

**AFRICAN DEVELOPMENT BANK GROUP**



**LESOTHO**

**KHAMANE – OXBOW ROAD PROJECT**

**Project Performance Evaluation Report (PPER)**

**OPERATIONS EVALUATION DEPARTMENT  
(OPEV)**

**11 January 2000**

## TABLE OF CONTENTS

	<u>Page</u>
EQUIVALENTS AND ABBREVIATIONS	i
PREFACE	iii
BASIC PROJECT DATA	iv
1. <b><u>EVALUATION SUMMARY</u></b>	1
1.1   Project Objectives and Scope	1
1.2   Project Implementation	2
1.3.   Compliance with Loan Conditions and Covenants	3
1.4   Institutional Aspects	3
1.5   Project Impact	3
1.6   Performance Evaluation	3
1.7   Project Sustainability	4
1.8   Conclusions, Feedback and Recommendations	5
2. <b><u>BACKGROUND</u></b>	9
2.1   Macro-Economic Context	9
2.2   The Road Sub-sector	10
2.3   History of Operations	12
2.4   Project Formulation	12
2.5   Project Rationale	13
2.6   Project Objectives and Scope at Appraisal	14
2.7   Financing Arrangements	15
2.8   Evaluation Methodology and Approach	16
3. <b><u>PROJECT IMPLEMENTATION</u></b>	16
3.1   Loan Effectiveness	16
3.2   Changes in Project Design	17
3.3   Implementation Schedule	18
3.4   Reporting	18
3.5   Procurement	19
3.6   Project Costs	21
3.7   Disbursement and Financial Sources	21
3.8   Compliance with Loan Conditions and Covenants	21
4. <b><u>PERFORMANCE EVALUATION</u></b>	22
4.1   Operating Performance	22
4.2   Financial Performance	23
4.3   Economic Performance	23

4.4	Institutional and Social Performance	24
4.5	Impact on Women	25
4.6	Environmental Performance	25
4.7	Performance of Contractor, Consultant and Borrower	26
4.8	Bank Group Performance	27
5.	<b><u>PROJECT SUSTAINABILITY</u></b>	28
6.	<b><u>PERFORMANCE RATING</u></b>	28
7.	<b><u>CONCLUSIONS, FEEDBACK AND RECOMMENDATIONS</u></b>	29
7.1	Conclusions	29
7.2	Lessons	30
7.3	Recommendations	31
7.4	Follow-up Action Matrix	32

### **LIST OF ANNEXES**

	<b><u>No. of Pages</u></b>
1. Road Network of Lesotho	2
1.1. Road Network Length in 1994	
1.2. Condition of the Road Network in 1994	
2. Evaluation of Contractor's Foreign Exchange Risk	1
3. Scheduled and Actual Implementation	2
4. Heavy Traffic Forecasts	2
5. Traffic Forecasts	1
6. Vehicle Operating Costs	1
7. Maintenance Cost Savings	1
8. Time Savings	1
9. Streams of Costs and Benefits	1
10. Performance Rating	3
11. Recommendations and Follow-up Matrix	3
12. Retrospective Logical Framework Matrix	2

---

This report was prepared by Messrs **W. Byaruhanga**, Principal Post Evaluation Officer, and **Jose C. Horta**, Consulting Civil Engineer, following their mission to Lesotho in April 1999. Any further matters relating to this report should be referred to Mr. **G.M.B. Kariisa**, Director, Operations Evaluation Department (telephone extension 4052).

## EQUIVALENTS AND ABBREVIATIONS

### Currency Equivalents

Lesotho Currency Unit:        Maloti (M)

Exchange Rates:

UA 1.00 = M	2.80926	Jan. - March	1986	(Appraisal)
	2.91118	July - Sept.		(Loan signed 16.7.1986))
	2.67072	Jan. - March	1987	(Tenders closed, 17.2.1987)
	2.59461	April-June		(Loan effective 1.4.1987)
				(First disbursement 26.6.1987)
	1.77429	July - Sept.		(Award of Contract 16.7.1987)
	3.52021	July - Sept.	1990	(Final Completion 9.7.1990)
	5.28872	July - Sept.	1994	(last disbursement 22.9.1994)
	5.45137	December	1995	(deadline last disbursement)

### Weights and Measures

1 metric ton (t)	=	2.205 lbs
1 kilogramme (kg)	=	2.2 lbs
1 metre (m)	=	3.28 ft
1 foot	=	0.305 m
1 kilometre	=	0.621 mile
1 mile	=	1.609 km
1 square kilometre (km <sup>2</sup> )	=	0.386 square mile
1 hectare (ha)	=	0.01 km <sup>2</sup>

### Fiscal Year

1st April - 31st March

## Abbreviations

ADB	African Development Bank
ADF	African Development Fund
BCEOM	Bureau Central d'Etudes Outremer
CWS	Civil Works Section
EIRR	Economic Internal Rate of Return
ERR	Economic Rate of Return
ESAL	Equivalent Standard Axle Load
FE	Foreign Exchange
GDP	Gross Domestic Product
GNP	Gross National Product
HV	Heavy Vehicle
GoL	Government of Lesotho
LC	Local Currency
LCU	Labour Construction Unit
LHDA	Lesotho Highlands Development Authority
LHDP	Lesotho Highlands Development Project
M	Maloti
MEC	Ministry of Economic Planning
MF	Ministry of Finance
MLG	Ministry of Local Government
MoPWT	Ministry of Public Works and Transport
MR	Main Road
PAR	Project Appraisal Report
PCR	Project Completion Report
PPER	Project Performance Evaluation Report
PVPS	Plant and Vehicle Pool Service
RB	Roads Branch
RMA	Rand Monetary Area
RPCE	Roughton and Partners Consulting Engineers
RRMP	Road Rehabilitation and Maintenance Project
SACU	Southern Africa Customs Union
SADC	Southern African Development Community
SSJV	Stirling Skanska Joint Venture
TA	Technical Assistance
TOR	Terms of Reference
UA	Unit of Account
VOC	Vehicle Operating Costs
VO	Variation Order

## **PREFACE**

1. This Project Performance Evaluation Report (PPER) is concerned with the performance of the Khamane - Oxbow Road Project in Lesotho.
2. On 18 June 1986, ADF Loan N° CS/LES/TR/86/18 in the amount of UA 6.424 million was approved by ADF for the Project. The loan was declared effective on 1 April 1987 and the first disbursement was made on 26 June 1987. The final completion of the works was on 10 April 1990 and the last disbursement was made on 22 September 1994. The Loan was used to finance the construction of the project road to bitumen standard, including construction supervision and contractor's claim analysis by a consulting firm.
3. The project was substantially completed and the road entirely opened to traffic in April 1990. The Project Completion Report was prepared in July 1998, following a mission to Lesotho from 27 April to 12 May 1998.
4. The project was fully implemented and it has partially attained its objectives as stated at appraisal, which were to: (i) upgrade the primary Khamane - Oxbow road section to a bitumen standard; (ii) provide a faster, safe and all weather access through the mountainous region of the Moteng Pass to the Oxbow area, which has considerable tourism potential; (iii) reduce the costs of transportation of persons and goods between Khamane, Oxbow, the diamond mine of Letseng-La-Terae and Mokhotlong; (iv) provide an improved road link to the rural communities residing in remote mountainous areas of the north-eastern part of the country; (v) improve the primary road communications within Lesotho and around its periphery; and (vi) contribute to better integration of the people of that region in the economic and social life of the country.
5. The PCR has narrated and covered in broad terms the implementation experience on this project. This performance evaluation report looks deeper into this experience as well as other issues of the completed project. The evaluation report therefore clarifies, amplifies and complements the findings in the PCR. While this report accepts the lessons given in the PCR, it nevertheless provides a set of additional lessons which are designed to enhance the effectiveness of Bank Group financed projects in Lesotho and in other member countries of the Bank.
6. The evaluation report is a result of a post evaluation mission undertaken in April 1999. The information contained herein is based on discussions with Lesotho Government officials, a visit to the project site, analysis of documents collected in Lesotho, information from the appraisal (PAR) and completion (PCR) reports, and from project documents and Bank files. The draft of this report was submitted for comments to the relevant operational departments of the Bank and to the Borrower; comments received were taken into account in the final version of the report.
7. The overall assessment in both the PCR and this Evaluation report shows unsatisfactory project performance outcome.

**SUMMARY DATA SHEET**

1.	Country	:	Kingdom of Lesotho
2.	Project	:	Khamane - Oxbow Road
3.	Loan Number	:	CS/LES/TR/86/18
4.	Borrower	:	Government of Lesotho
5.	Beneficiary	:	Government of Lesotho
6.	Executing Agency	:	Roads Branch of the Ministry of Works

**A. BASIC LOAN DATA**

		<u>Appraisal Estimate</u>	<u>Actual</u>
1.	Amount (UA million)	6.425	5.600
2.	Amount cancelled (UA million)	n. a.	0.824
3.	Interest Rate (% annum)	nil	nil
4.	Service Charge	0.75 %	0.75 %
5.	Repayment Period (years)	50	---
6.	Grace Period (years)	10	---
7.	Loan balance (UA million)	---	0.824
8.	Loan negotiation Date	March 1986	April 1986
9.	Loan approval Date	April 1986	18 June 1986
10.	Loan Signature Date	July 1986	16 July 1986
11.	Loan Effectiveness Date	August 1986	1 April 1987

**B. PROJECT DATA**

		<u>Appraisal Estimate</u>				<u>Actual</u>			
1.	Total Cost (UA Million)	7.139				8.661			
(i)	FE Component (UA Million)	5.711				5.600			
(ii)	LC Component (UA Million)	1.428				3.061			
2.	Financing Plan (UA Million)	<u>FE</u>	<u>LC</u>	<u>Total</u>	<u>%</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>	<u>%</u>
	ADF	5.711	0.714	6.425	90	5.600	-	5.600	65
	GOL	-	0.714	0.714	10	-	3.061	3.061	35
		<u>5.711</u>	<u>1.428</u>	<u>7.139</u>	<u>100</u>	<u>5.600</u>	<u>3.061</u>	<u>8.661</u>	<u>100</u>
3.	Deadline for First Disbursement	30 June 1987				---			
4.	Effective Date of First Disbursement	---				25 June 1987			
5.	Deadline for Final Disbursement	31 December 1991				---			
6.	Effective Date of Last Disbursement	---				22 September 1994			
7.	Commencement of Implementation (Consultant appointed)	1 September 1986				1 January 1987			

8.	Commencement of Works	1 February 1987	15 August 1987
9.	Substantial Completion of Works	1 February 1989	10 April 1990
10.	End of maintenance period	1 February 1990	9 July 1990

### C. PERFORMANCE INDICATORS

1.	Cost overrun	UA 0.911 million (11.75%)	
2.	Time overrun	17.5 months	
	Slippage on effectiveness	7 months	
	Slippage on first disbursement	---	
	Number of Extensions of last disbursement	1	
	Slippage on Start-up of Works	6.5 months	
	Slippage on Completion of Works	17.5 months	
3.	Project Implementation Status	Completed	
4.	Implementation Performance	Unsatisfactory	
5.	Bank Performance	Unsatisfactory	
6.	Project Outcome	Satisfactory	
7.	EIRR	16.97 %	6.58 %

### D. MISSIONS

N°	Type of Mission	N° of Missions	Date Composition	N° of Persons	Person Days
1	Identification	0	-	n. a.	n. a.
2	Preparation	0	-	n. a.	n. a.
3	Appraisal	1	January 1986	2	28
4	Follow-up	1	Loans Officer	1	15
5	Supervision	3	Transport Engineer	1	42
6	PCR	1	27 April-12 May 1998 Transport Economist and Transp. Engineer	2	30
7	PPER	1	11 - 29 April 1999	2	36

### E. DISBURSEMENT (UA million)

	<u>Appraisal</u>	<u>Actual</u>	<u>%</u>
Total Disbursement	6.425	5.600	87.16
Undisbursed Balance	-	0.825	12.84
Amount cancelled	-	0.825	12.84

Annual Disbursement (UA million)

1987	3.109	0.537	8.36
1988	3.109	1.678	26.12
1989	0.207	0.879	13.68
1990	-	2.114	32.90
1991	-	0.337	5.24
1992	-	0.012	0.19
1993	-	0.000	0.00
1994	-	0.043	0.67
	<u>6.425</u>	<u>5.600</u>	<u>87.16</u>

F. **CONTRACTOR**

1. Name: Stirling International - Skanska Joint Venture
2. Responsibility : Execution of the Construction Works
3. Date Contract Signed : 16 July 1987

	<u>Appraisal</u>	<u>Actual</u>
4. Date of Commencement	1 February 1987	15 August 1987
5. Date of Completion	1 February 1989	10 April 1990
6. Duration of Contract	24 months	32,5 months
7. Amount of Contract (M million)	13.328	15.592
Physical Contingencies (M million)	1.333	0.000
Price Escalation (M million)	3.906	0.000
Cost of Pending Claims (M million)	---	2.000
8. End of maintenance period	1 February 1990	9 July 1990

G. **CONSULTANT**

1. Name Roughton and Partners Consulting Engineers
2. Responsibility Pre-contract services and construction supervision
3. Date Contract Signed 27 April 1987
4. Date Contract Terminated December 1991
5. Contract duration 56 months
6. Amount of Contract M 799,000 or UA 293,850 M 366,415 + £ 398,793

**H. THE BANK GROUP FINANCED TRANSPORT SECTOR PROJECTS IN LESOTHO**

N°	Year of Approval	Project	Loan Amount (UA millions)			Remarks
			ADB	ADF	TAF	
1	1975	Roma - Semonkeng - Leribe - Oxbow Road Study			0.83	Completed
2	1977	Leribe - Butha Buthe - Joel's Drift Road		6.17		Completed, evaluated
3	1979	New Maseru International Airport I		8.00		Completed, evaluated
4	1979	Joel's Drift - Khamane Road		6.62		Completed, evaluated
5	1983	Road Maintenance Project		8.06		Completed evaluated
6	1984	Feeder Roads Study			0.90	Completed
7	1986	Khamane - Oxbow Road		5.60		Completed, evaluated
8	1984	Masianokeng - Mafeteng / Roma Roads		6.45		Completed
9	1984	New Maseru International Airport II	12.04			Completed, evaluated
10	1988	Oxbow - Mokhotlong		17.17		Completed
11	1989	Institutional Support to the Transport Sector		2.60		Completed
12	1992	Oxbow - Mokhotlong Road (Supplementary)		2.86		Completed
<b>Total</b>			<b>12.04</b>	<b>63.53</b>	<b>1.73</b>	

## 1. EVALUATION SUMMARY

### 1.1 Project Objectives and Scope

1.1.1 The upgrading of the existing gravel road between Khamane and Oxbow to bitumen standard was identified in 1980 (Lesotho Transportation Study) as a section of the Leribe - Khamane - Mokhotlong road, which improvement was recommended to be executed in phases. Feasibility studies and detailed design were prepared in 1980 and detailed redesign in 1985 with ADF funding. By the time the Project was appraised (March 1986) rehabilitation of the Maseru to Leribe road was being implemented, and the two sections of the Leribe - Khamane road had been upgraded to bitumen standards, all funded by the Bank.

1.1.2 The project objectives as stated at appraisal were to:

- (i) upgrade the primary Khamane - Oxbow road section to a bitumen standard;
- (ii) provide a faster, safe and all weather access from one end of the foot hills of Khamane through the mountainous region of the Moteng Pass to the Oxbow area, which has considerable tourism potential;
- (iii) reduce the costs of transportation of persons and goods between the foothills of Khamane, Oxbow, the diamond mine of Letseng-La-Terae and Mokhotlong;
- (iv) provide an improved road link to the rural communities residing in remote mountainous areas of the north-eastern part of the country;
- (v) improve the primary road communications within Lesotho and around its periphery;
- (vi) contribute to better integration of the people of that region in the mainstream of the economic and social life of the country.

1.1.3 The project was highly relevant and consistent with the Bank's mission and general goals, namely poverty reduction, human resources development, institutional strengthening, private sector development. It was also consistent with Lesotho's economic development strategy and the Bank's strategy in Lesotho. The project was an important contribution for the development of a trunk road network in order to integrate the country and create basic conditions for economic development. It represents one of the contributions of the Bank to the development of the transport sector in Lesotho.

1.1.4 However, project objectives were only partially fulfilled for two reasons: limited funding and project design shortcomings.

