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Review of the Zambia Road Sector Programme

Final Report

Henning Lauridsen
Ulf Brudefors
Tyson Ngoma

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Summary:
The current NORAD supported Road Sector Programme in Zambia focuses on institutional strengthening of Roads Department and support to the department's training school. Programme effectiveness appears low at this stage. Some outputs have started to take effect but impacts are limited. Sustainability is low with the exception of the training school's labour-based section. Further support is needed and should comprise two elements, institutional and human resource development and possible support to upgrading of National Park roads. A programme for institutional development of road administration and support to a new road sector training institute is outlined. The current institutional framework is weak. Conditions in respect of a new framework for the sector and for training are therefore introduced.

Tittel: Review of the Zambia road sector programme.

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Sammendrag:
Det NORAD støttede veisektorprogram i Zambia fokuserer på institusjonsbygging i Roads Department og den tilknyttede skole for sektoropplæring. Programmet har for tiden lav måloppnåelse. Noen resultater er oppnådd, men virkningene er begrensede. Programmets bærekraftighet er generelt lav. Skolens seksjon for arbeidsintensive metoder for veibygging vurderes dog som bærekraftig. Videre støtte til sektoren er nødvendig. Den bør omfatte institusjonell utvikling og opplæring. I tillegg vil støtte til oppgradering av veier i nasjonalparker kunne være aktuelt. Det nye programmets komponenter for institusjonell støtte til veietaten og til et nytt institutt for sektoropplæring er utformet i detalj. Eksisterende institusjonelle rammer er svake. Gjennomføringen av programmet bør derfor gjøres betinget av reformer i veisektoren og nye institusjonelle rammer for opplæring.

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Preface

This Final Report has been prepared for NORAD – Norwegian Agency for Development Cooperation under an agreement for a Prospective Review and Final Assessment of the ZAM 0053 Road Sector Programme. For the purpose of the Review, the Institute of Transport Economics has been co-operating with Hifab International, Stockholm and Mr. T. Ngoma, an independent consultant, Lusaka.

NORAD has supported the road sector in Zambia since the 1980's. The current Road Sector Programme (RSP) is a continuation of previous Norwegian support to the sector. The programme agreement, which was signed in September 1994, included a budget of NOK 63 million NOK. Two subsequent addenda to the agreement have since increased this amount with NOK 21.5 million.

The Road Sector Programme is focused on institutional strengthening of the Roads Department and developing the department's Training School. The programme is part of the Zambia Road Sector Investment Programme (ROADSIP), which was launched in 1997, and has since provided the overall framework for road sector development in Zambia.

This report is primarily based on information collected during a mission to Zambia in November/December 2000. A Review Team comprising Mr. Henning Lauridsen, Team Leader (Institute of Transport Economics), Mr. Ulf Brudefors (Hifab International) and Mr. Tyson Ngoma has prepared it. Ms. Bjørg Mannsverk has assisted with the final editing of the report.

We wish to acknowledge the co-operation of the Ministry of Works and Supply and the Roads Department in Zambia and of NORAD. Many people in the ministry, the department and other parts of the public sector as well as in the private sector were met during the mission to Zambia. We appreciate the time spent and efforts made and acknowledge their contribution to the review.

Oslo, January 2001
INSTITUTE OF TRANSPORT ECONOMICS

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Abbreviations, Acronyms and Exchange Rates

ADT	Annual Daily Traffic
DANIDA	Danish International Development Agency
DFID	Department for International Co-operation, UK (previously ODA)
CBU	Copperbelt University, Kitwe
CMU	Contract Management Unit (in Roads Department)
DC	District Council
DISS	Department of Infrastructure and Support Services, Ministry of Local Government and Housing
DNPW	Department of National Parks and Wildlife
ECA	United Nations Economic Commission for Africa
EDF	European Development Fund
EEOA	Economic Expansion in Outlaying Areas
EU	European Union
FINIDA	Finish International Development Agency
FRP	Feeder Road Programme (Eastern Province)
FY	Financial Year
GRZ	The Government of Zambia
IBRD	World Bank
IDA	International Development Agency
IFAD	International Fund for Agricultural Development
ILO	International Labour Organisation
ILO/ASIST	Advisory Support Information Services and Training Programme
IMT	Intermediate Means of Transport
K	Zambian Kwacha
LFA	Logical Framework Approach
LOGOSP	Local Government Support Programme
MAFF	Ministry of Agriculture, Food and Fisheries
MCT	Ministry of Communications and Transport
MLGH	Ministry of Local Government and Housing
MOFED	Ministry of Finance and Economic Development
MWS	Ministry of Works and Supply
NCC	National Council of Construction
NDP	National Development Programme
NECD	National Economic Commission for Development
NOK	Norwegian Kroner
NORAD	Norwegian Agency for Development Cooperation
NPRA	Norwegian Public Roads Administration
NRB	National Roads Board
NRSC	National Road Safety Council
ODA	Overseas Development Agency, UK (now DFID)

PIP	Public Investment Programme
PMC	Project Management Committee
PMS	Pavement Management System
PRE	Provincial Road Engineer (Roads Department)
PSRP	Public Sector Reform Programme
PSV	Public service vehicles
RE	Road Engineer
RD	Roads Department, Ministry of Works and Supply
RDTS	Roads Department Training School
RMI	Road Management Initiative (ECA and World Bank)
ROADSIP	Road Sector Investment Programme
RSP	Road Sector Programme (ZAM 053 as supported by NORAD)
RTTP	Rural Travel and Transport Project (ECA and World Bank)
SADC	Southern African Developing Community
SAP	Structural Adjustment Programme
SATCC	Southern Africa Transport and Communications Commission
SIDA	Swedish International Development Cooperation Agency
SSATP	Sub-saharan Africa Transport programme (ECA and World Bank)
TA	Technical Adviser
TETAP	Transport Engineering and Technical Assistance Project
TEVET	Technical Education Vocational Entrepreneurship Training
TEVETA	Technical Education Vocational Entrepreneurship Training Authority
TRL	Transport Research Laboratory, UK
UNZA	University of Zambia, Lusaka
WB	World Bank
ZACCI	Zambia Association of Chamber of Commerce and Industries
ZAMPIP	Zambia Agricultural Marketing and Processing Infrastructure Project
ZMK	Zambian Kwacha

Exchange Rates in December each Year

1994: NOK 1 = Kwasha 100
1995: NOK 1 = Kwasha 151
1996: NOK 1 = Kwasha 200
1997: NOK 1 = Kwasha 180
2000: NOK 1 = Kwasha 390

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Summary:

Review of the Zambia Road Sector Programme

This report has been prepared for NORAD – Norwegian Agency for Development Cooperation under an agreement for a Prospective Review and Final Assessment of the ZAM 0053 Road Sector Programme. The aim of the review has been to identify which initiatives have been successful and which aspects of the programme need modification and, further, to provide recommendations on future Norwegian support to the road sector.

The Institute of Transport Economics has been co-operating with Hifab International, Stockholm and Mr. T. Ngoma, an independent consultant, Lusaka for the purpose of the review.

The Current Road Sector Programme

The agreement on the current ZAM 0053 Road Sector Programme (RSP) was signed in September 1994. The programme is focused on institutional strengthening. It was initially planned for four years but has been extended twice. Two addenda to the agreement have been signed and it is anticipated that a third will be required shortly to provide bridging funding until a new agreement can enter into force.

The initial purpose of the programme was very ambitious but has recently been redefined. The programme's aim is now to be an integral part of the implementation of the Road Sector Investment Programme (ROADSIP) and the Public Service Reform Programme. The ultimate goal is to contribute to a more lean and efficient road sector, in order to optimise the utilisation of resources made available for road works.

The content of the programme has changed underway. It now includes two components. The first, Institutional and Human Resource Development comprises support to Roads Department Headquarters. The other, Roads Department Training School and Labour-based Techniques comprises support to the school and its labour-based section.

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Main Conclusions of the Review

The review of achievements focuses on the last two years, that is the bridging period funded by the two addenda to the initial programme agreement. The review shows weaknesses in respect of the current institutional framework for the road sector in Zambia. These are to some extent reflected in progress, achievements and impacts of the programme.

Road Sector Reform

The current institutional set-up for the sector does not provide an adequate framework for the new Road Sector Programme. Reform of the sector policy and the institutional framework is therefore urgently required. Zambia is lagging behind other countries in the region. Many SADC member states, among them three neighbouring countries have already introduced the necessary new policy and implemented the corresponding institutional framework, including a road agency.

The assessment made by the ROADSIP Mid-term Review Mission in December 2000 clearly revealed that much remains to be done in respect of sector reform in Zambia. This situation creates serious uncertainties for further support to the road sector from the co-operating partners. It also raises serious questions about the possibilities for successful implementation of the planned NORAD supported programme.

Programme Effectiveness and Sustainability

Generally, the goals and objectives of the programme are relevant. It appears, however, that the definition of goals, objectives and expected outputs for the programme is not too clear leading to inconsistencies. Formulations in this respect have been changed frequently and such changes make it very difficult to manage the programme properly. In addition, too ambitious formulations are common, which makes it difficult to assess performance.

None of the components can be said to have achieved much in comparison with the expected outputs. Only a third of the planned outputs have been achieved or partly achieved as yet. Two thirds have not been achieved. Programme effectiveness, therefore, appears very low. It should, however, be taken into account that the level of ambition seems to have been high, and probably to a large extent unrealistically high, at the time of defining goals, purposes and expected outputs.

Some outputs have started to take effect, for instance the Strategic Corporate Plan for Roads Department for which implementation has now started. The same applies to the upgrading of the Roads Department Training School and the activities of the labour-based section of the school. Compared to the expected outputs for the whole programme, however, impacts have been limited so far.

Sustainability has been very limited and is regarded low for the first component, Institutional and Human Resource Development. Sustainability is also limited for the other component, Roads Department Training School and Labour-based Techniques, as a whole. The school's labour-based section is, however, considered sustainable now. The school as such is not sustainable yet and will hardly become sustainable within its current institutional framework.

Financial Management and Progress

Financial management of the grant has not been optimal. Roads Department does not employ any accounting staff but has, in accordance with Government practise, accountants seconded by the Ministry of Finance and Economic Development. This is not a good solution for the department as competent staff is easily transferred to other assignments.

Auditing has also been a problem. The Auditor General's office works too slow to meet the requirements of the programme agreement. A private auditor is therefore used. The auditing of the 1998 accounts, which took place during the review mission, showed serious deficiencies in the accounts as prepared by the accountants seconded to Roads Department.

The budget for 1999 and 2000 was around NOK 12.7 million for the first component. Of this, NOK 7.5 million or 59 per cent had been spent up to end June 2000. Expenditure for 1999 corresponded well to the budget for that year, whereas expenditure for 2000 is somewhat lower than planned for most budget lines.

For the training school component, the NORAD budget for 1999 and 2000 was around NOK 18.1 million. Of this, NOK 11.3 million or 62 per cent had been spent up to end June 2000. Expenditure is lower than planned for the whole period. In 1999, expenditure only reached 70 per cent of the budget, whereas expenditure for the first half of 2000 was a little more than half of the budget for the year. Major reasons for this are that expenditure for investment in equipment and for technical courses and short courses was almost nil. The Government's budget for the component for 1999 and 2000 was set at NOK 5.7 million. So far, these funds have not been released.

Institutional Co-operation

Institutional co-operation between Roads Department and the Norwegian Public Roads Administration and the International Labour Organisation (ILO) respectively are important elements of the programme.

Institutional co-operation between the department and the Norwegian counterpart has not worked well. It is difficult to assess precisely why. A main reason may be that no proper framework was established from the beginning. Other reasons may be frequent changes of contact personnel and insufficient contact and communication between the two parties. Co-operation has remained at a very low level the last few years.

The institutional co-operation between the Roads Department Training School and the ILO has worked well. This has contributed to the achievements of the labour-based section of the school.

Recommendations on Further Support to the Road Sector

The review has revealed that there is a substantial need for further support to the road sector in Zambia. This includes support to institutional development of the road administration and support to strengthening the local construction and consulting industry. Development of sustainable systems for maintenance and addressing the maintenance and rehabilitation backlog are also important areas for further support.

The main recommendations presented below are based on the framework provided by NORAD's Mandate for Dialogue. The mandate proposes a budget of NOK 100 million for the new four years Road Sector Programme.

Programme Contents

It is recommended that the new programme comprise two main elements. The first is Institutional and Human Resource Development. The other is Possible Support to Upgrading of National Park Roads.

Institutional and Human Resource Development

There are many areas within institutional and human resource development that need support. The recommendations of the review mission are concentrated to two areas designated institutional development and road sector training.

Support to institutional development would comprise institution building in Roads Department and its successor with focus on the following five sub-components:

- Institutional and organisational development of the road administration
- Road maintenance
- Control of vehicle overloading
- Development of technical competence and quality control
- Financial management and human resource development

Road maintenance falls under the Provincial Roads Engineers and support in this field must therefore be directed at their offices. Support to all other fields will be directed towards Roads Department Headquarters.

The contents of the planned institutional reforms are not known at present. Five institutional development sub-components have been identified at this stage. When the contents of the reforms become clear, emphasis may have to be shifted somewhat among them and support to other elements may be needed.

The cost of support to institutional development has been estimated at NOK 36 million, of which NOK 27 million ha been allocated to the five sub-components identified. In order to provide for flexibility in regard to needs, which may arise during the reform process, NOK 9 million or 25 per cent of the overall budget for institutional development has been left unallocated.

It is recommended that support to human resource development comprise road sector training. Such support will be a continuation of the current support to the Roads Department Training School, including the labour-based section. It is, however, time to broaden the scope of training offered at the school to respond to the huge training need of the private and public sectors. It is recommended that the school be converted into a road sector institute organised as a trust. The cost of operating the new institute is estimated at NOK 48 million for the first four years, of which the support from the programme would be NOK 24 million. This is based on the assumption that half of the operating costs for the institute during the four years period is covered by the programme whereas the other half is covered by fees paid for courses.

Below follows an overview of the sub-components and the associated costs for the new Road Sector Programme.

Table 1: Cost of the Institutional and Human Resource Component by Sub-component

Sub-component	**Estimated Cost NOK million**
1 Institutional and Organisational Development	5
2 Road Maintenance	7
3 Control of Vehicle Overloading	5
4 Development of Technical Competence	6
5 Development of Financial Management & HRD Skills	4
- Unallocated Institutional Development	9
Sub-total Institutional Development	*36*
7 Road Sector Training	24
Total	**60**

The total cost of the component is NOK 60 millions, that is 60 per cent of the financial framework proposed by NORAD for the new programme.

Possible Support to Upgrading of National Park Roads

It seems too early to propose detailed recommendations on the possible support to upgrading of National Park roads. There is a need for support to such roads and tourist roads have been included as a component in a draft proposal for the second phase of ROADSIP. When assessing this component in more detail, support to access roads as well as to roads within the parks should be considered. The assessment should not only look at the possible road projects, but also include the parks in a wider context, taking into account among other matters their standard of wildlife management and the market potential.

Implementation Issues

The institutional framework for the new Road Sector Programme is weak. Delays in implementing the necessary reform of the road sector policy and institutional framework and delays in deciding on a new framework for the training school create uncertainties.

The concerns expressed by the recent ROADSIP Joint Mid-term Review Mission, which included NORAD, comprise road sector policy, institutional reform and various other matters. They reflect issues that are of serious concern also for the new Road Sector Programme.

Certain conditions should therefore be introduced. Timeframes for the work and clear deadlines for decisions to be made by Government should be established for the new programme. Financing should only be released when such deadlines are met. Other international partners will most likely need to introduce similar conditions. It is, therefore, advisable to use the Donor Forum as co-ordinator in this respect.

The proposed future training activities can only succeed and become sustainable if the institutional framework for the Roads Department Training School is changed. Support by NORAD should, therefore, be subject to that necessary efforts are made to make the institution self-sustaining in its operations. It is recommended that a short feasibility study is carried out urgently and that specific conditions be met before NORAD embarks upon further support to the school. Key conditions in this respect are that the school is transformed into a trust with a board of trustees that reflects the market and that a professional manager is appointed and other staff employed under new conditions of service.

1 Introduction

The roads sector is currently one of the important public sectors in Zambia. Support to the sector has been one of the key elements in the Norwegian development assistance to Zambia.

Road Sector Support

NORAD assistance to the road sector in Zambia has been going on since the 1980's. Since 1994, the total support has amounted to NOK 332 mill of which NOK 247 million to road investment and maintenance. The current Road Sector Programme (RSP) was initiated in 1994 with a budget of NOK 63 million NOK. Two subsequent addenda to the agreement have since added NOK 21.5 million to the initial budget.

Since the Road Sector Investment Programme (ROADSIP) was launched in 1997, this programme has provided an important overall frame for road sector development in Zambia. The programme was initially co-ordinated by the World Bank and supported by a number of bilateral donors and other multi-lateral institutions. During the last year, other donors have taken a strong interest in ROADSIP and the Mid-term Review in December 2000 was carried out jointly by a team from Denmark, the European Union, Norway and the World Bank.

ZAM 0053 – The Current Road Sector Programme

The agreement on the current ZAM 0053 Road Sector Programme was signed in September 1994. The programme is focused on institutional strengthening. It was initially planned for four years but was extended due to various reasons as described in Chapter 2 below. Two addenda to the agreement were signed in 2000 and it is anticipated that a third will be required shortly to provide bridging funding until a new agreement can enter into force.

The initial purpose of the programme was very ambitious and the immediate objective was that the condition of roads and ancillary physical infrastructure (be) improved on a national sustainable basis. More recently, a redefinition has taken place. The programme's aim is now to be an integral part of the implementation of ROADSIP and the Public Service Reform Programme, and the ultimate goal is to contribute to a more lean and efficient road sector in order to optimise the utilisation of resources made available for road works.

The contents of the programme has changed over time. It now consists of two main components: (i) Institutional Reform and Development and (ii) Roads Department Training School including Labour-based Techniques.

The Review

The purpose for this Prospective Review and Final Assessment of the Road Sector Programme is to seek to identify which initiatives have been successful and which aspects of the programme need modification. The Review shall also provide recommendations as to future Norwegian support to the roads sector in line with Zambian transport sector policies in general and as an integrated part of ROADSIP in particular. The Terms of Reference also cover participation in the ROADSIP Joint Donor Review Mission for two of the team members. The latter mission took place in December 2000 immediately after the presentation of the preliminary findings and recommendations of the RSP mission (Inception Report) to the Annual Meeting between Zambia and Norway 4 December 2000. The Terms of Reference are attached as Annex 1.

NORAD has entered into contracts with the Institute of Transport Economics – Norwegian Centre for Transport Research (TØI), Hifab International and Mr. T. Ngoma for the purpose of the Review.

The Report

The report is primarily based on information collected during a mission to Zambia in November/December 2000.

Subsequent to this introduction, a presentation of the contents and objectives of the ZAM 0053 Road Sector Programme follows in Chapter 2. The Road Sector Investment Programme, the Public Sector Reform Process the and current roads institutional reform process, which will provide key frameworks for the programme, are outlined in Chapter 3. The two RSP components are described in detail in Chapter 4 with a view to objectives, progress, achievements and sustainability. Chapter 5 gives an overview of effectiveness, impacts and sustainability of the programme. Chapter 6 describes the experience gained with institutional co-operation, while Chapter 7 discusses the need for further support to the sector and outlines the programme. Chapter 8 describes in more detail the contents of the proposed institutional development component and, finally, Chapter 9 present the main conclusions and recommendations.

The review mission collected a substantial amount of documentation that may be of relevance for programme implementation. Parts of this information relates to the ROADSIP Mid-term Review and other parts relate to the regional efforts to harmonise road sector policy, legislation and subsidiary regulations made by the Southern African Development Community (SADC). We consider some of this documentation particularly important for further development, design and implementation of the RSP and have therefore annexed it to the report to facilitate further work on the programme.

Against the above background, there are 11 annexes to the report. The Terms of Reference are attached as Annex 1. A list of people met during the Mid-term Review follows as Annex 2. A complete list of references to reports and documents collected and applied for the Review appears in Annex 3. Annexes 4

and 5 present the Statement and the Aide Memoire from the recent ROADSIP Mid-term Review. The provisions of the SADC Protocol on road infrastructure policy and institutional reform appear in Annex 6, whereas key provisions of the Tanzania National Roads Agency Establishment Order appear in Annex 7. A report on overload control as prepared by the ROADSIP Mid-term Mission has been attached as Annex 8 and the provisions of the SADC Protocol for overload control appear as Annex 9. The main elements of the SADC overload control regime are described in Annex 10 and, finally, an indicutive budget for road training appears as Annex 11.

2 The ZAM 0053 Road Sector Programme

This chapter provides an overview of the development and contents of the Road Sector Programme (RSP) since the early 1990s. The description is divided into two periods. The first includes the preparations for and the implementation of the initial four years programme as agreed in 1994, whereas the other period is characterised by bridging funding until a new agreement can enter into force.

2.1 The Period up to 1998

A road sector study and a planning workshop in Livingstone in 1991 as funded by NORAD was the starting point for preparing the programme document for the Road Sector Programme. The workshop concluded that the core problem to be addressed was the poor condition of roads and ancillary physical infrastructure. High vehicle operating costs, reduced access, increased travel time and increased accidents were identified as the most critical impacts of the core problem.

A project review was undertaken in 1992. It examined the complexity of the problems and concluded that some were due to deficiencies within Roads Department (RD) while others were external factors affecting the department. Several alternative organisational models for a future road administration were discussed. NORAD was finally requested to concentrate its support to four components: Institutional Reform and Development, Human Resource Development, Labour-based Techniques and Emergency Resealing.

The draft programme document was presented to NORAD in April 1993 and appraised two months later. This provided the basis for the programme document presented in November the same year (Roads Department, 1993). The preparation of the final document was somewhat delayed due to continued discussions between Zambia and Norway concerning terms and conditions for support to Zambia in general and the road sector in particular. The outstanding issues were sorted out in the country negotiations in September and the following two agreements were signed in September 1994:

- ZAM 0053 concerning support to institutional reform and development in Roads Department. This included Institutional Reform and Development, Human Resource Development and Labour-based Techniques
- ZAM 0059 concerning support to Emergency Resealing and Repair of Paved Roads

Development Objective and Immediate Objective

The development objective to which the programme was expected to contribute was defined in the following way:

> Road travel and transport accomplished more rapidly, safely, cheaply and reliably in support of the social and economic development of Zambia and its people.

This development objective was comprehensive and rather ambitious aiming at improving both vehicle operating costs, road travel and transport access, travel time and road accidents in the road sector.

The immediate objective of the programme was defined as follows:

> The condition of roads and ancillary physical infrastructure improved on a national sustainable basis

Also the immediate objective appears to be quite ambitious.

Outputs

The expected outputs of the programme's four components were defined in the following way:

1. *Institutional development*: Effectiveness of the road administration improved
2. *Human resource development:* Roads Department managerial, technical and administrative skills increased
3. *Labour-based techniques*. Labour-based maintenance techniques adopted where appropriate
4. *Emergency resealing*: Pavement integrity preserved on prioritised road links

Programme Review in 1997

The programme was reviewed in mid-1997 for the period from 1994 to that time. The Review Mission assessed the possibilities for continued support and provided recommendations on continuation. The review recommended continuation of the programme subject to a considerable number of modifications for the various components (Brudefors et al., 1997). The main recommendations are summarised in Table 2.1 below.

In addition to the four components, the experience of the institutional co-operation arrangement between Roads Department and the Norwegian Public Roads Administration (NPRA), which started in 1995, was also evaluated. The review was fairly critical in respect of the results of this co-operation up to 1997 and presented a number of detailed recommendations on operational matters aimed at making the arrangement more effective.

Table 2.1 Recommendation of the First Review Mission 1997

Component 1: Institutional Development

- Continue NORAD institutional support to the road sector in general
- A restructuring strategy and a needs assessment study should be carried out
- National Roads Board should also be supported
- Materials Laboratory should be required to aim at more self-reliance

Component 2: Human Resource Development

- Divide and merge component into the redefined components 1 and 3

Component 3: Labour-based Techniques

- Develop an enabling environment parallel/prior to the training programme
- Establish a semi-autonomous training institution with German funding as a basis
- Co-operate and co-ordinate training syllabuses with other institutions
- Upgrade training facilities at Roads Department Training School
- Establish accredited courses through the National Education Council
- Continue NORAD support provided recommendations adhered to

Component 4: Emergency Resealing and Repair

- Support to road maintenance and road resealing should be continued
- Support to resealing units should be discontinued
- Resealing Unit in Southern Province to be kept as national training unit

Twinning (Institutional Co-operation) between Roads Department and Norwegian Public Roads Department

- A structured plan to document the need for and benefit of twinning should be prepared
- A strategy for achieving objectives and outputs should be developed

Extension of the Programme

Subsequent to the review, the programme was extended to the end of 1998 without changing its components, as the funds had not been utilised by the end of 1997.

An appraisal mission was undertaken in August 1998. It recommended future Norwegian support to the road sector.

