

AFRICAN DEVELOPMENT FUND

PROJECT COMPLETION REPORT

TRANSPORT PROGRAMME

REPUBLIC OF MOZAMBIQUE

**TRANSPORT DIVISION, (ONIN 3)
INFRASTRUCTURE DEPARTMENT-NORTH, SOUTH & EAST REGIONS
JANUARY 2005**

EQUIVALENTS AND ABBREVIATIONS

CURRENCY EQUIVALENTS

Appraisal (September 1992)	1 UA =	MZM 2,954.3
PCR (December 2004)	1 UA =	MZM 30,696.6

WEIGHTS AND MEASURES

1.00 meter (m)	=	3.281 ft.
1.00 kilometre (km)	=	0.621 mile
1.00 square kilometre (km ²)	=	0.386 square mile (mi ²)
1.00 hectare (ha)	=	2.471 acres
1.00 kilogram (kg)	=	2.205 lbs.

FISCAL YEAR : 1st April - 31st March

ABBREVIATIONS

ADB	=	African Development Bank
ADF	=	African Development Fund
ADM	=	Aeroportos de Mozambique (Mozambique Airport Authority)
AADT	=	Average Annual Daily Traffic
BPD	=	Banco Popular de Desenvolvimento
CFM	=	Caminhos de Ferro de Mozambique (Mozambique Railways)
DNEP	=	Direccao Nacional de Estradas e Pontes (National Directorate of Roads and Bridges)
DNPCF	=	Direccao Nacional dos Portos e Cominhos de Ferro (National Directorate of Ports and Railways)
DNTR	=	Direccao Nacional de Transportes Rodoviaros (National Directorate of Road Transport)
ECMEP	=	Empresa de Construc�o e Manutencao de Estradas e Pontes (Provincial Road and Bridge Construction and Maintenance Maintenance)
ERP	=	Economic Rehabilitation Programme
ESRP	=	Economic and Social Rehabilitation Programme
GOM	=	Government of Mozambique
ICAO	=	International Civil Aviation Organisation
ICB	=	International Competitive Bidding
IDA	=	International Development Association
LAM	=	Linhas Aereas de Mozambique (Mozambique Airlines)
MICOA	=	Ministry of Coordination of Environmental Affairs
MOPWH	=	Ministry of Public Works and Housing
MTC	=	Ministry of Transport and Communications
NRZ	=	National Railways of Zimbabwe
POL	=	Petroleum, Oil and Lubricants
ROCS	=	Roads and Coastal Shipping Project
RSA	=	Republic of South Africa
UNDP	=	United Nations Development Programme
WB	=	World Bank

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MOZAMBIQUE: TRANSPORT PROGRAMME
PROJECT COMPLETION REPORT: PROJECT MATRIX*

Narrative Summary	Verifiable Indicators		Means of Verification	Assumptions/ Risks
	Appraisal (1992)	PCR (2004)		
Sector Goal 1.1 Rehabilitation of essential road network and airport infrastructure to protect investments for economic and social activities.	1.1 Increase in the upgraded/ rehabilitated national/ rural roads in the country. 1.2 Overall growth in traffic.	1.1 At the completion of the project, increase in the total length of rehabilitated/ bitumen roads increased by 316 km. 1.2. Traffic on the Mozambique's primary road network is increasing by 6% per year.	1.1 Annual road construction and pavement evaluation data from ANE. 1.2 Traffic Statistics	(Goal to Super goal) 1.1 Adequate Government Commitment.
Project Objectives 2.1 (a) To reduce the transport costs and improving the road safety for the Beira-Machipanda Road and consequently facilitating road transport transit from and to Zimbabwe, (b) to contribute to the efforts of rehabilitating the road network by ensuring economic and technical feasibility for two roads and, (c) To ensuring economic and technical feasibility for rehabilitation/ improvement of the airports to sufficient standards.	2.1 Reduction of vehicle operating costs (VOC). 2.2 Traffic counts. 2.3 Maintenance budgets.	2.1 Total VOC on the project road reduced by 18%. 2.2 Actual traffic count in 2003 was 1236 vehicles per day (vpd) compared to the forecast level at appraisal of 767 vpd. 2.3 Maintenance expenditure on the roads increased from MZM 32 billion in 2001 to MZM 592 billion in 2004.	2.1 Review of the Highway Network Management System statistics from ANE and vehicle operating cost surveys. 2.2 Regular traffic counts after project completion. 2.3 Annual ANE budgets.	(Project Objective to Goal) 2.1. Appropriate and regular periodic and routine maintenance carried out.
Outputs 3.1 Completely rehabilitated two lane paved road between Inchope and Machinpanda. 3.2 Studies for Vanduzi-Changara Road; Pemba-Montepuez Road; and Regional Airports.	3.1 153.5 km of a 2-lane bitumen surfaced road 7.0 m wide and with 1.5 m wide surfaced shoulders between Inchope and Machinpanda. 3.2 (i) Detailed engineering design and updating of economic feasibility for the rehabilitation of Vanduzi-Changara Rd. (273 km) and the Pemba – Montepuez Rd. (207 km). (ii) Program for rehabilitation and development of the airports in Mozambique	3.1 Rehabilitation completed for 152.5 km in March 1997 with 2 x 3.5 traffic lanes and 2 x 1.5 m shoulders. 3.2 Based on the recommendations of the road studies, the GOM have implemented rehabilitation of: (a) Pemba-Montepuez Road (completed in 2002, (b) Vanduzi-Changara Road (on-going), and (c) rehabilitation plan prepared for airports, and emergency works completed on some airports.	3.1 Borrowers Quarterly Progress Reports . 3.2 Bank Supervision Reports. 3.3 Borrower's Project Completion Report (PCR)	3.1 Availability of counterpart funds.
Activities 4.1 Civil Works a) Procurement of supervision consultant and civil works contractor b) Actual rehabilitation of the project road and supervision 4.2 Studies a) Procurement of consultants for carrying out the studies. b) Actual conduct of the studies.	Input (UA Million) Road Rehab. 20.78 Studies 2.21 Audit 0.08 Contingencies Physical 2.31 Price 3.85 Total 29.23 Resources (UA Million) ADF 23.95 TAF 2.49 GOM 2.79 Total 29.23 EIRR (%) = 9.03	Input (UA Million) Road Rehab. 20.59 Studies 1.70 Total 22.29 Resources (UA Million) ADF 18.94 TAF 1.62 GOM 1.73 Total 22.29 EIRR(%) = 13.00	4.1 ADF /TAF disbursement ledger. 4.2 Borrowers Quarterly Progress Reports. 4.3 Bank technical supervision missions. 4.4 Annual Audit Reports.	4.1 No cost overruns. 4.2 Competent consultants and contractor selected.