1.1.5 A winter maintenance component was not included in the project. Without appropriate resources and equipment for snow clearing, snow drift control and black-ice prevention, the road cannot provide an all weather access.

1.1.6 The access provided by the road as designed and constructed is moreover not safe. In order to minimise costs, cut slopes were designed too steep and left without appropriate treatment and protection against rock fall and slides. As a result, rock cobbles and boulders have been falling since construction in many sections, damaging side ditches, pavement and guard rails and causing a very serious hazard to road users and the environment.

1.1.7 Furthermore, a substandard cross section was adopted in the Moteng Pass to decrease costs and proved to be a poor compromise against well established and widely used geometric standards. It also represents a traffic hazard since it does not allow enough space for large vehicles in different directions to pass each other safely.

1.1.8 In addition the diamond mine of Letseng-La-Terae did not resume operations since 1982 and the winter tourism potential of the area has not been developed since construction.

## 1.2. **Project Implementation**

1.2.1 Eight and a half months elapsed between the approval of the Loan and its effectiveness. There was a delay of 7.5 months from the date the Loan was signed by the Bank to the date the Loan became effective. This delay was only one and a half month in excess of the six month maximum delay that is now enforced by the Bank.

1.2.2 A comparison between the appraisal and actual implementation schedules for the project shows a delay of three months between the dates of submission of consultants tenders, and a 17.5 months delay between the completion dates of the appraisal and actual schedules. Actual implementation of construction exceeded the appraised construction period by eleven months.

1.2.3 During the first phases of project implementation, before construction, delays were gradually increasing from three months at the date of submission of consultants tenders to six and a half months at the date of commencement of works in spite of the mobilisation of the consultant four months in advance of the date his contract was signed. The causes of increasing delays include long delays for comments on Borrower's submissions and non objection statements by the Bank.

1.2.4 The Bank's rules of procedure for acquisition of goods and services were not strictly followed for the road construction works. Comparison of tenders was not meaningful and the selected contractor was not the lowest evaluated bidder. This resulted in difficulties, time overrun, cost overrun and protracted, unsettled claim procedures by the selected contractor (section 3.5).

1.2.5 The road was redesigned in 1985. Slope gradients and pavement cross sections were redesigned in deviation from well established technical standards in order to achieve economic justification and take into account financial restraints.

1.2.6 Pavement thickness was modified with increased cost during construction following a proposal by the Contractor. This modification was justified by site specific conditions and also resulted in an increased pavement design life that became sixty instead of twenty years. Since site specific conditions were well known to the parties and from the recent experience of the contiguous Joel's Drift to Khamane Road project, such changes are signs of weaknesses inherent in the detailed redesign, specification and contract clauses and in construction supervision.

1.2.7 At appraisal, the project cost was estimated at UA 7.139 million, net of taxes; the actual cost of the completed project was UA 8.661 million. This final cost includes UA 2.000 as a ceiling for Contractor's claim settlement which has to be entirely covered by the GoL, since the Loan balance was cancelled on 31.12.1995. The main reason for cost overrun was the selection of a claim oriented contractor, following deviation from the Bank's rules of procedure for procurement of goods and services.

1.2.8 As a consequence of the cost overrun, the ADF contribution to the project was reduced from 90% of the total cost to 65%, covering 100% of the foreign exchange cost and the contribution of the GOL was increased from 10% to 35% of total cost and covered the totality of the local cost.

### 1.3. **Compliance with Loan Conditions and Covenants**

All loan conditions were fulfilled in reasonable delay. In addition undertakings given by the Government were followed by appropriate action. The GOL gave an undertaking and actually assumed the responsibility and met all cost overruns on the Project. Adequate budgetary allocations for routine and periodic maintenance have been regularly provided.

### 1.4. **Institutional Aspects**

1.4.1. At the time of project implementation, the Roads Branch was facing staffing problems and the Bank was funding technical assistance under a project of institutional support to the transport sector. Staffing problems still prevail and the Roads Branch still needs the assistance of foreign experts.

1.4.2. In the Roads Branch, one of the most critical problem is the capability of Government to attract and retain national staff. This capability determines institutional continuity and safeguarding of the benefits of the technical assistance.

1.4.3. The Government of Lesotho has established a Road Fund and is in the process of establishing of a road authority.

### 1.5 **Project Impact**

1.5.1 The project had an important socio-economic impact for the rural inhabitants of the South Western Bank including women farmers. Its components include an important main road and bridge whose impact on the South Western Bank reaches far to the east. The combined South Bank Road, Banjul - Serrekunda Highway and Bund Road constitute the primary trunk road of the South Bank. This trunk road is critical for the existing and planned feeder road networks, which are intended to improve marketing with increased farm production and food security.

1.5.2 The project improved travelling conditions to the north-eastern mountain area of Lesotho. Its socio-economic impact is closely associated with the impact of the Oxbow - Mokhotlong road which has been recently paved and signs of this impact on the rural populations of the north eastern region are yet not easily perceived. Although expected specific development programmes (winter sports, diamond mine) did not materialise in the Project impact area, the road is contributing to the social-economic development of the area.

1.5.3 There was no environmental impact assessment study for the project road but environmental considerations played an important role in design and negative impacts on soils and water were minimised during construction and for the design life of the road thanks to adequate drainage design. However a serious environmental hazard with persisting rock fall and landslides was created by steep cut slope design intended to decrease construction costs.

### 1.6. **Performance Evaluation**

1.6.1 The road was opened to traffic in July 1990 and a continuous increase in traffic volumes was noted. Total traffic growth rates increased from nil to 20%. The traffic of the project road includes local traffic and transit traffic to Mokhotlong. The road from Oxbow to Mokhotlong has recently been paved and it is expected that traffic will continue to grow at high rates.

1.6.2 The EIRR calculated at appraisal on the basis of the detailed redesign was 16.97%. This value is to be compared with 6.20% and 6.58% obtained respectively in the PCR and in the present PPER and the conclusion is that the project as appraised did not result viable in spite of efforts to decrease construction costs by means of substandard design during the redesign phase. The high value obtained at appraisal was based on very optimistic traffic forecasts that did not materialise. Even with fast growing traffic at this stage the EIRR would not become much higher than 7.00%.

1.6.3 The project unit comprising the Chief Engineer of the Roads Branch assisted by the Project Co-ordinator and the Consultant's team was directly responsible for the execution of the Project and performed satisfactorily.

1.6.4 The contractor took advantage of inappropriate specification and contract clauses, developed dilatory moves and successfully implemented his claim strategy. In spite of design shortcomings, he provided satisfactory workmanship but caused important delays in the works. The total delay was 11 months or almost 50% of the agreed construction period. The contractor also caused important cost overruns and is still entertaining amicable, protracted settlement procedures for multiple claims including delays, costs and interests.

1.6.5 The performance of the Consultant in works supervision and financial contract management can be considered as satisfactory, but his performance in detailed redesign and procurement activities was not satisfactory. Detailed redesign introduced substantial technical shortcomings, namely steep cut slopes and a substandard cross section in the Moteng Pass, which are now causing environmental and security hazards. During comparison and evaluation of contractor's bids, departure from strict application of the Bank's rules resulted in selection of a claim oriented contractor and final costs becoming higher than the second or the third lowest bid.

1.6.6 With regard to the overall administration of the project, the Borrower and the Executing Agency were effective and strove to avoid delays but they experienced difficulties in applying Bank's rules of procedure for procurement of the Contractor.

1.6.7 The Bank did not participate in project identification. As soon as the Loan application was received, the Bank sent one mission for project appraisal in January 1986. The Bank was not very effective in providing guidance to the Executing Agency and did not properly scrutinise the detailed redesign, bid documents and the tender evaluation report. The Bank did not enforce the strict application of its own rules of procedure for procurement of goods and works. During the first phase of project implementation the Bank was reacting slowly to submissions by the Borrower and Executing Agency causing some unnecessary delays. The Bank effected one follow-up mission at the begin of project implementation and only three supervision missions. On balance, the Bank's performance was not satisfactory.

## 1.7. **Project Sustainability**

1.7.1 The present unsatisfactory status of maintenance of the project road is a result of design shortcomings. Volumes of slides and rock-fall exceed the removal capacity of the maintenance gangs and represent a serious hazard for traffic and the integrity of the road. Distress and pavement damage resulting from the substandard cross section of the Moteng Pass are also beyond the capacity of a normal maintenance structure. Project implementation was neither accompanied nor followed by the establishment of a specific winter maintenance capacity.

1.7.2 Although the conditions for project sustainability have been reasonably satisfactory in Lesotho to this date with effective routine and periodic maintenance as well as resealing programmed this year under the World Bank funded Road Rehabilitation and Maintenance Project (RRMP), many sections of the project road display distress and maintenance backlogs which are inherent to the adopted substandard design. The sustainability of the benefits of this project is therefore subject to appropriate upgrading and rehabilitation of the road including formation widening, in conformity with international standards for mountain roads, and slope stabilisation.

## 1.8 **Conclusions, Feedback and Recommendations**

### 1.8.1 **Conclusions**

The present report accepts most of the conclusions of the PCR with the additions stated below:

- (i) The project was relevant and consistent with Lesotho's economic development strategy, the Bank's strategy for the country and the Bank's missions and goals.
- (ii) The Project has not entirely met its main objectives which were to: (i) upgrade the primary Khamane - Oxbow road section to a bitumen standard; (ii) provide a faster, safe and all weather access through the mountainous region of the Moteng Pass to the Oxbow area, which has considerable tourism potential; (iii) reduce the costs of transportation of persons and goods between Khamane, Oxbow, the diamond mine of Letseng-La-Terae and Mokhotlong; (iv) provide an improved road link to the rural communities residing in remote mountainous areas of the north-eastern part of the country; (v) improve the primary road communications within Lesotho and around its periphery; and (vi) contribute to better integration of the people of that region in the economic and social life of the country. The project objectives were only partially fulfilled for two main reasons, which appear to be related: limited funding and project design shortcomings.
- (iii) As a result of redesign, design changes during construction and contractor's claims the actual project cost was 21% in excess of its appraised cost estimate. The EIRR decreased from 16.97% at appraisal to 6.58% at post-evaluation as a result of the actual traffic volumes that are not as high as the forecasts at appraisal and in spite of efforts to decrease construction costs by means of a substandard design.
- (iv) The project road was completed according to the specified technical standards including the technical shortcomings of redesign. In spite of design shortcomings and low rate of return, the project had a critical importance in upgrading with restricted finance the most difficult section of main road A1.
- (v) The implementation of the project experienced considerable delays which caused a time overrun of 17.5 months. The construction phase was 11 months out of schedule.
- (vi) The Roads Branch as the Executing Agency for the project performed satisfactorily in overseeing project execution but experienced serious difficulties in applying Bank's rules of procedure for procurement of the Contractor.

- (vii) The Bank's performance was not satisfactory. The Bank should have been more effective and active in giving speedy responses to Borrower's correspondences, scrutinising redesign reports and tender documents, and enforcing strict application of its own rules of procedure for procurement of goods and works.
- (viii) The project brought substantial benefits to road users and had a potential positive impact in the development of the North Eastern region of the Kingdom of Lesotho. Recent upgrading of the Oxbow - Mokhotlong road shall further increase the impact of the project. However the development of the tourism potential of Oxbow area, which has the best winter sport site in Southern Africa, did not materialise and negotiations for reopening the diamond mine of Letseng-La-Terae are not concluded.
- (ix) Following redesign shortcomings, the road cannot be adequately maintained before rehabilitation works are carried out. Resealing is programmed this year under the World Bank funded Road Rehabilitation and Maintenance Project (RRMP).
- (x) The overall assessment shows a satisfactory project outcome.

#### 1.8.2 Lessons

The following lessons can be drawn out of the project:

- (i) Implementation schedules do not appear to be always monitored and target dates are sometimes not respected. The parties, namely the Borrower and the Bank do not appear to be very concerned by time effectiveness (section 3.3 of this report).
- (ii) Economic and engineering feasibility studies cannot replace the detailed engineering design which is an essential phase for preparing appropriate tender documents: construction works cannot be tendered on the basis of feasibility studies because at this level of project investigation design assumptions cannot be based on substantial evidence and costs cannot be evaluated with satisfactory accuracy. Updating of cost estimates when required often results in unnecessary design review and redesign (section 3.2 of this report).
- (iii) Unnecessary design reviews, redesign and design changes reflect professional staff weakness of the Executing Agency and poor supervision by the Bank (section 3.2 of this report).
- (iv) Redesign to lower standards and doubtful departures of well established technical standards were used to achieve economic justification and overcoming financial restraints of this road project. This wrong practice resulted in a road which is not maintainable and serious safety and environmental hazards (sections 3.2 and 4.6 of this report).
- (v) Lack of familiarity with and deviation from strict application of the Bank rules of procedure for procurement have caused considerable delays and cost overruns during project implementation and negatively affected the completed project (section 3.5 of this report).

- (vi) Inappropriate, unrealistic specification and contract clauses can jeopardise project implementation and lead to delays, cost overrun and heavy claims at the end of construction (sections 3.2 . and 3.6 of this report).

### 1.8.3 Recommendations

The following recommendations are formulated for the consideration of the Government and the Bank:

#### For the Government

- (i) The Government should intensify its efforts in acquainting itself with and strictly applying Bank's Rules of Procedure for Procurement and also with some standard loan conditions such as the provision of legal opinion and annual audited financial reports. In any case, the Government should be required to respect the target dates now in force concerning loan signature and loan effectiveness (paragraphs 3.1.and 3.5 of this report).
- (ii) Executing agencies should include project implementation and disbursement schedules in project feasibility reports (paragraph 3.3 of this report).
- (iii) In order to avoid or minimise design modifications during construction, senior engineers should be assigned to supervise and scrutinise the work of design consultants (paragraphs 3.2, 4.1 of this report).
- (iv) The Roads Branch should ensure that rehabilitation works of the Khamane - Oxbow road are programmed for the near future (paragraphs 4.1, 4.6 of this report).
- (v) The Roads Branch should forward to the Bank as from 1998, original audited financial statements and a signed copy of the Auditor's report on all on-going road projects (paragraph 3.8.6 of this report).

#### For the Bank

- (i) The Bank should always be satisfied with project identification and preparation before deciding to appraise a project in order to avoid overlooking or oversimplifying some crucial issues at appraisal. Studies and design activities should be carefully monitored and evaluated. Multiple designs (design reviews, redesigns) should be avoided (paragraphs 2.4 and 3.2).
- (ii)
  - a) The Bank has to ensure that project implementation schedules are included in feasibility studies or project preparation reports and that these schedules are detailed enough to cover all main implementation activities (paragraphs 3.3).
  - b) The Bank should adopt a sample, detailed implementation schedule in the guidelines for project preparation (paragraphs 3.3).

- (iii) The Bank should be very strict on redesigns and design reviews prior to construction and should not accept deviations from sound technical standards as a means of achieving economic justification and overcoming financial restraints of road projects (paragraphs 2.4 and 3.2).
- (iv) The Bank should closely supervise and/or check the adequacy of project preparation and bid documents so that changes in design and friction during project execution can be avoided as far as possible (paragraphs 2.4, 3.2 and 4.1).
- (v) Procurement issues should be given careful consideration at the project preparation stage and be resolved at project appraisal or at loan negotiation stage. During implementation the Bank should always enforce the strict application of its own rules of procedure for procurement of goods and works (paragraphs 3.5 and 3.6).
- (vi) The Bank should follow-up the rehabilitation of the Khamane-Oxbow road (paragraphs 4.1 and 4.6).
- (vii) The Bank has to ensure that as from 1999, the Roads Branch will forward to the Bank, the original audited financial statements and signed copies of the auditor's reports on all on-going road projects (paragraph 3.8.6 of this report).

#### 1.8.4. Follow-up Action Matrix

A summary of the follow-up actions is presented in Annex 11.

## 2. BACKGROUND

### 2.1 Macro-Economic Context

2.1.1 The Kingdom of Lesotho is a small, landlocked mountainous country. The country lies between latitudes 21° and 31° south and longitudes 27° and 30° east and is completely surrounded by the Republic of South Africa (Annex 1). The climate is subtropical cool to cold with dry winters and hot, rainy summers.