A Logical Framework Approach (LFA) planning workshop was held in September 1998 at Kafue Gorge Regional Training Centre. The workshop was attended by participants from Ministry of Works and Supply (MWS), Roads Department Ministry of Communications and Transport (MCT), Department of Infrastructure and Support Services (DISS) of the Ministry of Local Government and Housing (MLGH), Ministry of Finance and Economic Development (MFED), National Roads Board (NRB), ILO, World Bank, the Japanese Embassy and NORAD.

Based on the results of the appraisal and the workshop, a draft program document on the second phase (RSP II) was finalised and submitted to NORAD in December 1998

2.2 The Period 1999 to 2000

The new programme document and the new agreement could not be completed in time for starting the second phase in January 1999. A bridging period was therefore needed until the agreement would enter into force and Addendum No. 1 was therefore signed in April 1999. It covered the six months, January to June 1999, deemed necessary for completing the programme document and entering into a new agreement between Zambia and Norway for the period 1999 to 2002.

The Road Sector Programme II document 1999 –2002 (Roads Department, 1999a) was completed in April 1999. Some of the recommendations made by the 1997 review mission were followed. For example, the Human Resource Development component was split and merged into the redefined components 1 and 3, which then became Institutional and Human Resource Development, respectively Roads Department Training School. Furthermore, the Emergency Resealing component was taken out of the programme. Three new components, namely Axle Load Control, Road Safety and Information Dissemination were added. The total programme cost was estimated at approximately NOK 70 million.

Further, the Roads Department decided to follow the latest guidelines from NORAD as regards application of the Logical Framework Approach technique. In brief, that lead to the following changes in terminology:

- "The Development Objective" was changed to "Goal"
- "The Immediate Objective" was changed to "Purpose".

At this time, a decision made in 1998 at the mid-term meeting between Zambia and Norway to improve reporting was also effected. The format of the semi- and annual reports changed accordingly from 1999. New budget lines were also established to better correspond with the Government of Zambia regulations.

The new programme as finally agreed in 1999 contained the five components as described above. The components and their purpose as defined by the programme document are listed in Table 2.2 below.

Table 2.2 Components of the Second Phase of the Programme as proposed by the Programme Document of April 1999

Institutional and Human Resource Development with the purpose of achieving:
- A corporate strategic plan for Roads Department completed and implementation commenced
- Human Resource Development Plan completed and implemention commenced
- Contract Management Units operational in 4 selected provinces
- A well structured cooperation with NPRA aiming at improved road sector management with emphazise on Central Materials Laboratory

Roads Department Training School with the purpose of achieving:
- Roads Department Training School upgraded and developed to cater for the much needed capacity building in the public and private civil engineering/road sector, through training

Axle Load Control with the purpose of achieving:
- Improved operational efficiency and effectiveness of existing and new weighbridges by curbing evasion of regulations regarding axle load control

Road Safety with the purpose of:
- Improving Road Safety through creating a basis for reducing road accidents by having an updated and well functioning accident data system by 2002. Road safety engineering working as an integrated part of design, rehabilitation and maintenance

Information Dissemination with the purpose of achieving:
- Transparency in implementation of road sector policy through information dissemination

In September 1999, unexpected events led to further delays. A decision was made at NORAD's headquarters in Norway to abandon the transport sector in Zambia due to a shift in focus of the overall aid programme to Zambia. It came as a surprise to most parties involved in the aid programme, and it created confusion in Zambia as the local office had just completed an exercise where road stakeholders had been asked to submit their proposal for further NORAD support.

The above decision, however, was formally reverted in March 2000 after the country strategy negotiations in Lusaka between Zambia and Norway. In the meantime a new Addendum had been signed in December 1999 for the period July 1999 to December 2000 to provide bridging funding until the new programme could be in place. NORAD continued to focus on institution building in the road sector and is still one of the major contributors in this area. It was decided to only approve funds for ongoing activities until the new agreement had been signed.

A task group was formed in 2000 to work out how the old components from the first phase could be revised considering the short period of the extended contract. This group of Roads Department and NORAD staff adjusted and reworded components 1 and 3 of the 1994 programme into two components: (A) Institutional and Human Resource Development and (B) Roads Department

Training School according to the structure of the 1999 programme document. A decision was made by both parties to accept this proposal. The reporting and the budget lines were also to follow the new structure. The overall goal of the proposal is described below

Overall Goal as defined in 2000

The programme's aim as defined in the proposal accepted by Roads Department and NORAD in 2000 is to be an integral part of the implementation of ROADSIP and the Public Service Reform Programme (PSRP). The ultimate goal is:

> To contribute to a more lean and efficient road sector in order to optimise the utilisation of resources made available for road works.

The project documents also introduced goals for each component. The goals and objectives of Component A appear in Table 2.3 below.

Table 2.3 Goals and Purposes (Objectives) of Component A: Institutional and Human Resource Development

Goals

- Effectively implement Government's Policy for improvement of road standards in Zambia through planning, maintenance and rehabilitation
- Utilise resources allocated to Roads Department (RD) at a high standard of managerial capacity, capability and efficiency

Purposes as defined initially

1. A corporate strategic plan for RD completed and implementation commenced
2. Human Resource Development Plan completed and implementation commenced
3. Contract Management Units operational
4. A well-structured co-operation with Norwegian Public Roads Administration aiming at improved road sector management with emphasise on Central Materials Laboratory

Purposes as adjusted 2000

- Develop and implement a Corporate Strategy with the purpose to enable the Department to maintain and improve its important function as the Executive Agent in service for the maintenance and rehabilitation of the Main Road Network in Zambia
- Norwegian Public Roads Administration provide advisory service to RD upon request

The above goals have been set under the auspices of and in response to the new Public Sector Policy. Component A had initially four purposes to cover the following fields:

- Technical assistant and support
- Institutional reform, including the provinces
- Human resource development
- Institutional co-operation with the Norwegian Public Roads Administration

However, these purposes were changed over time as found appropriate and the initial purposes 1 to 3 have subsequently been grouped into one as they were closely related. The latest definitions are also reflected in corresponding activities.

Roads Department did not want the twinning arrangement with NPRA to include the Central Materials Laboratory and the last purpose was, therefore, changed into a more general statement about providing assistance to the department. However, the latest development in this regard is a proposal from NPRA to develop a contract management manual, and the following is included in the latest programme documentation.

> The development of a Contract Management Manual or rather a guideline in contract management is a presupposition for the professional work of the Contract Management Units (CMU) and will therefore be developed in parallel with the organisational reforms, the establishment of the CMU's, the recruitment of personnel and the training of the same. The Contract Management Guideline will be tailor-made to the needs of the CMU's, the Roads Department Training School and the other stakeholders.

This proposal had, however, not been properly discussed with RD prior to the Annual General Meeting in December 2000. The matter is therefore still pending.

Goals were also introduced for Component B: Roads Department Training School. The goals and objective of this component appear in Table 2.4.

Table 2.4 Goals and Purpose (Objective) of Component B: Roads Department Training School

Goals

- Improved infrastructure in the country, through training of personnel involved in rehabilitation and maintenance of roads, as well as other civil work.
- Public road administration more competent and efficient
- Greater participation of private companies in the road sector
- Employment improved

Purpose

- Roads Department Training School upgraded and developed to cater for the much needed capacity building in the public and private civil engineering/road sector, through training

Component B has been designed to cover the following support to the school:

- Physical infrastructure and equipment (supplement to RSP I)
- Development of institution and staff
- Development of programmes and courses
- Technical assistance and support
- Continued support to training in labour-based techniques

Recent Development

Roads Department in conjunction with NORAD organised a workshop at Kafue Gorge Regional Training Centre in April 2000 concerning the transition of the Roads Department Training School into a semi-autonomous institution. The objectives of the workshop were to assess the current situation at the school and

discuss options to move forward. A plan was prepared and a workshop report distributed among the road stakeholders.

It became formally clear only in September 2000 that there would be a second phase of the programme. A Memorandum of understanding to that effect was signed between the Governments of Zambia and Norway 5 September. NORAD will hereafter focus its aid programme to Zambia on four sectors: Good governance, Basic education, Roads and Environmental Management (Wildlife).

There is a need for a third addendum to the agreement of the first phase of the programme to cover the period until a new agreement is signed. All accounts of previous activities will now be closed and only the two accounts for each of the present components A and B will be operational until then.

3 The Road Sector Investment Programme and the Reform Process in Zambia

The current road sector reform process and the Road Sector Investment Programme, which also provides the overall framework for the NORAD supported Road Sector programme, can be traced back to the early 1990's. After initiation of the Structural Adjustment Programme and as an important component of this, a Public Sector Reform Programme (PSRP) was launched in 1992. The PRSP covered all public sectors among them the road sector.

Parallel to this development, the UN Economic Commission for Africa (ECA) and the World Bank had started a road sector policy development programme, the Road Management Initiative (RMI), which at that stage was focused at Sub-Saharan Africa. A major RMI seminar was arranged in Lusaka in 1993. This event spearheaded the establishment of the Road Fund and the National Roads Board (NRB), which again were important stepping-stones towards the new programme.

3.1 The Road Sector Investment Programme (ROADSIP)

The recommendations of the 1993 RMI seminar in Lusaka provided a framework for a major new road sector development programme in Zambia. It took time to prepare the programme, which was launched in 1997 as the Road Sector Investment Programme (ROADSIP). Initially, the programme was funded by an IDA credit of US$ 70 million.

Goal and Objectives

The Staff Appraisal Report (World Bank, 1997) states that the "overriding goal of the Government for the roads sector is 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." ROADSIP, which is expected over a 10-year time horizon to address this goal, has eight other main objectives of which the following three are of particular concern to the Road Sector Programme:

- Bringing a core network of 33,500 km into maintainable conditions
- Bringing the condition of the road network to at least 50 per cent good and about 10 per cent poor for all types of road
- Strengthening the technical and managerial capacity of road authorities

The IDA funded project should address the first time slice of the programme for the period 1997-2002. Five specific objectives were defined for this period. They address the following issues:

- Reform of road sector policy and institutional framework, including legislation for roads and road traffic management and strengthening and refocusing of sector organisations
- Strengthening of road sector financing aimed at ensuring the sustainability of road maintenance.
- Strengthening of the local construction and consulting industry
- Addressing the road maintenance and rehabilitation backlog
- Establishing a community road management pilot programme in at least three districts

A specific target was set for road financing; namely that road user charges should be cover 70 per cent of periodic and routine maintenance cost of the core network by 2002. Similarly, a target was set in respect of road maintenance and rehabilitation. It specified that the proportion of roads in good condition should increase to about 45 per cent of main roads and to about 15 per cent of feeder roads.

The need for reform of the road sector policy and institutional framework was a particular concern during the preparation of the programme. The key elements of the road sector strategy to be followed were therefore set out in a letter from the Minister of Economic Development and Finance to the President of the World Bank in March 1997, that is prior to the finalisation of the bank's Staff Appraisal Report.

The Mid-term Review

A Mid-term Review was scheduled for mid 2000. Prior to this, a number of donors had met and established a Donor Forum aimed at facilitating programme co-ordination among the key donors. A joint team comprising Denmark, European Union, Norway and World Bank carried out the review, which took place in December 2000. Prior to the review, the Government prepared an extensive status report (Ministry of Communications and Transport et al., 2000). The report revealed that achievement of some critical objectives and targets was lagging much behind, among them the sector strategy and legislation, institutional reform and strengthening, fuel levy remittances, and thereby funding for road maintenance.

The Mid-term Review Mission expressed serious concern in respect of targeted achievements not being met as planned at the Road Sector Investment Programme Workshop held in Lusaka 6-7 December 2000. A statement was issued on behalf of the Joint Mission, see Annex 4. The statement emphasised that many important undertakings by Government, planned to be completed by or before the mid-term review, had yet to be accomplished including the following six points:

- Reviewing the opportunity for rationalising the sector institutional framework;
- Securing the institutional and legal basis of the National Roads Board and the Road Fund;
- Carrying out a reform of the Roads and Road Traffic Act:
- Streamlining the payment of fuel levy payments to the Road Fund;
- Diversifying the sources of funding for the Road Fund; and
- Giving highest priority to routine and periodical maintenance in the allocation of Road Fund revenues.

The problems were discussed in the Aide Memoire of the Joint Mission, see Annex 5. In its concluding meeting with the Permanent Secretaries for the ROADSIP Steering Committee, the mission stressed the importance of the partnership between Government, local stakeholders and the donor community in delivering the necessary resources and support for the achievement of the objectives of ROADSIP. The mission was of the view that a new compact, meaning an understanding on policy reform and the means to attain it, was urgently needed to put the partnership back on a firm footing, and thus ensure that the co-operating partners would be in a position to consider further assistance to the programme.

The new compact would set out the medium term vision of the policy and institutional framework for the road sector, with the supporting financial and legislative measures. It should also include a plan of action to ensure that the deficiencies highlighted during the mission were addressed in the short term. The mission proposed the eventual agreement on the compact by end of March 2001. The main concern of the mission was to receive comprehensive and viable proposals in relation to four key issues: Institutional reform, sector financing, maintenance priority and axle load control.

The mission proposed nine immediate actions related to key issues that could be taken to consolidate the partnership and the exchange of views and information as well as to start the process of addressing the issues raised. Among these, the following seven are of particular concern to the Road Sector Programme

- *Legislative Reform:* Drafts of proposed revisions to the legislation contained in the Roads and Road Traffic Act have been prepared. In view of their linkages to policy and institutional reform, sharing of these drafts with the mission for information and possible comment and suggestion would enhance the spirit of partnership.

- *National Roads Board:* Because of the likely delay beyond end March 2001 of the passage of the comprehensive legislation required to implement the transport policy, the mission urgently wishes to hear from Government that action is being taken to safeguard the continued operation and representatives of NRB beyond the end of its currently mandated term of office.
- *Road Financing:* The mission heard much support for: consolidation of all road sector financing under a single (ROADSIP) programme and direct transfer of fuel levy proceeds to the Road Fund. The mission would like to see what specific measures towards these goals are envisaged under the 2001 Budget.
- *Axle Load Control:* Immediate action can and should be taken under the present legal and institutional setting to improve performance. An action plan should be developed. It should be prepared by and subsequently monitored by a small Task Force.
- *Strengthening Institutional Capacities:* Pending institutional reform and any modification of the roles and responsibilities of particular institutions, the mission notes serious capacity constraints in contract management. This is so in Roads Department but more particularly in Department of Infrastructure and Support Services, which is a concern because of the centrality of feeder road provision for poverty reduction in the rural areas. This makes it difficult to sustain current projects, let alone contemplate new ones. An action plan to deal with this problem in the short term is urgently needed.
- *Stakeholder Input to Reform:* Stakeholder input is critical to the success of road sector reform. The secretariat for the Mid-term Review Workshop produced a set of resolutions, which it is intended to pass on to Cabinet as a reflection of the stakeholders' view. It would be preferable – if the resolutions are to have real impact – that they be edited for consistency of content and a time frame and areas of responsibility be added.
- *Donor co-ordination:* The mission recognised scope for improvement on both sides and suggested that the Donor Forum meet as needed with MCT and NRB to improve co-ordination, streamline reporting procedures, and provide better and more timely information on donor involvement, actual and potential.

The mission finally proposed that there be regular contact between Government and the co-operating partners to ensure that the issues raised be addressed and the action plan be monitored. It was proposed that these contacts be between the Donor Forum and the Permanent Secretary for Communications and Transport.

3.2 The Public Sector Reform Programme (PSRP)

The new Public Sector Reform Programme (PSRP) was launched in 1992 as one of the key components of the Structural Adjustment Programme. The aim of the programme was to improve Government's capacity and capability of analysing and implementing national policies and programmes, to effectively manage public

expenditure and to make the public service more efficient and responsive to the needs of the people.

According to the initial PSRP schedule, all government ministries and departments should have been evaluated and restructured by 1995. The process, however, was delayed and programme implementation only started in 1997.

The Government has through the reform programme established guidelines for the restructuring of the public sector. Significant elements are the opening of the economy for private sector participation and the downsizing of the number of employees in public services.

During the last few years the PSRP has led to significant changes in the roads sector. The Roads Department has been turned into a purchaser of service and not a service provider as in the past. This implies intensive use of contractors for road works and consultants for planning, design and supervision of contractors. Only a minor part of road maintenance confined to emergency situations is to be carried out by Roads Department force account in the provinces. Otherwise the role of the Roads Department will be management of roads.

Against the above background, Roads Department has experienced a dramatic reduction in the number of employees. The total number of employees is now down to a total of 168 civil servants for Headquarter and all provinces together. All employees were laid off and could apply for the new positions. Those best qualified for the positions within the new organisation were re-employed. There are still a considerable number of vacancies at Headquarters and in the provinces. The number of vacancies was around 50 or 30 per cent of the establishment by December 2000. It is anticipated, probably optimistically, that most positions at Headquarters will be filled during 2001. The current severe shortage of qualified staff creates a very difficult and untenable situation for road management in Zambia.

3.3 Roads Institutional Reform

The current road sector policy and institutional set-up in Zambia does not provide an adequate framework for the next phase of the Road Sector Programme (RSP II). Reform of the sector policy and the institutional framework is therefore urgently required. This has been recognised by the Government and the co-operating partners since the mid-1990s. Although some progress has occurred, for instance through the Public Sector Reform Programme, much remains to be achieved. This raises serious questions about the possibilities for successful implementation of the NORAD supported programme and the sustainability of the support to the sector. We therefore need a closer look at what has happened during the last few years and the current situation, in order to have sufficient background for assessing how and whether RSP II should be launched.

The Need for Reform

As described in Section 3.1 above, the need for road sector reform was clearly recognised during the period of preparing the Road Sector Investment Programme (ROADSIP) up to 1997. To clarify its intentions, the Government made a clear commitment in this respect through a letter from the Minister of Economic Development and Finance in March 1997.

This letter outlined a policy framework for the transport sector in general and for the road sector in particular. Strengthening of the road sector institutional framework was designated as a key strategy. The letter specified strengthening of the National Roads Board (NRB) and restructuring of the two key road administrations as short-term measures. It was further specified that by mid-term review of ROADSIP, an assessment would be made of the opportunities to rationalise these three organisations by vesting in a single commercially oriented semi-autonomous NRB, full responsibility for road sector management with Government retaining the overall sector policy and planning functions. This assessment is still pending.

Parallel to the preparation of ROADSIP, Zambia participated as a member state of Southern African Development Community (SADC) in the development of the Protocol on Transport, Communications and Meteorology in the SADC Region, which defines a range of common policies for the region. The Protocol was signed by the Heads of State and Government in Maseru in August 1996 and entered into force in 1998 after ratification by Parliament in the required number of the Member States. Zambia's Parliament has subsequently ratified the Protocol, which legally is an instrument under the SADC Treaty.

The Protocol provides the background for harmonisation of transport policies within the region. The provisions of relevance for road infrastructure policy and institutional reform appear in Chapter 4, Road Infrastructure, see Annex 6. It is here, among other policy issues, stated that member states agree to develop a harmonised regional road infrastructure policy aimed at introducing commercial management practices to foster institutional, economic and technical efficiency in their national roads sectors. Further, that member states agree to establish autonomous accountable national roads authorities which are representative of the public and private sector and which, among other tasks, have clearly defined responsibilities for overseeing, regulating and managing roads on a commercial basis.

Experience from the Region and Models for Reform

The provisions of the SADC Protocol have subsequently been operationalised through model legislation, and a number of model acts have been prepared for the various sub-sectors. The SADC Roads Act, which applies to the management and financing of all roads, lays down an institutional framework for the sector and principles for road management and financing in accordance with the Protocol policy. It includes an explanatory memorandum describing the policy and

principles and a complete legal text. The Model Roads Act aims at harmonising road sector policies and institutional reform in the regional and at facilitating their implementation in the member states.

Most of the SADC member states are well ahead of Zambia in respect of reform of road sector policy and institutional framework. Among them, three of the neighbouring countries have introduced new road administration based on the SADC and the Road Management Initiative (RMI) models, which have the same main features. Malawi went through the reform process a few years ago and Namibia and Tanzania completed their processes last year by introducing new road authorities.

Institutional reform of the road sector in the region typically addresses the same or very similar problems. The core problem has usually been road deterioration caused by lack of maintenance. The root cause of the problem has hinged more on inadequate institutional and financial arrangements, than on technical deficiencies. Inadequate funding of road maintenance, poor working environment in government, bureaucratic procurement procedures have been identified as some of the contributory factors to the non-performance. Institutional reform was therefore seen as the only realistic remedy to the problem.

The reform process typically addresses the four basic issues of ownership, financing, responsibility and management. This, of necessity, leads to major changes in the way things have traditionally been done, and as to be expected, there is usually resistance to such a move. The key elements of the reforms are usually:

- Adoption of *commercial management practices* to foster institutional, economic and technical efficiency, amongst others by introducing competition in undertaking any road-related activity and adopting a preference for the contracting-out of all types of road construction and maintenance activities.
- Establishing *accountable and autonomous roads authorities* with public and private sector participation in key decision-making and the ability to source expertise outside civil service restrictions.
- Implementing *cohesive and transparent road funding policies* aimed at progressive full cost recovery to ensure an adequate flow of funds to roads.
- *Dedicating revenues* derived from roads to the provision, operation and maintenance of roads.
- Identifying *sustainable funding sources* to ensure a regular flow of funds to road funds.

The reform process in other countries in the region has lead to establishment of a Road Fund and an Executive Roads Agency. The Ministry responsible for roads will then be relieved from the implementation functions currently undertaken by roads departments. The workload of the Ministry may be further reduced following reform of other departments within its area of responsibility. Subsequent to implementation of these reforms, the Ministry's central functions will be concentrated to:

- Policy formulation, strategic planning and donor co-ordination;
- Monitoring, regulatory functions and the setting of standards and specifications;
- Strategic management of Executive Agencies under the Ministry;
- Human resources development, administration and personnel management.

The above description of problems to be addressed and the road sector reform is based on a recent review of the road sector reform in Tanzania (Lauridsen et al., 2000). It is, however, highly similar to that of most other countries in the region.

Experience from neighbouring countries provides good examples, which could facilitate the reform process in Zambia. Annex 7 presents some of the main features of the Tanzania National Roads Agency (TANROADS) Establishment Order as gazetted in August 2000. The Order, which provided for the establishing of the agency last year for an interim period under the Executive Agencies Act, will be substituted by a new Roads Act in April 2001 based on the SADC model and TANROADS will be fully operational by July 2001.

The Current Situation in Zambia

The assessment made during the Mid-term Review of ROADSIP in December 2000 clearly revealed that much remains to be done in respect of sector reform. The Government has started a process of developing a new transport policy. Various drafts have been presented to and discussed by Cabinet. So far, however, no decisions have been made. Parallel to this, a process of drafting new legislation has started and a draft final report on the new Roads and Road Traffic Act has been prepared. The policy process and the drafting of new legislation has been done by Government through an internal process and the draft prepared have not been shared by the co-operating partners nor this review mission. General indications are, however, that much remains to be done and agreed on, and no firm time schedules for completion of the processes are available.

This situation creates serious uncertainties for further support to the road sector from the co-operating partners. This has been expressed clearly by the ROADSIP Joint Mid-term Review Mission and the mission has proposed a range of immediate actions to alleviate the situation.

The above comparison with other countries in the region clearly indicates that Zambia at this stage is lagging behind other SADC member states in road sector reform. On the other hand, SADC and the RMI have prepared operational models for reform and three neighbouring countries have already introduced the necessary new policy and implemented the corresponding new institutional frameworks including a road agency. This means that good models and relevant experience are easily available to the Government of Zambia, if it wants to speed up the reform process in regard of road sector policy and institutional framework.

4 Review of Road Sector Programme Components

This chapter reviews the work carried out and the results for each of the current two components: (A) Institutional and Human Resource Development and (B) Road Training School and Labour-based Techniques. The review is focused on the period 1999 to 2000, that is the activity carried out for bridging funding provided under two addenda to the initial agreement.

This period has been of short duration, and the situation has been somewhat unclear underway. Initially, the intention was to provide bridging funding until a new agreement could be entered into, see Chapter 2. Then, it was decided to discontinue Norwegian support to the road sector. This decision was reverted afterwards and preparations started for a second programme phase and a new agreement in this respect. The turbulent and uncertain situation has, reasonably enough, had an impact on planning and programming as well as the outcome of the programme. This has to be taken into consideration when reviewing the plans and activities carried out during the course of these interim arrangements.

4.1 Component A: Institutional and Human Resource Development

Management of the main road network in Zambia is a task that requires an effective organisation. Considerable organisational changes have occurred during the last few years and more are to follow. Institutional and human resource development is therefore a highly important area at this stage.

4.1.1 Background and Problems to be addressed

Roads Department (RD) has since long back faced shortages of staff. This is a problem dating back to independence when the department started using consultants and contractors for the execution of some works. RD had at that stage many international aid organisations offering their services in the form of technical assistance by providing gap-fillers for long periods of time, and the department never managed to attract enough staff to fill all vacant positions.

At a later stage, some donors pulled out their supporting staff in the road sector. RD was once again faced with too few staff to manage its responsibilities as the main road agency in the country. Therefore technical assistance staff was required to fill the most severe gaps while senior management staff would undergo further advanced training. The period of gap filling by donor supported expatriate staff has been longer than envisaged.