* Project Matrix was not presented in the Appraisal Report. The above is a retrospective Matrix.

BASIC PROJECT DATA

1. Country : Mozambique
2. Project : Transport Programme project
3. Loan Number : ADF - 2100150000732
TAF - 2100155000241
4. Borrower : Government of Mozambique
5. Beneficiary : Government of Mozambique
6. Executing Agency : Ministry of Public Works and Housing

A. Loan Details

Description	Appraisal	Actual
1. Loan Amount (UA million)	ADF – 23.95 TAF – 2.49	ADF – 18.93 TAF – 1.622
2. Service Charge	ADF: 0.75% per year on amount disbursed and outstanding.	
3. Commitment Fee	0.50% per year on un-disbursed portion balance beginning 120 days after signature of loan agreement.	
4. Repayment Period	ADF: 40 years (ADF)	
5. Grace Period	ADF: 10 years (ADF)	
6. Repayment	1% of the principal each year from the eleventh to twentieth year inclusive and 3% each year thereafter.	
7. Loan Negotiation Date		27-29 May 1992
8. Loan Approval Date		01-12-1992
9. Loan Signature Date		13-05-1993
10. Date of Entry into Force		07-12-1994 (ADF) 25-04-1994 (TAF)

B. Project Data

1. Project Cost

Item of Cost	Project Cost (in UA million)	
	Appraisal	Actual
Foreign Exchange Component	23.54	19.23
Local Cost Component	5.69	3.06
Total Cost	29.23	22.29

2. Source of Finance

Source of Finance	In UA Million							
	Appraisal				Actual			
	F.E.	L.C.	Total	%	F.E.	L.C.	Total	%
ADF	21.45	2.50	23.95	81.8	17.74	1.20	18.94	85.0
TAF	2.09	0.40	2.49	8.6	1.49	0.13	1.62	7.3
GOM	-	2.79	2.79	9.6	-	1.73	1.73	8.7
Total	23.54	5.69	29.23	100.0	19.05	3.06	22.29	100

<u>Appraisal</u>	<u>Actual</u>			
	<u>Loan</u>	<u>Grant</u>	<u>Loan</u>	<u>Grant</u>
3. Effective Date of First Disbursement:	Feb.1993	May 1993	5 Dec 1994	25 April 1994
4. Effective Date of Last Disbursement:	Dec1997	Dec 1994	22 April 1998	10 Nov 1999

5. Commencement of Project:

Road Study	September 1993	January 1994
Airport Study	November 1993	October 1996
Road Rehabilitation:	March 1994	November 1994

6. Completion of Project

Road Study	June 1994	August 1995
Airport Study	September 1994	May 1998
Road Rehabilitation:	March 1996	March 1997

C. Performance Indicators

1. Cost Under-run : 24%
2. Time Overrun :
 - * Slippage on Effectiveness (%) : 200% for loan
80% for grant
 - * Slippage on Completion Date :
 - Road Studies : 14 months
 - Airport Study : 44 months
 - Road Rehabilitation : 12 months
 - * Slippage on Last Disbursement :
 - Loan : 16 months
 - Grant : 35 months
 - * Number of Extensions of Grant Validity Period : two
3. Project Implementation Status : Completed
4. List of Verifiable Indicators and Levels of Achievement :

Evaluation Criterion	Score	
	Maximum	Actual
1. Time Overruns	4	2
2. Cost Underruns	4	3
3. Adherence to Contractual Conditions	4	3
4. Adequacy of Supervision and Reports	4	2
5. Operational Performance	4	3
Total Score	20	13

5. Implementation Performance

- * Institutional Performance : Satisfactory
- * Consultants' Performance:
 - Supervision - Satisfactory
 - Studies - Satisfactory
- * Contractor's Performance : Satisfactory

6. Economic Internal Rate of Return (EIRR):

Appraisal : 9.03%
Actual : 13.00%

D. Missions

Project Cycle	M/Y	Numbers of Persons	Composition	Man Days
1. Identification				
2. Preparation				
3. Appraisal	09/1992	2	T.E, T.En	14
4. Supervision	08/1993	2	T.E, T.En	14
	05/1994	2	T.E, T.En	14
	11/1994	2	T.E, T.En	14
	04/1995	2	T.E, T.En	14
	11/1995	2	T.E, T.En	14
	10/1996	2	T.E, T.En	14
	11/1997	2	T.E, T.En	14
	11/1998	2	T.E, T.En	14
5.PCR	11-12/04	3	T.E, T.En	21

T.E: Transport Economist, T. En: Transport Engineer

E. Bank Loan/Grant –Disbursements (UA million)

Year	As at Appraisal		Actual	
	Amount	Cum. (%)	Amount	Cum. (%)
1994	6.52	24.7	2.20	10.7
1995	10.60	64.7	5.64	38.1
1996	6.98	91.1	7.39	74.0
1997	2.34	100.0	4.88	97.8
1998	-		0.28	99.2
1999	-		0.17	100.0
Total	26.44		20.56	
Balance Cancelled			5.88	

F. CONTRACTOR

Name : Contrutora Noberto Odebrecht S.A (Brazil)
Contract Description : Rehabilitation
Date Contract Signed : October 1994
Date Contract Terminated : March 1998
Contract Duration : 40 Months
Amount : US\$ 32,547,770.38

G. CONSULTANTS

a) Construction Supervision

Name : Civil and Planning Partnership
Contract Description : Supervision
Date Contract Signed : 13th January 1994
Date Contract Terminated : March 1998
Contract Duration : 50 Months
Amount : US\$ 1,417,625.25

b) Feasibility and Detailed Engineering Studies

Name	Louis Berger Intl.	Roughton & Partners	Louis Berger Intl.
Contract Description	Detailed Engineering and Updating of Economic Feasibility for Rehabilitation of Vanduzi-Changara Road (273 km)	Detailed Engineering and Updating of Economic Feasibility for Rehabilitation of Pemba-Montepuez Road (207 km).	Preparation of i) a Programme for the Rehabilitation and Development of the Airports in Mozambique and ii) Detailed Engineering for the required works on runways, taxiways and aprons at the seven major airports.
Date on Contract i) Signed ii) Terminated	January 1994 August 1995	January 1994 June 1995	October 1996 May 1998
Contract Duration	20 months	18 Months	20 months
Amount	US\$ 654,516	GBP 461,564	US\$ 954,644

EXECUTIVE SUMMARY

1. INTRODUCTION

1.1 Recognising the GOM's priority for rehabilitation of the port-rail corridors, the ADF financed detailed design and updating of the feasibility for the rehabilitation of Beira-Machipanda road in 1988 as part of Beira Corridor Transport System Project. Further, in 1991, subsequent to the Roads and Coastal Shipping (ROCS) Project Donor Conference in Brussels, the ADF was interested in financing the detailed engineering and updating of the feasibility design for the Vanduzi - Changara road and the Pemba – Montepuez road. As to the financing of Airports Study, the original request of the GOM for assistance to rehabilitate the runways of the seven major airports was modified to include issues such as future traffic volumes, critical aircraft(s), and other technical, economic, financial and organizational aspects of the civil aviation sub-sector.