2.1.2 Lesotho has an area of 30,350 km<sup>2</sup> and is the only country in the world with all of its territory at altitudes in excess of more than 1000 m above sea level. Altitudes range from 1,388 (junction of the Orange and Makhaleng rivers) to 3,482 m (mount Thabana-Ntlenyana). About 75 % of the country is highland area, while about 25 % on the western belt of the country is considered lowlands. Two of southern Africa's most important rivers (Orange or Senqu and Lugela) rise in the mountains of Lesotho. The country has no important natural resources other than water.

2.1.3 The country's population is about two million inhabitants with a growth rate of 1.91 % (1998 estimate). About two thirds of the population live in the western lowlands. Lesotho's population is still youthful, with 40% being under 15 years.

2.1.4 The economy of the Kingdom of Lesotho is structurally linked to that of South Africa by virtue of the Kingdom's geographical location, her migrant workers in the Republic of South Africa and her membership of both the Southern Africa Customs Union (SACU) and the Rand Monetary Area (RMA).

2.1.5 The key sectors of the economy of Lesotho are construction (27.2% of GDP in 1996), agriculture and animal husbandry (12.9% in 1996), light manufacturing (13.8 in 1990, 15.3% in 1996), and remittances from miners employed in South Africa (67% in 1990 and 33% in 1996). Agriculture plays an important role in national development and comes after industry as a leading sector in its contribution to the GDP. Significant proportions of output from this sector are either used in the manufacturing industry or exported (mostly animal husbandry products). Cereal production (maize, sorghum and wheat) is adversely affected by droughts and food requirements must be supplemented by imports. The input of the agricultural sector is affected by overgrazing, soil erosion and uncontrolled water resources (excessive rainfall, persistent droughts). Erosion control techniques are widely used .

2.1.6 Although Lesotho's industrial sector is still small, it has grown at impressive rates and currently accounts for 76.3% of the total merchandise export (1997). Manufacturing activity depends on farm products which support the milling, canning, jute, leather, and shoes industries and on imported textile supporting the garment industry. Construction with the Lesotho Highlands Water Project (LHWP) is one of the main sources of GDP, but tourism, which has been neglected in spite of its potential, only contributes an average 2.8% GDP. The mining sector (mining and quarrying) has a very small contribution of 0.1% GDP (1996).

2.1.7 The economy of Lesotho is strongly export oriented. In addition to manufactured goods exports comprise cattle, wool and mohair in equal parts. Transport and communication play a key role in support of overall growth in the economy.

2.1.8 In recent years, the economy of Lesotho grew at an average rate of 7% and the real GDP is projected to increase in 1999. The estimated GDP per capita was UA 287.00 in 1996 and Lesotho is classified as a low income developing country. However, its macro-economic indicators conceal inequalities and poverty.

2.1.9 Recent macro-economic trends show significant improvements in the balance of payments, decline of inflation and strong foreign exchange reserves. Macro-economic improvement has been achieved in spite of droughts and retrenchment of basotho labourers by South African mines and is being supported by LHWP and royalties paid by South Africa for water. The industrial sector is also contributing to macro-economic achievement and job creation but unemployment rates are still very high.

2.1.10 Rigorous implementation of the economic structural adjustment programme and continued progress on expenditure control, revenue diversification and encouragement of investment and private sector are essential to Lesotho's future growth and stability. With the population growing at about 2% per annum, Lesotho needs growth rates of at least 4 to 5% per annum to keep its unemployment rate under control. Achieving these and higher growth rates that could bring about a situation close to full employment in the long range will require that the country not only adheres to the adjustment programme but also increases investments in key sectors, such as agriculture, manufacturing, tourism and infrastructure.

2.1.11 Together with these requirements, there is need to provide an improved and better balanced road network to facilitate economic development and the extension of basic social services in the remote, poor areas of the country. The development of road infrastructure is a priority for the Government.

## 2.2 **The Road Sub-Sector**

2.2.1 Lesotho is geographically situated in the middle of the Republic of South Africa, between the Orange Free State and Kwazulu-Natal, and its most populated western belt is connected to the sophisticated transport system of South Africa.

2.2.2. The development of the paved road network of Lesotho started from Maseru and progressed around the periphery of the country. It has now reached Mokhotlong in the north-east and Mphaki in the district of Quthing in the south-east. The Bank made an important contribution to this development. During the Fifth Five-Year Plan the roads in the eastern periphery of the country shall be paved and connected to the Kwazulu-Natal border together with some other roads penetrating the mountains from Maseru. The feasibility studies of one of these roads, the Trans-Maluti Highway have been carried out in 1998. The Bank has been recently approached for funding feasibility studies and detailed design of the Roma - Ramabanta - Semonkong - Sekake road (150 km) and detailed design of the Likalaneng - Thaba Tseka road (88 km), which is a part of the Trans-Maluti Highway.

2.2.3 The economy of Lesotho is highly dependent on road transport that carries 63% of the country's surface freight and moves all passengers, while the rail sub-sector (Maseru Railhead and 2 km rail spur connected to the line of Bloemfontein) only handles 37% of the total freight. Priority has been and is being given to the development of road infrastructure since independence in 1966.

2.2.4 At the time of independence, Lesotho had no bitumen paved roads outside Maseru. Since then the network has been expanding steadily and more than 1,000 km of highways were paved. Lesotho road network lengths are shown in the table of Annex 2.1. The paved, gravel and earth road lengths represent respectively 19, 42 and 39% of the total network length.

2.2.5 The road network has a total length in excess of 5,000 km. In addition to the Roads Branch of the Ministry of Public Works and Transport, other agencies are contributing to the development and management of the road network, namely the Labour Construction Unit (LCU) of the Ministry of Public Works and

Transport and the Civil Works Section (CWS) under the Ministry of Local Government (MLG). More recently the Lesotho Highlands Development Authority (LHDA) has rehabilitated and upgraded existing roads and constructed new roads in connection with dam and development projects.

2.2.6 The RB of the Ministry of Public Works and Transport is responsible for the classified gazetted roads which are the most important and most heavily trafficked roads of the network. The LCU is responsible for upgrading earth roads to engineering standards, maintaining and regravelling them. The LCU usually employs labor-based local contractors. The CWS is responsible for the construction and maintenance of earth roads to a lower standard than LCU-built roads.

2.2.7 The RB under the Ministry of Public Works and Transport is responsible for the development, management and maintenance of primary and secondary roads. One of its divisions headed by the Principal Roads Engineer (Maintenance) is in charge of the maintenance of the national network (primary and secondary roads), including all routine and periodic maintenance, maintenance of road signs and roads markings, and implementation of control measures on axle-overloading by heavy vehicles.

2.2.8 The Government's Plant and Vehicle Pool Service (PVPS) works under the MOPWT. It is in charge of all Government equipment, plant and vehicles working in road construction and maintenance.

2.2.9 For the purposes of maintenance, the country is divided into three regional divisions: North, South and Centre. Each division is headed by a Senior Roads Engineer. Each division is further divided into 5 districts, comprising several maintenance units. Each district is headed by a Supervisor. The Maintenance Division at the Headquarters is also directly responsible for heavy maintenance works such as road rehabilitation, regravelling and periodic resealing by contract. Plant and equipment for maintenance are allocated by PVPS which is responsible for both the purchase and repair of all equipment. The Maintenance Division may hire additional equipment from the local market, whenever needed.

2.2.10 Annex 2.2 shows the condition of the road network in 1994. The condition rating of the network as a whole was not satisfactory with one third rated good, one third fair and one third poor and was indicating maintenance backlogs as a result of maintenance allocations being short of necessary funding to meet maintenance requirements.

2.2.11 A closer analysis shows however that the condition of the paved network is reasonably good with no road sections rated as poor and only one fifth of the total length rated as fair. The condition of the gravel roads is worse but only one sixth of the length is rated poor, and the earth roads are even in worse condition with two thirds of their length rated as poor. This situation reflects the decreasing levels of funding of the three road authorities.

2.2.12 The annually allocated funds are enough to maintain the roads under RB management. For LCU and CWS, the allocations fall short of the necessary funding to meet maintenance requirements. This has resulted in an increasing deterioration of roads, and increasing impassability of roads to some communities in the mountainous parts of the country.

2.2.13 One of the major problems faced by the MOPWT is that it cannot keep or attract experienced engineers, technical staff and administrators. Most of them either go to the private sector or migrate abroad. Both RB and LCU suffer from lack of qualified and experienced staff in road project design, evaluation, appraisal, management and construction supervision.

### 2.3 **History of Operations**

2.3.1 The highest share of the Bank Group's commitments to Lesotho is in the transport sector, amounting to UA 78.12 million or 40.6% of total commitment as at 21 January 1998 (last update of country strategy paper). With the exception of the new Maseru Airport, all transport sector commitments were in the road sub-sector.

2.3.2 The share of the roads sub-sector comprised ten projects: all were completed. Of the ten projects, four completed projects including this were subject to project performance evaluation reports (Summary Data Sheet, section H).

2.3.3. The Leribe - Butha - Buthe - Joel's Drift road project was completed and generally considered successful. Some of the findings were that there was poor communications between the Bank and the Government, unnecessary long period of mobilization by the contractor, and lack of sufficient traffic data for evaluating project effects and impacts. It was recommended in the PPER that the Bank Group should prepare for borrowers, guidelines for the collection of traffic data for monitoring and evaluation of projects. The collection of this traffic data should be a condition in Loan Agreements. The Bank Group should also streamline and improve its courier service. Communication between Government and the Bank improved since but findings and conclusions on other issues still apply to the Khamane - Oxbow Road Project.

2.3.4 The Joel's Drift - Khamane Road Project was completed in 1980. The evaluation report concluded that the use of the same consultant for the design and the supervision of implementation of a project does not necessarily have advantages. The same consultant was again selected for redesign and construction supervision of the Khamane - Oxbow road and was apparently unable to draw from the lessons of experience of the construction of the Joel's Drift - Khamane road. A second conclusion was that for a project to live up to appraisal expectations, there is the need for complimentary investments in the project area and this conclusion also applies to both projects.

2.3.5 The Road Maintenance Project was jointly funded by IDA and ADF. The ADF component comprised rehabilitation of the Maseru to Leribe section (87.7 km) of the main road A1 and 9.5 km of urban roads. The works were completed on 29 April 1989 with a 21 months delay by Stirling Skanska Joint Venture SSJV). The evaluation report concluded that the performance of the Contractor was not satisfactory and was characterized by poor site management with replacement of site agents, poor workmanship and non compliance with specifications resulting in extensive repairs of large areas. SSJV was the preferred contractor selected for contract negotiations in the Khamane - Oxbow road project and commenced the works of this project on 15 August 1987, eight months before he had completed the works of the former. After completion he submitted a heavy claim file that was still being analyzed by the relevant consultant at the time the PPER was issued.

2.3.6 The World Bank is currently funding a Road Maintenance and Rehabilitation Project (RRMP), which includes resealing of the Khamane - Oxbow road.

### 2.4 **Project Formulation**

2.4.1 The Fourth National Development Plan 1986-87 to 1990-91 included rehabilitation and upgrading of the Khamane - Oxbow section of main road A1. The upgrading of the existing gravel road Khamane - Oxbow to bitumen standard had been identified in 1980 (Lesotho Transportation Study) as a section of the Leribe - Khamane - Mokhotlong road, which improvement was recommended to be executed in phases.

2.4.2. Following the application for a loan by the GoL, an appraisal mission was sent to Lesotho by the Bank in January 1986 and loan negotiations took place in Abidjan in April 1986.

2.4.3. The project was designated Khamane - Oxbow Road Project with an approximate length of 22 km. The project road was the most difficult section of Main Road A1 comprising a particularly difficult 10 km long, tortuous subsection through the Moteng Pass. A feasibility study and a detailed engineering design prepared by consultants were available. However, the Bank elected to finance a detailed redesign in 1985 which was prepared by another consultant before appraisal. Following very difficult site conditions and widely accepted engineering practice, the initial detailed engineering design had recommended lower geometric standards for the road. The desire to upgrade this road section to the same standards (bitumen 2 standard) as the Joel's Drift to Khamane road section appears to have been one of the reasons for the redesign by a new consultant, which also included updating of economic indicators.

2.4.4 The Project appraisal was based on the detailed redesign. Redesign resulted in the adoption of a substandard cross section in the Moteng Pass, the so-called "modified bitumen 2 standard" with a full paved 6.00 m carriageway, no shoulder on the mountain side, and a 0.30 m wide shoulder for guard rails on the valley side. Redesign also resulted in steep, unstable cut slopes. In order to achieve economic justification and take into account financial restraints the new consultant thus recommended important technical deviations from well proven standards.

2.4.5 The consequences of such deviations were not assessed in the appraisal report. Winter maintenance was also not considered. Apart from this, the report was prepared in a satisfactory manner and provided a detailed implementation schedule of three and a half years with sixteen target dates.

## 2.5 **Project Rationale**

2.5.1 The Project road was a critical section of the Leribe - Mokhotlong road (Main Road A1) and was identified in 1980 by the Lesotho Transportation Study for upgrading to bitumen standards. Due to limited resources including limited capacity of the Roads Branch for contract management, the improvement of Main Road A1 was programmed to be executed by sections and the most expensive section through the Moteng Pass was separated from others forgetting that economic justification of the investment of a large amount of money in a short section would be a most difficult exercise. The Project road was included in the Fourth National Development Plan.

2.5.2 An economic analysis and feasibility study carried out in 1981 indicated that the improvement of the Project road section would be viable in 1990. The updating of the economic analysis in 1985 confirmed this conclusion but was based on an engineering redesign departing from sound technical standards and concepts for cut slopes and pavement cross sections.

2.5.3 The road was also providing direct access to a potential site for winter sports that was unique in southern Africa and to a kimberlite pipe and diamond mine concession at Letseng La Terae which was closed since 1982.

## 2.6 **Project Objectives and Scope at Appraisal**

2.6.1 The appraisal report did not use the logical framework approach and defined project objectives in an unclear manner. From its summary, section 5 (a) and its section 5.1.1, the following six project objectives can be identified:

- (i) upgrade the primary Khamane - Oxbow road section to a bitumen standard;
- (ii) provide a faster, safe and all weather access from one end of the foot hills of Khamane through the mountainous region of the Moteng Pass to the Oxbow area, which has considerable tourism potential;
- (iii) reduce the costs of transportation of persons and goods between the foothills of Khamane, Oxbow, the diamond mine of Letseng-La-Terae and Mokhotlong;
- (iv) provide an improved road link to the rural communities residing in remote mountainous areas of the north-eastern part of the country;
- (v) improve the primary road communications within Lesotho and around its periphery;
- (vi) contribute to better integration of the people of that region in the mainstream of the economic and social life of the country.

2.6.2 The completion report (section 2.1) stated that the sector objective was to improve and upgrade the primary road network that traverses the extremely difficult terrain regions of the north-eastern part of the country and that the project objectives were to upgrade the Khamane - Oxbow road section to bitumen standards and to provide safe, serviceable all weather access from one end of the foothills (i. e Khamane) to the other end (i. e. Oxbow) through the Moteng Pass.

2.6.3 The project objectives were only partially fulfilled for two reasons. A winter maintenance component was not included in the project and in the absence of appropriate resources and equipment for snow clearing, snow drift control and black-ice prevention, the road does not provide an all weather access.

2.6.4 The second reason is that the access provided by the road as designed and built is not safe. Cut slopes were designed too steep and left without appropriate equipment and protection against rock falls. As a result, rock boulders, cobbles and debris have been falling since construction in many sections, damaging side ditches, pavement and guard rails and causing a very serious hazard to road users.

2.6.5 Furthermore, the “modified standard 2” cross section proved to be a poor compromise against well established and widely used geometric standards. It also represents a traffic hazard and does not allow enough space for large vehicles in different lanes to pass each other safely.

2.6.6 Winter tourism potential did not result in substantial development projects. The diamond mine of Letseng La Terae remained closed since 1982 but negotiations for reopening are being held.

2.6.7 However, the project was of critical importance in improving with restricted finance the most difficult section of the main road A1 and provide faster access at lower cost to the north eastern area of Lesotho. The project road is contributing to better integration of the people of that region in the economic and social fabric of the country.

2.6.8. The project was therefore highly relevant and consistent with the country's economic development strategy, with the Bank's strategy for Lesotho and with the Bank's mission and general goals.