The Public Service reform Programme (PSRP) was introduced in 1992, but not implemented until 1997 due to the economic implications of lying off Government staff. Furthermore, implementation was slow and the leaner current RD organisation is not fully staffed as yet as the Public Service Commission has been very slow in appointing staff. Accordingly, the department is still suffering from a large number of vacancies. However, there is a glimmer of hope that the staffing situation will improve following the recruitment exercise carried out during the last months of 2000.

The uncertainty about the new reform process within the road sector has inevitably affected the process of engaging staff to the new organisation.

4.1.2 Description of the Component

The goal set reflected the intentions of the Public Service Reform Programme (PSRP) and Component A was designed to assist Roads Department in finding its new role in the new Government structure. The component was divided into the following five sub-components:

- Technical assistance
- Institution building
- Human resource development
- Equipment and expenses
- Institutional co-operation between RD and NPRA."

The goals, purposes, sub-components and expected outputs are summarised in Table 4.1 below.

Ten expected outputs were defined in 1999, based on the RSP II document submitted in April that year. These outputs were revised and reduced to seven the following year.

Generally, outputs are vague and not well formulated. "Facilitating the process of developing RD" can hardly be seen as a well-defined output against which results can be measured. Similarly, "General support from NPRA as asked for by RD" is another output difficult to quantify. Some of the outputs as defined in 1999 were expressed as activities rather than outputs. This has partly been rectified in the documentation available for 2000.

It is understood that the expected outputs as defined over the four-year period were kept despite the much shorter duration of the two bridging periods. Obviously, the level of ambition of the expected output should have been revisited and reduced to a more realistic level. It seems therefore as somewhat artificial to measure achievements against expected outputs, which do not appear realistic.

Table 4.1 Goals, Purposes, Sub-components and expected Output of Component A: Institutional and Human Resource Development as per Programme Documents 1999 and 2000

Goals	• Effectively implement Government's Policy for improvement of road standards in Zambia through planning, maintenance and rehabilitation • Utilise resources allocated to RD at a high standard of managerial capacity, capability and efficiency		
Purposes	• Develop and implement a Corporate Strategy with the purpose to enable the Department to maintain and improve its important function as the Executive Agent in service for the maintenance and rehabilitation of the Main Road Network in Zambia • NPRA provide advisory service to RD upon request		
Sub-components	• Technical assistance • Institution building • Human resource development • Equipment and expenses • Institutional co-operation between RD and NPRA		
	Expected Output		
1999 Document		**2000 Document**	**Review Mission Interpretation**
TA facilitating the process of developing RD		Facilitating the process of developing RD	The process of developing RD facilitated
Strategic Corporate Plan		Strategic Corporate Plan developed	Strategic Corporate Plan for RD developed
Implementation of SCP		Implementation of SCP	Strategic Corporate Plan for RD implemented
CMU in the provinces fully operational		CMU operational in all provinces	CMU operational in all provinces
HRDP for RD completed		HRDP for RD completed	HRDP for RD completed
Implementation of HRDP RD		Implementation of HRDP RD	HRDP for RD implemented
General support from NPRA as asked for by RD		General support from NPRA as asked for by RD	RD supported by NPRA as requested
Produce the manual for Institutional Co-operation RD/NPRA			
Action Plan on support to CML			
Implementation of Action Plan with priority to adjust CML's role to the needs			

4.1.3 Budget and Expenditure

Component A has five budget lines corresponding to the five sub-components. The budgeted amounts for each component and the actual expenditure for 1999 and 2000 appear in Table 4.2 below. For year 2000, expenditure is so far only reported for the first six months.

Table 4.2 Budget and Expenditure 1999 to 2000 of Component A: Institutional and Human Resource Development (NOK thousand)

	Year	1999		2000		Total		
Vote	Item	Budget	Expen.	Budget	Expen*	Budget	Expen*	Exp.%
11	Technical Assistance**	3,285	2,496	1,280	1,125	4,565	3,621	48%
12	Institution Building	100	0	530	172	630	172	2%
13	Human Resource Development	428	609	2,450	459	2,878	1,068	14%
14	Equipment and Expenses	675	1,006	2,640	792	3,315	1,798	24%
15	Institutional Co-operation	500	671	800	197	1,300	868	12%
	Total	4,988	4,782	7,700	2,745	12,688	7,527	100%

* Expenditure up to end June 2000 only
** Expenditure of vote 11 has been estimated

It appears that expenditures in 1999 corresponded reasonably well to the budget, whereas expenditures for 2000 seem to be lagging somewhat behind.

The table shows that technical assistance accounts for almost half of the expenditure so far for this component, and that not much has been spent on institution building. Human resource development and institutional co-operation with NPRA accounts for 14 respectively 12 per cent of expenditure, whereas purchase of vehicles and computers accounts for 24 per cent of the total.

This may, however, be somewhat misleading, as the costs of various activities have been shared between budget lines for various reasons. For example, costs of developing the Strategic Corporate Plan (SCP) for Roads Department and curriculum development were allocated to votes 11 and 14, while they perhaps ought to have been allocated to vote 12. Accordingly, the distribution of expenditure does not necessarily give a correct picture of for which component the money actually was spent.

4.1.4 Progress, Achievements and Impacts

Expected Output: The Process of developing RD facilitated

This can hardly be regarded as a separate output as technical assistance to RD is incorporated in most of the other activities as well, such as developing and implementing the Strategic Corporate plan and the Human Resource Development Plan. The expected output cannot be quantified and achievements measured against it in a meaningful way. Achievements in this respect are, however, where relevant commented upon under the other expected outputs below.

Expected Output: Strategic Corporate Plan for RD developed

A work group was established in 1999 and the Strategic Corporate Plan, covering the period of 2000 to 2005, was completed and distributed to relevant stakeholders in June 2000. The expected output has been achieved.

Expected Output: Strategic Corporate Plan for Roads Department implemented

The implementation of this plan has just started as the document was distributed in June 2000.

Some of the department's staff was awarded scholarships at the Copperbelt University (CBU) and the University of Zambia (UNZA), but that was according to earlier plans. The expected output has not been achieved.

Expected Output: CMU operational in all Provinces

The work carried out in respect of implementing the Contract Management Units (CMU) has focused on the training aspect starting with development of curriculum and syllabus for contract management training courses at two levels.

A one-week awareness course was conducted five times during the period from June 1999 to May 2000, with about 130 people from RD and DISS to attend this basic course in contract management. The training was conducted in close co-operation with RD, RDTS, CBU and DISS.

The second level of training to be provided is a comprehensive contract management course. Roads Department developed this in close co-operation with the Curriculum Development Unit at TEVETA, the Contracting and Consulting Industry of Zambia, CBU, UNZA, Evelyn Hone College, Zesco, DISS, NRB, PRE's Offices and RDTS. Staff from the Curriculum Development Unit facilitated the curriculum and syllabus development, and the course is recognised by TEVETA as a national diploma course in contract management. The first course is expected to start in January 2001 and be completed by June the same year (600 hours). RD and DISS are expected to send 15 participants each to this course. The course will be repeated until the demand is met.

The implementation of the new structure of the Provincial Roads Engineer's (PRE) offices is about to start as the SCP document has been distributed. The organisational set-up is finalised, and it is now a matter of having the trained staff in place.

Six vehicles were purchased and distributed to the provinces in 2000.

To make the CMU operational in all provinces is a huge task even taking account of an implementation period of four years. There are still many vacant posts in the CMUs and the units are not functioning well due to serious shortage of staff. Furthermore, the task of making the CMUs operational is dependent on many external factors.

The expected output has not been achieved. It appears too ambitious and should have been adjusted and better defined in quantitative terms.

Expected Output: Human Resource Development Plan (HRDP) for RD completed

This output has a linkage to the Strategic Corporate Plan as it in one of the areas covered by the plan. Work on the HRDP could therefore only commence upon completion of the SCP. A work group was established in 1999 to follow the work done by the consultant carrying out the Training Needs Assessment study for RDTS. As a spin-off effect from this exercise the consultant developed a detailed training programme for RD. However, the consultant disappeared without completing the assignment and was nowhere to be found. A draft final report was left behind, but the study was never completed, and the training of RD staff was also shelved. The expected output has not been achieved, but a new HRD-consultant was employed in October under EU project to complete this task before the end of the first quarter of 2001.

Expected Output: Human Resource Development Plan for RD implemented

The HRDP is currently being developed and it will take some time before it is implemented. Therefore, expected output has not been achieved.

Some RD staff has attended training courses in human resource management, computer and secretarial work according to earlier plans.

Expected Output: RD supported by NPRA as requested

It is difficult to assess whether this expected output really has been achieved, as it is very vague. However, it seems that not much co-operation between Roads Department and the Norwegian Public Roads Administration (NPRA) has taken place during the last couple of years. Efforts were made in 1999 to compile a manual for institutional co-operation, but it was never completed.

NPRA proposed continued support to the Central Material Laboratory, and started preparing an action plan, but RD shelved it due to changed priorities. NPRA supported RD in their preparations of planning the two components "Axle load control" and "Road Safety" for the RSP II document.

There were no inputs from NPRA in 2000 except for a proposal to compile an equipment-based contract management manual.

4.1.5 Sustainability

It has been difficult to implement the planned activities as the Public Service Commission was very late with appointing new staff to Roads Department. This severely affected the daily work of the technical assistants who had to fill the gap wherever needed. There are still a large number of positions not filled due to slow and cumbersome procedures of employing people through the Commission. The department has also approved further postgraduate studies for many of its senior staff, and there have simply not been counterparts to find for expatriate staff.

It cannot be considered sustainable to provide technical assistance staff as "gap fillers" in an organisation that is seriously understaffed. Without such support, however, the department would have been even worse off than it is today. The technical assistance has, however, contributed to keep the department operational for a while, although the method used could be characterised as artificial respiration.

The Strategic Corporate Plan is now in place, but still needs to be implemented. The HRDP is being developed, and the contract management courses have been developed.

The roles of technical assistance staff should have been more clearly defined at the outset and quantitative objectives should have been defined. Transfer of knowledge to counterparts is an essential function when TA staff is allocated to a department. Unfortunately, the staff has had very limited opportunities to work with counterparts, which usually were not assigned as planned. This has diminished the impacts considerably. It has therefore been extremely difficult to fulfil the objectives of this Institutional and Human Resource Development Component and its sustainability must be regarded as low.

4.1.6 Future Needs for Support

There is clearly a need for continued to support to Roads Department, in particular in the transition period of the road sector reform, but also in the interim phase of implementing the new road organisation.

Despite the Public Service Reform Programme, which started implementation in 1997, Roads Department still experience very serious shortages in technical and managerial capacity at Headquarters as well as at the provincial level. In fact, the PSRP restructuring exercise has created some additional problems for the department, for instance that experienced staff without university degrees has been retrenched leaving less experienced personnel in positions they are not ready to take the responsibility for. The new organisation has now been put in place but is not fully operational. Available staff has been fitted into the restructured organisation but too many posts are still to be filled.

The managerial capacity in the provinces is particularly weak, and there is a need for improving the operational capacity of the PRE's offices to enable them to efficiently cope with the new role of contracting out road works. The PRE's organisations must improve their capacity in contract management.

There is a huge backlog of periodic maintenance and there seems to be lack of capacity for emergency work. This is mainly a funding problem, but relates also to the organisational set-up.

In the new situation of contracting out road works, the functions of the Central Materials Laboratory will be very important, as there will be more focus on quality control and management. However, the capacity of the laboratory is very limited today. First of all the laboratory is not adequately staffed, but there is also a need to revamp its equipment. Furthermore, there is a need to established decentralised field laboratories in the provinces.

4.2 Component B: Roads Department Training School and Labour-based Techniques

This component has two sub-components, namely Roads Department Training School (RDTS) and the Labour-based Training at RDTS. The school was established in 1964 as an institution for in-house training of Roads Department staff for employment under the force account regime. The school has since then been the main source of training technicians and lower ranks staff for road works in various fields to meet the needs of the department.

The Labour-Based Road Improvement and Maintenance Project (ZAM 0026) was initiated in 1987 as a component of NORAD's support to an integrated approach for support to the Northern Province and District Councils. The project was executed under the Ministry of Local Government and Housing in the Northern Province and managed by ILO.

4.2.1 Background and Problems to be addressed

Roads Department Training School

RDTS has provided courses in basic highway engineering certificate, road construction and maintenance, vehicle and plant maintenance and management courses, etc. In 1984, the school introduced the Road Ganger's Course, which was the first course available to candidates from outside the department. It was an 18 months practical and theoretical training designed for Grade 12 school leavers who were then offered employment at Provincial Road Engineer's offices within the Roads Department. Over 200 road superintendents, foremen and supervisors were trained during the period of 1984 to 1995.

Labour-based Training at RDTS

The initial Labour-Based Road Improvement and Maintenance Project located in Kasama in the Northern Province comprised training in rehabilitation and

maintenance of low volume rural feeder roads. The training and fieldwork were successful, but the District Councils were inadequately staffed and their capacity to adopt the project was unsatisfactory. Furthermore, the training in Northern Province had reached a saturated level at that time.
In 1994, the labour-based training in Kasama was transferred to Lusaka and integrated with RDTS. The labour-based section of the school has since then trained about 680 people in labour-based techniques.

4.2.2 Description of the Component

Component B: Roads Department Training School and Labour-based Techniques has been divided into the following five sub-components:

- Physical infrastructure and equipment, supplemented to RSP I
- Development of institution and staff
- Development of programmes and courses
- Technical assistance and support
- Continued support to training in labour-based techniques

The goals, purposes, sub-components and expected outputs are summarised in Table 4.3 below.

Table 4.3 Goals, Purposes, Sub-components and expected Output of Component B: Roads Department Training School and Labour-based Techniques

Goals	• Improved infrastructure in the country, through training of personnel involved in rehabilitation and maintenance of roads. • Public road administration more competent and efficient. • Greater participation of private companies in the road sector. • Employment improved
Purpose	• Roads Department Training School upgraded and developed to cater for the much-needed capacity building in the public and private civil engineering/road sector through training.
Sub-components	• Physical infrastructure and equipment, supplemented to RSP I • Development of institution and staff • Development of programmes and courses • Technical Assistance and support • Continued support to training in labour-based techniques
Expected Output	• RDTS physically upgraded, and adequately equipped • RDTS's organisation developed to meet future needs • Adequate staff in place to run RDTS • RDTS's training programme in place • Technicians course established • Short course programme established • Labour-based course run, expanded and consolidated • Training production units established • RDTS's reputation as a professional partner in the road sector development enhanced

Although, the expected outputs have been somewhat reworded, they have basically remained the same over the bridging period.

4.2.3 Budget and Expenditure

Component B has nine budget lines. The budgeted amounts for each component and the actual expenditure for 1999 and 2000 appear in Table 4.4 below. For year 2000, expenditure is so far only reported for the first six months.

When the extended Road Sector Programme came to an end in 1998 the new agreement was still to be prepared. This affected to some degree the component. Funds for constructing the buildings were available from the budget of the first phase of the programme, but very little money was provided for training activities. The funds provided during the period of the two addenda, which are controlled by RD Headquarters, will be exhausted by the end of year 2000. The funds received represent less than half of what the school normally would need for training purposes.

Table 4.4 Budget and Expenditure 1999 to 2000 of Component B: Roads Department Training School and Labour-based Techniques (NOK thousand)

	Year	1999 NORAD		2000 NORAD		Total NORAD			GRZ
Vote	Item	Budg.	Exp.	Budg.	Exp.*	Budget	Exp.*	Exp. (%)	Total Budg.
20	General	2,290	1,955	2,800	1,009	5,090	2,964	26	0
21	Investments in buildings and plant	5,331	3,808	2,100	2,035	7,431	5,843	52	3,300
22	Investment in equipment	**1,050**	0	450	6	1,500	6	0	400
24	Staff	1,075	617	275	207	1,350	824	7	150
25	Operations/ maintenance of build/comp	0	0	150	107	150	107	1	450
26	Operations/ maintenance vehicles/equip	200	567	300	157	500	724	6	1,000
27	Technical courses and short course	700	0	1,325	0	2025	0	0	150
28	Labour-based course	0	490	100	39	100	529	5	270
29	Other courses	0	0	0	288	0	288	3	0
	Total	10,646	7,437	7,500	3,848	18,146	11,285	100	5,720

* Expenditure up to end June 2000 only

The Government (GRZ) contribution to the school was budgeted to NOK 5,720 million for the two-year period. However, the funds were never released, and the school had to manage with the support from NORAD only. This might be seen as an indication of lack of commitment of the Government.

The first item, General, which includes technical assistance and some other cost elements accounts for 26 per cent of the total expenditure up to June 2000. More than 50 per cent of the total expenditure is investment in the school's buildings and plant. There was no investment in equipment and no repair work of equipment was done. No funds were allocated for technical and short courses. The labour-based section was only allocated NOK 100,000 in the budget, but actually spent NOK 529,000 as some funds were reallocated in 1999.

4.2.4 Progress, Achievements and Impacts

The progress and achievements are measured against the defined expected outputs as listed in Table 4.3 above.

Expected Output: RDTS physically upgraded and adequately equipped

The construction of the school's new buildings started in July 1998 and the major work was completed by December 1999. Some smaller works were finalised in the beginning of 2000. The school premises can now accommodate up to 75 male and female students with a classroom and dinning capacity of about 120. The total area of the premises is 4200 m^2. The facilities are listed below.

RDTS Facilities by end 2000
31 offices with an average area of 30m^2
4 new classrooms of 600 m^2 (2 existing classrooms of 250 m^2)
Storage and workshop of 650 m^2
Hostel of 1100 m^2 (32 beds for women and 43 beds for men)
Kitchen and dining of 370 m^2 (120 sitting)
Ablution block of 60 m^2
Parking bays for more than 20 vehicles.

The expected output has to a large extent been achieved, but equipment was not procured as planned, as no funds were available. Furthermore, the library has not been established as planned.

The funds used for renovation and construction came from the budget line for Component 2 of the first phase of the programme.

Expected Output: RDT's Organisation Developed to meet Future Needs

The Review mission in 1997 recommended that RDTS be converted into a semi-autonomous training institution. This was followed up by a workshop held in September 1998 aimed at setting-up an operational entity serving both the public and the private sectors. The road stakeholders participating in the workshop agreed on a changed mandate of the training school and a number of indicators were agreed. For example, the changed mandate allowed the school to be set up as a Trust with a Board of Trustees comprising members from the public and the private sector. The school would then be able to employ its own staff and set conditions of service. A number of milestone were also agreed upon, namely:

- Training and organisation study to outline option by the end of 1998
- Advisory Board of Directors to be constituted by December 1998

- Proposal submitted (concerning the transition) to Government by June 1999
- RDTS converted into a semi-autonomous Trust by June 2000

There has been no success, so far, in implementing the above actions, except for the establishment of the Advisory Board that was nominated by the Permanent Secretary of the Ministry of Works and Supply in June 1999. However, the Board has not yet held its constitutive meeting.

The Training Needs Assessment Study commenced, but was not completed by the consultant engaged for the study as he disappeared without completing the assignment. A draft report was compiled, but never completed.

NORAD has had several meetings with Roads Department concerning the future status of the school and, eventually, another workshop was held, this time at Kafue Gorge Regional Training Centre in April 2000. The objectives of the workshop were to assess the current situation at the school and discuss options for moving forward and drawing up a plan for the transformation of the school.

At the workshop, stakeholders discussed a number of possible options for the school and recommended that it focus on immediate, demand driven short course for the immediate future. This meant that RDTS should re-oriented towards offering short courses that provide hands-on skills and are in demand by both the public and the private sectors. The school, however, has neither the funds nor the staff to carry out such training courses at this stage. This would require extra funding from the donor community. This recommended phase of immediate action was to last about 12 months.

The long-term options of turning the school into a trust, transferring it to the National Council of Construction (NCC) or setting it up as a private company were also discussed at the workshop. The consensus was that the school must operate on a financially sustainable basis with a minimum of donor and Government support in the long term.

Although, it seems that a draft Cabinet Memorandum has been prepared and circulated, there has been no official proposal submitted to Government to convert the school into a semi-autonomous institution or a trust. Instead, it currently seems that the Ministry of Works and Supply is hesitant to change, possibly because there is doubt about that the school can manage on its own.

Although, there have been some efforts in establishing a plan of transforming the school, the expected output has not been achieved as yet.

Expected Output: Adequate Staff in Place to run RDTS

The only personnel on full time assignments have been the Chief Technical Officer supported by clerical staff, stores and typist staff. During the construction of the new premises, the technical staff was assigned other tasks in the department. At times of training, resource staff was sourced from Roads Department's regular staff.

NORAD's manpower support has been through the ILO Chief Technical Advisor (CTA) and a training specialist funded directly by NORAD. An ILO Field Engineer completed his assignment in December 1998.

The training specialist left his assignment in May 1999 while the Chief Technical Advisor is still heading the labour-based section. He is employed by the ILO and funded by NORAD through a contract agreement between ILO and RD.

An executive road engineer, who was seconded to the school in 1997 to work as the counterpart to the CTA, was transferred in 1999. A replacement took place in March in 2000.

It has not been possible to carry out much human resource development of the staff based at the school. However, the labour-based section made some attempts and three engineers from RD participated in a workshop on the Management of Labour-based Contract Road works in Harare in 1999. In 1999, six labour-based staff attended courses outside the school, and the following year twelve people from the school attended external courses.

The expected output on this item has not been achieved due to the situation of uncertainty in regard of where the school is heading. The financial situation has not allowed any recruitment to be effected.

Expected Output: RDTS's Training Programme in Place

The school has been registered with the Technical Education Vocational Entrepreneurship Training Authority (TEVETA), and the Curriculum Development unit of the Department of Technical Education Vocational Training DTEVT has confirmed their co-operation in accrediting and normalising the school's courses into proper qualifications.

Three staff attended a one-week workshop on development of curriculum and syllabi for the Contract Management Course.

Currently, no training is undertaken due to lack of funds. However, external labour-based training courses are lined up and are awaiting approval of funding. In fact, the school has no proper training programme except for the labour-based courses and contracting development schemes. The expected output has, therefore, not been achieved.

Expected Output: Technicians Course established

It is still unclear what type of courses will be developed and offered by the school, and not much progress has been made. The output has not been achieved.

Expected Output: Short Course Programme established (RDTS component)

A course in contract management was initiated by RD Headquarters and developed with the assistance of RDTS, CBU and DISS.

These one-week management courses for RD and DISS staff were conducted in collaboration with CBU, DISS and RD. They were held at CBU due to lack of classrooms at the school, as the buildings were not in place, except for the last course held at RDTS.

Except for this training, which saw 130 people, not much progress has been made due to uncertainties regarding the status of the school. This output has, therefore, not been achieved.

Expected Output: Labour-based Course run, expanded and consolidated

There has not much other activity during this period, except for labour-based training carried out outside the school's premises. No funds were allocated for labour-based training in 1999 and only a small amount in 2000. However, some training was undertaken in 1999 after re-allocation among the budget lines. In addition, the labour-based section secured funding from other organisations, such as the Ministry of Local Government and Housing (MLGH) and the Zambia Agricultural Marketing and Processing Infrastructure Project (ZAMPIP). In 1999, 104 trainees were trained at the school. In 2000 a short course in contract management was held at the school, and the off-carriageway maintenance trial contracts continued. Other training undertaken during this year was training of trainers in accessibility interventions and road maintenance.

A new contract for training small-scale contractors in ZAMPIP was lined up for 2000, but the execution of this training programme has been delayed due to bureaucratic procedures within the World Bank. However, it now seems the programme will take off as planned. The cost of the programme is estimated at NOK 7 million.

The labour-based section has also assisted external clients in preparing proposals, programme documents and agreements. It is envisaged that the labour-based section will take on a training contract for contractors and managers for an International Fund for Agricultural Development (IFAD) funded labour-based contractor programme. Furthermore, the Zambia National Feeder Roads Trust (ZNFRT) sees the school as a vital provider of labour-based training and a tentative programme of approximately NOK 5 million is planned.

The outcome of this activity has been hampered by the lack of funding, and it is estimated that 200 to 300 small-scale contractors could have been trained during the last couple of years if full funding had been made available. Against this background, it would be fair to say that a reasonable output has been achieved considering the limited funding that has been made available.

Expected Output: Training Production Units established

Nothing has been done and the output has accordingly not been achieved.

Expected Output: RDTS's Reputation as a Professional Partner in the Road Sector Development enhanced

The training school has over the past seven years gained considerable experience in labour-based road works. After the labour-based component was transferred, the school has offered short- and long-term courses in contracting for rehabilitation and maintenance and contractors and contract management courses for the public and the private sector.

Many road stakeholders are aware of the school and its capabilities and the school's labour-based section has a good reputation in the sector. However, no major efforts have been made to achieve the expected output in a comprehensive and structured way, due to limited funding. By default, the labour-based section has a good reputation, but the output has not been achieved at a broader scale.

4.2.5 Sustainability

The move to Lusaka had an impact on the development of the labour-based approach, as more clients could be reached from this central location. This institutionalised the labour-based section within RD, and labour-based techniques are now seen as good complements to equipment-based techniques for road works in Zambia.