1.2 In March 1992, an ADF mission visited Mozambique to appraise various components comprising the Transport Programme namely: (i) construction works and supervision services for 263.5 km of the Beira – Machipanda road divided into two sections; Section I – 110 km in Sofala Province and Section II – 153.5 km in Manica Province; and (ii) consultancy services for the two road studies and the airport study. The entire programme was to be co-financed by the Governments of Mozambique and Sweden and the ADF. The Governments of Sweden through SIDA and Mozambique were to finance Section I in Sofala; while the GOM and ADF were to finance Section II of the road in Manica Province including consultancy services for the roads and the airport study.

1.3 Since SIDA, in July 1992, indicated its inability to participate in the financing of Section I, the project was re-appraised in September, 1992 by a team of two experts comprising a Civil Engineer and a Transport Economist. The loan conditions were negotiated and there were no issues of disagreement raised by the Bank or the Borrower concerning the project. The loan amounts of ADF: UA 23.95 million and TAF Grant: UA 2.49 million were approved on 1st December 1992, and signed on 13 May 1993.

1.4 This PCR is based on the appraisal report, project files in the Bank, Borrower's progress reports, supervision consultant's Final Construction Report (FCR) and the Borrower's PCR, interviews and site inspection conducted during an ADF mission to Mozambique in November-December 2004. The Borrower's PCR is on the file with ONIN 3.

Project Objective and Description

1.5 The objective of the Transport Programme was aimed at: i) reducing the transport costs and improving the road safety for the Beira-Machipanda Road and consequently facilitating road transport transit from and to Zimbabwe; ii) contributing to the efforts of rehabilitating the road network by ensuring economic and technical feasibility for two roads; and iii) ensuring economic and technical feasibility for rehabilitation/improvement of the airports to sufficient standards.

1.6 The Programme, as designed at appraisal, comprised: i) Construction works for rehabilitating 153.5 km of the Beira-Machipanda Road within the Manica Province (Inchope-Machipanda) comprising mainly a 2-lane bitumen surfaced road of 7.0 m wide with 1.5 m sealed shoulders, ii) Consultancy services for pre-construction services and supervision of the works in item (i) above, iii) Consultancy services for the detailed engineering and updating of economic feasibility for the rehabilitation of the Vanduzi-Changara Road (273 km) and the

Pemba-Montepuez Road (207 km) ; and iv) Consultancy services for (a) preparation of a programme for the rehabilitation and development of the airports in Mozambique and (b) preparation of detailed engineering for the required works on runways, taxiways and aprons at the seven major airports.

Project Execution and Implementation Schedule

1.7 The Ministry of Public Works and Housing, through the ANE, was responsible for the execution of the road rehabilitation works and the two road studies. Airport of Mozambique (ADM) was responsible for the Airports study. Consulting firms carried out the studies and provided supervision of civil works for the road rehabilitation. A civil works contractor executed the road rehabilitation works.

1.8 Completion of the road rehabilitation works was delayed 12 months and the delay for the studies ranged between 12-44 months compared to the appraisal forecast. The delay was due to slippage in loan effectiveness, delay in procurement

Project Costs and Financial Resources

1.9 The total project cost at appraisal was UA 29.23 million including contingencies, net of taxes of which UA 23.54 million was in foreign exchange. The actual cost of the completed Project was UA22.29 million, which is 24% less than the appraisal estimate. Though provision was made for project audit in the cost estimate, the project audit was financed by the World Bank under the Roads and Coastal Shipping (ROCS) project.

1.10 The project was jointly financed by ADF, TAF and GOM. The Bank Group was to contribute 100% of the foreign exchange cost (UA22.54 million) and 51% (UA2.90 million) of local cost. The GOM had utilised 79% of the ADF loan amount and 65% of the TAF Grant with an un-disbursed balance of UA 5.88 million (ADF – UA 5.01 million and TAF UA 0.87 million). The balance has been cancelled. At completion, the overall project cost was about UA 6.94 million less than the appraisal estimate (24%).

Overall Assessment

1.11 The loan covenants /conditions were appropriate and valuable to the execution of the project. The success of the project itself is evidence that the loan conditions were sensible and no more additional conditions were necessary. The appointment of an engineer from the staff of DNEP with the relevant qualifications and experience to act as the coordinator for the programme was helpful to the overall achievement of the project.

Economic Performance

1.12 The traffic projection at appraisal has been revised duly reflecting current (2003) traffic count of the MPWH. The traffic on the project road for the year 2003 (1236 VPD) has exceeded the appraisal projection by about 60%. The recalculated EIRR is 13.13 % (Annex 4) is higher than the 9.03% EIRR estimated at appraisal. This increase in EIRR is mainly due to the higher traffic levels on the project road. This EIRR of 13.00% confirms economic viability of the investment as compared to the opportunity cost of capital of 12%.

2 CONCLUSIONS, LESSONS AND RECOMMENDATIONS

2.1 Conclusions

2.1.1 The rehabilitated road vastly improved communications and access to services by residents of villages along the route. There is faster access to better health facilities, particularly in emergency situations. Road transport costs have been reduced and also passenger travel time on the Biera – Machipanda road. The improved road has increased trade and tourist traffic through the area to a very modest extent. The GOM could not undertake periodic maintenance (due within 5 years of rehabilitation) on this road due to paucity of resources. However, the GOM have put in place adequate measures (Section 6) to ensure proper and regular maintenance of the road network.

2.1.2 All the three studies of the Transport Programme were satisfactorily completed. Further, the GOM has implemented the recommendations of the two road studies. While the rehabilitation of the Pemba-Montepuetz Road (financed by ADF) was completed in 2002, that of the Vanduzi-Changara Road is currently under implementation (financed by ADF). Based on the recommendations of the Airports Study, the GOM has prepared an action plan for rehabilitation/improvement of airports in Mozambique. The GOM has already undertaken some emergency works, and approached international funding agencies for financing the remaining rehabilitation/improvement projects.

2.2 **Lessons Learned**

2.2.1 The bad condition of the section of road between Chimoio and Machipanda (85 km) is a glaring example of the results of not carrying out timely periodic maintenance. The lesson is that there should be commitment in the planning and executing of routine and periodic maintenance. GOM is carrying out pothole patching and spot resealing to protect the pavement from further deterioration. Sustained inspections followed by consistent maintenance are necessary for the roads to be in reasonable condition.