## 2.7 **Financing Arrangements**

2.7.1 The project was financed by the ADF and the GOL. According to the original estimate the total cost of the project was UA 7.139 million with a foreign exchange cost of UA 5.711 million or 80%. The ADF had to contribute 100% of the foreign exchange and 50% of the local costs, or 90% of the total project cost, net of taxes. The GOL had to meet the remaining 50% of the local costs representing 10% of the total cost. The total local cost was 20% of the total project cost.

2.7.2 The final cost of the project is UA 8.661 million including an estimated M 2.000 million or approximately UA 0.30 million for settlement of unresolved claims (PCR). The actual ADF disbursement was limited to UA 5.600 million and less than the amount of the loan (UA 6.425 million) and the GOL was to provide finance to cover all cost overruns. Therefore the funding proportions turn out to be substantially different from appraisal estimates. The GOL actually ends up funding 35% of the project cost amounting to UA 3.061 million in local currency. The ADF loan was not fully disbursed and a loan balance of UA 0.824 million was cancelled in 1995.

2.7.3 The GOL is still negotiating with the Contractor's representative for the amicable settlement of a large claim file. The evaluation of original claims by the Contractor himself (letter of 18.1.1999 from Stirling International Civil Engineering Ltd., signed A. Fasciotti) was M 9,347,022 and DM 279,332. If compared to the final cost of the contract (M 15.592 million), the original claim represents about two thirds. From the original claims, the Government accepted to pay the total amount in foreign currency and M 1,064,713, and rejected M 109,815. The claims still pending for amicable settlement amount to M 8,172,494. The Government recently offered to pay one million maloti as final claim settlement but the Contractor did not accept arguing that the amount of the accepted claims exceeds this offer.

2.7.4 Contradictory contract clauses on foreign currency exchange rates originated lengthy contract negotiations with the validity of bids being extended twice. The Contractor finally accepted to sign the contract and support the risk of foreign exchange rates. The table of Annex 3 gives an evaluation of the risk incurred by the Contractor, which amounts to a foreign exchange loss of about UA 200,000.00 or M 700,000.00.

2.7.5 If the foreign exchange risk is added to the amounts of claims already accepted by the Government it can be concluded that M 2.000 million would be a very reasonable estimate for final claim settlement and full compensation of the Contractor for all extra costs including financial costs.

2.7.6 Payments made to the Contractor and Consultant by the Borrower were net of taxes, since they were exempted from direct taxes and import duties on plant equipment, spare parts, construction materials and salaries.

2.7.7 The appraisal and actual project financing plans are shown above in the summary data sheet, section B.2.

## 2.8 **Evaluation Methodology and Approach**

2.8.1 The present project performance evaluation report was prepared following (i) a desk review of the project documents and information available in Bank files; and (ii) a post evaluation mission to Lesotho, undertaken from 11 to 29 April 1999. The documents reviewed included the appraisal report, the project completion report, the economic and engineering studies, the tender evaluation report, monthly progress and quarterly supervision reports and the final construction report as well as correspondence and claim files from the Executing Agency and the correspondences available in the Bank files. In the course of the field mission, additional information was collected and visits to the Project site were effected; a detailed inspection of the road was carried out. Discussions were held with staff of the Executing Agency and with officials of other government agencies, as well as leaders of the private sector.

2.8.2 Since the Project was characterised by abnormal implementation delays a project actual versus appraised schedule was prepared in the form of two bar charts comparing all target and implementation dates that could be documented (Annex 4). The two charts of scheduled and actual implementation can be usefully consulted to facilitate and clarify many sections of this PPER.

2.8.3 The PPER presents a retrospective evaluation of the project. In particular, it assesses the relevance and degree of achievement of objectives, as well as the operational, economic, institutional and sustainability aspects of the Project. It supplements the PCR, draws additional conclusions and lessons, and puts forward recommendations for both the Bank and the Government. The assessment of the economic impact used the with-without approach and the assessment of the institutional impact used the before-after approach.

### 3. **PROJECT IMPLEMENTATION**

#### 3.1 **Loan Effectiveness**

3.1.1 The loan for the project was approved by the ADF Board on 18 June 1986. The loan agreement was signed, one month later, in 16 July 1986. It was declared effective on 3 April 1987. The delay of eight and a half months between signature and entry into force was required by the Government of Lesotho to fulfil the loan conditions.

3.1.2. The conditions precedent to the first disbursement of the Loan Agreement required that the borrower should

- (i) give an undertaking to the Fund that it would make adequate budgetary allocations to meet both its share of the project costs and the tax element;
- (ii) give an undertaking to the Fund that it would assume responsibility to meet all cost overruns of the project,
- (iii) give an undertaking to draw up and submit to the Fund, each year, a satisfactory annual programme for the rehabilitation, the routine and periodic maintenance of the classified road network. The said programme shall define the roads to be covered and shall contain detailed information showing in particular (a) the individual categories of work to be performed and the agencies responsible for carrying out such work and (b) an annual programme and an indication of the sources of finance required for implementation of the entire programme;
- (iv) assign a senior officer from the Chief Engineer's Office of the Roads Branch to be the Project Co-ordinator,

(v) give an undertaking to submit to the Fund monthly and quarterly reports on the progress of works performed by the construction contractor.

3.1.3 The conditions were quite appropriate and the Borrower fulfilled all conditions in a reasonable delay.

### 3.2 **Changes in Project Design**

3.2.1 Substantial changes in project design were made at two different phases of project implementation. Redesign prior to construction was carried out with the intention of improving geometric standards but resulted in serious deviation from well established technical concepts and substandard geometric design for the Moteng Pass section. Redesign also resulted in inappropriate specification and contract clauses which helped the Contractor to develop and implement his claim strategy and bring about his own design changes with increased costs during construction.

3.2.2. Before project appraisal in 1986, an updating of the cost estimate and economic indicators was required because five years had elapsed since the existing design had been prepared. The updating would have shown the high costs of earthworks resulting from large volumes of rock excavation. The economic indicators could have suggested a positive solution by combining this short, costly section of main road A1 to a nearby long section of the same road with small volumes of earthworks along the plateau between Oxbow and Mokhotlong. Instead, it was decided to decrease construction costs of the small section by adopting unstable, steep cut slopes and a substandard cross section for the Moteng Pass.

3.2.3 On 15 January 1990 the Contractor submitted a list of 73 soil slides and rock falls that he had to remove. After the maintenance period, the maintenance gang of Khamane tried to keep the side ditch and the pavement clear of soil and rock debris by shovelling the materials across the guard rail but could not cope with the pace of falling materials. Ditches and culverts are now obstructed with debris and uncontrolled run off is threatening the road.

3.2.4 The pavement lateral strips of the Moteng Pass could not be properly compacted because no wide shoulders were available to provide lateral support. The pavement edges are failing under heavy traffic loads for the same reason, lack of lateral support, with longitudinal cracking gradually progressing towards the centre line.

3.2.5 The difficulties of earthworks in the mountain environment with abundant rain and, cool temperatures and waterlogged soils and materials were well known to the Consultant from the Joel's Drift to Khamane Road Project that he was supervising. However, a clause was included in Specifications and General Provisions (Clause 3302) stating that "the use of unslaked lime would not be permitted". Since quicklime or unslaked lime is the only practical means of drying soils and materials and achieving compaction of water logged soils at low temperatures, under cloudy skies, the Resident Engineer was left without alternative solution, contending with the Contractor on the issue of drying soils and the earthworks were being delayed during the rainy summer and the cold winter. Test results by the Contractor (145 samples, June and July 1988) showed natural water contents in the range 20 to 50%. Quicklime is widely used in northern Europe including the British Isles for earthworks during rainy summers and the rationale for introduction of such a clause by the Consultant are not easily understood.

3.2.6 Oversize material was also an issue of permanent conflict between the Contractor and the Resident Engineer as a result of poor geotechnical investigations prior to construction. The Engineering Design Report of the Redesign Study was a self contained document with attached laboratory test results on 120 samples. This report included a map showing the locations of eighteen borrow areas along the road and stated that "sufficient borrow materials for the various layers of the road construction had been located and tested" and that the average haul distance was 1.0 km for selected subgrade, 5.5 km for sub-base and up to 10 km for base. However, the report did not present natural water content test results and also omitted the oversize issue.

3.2.7 In July 1988, in order to avoid more delays, the Contractor proposed a pavement design change that was recommended by the Consultant and accepted by the Engineer. The natural materials of the selected subgrade and subbase layers with a total thickness of 25 cm were replaced by a 50 cm thick draining layer of crushed stone with an extra cost of ca. M 350,000. The pavement as designed by RPCE had a 20 years design life. The design life of the pavement as designed by SSJV can be evaluated to 6 - 10 MESAL by application of the Overseas Road Note N° 31 design method. Based on the traffic forecasts assumed in this report Annex 5 indicates a design life of 60 years.

3.2.8 It can be concluded that the design changes were at the expense of either sound technical concepts and resulted in premature deterioration or common sense economic concepts and resulted in extra costs.

### 3.3 **Implementation Schedule**

3.3.1 The PAR provided a detailed implementation schedule with sixteen different target dates. A comparison between the appraisal and actual implementation schedules for the project as a whole was made in the PCR (section 3.3). A more comprehensive comparison is given in the scheduled and actual implementation bar charts of Annex 4 to this report.

3.3.2 A comparison between the appraisal and actual implementation schedules for the project shows a delay of three months between the dates of submission of consultants tenders, and a 17.5 months delay between the completion dates of the appraisal and actual schedules. Actual implementation of construction exceeded by eleven months the appraised construction period.

3.3.3 During the first phases of project implementation, before construction, delays were gradually increasing from three months at the date of submission of consultants tenders to six and a half months at the date of commencement of works in spite of the mobilisation of the consultant four months in advance of the date his contract was signed. The causes of increasing delays include long delays for comments on Borrower's submissions and non objection statements by the Bank.

3.3.4 Eight and a half months elapsed between the approval of the Loan and its effectiveness. There was a delay of 7.5 months from the date the Loan was signed by the Bank to the date the Loan became effective. This delay was one and a half month in excess of the six month maximum delay that is now enforced by the Bank. The works commenced 4.5 months after the effectiveness date.

### 3.4 **Reporting**

3.4.1. The construction works were adequately supervised. The Consultant prepared 54 monthly progress reports and 17 quarterly supervision reports on behalf of the Executing Agency up to July 1990 and a final report in December 1990. These reports were regularly sent to the Bank by the Government and contained sufficient detailed information to enable monitoring of Project implementation.

3.4.2 Despite reminders from the Bank, the Borrower did not submit any annual audit reports. The submission of audited financial statements is a requirement of the general conditions of loan agreements and ought to have been complied with.

3.4.3 The non-submission of annual audit reports is a common deficiency affecting many Bank funded road projects and is now being addressed by the inclusion of an audit component on new projects whenever considered necessary.

### 3.5 **Procurement**

3.5.1 Goods and services were procured in accordance with the Bank's rules of procedure (PCR, section 3.4). However, during the procurement of road construction services strict application of some of the Bank's rules of procedure could have avoided increased costs and delays as well as protracted claim negotiations.

3.5.2 The procurement procedures suffered some unnecessary delays. Thus the GoL advertised pre-qualification of contractors on 13 March 1986 and the submission deadline was 1 May 1986, but the evaluation report was only submitted to and approved by the Bank six months later. Tenders were issued in November 1986 and closed on 17 February 1987. The draft tender evaluation report was issued on 12 March 1987 and the final version on 26 March 1987. It was approved by the Bank on 21 April 1987.

3.5.3 The Tender Evaluation Report as approved by the Bank did not make the responsive bids comparable and failed to provide a meaningful bid comparison (Section 3.14 and Guidance N° 2, Paragraphs 2.1.2 and 2.1.6 of the Rules of Procedure for Procurement Under the African Development Fund Loans, March 1980 and November 1983, or Section 3.36 of the Rules of Procedure for Procurement of Goods and Works, ADB and ADF, December 1996).

3.5.4 When dealing with tender responsiveness, the Report recommended rejection of the third lowest bid (Kier International) because this bid had a qualification (or reservation), but recommended that the first lowest bidder should remove an implied qualification from his tender rather than having his bid rejected.

3.5.5. When analysing cost savings involved with shorter construction time of Kier International (18 instead of 24 months), the Report evaluated savings in vehicle operating and in escalation costs but forgot to consider savings in construction supervision costs, which were higher than the former.

3.5.6. The Report stated that the plant of the lowest bidder was not acceptable but made no mention of the fact that this bidder had some of its plant engaged in another road construction project in Lesotho. The report stated that with the plant listed the tenderer would be unable to complete construction within the specified period. However, no evaluation was given of time delays and extra costs that would be incurred by this unacceptable plant. The plant of the lowest bidder was actually short of earth moving equipment and trucks.

3.5.7 The Report compared the tendered rates to the rates of the Consultant's confidential evaluation. The Consultant's confidential estimate for the contract value was based on unrestricted competition and the lowest tender price reflecting the Bank's eligibility rules then in force was 9.3 % higher. In spite of this, the lowest bidder was tendering lower rates for earth works, shoulders and pavement granular layers and his artificially low rate for subbase was 50% lower than the Consultant's estimated rate. The only exceptions were higher rates for blasting and crushed stone, which was 25% higher. The report does not include any break down of unit rates that could have been timely requested to and provided by the lowest tenderer and were essential for preliminary clarification of unbalanced and artificial rates for making the bid with the lowest offered price comparable with the others and carrying out a meaningful comparison of the tenders.

3.5.8 From the Tender Evaluation Report, it was therefore clear that SSJV was tendering abnormally low and prepared to recover by means of claims and litigation on the basis of inappropriate and contradictory specification and contract clauses. After nomination by the Borrower's Tender Board as preferred

contractor, SSJV promptly disclosed his strategy when he delayed contract negotiations for two months. Construction was further delayed by inappropriate specifications to deal with the waterlogged soils issue. The contractor finally proposed a new pavement design that disregarded the artificially low rate of subbase and only considered the exceptionally high rate of crushed stone.

3.5.9 This strategy could have been arrested by the Bank and the Borrower on two or three different occasions. The first occasion could have been rejection on the basis of inappropriate plant and resulting higher costs and longer delays. The second occasion could have been the approval of the Bid Evaluation Report. This report should have been rejected because it was not concluded and did neither contain clarification of unbalanced and artificial rates, including sensitivity analysis and evaluation of resulting extra costs nor a meaningful cost comparison of bids. The third occasion could have been the extension of validity of bids (Section 3.17 of the Rules of Procedure for Procurement Under the African Development Fund Loans, March 1980 and November 1983, or Section 3.39 of the Rules of Procedure for Procurement of Goods and Works, ADB and ADF, December 1996), since this extension can only be allowed “in exceptional circumstances”, “for the minimum period required to complete the evaluation, obtain the necessary approvals and award the contract.” This was not the case and the extension was being awarded twice following dilatory arguments by the preferred Contractor.

3.5.10 It can be concluded and subsequent experience demonstrated that the contract was not awarded to the “lowest evaluated cost bid” (Paragraph 3.18.1 of the Rules of Procedure for Procurement Under the African Development Fund Loans, March 1980 and November 1983, or Section 3.40 of the Bank Group’s Rules of Procedure for Procurement of Goods and Works, December 1996).

3.5.11 The above discussion shows that strict application of the Bank’s Rules of Procedure for Procurement of Goods and Works could have avoided the difficulties experienced with this project. It is therefore essential that the Borrowers become familiar and strictly comply with the Bank’s Rules of Procedure.

3.5.12 Contract negotiations were called before the required information for meaningful bid comparison had been provided by the lowest bidder and the Bank made no objection to negotiation with a bidder who was not the lowest evaluated and was quoting unbalanced rates as well as some artificial rates, before this issue was properly clarified by the Consultant. The validity period of the bids had to be extended twice as a result of dilatory moves by the preferred Contractor during negotiations.

3.5.13 Thus the road construction works were entrusted to a claim oriented Contractor who implemented his claim strategy and caused extra costs and unnecessary delays.

3.5.14 The award of the consultancy services contract was made in accordance with the Bank’s procedures. The selected consultant was the same who had prepared the redesign study and tender documents that should have been more accurately scrutinised by the Borrower and the Bank. In spite of efforts by the Resident Engineer, the Consultant did not provide and could not have provided appropriate contract management in the conditions created by inappropriate specification and contract clauses and the selection of a claim oriented Contractor who was already working in another Bank funded project (Road Maintenance Project), where he later submitted a heavy claim file.