Many road stakeholders in the country have acknowledged the role and importance of labour-based techniques, and the labour-based section have managed to attract many other organisations to procure their services in this field. Clients since 1994 are listed below.

Clients of the RDTS Labour-based Section 1994-2000
• DISS - Department of Infrastructure and Support Services of MLGH
• Care International
• IFAD – International Fund for Agricultural Development
• ZAMPIP – Zambia Agricultural Marketing and Processing Infrastructure Project
• DC – District Councils
• FRP – Feeder Roads project in Eastern Province
• EEOA – Economic Expansion in Outlaying Areas
• RD
• NRB - National Roads Board

The National Roads Board has also funded trial contracts since 1995 within the training courses, and they are very supportive to RDTS's involvement in the road sector.

Some contractors trained by RDTS are now prepared to pay for their own courses. Recently a contractor trained by RDTS decided to participate on his own expense with his own staff at the ILO/ASIST seminar for labour-based practitioners in

Cairo. The Zambia delegation was the second largest in the group of over 200 practitioners who met in Egypt last year.

Although, there are pockets of resistance here and there in Zambia, the labour-based approach has come to stay as most stakeholders realise its potential. RDTS has been instrumental in this by marketing, delivering good products and demonstrating the labour-based technology's feasibility and viability.

In general, there has been a high turn over of staff and this has to some extent affected the training. However, it is positive to notice that staff previously trained by the school now act as labour-based "ambassadors" in the road sector.

It is heartening to see that RDTS has adopted and adapted training material, techniques and approaches developed elsewhere instead of re-inventing the wheel. The school has also developed material on its own when needed. RDTS has collected a wealth of information on the labour-based sector and the road sector in general.

RD and DISS are the two main road stakeholders in Zambia and they are now supporting the labour-based approach as a complement to other methods. It is anticipated that it will remain a high priority for the two organisations to take on board small-scale emerging contractors.

In the ROADSIP Mid-term Review Seminar held in December 2000, many road stakeholders clearly indicated their interest in labour-based technology and the need for training and assistance.

Against the above background, the school's labour-based section is considered sustainable now, as there is a huge training need in the road sector. The school as such is, however, not sustainable yet and will hardly become sustainable if it remains a Government institution within the present institutional framework.

4.2.6 Future Needs for Support

The school facilities are excellent and well suited to cater for various courses. The current situation does, however, not justify further funding as the school is basically empty of trainees due to lack of funds for training.

It is, on the other hand, not advisable to close down the school, as there is a huge need to train the private and the public sectors in various aspects of road works. A DANIDA mission undertaken in November 2000 assessed the scope for training within the construction industry. The mission concluded that there is a massive need for training at all levels in the construction industry.

It is time to broaden the scope of training offered at the school to respond to the huge training need of the private and public sectors. In summing up, there is a need for: Continued training of small-scale contractors, increased and enhanced training for supervision of contracts for the public and private sector (consultants), increased and enhanced training for contract management and tailor-made short training courses for technicians within various fields, such as survey and soil investigations.

5 Institutional Co-operation

Institutional co-operation between Roads Department (RD) and the Norwegian Public Roads Administration (NPRA) and the International Labour Organisation (ILO) respectively forms important elements of the Road Sector Programme (RSP). This chapter reviews the experience of these co-operative or twinning arrangements with a view to achievements and impacts.

5.1 Co-operation with Norwegian Public Roads Administration

Institutional co-operation between Roads Department and the Norwegian Public Roads Administration commenced before the Road Sector Programme started. This was due to that NPRA was involved in another NORAD funded project and co-operated with the Provincial Roads Engineer (PRE) and the Resealing Unit in Southern Province. The support to the PRE had partly been initiated by NPRA and was partly a direct follow-up of NORAD's involvement in refurbishing and rehabilitating the Livingstone to Kafue road.

A twinning arrangement between RD and NPRA was formally approved in November 1995 in line with the RSP agreement. It was not set up as a separate component of the programme but defined as separate budget lines for Components 1 and 2 of the initial programme.

The agreement was at the outset unspecified and comprised in principle all that could be provided by NPRA. The institutional arrangement took off relatively slow. It was not until March 1997 that a first plan was compiled. The plan, however, did not truly take the objectives of the RSP and the road sector policy into account.

The review mission in 1997 recommended that a structured plan for future institutional co-operation between RD and NPRA be prepared showing the need for such arrangement and also how the objectives were to be achieved. This has not been done, but NPRA has assisted RD in preparing new components for the new agreement of RSP II.

NPRA has experience from development work and successful institutional co-operation in other countries, such as Tanzania and Botswana. Such co-operation, however, has not worked out well in Zambia. It is difficult to assess properly why it has not worked well. A main reason is probably that no proper framework was established from the beginning for this co-operative arrangement. Other reasons seem to be the rather frequent changes of contact personnel on both sides and the insufficient contact and communication between the two parties. The assessment is particularly difficult to make because the level of co-operation has remained at a

very low level the last few years. There is, consequently, too little evidence upon which a clear conclusion could be made.

The same difficulty arises when it comes to assessing the experience with technical assistance personnel. The low level of activity and the fact that no NPRA staff was involved for any length of time do not allow any meaningful assessment in this regard.

The twinning arrangement was never meant to comprise consultancy services by NPRA. It was intended to be a well-structured co-operative arrangement between the two parties aimed at improving the management of the road network in Zambia, and where RD could draw upon the resources of NPRA whenever needed. If a closer contact between the parties and better structured operation procedures can be introduced, this co-operation could well turn out to be fruitful and cost-effective in future, like it has proved in Botswana and Tanzania.

5.2 Co-operation with International Labour Organisation

The International Labour Organisation is a well-known international organisation with a particular wealth of experience and knowledge of labour-based technology. The organisation has provided expertise in the field since the start of labour-based works in Kenya in the mid 1970s, and it has access to the best practises in respect of road works, training and other related areas of relevance for the management of rural feeder roads.

ILO has provided support to the feeder roads programmes in Zambia since the late 1980s when the pilot project in Northern Province took off. The organisation has played an important role in developing the capacity for labour-based construction and maintenance activities. This has been done close cooperation with the Roads Department Training School.

NORAD has funded the ILO experts who have been assigned the project through an agreement between RD and ILO. This has worked well and both parties are satisfied with the arrangement. There are a number of reasons for the success of co-operation, but the most significant one may be the quality and continuity of key technical assistance personnel attached to the school.

ILO is now in the process of preparing tools for procurement of road works. The procurement will be based on FIDIC procurement polices, the World Bank's and other donors' policies on procurement. ILO is currently also developing appropriate frameworks for supporting and developing local consultants in developing countries. Most support efforts have previously been focused on contractor development but there is now an urgent need for more focus on the use of local consultants in developing countries. These efforts could also benefit future work in the road sector in Zambia. ILO is in a position to provide valuable back-up services from the regional offices in Harare and Nairobi.

6 Programme Effectiveness and Sustainability

This chapter reviews the relevance of the Road Sector Programme goals and objectives and the programme effectiveness and impacts. Further, it looks into the financial progress and discusses programme efficiency. Finally, it reviews the sustainability of the programme.

6.1 Relevance of Goals and Objectives

The goals and objectives of the Road Sector Programme have changed over time as described in Chapter 2. The initial development objective was defined as: Road travel and transport accomplished more rapidly, safely, cheaply and reliably in support of the social and economic development of Zambia and its people. The immediate development objective at that stage was the following: The condition of roads and ancillary physical infrastructure improved on a national sustainable basis. Both these are relevant but the formulation of the objectives, and in particular that of the latter one, appears quite ambitious. It is difficult to see that the programme had any realistic possibility of achieving them. The expected outputs defined at that stage were also fairly ambitious.

This review focuses on the last few years of the programme and goals and objectives as well as terminology were changed underway in the process. By 1999, the programme was restructured into only two components, and separate goals and purposes were defined for each.

The programme's aim as defined now is to be an integral part of the implementation of ROADSIP and the Public Service Reform Programme (PSRP). The ultimate goal for the programme is to contribute to a more lean and efficient road sector in order to optimise the utilisation of resources made available for road works.

The goals for Component A: Institutional and Human Resource Development are now defined as: (i) Effectively implement Government's Policy for improvement of road standards in Zambia through planning, maintenance and rehabilitation and (ii) Utilise resources allocated to Roads Department at a high standard of managerial capacity, capability and efficiency. Both appear somewhat general and ambitious. The goals are relevant and somewhat ambitious considering the current low level of programme activity. Both are operationalised in more specific expected purposes.

The goals for Component B: Roads Department Training School are now defined as: (i) Improved infrastructure in the country, through training of personnel

involved in rehabilitation and maintenance of roads, as well as other civil work, (ii) Public road administration more competent and efficient, (iii) Greater participation of private companies in the road sector and (iv) Employment improved. Also these goals are relevant but appear ambitious considering the current low level of programme activity. All are operationalised in more specific expected purposes.

Also the purposes of the programme have changed over time as described in detail in Chapters 2. They are relevant and more precise now than in the past but still somewhat ambitious.

The same pattern applies when we consider the expected outputs that are described in Chapter 4. Generally, it appears the outputs change over time, almost from year to year, and several have been defined rather vaguely, thereby making the assessment rather complicated. In addition, many seem to be far too ambitious and the expected outcome has not been achieved as planned. It is difficult to understand why outputs, which are redefined that often, still remain too ambitious.

In summing-up, it appears that the establishing of goals, objectives and expected outputs for the programme is not done too well leading to inconsistency. It is unfortunate to introduce frequent changes of formulations in this respect, and such changes make it very difficult to manage the programme properly. In addition, too ambitious formulations are detrimental to the idea of management by objectives, which the system is based upon, and makes it very difficult and frustrating to assess performance and almost impossible to learn by experience.

Against the above background, it appears highly necessary to improve on this matter when developing the new programme. Clear emphasis should be given to establishing a well-structured and consistent hierarchy of goals, objectives/purposes and expected outputs.

6.2 Programme Effectiveness and Impacts

This Sub-section comprises two parts, one reviewing component and programme effectiveness, the other assessing the impacts of the programme.

6.2.1 Component and Overall Programme Effectiveness

Component A: Institutional and Human Resource Development

The expected output of Component A is currently defined in seven different items as described in detail in Section 4.1. One of them can hardly be considered as separate. Among the other six, the expected output has been achieved for one, that is the Strategic Corporate Plan for Roads Department. Four have not been achieved or not yet achieved. For the last one, Roads Department supported by Norwegian Public Roads Administration as requested, is it difficult to assess whether the expected output really has been achieved, as it was only vaguely

defined. It seems, though, that not much has happened in respect of operational co-operation between the two parties the last couple of years.

Component B: Roads Department Training School and Labour-based Techniques

The expected output of Component B includes currently nine different items. One of the expected outputs, that is Labour-based Courses run, expanded and consolidated, can be seen as achieved considering the reduced funding made available, see Section 4.2 for details. Two others expected outputs have partly been achieved. One of them, The School physically upgraded and adequately equipped, has to a large extent been achieved. The other, The School's Reputation, as a Professional Partner in the Road Sector Development enhanced, has been achieved almost by default for the labour-based section but not for the school at a broader basis. The remaining six expected outputs have not been achieved for this component.

Overall Programme Effectiveness

None of the current two components can be said to have achieved much in a comparison with the expected outputs. Only a third of the planned outputs have been achieved or partly achieved as yet, whereas two thirds have not been achieved. Against this background, programme effectiveness appears very low. It should, however, be taken into account that the level of ambition seems to have been high, and probably to a large extent unrealistically high, at the time of defining goals, purposes and expected outputs.

The institutional co-operation between the school and the ILO has worked well. This has contributed to the achievements of the labour-based section of the school.

6.2.2 Impacts of the Programme

As mentioned above, both the two programme components have achieved around a third of the planned outputs in full or partly. Some of the outputs have started to take effect, for instance the Strategic Corporate Plan for Roads Department for which implementation has now started. The same applies to the upgrading of the Roads Department Training School and the activities of the labour-based section of the school. Compared to the expected outputs for the whole programme, however, impacts have been fairly limited so far.

6.3 Expenditure and Financial Management

The budget and the expenditure for the two programme components are described and discussed in Sections 4.1 and 4.2 respectively. For Component A: Institutional and Human Resource Development, the budget for 1999 and 2000 was around NOK 12.7 million. Of this, NOK 7.5 million or 59 per cent had been spent up to end June 2000. Expenditure for 1999 corresponded well to the budget

for that year, whereas expenditure for 2000 is somewhat lower than planned for most budget lines.

For Component B: Roads Department Training School and Labour-based Techniques, the NORAD budget for 1999 and 2000 was around NOK 18.1 million. Of this, NOK 11.3 million or 62 per cent had been spent up to end June 2000. Expenditure is lower than planned for the whole period. In 1999, expenditure only reached 70 per cent of the budget, whereas expenditure for the first half of 2000 was a little more than half of the budget for the year. Major reasons for this is that expenditure for investment in equipment and for technical courses and short courses is almost nil, whereas the budgeted amounts were NOK 1.5 million and NOK 2.0 million respectively. The Government's budget for component B for 1999 and 2000 was set at NOK 5.7 million. So far, these funds have not been released.

The financial management of the grant has not been easy. This is mainly due to the low capacity of Roads Department in respect of accounting and auditing. The department does not employ any accounting staff but has in accordance with Zambian Government practise some staff at headquarters seconded by the Ministry of Finance and Economic Development. This is not a good solution for the department, as it is almost impossible to get any lasting effect of staff training. It appears that when Roads Department has trained accounting staff, the Ministry often transfers them to assignments in other Government organisations shortly afterwards.

Auditing has been a special problem as the Auditor General work too slow to meet the requirements of the programme agreement. A private auditor is therefore used. The auditing of the 1998 accounts, which took place during the review mission, showed serious deficiencies in the accounts as prepared by the accountants seconded to Roads Department. The information submitted to the auditor was unsatisfactory for the purpose. There is an obvious need for improvements in this respect in future.

6.4 Programme Efficiency

It appears in Section 6.2 above that only a third of the planned outputs have been achieved or partly achieved as yet and that programme effectiveness measured against the planned output is very low. This must, however, been seen in the light of that the level of ambition may have been unrealistically high when the expected outputs were formulated.

Two of the planned outputs have been achieved fully. One of them is the Strategic Corporate Plan for Roads Department. Costs in this respect have been shared between various budget lines and it is almost impossible to see whether the output has been achieved efficiently in respect of the resources used. The same applies to some extent to the other planned output that has been achieved, Labour-based Courses run, expanded and consolidated. It is therefore not possible to measure programme efficiency in quantitative terms. There are, however, no indications of

that the few outputs that have been met in full or partly, have not been achieved efficiently.

6.5 Sustainability

Sustainability cannot be expected to be considerable when achievements and impacts are very limited. For Component A: Institutional and Human Resource Development, sustainability has been very limited and is regarded low, see Sub-section 4.1. For instance, provision of technical assistance staff as gap fillers in an organisation that is seriously understaffed does clearly not lead to a sustainable situation.

Sustainability is also limited for Component B: Roads Department Training School and Labour-based Techniques as a whole. There are, however, clear differences within the component. The school's labour-based section is considered sustainable now. The school as such is, however, not sustainable yet and will hardly become that unless its institutional framework is changed.

7 Further Norwegian Support to the Road Sector

This chapter reviews the need for support to the road sector in Zambia and describes the current sector policy and the Roads Department's organisation and human resource capacity. Against this background, a New Road Sector Programme for further Norwegian support is outlined. Finally, a number of implementation issues are raised.

7.1 The Need for Road Sector Development and Support

Zambia is facing a difficult financial situation and the country is heavily indebted. It is at this stage much dependent on the donor community. The Government must combat the falling local currency by inspiring local industrial growth in order to stop the deterioration of living standards. Unemployment is currently high and the Government must address this problem as a priority issue. Even impressive economic performance does, however, not automatically translate into employment creation and poverty alleviation. Employment generation therefore needs to be a major goal, one as important as economic growth itself. It needs to become an integral part of economic, financial and social policies.

At the Musungwa Road Management Initiative workshop held in 1993, road stakeholders drew up policy statements on employment polices and investment strategies for the sector. The Road Sector Investment Programme (ROADSIP) launched in 1997 included facilitation of economic growth as a goal and employment creation and poverty alleviation as important objectives.

More specifically, ROADSIP established five objectives for the first five years period 1997-2002. One of them was strengthening of the local construction and consulting industry. Another was reform of the road sector policy and institutional framework, which appears as a basic precondition for progress in the sector. The third and fourth objectives were strengthening of road sector financing aimed at ensuring the sustainability of road maintenance respectively addressing the road maintenance and rehabilitation backlog. The last objective was establishing a pilot programme for community road management, see Section 3.1 for further details.

The ROADSIP Mid-term Review as carried out in December 2000 revealed that much was still to be done to achieve all objectives. The Review Mission expressed serious concern in respect of targeted achievements not met as planned, among them six important undertakings by Government. The first two were rationalising the sector institutional framework and securing the institutional and legal basis of the National Roads Board and the Road Fund. Then followed revision of the Roads and Road Traffic Act. The fourth and fifth points were streamlining fuel

levy payments to the Road Fund and diversifying the sources of funding for the Road Fund, whereas the final one was prioritising of routine and periodical maintenance in the allocation of Road Fund revenues.

The mission expressed clearly that a new compact was needed. That implies that an understanding on policy reform and the means to attain it is urgently needed to put the partnership back on a firm footing, and thus ensure further assistance from the co-operating partners to the programme.

The new compact would set out the medium term vision of the policy and institutional framework for the road sector, with the supporting financial and legislative measures. It would also include a plan of short-term actions. The main concern of the mission was to receive comprehensive and viable proposals in relation to the following four key issues:

- Institutional reform
- Sector financing
- Maintenance priority
- Axle load control.

The mission proposed that there be regular contact between Government and the co-operating partners through the Permanent Secretary for Communications and Transport and the Donor Forum to ensure that the issues raised be addressed.

7.2 Sector Reform and Roads Department's Capacity

The planned reform of the road sector policy and institutional framework, which is a cornerstone for future sector development, is still to a large extent pending. Several key decisions on sector policy and institutional framework have not yet been made. The Roads Department has changed during the last few years but further change hinges very much on such decisions.

Institutional Reform

The Public Sector Reform Programme (PSRP) was launched in the early 1990s but only started effectively in 1997. The programme has during the last few years led to significant changes in the roads sector. Roads Department has been turned into a purchaser of service and an intensive user of contractors for road works and consultants for planning, design and supervision of contractors. Only a minor part of road maintenance is to be carried out by force account in the provinces. Consequently, Roads Department has experienced a dramatic reduction in the number of employees. The total number of employees is now down to a total of 168 civil servants for Headquarter and all provinces together.

A comparison with other countries in the region, clearly shows that Zambia is lagging behind most SADC member states in road sector reform, see Section 3.3. Others have, therefore, both operational models for reform and recent experience, among them three neighbouring countries. This means that good models for as

well as relevant experience from similar reforms are easily available to the Government of Zambia.

The current road sector policy and institutional set-up in Zambia does not provide the solid framework needed for the extensive sector support required in future. The need for a better framework has been agreed between the Government and the international co-operating partners since the mid-1990s. Although some progress has occurred through the Public Sector Reform Programme, much remains to be achieved.

Roads Department's Current Organisation and Human Resource Capacity

A Strategic Corporate Plan (SCP) for Roads Department was completed in 2000 but is still to be implemented. It outlines the future organisation of the department. The plan proposes two key divisions at headquarters, the one responsible for operation and the other responsible for planning and design. The divisions are planned to be fully operational by 2004 respectively 2005. The Provincial Roads Engineers offices are given the responsibility for road maintenance.

The new staff establishment of Roads Department is as indicated above 168. The number of vacancies was around 50 or 30 per cent of the establishment by December 2000. The department anticipates that most positions at Headquarters will be filled by end 2001. This, however, appears optimistic. The current severe shortage of qualified staff creates a most difficult and untenable situation for road management in Zambia.

Functions and Human Resource Needs of the Future Roads Agency

It is impossible at this stage to discount the organisational set-up of the future roads agency. As mentioned above, three of the neighbouring countries have introduced new road administration. Malawi went through the reform process a few years ago and Namibia and Tanzania completed their processes last year by introducing new road authorities. Their problems were similar to those of Zambia and the solutions will, presumably, not be too different.

Typically, a modern Roads Agency will have a number of roads engineering key functions at Headquarters, namely (i) planning and design, (ii) operations and maintenance and (iii) technical development. The first function is self-explanatory. The second function will include responsibility for implementation of road works. The third engineering function includes the development of various manuals, specifications for road works, central materials laboratory and quality control. In addition to the three engineering functions, comes a finance and administration function, which also carries the responsibility for human resource development. The first two functions can be delimited somewhat differently like for the new Tanzania National Roads Agency, which has one function responsible for development projects and another for maintenance, see Annex 7.

When considering the human resource needs of the future road organisation, we take the above four functions and the provincial organisations as the starting point for our review of human resource capacity.

(i) *Planning and Design:* This function corresponds to one of the divisions proposed in the Strategic Corporate Plan. This division is scheduled to be fully operational by 2005. The corresponding function in Roads Department is currently supported by technical assistance from the European Union (EU). The current division has a severe shortage of qualified staff and the senior technical assistant provided by EU acts currently as director of the division

(ii) *Operations and Maintenance:* This function corresponds to the other division proposed in the Strategic Corporate Plan. This division is scheduled to be fully operational by 2004. The corresponding function in Roads Department is also currently supported by technical assistance from the EU. The current division has a considerable shortage of qualified staff

(iii) *Technical Development:* This function is not established as a division or unit in the current Roads Department. Central Materials Laboratory has a severe shortage of qualified staff today and very little is presently done in respect of preparing manuals and specifications for road works and undertaking quality control of road works

(iv) *Administration and Finance:* This function appears to be very weak today. Accounting is not up to standards and human resource development is lagging behind. The Ministry of Finance and Economic Development currently seconds accountants, but the new roads agency will need its own accounting staff

(v) *Provincial Roads Engineers' Offices:* This function will become even more important in future as it will be assigned the responsibility for maintenance of roads and bridges. The offices are currently seriously understaffed and the situation is considerably worse off than at Headquarters

The above review clearly indicates that the current human resource capacity is far too limited to ensure that the requirement of the future roads organisation are met, irrespectively of which form it will take. There is obviously, a huge need for support to institution building and human resource development both at Roads Department Headquarters and at the provincial offices.

7.3 Outline of the New Road Sector Programme

The decision about the new Road Sector Programme was made at the country strategy negotiation meeting between Zambia and Norway last year. Subsequent to the meeting, NORAD prepared a mandate for dialogue indicating the main features of the programme.

7.3.1 Background and Framework

The need for future support to the road sector has been established in Section 7.1, and the prevailing conditions in the sector and in Roads Department are summarised in Section 7.2 above. NORAD's mandate for dialogue with Zambia

provides the framework for further Norwegian support. The Road Sector Investment Programme (ROADSIP) and other donors' support to the sector provide important guidance when considering the contents of the Road Sector Programme.

NORAD's Mandate for Dialogue

The mandate as prepared after the country strategy negotiation meeting between Zambia and Norway in March 2000, indicates the main features of the programme. It will aim at contributing to economic development and poverty alleviation and comprise support to the road administration. The need for institutional reform in the sector is emphasised in the mandate and it is suggested that a time frame for a decision in this respect be established.

The mandate suggests that the new Road Sector Programme be fully integrated with ROADSIP. It is further suggested that the support be concentrated to the following three components: Institution building, human resource development and road investment. Under the latter component, support to roads in National Parks is to be considered

A financial framework of NOK 100 million for a four years programme period is proposed. The suggested allocation is NOK 60 million to institution building and human resource development and NOK 40 million to support to road investment.

ROADSIP, World Bank and other Supporters

The review of the need for support to the road sector in Section 7.1 above clearly demonstrate the extensive needs in this respect. Among the particular concerns of the ROADSIP Mid-term Review were institutional reform, sector financing, maintenance and axle load control, most of which relate closely to institution building and have also a human resource development dimension.

A number of other donors support the road sector today. Two of them have programmes that are of concern for the Road Sector Programme. The European Union provides technical assistance support to Roads Department. This assistance is focused on the Planning and Design Division and the Operations Division. Denmark is considering support to training directed towards the need of the construction industry, which would also include road contractors. Otherwise, it does not appear that other donors support the sector in areas of particular concern to the new Road Sector Programme.

Programme Structure

Against the above background, we propose a programme that includes two main elements. The first is Institutional and Human Resource Development and the other is the Possible Support to Upgrading of National Park Roads.

Institutional Development

Institutional development should be focused on institution building at the current Roads Department and subsequently at its successor. This support should be designed in such a way that it takes fully into account focus areas of particular importance for the development of the future organisation. As described in Section 7.2 above, the five key functions in a future road organisation are expected to be:

- Planning and design
- Operations and maintenance
- Technical development
- Administration, finance and human resource development
- Provincial Roads Engineers' offices (maintenance)

There is a tremendous need for support to all the above five key functions. In addition, direct support to the institutional reform and organisational development process will be extremely important in the period of transition to a new organisation and during the first year(s) of this organisation.