2.2.2 Carrying out of studies as part of projects lead to potential projects in the pipeline for future Bank financing. The strategy will help to build up the Borrower's portfolio of projects and also that of the project preparation missions in recommending viable projects for the Bank's intervention.

2.3 **Recommendations**

2.3.1 It is recommended:
To the Bank

Two out of the three studies have led to new projects financed by the Bank and the Airports Study has helped the GOM prepare an action plan for rehabilitation/improvement of airports in Mozambique. It is therefore recommended that the Bank continue to prepare projects through funding studies through grants that lead to new projects.

To the Borrower

- (a) Normal preventive maintenance activities should be routinely performed to guarantee that the pavement would carry the projected 20-year design traffic volume. Maintenance crews should be equipped to address distress problems as soon as they are manifested.
- (b) Positive steps should be taken to safeguard the sovereignty of the road reserve. Action should be taken against members of the public who indulge in the indiscriminate sale of fuel along the road, cultivate areas of the road reserve, establish informal businesses at random points along the road and, access the road at random.

1. INTRODUCTION

1.1 The Republic of Mozambique is located on the east coast of Africa and has 2,515 km of shore line. It has a land area of 799,380 km², of which 13,000 km² are under Lake Niassa (Malawi). The country has land borders with Tanzania on the North, Zambia, Malawi, Zimbabwe and Swaziland on the East and the Republic of South Africa on the South. Total population of the country as per 2004 estimates was 18.96 million and growing at an average annual rate of 2.4%. The country is generally made of coastal plain that rises to the East (highest point Monte Binga – 2,436 m) near the border with Zimbabwe. Mozambique seawaters are rich in fish and exports of fish and shells constitute about 35% of the country's total export earnings.

1.2 Priority rehabilitation of crucial transport infrastructure was one of the major focus areas of Government of Mozambique's (GOM) 1987 Economic Rehabilitation Programme. To this end, rehabilitation of rail-road corridors which would restore the foreign exchange earning capacity of the GOM was accorded very high priority.

1.3 The transport system of Mozambique comprises four modes namely i) 25,340 km of classified roads, of which about 70% are in fair to good condition, ii) 3000 km of railway network of which 50% are in operation, iii) five international airports (Maputo, Beira, Nampula, Pemba and Vilankulos) and 14 secondary airports, and one national airline (Linhas Aereas de Mocambique – LAM) and iv) three major seaports (Maputo, Beira and Nacala) and 15 secondary and tertiary ports dotted along the 2,515 km coast line. During 2003, transport and communications sector contributed about 9 % to the country's Gross Domestic Product (GDP).

1.4 The Beira-Inchope-Machipanda Road (287 km) traverses from Beira (a major seaport) towards west-north-west, to Machipanda at the Zimbabwe border, about 6 km east of Mutare (Annex 1). This road which runs through the provinces of Mozambique – namely Sofala (Beira to Inchope) and Manica (Inchope to Machipanda) has an international character. The project road provides an international trade gateway through the port of Beira to neighbouring land-locked countries viz. Malawi, Zimbabwe and Zambia. Due to the civil war and insurgent activities, the road was not properly maintained after 1975 and by late 1980's the pavement had deteriorated. Further, deck of one bridge was damaged by sabotage and needed replacement.

1.5 The Vanduzi-Changara Road (270 km) takes off at the junction with the Beira-Machipanda Road near Nova Vanduzi and runs northwards to Changara (Annex 1). The project road, besides linking Tete Province with Beira port and rest of the country, provides internal transit route to Malawi and Zambia. In addition to providing access to Pemba port, the Pemba-Montepuez Road (207 km) serves a rich hinterland (Cabo Delgado Province) endowed with natural resources. Both of these roads were adversely impacted due to lack of maintenance for many years due to the security situation. These two roads required detailed engineering and feasibility studies for formulating the required rehabilitation works.

1.6 During 1990s the condition of runways, taxiways and aprons at most of the seven major airports was not satisfactory. Though the GOM was undertaking some repair works with its own funds, major rehabilitation works were overdue for which a detailed engineering study was called for.

1.7 Since 1977, when the Bank started its operations in Mozambique, the Bank has approved (as of June 2004) 66 operations comprising 50 projects, 11 studies and 5 policy-based loans (PBL). The Bank's total commitments in Mozambique have aggregated to UA 837.71 million (net of cancellations as at 30th June 2004). Major share of the Bank group's commitments in Mozambique is accounted by the agriculture sector (33%), followed by multi-sector (23%), public utilities (19%) transport (16%), social sector (8%) and industry (1%).

1.8 This PCR is based on the appraisal report, project files in the Bank, Borrower's progress reports and the Borrower's PCR, interviews and site inspection conducted during an ADB mission to Mozambique in November-December 2004.

2. PROJECT OBJECTIVES AND FORMULATION

2.1 Programme Objective

2.1.1 The objective of the Transport Programme was aimed at: i) reducing the transport costs and improving the road safety for the Beira-Machipanda Road and consequently facilitating road transport transit from and to Zimbabwe; ii) contributing to the efforts of rehabilitating the road network by ensuring economic and technical feasibility for two roads; and iii) ensuring economic and technical feasibility for rehabilitation/improvement of the airports to sufficient standards.

2.2 Programme Description

2.2.1 The Programme, as designed at appraisal, comprised the following components:

a) Beira-Machipanda Road rehabilitation

- (i) Construction works for rehabilitating 153.5 km of the Beira-Machipanda Road within the Manica Province (Inchope-Machipanda) comprising mainly a 2-lane bitumen surfaced road of 7.0 m wide with 1.5 m sealed shoulders.
- (ii) Consultancy services for pre-construction services and supervision of the works in item (i) above.

b) Road and Airport Studies

- (i) Consultancy services for the detailed engineering and updating of economic feasibility for the rehabilitation of the Vanduzi-Changara Road (273 km) and the Pemba-Montepuez Road (207 km) ; and
- (ii) Consultancy services for (a) preparation of a programme for the rehabilitation and development of the airports in Mozambique and (b) preparation of detailed engineering for the required works on runways, taxiways and aprons at the seven major airports.

2.2.2 The ADF financed components were the Beira-Machipanda Road rehabilitation within the Manica Province (Inchope-Machipanda - Section II) including consultancy for pre-construction services and supervision of the construction works for Section II. The TAF financed components were the two road studies and the Airports Study.