### 3.6 **Project Costs**

3.6.1 The following table below shows a summary of Project costs as appraised and actual.

Table 3.1

Summary of Project Costs (UA million)

	<u>Appraisal</u>			<u>Actual</u>		
	<u>FE</u>	<u>LC</u>	<u>Total</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>
Construction	4.137	0.776	4.913	5.105	2.948	8.053
Supervision	0.248	0.046	0.249	0.495	0.113	0.608
Contingencies	<u>1.326</u>	<u>0.606</u>	<u>1.932</u>	-	-	-
<b>Total</b>	<b>5.711</b>	<b>1.428</b>	<b>7.139</b>	<b>5.600</b>	<b>3.061</b>	<b>8.661</b>

3.6.2 Table 3.1 indicates that all appraised costs were exceeded. The final total cost was 21% higher than appraised. The cost of construction including contingencies was 18 % higher than appraised as a result of successful implementation of a claim strategy by the Contractor. The cost of Consultant's services was 144% higher than appraised as a result of time overrun in construction and additional services for claim analysis. Since the Loan Amount was not modified, the Government entirely covered the cost overrun.

### 3.7 Disbursements and Financial Sources

3.7.1 As pointed out in the PCR (3.7.1), it was expected at appraisal that the loan would be disbursed from 1987 to 1989 but actual disbursements were spread over eight years from 1987 to 1994.

3.7.2 The direct disbursement method was used to pay the monthly invoices submitted by the Contractor and the Consultant.

3.7.3 Section E of the Summary Data Sheet presents a comparison between anticipated and actual disbursements. The total loan amount should have been totally disbursed in 1987 but by that date less than 50% of the total loan was disbursed. The total disbursement only attained 95% in 1991. Disbursements were still being made in 1994.

### 3.8 Compliance with Loan Conditions and Covenants

3.8.1 As mentioned in chapter 3.1. above, conditions precedent to the first disbursement were complied with almost timely.

3.8.2 Loan conditions (i), (ii) and (iv) were fulfilled by the 28 of November of 1986 or four months after signature. However, specimen signatures were only received by the Bank on 11 March 1987 and rehabilitation and annual programme and investment schedule, following condition (iii) on 1 April 1987 after the end of the rainy season and before beginning of the fiscal year in Lesotho.

3.8.3 The formal fulfilment of conditions (i), (ii), (iii) and (v) by giving undertakings was followed by appropriate, effective actions. The Government of Lesotho has prepared and implemented adequate annual maintenance programmes for the classified road network including the project road.

3.8.4 The Borrower complied with condition (ii) and covered all cost overruns of the project,

3.8.5 The experience of this project shows that the Government is in a position to comply with the maximum delay of six months now in force between loan approval and effectiveness and avoid the prospect of future loans being cancelled before they are declared effective.

3.8.6 Finally, it should be noted that the annual financial audit reports required in Section 703 (c) of the loan agreement were not submitted by the Borrower.

#### **4. PERFORMANCE EVALUATION**

##### **4.1 Operating Performance**

4.1.1 The Khamane - Oxbow road was fully opened to traffic nine years ago in April 1990 (substantial completion). The road construction generated some volume of long distance traffic. Construction of the Oxbow to Mokhotlong road to paved standards which was recently completed generated more long distance traffic. However, according to available traffic data, growth rates are moderate and total traffic remains below appraisal forecasts. It is expected the development of the Mokhotlong area will result in higher traffic growth rates. However, the future construction of the Trans-Maluti Highway will divert traffic originating in the Maseru area. It is still expected that reopening of the Letseng-La-Terae mine and winter tourism development will generate more traffic in these sections of the main road A1.

4.1.2 The inspection of the project road as well as the condition survey, and roughness measurements recently carried out by the Roads Branch all together point to a good operating performance of this road subject to the limitations of design shortcomings. The measured international roughness index (IRI, May 1998) varies in the range 2.68 to 4.61 m/km, with averages of 3.00 in the left and 3.40 m/km in the right lane. Deflections have not been measured. This road section is due for resealing this year under the World Bank funded Road Rehabilitation and Maintenance Project (RRMP).

4.1.3 Design shortcomings are causing increasing damage to the road. Longitudinal cracking resulting from pavement edge failure is progressing towards the centre line. This type of distress cannot be repaired and will only be temporarily concealed by resealing.

4.1.4 Slope slides and rock fall are damaging the pavement and guard rails and causing potholes that are regularly repaired by the maintenance gangs. However, the maintenance gangs do not have the capacity to remove the large amount of debris continuously falling and obstructing the drainage structures. Obstruction of side ditches is already resulting in uncontrolled runoff, which will cause serious erosion and slides if it is not timely arrested.

4.1.5 Application of the design method of the Overseas Road Note 31 indicates that the pavement structure has the capability to carry the forecast traffic volumes of the next fifty years. However, narrowness and lack of lateral support will cause failure progressing from the edges and require rehabilitation much before the design life is used up.

4.1.6 The Roads Branch should programme rehabilitation and widening of the Moteng section and cut slope rehabilitation of the entire road. Realignment and raising of the Oxbow section will also be required before the construction of the Oxbow dam which is planned by the LHDA.

4.1.7 The Roads Branch should also continue to provide adequate routine and periodic maintenance to the bitumen paved road network including the project road.

## 4.2 **Financial Performance**

4.2.1 Since appraisal, the regional currency which is the Rand-Maloti was being devalued every quarter. The average yearly rate of devaluation was 30% between 1987 and 1990 and 55% between 1990 and 1994.

4.2.2 These devaluation trends introduced considerable fluctuations in the project cost and increased the Borrower's contribution to the Project. However, late reimbursements to the Borrower (section 3.7.1 above) had an opposite effect.

4.2.3. A contractual clause on foreign exchange fixed rate coupled with the devaluation trends also caused foreign exchange loss to the Contractor which has been estimated in Annex 3. Having accepted the clause and signed the contract, the Contractor did not formulate claims on foreign exchange risk that he is apparently trying to recover by means of other claims.

4.2.4 The project was not designed for revenue generation. The project road is not subject a toll road and does not provide financial revenue.

## 4.3 **Economic Performance**

4.3.1 The project was designed to stimulate the economy of the north eastern region by providing an all-weather bitumen road link through the Moteng Pass.

4.3.2 The economic evaluation, as carried out at appraisal, showed the road to be viable with a rate of return of 16.97%. The evaluation involved a comparison of the costs of implementing the project with the expected benefits arising from savings in vehicle operating costs, time saving, and maintenance cost savings. Non-quantifiable benefits were also expected to arise with the implementation of the project, and these included: direct and indirect job creation during construction, improved accessibility to health, educational, administrative and market centres. Mining operations in Letseng-La-Terae were assumed to resume and winter tourism potential to develop with important generated traffic flows.

4.3.3 The project costs expressed in maloti, included the total investment expenditures undertaken under the project. The actual cost of implementing the project was however higher than the appraisal estimate of the economic cost. Moreover expected project development in the impact area did not materialise and traffic volumes remained much lower than forecasts at appraisal. The PCR recalculated the economic internal rate of return and concluded that the project was less than viable with a rate of return of 6%.

4.3.4 This project was followed by the recent upgrading to bitumen standards of the Oxbow - Mokhotlong road which will foster economic growth in the whole north eastern region. Negotiations are being held for reopening of the diamond mine and winter tourism development of this unique site can be reasonably foreseen in the middle term. Therefore there are favourable conditions for increasing volumes of traffic using this road in the next years.

4.3.5 The rates of growth of traffic adopted in this report are therefore higher than those of the PCR and more consistent with average economic growth in Lesotho and forecast growth of the impact area. Growth rates of 4 and 7% respectively have been adopted for light and heavy traffic with a resulting overall growth rate of 6.63%. The revised traffic forecast as used in this report is given in Annex 6. After construction of the Trans-Maluti road, the traffic from Maseru to Mokhotlong will be diverted from the project road. The revised forecasts consider a 30 % loss of traffic after the year 2005.

4.3.6 The table of Annexe 7 shows as a function of roughness the vehicle operation costs resulting from recent research in Lesotho and the project benefits derived from decreased VOC. The savings in maintenance costs were also considered in the table of Annex 8 and the time savings in Annexe 9.

4.3.7 Annexe 10 shows the streams of costs and benefits. The benefit streams are limited to 20 years. On this assumption, and on the basis of the data presented in Annexes 6, 7, 8 and 9 it is estimated that the project yields a rate of return of 6.58%.

#### 4.4 **Institutional and Social Performance**

##### Institutional Development

4.4.1 The Roads Branch was the Executing Agency. However, the unit directly dealing with the project comprised the Chief Roads Engineer, a Project Co-ordinator and the Resident Engineer and his staff supplied by the Consultant.

4.4.2 This unit was adequately staffed and performed satisfactorily as far as supervision of the project execution was concerned.

4.4.3 At the time of project implementation, the Roads Branch was facing staffing problems and the Bank was funding technical assistance under a project of institutional support to the transport sector. Shortly after qualified staff left the Roads Branch to join the LHDA. Staffing problems still prevail and the Roads Branch still needs the assistance of foreign experts.

4.4.4. Actually the GOL is facing difficulties in keeping technical staff, as a result of better remuneration in the private sector and in South Africa. This problem cannot be settled without an appropriate motivation policy. In the Roads Branch, one of the most critical problem is the capability of Government to attract and retain national staff. This capability determines institutional continuity and safeguarding of the benefits of the technical assistance.

4.4.5. The Government of Lesotho has established a Road Fund and is in the process of establishing of a road authority. Based on positive experience of other countries, it can be predicted that the establishment of a dedicated road fund and an autonomous road management agency will create optimum conditions for the solution of main problems still pending, the development of the road sector and sustained benefits from the Khamane - Oxbow Road Project. However road funds and road authorities should not be considered as panaceas and success will depend on a careful implementation and organisational policy.

##### Socio-economic Impact

4.4.6 The socio-economic impact of the Khamane - Oxbow road is closely associated with the impact of the Oxbow - Mokhotlong road which has been recently paved and signs of this impact on the rural populations of the north eastern region are yet not easily perceived.

4.4.7. The project improved travelling conditions and the winter resort of Oxbow is attracting more tourists and operating at its full capacity of 100 beds. Oxbow is by far the best winter sports site in southern Africa and this potential should be developed.

4.4.8. The social-economic benefits for the rural areas of the project impact area cannot be easily evaluated with the existing statistical data. However, sheep breeding and wool production is an important activity in this area. The construction of the road created more favourable conditions for the commercialisation of wool and mohair production.

4.4.9 Although specific development programmes have not been designed in the Project impact area, the road is contributing to the social-economic development of the area. This contribution cannot be easily quantified.

#### 4.5 **Impact on Women**

4.5.1 The women and economic active women constitute an important proportion of people taking benefit from the project. The road is helping women farmers and farmers associations to enter the market economy.

4.5.2. In Lesotho women are traditionally involved in agriculture and unlike men who migrate to South Africa for labour opportunities they work on agricultural farms in country. They constitute therefore the majority of the beneficiaries of the project

#### 4.6 **Environmental Performance**

4.6.1 There was no environmental impact assessment study for the project road but environmental considerations played an important role in design and negative impacts on soils and water were minimised during construction and for the design life of the road thanks to adequate drainage design.

4.6.2 Traffic disturbance during construction was minimised. Communication and access were only exceptionally disrupted.

4.6.3 However, slope stability was not properly dealt with during design and the road exhibits a serious safety and environment hazard with extended rock fall and slope instability. Debris are obstructing drainage structures and threatening to develop uncontrolled water runoff with extended erosion and landslides.

4.6.4 Upgrading from gravel to bitumen standard eliminated a hazard to pedestrians and cyclists and to people living along the road as passing vehicles raised clouds of dust. Since the construction of the road, these groups of people have been spared the hazards and discomfort of dust.

4.6.5 The road project did not vary much from an already demarcated alignment; encroachment on existing agricultural, cattle grazing or traverse virgin lands was minimised.

4.6.6 The road alignment was carefully designed in order to minimise safety hazards. Appropriate safety equipment including guard rails on the valley side, road markings and traffic signs has been comprehensively provided. Borrow pits were rehabilitated after use.

4.6.7 The only but important shortcoming of this project from the point of view of environmental impact was the design of steep cut slopes that resulted in extensive rock fall and landslides all along the road. This shortcoming should be addressed by appropriate rehabilitation works. Removal of continuously falling debris has surpassed the capacity of normal routine maintenance crews and equipment.

#### 4.7 **Performance of Contractor, Consultant and Borrower**

##### Contractor

4.7.1 The Contractor was concerned with financial benefits and his claim strategy rather than technical performance. However, within the limitations of the design shortcomings, he delivered an acceptable product at high cost.

4.7.2. The technical performance of the Contractor was satisfactory but his management performance was not satisfactory with repeated replacements of site agents and resulted in unnecessary delays and labour conflicts.

4.7.3. Mostly concerned with the implementation of his claim strategy, the Contractor was in disagreement with the Resident Engineer rather than either following his instructions and orders or proposing alternative solutions to construction problems. He was delaying and blocking the works and finally came out with a new over-designed pavement structure intended to increase the quantities of his inflated rate for crushed stone and nullify quantities of his artificially low rate for sub-base. This design change was recommended by the Consultant and accepted but the Contractor was not diverted from submitting a heavy claim file after works completion.

4.7.4. He is still entertaining protracted negotiations for amicable settlement of claims evaluated to an additional 66% of construction costs (section 2.7.3. above).

4.7.5. In spite of acceptable workmanship, the overall performance of the Contractor was not satisfactory.

##### Consultant

4.7.6 The performance of the Consultant was not satisfactory during the pre-contract services phase. Redesign resulted in serious shortcomings and deviations from well established standards and technical concepts. The tender documents prepared by the Consultant contained contradictory and inappropriate specification and contractual clauses. The Tender Analysis Report was poorly substantiated and resulted in non significant comparison of bids and recommendation of a contractor that was not shown to have proposed the lowest evaluated cost bid and was early revealing he had prepared a claim strategy in order to increase construction costs.

4.7.7 The performance of the Resident Engineer can be considered to have been satisfactory but he was working on the basis of inappropriate work specifications, receiving poor support from his headquarters and dealing with a claim oriented contractor.

4.7.8 The financial management of the Contract was not satisfactory and resulted in 20 % cost overrun.

### Borrower

4.7.9 With regard to the overall administration of the project, the Borrower and Executing Agency were reasonably effective; they were expeditious in fulfilling the loan conditions.

4.7.10. The Executing Agency did not critically scrutinise the detailed redesign studies and tender documents and this led to design shortcomings and difficult problems during implementation.

4.7.11. The Borrower was unable to follow the strict application of the Bank's Rules of Procedure for Procurement of Goods and Works for the evaluation and comparison of bids and showed precipitation in accepting conclusions of a meaningless bid comparison and declaring a claim oriented bidder as the preferred contractor by his Tender Board. He opened negotiations with this preferred contractor even before unbalanced and artificially low rates were properly clarified.

4.7.12. The Borrower provided finance to cover cost overruns and quite satisfactorily fulfilled all his obligations under the Loan Agreement. However, he did not submit annual audit reports to the Bank.

4.7.13. The Executing Agency kept close contact with the Bank submitting documents and requesting comments.

### 4.8 **Bank Group Performance**

4.8.1. The performance of the Bank was not satisfactory in so far as Project preparation and appraisal were concerned. The Bank accepted to finance an engineering redesign but did not provide additional funding to avoid serious technical shortcomings and then appraised the project as viable including the technical shortcomings. The appraisal report assigned to the project road the objective of being an all weather road but did not consider a project component on winter maintenance.

4.8.2 The Bank was reacting slowly during the first phase of Project implementation (procurement and redesign) causing some delays. However, responsibility for delays in implementation is also shared by the Executing Agency.

4.8.3 The Bank did not efficiently scrutinise the redesign reports and the tender documents prepared by the Consultant which contained contradictory and inappropriate specification and contract clauses.

4.8.4 During procurement procedures for works, the Bank did not pay sufficient attention to the strict application of its own rules of procedure and did not react to an inadequate and meaningless bid comparison and to contract negotiations with a bidder even before his unbalanced and artificial rates were adequately clarified.

4.8.5 The Bank was not very active during the construction works and only sent three supervision missions. The Bank organised its last mission from 27 April to 12 May 1998 and a project completion report was prepared in July 1998.