Among the above six possible areas for support, the European Union currently provides technical assistance to the Planning and Design Division and the Operations Division of Roads Department. Further support to these functions would easily lead to some duplication of efforts and would not be recommendable at this stage. It would therefore be better to concentrate Norwegian support to the other four priority areas.

Considering the need for support and the concerns expressed by the ROADSIP Mid-term Review Mission, the following issues are of particular importance at this stage: Institutional reform, maintenance and control of vehicle overloading.

We also believe that development of technical manuals and specifications for road works as well as quality control of road works will be increasingly important. Finally, the future road administration will be heavily dependent on improved performance in respect of administration, financial management and accounting and human resource development.

Human Resource Development

The four training needs assessment studies carried out during the 1990's have all concluded that there is a massive training need in the road sector (Howard Humpreys - John Burrow Joint Venture 1993, I.T. Transport Ltd. 1995, Kampsax International 1995 and Steve Price 1999).

The ROADSIP strategy is clear about an increased use of local contractors for road works. The labour-based approach to rehabilitating and maintaining roads has been well received and is now accepted as an appropriate complement to equipment-based operations.

Possible Support to Upgrading of National Park Roads

The tourism sector is one of the areas of the Zambian economy that have a considerable potential for growth and for foreign exchange earnings. The Draft Bankable Document (National Task Force for ROADSIP II) prepared for the second phase of ROADSIP has included tourist roads as a component. This component comprises roads in the national parks as well as roads that lead to the parks. There is a large need for maintenance and upgrading of such roads.

7.4 Support to Institutional and Human Resource Development

Institutional Development

Against the above background, it is recommended to focus the future Norwegian support to Roads Department and its successor on the following fields:

- Institutional and Organisational Development of the Administration
- Road Maintenance
- Control of Vehicle Overloading
- Development of Technical Competence and Quality Control
- Financial management and human resource development

Road maintenance will be the responsibility of the Provincial Engineers' offices and support in this field must therefore be directed at one or more of these offices. Support to all other fields will be directed towards Roads Department Headquarters.

Human Resource Development

Against the above background, it is recommended to include support to road sector training in the programme. This support will constitute a continuation of the current support to the Roads Department Training School. It is, however, time to broaden the scope of training offered at the school to respond to the huge training need of the private and public sectors. In summing up, there is a need for:

- Continued training of small-scale contractors, especially in routine and periodic maintenance work.
- Increased and enhanced training for supervision of contracts for the public and private sector (consultants).
- Increased and enhanced training for contract management
- Tailor-made short training courses for technicians within various fields, such as survey and soil investigations.

A DANIDA mission undertaken in November 2000 assessed the scope for training within the construction industry. The missions preliminary recommendation gave openings for co-operation with the Roads Department Training School. The final recommendations of this mission should be taken into consideration when designing the training support in the Road sector Programme.

7.5 Possible Support to Upgrading of National Park Roads

As mentioned in Section 7.3 above, tourist roads have been included as a component in the Draft Bankable Document for the second phase of ROADSIP. The document presents a range of roads in the national parks as well as district and feeder roads that lead to the parks. Tentative cost estimates for rehabilitation of access roads and spot improvements of roads in priority national parks have also been prepared.

NORAD is currently supporting wildlife management in Zambia. Support to roads in or leading to national parks could therefore be seen together with the current efforts.

It seems too early to propose detailed recommendations in respect of this programme component. One important reason is that the above bankable document is only a draft. Another important reason is that possible projects as mentioned in the document have not been assessed in any way as yet. The benefits of intervention compared to costs remain to be clarified.

The national parks in Zambia appear to attract rather different groups of visitors. The South Luangwa National Park, for instance, caters currently to a high extent for a rather exclusive market. The access road from Chipata is in poor condition and at present constitutes a bottleneck. However, many visitors come by air and can afford to do so. Distances from Lusaka and other centres in the region are, with the exception of Lilongwe, very long. Improvement of the access road may therefore not necessarily lead to any larger increase in the number of visitors.

The situation appears quite different for the Kafue South National Park. The park is close to the Livingstone area, which now is being rapidly developed as a centre for tourism with two major new hotel complexes. Upgrading of the southern access road from Kalomo will have a considerable impact on accessibility to the park. This may in combination with the massive tourism development in the nearby Livingstone area lead to a rapid increase of visitors to the park. Considerable improvement of the park's infrastructure and wildlife management may, however, be needed to attract the tourists.

The above two examples indicate that improvements most likely will be needed in respect of roads within the parks as well as access roads. It would therefore make sense to consider both types within this programme component. The examples also demonstrate that roads cannot be seen as isolated items in this context. The assessment of possible road projects must therefore also consider the parks in a wider context, taking into account among other matters their standard of wildlife management and market potential.

7.6 Programme Implementation Issues

Due to the delays in implementing the necessary reform of the road sector policy and institutional framework, the starting point for the new Road Sector Programme is not as good as it could have been. Preferably, a more solid framework should have been decided or been in place by now, thereby creating better conditions for successful programme implementation and sustainability. This situation raises serious concerns in respect of a number of issues.

7.6.1 Road Sector Reform

The concerns expressed by the recent ROADSIP Joint Mid-term Review Mission, which included NORAD, cover road sector policy, institutional reform and various other matters. They reflect issues that are of serious concern also for the new Road Sector Programme.

The mission expressed that a new mutual understanding between the Government and the international co-operating partners was urgently needed. This would lead to that the Government urgently address the issues raised by the Joint Mission, among them the four key issues: Institutional reform, sector financing, maintenance priority and axle load control.

The Government's urgent attention to issues raised appear as a precondition for successful implementation of the requested support through the Road Sector Programme and the various other programmes funded by the World Bank and a range of donors. Certain conditions should therefore be introduced for financing of the new programme. Timeframes for the work and clear deadlines for decisions to be made by Government should be agreed and established. Further financing should only be released when these are met. Other international partners will most likely need to introduce similar conditions. It is, therefore, advisable to use the Donor Forum as co-ordinator in this respect.

7.6.2 Road Sector Training

The proposed future training activities can only succeed and become sustainable if the institutional framework for the Roads Department Training School is changed. Support by NORAD should, therefore, be subject to that necessary efforts are made to make the institution self-sustaining in its operations. It is recommended that a short feasibility study be carried out urgently and that the following conditions then are met before NORAD embarks upon further support to the school.

- The school is transformed into a Trust with a Board of Trustees that reflects the market
- A professional Manager is appointed and other staff employed under conditions of service.

- The future school will focus on demand driven courses that are accredited by TEVETA
- External funding should gradually be secured over time

The above conditions are discussed further in Section 8.6 below.

7.6.3 Channelling of Funds through National Roads Board

The National Roads Board's mandated term of office expires by end March. The delay in introducing the new sector policy and legislation therefore endangers the continued operation of the board.

The ROADSIP Joint Mid-term Review Mission expressed serious concern in this respect and included the solution of problems concerning the operation of the National Roads Board as one of the immediate actions to be taken by Government. The board is a key organisation in the road sector and currently tasked with operation of the World Bank's ROADSIP programme. It is, however, intended that the board in future be responsible for full co-ordination of all ROADSIP programmes.

We anticipate that the above problems in respect of continued operation of the board will be sorted out shortly through an interim arrangement. The final arrangement, however, will only be clear with the Government's decision on reform of the sector policy and the institutional framework.

Against the above background, we recommend that the Norwegian funds for the new Road Sector Programme be channelled through the National Roads Board. This arrangement will be in accordance with the intended function of the board and will facilitate the overall co-ordination of all the various programmes under the Road Sector Investment Programme.

8 The Institutional and Human Resource Development Component

This chapter describes the contents of the Human Resource Development Component as identified in Chapter 7 above. The financial framework for this component has been set at NOK 60 million.

The component has six sub-components. The first five comprises support to institutional development of Roads Department and its successor, that is the new road organisation that will take over as soon as the necessary sector reforms are implemented. The total costs of these components, which are described in Sections 8.1-8.5, are estimated at NOK 36 million. In addition comes an unallocated amount of NOK 9 million to institutional development to provide for flexibility in responding to the needs as soon as decisions on reform have been made by Government.

The last and largest sub-component concerns human resource development. It constitutes development of a new road sector training institute, see Section 8.6. The cost of this sub-component is estimated at NOK 24 million.

8.1 Institutional and Organisational Development

The Roads Department was restructured in 1997 and now operates under a new organisation structure in line with the Public Sector Reform Programme. The reorganisation was necessary to suit the new policy of planning out force account and contracting out all maintenance works.

The Current Situation

Despite the restructuring in 1997 the department still lacks in technical management capacity both at Headquarters and at the Provincial Roads Engineers' (PRE) organisations as not all the positions are filled. There are at present three technical assistance staff at Headquarters, two sponsored by the European Union and one by NORAD. At present the incumbent Assistant Director, Planning is abroad pursuing a two-year course and one of the technical assistants is acting in his post. The shortfall in the professional staff is of major concern and must be addressed urgently.

In regard to the above, the Review Team has learnt that in October/November 2000 the Ministry of Works and Supply interviewed candidates with a view to filling all vacant positions. It is hoped that the employment of the successful candidates will be speeded up. Past experience is that delays in the employment process results in the loss of potential recruits to other prospective employers.

Due to a large number of vacancies at professional and engineering level, the department lacks technical and managerial capacity especially to deal with the reform process.

Unless government immediately takes steps to recruit engineers who underwent interviews in October/November 2000, the shortfall in manpower will continue to the detriment of service delivery to the private sector.

Objectives

The primary objective of this sub-component is to strengthen the technical and managerial capacity of Roads Department and its successor.

For the private sector to effectively participate in the delivery of service, for instance in construction and maintenance, Government must provide efficient support service. Therefore reform alone will not achieve anything if the various government institutions do not have the managerial capacity required. Further reform as required be subject to continued training of personnel in order to cope with new challenges.

Therefore there is great need for improved efficiency and effectiveness in the administration of national roads. Government is considering the establishment of a new road authority, and processes preceding its establishment will need capable human resource.

The specific objective of this sub-component is to provide assistance to Roads Department through the reform process and to assist the subsequent new road authority with organisational development during the first year(s) of operation.

Contents

The support to institutional and organisational development should include one adviser to Headquarters for a period of three years.

Budget

The total cost of the sub-component is estimated at NOK 5 million for the three years period.

8.2 Road Maintenance

In general the condition of roads are far from satisfactory. In 1995, 20 per cent of the paved road network was rated as good and 40 per cent as fair. By June 2000 the proportion rated as good has increased to 43 per cent whereas the proportion rated as fair had decreased dramatically to 14 per cent (National Task Force for ROADSIP II). On the other hand only 2 per cent of the unpaved road network were good in 1995 and only increased to 5 per cent by June 2000, while the percentage fair and poor remained at 19 per cent and 76 per cent respectively.

The Current Situation

The responsibility to manage roads in Zambia mainly falls under various organisations. The abandonment of force account maintenance in preference to contracting is not in self enough. Funding still remains a key factor for increased output in maintenance, especially periodic maintenance. Apart from poor funding, some problems have resulted from the restructuring. Experienced staff was retrenched for lack of formal university qualifications, leaving inexperienced but formally qualified personnel.

There are therefore serious concerns about insufficient funds for maintenance, inadequate managerial capacity, especially at the PRE's organisations and lack of capacity for urgent and emergency works

The lack of capacity for urgent and emergency works is due to funding as well. Maintenance equipment has been sold off and the remaining units are usually unserviceable because of the shortage of contingency funds to cater for such situations.

The findings of the Review indicate that current funds allocations for maintenance are far below the required levels. Further that there is seriously inadequate capacity at PRE's organisations and that the PRE's have no capacity for emergency/urgent works.

Maintenance can only be improved if the PRE's organisations become more effective. Support in this respect is urgently needed.

Objective

The primary objective of this sub-component is to improve the operational capacity and efficiency of the PRE's organisations to enable them to fully perform their new roles as planners and managers.

Contents:

The sub-component comprises support to (at least) two PRE's organisations during a period of three years by technical assistance personnel. Two technical advisers should be provided for this purpose each for a period of three years. It is possible that one advisor may cover two provinces but that depends on the geographical conditions of the provinces selected.

Budget

The total cost of the sub-component is estimated at NOK 7 million for the three years period.

8.3 Control of Vehicle Overloading

The review of the situation clearly indicates that overloading is rampant on roads in Zambia. There is no evidence whatsoever of any recent improvement of law enforcement in respect of the maximum permissible axle loads and maximum vehicle dimensions regulations of the Roads and Road Traffic Act.

The Current Situation

Joint weighbridge operations have been carried out by the Anti-Corruption Commission (ACC) and Roads Department at five locations during some periods in 2000. The period of joint operations varied from 3-4 days to up to 3-4 weeks at each weighbridge. The total overweight of vehicles apprehended amounted to 984 tonnes and the total amount of fines collected was K492billion or approximately US$137,000. Tentative figures from the weighbridge at Livingstone indicate that the ratio between trucks fined and trucks weighed increased from about 10 per cent to about 25 per cent during the period of joint operations.

The extent of vehicle overloading in Zambia today is not known. Previous studies, however, give some indication of the possible level. A study in the mid 1990's (Lauridsen et al., 1994) indicates that the incidence of overloading in the region at that time varied from 15-20 per cent in Botswana to 40-45 per cent in Tanzania. The study report notes that "... from a previous study carried out in South Africa, 16 per cent of heavy vehicles overloaded by 25 per cent were found to constitute more than 57 per cent of the damage to the road. This alarming statistic would suggest that overloading on the SADC Regional Trunk Road Network is responsible for probably at least 50 – 60 per cent of the total damage to the roads." It appears that most parties concerned believe that overloading is still serious in Zambia. The figures on overloading and damage to roads in the region may therefore, although they are some years old, still give an indication on the situation in Zambia today.

The question of overload control was discussed at length at the ROADSIP Mid-term Workshop in December 2000. The resolution of the workshop states that "In order to prevent damage to our road network, Government should enforce the axle load control measures strictly and professionally and where necessary update the existing legislation." The ROADSIP Mid-term Review Mission expressed serious concerns about overloading. The statements of the mission at the workshop and the mission's Aide Memoire appear as Annexes 4 and 5. The mission also prepared a special report on overloading. This report is attached as Annex 8.

The Zambian regulations on control of overloading, maximum vehicle dimensions and maximum permissible axle loads are based on the Roads and Road Traffic Act (Cap. 766). The relevant regulations were amended in 1993 and 1994. Axle loads and vehicle dimensions were brought in line with SADC and COMESA standards through Gazette Notice No. 1374 of 1993 on Maximum Vehicle Dimensions and Maximum Permissible Axle Loadings.

Zambia has not yet implemented the SADC policy and overload control regime. The Protocol on Transport, Communications and Meteorology in the SADC

Region (Southern African Development Community – SADC) defines the policy in respect of dimensions of vehicles and loads on vehicles as well as in respect of abnormal, awkward and hazardous substance loads and road traffic control and policing, see Annex 9.

A SADC overload control regime was adopted by the Southern Africa Transport and Communications Commission (SATCC) in 1994 (Lauridsen et al., 1994). The regime introduced an administrative "infringement system" of dealing with overload offences on the spot instead of the previous prosecution system and new schedules for overload fees based on pavement damage and travel distance, see Annex 10. The fee schedules implied a dramatic increase compared to the previous maximum fees.

At least three studies on overload control have been carried out in Zambia. The first, called the Zambia Weighbridge Project, comprised a draft project description inclusive of a national plan for location of weighbridges, i.e. at border posts and other strategic locations on the road network (Mathisen, 1988). The next was a comprehensive weighbridge study carried out four years later (Director of Roads and E. G. Pettit and Partners, 1992). The study report describes existing operations, current legislation and evaluates the existing operations. The third study was carried out last year under the institutional co-operation agreement between Roads Department and Norwegian Public Roads Administration (Muskaug, 1999). It included both axle load control and road safety and aimed at identifying areas for further institutional co-operation.

Against the above background, the prevailing situation can be summarised as follows:

- The current vehicle overload control legislation in Zambia is inadequate
- The current fine of K 500 per kilogram is too low
- The current control practices are not up to standard
- Existing weighbridges are too few and too old

Overload control is considered a priority matter and should be included as a sub-component in the new Road Sector Programme.

Objectives

The primary objective of this sub-component is to assist in providing a framework for more efficient overload control and to strengthen the technical and managerial capacity of Roads Department and its successor in this respect.

The specific objective of this is to provide technical assistance as required.

Contents

The sub-component comprises technical assistance to Roads Department and its successor, preferably through institutional co-operation.

Budget

The total cost of the sub-component is estimated at NOK 5 million for the programme period.

8.4 Development of Technical Competence

This sub-component comprises support to development of specific technical competence that is needed in the future road organisation. The support is concentrated to two areas, namely (i) Manuals, Guidelines and Standard Specifications and (ii) Central Materials Laboratory. The total costs for the said areas are estimated at NOK 6 million.

8.4.1 Manuals, Guidelines and Standard Specifications

The growing demand for road maintenance and rehabilitation will call for more involvement of local contractors in particular, small scale and labour based contractors. This category of contractors requires assistance in understanding job requirements. Similarly project and contract managers need full understanding of the standard specifications for various construction/maintenance works. Development of contract management and manuals is essential to increase capacity and competence of the road administrations.

The Current Situation

Road design manuals and standard specifications in use in the Roads Department were developed years back in the 1960' and have been revised periodically. The standard specifications for Roads and Bridges in Zambia have not been revised since 1973.

Regional co-operation within SADC has lead to standardisation and harmonisation of technical guidelines in road design and construction. As a result of this, SADC Guidelines for Road Design and Specifications are now in existence.

A road maintenance handbook for Africa was produced in the mid 1980's under the auspices of the United Nations Economic Commission for Africa (ECA). The handbook is in three volumes comprising (i) General Guidelines, (ii) Maintenance of Gravel Roads and (iii) Maintenance of Paved Roads.

Under the Feeder Roads for Fisheries Project in Luapula and Northern Provinces, undertaken in between 1984 and 1986, a maintenance manual for gravel roads was produced. The project was funded by the government of Canada.

There is a clear need for preparing updated manuals, guidelines and standard specifications for Zambia. It is recommended that this activity be included in the new Road Sector Programme.

Objective

The main objectives of the activity are to develop contract management manuals and to develop standard specifications for road repairs.

Contents

The support comprises technical assistance to Roads Department and its successor, preferably through institutional co-operation. The Review Mission has gathered that there has been a preliminary discussion on contract management guidelines between the department and the Norwegian Public Road Administration.

Budget

A provisional sum of NOK 3 million is suggested to kick off the activity.

8.4.2 Central Materials Laboratory

The Central Materials Laboratory (CML) was established to provide all the technical information necessary for design, construction and maintenance of roads and related structures and to effect quality control at all stages of construction and maintenance works. The CML also serves the PRE's.

The Current Situation

The staffing is not satisfactory presently. The Head of Section is currently abroad for a one-year course. The position of Chief Materials Officer is vacant. A recently appointed Senior Materials Officer is acting as Chief Materials Officer. One Senior Materials Officer is virtually retired and will be leaving any time.

At lower level the positions are filled but the majority are ill qualified and need further training.

In the past one technical assistant has been attached to the CML through a co-operative arrangement between the department and the Norwegian Public Road Administration. Unfortunately, such co-operation did not yield the expected results and sustainability was not achieved.

In the new scenario of maintenance by contract, the functions of the CML will be more important than before as there will be more focus on quality control of road works. This, however, can not be achieved with the current capacity of CML. There will also be more need for testing at the PRE's offices in future. Another important function of a Materials Laboratory is to produce technical guidelines to the PRE's to assist them in contract management. This is not possible in the current status of the CML.

There is an urgent need for strengthening the CML. It is recommended that this be included as a component in the new programme.

Objective

The primary objective is to develop the CML into a unit of high professional competence and capacity. Further, to improve overall operational efficiency. The change from force account to contracting has resulted in increased demand for CML services, especially in the provinces.

Contents

The support comprises technical assistance to Central Materials Laboratory, preferably through institutional co-operation. The Review Mission has understood that Roads Department and the Norwegian Public Roads Administration have expressed the wish and need to give further co-operation a chance. Further co-operation within a well-defined framework should therefore be considered.

Budget

A provisional sum of NOK 3 million is suggested to initiate the support to Central Materials Laboratory.

8.5 Development of Financial Management and Human Resource Development Skills

The institutional reform process will bring about new roles and responsibilities for the road administration. Such reforms require much more focus on financial management and accounting and on human resource development. These functions are comparatively week in the current Roads Department. Therefore the need to build capacity and competence in this respect within the new road administration is highly needed to implement and manage the reforms.

The Current Situation

Financial management and accounting is currently a problem area. At present accounting staff is seconded from the Ministry of Finance and Economic Development. Such an arrangement means that accounting staff has double loyalty, to the seconding ministry and to the institution they serve. Besides, institutions may not feel obliged to include such accounting personnel in training programmes because they are always being rotated among institutions. There is need to develop permanent in-house accounting capacity as will be required under the expected new regime.

Roads Department is still short of manpower and lacks engineering capacity in many areas, among them feasibility studies, design and contract preparation and contract supervision and monitoring. Generally, human resource development has not been a priority area. A plan is this respect is being prepared, but much remains to be done.

Dramatic improvements in respect of both financial management and accounting and human resource development will be needed when the new road organisation starts operation. Support in this respect will be critical for the functioning of the organisation and it is recommended to include this as a sub-component in the new programme.

Objectives

To develop an efficient in-house financial management and accounting unit and to develop a human resource development unit.

Contents

Technical assistance to Headquarters, if possible institutional co-operation should be considered.

Budget

The total cost of the sub-component is tentatively estimated at NOK 4 million for the programme period.

8.6 Road Sector Training

This sub-component can be seen as a continuation of the current Roads Department Training School (RDTS), which is described in Section 4.2. The need for the proposed activity is described in Chapter 7 above.

8.6.1 Background and Current Situation

The Roads Department Training School was established under the force account regime to provide internal training of the department's staff. The labour-based training section was integrated with the school in 1994 and the training shifted towards contractor training in 1995.

With the labour-based section integrated with the school, it was possible to train road authority staff to manage labour-based road works, develop a local contractor capacity for labour-based road works and promote and support implementation of labour-based technology. The school has conducted awareness creation seminars for project managers and decision-makers.

The labour-based section received funds directly from NORAD for training in labour-based techniques from 1994 to 1998. Since then only limited funds have released during the two bridging periods. The school has therefore not been able to undertake much training.

The school was re-built in 1999 for funds from NORAD and has excellent training facilities today.

Although the school has a well functioning labour-based section, no Government funds have come forth in recent years to operate the school. Accordingly, the school has been entirely dependent on NORAD funding. Uncertainties about continued funding in 1999 and 2000 has severely affected the activities of the school as only very limited funds were received to keep it operating at a reduced level. The school lost some of its staff during the time of constructing the new premises, and is no longer sufficiently staffed to meet the demand for training.

Many stakeholders see the school as the future key training provider in the road sector if its current institutional set-up is changed. It has a wealth of information concerning labour-based training and other related matters. Various forms of contracts have been developed and established to meet the training needs.

8.6.2 The New Road Sector Training Institution

The training school has an important role to play in the process of increasing local participation in the road sector. However, it cannot remain a Government institution as it will then not be provided with sufficient funds for operation and hardly attract the private industry to its courses. Furthermore, the current structure of the school is not geared to take on the large training programmes needed.

It is recommended that NORAD give full support to the training institute during the four-year programme period. A short study on the feasibility of transforming the school into a Trust is urgently required. Since 1993, four training needs assessment studies have been undertaken. The short study should summarise information on training needs from the previous studies and assess the actual demand for training. The result of the study will enable the Ministry of Works and Supply to firm up the necessary recommendations to Cabinet and to prepare the legislation required.

Recently, an In Service Training Trust (ISST) was established under National Resource Development Council (NRDC). The study should review the progress and current situation of this trust to learn from its experience.

In order not to loose momentum, NORAD should release limited funds for the study and for labour-based activities. If the study is undertaken in early 2001, it is envisaged that the bill can be approved by Parliament before the end of 2001.

Conditions for Support

The conditions for continuation of the support are established in Sub-section 7.6.2 above. They are described in more detail below. It is recommended that funding beyond the above study be subject to the following:

The School is transformed into a Trust with a Board of Trustees that reflect the Market for Training

The transformation into a Trust to serve the private and public sectors is in line with previous recommendations from the stakeholders and the Public Service Reform Programme.

A Board of Trustees should be appointed representing the private and public sectors. The Board will carry the overall responsibility for the Trust and should be supported by a Secretariat headed by a Manager responsible for daily operation of the new institution. It is essential that the composition of the Board reflects the market for road sector training and that members are market and training oriented. The institution will be instrumental in providing skilled personnel for the construction industry.

The new institution (the institute) should be given a new name reflecting its business and new national mandate, for instance Roads Institute of Zambia.