2.3 Formulation, Evaluation and Approval

2.3.1 The Mozambique Government's 1987 Economic Rehabilitation Programme was the rehabilitation of the transport infrastructure. The port-rail corridors were given first priority and the ADF had assisted GOM in this effort through the Beira Corridor Transport System for which a loan and grant were approved in 1988. As part of the Beira Corridor Transport System project, the ADF financed the detailed design and updating of the feasibility study of the Beira – Machipanda Road.

2.3.2 The Vanduzi – Changara and the Pemba – Montepuez road studies were components of the Roads and Coastal Shipping (ROCS) project implemented by the GOM with assistance from the World Bank (IDA). The Bank Group expressed interest in the detailed engineering and updating of the feasibility design for the Vanduzi - Changara road at the ROCS Project Donor Conference in Brussels in June 1991.

2.3.3 The original GOM request for assistance with Airports Study was based on an engineering report dated August 1987 on the need to rehabilitate the runways of the seven major airports. The GOM request therefore focused on only the rehabilitation of the runways and did not relate to other airport requirements or to civil aviation sub-sector. It was then agreed with the GOM that the runways cannot be considered in isolation and issues such as future traffic volumes, critical aircraft(s), and other technical, economic, financial and organizational aspects of the civil aviation sub-sector should be considered.

2.3.4 In March 1992, at the invitation of the GOM, an ADF mission visited Mozambique to appraise the various components of the programme. At this appraisal the transport programme was envisaged to consist of: (i) construction works and supervision services for 263.5 km of the Beira – Machipanda road divided into two sections; Section I – 110 km in Sofala Province and Section II – 153.5 km in Manica Province; and (ii) consultancy services for the two road studies and the airport study. It was intended that the Governments of Sweden and the ADF were to finance the entire programme. The Governments of Sweden through ASDI and Mozambique were to finance Section I of the civil works in Sofala; while the GOM and ADF were to finance Section II of the road in Manica Province including consultancy services for the roads and the airport study.

2.3.5 ASDI in July 1992 indicated that it was unable to participate in the financing of Section I. This withdrawal made it necessary for the ADF to mount another mission in September 1992 to re-appraise the project and identify a donor source. The European Union finally agreed to finance the entire corridor with the Bank.

2.3.6 The project was re-appraised in September, 1992 by a team of two experts comprising a Civil Engineer and a Transport Economist. The team prepared the project in adequate detail in the perspective of the borrower's technical and managerial capability. The loan conditions were negotiated and there were no issues of disagreement raised by the Bank or the Borrower concerning the project. The loan amounts of ADF: UA 23.95 million and TAF Grant: UA 2.49 million were approved on 1st December 1992, and signed on 13 May 1993.

3. PROJECT EXECUTION

3.1 Effectiveness and Start-up

3.1.1 The ADF loan and TAF grant for the project were approved in December 1992 and the loan/grant agreement was signed in May 1993. Thus, loan/grant was signed within the normal limit of 180 days for loan signature after Board approval. The ADF loan was made effective in December 1994 with a slippage of about 12 months and the TAF grant was made effective in April 1994 with a slippage of about 5 months. The total slippage of about 12 months was mainly due to the delay in fulfilling the loan conditions precedent to the entry into force of the Loan Agreement i.e. “The Borrower shall have provided evidence satisfactory to the Fund that the other donors have committed appropriate funds to the project.”

3.1.2 There were no particular problems during the start-up period and the delay in fulfilling the loan conditions had no discernible impact on project implementation. The loan conditions were simple and the Borrower could have avoided the delay through diligence and commitment.

3.2 Modifications

3.2.1 The original design provided for the structural upgrading of km 141.220 – km 146.790 section of road (Section II: Inchope – Machipanda) through the application of an 80 mm thick asphalt overlay. The specification was reviewed because of the extreme deformation manifested in the section since the carrying out of the pavement investigations in 1991. It was therefore decided that under the existing traffic it was necessary to substitute the asphalt overlay with a combined, but structurally equivalent, granular/asphalt solution. Accordingly the initial overlay design was replaced with 150 mm-graded crushed stone base and 30 mm asphalt concrete wearing course.

3.2.2 The km 193.800 – km 202.300 section of the road is constituted by the portion of the EN6 within the municipality of Chimoio. In view of the higher volume of pedestrian and vehicular traffic in the urban section the original design had called for the construction of a 12 m rather than 10 m (standard) wide carriageway between the indicated stake distances. Unfortunately the above geometry was never adopted because of obstructions posed by numerous services and developments in the road reserve. Meetings held with the Governor and other high profile figures at Provincial level to have the obstacles removed were unsuccessful. A compromise was finally reached which entailed construction of an 11 m wide carriageway over 3.7 km of the section under consideration. Overall, 56% and 44% of the section length was constructed to widths of 10 and 11 m respectively.

3.2.3 The completed Works, bridge carriageways excluded, provide the road user with a 10m wide surfaced carriageway comprising 2 x 3.5m traffic lanes with 2 x 1.5m shoulders between Inchope at km 133.5 and Machinpanda at km 286 (152.5km). At bridges the carriageway reduces to 7m in most instances. The reduction in bridge width was due to budgetary constraints at the time of design. The original surfaced width of the facility was typically 7m between Inchope and Gondola (41.5km) and 6m between Gondola and Machinpanda.

3.2.4 The changes were not due to inadequate project preparation or external factors but were due to technical factors as discussed above. The changes had minimal effect on the

implementation schedule but no influence at all on the original objectives and agreements in the project.

3.3 Implementation Schedule

3.3.1 The road rehabilitation works commenced on 14 November 1994 and completed on 10th March 1997, with a 4-month extension to the original contract completion date of 10th November 1996. The detailed engineering and update of feasibility study for the two roads started in January 1994. While the Pemba-Montepuez Road study was completed in June 1995, the study for Vanduzi-Changara Road was completed in August 1995. The Airports Study commenced in October 1996 and completed in May 1998. These entire programme components were delayed when compared to the Appraisal forecast date of March 1996 for road rehabilitation (about 12 months delay) and July/September 1994 for the studies (about 12 month delay for road studies and 44 months delay for Airports Study).

3.3.2 About 85% of the works had been completed by the original contract completion date. The total extension of time for completion awarded under the contract amounted to 120 days and comprised of two sub extensions: (a) due to significant increases in certain scheduled quantities (double seal treatment on shoulders and usage of additional graded crushed stone) the Contractor was awarded a 3-month extension of time for completion and, (b) a 31-day extension of time for completion on account of abnormal rainfall during January and February of 1996. The inclement weather conditions occurred both during and after Cyclone Bonita.