## 5. **PROJECT SUSTAINABILITY**

5.1 In Lesotho conditions, project sustainability has been reasonably good to this date. Resealing of the road is programmed this year and potholes caused by rock fall have been regularly patched.

5.2 The Road Fund and establishment of a road authority have already been mentioned as important steps towards a more efficient and cost effective road network management in Lesotho. The establishment of the road authority will result from the reorganisation of the MoPWT with privatisation of its production functions.

5.3 Project design was technically unsound and deviated from well established standards and technical concepts.

5.4 The benefits from the Khamane - Oxbow road cannot be sustained because the road cannot be maintained by a normal maintenance structure as a result of redesign shortcomings. Project sustainability is therefore dependent on appropriate and timely rehabilitation of cut slopes along the road and upgrading of the Moteng Pass section.

5.5 The project was assessed as economically non-viable by the PCR and recalculation of the internal rate of return based on higher traffic forecasts in this report confirmed the value of 6 - 7% for the EIRR. Future implementation of winter tourism and mining projects will increase project benefits to some extent but are not likely to change this situation.

5.6 As a matter of fact the economic viability of this short and costly section of the A1 main road cannot be considered independently from that of the Oxbow - Mokhotlong section. Both sections taken together should be economically viable.

## 6. **PERFORMANCE RATING**

6.1 The project achieved its major goals and was consistent with the Bank's mission and the economic development strategy of Lesotho.

6.2 The project was accorded priority in 1980 by the Lesotho Transportation Study and included in the Five-Year National Development Plan of the late eighties.

- 6.3 The efficacy of the project in achieving its economic and social objectives can be rated as satisfactory. The institutional efficacy of the project was significant but limited by the institutional weakness of the Executing Agency. Institutional strengthening of the transport sector still requires sustained efforts by the Government. The physical efficacy of the project was impaired by redesign shortcomings and deviations from sound standards and concepts.
- 6.4 The project was cost efficient although its cost could have been lower if the Bank's rules of procedure had been strictly followed for procurement of the Contractor.
- 6.5 The internal rate of return was not acceptable in spite of technical shortcomings intended to decrease construction costs.
- 6.6 The project was characterised by low time efficiency and the Contractor carries the main responsibility for time inefficiency.
- 6.7 The Implementation Performance has a score of 1.8 which is not satisfactory. Adherence to time and cost schedule are rated unsatisfactory because of construction delays and construction cost overrun.
- 6.8 The Bank's performance was not satisfactory with a score of 1.0. Since the Bank did not make any contribution to project preparation 1 mark is given. For identification, 1 mark is given: the project was a good selection (national priority strongly supported by both the Government and the Bank) but the Bank did not consider that the most difficult and costly short section of main road A1 through the Moteng Pass could only represent an economically viable project if combined with the next long section on the high plateau. Only 1 mark were given for appraisal and supervision because of the above mentioned shortcomings (section 4.8.).
- 6.9 The assessment of the project shows an overall satisfactory project outcome. The performance ratings are shown in Annex 11.

## 7. **CONCLUSIONS, FEEDBACK AND RECOMMENDATIONS**

### 7.1 **Conclusions**

The present report accepts most of the conclusions of the PCR with the additions stated below:

- (i) The project was relevant and consistent with Lesotho's economic development strategy, the Bank's strategy for the country and the Bank's missions and goals.
- (ii) The Project has not entirely met its main objectives which were to: (i) upgrade the primary Khamane - Oxbow road section to a bitumen standard; (ii) provide a faster, safe and all weather access through the mountainous region of the Moteng Pass to the Oxbow area, which has considerable tourism potential; (iii) reduce the costs of transportation of persons and goods between Khamane, Oxbow, the diamond mine of Letseng-La-Terae and Mokhotlong; (iv) provide an improved road link to the rural communities residing in remote mountainous areas of the north-eastern part of the country; (v) improve the primary road communications within Lesotho and around its periphery; and (vi) contribute to better integration of the people of that region in the economic and social life of the country. The project objectives were only partially fulfilled for two main reasons, which appear to be related: limited funding and project design shortcomings.

- (iii) As a result of redesign, design changes during construction and contractor's claims the actual project cost was 21% in excess of its appraised cost estimate. The EIRR decreased from 16.97% at appraisal to 6.58% at post-evaluation as a result of the actual traffic volumes that are not as high as the forecasts at appraisal and in spite of efforts to decrease construction costs by means of a substandard design.
- (iv) The project road was completed according to the specified technical standards including the technical shortcomings of redesign. In spite of design shortcomings and low rate of return, the project had a critical importance in upgrading with restricted finance the most difficult section of main road A1.
- (v) The implementation of the project experienced considerable delays which caused a time overrun of 17.5 months. The construction phase was 11 months out of schedule.
- (vi) The Roads Branch as the Executing Agency for the project performed satisfactorily in overseeing project execution but experienced serious difficulties in applying Bank's rules of procedure for procurement of the Contractor.
- (vii) The Bank's performance was not satisfactory. The Bank should have been more effective and active in giving speedy responses to Borrower's correspondences, scrutinising redesign reports and tender documents, and enforcing strict application of its own rules of procedure for procurement of goods and works.
- (viii) The project brought substantial benefits to road users and had a potential positive impact in the development of the North Eastern region of the Kingdom of Lesotho. Recent upgrading of the Oxbow - Mokhotlong road shall further increase the impact of the project. However the development of the tourism potential of Oxbow area, which has the best winter sport site in Southern Africa, did not materialise and negotiations for reopening the diamond mine of Letseng-La-Terae are not concluded.
- (ix) Following redesign shortcomings, the road cannot be adequately maintained before rehabilitation works are carried out. Resealing is programmed this year under the World Bank funded Road Rehabilitation and Maintenance Project (RRMP).
- (x) The overall assessment shows a satisfactory project outcome.

## 7.2 Lessons

The following lessons can be drawn out of the project:

- (i) Implementation schedules do not appear to be always monitored and target dates are sometimes not respected. The parties, namely the Borrower and the Bank do not appear to be very concerned by time effectiveness (section 3.3).
- (ii) Economic and engineering feasibility studies cannot replace the detailed engineering design which is an essential phase for preparing appropriate tender documents: construction works cannot be tendered on the basis of feasibility studies because at this level of project investigation design assumptions

cannot be based on substantial evidence and costs cannot be evaluated with satisfactory accuracy. Updating of cost estimates when required often results in unnecessary design review and redesign (section 3.2).

- (iii) Unnecessary design reviews, redesign and design changes reflect professional staff weakness of the Executing Agency and poor supervision by the Bank (section 3.2).
- (iv) Redesign to lower standards and doubtful departures of well established technical standards were used to achieve economic justification and overcoming financial restraints of this road project. This wrong practice resulted in a road which is not maintainable and serious safety and environmental hazards (sections 3.2 and 4.6).
- (v) Lack of familiarity with and deviation from strict application of the Bank rules of procedure for procurement have caused considerable delays and cost overruns during project implementation and negatively affected the completed project (section 3.5).
- (vi) Inappropriate, unrealistic specification and contract clauses can jeopardise project implementation and lead to delays, cost overrun and heavy claims at the end of construction (sections 3.2 and 3.6).

### 7.3 **Recommendations**

The following recommendations are formulated for the consideration of the Government and the Bank:

#### For the Government

- (i) The Government should intensify its efforts in acquainting itself with and strictly applying Bank's Rules of Procedure for Procurement and also with some standard loan conditions such as the provision of legal opinion and annual audited financial reports. In any case, the Government should be required to respect the target dates now in force concerning loan signature and loan effectiveness (paragraphs 3.1 and 3.5).
- (ii) Executing agencies should include project implementation and disbursement schedules in project feasibility reports (paragraph 3.3).
- (iii) In order to avoid or minimise design modifications during construction, senior engineers should be assigned to supervise and scrutinise the work of design consultants (paragraphs 3.2, 4.1).
- (iv) The Roads Branch should ensure that rehabilitation works of the Khamane - Oxbow road are programmed for the near future (paragraphs 4.1, 4.6).
- (v) The Roads Branch should forward to the Bank as from 1998, original audited financial statements and a signed copy of the Auditor's report on all on-going road projects (paragraph 3.8.6 of this report).

#### For the Bank

- (i) The Bank should always be satisfied with project identification and preparation before deciding to appraise a project in order to avoid overlooking or oversimplifying some crucial issues at appraisal. Studies and design activities should be carefully monitored and evaluated. Multiple designs (design reviews, redesigns) should be avoided (paragraphs 2.4 and 3.2).
- (ii)
  - a) The Bank has to ensure that project implementation schedules are included in feasibility studies or project preparation reports and that these schedules are detailed enough to cover all main implementation activities (paragraphs 3.3).
  - b) The Bank should adopt a sample, detailed implementation schedule in the guidelines for project preparation (paragraphs 3.3).
- (iii) The Bank should be very strict on redesigns and design reviews prior to construction and should not accept deviations from sound technical standards as a means of achieving economic justification and overcoming financial restraints of road projects (paragraphs 2.4 and 3.2).
- (iv) The Bank should closely supervise and/or check the adequacy of project preparation and bid documents so that changes in design and friction during project execution can be avoided as far as possible (paragraphs 2.4, 3.2 and 4.1).
- (v) Procurement issues should be given careful consideration at the project preparation stage and be resolved at project appraisal or at loan negotiation stage. During implementation the Bank should always enforce the strict application of its own rules of procedure for procurement of goods and works (paragraphs 3.5 and 3.6).
- (vi) The Bank should follow-up the rehabilitation of the Khamane-Oxbow road (paragraphs 4.1 and 4.6).
- (vii) The Bank has to ensure that as from 1999, the Roads Branch will forward to the Bank, the original audited financial statements and signed copies of the auditor's reports on all on-going road projects (paragraph 3.8.6 of this report).

#### 7.4. **Follow-up Action Matrix**

A summary of the follow-up actions is presented in Annex 12.

**Lesotho**  
**Khamane - Oxbow Road Project**  
**Project Performance Evaluation Report**

**Road Network of Lesotho**  
**Road Network Length in 1994**

Highway Authority	paved length		gravel length		earth length		total length	
	km	Percent (%)	km	percent (%)	km	percent (%)	km	percent (%)
Roads Branch	872,5	45	1 044,7	54	34,0	2	1 951,2	37
Lesotho Highlands Dev. Auth.	132,1	65	70,0	35	0,0	0	202,1	4
Labour Construction Unit	0,0	0	718,7	92	58,4	8	777,1	15
Civil Works Section	0,0	0	266,9	17	1 304,2	83	1 571,1	30
none	0,0	0	128,3	16	693,6	84	821,9	15
Total	1 004,6	19	2 228,6	42	2 090,2	39	5 323,4	100

Source: Government of the Kingdom of Lesotho, January 1995, National Transport Study

**Lesotho**  
**Khamane - Oxbow Road Project**  
**Project Performance Evaluation Report**

**Road Network of Lesotho**  
**Condition of the Road Network in 1994**  
**length**

Overall condition of carriageway	Terrain type	Paved roads			Gravel roads			Earth roads			Whole network	
		km	%	global %	km	%	global %	km	%	global %	km	%
Good	lowland	263,1	80	78	65,9	20	38	0,0	0	6	329,0	33
	hilly	203,6	25		541,0	67		58,0	7		802,6	
	mountain	321,7	51		244,3	39		62,5	10		628,5	
Fair	lowland	98,2	27	22	179,7	50	46	82,1	23	31	360,0	35
	hilly	86,9	11		418,6	55		260,0	34		765,5	
	mountain	31,1	4		420,2	55		311,4	41		762,7	
Poor	lowland	0,0	0	0	137,8	58	16	100,6	42	63	238,4	31
	hilly	0,0	0		108,8	19		454,0	81		562,8	
	mountain	0,0	0		112,3	13		762,3	87		874,6	
Totals all conditions	lowland	361,3	39	100	383,4	41	100	182,7	20	100	927,4	
	hilly	290,5	14		1 068,4	50		772,0	36		2 130,9	
	mountain	352,8	16		776,8	34		1 136,2	50		2 265,8	
Total network		1 004,6	19		2 228,6	42		2 090,9	39		5 324,1	

Source: Government of the Kingdom of Lesotho, January 1995, National Transport Study

**Lesotho**  
**Khamane – Oxbow Road Project**  
**Project Performance Evaluation Report**

**Evaluation of Contractor's Foreign Exchange Risk**

Fixed Exchange Rate, April 1987: UA 1.00 = M 2,59461

N°	Certificate Month	Date of Billing	Disbursement Application N°	Date of Disbursement	Variable Ex- change Rate UA 1.00 = Maloti (M)	Foreign Exchange Amount			Contractor's Risk (UA)
						Maloti (M)	UA		
							fixed rate	variable rate	
1	15 % adv. (Aug. 1987)	28.08.1987	2	13.10.1987	1,77429	996 053,79	383 893,45	561 381,62	-177 488,17
2	Sep. 1987	28.09.	5	10.11.	1,77429	136 189,88	52 489,54	76 757,40	-24 267,86
3	Oct.	17.11.	7		2,65678	164 475,31	63 391,15	61 907,76	1 483,39
4	Nov.	19.12.	10	23.02.1988	2,65678	353 155,32	136 111,14	132 926,07	3 185,07
5	Jan. 1988	10.02.1988	12	28.03.	2,73793	249 340,40	96 099,38	91 068,95	5 030,43
6	Feb.	22.03.			2,73793	119 618,13	46 102,55	43 689,26	2 413,29
7	March	22.03.	14	14.06.	2,73793	101 190,37	39 000,22	36 958,71	2 041,51
8	Apr.	17.05.	17	27.06.	2,94867	159 729,59	61 562,08	54 170,05	7 392,03
9	May	20.06	19	10.08.	2,94867	289 262,05	111 485,75	98 099,16	13 386,59
10	June	16.07.	20	25.08.	2,94867	241 991,84	93 267,13	82 068,13	11 199,00
11	July	22.08.	21	23.09.	3,05212	274 531,18	105 808,26	89 947,70	15 860,56
12	Aug.	20.09.	23	21.10.	3,05212	237 680,96	91 605,66	77 874,05	13 731,60
13	Sep.	19.10.	26	06.12.	3,05212	117 205,91	45 172,84	38 401,48	6 771,37
14	Oct.	21.11.	27	19.01.1989	3,22307	188 276,06	72 564,30	58 415,13	14 149,17
15	Nov.	13.12.	29	06.02.	3,22307	262 917,40	101 332,15	81 573,59	19 758,55
16	Jan. 1989	13.02.1989	33	13.04.	3,19971	140 645,70	54 206,88	43 955,76	10 251,11
17	Feb.	22.03.	35	18.05.	3,19971	154 669,04	59 611,67	48 338,46	11 273,22
18	Mar.	19.04.	37	26.05.	3,19971	94 399,39	36 382,88	29 502,48	6 880,40
19	Apr.	24.05.	38	24.08.	3,31117	157 487,00	60 697,75	47 562,34	13 135,41
20	May	16.06.	39	16.08.	3,31117	171 037,86	65 920,45	51 654,81	14 265,64
21	June	13.07.	42	12.09.	3,31117	64 667,70	24 923,86	19 530,17	5 393,70
22	July	12.08.	43		3,46277	55 696,07	21 466,07	16 084,25	5 381,81
23	Aug.	16.09.	45	28.12.	3,46277	89 053,70	34 322,58	25 717,47	8 605,10
24	Sep.	17.10.	48	28.12.	3,46277	178 848,66	68 930,85	51 649,02	17 281,83
25	Oct.	09.11.	49	28.12.	3,44461	259 201,40	99 899,95	75 248,40	24 651,54
26	Dec.	12.12.	52	28.02.1990	3,44461	235 702,41	90 843,10	68 426,44	22 416,65
27	Jan. 1990	08.02.1990	55	08.06.	3,35578	169 648,48	65 384,96	50 554,11	14 830,85
28	Feb.	14.03.	56	14.06.	3,35578	158 895,60	61 240,65	47 349,83	13 890,82
29	Mar.	19.04.		24.09.	3,35578	72 897,98	28 095,93	21 723,11	6 372,82
30	Apr.	14.05.		24.09.	3,45304	220 590,21	85 018,64	63 882,90	21 135,74
31	Final (July 1990)	19.09.		24.09.	3,52021	907 778,93	349 871,05	257 876,36	91 994,70
Totals						7 022 838,32	2 706 702,86	2 504 294,98	202 407,89
Contractor's Risk in Maloti at exchange rate of July 1990									712 518,27