New Staff to be recruited, based on better Employment Conditions

New conditions of service for trainers and administration staff, including new salary schemes should be introduced. This will attract the most qualified trainers to the school. Appropriate remuneration should make it possible to employ a well-qualified Manager with private sector experience to run the new institution and report to the Board of Trustees.

The Manager will be supported by a minimum of supporting staff during the initial phase. Professional lectures will be engaged on short-term contracts from outside the institution.

Training should be demand driven

The institute should offer market oriented demand driven courses, not necessarily short ones as by the workshop held in April 2000. Courses should be tailor-made to meet the need for specific training. The institute should in the longer term offer training covering a wide range of subjects from artisan to management levels. Courses developed should be accredited by TEVETA.

It is important that the institute be able to respond quickly to the changing needs of the market. For example, if there is a change in legislation or contract procedures, it should be possible to quickly offer new courses that reflect such changes.

External Funding should be secured gradually

It is essential that the institute becomes self-financed in the long-term time perspective. That may, however, take some time, but it is important that the institute immediately takes step to secure financing its operations, at least partly, with external funding. This is discussed further in Sub-section 8.6.5 below.

Alternative Option in Case the Conditions are not met

If the above conditions are not met, it is not recommended that NORAD support the school, as it is not considered sustainable if kept within the present Government institutional framework.

The labour-based projects have, however, had such success in Zambia that it would be wrong to take away the support for this important component at this stage. Especially, as it is the policy of the Government not only to see the road as an end product, but also to consider how to get there. One of the main trusts of the national plans is to create employment in the road sector. The labour-based approach to constructing and maintaining roads has been widely recognised, and its reliance on local resources praised by several road stakeholders in Zambia. The road organisations would like to see the labour-based approach expanded in order to meet the needs all over the country.

It is therefore recommended that NORAD continue to fund labour-based training as a separate component in the same way as in the first phase of the programme. This means to operate the activity as a project within an appropriate framework. It is not the optimal solution, as the labour-based approach has come a long way in becoming institutionalised as a useful contributor within the overall road sector training.

If the labour-based section is set up as a project, it is recommended that it also in future be operated under an agreement with ILO. It might be somewhat cheaper to run the project directly and appoint technical assistance staff, but sustainability would then be more at risk than under an agreement with ILO.

Another possibility would be to transfer the labour-based section to the National Council of Construction (NCC), as the council is strategically located at the premises of the school. However, at this stage of development of NCC, this option is not found feasible. But, it is considered important to have a close link between the labour-based section and NCC to promote and facilitate the work evolving around these small-scale contractors. The contractors need assistance to be certified and registered at the various road agencies and to get access to equipment. NCC can play an important role in this respect.

8.6.3 Goal and Objectives

The following goal, purpose and expected outputs are proposed for the support to the new institute.

The Goal (long term development objective) for this sub-component should be in line with those of ROADSIP, that is to contribute towards an improved road sector. The four goals listed in the programme document of April 1999 are all relevant, but they should be reworded and merged into the following:

> Improved quality and reduced costs in construction and maintenance of roads through increased use of local resources.

The purpose (immediate objective) should be expressed in the following way:

> The Training Institute developed to cater for the training demand in the road sector, operating on a self-sustaining basis offering training courses in the road sector.

The expected outputs should address staffing, development of new courses, conducting old and new courses, expansion of labour-based training and marketing.

It is important that goals, purposes, expected outputs and activities are expressed in clear terms and that the outputs are quantifiable.

8.6.4 Contents of the Sub-component

It is recommended that NORAD gives the new institute full support within the next phase of the programme as soon as the new legislation has passed Parliament. The following advisory support to the institute is recommended:

Marketing Advisory Support

Marketing of the school is imperative. Furthermore, it is very important that the Board quickly responds to the needs of the market. Therefore it is recommended that an experienced person be engaged on a part-time basis over a period of two years to advice the Manager of the institute on matters related to training of the private sector.

Labour-based Advisory Support

It is expected that the training needs in labour-based technology for contractors and clients will be massive. The current advisory team should therefore be strengthened. It is recommended to retain the ILO labour-based adviser for a period of two years, during which his responsibilities are to be handed over to a local counterpart. The adviser will need the support from a field-training engineer in order to carry out training in the field. This post should be phased out after three years and be taken over by a local training engineer.

Training Adviser

With the envisaged change in training offered by the institute, it is recommended to engage a part-time adviser to the institute for course development other than labour-based courses. This input is estimated at around three months per year over the four-year period.

Staff

Under the new set-up, qualified staff is needed to run the institute. The Board will draw up new salary schemes and conditions of service, in order to attract the right category of people. This requires seed funding until the institute can operate on a commercial basis.

Development of New Courses

The labour-based section has already a well-developed training programme and no major changes are expected in the near future. However, the new institute will take on a new role of serving the private sector. New courses will have to be developed to meet the future needs of the road sector. It is therefore imperative to inject funds for this purpose the new institute's initial period of operation.

Purchase of Equipment

During the last two years no funds were set aside to maintain or repair broken equipment and vehicles and there will be a need to re-equip the institute. This includes procurement of new vehicles to be used for field training.

Operation of the Institute

Initially, NORAD is recommended to finance the daily operations of the new institute until the necessary income basis has been established.

Establishing a Construction Industry Training Trust

Turning a Government training school into a self-sustained private driven training institute will take time, and there are questions concerning various training programmes that need to be addressed. For example, who will be prepared to pay for long-term training of technicians?

It is important that the training offered in the road sector is well co-ordinated and that sufficient training funds are made available and directed at the place where they are most needed. Therefore a Construction Industry Training Board is needed, first of all to secure funding for training within the sector, and then to allocate it correctly.

The National Council of Construction (NCC) is an advisory body representing all trade organisations and professional bodies within the construction industry. NCC has its own statutory instrument and may be able to assist in establishing the proposed new board through an Act of Parliament. The establishing of a Construction Industry Training Board will enable trained firms and individuals to get accredited and eventually registered with the various road agencies.

Against the above background, it is recommended that limited funds be allocated to allow NCC to engage a consultant to study and draw up the mechanism for establishing the Construction Industry Training Board and Trust.

8.6.5 Costs and Budget

The school cannot be turned into a self-sustained training institute overnight, and it would need funds to commence the journey towards commercialisation. Donor support will be needed to cover the expenditure during the period of transition. It is anticipated that the NORAD support can be gradually phased out over a period of four years. The short study to be undertaken early 2001 will establish the demand for training and look into the questions of cost and income in much more detail. Financial targets must be established for the institute and they should be used to trigger release of further funds from NORAD.

The total operational costs of the institute are estimated at NOK 48 million for a period of four years. It is recommended that NORAD cover half of these costs or NOK 24 million. An indicative budget is shown in Annex 11. The anticipated distribution of costs and funding appear in Figure 8.1 below.

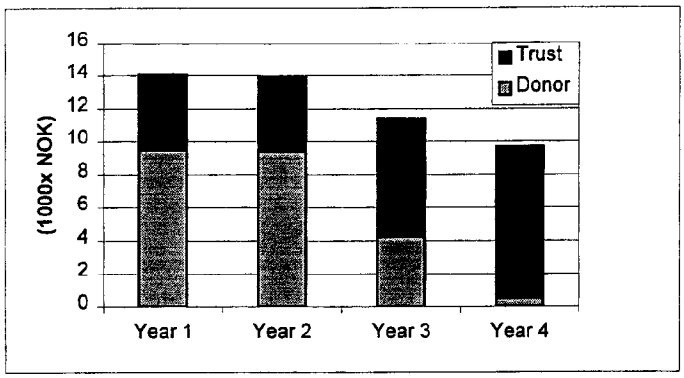

Figure 8.1 Anticipated Distribution of Operational Costs and Funding

Costs will be higher the first two years of the new institute because of the need for developing new courses. It is estimated that NORAD would cover approximately two thirds of the total cost for the first two years. This will give the institute time to broaden the activity and increase earnings from course fees. Therefore, the need for funding from NORAD will be reduced to one third of the costs during the third year and much less the fourth year.

The anticipated distribution of financing of the various cost items is shown in Figure 8.2 below. NORAD is recommended to fully fund the advisers and short studies.

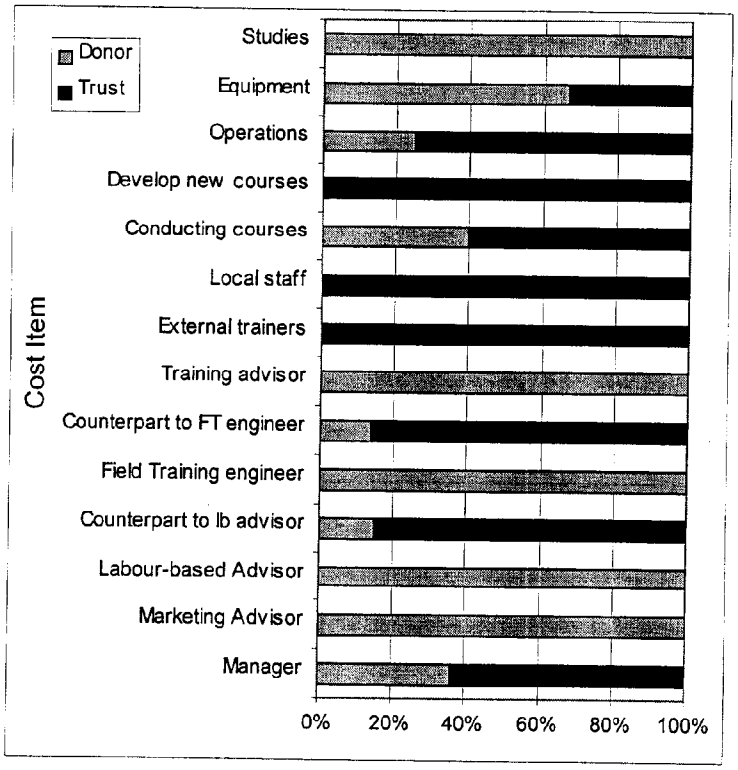

Figure 8.2 Financing of the Various Cost Items

Co-operation with DANIDA about the institute might be possible if the DANIDA current assessment of industry training in the road sector results in the incorporation a training component in the road sector programme supported by Denmark. Funding of the institute could in that case be divided in such way among the two parties, that it will not create too much difficulty making it a joint effort. A possible solution in this respect could be that NORAD fund the labour-based advisers through a contract with ILO and that NORAD continue funding the daily operations of the school. DANIDA could then fund the marketing and training advisers and finance the development of new courses and their execution.

8.7 Summary and Overview of the Component

There are many areas within institutional and human resource development that need support. The recommendations of the review mission are concentrated to two areas designated institutional development and road sector training.

The contents of the planned institutional reforms are not known at present. Five institutional development sub-components have been identified and described in

Sections 8.1-8.5 above. When the contents of the reforms become clear, emphasis may have to be shifted somewhat among them and other elements may be needed, for instance, some of those already discussed at an earlier stage like Road Safety and Road Design Unit. In order to provide for flexibility in this respect, NOK 9 million or 25 per cent of the overall budget for institutional development is left unallocated.

The necessary support for the road sector training sub-component has been estimated at NOK 24 million. This is based on the assumption that half of the operating costs for the new training institute during the four years period is covered by the programme whereas the other half is covered by the fees paid for courses.

Below follows an overview of the sub-components and the associated costs for the new Road Sector Programme.

Table 8.1 Cost of the Institutional and Human Resource Component by Sub-component

Sub-component	**Estimated Cost NOK million**
1 Institutional and Organisational Development	5
2 Road Maintenance	7
3 Control of Vehicle Overloading	5
4 Development of Technical Competence	6
5 Development of Financial Management & HRD Skills	4
- Unallocated Institutional Development	9
Sub-total Institutional Development	*36*
7 Road Sector Training	24
Total	**60**

The total cost of the component is NOK 60 millions or 60 per cent of the financial framework indicated for the new programme.

9 Main Conclusions and Recommendations

This final chapter summarises the main conclusions and recommendations of the review of the Road Sector Programme. Conclusions appear in Section 9.1, whereas recommendations on further support follow in Section 9.2.

9.1 Conclusions

The review shows that much remains to be done in Zambia in respect of reform of road sector policy and institutional framework. This is to some extent reflected in the progress, achievements and impacts of the components of the programme. The review of achievements focuses on the last two years, that is the bridging period funded by two addenda to the initial programme agreement.

Programme Contents and Financial Progress

The programme has two components. The first, Institutional and Human Resource Development comprises support to Roads Department Headquarters. The other, Roads Department Training School and Labour-based Techniques comprises support to the school and its labour-based section.

The budget for 1999 and 2000 was around NOK 12.7 million for the first component. Of this, NOK 7.5 million or 59 per cent had been spent up to end June 2000. Expenditure for 1999 corresponded well to the budget for that year, whereas expenditure for 2000 is somewhat lower than planned for most budget lines.

For the training school component, the NORAD budget for 1999 and 2000 was around NOK 18.1 million. Of this, NOK 11.3 million or 62 per cent had been spent up to end June 2000. Expenditure is lower than planned for the whole period. In 1999, expenditure only reached 70 per cent of the budget, whereas expenditure for the first half of 2000 was a little more than half of the budget for the year. Major reasons for this are that expenditure for investment in equipment and for technical courses and short courses was almost nil. The Government's budget for the component for 1999 and 2000 was set at NOK 5.7 million. So far, these funds have not been released.

Relevance, Effectiveness, Impacts and Sustainability

The goals and objectives of the programme are relevant. It appears, however, that the definition of goals, objectives and expected outputs for the programme is not too clear leading to inconsistencies. Formulations in this respect have been changed frequently and such changes make it very difficult to manage the programme properly. In addition, too ambitious formulations are common, which makes it difficult to assess performance.

None of the components can be said to have achieved much in comparison with the expected outputs. Only a third of the planned outputs have been achieved or

partly achieved as yet. Two thirds have not been achieved. Programme effectiveness, therefore, appears very low. It should, however, be taken into account that the level of ambition seems to have been high, and probably to a large extent unrealistically high, especially considering the short duration of the bridging period.

Some outputs have started to take effect, for instance the Strategic Corporate Plan for Roads Department for which implementation has now started. The same applies to the upgrading of the Roads Department Training School and the activities of the labour-based section of the school. Compared to the expected outputs for the whole programme, however, impacts have been limited so far.

Sustainability has been very limited and is regarded low for the first component, Institutional and Human Resource Development. Sustainability is also limited for the other component, Roads Department Training School and Labour-based Techniques, as a whole. The school's labour-based section is, however, considered sustainable now. The school as such is not sustainable yet and will hardly become sustainable within its current institutional framework.

Financial Management

Financial management of the grant has not been optimal. Roads Department does not employ any accounting staff but has, in accordance with Government practise, accountants seconded by the Ministry of Finance and Economic Development. This is not a good solution for the department as competent staff is easily transferred to other assignments.

Auditing has also been a problem. The Auditor General's office works too slow to meet the requirements of the programme agreement. A private auditor is therefore used. The auditing of the 1998 accounts, which took place during the review mission, showed serious deficiencies in the accounts as prepared by the accountants seconded to Roads Department.

Institutional Co-operation

Institutional co-operation between Roads Department and the Norwegian Public Roads Administration and the International Labour Organisation (ILO) respectively are important elements of the Road Sector Programme.

Institutional co-operation between the department and the Norwegian counterpart has not worked well. It is difficult to assess precisely why. A main reason may be that no proper framework was established from the beginning. Other reasons may be frequent changes of contact personnel and insufficient contact and communication between the two parties. Co-operation has remained at a very low level the last few years.

The institutional co-operation between the Roads Department Training School and the ILO has worked well. This has contributed to the achievements of the labour-based section of the school.

Road Sector Reform

The current road sector policy and institutional set-up in Zambia does not provide an adequate framework for the new Road Sector Programme. Reform of the sector policy and the institutional framework is therefore urgently required. Zambia is lagging behind other countries in the region. Many SADC member states, among them three neighbouring countries have already introduced the necessary new policy and implemented the corresponding new institutional framework including a road agency.

The assessment made by the ROADSIP Mid-term Review Mission in December 2000 clearly revealed that much remains to be done in respect of sector reform in Zambia. This situation creates serious uncertainties for further support to the road sector from the co-operating partners. It also raises serious questions about the possibilities for successful implementation of the planned NORAD supported programme.

9.2 Recommendations

The review has revealed that there is a substantial need for further support to the road sector in Zambia. This comprises support to institutional development of the road administration and support to strengthening the local construction and consulting industry. Development of sustainable systems for maintenance and addressing the maintenance and rehabilitation backlog are also important areas for support.

The main recommendations presented below are based on the framework provided by NORAD's Mandate for Dialogue. The mandate proposes a budget of NOK 100 million for the new four years Road Sector Programme.

Programme Structure and Contents

It is recommended that the new programme comprise two main elements. The first is Institutional and Human Resource Development. The other is Possible Support to Upgrading of National Park Roads.

Support to institutional development would comprise institution building in Roads Department and its successor with focus on the following five sub-components:

- Institutional and organisational development of the road administration
- Road maintenance
- Control of vehicle overloading
- Development of technical competence and quality control
- Financial management and human resource development

Road maintenance falls under the Provincial Roads Engineers and support in this field must therefore be directed at their offices. Support to all other fields will be directed towards Roads Department Headquarters.

The cost of support to institutional development has been estimated at NOK 36 million, of which NOK 27 million has been allocated to the five sub-components. NOK 9 million or 25 per cent has been left unallocated to provide for the necessary flexibility during implementation.

It is recommended that support to human resource development comprise road sector training. Such support will be a continuation of the current support to the Roads Department Training School, including the labour-based section. It is, however, time to broaden the scope of training offered at the school to respond to the huge training need of the private and public sectors. It is recommended that the school be converted into an institute organised as a trust. The cost of operating the new institute is estimated at NOK 48 million for the first four years, of which the support from the programme would be NOK 24 million and a similar amount would derive from course fees.

It seems too early to propose detailed recommendations on the possible support to upgrading of National Park roads. There is a need for support to such roads and tourist roads have been included as a component in a draft proposal for the second phase of ROADSIP. When assessing this component in more detail, support to roads within the parks as well as access roads should be considered. The assessment should not only look at the possible road projects, but also include the parks in a wider context, taking into account among other matters their standard of wildlife management and the market potential.

Implementation Issues

The institutional framework for the new Road Sector Programme is not solid. Delays in implementing the necessary reform of the road sector policy and institutional framework and delays in deciding on a new framework for the training school create uncertainties.

The concerns expressed by the recent ROADSIP Joint Mid-term Review Mission, which included NORAD, cover road sector policy, institutional reform and various other matters. They reflect issues that are of serious concern also for the new Road Sector Programme.

Certain conditions should therefore be introduced. Timeframes for the work and clear deadlines for decisions to be made by Government should be established for the new programme. Financing should only be released when such deadlines are met. Other international partners will most likely need to introduce similar conditions. It is, therefore, advisable to use the Donor Forum as co-ordinator in this respect.

The proposed future training activities can only succeed and become sustainable if the institutional framework for the Roads Department Training School is changed. Support by NORAD should, therefore, be subject to that necessary efforts are

made to make the institution self-sustaining in its operations. It is recommended that a short feasibility study is carried out urgently and that specific conditions be met before NORAD embarks upon further support to the school. Key conditions in this respect are that the school is transformed into a Trust with a Board of Trustees that reflects the market and that a professional Manager is appointed and other staff employed under new conditions of service.

ANNEXES

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Annex 1

Terms of Reference

Prospective Review and Final Assessment of ZAM 0053 Road Sector Programme

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1 Background

In September 1994 Zambia and Norway entered into an agreement to support institutional reform and human resource development within the road sector. The programme consisted of three main elements:

1. Institutional reform and development
2. Human resource development
3. Labour based techniques

On the basis of this bilateral agreement two separate agreement where concluded namely: Institutional co-operation between Roads Department and Norwegian Public Roads Administration (NPRA) and Co-operation between Roads Department and International Labour Organisation (ILO).

A review of the programme was carried out in 1997. The recommendation was continued support. Hence a new programme document was prepared in 1998. Pending the strategy discussion regarding the profile areas for further Norwegian support to Zambia the conclusion of a new agreement was put on halt until the new country strategy was finalised.

As a result two addendum's have been signed to the value of 21,5 mill. NOK.

Under Bi-lateral negotiations between Zambia and Norway in March 2000 support to the road sector was included as one of four main areas for support.

2 Purpose

The purpose of this prospective review will be through retrospective examination of the content and achievements of the ZAM 053 to seek to identify which initiatives have been successful and which aspects needs modification. It will also provide recommendations as to future Norwegian support to the roads sector in line with Zambian transport sector policies in general and as an integrated part of

ROADSIP (Road Sector Investment Programme) in particular. Hence, the objective is to be both backward and forward-looking.

The recommendations for further support should not be limited to areas of previous Norwegian support, but give advice and guidance to the most effective way further Norwegian support can assist Zambia in their endeavours to develop the road sector.

The purpose will also be to participate in the ROADSIP Mid-term joint donor review mission.

3 Scope of work

To assess the achievements and their concrete impact on Roads Department operation compared to programme objectives. Particular attention should be paid to:

- Institutional development, including an assessment of the agreement and content of the institutional co-operation between NPRA and Roads Department.
- Labour based technology, including an assessment of the agreement and content of the co-operation between ILO and Roads Department.
- Human Resource Development, including the support to Roads Department Training School.
- Financial Management of the grant.

Specific issues to be covered:

- A rapid assessment of the efficiency and effectiveness of the overall programme. This includes an assessment of the results achieved by all the components related to the resources made available.
- A rapid assessment of the relevance of the goal and purpose of the overall programme and to what extend the programme has achieved its purpose, including an analysis of the processes that have facilitated or prevented this.
- An rapid assessment of the possible sustainability of the programme, to what extend it is likely that Zambia will continue to pursue the purpose of the programme after NORAD has terminated its assistance.
- An overview and rapid assessment of the expenditures and financial management of the grant.
- An in-depth assessment of the experiences, impact and achievements of the institutional co-operation between NPRA and RD. An assessment of the experiences with Technical assistance personnel.
- An in-depth assessment of the experiences, impact and achievements of the co-operation between ILO and RD. An assessment of the experiences with Technical assistance personnel.

- An in-depth assessment of experiences, impact and achievements of the support to the Roads Training School. An assessment of the experiences with Technical assistance personnel.
- A general assessment of Roads Department's organisation and human resource capacity to fulfil their new role under the PSRP with particular regard to routine and periodic maintenance. Including organisational capacity, planning capacity, co-ordination and to delegation to provincial level and contract management capacity.
- Other relevant issues as identified by the Team.

Based on the above findings the team should outline their recommendations regarding the profile of present programme, but also regarding possible future support to institutional development within the Road Sector in Zambia. The recommendation should take into consideration other ongoing activities of the Government within the road sector like the ROADSIP programme and the Public Sector Reform Programme (PSRP) and the Mandate for Dialogue (Norwegian Embassy) for further support to the road sector.

- An assessment of the proposed channelling of funds through NRB.
- The most relevant areas for future support to the road sector in view of the reforms, the review, the ROADSIP review reports and the profile of the present road sector programme.
- Brief description of components for the proposed programme.
- Budget estimates for the proposed components of the next phase of the programme.
- Assess possible support to investments in upgrading of National Park Roads according to the ROADSIP II Programme.

4 Implementation

The Team shall, consist of one Team Leader with experience from the transport sector and transport sector reforms in Africa with knowledge of Norwegian aid policy and institutional co-operation, One Roads Engineer with experience from labour-based technology and one local Consultant with experience from the transport sector and with in-depth knowledge and experience from the Road Sector in Zambia.

Teamleader:	Henning Lauridsen, Chief Research Officer, Institute of Transport Economics, Oslo, Norway
Roads Engineer:	Ulf Brudefors, Hifab, Stockholm, Sweden
Local consultant:	Tyson Ngoma, Consultant, Lusaka, Zambia

The Team is expected to need approximately two and half weeks in Zambia in addition to preparatory work and finalisation of the report. The mission shall be carried out from approx. 19 of November to 11th of December 2000.

The Norwegian Embassy in Zambia and the Government of Zambia shall assist the Team in acquiring information and make available all necessary reports, data and documentation.

5 Reporting

The team is required to present their conclusions, findings and recommendations in form of an inception report on the Annual Meeting between Zambia and Norway on the 4th of December 2000. A final report shall be submitted no later than 15th of January 2001. The report shall present the views, findings and recommendations of the Team only and shall not be binding for either the Zambian or the Norwegian Government.

The report should have an introduction, executive summary, main text and a presentation of major findings, conclusions and recommendations.

6 ROADSIP Mid-term joint donor review mission

In addition to the tasks and reporting requirements and outlined above, the team shall;

- Participate in the ROADSIP Mid-term joint donor review mission. The particular tasks will be related to axle load control and labour-based contracting. The specific tasks will be to assist the Mission Team Leader for ROADSIP. Attached to these terms of reference is a letter to the Permanent Secretary, Ministry and Communication and Transport, Lusaka. The letter outlines the objectives, scope of work and composition of the ROADSIP Mid-term joint donor review mission and the input required from the team.