3.4 Reporting

3.4.1 Pursuant to the provisions of the General Conditions of the Loan Agreement on submission of reports, the GOM submitted monthly progress reports during the execution of the project. The project reports were a part of the project documents, which comprised: Civil & Planning Partnership (CPP) tender report, detailed design, the design review report, all volumes of the contract documents, evaluation of claims submitted, the contract addenda, Quality Assurance Plan, the Completion Report dated January 1998 prepared by the supervisory consultant and the Borrower's Project Completion Report dated December 2004 prepared by the executing agency. These reports were satisfactory in content and detail.

3.4.2 The Completion Report covered all the relevant sections of the contract documents and the Borrower's PCR followed the Bank's Operation's Manual Format for the Preparation of PCR to be submitted by the Borrower. Annual audit reports were also submitted.

3.4.3 The purpose of the Quality Assurance Plan (QAP) was to create a site-based document with the aim of integrating the Contract and Engineer's procedural systems into one common system, which formed the basis and set guidelines for Quality Assurance processes on this Contract. The QAP further made provision for continuous visual inspection of completed work, regular calibration of equipment and control testing by independent laboratories on certain materials or as a means of auditing and controlling testing procedures on site.

3.5 Procurement

3.5.1 The Bank's procurement rules and guidelines did not create any problems for the GOM. The rules did not conflict with the national laws and procedures of the GOM and did not have any impact on start-up of the project. The GOM did not have any difficulty following the Bank's rules of procurement nor did any problems occur during project implementation that related to procurement and suppliers. There were no procurement changes requested by the Borrower.

Consultancy Services

3.5.2 The supervision consultant for Beira-Machipanda road rehabilitation works and consultants for the studies were procured on the basis of shortlist of qualified consultants submitted by the GOM and approved by the Bank. The shortlist included the design consultant, and details regarding these consultancy contracts are presented below:

Name of the Consultant	Nationality	Responsibility	Date of Contract Award	Contract Value
1. Civil & Planning Partnership (CPP)	Zimbabwe	Supervision of Road Rehabilitation Works	January 1994	US\$919,875
2. Louis Berger Intl.	U.S.A.	Vanduzi-Changara Road Study	January 1994	US\$654,516
3. Roughton and Partners	U.K.	Pemba-Montepuez Road Study	January 1994	GBP461,564
4. Louis Berger Intl.	U.S.A.	Airport Study	October 1996	US\$ 954,644

Works Contract

3.5.3 The construction contractor was procured through International Competitive Bidding (ICB) with prequalification. Following a detailed analysis of eleven tenders a contract for the execution of the works was finally awarded to Construtora Norberto Odebrecht S.A. of Brazil who returned a tender in the following amounts: foreign component –US\$ 17,762,241.30 (90.1% of bid price); local component – US\$ 718,055.24 (3.6% of bid price) and taxes US\$ 1,241,373.84 (6.3% of bid price). The total bid price was US\$ 19,721,670.38.

3.5.4 During pre-contract negotiations, however, the Contractor was asked to reduce the foreign component from the tendered proportion of 90% of the bid price to 80% in conformity with the appraisal estimated proportion. The Contractor agreed to this request and revised his currency requirements to reflect the following: foreign component - US\$ 15,777,336.30 (80% of bid price); local component – US\$ 2,702,960.24 (13.7% of bid price) and, taxes - US\$ 1,241,373.84 (6.3% of bid price).

3.6 Financial Sources and Disbursement

3.6.1 Project Costs: The total project cost at appraisal was UA 29.23 million including contingencies, net of taxes of which UA 23.54 million was in foreign exchange. The actual cost of the completed Project was UA22.29 million, which is 24% less than the appraisal estimate. Though provision was made for project audit in the cost estimate, the World Bank under Roads and Coastal Shipping (ROCS) project financed the project audit. A summary comparison of the project costs as appraised and actual is shown in Table 3.1. The cost under-run for studies and

road rehabilitation work was mainly attributable to the competitive prices obtained in procurement.

Table 3.1: Summary - Appraisal versus Actual Costs (UA Million)

Item	Appraisal			Actual			Actual - Appraisal		
	F.E.	L.C.	Total	F.E.	L.C.	Total	F.E.	L.C.	Total
Road Rehabilitation	21.36	5.15	26.51	17.74	2.85	20.59	-3.62	-2.30	-5.92
Studies	2.09	0.53	2.62	1.49	0.21	1.70	-0.60	-0.32	-0.92
Audit	0.09	0.01	0.10	-	-	-	-0.09	-0.01	-0.10
Total	23.54	5.69	29.23	19.23	3.06	22.29	-4.31	-2.63	-6.94

3.6.2 It is worthy of note that the final contract value of the rehabilitation work was about 65% of the original contract amount (Para. 3.5.3). The increase of the contract amount comprises in the main; claims (19%), additional works (11%), and cost price adjustment (28%). A broad composition of the contract budget is present in Annex 3.

3.6.3 Financial Resources: The estimated and actual expenditures (in UA terms) by source of finance are presented in Table 3.2. Of the total estimated cost of the project (UA 29.23 million) at appraisal, the ADF contribution was to be 81.8%, TAF 8.6% and GOM 9.6%. However, of the actual project cost at completion (UA 22.29 million), the ADF contribution was 85.0%, TAF 7.3% and GOM 8.7%. The slight decline in GOM's contribution in UA terms was mainly due to the depreciation of local currency in which the GOM disbursed all its contribution towards local cost. The GOM had utilised 79% of the ADF loan amount and 65% of the TAF Grant with an un-disbursed balance of UA 5.88 million (ADF – UA 5.01 million and TAF UA 0.87 million). The balance has been cancelled. At completion, the overall project cost was about UA 6.94 million less than the appraisal estimate (24%). The completed road however, is a well-designed and is adequate to cater to the current and anticipated traffic. Further, based on the recommendations of the two road studies, the Bank has financed rehabilitation of Pemba-Montepuez Road (1997) and Vanduzi-Changara Road (1999). While the rehabilitation of Pemba-Montepuez road was completed and opened to traffic in 2002, the latter is currently under rehabilitation. The GOM has prepared an action plan for the improvement of the airports on the basis of the Airports Study Report.