**Lesotho**  
**Khamane - Oxbow Road Project**  
**Project Performance Evaluation Report**

**Heavy Traffic Forecasts (moderate)**  
Road section A1-29B

Assumed growth rate: 4 %  
Equivalency: 1 hv = 3.0 esal

Heavy Traffic				Year
Daily	Annual	Cumulated		
		Heavy veh. (hv)	Axle load (esal)	
17				1983
22				1984
5				1985
16				1986
				1987
16				1988
44				1989
12	4 383	4 383	13 149	1990
26	9 497	13 880	41 639	1991
13	4 748	18 628	55 883	1992
20	7 305	25 933	77 798	1993
20	7 305	33 238	99 713	1994
33	12 053	45 291	135 873	1995
35	12 784	58 075	174 224	1996
37	13 514	71 589	214 767	1997
37	13 514	85 103	255 310	1998
38	14 055	99 158	297 474	1999
40	14 617	113 775	341 325	2000
42	15 202	128 977	386 930	2001
43	15 810	144 787	434 360	2002
45	16 442	161 229	483 686	2003
47	17 100	178 329	534 986	2004
34	12 449	190 777	572 332	2005
35	12 947	203 724	611 172	2006
37	13 464	217 188	651 565	2007
38	14 003	231 191	693 574	2008
40	14 563	245 755	737 264	2009
42	15 291	261 046	783 138	2010
44	16 056	277 102	831 306	2011
46	16 859	293 961	881 882	2012
48	17 702	311 662	934 987	2013
51	18 587	330 249	990 747	2014
53	19 516	349 765	1 049 295	2015
56	20 492	370 257	1 110 771	2016
59	21 516	391 773	1 175 320	2017
62	22 592	414 366	1 243 097	2018
65	23 722	438 088	1 314 263	2019
68	24 908	462 996	1 388 987	2020
72	26 153	489 149	1 467 447	2021
75	27 461	516 610	1 549 830	2022
79	28 834	545 444	1 636 333	2023
83	30 276	575 720	1 727 160	2024
87	31 790	607 510	1 822 529	2025

91	33 379	640 889	1 922 667	2026
96	35 048	675 937	2 027 811	2027
101	36 800	712 737	2 138 212	2028
106	38 640	751 378	2 254 134	2029
111	40 573	791 950	2 375 851	2030
117	42 601	834 552	2 503 655	2031
122	44 731	879 283	2 637 848	2032
129	46 968	926 251	2 778 752	2033
135	49 316	975 567	2 926 700	2034
142	51 782	1 027 349	3 082 046	2035
149	54 371	1 081 720	3 245 159	2036
156	57 090	1 138 809	3 416 428	2037
164	59 944	1 198 753	3 596 260	2038
172	62 941	1 261 695	3 785 084	2039
181	66 088	1 327 783	3 983 349	2040
190	69 393	1 397 176	4 191 528	2041
199	72 862	1 470 038	4 410 115	2042
209	76 506	1 546 544	4 639 631	2043
220	80 331	1 626 875	4 880 624	2044
231	84 347	1 711 222	5 133 666	2045
242	88 565	1 799 787	5 399 360	2046
255	92 993	1 892 780	5 678 339	2047
267	97 643	1 990 422	5 971 267	2048
281	102 525	2 092 947	6 278 841	2049
295	107 651	2 200 598	6 601 794	2050

Source: Roads Branch

**Lesotho**  
**Khamane - Oxbow Road Project**  
**Project Performance Evaluation Report**

**Traffic Forecasts (moderate)**

road section A1-29B

Design life = 20 years

Year	Average Daily Traffic						
	Cars and Light Goods Vehicles	Medium Goods Vehicles	Heavy Goods Vehicles	Buses	Others	Total of Heavy Vehicles	Total
1983	13	16	1	16		17	46
1984	7	22	4	18		22	50
1985	10	26	2	2		5	41
1986	8	24	14	2		16	48
1987							
1988	11	37	14	2		16	64
1989	7	100	43	1		44	151
1990	14	16	10	2		12	42
1991	44	1	19	7		26	71
1992	38	11	8	5		13	62
1993	17	40	16	4		20	77
1994	12	60	16	4		20	92
1995	46	62	30	3		33	141
1996	43	58	29	6		35	136
1997	40	48	28	9		37	125
1998	38	41	26	11		37	116
1999	41	44	27	11		38	123
2000	44	48	28	12		40	131
2001	47	52	29	12		42	140
2002	50	56	30	13		43	149
2003	53	60	32	13		45	159
2004	57	65	33	14		47	169
2005	43	49	24	10		34	126
2006	46	53	25	11		35	134
2007	49	57	26	11		37	143
2008	52	62	27	11		38	153
2009	56	67	28	12		40	163
Total traffic during the design life (1989 - 2009)						245 755	895 491
Assumed Growth Rates (%)	7,00	7,00	4,00	4,00		4,00	6,63

Source: Roads Branch

**Lesotho**  
**Khamane - Oxbow Road Project**  
**Project Performance Evaluation Report**

**Vehicle Operating Costs**

Year	Roughness IRI (m/km)  Bitumen Paved Road	Unit Costs (maloti / km)								Cost Saving over 22 km long A1-29B (maloti) at price level of 1991			
		Average Unit Costs for Lesotho				Unit Costs for A1-29B							
		Vehicle Type				Vehicle Type							
		Cars and Light Goods Vehicles	Medium Goods Vehicles	Heavy Goods Vehicles	Buses	Cars and Light Goods Vehicles	Medium Goods Vehicles	Heavy Goods Vehicles	Buses	Cars and Light Goods Vehicles	Medium Goods Vehicles	Heavy Goods Vehicles	Buses
1990	2,00	0,33	1,07	1,36	1,52	0,33	1,14	1,92	1,98	8,35	20,13	35,04	24,89
1991	2,00	0,33	1,07	1,36	1,52	0,33	1,14	1,92	1,98	8,35	20,13	35,04	24,89
1992	2,00	0,33	1,07	1,36	1,52	0,33	1,14	1,92	1,98	8,35	20,13	35,04	24,89
1993	2,00	0,33	1,07	1,36	1,52	0,33	1,14	1,92	1,98	8,35	20,13	35,04	24,89
1994	2,50	0,35	1,10	1,53	1,76	0,35	1,18	2,16	2,29	8,14	19,74	32,52	21,62
1995	2,50	0,35	1,10	1,53	1,76	0,35	1,18	2,16	2,29	8,14	19,74	32,52	21,62
1996	2,50	0,35	1,10	1,53	1,76	0,35	1,18	2,16	2,29	8,14	19,74	32,52	21,62
1997	3,00	0,36	1,14	1,69	2,01	0,36	1,21	2,38	2,61	8,03	19,35	30,16	18,21
1998	3,00	0,36	1,14	1,69	2,01	0,36	1,21	2,38	2,61	8,03	19,35	30,16	18,21
1999	3,00	0,36	1,14	1,69	2,01	0,36	1,21	2,38	2,61	8,03	19,35	30,16	18,21
2000	3,50	0,38	1,22	1,77	2,10	0,38	1,31	2,50	2,73	7,82	18,39	28,98	16,98
2001	3,50	0,38	1,22	1,77	2,10	0,38	1,31	2,50	2,73	7,82	18,39	28,98	16,98
2002	3,50	0,38	1,22	1,77	2,10	0,38	1,31	2,50	2,73	7,82	18,39	28,98	16,98
2003	4,00	0,40	1,31	1,86	2,20	0,40	1,40	2,62	2,86	7,61	17,38	27,65	15,62
2004	4,00	0,40	1,31	1,86	2,20	0,40	1,40	2,62	2,86	7,61	17,38	27,65	15,62
2005	4,00	0,40	1,31	1,86	2,20	0,40	1,40	2,62	2,86	7,61	17,38	27,65	15,62
2006	4,50	0,42	1,36	1,96	2,30	0,42	1,46	2,76	2,99	7,40	16,82	26,17	14,26
2007	4,50	0,42	1,36	1,96	2,30	0,42	1,46	2,76	2,99	7,40	16,82	26,17	14,26
2008	4,50	0,42	1,36	1,96	2,30	0,42	1,46	2,76	2,99	7,40	16,82	26,17	14,26
2009	5,00	0,44	1,41	2,06	2,39	0,44	1,50	2,90	3,11	7,19	16,32	24,69	13,03
Gravel Road	15,00	1,13	3,06	5,26	4,35	1,13	3,06	5,26	4,35				

Source: Roads Branch

**Lesotho**  
**Khamane - Oxbow Road Project**  
**Project Performance Evaluation Report**

**Costs of Maintenance (maloti/km\*year)**

Maintenance	Gravel Road	Paved Road	Savings at price level of	
			1999	1991
Routine	24 100	3 768	20 332	9 688
Periodic	8 050	4 900	3 150	1 501
Total	32 150	8 668	23 482	11 189

**Lesotho**  
**Khamane - Oxbow Road Project**  
**Project Performance Evaluation Report**

Road Section A1-29B

**Time Savings**  
(1,000 maloti)

Year	PAR		PCR		PPER	
	Total Daily Traffic	Time Saving	Total Daily Traffic	Time Saving	Total Daily Traffic	Time Saving
1987						
1988						
1989	1 818	750,00				
1990	1 987	825,00	42	117,86	42	117,86
1991	2 164	908,00	71	381,62	71	381,62
1992	2 368	998,00	62	323,68	62	323,68
1993	2 614	1 098,00	75	160,68	77	164,96
1994	2 873	1 208,00	92	134,22	92	134,22
1995	3 144	1 329,00	141	356,23	141	356,23
1996	3 144	1 462,00	133	365,50	136	373,74
1997	3 787	1 608,00	125	385,92	125	385,92
1998	4 156	1 786,00	116	421,89	116	421,89
1999	4 530	1 945,00	120	438,96	126	459,99
2000	4 996	2 140,00	125	461,30	136	503,31
2001	5 479	2 354,00	128	478,91	148	553,67
2002	6 010	2 589,00	132	501,26	161	610,01
2003	6 598	2 840,00	137	521,59	174	664,18
2004	7 233	3 095,00	142	543,26	190	725,13
2005	7 948	3 374,00	146	590,04	206	832,57
2006	8 727	3 678,00	151	650,28	224	964,69
2007	9 582	4 009,00	156	717,10	244	1 120,13
2008	10 516	4 370,00	162	717,10	265	1 173,81
2009	11 543	4 763,00	167	717,10	289	1 239,59

Sources: PAR and PCR

**Lesotho**  
**Khamane - Oxbow Road Project**  
**Project Performance Evaluation Report**

Road Section A1-29B  
**Streams of Costs and Benefits (moderate traffic forecast)**  
(1,000 maloti)

Year	Investment Costs	Benefits				Net Benefits
		Maintenance Savings	VOC Savings	Time Savings	Total Savings	
1987	2 390,850					-2 390,85
1988	5 477,210					-5 477,21
1989	3 663,250					-3 663,25
1990	5 539,690	246,16	306,51	117,86	670,52	-4 869,17
1991	2 195,650	246,16	448,35	381,62	1 076,13	-1 119,52
1992		246,16	344,63	323,68	914,46	914,46
1993		246,16	587,10	164,96	998,22	998,22
1994		246,16	689,91	134,22	1 070,29	1 070,29
1995		246,16	963,84	356,23	1 566,22	1 566,22
1996		246,16	937,88	373,74	1 557,78	1 557,78
1997		246,16	824,86	385,92	1 456,93	1 456,93
1998		246,16	760,79	421,89	1 428,84	1 428,84
1999		246,16	806,16	459,99	1 512,31	1 512,31
2000		246,16	817,01	503,31	1 566,47	1 566,47
2001		246,16	866,27	553,67	1 666,09	1 666,09
2002		246,16	918,79	610,01	1 774,95	1 774,95
2003		246,16	926,43	664,18	1 836,77	1 836,77
2004		246,16	983,24	725,13	1 954,52	1 954,52
2005		246,16	730,69	832,57	1 809,41	1 809,41
2006		246,16	742,86	964,69	1 953,71	1 953,71
2007		246,16	789,34	1 120,13	2 155,63	2 155,63
2008		246,16	838,98	1 173,81	2 258,94	2 258,94
2009	-13 486,66	246,16	854,91	1 239,59	2 340,65	15 827,31
<b>Economic Internal Rate of Return (%)</b>						<b>6,58</b>

**LESOTHO**  
**KHAMANE-OXBOW PROJECT**  
**PROJECT PERFORMANCE EVALUATION REPORT**

**Performance Rating**

Implementation Performance

<b>COMPONENT INDICATORS</b>	<b>SCORE (1-4)</b>	<b>REMARKS</b>
1. Adherence to Time Schedule	1	The implementation schedule was not adhered to; there was a 17.5 months delay representing 40% of the original time span.
2. Adherence to Cost Schedule	1	Actual cost was 112% of the appraisal estimate.
3. Compliance with Covenants	3	There was compliance with the loan conditions.
4. Adequacy of Supervision and Reporting	2	The works were adequately supervised and progress reports prepared; financial statements were not prepared.
5. Satisfactory Operations (if applicable)	2	The performance of the road was satisfactory in spite of technical shortcomings and safety and environmental hazards.
<b>Overall assessment of Implementation Performance</b>	1.8	Implementation was not satisfactory

Bank Performance

<b>COMPONENT INDICATORS</b>	<b>SCORE (1-4)</b>	<b>REMARKS</b>
1. At Identification	1	The Project was accorded priority in the National Development Plan; a feasibility study and a detailed design were available. No identification mission was undertaken. The project comprised a short and very difficult and costly section of the main road A1 which could not be economically feasible alone.
2. At Preparation	1	Desk review led to few recommendations, and only modest actions were taken before Project appraisal
3. At Appraisal	1	In the appraisal report basic assumptions were analysed. A realistic and detailed time schedule with target dates was provided. However a substandard cross section was accepted for the Moteng Pass. Slope stability was neglected. A project component on winter maintenance was not considered.
4. At Supervision	1	The Bank's Rules of Procedure for Procurement of Goods and Works were not strictly applied with resulting time and cost over run, and protracted claim procedures. The bank organised only three supervision missions.
<b>Overall Assessment of Bank Performance</b>	1.0	The Bank performance is not satisfactory.

Project Outcome

<b>COMPONENT INDICATORS</b>		<b>SCORE (1-4)</b>	<b>REMARKS</b>
<b>1.</b>	<b>Relevance of Achievement of Objectives</b>	<b>2.7</b>	<b>The main objective was partially met.</b>
i)	Macro-economic Policy	3	The project was accorded priority by National Development Plans which took into account the macro-economic setting.
ii)	Sector Policy	3	Project was in line with sectoral policy of improving the condition of the road network and facilitating transit traffic.
iii)	Physical (including production)	3	Construction of the road to an improved standard removed a major transport constraint in the project area.
iv)	Financial	N/A	The project was not designed for revenue generation.
v)	Poverty alleviation, social and gender	3	Project brought benefits to urban and rural population. It promoted commercialisation of crops and livestock of its impact area.
vi)	Environment	1	Negative short and long term environmental impacts were minimised. However, a serious environmental hazard was created by inappropriate design of cut slopes.
vii)	Private Sector Development	3	Following construction of the road to bitumen standards, potential for development of winter tourism and mining as well as small scale farming activities has improved.
viii)	Other (Specify)	N/A	
<b>2</b>	<b>Institutional Development</b>	<b>2.0</b>	<b>Institutional Development was satisfactory; it had modest impact on the Project.</b>
i)	Institutional Framework, including restructuring	2	Institutional weaknesses adversely affected Project implementation and caused time overrun. Project documents were not properly checked by the Executing Agency, resulting in contradictory and inappropriate specification and contract clauses, which created favourable conditions for protracted on going claim negotiations.
ii)	Financial and Management Information Systems, including Evaluation Systems	2	Project accounts were kept but no audit evaluation reports were prepared.
iii)	Transfer of Technology	2	National staff assigned to this project had the opportunity to learn from design shortcomings and construction difficulties.
iv)	Staffing by qualified persons (including turnover), training and counterpart staff	2	Senior and qualified staff are departing from the Roads Branch and Government service for better pays in the private sector. Major reorganisation and staff motivation plans are needed for sustainable development and for retaining benefits from technical assistance.