- Assist the team leader of the ROADSIP Mid-term joint donor review mission all issues related to the mission and provide written input as required.

- The team shall present a short report by the 15th of January 2001, outlining the experience of participating in the ROADSIP review mission and advice on potential for improvement for future missions of similar nature.

Annex 2

List of People met and interviewed

Ministry of Communications and Transport
Mr. B. Nonde, Permanent Secretary
Mr. W. Mwandila, Director of Planning
Mr. P. H. Cholwe, Senior Transport Economist
Mr. D. P. Zulu, Acting Senior Economist

Ministry of Local Government and Housing
Mr. P. Lumbambo, Director Department of Infrastructure and Support Services
Mr. N. Siame, Senior Engineer

Ministry of Works and Supply
Mr. P. G. Nyirenda, Permanent Secretary

National Roads Board
Mr. R. A. Jhala, Chairman
Mr. N. Gananadha, Executive Secretary
Mr. R. Mabenga, Co-ordinator Highway Engineering

Roads Department
Mr. J.D. Mwila, Director of Roads
Mr. J Mwewe, Deputy Director (Operations)
Mr. L. Bustnes, Institutional Planner
Mr. J. Donovan, Adviser to Deputy Director (Operations)
Mr. A. Stanbury, Adviser to Acting Deputy Director (Planning)
Mr. R Phiri, Provincial Roads Engineer, Lusaka Province

Roads Department Training School
Mr. C. Mushota, Principal
Mr. M. Chibale, Training Officer
Mr. C.- E. Hedström, Chief Technical Adviser (ILO)

National Council for Construction
Mr. F. M. Ndilila, Chairman
Dr. M. S. Mashamba, Executive Secretary
Mr. A. Lüring, Member
Mr. M. Mangandi, President of the Zambia Institute of Architects
Mr. B. Mumbe, Kansai Construction Ltd.

Consultants, Contractors and Others
Mr. F. van Dixhoorn, Dir. Development Services and Initiatives Southern Africa
Mr. P. Turner, Turner Construction
Mr. K. Stephen, Association for Small-Scale Contractors

Delegation of the European Commission
Mr. Guy Rijcken, First Counsellor

Royal Danish Embassy
Ms. S. Olsen, Counsellor
Mr. N. Lauridsen, Programme Co-ordinator for Skills Training TEVETA
Mr. N. H. Andersen, Head DANIDA Training Mission
Mr. G. Scott, DANIDA Training Mission

Royal Norwegian Embassy
Mr. L. Sauvik, Counsellor
Mr. B. Hunnestad, First Secretary
Mr. M. E. Grøva, Second Secretary

KfW - Kreditanstalt für Wiederafbau
Mr. K. Grüning, Division Chief, Headquarters Frankfurt

NORAD - Norwegian Agency for Development Cooperation
Mr. Ørnulf Strøm, Adviser, Headquarters Oslo

World Bank
Ms. M. Plessis-Fraissard, Africa Transport Sector Manager, HQ Washington, D.C.
Mr. S. Brushett, Team Leader ROADSIP Mid-term Review, Washington, D.C.
Mr. G. A. Banjo, Regional Advisor RTTP Africa Region, Harare
Mr. D. Rudge, Highway Engineer, HQ Washington, D.C.
Mr. Y. Kawasumi, Senior Highway Engineer, HQ Washington, D.C.

ILO – International Labour Organisation
Mr. A. During , Programme Officer, Country Office Zambia
Mr. T. Tessem, Intensive Employment Specialist SAMAT, Headquarters Geneva

NPRA - Norwegian Public Roads Administration
Mr. Kjell Bjørvig, Deputy Director General
Mr. K. Levik, Director Technical Department
Ms. S. Sørensen, Head International Division
Mr. P. Koren, Senior Engineer, Country Co-ordinator Zambia

Annex 3

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Annex 4

Republic of Zambia
Road Sector Investment Program (ROADSIP)
Mid Term Review Workshop
Lusaka, Zambia December 6-7, 2000

Statement Issued on behalf of the Joint Mission to the Mid Term Review (World Bank, Norway, Denmark and European Union)

Chairman, Ladies and Gentlemen

I have the pleasure to address you on behalf of members of the joint mission – World Bank, Norway, Denmark and the European Union – who have been among the principal external partners supporting ROADSIP to date.

We very much appreciate the effort that has gone into organizing this workshop and are pleased to have been invited to attend and given this opportunity to convey our views.

The presentations and discussions thereon during these two days have underlined the strong interest of Zambia in the road sector and confirm the impressive record established under ROADSIP for wide dissemination of information to stakeholder groups and for giving opportunity for stakeholder discussion and input into the decision making process in the sector.

The workshop has highlighted important achievements under ROADSIP to date including: progress on the civil works program, especially on the main and trunk paved network and on urban roads; better then anticipated performance on financing from the donor community. A start has been made on strengthening of some sector institutions and on capacity building for improved road management. The workshop has not though shied away from highlighting areas where performance has failed to reach targets, such as on the resources made available to the Road Fund and on the extent of the maintenance program. While this degree of openness is to be welcomed, the donors would have thought that it would have been possible to make a more balanced and quantified presentation - of actual performance against original target - based on the fairly extensive analyses carried out in the preparatory reports on the five components. In fact it is surprising to note that no mention has been made of the Mid Term Review report which contains this work. We would encourage all parties to review and digest the findings and recommendations before finalizing the action plan for the way forward.

Chairman, ladies and gentlemen, we are pleased to be working as partners of the Zambian Government and the program executing agencies for ROADSIP. And it is in the spirit of partnership that we table the concerns that follow. In this

partnership the donors have pledged further and quite substantial funding (both in relation to pre-1997 support to the road sector) for ROADSIP on the understanding of a new compact – based on the principles of the Road Management Initiative (RMI) – under which adequate and sufficient funding for maintenance would be secured, maintenance would be given highest priority, and policy and institutional reforms would be carried out to support these intentions. The workshop presentations and discussions do not give us grounds for believing that Zambia has yet delivered on its side of the compact. It should be of grave concern not only to the donors but also to Government and the stakeholders of the program that there is a risk of slipping back towards the failed approaches of the past.

The joint mission is sensitive to the need to allow time and space in which policy reforms and the institutional and financial consequences can be developed and consensus built around concrete actions. With all due respect however, such time and space has been built into the first phase of ROADSIP up to the point of this mid term review. This is as reflected in the letter of road sector policy dated March 1997 where a number of undertakings were made by Government. In the continued unavailability of a comprehensive transport policy statement, this letter serves to guide the donor community as to the intent of Government. Many important undertakings by Government to completed by or before the mid-term review have yet to be accomplished including the following six points, i.e.:

- Reviewing the opportunity for rationalizing the sector institutional framework;
- Securing the institutional and legal basis of the NRB and the Road Fund;
- Carrying out a reform of the Roads and Road Traffic Act;
- Streamlining the payment of fuel levy payments to the Road Fund;
- Diversifying the sources of funding for the Road Fund; and
- Giving highest priority to routine and periodical maintenance in the allocation of Road Fund revenues.

The joint mission is asking in the spirit of partnership and in anticipation of the Government's request for further support for the next phase of the program that a new policy understanding be urgently drawn up and agreed and that the donors be given an opportunity for consultation. We acknowledge that such may firstly be dependent on Cabinet consideration and adoption of the policy statement which has now been prepared by the responsible ministry. The joint mission would stress however that further delays in elaborating detailed policy measures – both short and long term - will inevitably delay the further external support.

In particular the joint mission would want to stress the following as areas of primary concern which must be addressed with immediate effect. In all cases, the joint mission would emphasize that what is required is that decisions are made in the respective areas by the responsible agencies of Government. On the basis of what we have heard during this workshop, we believe that the following assertions should merit the support of all stakeholders:

- Institutional reform: There is a state of uncertainty on what further reforms are being considered, to what extent these will involve rationalization of roles and responsibilities, and to what extent these will be consistent with the underlying premises of the RMI, and with the process of decentralization. Further external support for capacity development and for funding of works in such an environment is difficult to conceive. Finally, an immediate step is to be taken to secure the future of the NRB beyond the expiry of the Board's current term end March 2001.

- Sector financing: There is yet neither a strategy by Government nor a revised financing plan for the balance of ROADSIP I which will demonstrate how the objectives of the program can be realized. It is not enough to confirm the existence of a financing gap, it is necessary to demonstrate how it can be filled. In this regard certain decisions have to be made, not least in relation to the provision of sufficient resources – in the most direct and transparent fashion - to the Road Fund.

- Maintenance priority: Preservation of road assets through a comprehensive, prioritized maintenance program is yet to be assured. This as previously stated is supposed to be a fundamental underpinning of the new compact in the road sector. It would follow that the emphasis on rehabilitation and upgrading should be curtailed – and projects which do not respond to ROADSIP I priorities, including those funded directly by Government, should be phased out altogether – until such time as the maintenance objective can be secured.

- Axle load control. As important as sustainable road maintenance for asset preservation is a viable system for ensuring no vehicle overloading on the road network. Reference has been made to this subject during the workshop. Reports are available that demonstrate the pervasiveness of overloading and the laxity of control. Further investment in rehabilitation and upgrading would be imprudent until such time as arrangements are in place to assure axle load control.

In the light of these considerations, the joint mission is surprised by the suggestion that the so-called ROADSIP II, the next five year phase of the ten year program, should be brought forward to start in early 2001. Notwithstanding that by definition ROADSIP II is the second five years of the program which do not in any case start before mid –2002 (bearing in mind the launch of ROADSIP was in July 1997), the joint mission find it not helpful and quite possibly misleading to take this step. From the foregoing it is quite evident that the objectives of ROADSIP I have not been met yet and that adequate time and opportunity has to be given to address this – not only with regard to the shortcomings on policy and institutional reform and on financial requirements for maintenance, but with regard to the civil works program as evidenced in the Mid Term Review Report.

Annex 5

Republic of Zambia
Road Sector Investment Program (ROADSIP)
Mid Term Review
Aide Memoire of the Joint Mission

Mission Objectives

A joint mission comprising Denmark, European Union, Norway and the World Bank carried out work in Lusaka, Zambia over the period November 30. to December 12. 2000. The objectives and scope of work of the joint mission are set out in a letter from the Norwegian Embassy dated November 15, 2000 addressed to the Permanent Secretary (PS) for Communications and Transport at Attachment 1. Attached to this letter was an Issues Paper for the Mid-Term Review dated October 2000 which also contains a proposed six point action plan for addressing the concerns raised in the paper.

Mission Composition

The joint mission comprised the following persons: Messrs/Mmes Stephen Brushett (World Bank Team Leader for ROADSIP), Bjarte Hunnestad (Second Secretary, Royal Norwegian Embassy), Sanne Olsen (Counsellor, Royal Danish Embassy), and Guy Rijcken (First Counsellor (Engineering), Delegation of the European Union). David Rudge, Yoshimichi Kawasumi (World Bank Highway Engineers), George Banjo (RTTP Regional Adviser), Ulf Brudefors and Henning Lauridsen (NORAD Consultants) and Guy Scott (DANIDA Consultant) participated in some of the messiness' meetings. Mr. Klaus Gruening (Head of Transport) of Kreditanstalt für Wiederaufbau of Germany consulted with the mission on some of the issues raised in the Aide Memoire.

Mission Work Program

The mission participated in the Mid Term Review Workshop which took place December 6-7, 2000 in the Pamodzi Hotel, Lusaka. A statement that was issued by the joint mission at the workshop's conclusions is at Attachment 2. The mission also had the following meetings to further explore issues and possible solutions, i.e.: o impact assessment with the National Roads Board and others; on policy and institutional reform with the PS for Communications and Transport and his staff; on financing arrangements with the staff of the Department of Budget and Economic Affairs; on axle load control with the PS for Works and Supply and his staff; on contractor and consultant development with the National Construction Council and various invited participants; on coordination of interventions I support of rural travel and transport and poverty reduction with the Acting PS for

Local Government and Housing and invited participants; and on the preparation of ROADSIP II with the National Task Force.

Mission' Principal Conclusion

In its concluding meeting with the Permanent Secretaries for the ROADSIP Steering Committee on Tuesday December 12, 2000 , the mission stressed the importance of the partnership between Government, local stakeholders and the donor community in delivering the necessary resources and support for the achievement of the objectives of ROADSIP. The mission was of the view that a new compact, meaning an understanding on policy reform and the means to attain it, now urgently needs to be drawn up to put the partnership back on a firm footing so as to ensure that the cooperating partners would be in a position to consider further assistance to the program.

This compact would set out the medium term vision of the policy and institutional framework or the road sector, with the supporting financial and legislative measures. It should also include a plan of action to address in the short term some of the deficiencies highlighted in the Issues Paper and in the documentation for, and the deliberations at, the Mid Term Review Workshop. The mission proposes that the compact should be prepared under the guidance of the PS for Communications and Transport with internal consultations as needed.

The mission further proposes the eventual agreement on the compact by end of March 2001 after its own inputs are take into consideration – derived from the Issues Paper and Statement. The mission's main concern is to receive comprehensive and viable proposals in relation to the following: institutional reform; sector financing; maintenance priority; and axle load control. The mission is available to provide clarification to Government on the points raised.

Mission's Further Conclusions

The mission proposed immediate actions that could be taken I the following areas to consolidate the partnership and the exchange of views and information as well as to start the process of addressing the issues, i.e.:

(i) Legislative Reform: Drafts of proposed revisions to the legislation contained in the Roads and Road Traffic Act have been prepared. In view of their linkages to policy and institutional reform, sharing of these drafts with the mission for information and possible comment and suggestion would enhance the spirit of partnership.
Action – MCT to provide copies soonest to the mission, consultations to be completed within one month of submission.

(ii) National Roads Board: Because of the likely delay beyond end March 2001 of the passage of the comprehensive legislation required to implement the transport policy, the mission urgently wishes to hear from Government that action is being taken to safeguard the continued operation and representativeness of NRB beyond the end of its currently mandated term of office.
Action – MCT to advise measures to be taken by end January 2001 and afford opportunity for comment and suggestion.

(iii) Road financing: The mission heard much support for: consolidation of all road sector financing under a single (ROADSIP) program; and direct transfer of fuel levy proceeds to the Road Fund. The mission would like to see what specific measures towards these goals are envisaged under the 2001 Budget. Furthermore concerning the imbalances between funding availability and requirements for the balance of ROADSIP I, the mission should be afforded an opportunity to review the Annual Work Program (AWP) for 2001. The mission would be prepared to identify a consultant and financing thereof to provide further assistance to MCT and NRB on the financing plan.
Action – MCT to assure copies of 2001 Budget and relevant supporting documents; NRB to provide a copy of the AWP by end of December 2000. Mission to provide comments and suggestions by end January 2001.

(iv) Axle load control: Immediate action can and should be taken under the present legal and institutional setting to improve performance. An action plan should be developed to be prepared by and subsequently monitored by a small Task Force. The donors would be willing to provide financial and technical support to this Task Force and to the implementation of the action plan with well defined targets. A more detailed report of the mission's observations on this subject is to be distributed separately.
Action – MWC in conjunction with MCT and NRB to set up Task Force by end January 2001. Mission to clarify support to be provided within same time frame.

(v) Strengthening institutional capacities: Pending institutional reform and any modification of the roles and responsibilities of particular institutions, the mission notes serious capacity constraints in contract management. This is so in Roads Department but more particularly in Department of Infrastructure and Support Services, which is a concern because of the centrality of feeder road provision for poverty reduction in the rural areas. This makes it difficult to sustain current projects, let alone contemplate new ones. An action plan to deal with this problem I the short term is urgently needed – the cooperating agencies stand ready to provide technical support.

Action – Through MCT, action plans to be provided by end January 2001. Mission to provide comments and suggested remedies by mid February 2001.

(vi) Stakeholder input to reform: Stakeholder input is critical to the success of road sector reform. The secretariat for the Mid Term Review Workshop produced a set of resolutions which it is intended to pass on to Cabinet as a reflection of the stakeholders' view, it would be preferable – if the resolutions are to have real impact – that they be edited for consistency of content and a time frame and areas of responsibility be added.
Action – MCT through NRB to put together a team to do this as soon as possible and preferably not later than end December 2000.

(vii) Impact assessment: The mission had fruitful discussions on the way forward in regard to poverty impact assessment – and supported the notion of a workshop in mid-January 2001 to review the field work done to date under DANIDA and World Bank/RTTP auspices. The mission also stressed the need to integrate this work into ROADSIP II preparation, but also into the Poverty Reduction Strategy Paper (PRSP) exercise to ensure future resource allocation to the road sector.
Action – Following have been agreed: Through NRB, briefing on ROASIP to be provided to PRSP teams by mid-December 2000. Strengthened participation of road sector in PRSP process with immediate effect thereafter. NRB to prepare terms of reference for ROADSIP poverty impact assessment by mid-January 2001, mission to provide comments and suggestions by mid-February 2001.

(viii) Preparation of ROADSIP II: The mission's queried the notion of an immediate launch of ROADSIP II in early 2001. It is however evident that the (technical) preparation of the next phase of the program (2002-2007) ought now to move into higher gear. To this end, the mission proposes further dialog – through the Donor Forum – with NRB and the National Task Force as needed to the end of a timely and coordinated preparation of the potential external input to the program. The mission emphasised also that the program document should address the sector response to HIV/AIDS.
Actions – Mission to provide feedback and suggestions on the Draft Bankable Document by end February 2001. NRB to coordinate the preparation of a revised final draft of this document taking this input into account.

(ix) Donor coordination: The mission recognises scope for improvement on both sides and suggests that the Donor Forum meet as needed with MCT and NRB to improve coordination, streamline reporting procedures, and provide better and more timely information on donor involvement, actual and potential.

Action – MCT to share with Donor Forum its proposed strategy on coordination by end December 2000. Donor Forum to respond to these proposals and communicate their own by end January 2001.

Next Steps

The mission proposes that – initially up to end March 2001 – there be regular contact between Government and the cooperating partners to ensure that the issues raised be addressed and the action plan be monitored. It is proposed that these contacts will be between the Donor Forum and the PS for Communications and Transport.

Annex 6

Provisions for Road Infrastructure Policy and Institutional Reform in the Protocol on Transport, Communications and Meteorology in the SADC Region

The SADC Transport Protocol was signed by the Heads of State and Government in Maseru in August 1996 and entered into force in 1998 after ratification by Parliament in the required number of the Member States. Zambia's Parliament has also ratified the Protocol. Legally, the Protocol is an instrument under the SADC Treaty.

The Protocol provides the background for harmonisation of transport policies within the region. The provisions of relevance for road infrastructure policy and institutional reform appear in Chapter 4, Road Infrastructure. The most important articles in respect of policy and reform are:

- Article 4.1 Objectives
- Article 4.2 Road Infrastructure Policy
- Article 4.4 National Roads Authorities
- Article 4.5 Funding Sources
- Article 4.6 Regional Funding Initiative

The text of the five articles appears in extenso below.

Article 4.1 Objectives

Member States agree to ensure and sustain the development of an adequate roads network in support of regional socio-economic growth by providing, maintaining and improving all roads including primary, secondary, tertiary and urban roads, including those segments which collectively constitute the Regional Trunk Road Network (RTRN) in order to -

(a) ensure access to major centres of population and economic activity;

(b) ensure access between ports of entry between Member States and harbours of importance to the region;

(c) minimize total road transport costs;

(d) preserve assets vested in road infrastructure; and

(e) minimize detrimental impacts to the environment.

Article 4.2 Road Infrastructure Policy

In order to attain road infrastructure objectives, Member States agree to develop a harmonized regional road infrastructure policy aimed at -

(a) monitoring the adequacy and quality of the regional road infrastructure and the need to mobilize resources to meet the developmental objectives contemplated in Article 4.1 of this Protocol;

(b) introducing commercial management practices to foster institutional, economic and technical efficiency in their national roads sectors;

(c) supporting, nurturing and co-ordinating their national roads activities to the benefit of the region as a whole;

(d) developing complementary strategies to reduce the cost of constructing and maintaining their respective road networks including consideration of the potential for reducing road financing needs by contracting out all types of road construction and maintenance activities; and

(e) acknowledging the need of the region for a vibrant, capable, varied and geographically extensive contracting and consulting industry and endeavouring to define and develop the optimal environment for development of the regional contracting industry.

Article 4.4 National Roads Authorities

Member States agree to establish autonomous accountable national roads authorities which are representative of the public and private sector and which have clearly defined responsibilities for -

(a) overseeing, regulating and managing roads on a commercial basis by –

  (i) applying economic criteria in respect of the optimal scope, design and timing for road programmes; and

  (ii) implementing effective performance measurement and independent auditing;

(b) effective utilization of funding for roads;

(c) promoting the involvement of the private sector, road users, local authorities, financial institutions and environmental interest groups in the planning, design, construction, maintenance, operation, and financing of roads;

(d) promoting competition by introducing competitive terms and conditions in infrastructure planning, design, construction, maintenance and operation contracts;

(e) developing a transparent process for the awarding of infrastructure contracts contemplated in paragraph (d);

(f) ensuring accountability to stakeholders for the provision, operation and management of roads;

(g) promoting public awareness on the importance of roads for mobility and trade purposes and engendering the culture of ownership and proper use of roads amongst road users;

(h) collaborating with road transport and traffic authorities to strengthen enforcement of road transport and traffic regulations; and

(i) reviewing the classification of national roads systems and the definition of the RTRN.

Article 4.5 Funding Sources

1. Member States agree to develop and implement cohesive and definitive road funding policies with a view to -

   (a) identifying adequate, sustainable and appropriate sources of road funding which includes general revenue, road user charges and funds generated jointly by the public and private sectors;

   (b) increasing transparency in the road funding process;

   (c) ensuring that revenues obtained from road users under road user charges shall be regarded as dedicated for the provision, maintenance and operation of roads;

   (d) ensuring that road users, including foreign road users, contribute to the full costs of maintaining roads and progressively contribute to the full costs of providing roads while

      (i) ensuring that the revenues obtained from foreign road users are devoted to the maintenance of the RTRN within their respective territories;

      (ii) ensuring that the use of roads is priced so as to improve economic efficiency in road transport; and

      (iii) promoting equity between different categories of road users;

   (e) ensuring that Member States shall apply the principle of non-discrimination in implementing road user charging instruments to foreign road users.

2. In order to promote harmonized national road user charging systems, Members States shall develop a common understanding in respect of the types of road user charging and the levels of such charges and introduce in their respective territories on the basis of regular exchange of information -

   (a) fuel levies (designated as road charges);

   (b) vehicle licence fees;

   (c) road tolls;

   (d) abnormal and awkward load charges;

   (e) weight-distance type charges;

   (f) cross-border road user charges;

   (g) entry fees payable by foreign registered vehicles; and

   (h) parking and traffic congestion costs.

Article 4.6 Regional Funding Initiative

1. Member States agree to implement harmonized cross-border road user charging systems which shall be regularly reviewed, improved and supplemented through improved research and data collection.

2. Member States acknowledge that national funding may be insufficient to ensure adequate extension, maintenance or improvement of the RTRN and, to this end, agree to encourage, in support of the activities of national roads authorities -

   (a)the development of joint regional research and other programmes to assess on a continuous basis the adequacy of road funding in the region;

   (b) the development of transparent and comprehensive regional strategies aimed at procuring funding sources which may include the levying of cross-border road user charges and the collective or individual procurement of loans; and

   (c)the establishment of a regional road maintenance fund.

Annex 7

Excerpts from the Tanzania National Roads Agency (TANROADS) Establishment Order

The Tanzania National Roads Agency (TANROADS) Establishment Order was gazetted in August 2000. The new Agency started work on an interim basis already in July. The Order, which provided for the establishing of the agency for an interim period under the Executive Agencies Act, will be substituted by a new Roads Act in April 2001 based on the SADC model and TANROADS will be fully operational by July 2000. Below follows a summary of some of the main elements in the Order.

Legal Status

The agency is established under the Executive Agencies Act, 1997, as a legal body that may:

(a) enter into contracts in its own name

(b) sue or be sued in contract

(c) upon approval of the Permanent Secretary of the Ministry of Works --- borrow money in its own name and acquire, hold or dispose of movable and immovable property

(d) do all things that are necessary or desirable for the efficient and effective discharge of its functions

Governance

A Chief Executive, appointed by the Minister on advice of the Civil Service Commission, shall hold office for five years ---. He/she will be the Agency's Accounting Officer responsible for day-to-day operations of the Agency ---.

The Permanent Secretary, Ministry of Works, is responsible for the strategic management of TANROADS and, for that purpose, may give directions to the Chief Executive, but with due regard to the need to uphold the Agency's autonomy in the day-to-day management of its affairs.

Aim

The aim of the agency is to provide cost-effective and sustainable maintenance of the trunk and regional road network to support the socio-economic development of Tanzania.

Organisational Structure

The establishment order includes an indicative organisational structure for TANROADS. This includes four divisional directors at Headquarter:

- Maintenance Director
- Development Director
- Technical Director
- Finance & Administration Director

At the zonal/regional level, Zonal Directors will manage the new road zones that are being established by merging the previous regional road engineers' offices. Regional Managers that report to the Zonal Director will manage the remaining activities at the regional level.