Table 3.2: Financing Plan - Appraisal versus Actual (UA million)

Source of Finance	Appraisal				Actual				Actual - Appraisal		
	F.E.	L.C.	Total	%	F.E.	L.C.	Total	%	F.E.	L.C.	Total
ADF	21.45	2.50	23.95	81.8	17.74	1.20	18.94	85.0	-3.71	-1.30	-5.01
TAF	2.09	0.40	2.49	8.6	1.49	0.13	1.62	7.3	-0.60	-0.27	-0.87
GOM	-	2.79	2.79	9.6	-	1.73	1.73	8.7	-	-1.06	-1.06
Total	23.54	5.69	29.23	100.0	19.05	3.06	22.29	100	-4.31	-2.63	-6.94

3.6.4 Disbursement: The loan funds were disbursed by direct method to the contractors and consultants. The slippage in the actual loan disbursement is broadly in line with the delay in project implementation. The loan amount, as per the appraisal schedule, was to be fully disbursed during 1994-1997. But due to the delay in project implementation, the actual disbursement on ADF loan commenced in November 1994 instead of March 1994 (as planned at appraisal). In the case of TAF component the first disbursement was in April 1994 and the last one was in November 1999. This was mainly due to the delay in the completion of Airports Study (November 1998). Table 3.3 presents a summary comparison between the appraisal and actual disbursement profiles.

Table 3.3: Appraisal Versus. Actual Disbursement Profile (UA Million)

Year	At Appraisal				Actual			
	ADF		TAF		ADF		TAF	
	Amount	Cum(%)	Amount	Cum(%)	Amount	Cum(%)	Amount	Cum(%)
1994	5.04	21.0	1.48	59.6	1.85	9.8	0.35	21.0
1995	9.59	61.1	1.01	100.0	5.19	37.2	0.45	49.0
1996	6.98	90.2			7.18	75.1	0.21	62.0
1997	2.34	100.0			4.68	99.8	0.20	74.0
1998	-				0.04	100.0	0.25	89.0
1999	-				-		0.17	100.0
Total	23.95		2.49		18.94		1.63	

3.6.5 During the project implementation, the average disbursement time per application at the Bank was 30 days for the ADF funds and 22 days TAF; resulting in an overall average disbursement time of 28 days per application as presented in Table 3.3. For the ADF funds, 22.7% of the payments were made within 14 days of receipt of application at the Bank, 45.5% within 21 days, 59.1% within 28 days (four calendar weeks) and 90.9% with 50 days. In respect of TAF funds, 76.9% of disbursement requests were paid within 28 days. On the whole, about 64% of the disbursements were made in less than 28 days and 94% within 50 days.

Table 3.4: ADF/TAF Actual Disbursement Time Profile

Time Taken for Disbursement at the Bank	ADF			TAF		
	No. of Applications	%	Cum. %	No. of Applications	%	Cum. %
x ≤ 14	15	22.7	22.7	13	50.0	50.0
15 ≤ x ≤ 21	15	22.7	45.5	3	11.5	61.5
22 ≤ x ≤ 28	9	13.6	59.1	4	15.4	76.9
29 ≤ x ≤ 50	21	31.8	90.9	6	23.1	100.0
X > 50	9	9.1	100.0	-	-	-
Total	66	100.0		26		
Average No. of days/Application	30				22	

Source: ADB Disbursement Ledgers

4. PROJECT PERFORMANCE AND RESULTS

4.1 Overall Assessment

4.1.1 The loan covenants /conditions were appropriate and valuable to the execution of the project. The success of the project itself is evidence that the loan conditions were sensible and no more additional conditions were necessary. The appointment of an engineer from the staff of DNEP with the relevant qualifications and experience to act as the coordinator for the programme was helpful to the overall achievement of the project.

4.2 Operating Results

Beira-Machipanda Road Rehabilitation

4.2.1 The successful rehabilitation of the road demonstrated the Borrower's commitment to the project. Counterpart funds were provided during implementation up to completion,

competent consultant and contractor were selected for the execution of the Works and, there was no cost overrun.

4.2.2 Maintenance has not been effective as desired particularly, periodic maintenance. Extensive areas of the road were showing severe distress in the form of potholes, edge damage and aggregate loss and require immediate repairs and resealing. The design approach was based on a 20-year design life and assumed that normal preventive maintenance activities would be routinely performed. In order to preserve the integrity of the facility it is recommended that special notice be taken of the following: (a) appropriate and regular routine and periodic maintenance be carried out on the facility, (b) indiscriminate sale of fossil fuels along the length of the road, which result in spillage, and cause extreme damage to the bituminous pavement, (c) areas within the road reserve that are cultivated by the settlements on the road, (d) informal businesses at random points along the road and, and (e) unrestricted accesses onto the road if not controlled could damage the pavement.

Road and Airport Studies

4.2.3 All the three studies of the Transport Programme were satisfactorily completed by the end of their contract. Based on the recommendations of detailed design and update of the feasibility studies, the GOM requested the Bank for financing the rehabilitation of these two roads. The Bank approved ADF loans for financing the rehabilitation of Pemba-Montepuez Road in 1997) and ii) Vanduzi-Changara Road in 1999. While the rehabilitation of the Pemba-Montepuez Road was completed and opened to traffic in 2002, the rehabilitation of Vanduzi-Changara road is underway.

4.2.4 The Airports study has identified five types of investment projects covering i) airport external equipment, ii) airport internal equipment, iii) support infrastructure, equipment and facilities, iv) terminals and other buildings, and v) organizational and institutional development. These investment projects have been prioritized into a) short-term (i.e. emergency investments required before the end of 1999), b) medium-term (before the end of 2003) and c) long-term (up to the end of 2007). Based on these recommendations, the GOM has prepared an action plan for rehabilitation/improvement of airports in Mozambique. The Airport of Mozambique (ADM) has already undertaken some emergency works, to the tune of about US\$ 3 million, at the airports of Maputo, Beira, Pemba and Inhope using their internal resources and borrowings from commercial banks. The ADM has also drawn up a 3-year (2005-07) investment programme, which is estimated at US\$ 23 million. The major problem hindering the implementation of the programme is the availability of required resources. The GOM is approaching international funding agencies for this purpose.

4.3 Training

4.3.1 As part of a technology transfer programme two (DNEP) technicians were seconded to the Engineer for training purposes. The technicians were assigned to the Engineer's staff for the period 11 September 1995 to 31 December 1996. Both trainees were stationed at the site laboratory for an initial period of 3 months. Each technician was assigned a dedicated supervisor who guided and instructed him in all facets of road construction. The candidates were:

- Exposed to the construction and supervision of earthworks, layer works, surface treatment and asphalt concrete.

- Given the opportunity of measuring quantities for the various activities on the project.
- Instructed in the programming and scheduling of work on the basis of available production capacity.
- Instructed in the legal relationship between the Employer and Contractor.
- Instructed in the use of leveling and tacheometric instruments.

4.4 Performance of Consultants, Contractors and Executing Agency

Consultants and Contractor

4.4.1 The site management's performance as regards to planning and organizational capabilities was generally good. The fact that the road was opened to traffic within the time allowed for on the contract is a testament to the Contractor's overall managerial performance. The quality of work submitted for approval was mostly of an average standard. The Contractor mobilized sufficient equipment to meet the required levels of productivity and maintained his equipment in a sound condition by deploying a full-time workshop staff to the site. Work was therefore hardly ever held up on account of plant breakdowns. The Contractor's performance was never impaired by pecuniary considerations as it had direct access to the group's financial reserves.