<b>3</b>	<b>Sustainability</b>	<b>2.4</b>	In spite of satisfactory routine and periodic maintenance project achievements and benefits cannot be sustained before rehabilitation of cut slopes and the Moteng Pass section.
i)	Continued Borrower commitment	3	GoS is committed to the proper functioning of the roads sector. The Roads Fund and the Roads Authority are currently being organised.
ii)	Environmental Policy	3	Roads Branch will incorporate environmental concerns into project studies and designs, and ensure their implementation.
iii)	Institutional Framework	3	Institutional framework is currently weak, but is being strengthened with support from funding agencies.
iv)	Technical viability and staffing	3	Project was not executed to acceptable technical standards. Staff of Roads Branch need to be concerned with adherence to well established technical standards and specifications when considering economic indicators .
v)	Financial viability, including cost recovery systems	N/A	The project was not designed for revenue generation.
vi)	Economic viability	1	The ERR at re-evaluation is 6.5%.
vii)	Environmental viability	1	Rock fall and slope slides are exceeding the capacity of normal maintenance.
Viii)	Operating and Maintenance facilities (availability of recurrent funding, foreign exchange, spare parts, workshop facilities etc.)	3	Fund allocation for road maintenance are adequate and this situation is expected to improve in the medium term thanks to the implementation of a maintenance management system and the creation of the Road Authority. Improvement in winter maintenance is also expected.
<b>4</b>	<b>Economic Internal Rate of Return</b>	<b>1</b>	<b>The EIRR is not satisfactory.</b>
	<b>Overall Assessment of Outcome</b>	<b>2.0</b>	Project Outcome is satisfactory.



**LESOTHO**  
**KHAMANE-OXBOW ROAD PROJECT**  
**PROJECT PERFORMANCE EVALUATION REPORT**  
**RECOMMENDATIONS AND FOLLOW-UP MATRIX**

MAIN FINDINGS & CONCLUSIONS	RECOMMENDATIONS	FOLLOW-UP ACTIONS	RESPONSIBILITY
<p><b><u>Project formulation</u></b> <b><u>And rationale</u></b></p> <p>Project formulation was undertaken without Bank's contribution</p>	<p>The Bank should always be satisfied with project identification and preparation before deciding to appraise a project. In so doing, the appraisal team will avoid overlooking or oversimplifying some crucial issues.</p>	<p>Project officers should check that the project is adequately processed through identification and preparation stages before appraisal</p>	<p>Operations Departments</p>
<p><b><u>Project Implementation</u></b> <b><u>A) Implementation Schedule</u></b></p> <p>The project implementation schedule was realistic and covered the main project activities. The schedule was relatively detailed and indicated target dates to be observed by both the Bank and the Borrower.</p>	<p>Project officers should always give proper consideration to project implementation schedule at project feasibility and / or preparation stage.</p>	<p>A standard and detailed project implementation schedule should be designed and included in the guidelines for project preparation</p>	<p>Operations Departments</p>
<p><b><u>B) Loan Effectiveness</u></b></p> <p>Conditions precedent to first disbursement were fulfilled with delays which had adverse effect on project implementation.</p>	<p>a) Whenever feasible, crucial issues should be resolved at preparation, appraisal, or negotiation stage rather than being established as conditions precedent to first disbursement.</p> <p>b) Conditions of Loan effectiveness which are unrealistic or inappropriate or which may block project implementation should be avoided or reformulated.</p> <p>c) The Bank should introduce a "Launching Mission" as a normal regular function after a loan is signed in order to assist borrowers in the fulfilment of conditions of loan effectiveness.</p>	<p>a) Crucial project issues should be highlighted in the project preparation report and should be made known to the borrower as early as possible.</p> <p>b) The Bank should always scrutinise loan conditions critically.</p> <p>c) Define the functions and composition of a Launching Mission and take action to introduce it as a normal Bank procedure</p>	<p>Operations Departments</p>
<p><b><u>C) Other Conditions</u></b></p> <p>"Other Conditions" and Covenants are often not fulfilled</p>	<p>Follow-up on the fulfilment of "Other Conditions" and covenants should be always undertaken.</p>	<p>Supervision and Launching Missions should ensure that the conditions and covenants are fulfilled.</p>	<p>Operations Departments</p>

<p><b>D) <u>Procurement</u></b> Wrong applications of Bank's rules of procedure for procurement may cause extra costs and considerable delays in project implementation.</p>	<p>a) Procurement issues should be given careful consideration at project preparation stage and be resolved at project appraisal or at the loan negotiation stage.</p> <p>b) Launching missions should assist borrowers in procurement activities.</p> <p>c) Frequent procurement seminars should be provided to staff of executing agencies.</p>	<p>TORs for project preparation and appraisal should include detailed procurement considerations.</p> <p>TORs of Launching missions should include procurement activities.</p> <p>Design seminars programme.</p>	<p>Operations Departments</p>
<p><b>E) <u>Project Cost</u></b> Project cost overrun was due to uncontrolled design review and inappropriate specification and contract clauses.</p>	<p>a) Updating of project cost estimates when necessary should not be confounded with design review.</p> <p>b) The Bank should only contemplate a design review if the existing detailed design is technically inadequate or when the scope of the project has been modified.</p> <p>c) The Bank should carefully monitor the implementation of any design review in order to avoid uncontrolled departures from the agreed design scope and standards.</p> <p>d) The Bank should always scrutinise specification and contract clauses against site conditions and particulars.</p>	<p>Guidelines on the preparation and updating of cost estimates should be provided in order to assist project officers.</p> <p>Guidelines on design review should be prepared and the situations where a design review is necessary or justified should be strictly identified.</p> <p>The TOR of a design review should always include analysis and reappraisal of economic indicators.</p>	<p>Operations Departments</p>
<p><b>F) <u>Disbursement</u></b> There was marked slowness in the processing of disbursement applications by the Bank.</p>	<p>a) Disbursement schedules based on detailed and realistic project implementation schedules should be included in project appraisal reports.</p> <p>b) Launching and supervision missions should always deal with this subject.</p>	<p>Guidelines on the preparation of disbursement schedules should be provided to assist project officers.</p> <p>Launching and Supervision missions should deal with this issue.</p>	<p>Operations Departments</p>
<p><b>G) <u>Communication</u></b> Communication difficulties and slowness caused considerable time overrun during project implementation.</p>	<p>Quick responses should always be given to at borrower's, contractor`s and Consultant`s submissions.</p> <p>The Bank and the Borrower should be more deeply concerned with time effectiveness,</p>	<p>Speedy actions should be taken to analyse documents and reply to correspondences.</p> <p>A schedule of standard times of response for the different types of submissions should be established and enforced.</p>	<p>Borrowers and Bank Departments</p>

<p>H) <u>Changes in design and unforeseen conditions</u></p> <p>Changes in design during construction can affect the progress of project implementation and cause additional cost.</p>	<p>As far as possible, changes in design should be avoided by appropriate investigations and studies during the phase of detailed design.</p>	<p>The borrower and the Bank should closely supervise project preparation and be satisfied that type and scope of investigations is well adapted to site conditions.</p>	<p>Borrowers and Bank</p>
<p>I) <u>Sustainability</u></p> <p>1. The road cannot be adequately maintained as a result of steep slope design intended to minimise construction costs. Rock fall is a serious security hazard.</p> <p>2. Minimisation of construction costs also resulted in a substandard cross section without shoulders being adopted in the Moteng Pass, which could not be properly compacted and is failing because of lack of lateral support.</p> <p>3. Winter maintenance was not considered as a component in project design and shortage of specific resources is causing traffic obstruction after snow fall and black ice formation.</p>	<p>1. The Bank should always make sure that design standards are consistent with future maintenance and that funding restrictions do not result in unsustainable roads being constructed.</p> <p>2. The Bank should always make sure that fund restriction does not result in substandard design and poor compromises against well established technical standards being implemented.</p> <p>3. Future maintenance requirements should always be investigated at project appraisal and appropriate accompanying measures designed and evaluated.</p>	<p>1. The Bank should support the Government of Lesotho in rehabilitation of the Khamane - Oxbow road including widening of the Moteng Pass section and overall slope stabilisation.</p> <p>2. The Bank should support the Government of Lesotho efforts to build up a winter maintenance capacity.</p>	<p>Borrowers, Operations Departments</p>
<p>J) <u>Impact on environment</u></p> <p>Steep slope design created a serious environmental design</p>	<p>The Executing Agency should include rehabilitation and protection of slopes in the road investment programme .</p>	<p>The Bank should support rehabilitation and upgrading of the project road.</p>	<p>Borrowers, Operations Departments</p>

**RETROSPECTIVE LOGICAL FRAMEWORK MATRIX**

Project : **Khamane - Oxbow Road**  
 Completion Date: **July, 1990**  
 PCR Date: **July, 1998**  
 Date of Evaluation: **May, 1999**  
 Post-Evaluation Team: **William Byaruhanga, José Carlos de O. S. Horta**

Hierarchy of Objectives	Objectively Verifiable Indicators		Means of Verification	Assumptions/Risks
	At Appraisal	At Evaluation		
<u>Sectoral Objectives</u> 1. Contribute to better integration of the people of remote mountainous areas of the north-eastern part of Lesotho in the economic and social life of the country. 2. Improve the primary road communications within Lesotho and around its periphery.	1. Increase in the total length of the bitumen paved road network 2. Overall growth in traffic	1. Increase in total length of the bitumen paved road network and relative increase in road maintenance expenditures 2. Overall growth in traffic 3. Improved socio-economic welfare in the project area	1.1 Annual road construction statistics from the Road Department 1.2. Annual accounts from the Road Department 2 Annual traffic data	1 Sustained budgetary provision for road rehabilitation, construction and maintenance 2 Government commitment to develop North-eastern areas.
<u>Project Objectives</u> 1. Provide an improved road link to the rural communities residing in remote mountainous areas of the north-eastern part of Lesotho. 2. Reduce the costs of transportation of persons and goods between Khamane, Oxbow, the diamond mine of Letseng-La-Terae and Mokhotlong. 3. Provide a faster, safe and all weather access through the mountainous region of the Moteng Pass to the Oxbow area, which has considerable tourism potential. 4. Upgrade the primary Khamane - Oxbow road section to a bitumen standard.	1.1 Reduction in VOC 1.2 Growth in road transit traffic 2.1. Statistics of agricultural activity and social amenity developments in the area of Mokhotlong	1.1 Reduced VOC 1.2. Traffic counts show that traffic is increasing. 2.2 Improved access high mountain areas with winter sport potential. 2.3. Reopening of Letseng-La-Terae mine.	1.1 Recalculation of VOC 1.2 Annual traffic counts 2 Scheduled negotiations for reopening of Letseng-La-Terae mine.	1 Traffic growth rates sufficiently high 2 Government and private commitment to develop winter sports. 2 Provision of appropriate resources for winter maintenance.

<p><u>Outputs</u></p> <p>1. Bitumen surfaced road (22.0 km) between Khamane and Oxbow</p>	<p>1. Bitumen surfaced road (22.0 km) between Khamane and Oxbow to be completed in 1.2.1989.</p>	<p>1. Bitumen surfaced road (22.0 km) between Khamane and Oxbow completed in July 1990.</p>	<p>1. Completion certificate issued in November 1992</p>	<p>Cost over run: UA 1.51 million Time over run: 17 months</p>																																																																				
<p><u>Activities / Components</u></p> <p>1. Procurement of consultancy services for supervision</p> <p>2. Procurement of contractor for carrying out road construction</p> <p>3. Actual construction of the project road and its supervision</p>	<p>Inputs/Resources:</p> <p><u>Appraisal Cost Estimate (UA million)</u></p> <table border="1"> <thead> <tr> <th><u>Component</u></th> <th><u>FE</u></th> <th><u>LC</u></th> <th><u>Total</u></th> </tr> </thead> <tbody> <tr> <td>Works</td> <td>4.13</td> <td>0.77</td> <td>4.90</td> </tr> <tr> <td>Supervision</td> <td>0.25</td> <td>0.05</td> <td>0.30</td> </tr> <tr> <td>Contingencies</td> <td><u>1.33</u></td> <td><u>0.61</u></td> <td><u>1.94</u></td> </tr> <tr> <td>Total</td> <td><u>5.71</u></td> <td><u>1.43</u></td> <td><u>7.14</u></td> </tr> </tbody> </table> <p><u>Appraisal Financing Plan</u></p> <table border="1"> <thead> <tr> <th><u>Source</u></th> <th><u>FE</u></th> <th><u>LC</u></th> <th><u>Total</u></th> </tr> </thead> <tbody> <tr> <td>ADF</td> <td>5.71</td> <td>0.71</td> <td>6.42</td> </tr> <tr> <td>GoS</td> <td>-</td> <td><u>0.72</u></td> <td><u>0.72</u></td> </tr> <tr> <td>Total</td> <td><u>5.71</u></td> <td><u>1.43</u></td> <td><u>7.14</u></td> </tr> </tbody> </table>	<u>Component</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>	Works	4.13	0.77	4.90	Supervision	0.25	0.05	0.30	Contingencies	<u>1.33</u>	<u>0.61</u>	<u>1.94</u>	Total	<u>5.71</u>	<u>1.43</u>	<u>7.14</u>	<u>Source</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>	ADF	5.71	0.71	6.42	GoS	-	<u>0.72</u>	<u>0.72</u>	Total	<u>5.71</u>	<u>1.43</u>	<u>7.14</u>	<p><u>Actual Project Costs</u></p> <table border="1"> <thead> <tr> <th><u>Component</u></th> <th><u>FE</u></th> <th><u>LC</u></th> <th><u>Total</u></th> </tr> </thead> <tbody> <tr> <td>Works</td> <td>5.11</td> <td>2.95</td> <td>8.06</td> </tr> <tr> <td>Supervision</td> <td><u>0.49</u></td> <td><u>0.11</u></td> <td><u>0.60</u></td> </tr> <tr> <td>Total</td> <td><u>5.60</u></td> <td><u>3.06</u></td> <td><u>8.66</u></td> </tr> </tbody> </table> <p><u>Actual Financing Plan</u></p> <table border="1"> <thead> <tr> <th><u>Source</u></th> <th><u>FE</u></th> <th><u>LC</u></th> <th><u>Total</u></th> </tr> </thead> <tbody> <tr> <td>ADF</td> <td>5.60</td> <td>-</td> <td>5.60</td> </tr> <tr> <td>GoS</td> <td>-</td> <td><u>3.06</u></td> <td><u>3.06</u></td> </tr> <tr> <td>Total</td> <td><u>5.60</u></td> <td><u>3.06</u></td> <td><u>8.66</u></td> </tr> </tbody> </table>	<u>Component</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>	Works	5.11	2.95	8.06	Supervision	<u>0.49</u>	<u>0.11</u>	<u>0.60</u>	Total	<u>5.60</u>	<u>3.06</u>	<u>8.66</u>	<u>Source</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>	ADF	5.60	-	5.60	GoS	-	<u>3.06</u>	<u>3.06</u>	Total	<u>5.60</u>	<u>3.06</u>	<u>8.66</u>	<p>Project completion reports and disbursement schedules.</p>	<p>Claim oriented contractor: unresolved claim dispute amounting to UA 2.000 million</p>
<u>Component</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>																																																																					
Works	4.13	0.77	4.90																																																																					
Supervision	0.25	0.05	0.30																																																																					
Contingencies	<u>1.33</u>	<u>0.61</u>	<u>1.94</u>																																																																					
Total	<u>5.71</u>	<u>1.43</u>	<u>7.14</u>																																																																					
<u>Source</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>																																																																					
ADF	5.71	0.71	6.42																																																																					
GoS	-	<u>0.72</u>	<u>0.72</u>																																																																					
Total	<u>5.71</u>	<u>1.43</u>	<u>7.14</u>																																																																					
<u>Component</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>																																																																					
Works	5.11	2.95	8.06																																																																					
Supervision	<u>0.49</u>	<u>0.11</u>	<u>0.60</u>																																																																					
Total	<u>5.60</u>	<u>3.06</u>	<u>8.66</u>																																																																					
<u>Source</u>	<u>FE</u>	<u>LC</u>	<u>Total</u>																																																																					
ADF	5.60	-	5.60																																																																					
GoS	-	<u>3.06</u>	<u>3.06</u>																																																																					
Total	<u>5.60</u>	<u>3.06</u>	<u>8.66</u>																																																																					