Financing

Maintenance will be financed by funds from the Roads Fund. 63 per cent of the funds will be transferred to TANROADS for maintenance of trunk and regional roads, whereas 27 per cent will be allocated to local authorities for maintenance of feeder and local roads.

Development works will be financed by funds from the Ministry of Works. Such funds may originate from the Government budget or from donors and are in the latter case transferred via the Ministry of Finance to the Ministry of Works.

Annex 8

ROADSIP Mid-term Review

H. Lauridsen. December 2000

Control of Road Vehicle Overloading in Zambia

1 The current Situation

Joint weighbridge operations have recently been carried out by the Anti-Corruption Commission (AAC) and Roads Department (RD) at five locations. The operations started 1 June and lasted up to 29 September this year. The period of joint operations varied from 3-4 days to up to 3-4 weeks at each weighbridge. The number of periods of joint operations were as follows: Kafue 5 periods, Kapiri Mposhi 2 periods, Livingstone 2 periods, Mpika 1 period and Nakonde 1 period. The total overweight of vehicles apprehended amounted to 984 tonnes and the total amount of fines collected was K492bn, or approximately US$137,000.

A few years ago, an attempt was made to curb overloading in Zambia through co-operation with the private sector. During a period, weighbridges were staffed jointly by Roads Department and the Federation of Road Hauliers. It appears that no information is available as to the results of this effort. After some time, joint operation was suspended, allegedly due to complaints about unfair treatment from road hauliers that were not members of the federation.

The full extent of vehicle overloading in Zambia today is not known. Previous studies in the region, however, give some indication on the possible level. The report of the SATCC Five Country Working Group on Overload Control (Lauridsen et al., 1994) indicates that the incidence of overloading in the region at that time varied from 15-20 per cent of the commercial vehicles on the road network in Botswana to 40-45 per cent in Tanzania. The report notes that "... from a previous study carried out in South Africa, 16 % of heavy vehicles overloaded by 25 % were found to constitute more than 57 % of the damage to the road. This alarming statistic would suggest that overloading on the SADC Regional Trunk Road Network is responsible for probably at least 50 - 60% of the total damage to the roads." It appears that most parties concerned believe that overloading is still rampant in Zambia and that there is no evidence of any improvement of law enforcement recently. The figures on overloading and damage to roads in the region may therefore, although they are some years old, still give an indication on the situation in Zambia today.

The question of overload control was discussed at length at the ROADSIP Mid-term Workshop 6-7 December 2000. The resolution of the workshop in this

respect states that "In order to prevent damage to our road network, Government should enforce the axle load control measures strictly and professionally and where necessary update the existing legislation."

2 Legislation and Overload Regime

The Zambian regulations on control of overloading, maximum vehicle dimensions and maximum permissible axle loads are based on the Roads and Road Traffic Act (Cap. 766). The relevant regulations were amended in 1993 and 1994. Axle loads and vehicle dimensions were brought in line with SADC and COMESA standards through Gazette Notice No. 1374 of 1993 on Maximum Vehicle Dimensions and Maximum Permissible Axle Loadings. This means that Zambia now has the same 10 tonnes axle load regime as most neighbouring countries with the possible exception of D. R. Congo.

The Roads and Road Traffic Act (Construction, Equipment and Use) Regulation was amended in 1994. The amendment substituted the previous of K100 with a system based on 2,500 penalty units. It appears, however, that the penalty units system has never been implemented. The amendment also added a new sub-regulation thereby introducing a fine of K500 per kilogram per kg. This fine is still being used, but has not been increased since 1994.

Zambia has not yet implemented the SADC policy and overload control regime. The Protocol on Transport, Communications and Meteorology in the SADC Region (Southern African Development Community – SADC) as signed by Heads of State and Government in Maseru 1996 and subsequently ratified by Member States, defines the policy in respect of dimensions of vehicles and loads on vehicles as well as well as in respect of abnormal, awkward and hazardous substance loads and road traffic control and policing. The Protocol specifies that Member States shall develop and implement a regional overloading control strategy that shall provide for, amongst others:

- harmonised legislation which ensures the necessary legislative authority to prosecute offenders
- harmonised penalties or administrative fees for vehicle overload offences which take account of factors such as pavement damage and travel distance
- effective enforcement procedures

A SADC overload control regime was adopted by the Southern Africa Transport and Communications Commission (SATCC) in 1994 (Lauridsen et al., 1994). The regime introduced an administrative "infringement system" of dealing with overload offences on the spot instead of the previous prosecution system and new schedules for overload fees based on pavement damage and travel distance. The fee schedules implied a dramatic increase compared to the previous maximum fees that typically had a maximum fine of around US$ 50 at that time. The SADC overload fee schedule for a 10 tonne legal load regime goes up to US$ 2988 per axle for an overload of 10 tonnes. At almost the same time, South Africa introduced a similar overload control system with a maximum fine level at the same order of magnitude.

3 Previous Studies in Zambia

A number of reviews and studies on overload control have been carried out in Zambia. Three of them are described briefly below.

The first, called the Zambia Weighbridge Project, comprised a draft project description inclusive of a national plan for location of weighbridges, i.e. at border posts and other strategic locations on the road network (Mathisen, 1988)

The next was a comprehensive weighbridge study carried out four years later (Director of Roads and E. G. Pettit and Partners, 1992). The study report describes existing operations, existing laws and evaluates the existing operations.

The third study was carried out last year under the institutional co-operation agreement between Roads Department and Norwegian Public Roads Administration (Muskaug, 1999). It included both axle load control and road safety and aimed at identifying areas for further institutional co-operation.

To what extent the recommendations of these studies were formally adopted and eventually the degree of implementation has not been looked into.

4 Experience from the Region

The SADC overload control has been implemented or is being implemented in several Member States. Some have copied the SADC fee schedules directly (expressed in US$), thereby reducing the need for frequent updating of the values. Zimbabwe was the first country that introduced a similar system in the mid-1990s and a dramatic decrease of overloading was reported at that stage.

Tanzania is in the process of implementing a system based directly on the SADC model. Under the present Road Traffic Act overload is a criminal offence, and each case of overload has to be taken to court. To avoid this time consuming process, the axle load control is presently carried out under the Highway Ordinance Act. This act does not include the fees to be paid for overload but the regional engineer estimates the value of the damage to the roads caused by the overload, normally using the fees recommended by SADC. However, to facilitate more efficient regulation of vehicle overloading, the road traffic legislation is being amended. The amendments to the Road Traffic Act will include the fee schedule recommended by SADC, and will allow the new road authority to collect the fees. A manual for weighbridge operators has been drafted and will be finalised when the amendments have passed Parliament.

Enforcement on overload control in Kenya was particular ineffective in the past and caused serious damage to its road network. As a consequence, Kenya has recently shown a strong will to curb overloading.

The new Minister of Works has committed himself to control overloading effectively and introduction of new measures has proved very successful. Much of the success is due to that the road transport industry has been brought in to monitor weighbridge operations. The Transporters Association has been empowered to control weighbridge operations at any time to monitor and report

what is happening. This has been supplemented by random control by the Ministry of Finance and the EU, which is a major partner in the road sector. Many axles are still overloaded in Kenya, which presently has an 8.2 tonne axle regime. Overloaded axles fall, however, now almost entirely within the 8-10 tonne range whereas they previously were in the 12-14 tonne range and above.

Most of the road transport industry in Kenya is content with improved enforcement and the hauliers have realised that is does not what the axle load limit is as far as it is enforced strictly. The industry has actually in the short-term made quite large profits as lower payloads led to shortage of trucks and higher tariffs. They have also found that trips can be made faster and that repair costs have been reduced. The hauliers have also, and perhaps more importantly, found that breakdowns on route have declined.

5 The Way Forward

The above review of the current situation, legislation and experience from the region, clearly indicates that overloading of vehicles is a serious problem in Zambia today and that overloading is on of the main contributory factors causing damage to the road network. The review further shows that Zambia is lagging behind other countries in the region in respect of control of overloading.

It is generally agreed in Zambia that Government should enforce the overload control regulations strictly and professionally and where necessary update the existing legislation. The international partners supporting ROADSIP consider effective overload control as a major issue in respect of continued support.

Against the above background, there is an urgent need for improving the overload control system. The way forward will necessarily be stepwise as it takes time to introduce new legislation and as the effectiveness of enforcement to some degree will depend on the institutional framework, which is still being developed. Taking into account, the need for new legislation and an improved institutional framework for the sector, we can distinguish between two or three stages in the process ahead.

The last phase will only commence when a new institutional framework is in place, and when legislation has been brought up to date. This may at best be a couple of years ahead in time. The first phase will include introduction of more effective enforcement measures under the present institutional framework and with the current legislation. To this end, an Action Plan based on partnership with the private sector and the donors will be required. A possible second phase may refer to the interim period, where the new institutional framework is clarified but not fully implemented and where the legislative changes are defined but not yet gazetted. This second phase cannot be clearly defined and described now but will have to be revisited during implementation of the first phase.

The ultimate phase will probably imply introduction of a new semi-autonomous or autonomous roads authority with qualified and well paid staff that can be entrusted with enforcement of the new overload control regulations. Legislation and enforcement procedures would most likely be based on the SADC model and

experience from the various countries in the region that are now ahead of, or even far ahead of, Zambia as regards effective overload control. Partnership arrangements with the private sector and donors may still play an important role at the inception of that stage, although the ultimate goal will be to crate a sustainable system.

The first phase should start immediately and an Action Plan should be developed early 2001. The first phase will initially be characterised by an inadequate system of weighbridges. Donors are, however, willing to support with installation of and procurement of necessary new equipment at some weighbridges. A fully comprehensive system of weighbridges at border posts and other strategic location on the national road network can, however, not be established overnight. This implies that the initial efforts to some extent may be concentrated to a limited but over time increasing number of weighbridges that are fully functional and calibrated by a Government Assizer or the equivalent. This phase will therefore initially have the character of a pilot project and it is possible that various designs and technical standards of weighbridges as well as optional procedures could be tested and their effectiveness evaluated during the first phase.

Partnership arrangements with the private sector and donors will play an important role in the first phase and in the development of the Action Plan. Experience from other countries shows that partnership with the private sector may be crucial for successful enforcement of axle load regulations. The donors consider overloading a key issue for continued support to ROADSIP that should be addressed urgently and have pledged their full support in this respect.

6 The Action Plan

The Action Plan should be developed as soon as possible. It should focus on immediate actions and short-term measures to reduce overloading but also identify possible measures aimed a reaching long-term sustainability. Sufficient experience and knowledge about effective overload control is at hand and easily available internationally. It should therefore not take long to prepare the Action Plan. The plan should be updated regularly as experience is gained underway.

The Action Plan should be prepared by a small Task Force within a public private partnership framework. The Task Force should ideally count six to seven members, but eight may be required to allow for representation from all key stakeholders: Ministry of Communications and Transport, Ministry of Works and Supply, National Roads Board, Zambia Chambers of Commerce and Industry, Federation of Road Hauliers or Transporters' Associations of Zambia, Zambia Railways Ltd. and the Civil Engineering Faculty of University of Zambia.

The donors are willing to support the work of the Task Force through a small group of international experts that can facilitate the process. This group will summarise current experience and knowledge on effective overload control from the region and elsewhere and prepare a background document for the consideration of the Task Force. The group will also be available as facilitators during the process of developing the Action Plan.

The Action Plan for overload control is urgently required. The Task Force should therefore be appointed immediately and start work in early 2001. As a background document will be prepared by the group of international experts, the Task Force should be able to finalise the Action Plan in a very short period of time. It may indeed be most cost effective to isolate the Task Force, say for one week, during which time it should be able to work concentrated and come up with a complete Action Plan.

In order to demonstrate progress in addressing vehicle overloading, clear targets must be set and a comprehensive monitoring system introduced. Introduction of effective control measures could reduce overloading dramatically almost overnight. Targets should reflect that the reduction of vehicle overloading decreases over time. Possible targets for reduction of overload incidences could therefore be as follows (per cent overload incidences relative to the number of incidences Year 0):

Year 1:	50 per cent
Year 2:	20 per cent
Year 3:	10 per cent
Year 4:	<5 per cent

Targets could also relate to total overloaded weight, number of overloaded axles or, more sophistically, number of overloaded axles measured in equivalent standard axles, which would provide a good indicator on the damage to the roads caused by overloading. The actual percentages of reduction to be may depend on the number of fully operational weighbridges and their location. In any case, the Action Plan should established clear targets and a comprehensive monitoring system.

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Annex 9

Provisions for Dimension of Vehicles and Loads and for Control of Vehicle Overloading in the Protocol on Transport, Communications and Meteorology in the SADC Region

The SADC Transport Protocol was signed by the Heads of State and Government in Maseru in August 1996 and entered into force in 1998 after ratification by Parliament in the required number of the Member States. Zambia's Parliament has also ratified the Protocol. Legally, the Protocol is an instrument under the SADC Treaty.

The Protocol provides the background for harmonisation of transport policies within the region. The provisions of relevance for dimensions of vehicles and loads and for the control of vehicle overloading appear in Chapter 6, Road Traffic. The objectives that defined in Article 6.1 as follows: "Member States shall enhance the overall quality of road traffic in the region with the emphasis on promoting acceptable levels of safety, security, order, discipline and mobility on the roads and protecting the environment and road infrastructure."

The most important articles in respect of dimensions of vehicles and loads and control of vehicle overloading are:

- Article 6.5 Dimensions of Vehicles and Vehicle Combinations
- Article 6.6 Loads on Vehicles
- Article 6.7 Abnormal, Awkward and Hazardous Substance Loads
- Article 6.13 Road Traffic Control and Policing

The text of the four articles appears in extenso below.

Article 6.5 Dimensions of Vehicles and Vehicle Combinations

1. Member States shall develop and implement harmonized standards in respect of vehicle dimensions and vehicle combinations.
2. Vehicles or vehicle combinations which exceed the harmonized standards referred to in paragraph 1 may only be authorized to circulate on the basis of special permits issued by authorities designated by each Member State for that purpose.

Article 6.6 Loads on Vehicles

1. Member States shall implement harmonized permissible axle mass loads and gross vehicle mass and gross combination mass limitations with due consideration of the need to balance financial needs and interests of preserving the region's road infrastructure, optimizing road transport operations and enhancing road traffic safety.

2. In order to attain the objectives stated in paragraph 1, Member States shall develop a sustainable strategy, which shall include –

   (a) an action programme for the incremental or phased in implementation of harmonized maximum axle mass loads by Member States which are not in a position to implement such loads immediately;

   (b) the procurement of adequate and sustainable funds for improvement, extension and maintenance of the region's road infrastructure contemplated in Chapter 4; and

   (c) the development and implementation of a regional overloading control strategy which shall provide for, amongst others -

      (i) co-ordinated programming of overloading control activities;

      (ii) co-operation with regard to the sharing of weighbridge facilities and equipment in the region;

      (iii) a co-ordinated approach in respect of the maintenance and calibration, practices and procedures and the management of information collected at weighbridges;

      (iv) harmonized legislation which ensures the necessary legislative authority to prosecute offenders;

      (v) harmonized penalties or administrative fees for vehicle overload offences which take account of factors such as pavement damage and travel distance;

      (vi) effective enforcement procedures;

      (vii) the introduction of special training programmes for traffic officers, prosecutors and transport operators and their employees;

      (viii) common training standards and the provision of joint training to enforce the sharing of technical resources and expertise;

      (ix) the possibility of involving the private sector as a form of self-regulation in order to promote voluntary compliance;

      (x) the introduction of administrative control measures in respect of habitual offenders; and

      (xi) the launching of public awareness campaigns.

3. Member States shall adopt a harmonized position with regard to the application of a bridge formula.

Article 6.7 Abnormal, Awkward and Hazardous Substance Loads

1. Member States shall develop and implement harmonized standards for the conveyance of abnormal, awkward and hazardous substance loads in respect of, amongst others -
   (a) the classification of such loads; and
   (b) the requirements and conditions in respect of the conveyance of such loads, including -
      (i) the issuing of authorizations;
      (ii) the nature and mass dimensions of the load;
      (iii) the designation of routes;
      (iv) the need for escort vehicles;
      (v) maximum speed limits; and
      (vi) harmonized authorization, escort and other relevant fees in this regard.
2. Member States which have not yet acceded to the Basel Convention on the Transboundary Movements of Hazardous Substances and their Disposal, 1989, shall consider acceding to that Convention.

Article 6.13 Road Traffic Control and Policing

Member States shall co-operate in developing and implementing a regional road traffic control and law enforcement plan which shall provide for -

(a) development of a system of common powers for enforcers of road traffic legislation;

(b) development of a common schedule of road traffic-related offences and penalties as well as documentation used by law enforcers;

(c) development of a common syllabus and minimum standards for the training and certification of road traffic enforcers, the designation of joint training centres to provide joint training and the reciprocal recognition of qualifications;

(d) establishment of a regional academy for advanced traffic control training on tertiary level;

(e) the development of common strategies for undertaking joint law enforcement actions;

(f) the development, in respect of critical road traffic offences, of co-ordinated traffic control or law enforcement programmes such as -

(i) overloading control;

(ii) speed management;

(iii) control of alcohol and drug impaired drivers;

(iv) safety aspects of vehicles;

(v) vehicle, driver and operator documentation; and

(g) development of harmonized standards in respect of law enforcement equipment such as weighbridges, speed measuring devices and alcohol meters.

Annex 10

Excerpts from the SADC Overload Control Regime

The Southern Africa Transport and Communications Commission (SATCC) in 1994 adopted a SADC overload control regime. The regime introduced an administrative "infringement system" of dealing with overload offences on the spot instead of the previous prosecution system and new schedules for overload fees based on pavement damage and travel distance. The fee schedules implied a dramatic increase compared to the previous maximum fees. The regime, which was developed by a special working group, is reported in: Overload Control in Southern Africa (Lauridsen et al., 1994). Below follows a summary of the main conclusions and recommendations of the working group.

Legislation

An "Infringement" system should be introduced in place of the current "Prosecution" system of dealing with vehicle overload offenders. This system will treat most offences out of court (rather like speed offences) and the "fees" rather than "fines" will be dealt with by administrative rather than legal procedures. The Infringement system will ease the burden on the courts, leaving them to deal only with cases where the correct procedures have not been followed.

The SATCC Book of Road Traffic Model Statute provides the basis for the regulations on overload control. An annotated version of the SATCC Model Road Traffic (Overload) Regulations taking account of the provisions of the new regime was prepared and included in the above report.

Enforcement

Inadequate appreciation of the strong economic rationale for overload control by the various involved parties (transporters, police, judiciary, weighbridge operators) results in an indifferent attitude to the enforcement process. The responsibility for enforcement is often split between Road, Traffic, Police and Transport Authorities with each having a vested interest in one aspect of the overall enforcement process. Because of lack of co-ordination and co-operation amongst these authorities, the net result is that the enforcement process is diluted and is generally not carried out adequately.

The poor image of the vehicle overloading enforcement process tends to result in laxity of its application and demotivation of staff and a gradual collapse of vehicle load checking in some countries. In order to improve the efficiency of enforcement of load limits, SADC member states should seriously consider the following:

- Introduction of weighing-in-motion systems operating at highway speed to assist in determining policing strategies and to allow heavily overloaded vehicles to be screened out for subsequent, more accurate, weighing.
- Introduction of slow speed dynamic weighing and portable scales on internal routes of the Trunk Road Network.

Current legislation does not cover the full spectrum of enforcement requirements and is generally outdated and requires revision. Where necessary, the laws and regulations should be amended. The SADC Model Road Traffic Act and its Subsidiary Regulations as amended should provide the background for new overload control legislation in SADC countries.

Penalties and Fees

Overload penalties imposed on admission of guilt or by the courts on conviction are generally negligible in comparison with the damage caused by overloading and are not an adequate deterrent to potential offenders.

Penalties for overloading should be revised upwards and be based on a progressive overload fee system derived from consideration of such factors as pavement damage, level of apprehension, travel distance and a punitive element. The SADC regime includes such model fee system. The fee schedules implied a dramatic increase compared to the previous maximum fees that typically had a maximum fine of around US$ 50 at that time. The SADC overload fee schedule for a 10 tonne legal load regime goes up to US$ 2988 per axle for an overload of 10 tonnes.

Control Sites and Installations

There is an insufficient number of weighbridge installations in many of the SADC member states, particularly on internal routes, to enable overload control measures to be carried out effectively.

Weighbridge facilities sometimes exist on either side of the border of adjacent countries. This is generally seen as a duplicative, expensive and unnecessary deployment of scarce resources. Consideration should be given to sharing, and thereby reducing, weighbridge installations at the borders of adjacent countries.

Weighbridge Organisation, Operations and Management

There are often several areas of overlap in authority and responsibility for vehicle overload control by various involved organisations which is exacerbated by lack of adequate co-ordination and co-operation amongst them. This tends to result in inevitable confusion with the operation and management of weighbridges and lack of enforcement of the regulations.

Payment procedures are often ill defined, impractical to enforce or subject to little control, with the result that they have become a loophole for malpractice or are not enforced at all.

Malpractice at weighbridges, involving bribery, has become a regrettable but real problem in many of the SADC countries. This unfortunate practice not only negates the enforcement process but also introduces an element of unfair competition against those who do not practice it as a matter of policy.

An organisation structure for all weighbridge installations should be drawn up showing the responsibilities and duties of all personnel involved in the operation, management and enforcement aspects of overload control at weighbridges.

Payment procedures should be revised and devised in a manner, which minimises cash transactions and includes the use of authorised revenue officers for the collection of fees. Such payments should be centralised and taken away from the general weighbridge staff.

Weighbridge Equipment and Weighing Practices

The type of weighing equipment used in the SADC countries varies quite significantly with regard to make, size, degree of automation and weighing accuracy as a result of which the outputs are also variable and subject to dispute.

Differences occur between weighing methods, the conditions under which vehicles are weighed and the way in which the loads are recorded in various countries. This has led to disputes, especially in situations where the vehicle is "legal" at a weighbridge in one country and "illegal" at a weighbridge in another country.

Weighbridge equipment should be standardised as much as possible to facilitate the uniformity of the weighing process. Static, single axle weighers are recommended for this purpose. Where feasible, weighbridge equipment should be included as an integral component of all major road construction or rehabilitation projects.

Guidelines for the weighing of vehicles for enforcement of axle load limits and gross vehicle mass limits should be developed in order to provide a sound, consistent and uniform basis for determining axle load or gross vehicle mass overload in the SADC region.

In addition to a 5% allowance as a weighing tolerance, a discretionary allowance of up to 5% overload should be permitted, and charged for, and the vehicle should be allowed to proceed on payment of a further surcharge. This is to cater for marginal overloading of the type found on vehicles carrying "awkward" loads.

Beyond the discretionary 5% overload allowance, and in addition to the levied fee for this offence, off-loading on to another vehicle should be mandatory, and the vehicle should not be permitted to proceed any further until this is done (off-loading on to the ground should not be permitted).

Standardised Weighbridge Report forms should be produced to ensure uniformity in the recording and calculation of overloads and overload fines. The working group prepared a model form.

Frequent calibration of weighing equipment by a Government Assizer or equivalent is vital and should be incorporated in the weighing routines in

compliance with local regulations, so as to validate the accuracy of the weighing equipment.

Weighbridge Personnel and Training

Varying levels of personnel training and ability exist in the various SADC countries, with the result that their performance as weighbridge operators is also variable.

Minimum standards of education and training should be set for weighbridge staff at various levels of operation. Such training should be standardised throughout the region and should follow a prescribed syllabus.

Maximum use should be made of regional rather than external training institutions. In this regard, a Regional Training Institute should be set up to cater for the needs of all SADC countries.

Implementation

Parallel to the harmonisation of axle load limits in the SADC region, it is strongly recommended that urgent action be taken by every country in the SADC region to finalise legislation which will provide the legal backing necessary to control overloading in a firm but reasonable manner. Thereafter, the various recommendations, which have been prepared by the working group and endorsed by all member states, should be implemented as soon as possible.

Annex 11

Indicative Budget for the New Road Training Institute

Cost Item	2001	2002	2003	2004	Total	Distr.
Manager	360	360	380	400	1500	3 %
Marketing Advisor	400	400	0	0	800	2 %
Labour-based Advisor	1 800	1 800	0	0	3600	8 %
Counterpart to l-b Advisor	240	240	300	320	1100	2 %
Field Training Engineer	1 600	1 600	1 600	0	4800	10 %
Counterpart to FT Engineer	240	240	240	280	1000	2 %
Training Advisor	400	400	300	200	1300	3 %
External Lectures	200	200	300	300	1000	2 %
Local Staff	270	270	330	330	1200	3 %
Courses	5 000	5 000	5 000	5 000	20000	42 %
Develop new Courses	400	200	200	200	1000	2 %
Operations	2 000	2 000	2200	2300	8500	18 %
Equipment	1 000	1 000	0	0	2000	4 %
Studies	100	0	100	0	200	0 %
Total Cost	**14 010**	**13 710**	**10 950**	**9 330**	**48 000**	**100 %**
Annual Cost/Grand Total C.	**29 %**	**29 %**	**23 %**	**19 %**	**100 %**	**100 %**