build local contractor and consulting capacity.
- 8.10 Force Accounts discouraged and Contract Accounts adopted to encourage private sector participation in road construction maintenance and repair activities.
- 8.11 Road Numbering and Mapping System installed.
- 8.12 Action Plan to reduce the rate of accidents in the country and improve road safety formulated.
- 8.13 Environment Management guidelines formulated and a unit established to monitor and carry out environmental impact assessment in the rehabilitation network.
- 8.14 Community Road Project launched to maintain community roads through community participation and cost sharing.
- 8.15 Feeder Road Section established in the Ministry of Local Government and Housing and functions defined.
- 8.16 Survey of all feeder roads in the country carried out and data base established.
- 8.17 Ten year programme for rehabilitation of roads launched with annual maintenance programme of maintainable roads as the engine of road sector investment in the country.
- 8.18 Detailed Engineering of Kapiri/Nakonde road rehabilitation works to be implemented in the first year of a proposed multi-year road rehabilitation project completed and procurement of civil works completed.
- 8.19 First year feeder roads rehabilitation and accessibility improvement programme launched.
- 8.20 Engineering of road rehabilitation works to be implemented under accelerated Urban Road Rehabilitation Programme in 8 of ten Provincial towns.
- 8.21 Civil works completed in Lusaka. Procurement of civil works in two other towns Ndola & Kitwe underway.
- 8.22 Luangwa Bridge strengthened
- 8.23 Training interventions funded under TETAP to enhance the delivery capability of stakeholder ministries.

8.24 Manual prepared for the various facets of Road Sector Investment Programme.

8.25 Local capacity built through the following initiatives:-

8.25.1 Local consulting firms contracted to work with foreign firms in most of the studies commissioned.

8.25.2 Counterpart staff allocated to most of the Consultancies undertaken.

8.25.3 Vehicles, equipment and furniture acquired under TETAP Studies remained with government Departments and Ministries to enhance delivery capacity and capability.

9.0 *LESSONS LEARNT*

The following lessons were learnt from this project:-

1. Project Management and Coordination skill is essential to make strategic and timely decisions at different levels, each member of the coordinating team playing his/her part effectively.
2. The success of a Consultancy study does not depend on the profile of a firm or on the Curriculum vitae of Consultants. These can be deceiving and hence the need to manage the process to ensure delivery.
3. Process Consultancy is a preferred approach to traditional report presentation approach. Reports have no value unless they are implemented to achieve results. Many reports tend to be shelved without being implemented due to several reasons thus wasting resources. It is therefore necessary that wherever feasible, process consultancy approach should be adopted to ensure recommendations are implemented and capacity built to manage the process.
4. Success of a project is judged not by number of reports presented and consultancies paid for but by the outcome of recommendations on the quality of life of people through improved management of the component of a sector.
5. Sustainability of a project is key to success. Local personnel should be developed on the Job doing the Job to acquire necessary knowledge, skills, attitudes and also providing the tools and motivation required to perform.
6. Pairing of local personnel and counterpart staff with consultants is essential to build the capacity of local firms and personnel.
7. Vehicles, computers, office equipment, office accommodation and furniture provided in a study should help to build the capacity and delivery capability of clients in the long term and not of the consultants only.
8. Supervision, guidance and continuous dialogue and feed back from the client is essential for the consultant to deliver to expectations of stakeholders.
9. Follow-up of implementation with well thought-out implementation plan is essential.
10. Internal control measures should be instituted and reviewed periodically to avoid any fraud, with quarterly internal and external Auditing.
11. Performance of local Banks should be closely monitored to avoid failures on the part of Banks.
12. Effective communication required between the key players to make timely decisions for efficient management of the Project.

10.0. **CONCLUSION**

TETAP Project has achieved not only the set objectives but beyond by providing almost all the input required to launch a multi-million dollar 10 year Road Sector Investment Programme.

The Project in brief helped to facilitate the formulation of policy, institutional, financial, legal and management information system framework for the management of road sector on a sound foundation. The Project provided the data base and the manuals required for efficient and effective management of the road Sector. Above all, private sector participation contribution and partnership in the road sector management was triggered through TETAP. The World Bank publication entitled 'Findings' in an article on promoting policy reforms for effective transport services in COMESA countries reads as follows:

Quote

"Seven of the area countries have established Roads Boards, with varying functions and success. But none have gained a status and success comparable to the National Roads Board in Zambia which has taken a strong lead in improving management and creating a sense of ownership favourable to increasing funding and improving performance."

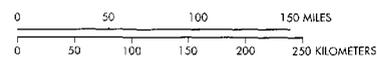
End of Quote

The achievements of the Zambian Road Sector has been due to the manner in which TETAP Project was managed.

ZAMBIA TRANSPORT ENGINEERING AND TECHNICAL ASSISTANCE PROJECT HIGHWAY NETWORK

ENGINEERING CARRIED OUT UNDER
PROJECT CR 2515 - ZA:

- MAIN ROAD
- NDOLA URBAN ROADS
- BRIDGE
- SELECTED CITIES
- ⊙ PROVINCE CAPITALS
- ⊕ NATIONAL CAPITAL
- TRUNK AND MAIN ROADS
- RAILROADS
- RIVERS
- SWAMPS
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES



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