4.4.2 The Borrower and the Bank were satisfied with the performance of the consultants (supervision and studies) and the contractor.

Executing Agencies

4.4.3 Banco Popular de Desenvolvimento (BPD) had the overall responsibility for implementing the programme. BPD had been coordinating all Bank Group's operations in Mozambique and had the managerial competence to monitor the project during implementation.

4.4.4 ANE was the executing agency for the Beira – Machinpanda road rehabilitation and for the two roads studies. Supported by technical assistance staff, ANE had been responsible for previous Bank Group financed road projects. ANE's technical and managerial competence during implementation of the project was satisfactory and it had good professional relationship with the consultants and the contractor. There was good rapport and free flow of communication between the ANE and the consultants and contractor.

4.4.5 Aeroportos de Mozambique (ADM) was the executing agency for the Airports Study. ADM handled all matters related to airport investments and maintenance in Mozambique and had the required technical and managerial competence supervise the Study. There was good rapport and free flow of information between ADM and Study consultant.

4.5 Institutional Conditions/Covenants

4.5.1 There were no institutional conditions either in the ADF Loan Agreement or the TAF Protocol of Agreement however, there were covenants in both. These covenants were very

appropriate and necessary for the successful execution of the Study. No additional covenant or modification could have served any useful purpose.

4.6 Economic Performance

Appraisal Expectations

4.6.1 At appraisal, the investment on rehabilitating the project road was evaluated using a “with” and “without” project scenario approach. The assessment of economic viability was based on Economic Internal Rate of Return (EIRR). The vehicle operating costs (VOC) and various road maintenance interventions underlying the economic analysis were calculated using Highway Design and Maintenance model (HDM-III). The analysis was conducted using 1992 prices, assuming a 3-year construction period (1994-96) followed by 12-month defects liability period. A twenty-year analysis period (1996-2015) was assumed. For the project road, the base year (1990) traffic level was 508 vehicles per day (VPD), with 44% medium & heavy vehicles. In view of the adverse impact of the then prevailing security situation and civil war on the national economy, the traffic levels had declined significantly since independence (1975). Further, there were no reliable traffic data to arrive at a reasonable traffic growth rate. Given this situation, very pessimistic growth rate of 3% per year ((under the assumption of continuation of hostilities) was adopted for the purpose of traffic projections during 20 year project life. At the assumed average annual growth rate of 3%, these traffic level was projected to increase from 508 VPD (1990) to 1032 VPD (2016).

4.6.2 The cost of rehabilitation included capital cost (excluding price contingency and transfer payments) and road maintenance (periodic and routine) cost. The benefits for the project consisted of saving in vehicle operating cost (VOC) and road maintenance cost resulting from the improved surface condition. Based on the comparison of economic costs and user benefits under “with” and “without” project scenarios, Economic Internal Rate of Return (EIRR) for the rehabilitated project road was 9.03%. This level of EIRR was considered significant in view of the very pessimistic traffic projections, which were based on the assumption of very low traffic growth and continuation of civil strife.

Recalculation of Economic Internal Rate of Return (EIRR)

4.6.3 According to the latest traffic count data of ANE, the annual average daily traffic (AADT) on project road for 2003 was 1236 VPD comprising 40% light vehicles, 17% medium vehicles and 23% heavy vehicles. The current traffic level has exceeded the expected traffic levels as at appraisal (767 VPD) by about 60% which is mainly due to the developments in 1990s after cessation of civil war.

4.6.4 Available traffic count data since the completion of the rehabilitation of the road, though fluctuating over a wide range, has indicated an increasing trend, the average annual growth being 13% as brought in Table 4.1.

Table 4.1: Average Annual Daily Traffic (AADT) on Inchope-Machipanda Road
(Number of Vehicles per Day)

Year	Car/ Pick Up	MGV	HGV	BUS	Total	Annual Growth
1997	294	164	147	92	696	--
1998	308	172	154	96	731	5%
1999	344	139	131	86	700	-4%
2000	295	108	156	81	640	-9%
2001	300	131	164	81	675	6%
2002	634	227	205	106	1172	74%
2003	739	212	204	81	1236	5%
Average Annual Growth Rate						13%

4.6.5 The average annual growth rate of 13% is high and cannot be sustained over long-term horizon of 20 years. A recent analysis of traffic growth on primary road network of Mozambique (July 2002) has indicated an average annual growth of 6% which is expected to decline to 4.5% per year up to 2005 and thereafter stabilise around 3.5% per year. For the current exercise, to be conservative, annual growth rates of 4.5% up to 2005 and 3.5% from 2006 onwards have been adopted for projecting the future traffic levels which are presented in Annex 4. With the assumed annual growth rates, the traffic level will grow from 1236 vpd in 2003 to 2110 vpd by 2018 (i.e. last year of design life of the project road).

4.6.6 For recalculation of EIRR, the economic costs have been revised in the light of actual construction costs and economic benefits have been updated in line with the observed growth in traffic since the completion of the project roads. The economic analysis was carried out in 1997 prices by converting the financial costs into economic terms. The actual construction and supervision economic costs as well as the benefits emanating from the revised traffic forecasts formed the basis for reworking the EIRR. The HDM-III model has been used to calculate the VOC and the estimates of VOC are presented in Table 4.2. All the cost and benefit streams over the 20-year life of the project have been expressed in 1997 prices and discounted to work out the EIRR.

Table 4.2: Vehicle Operating Cost – Economic
(US\$ per Vehicle Km – 1997 Prices)

Type of Vehicle	Rehabilitated Road	Existing Road
Car/Pick Up	0.200	0.225
MGV	0.390	0.495
HGV	0.520	0.666
Bus	0.340	0.459

4.6.7 Based on the above, the revised EIRR for the project road that works out to 13.00% confirms the economic viability of the completed project (Annex 4). The revised EIRR is higher than the appraisal EIRR (9.03%) mainly because of higher levels of traffic obtained on the road vis-à-vis the appraisal forecasts.

5. SOCIAL AND ENVIRONMENTAL SUSTAINABILITY

5.1 Social Impact

5.1.1 The Beira-Machipanda Road is an international transit route linking Beira Port in Mozambique with the neighbouring land-locked countries of Zimbabwe, Malawi and Zambia. Discussions, during the site visit, with a cross-section of beneficiaries conclusively brought out the positive impact of the rehabilitated road. Better road conditions coupled with the improved political and economic situation in the country contributed to a significant increase in traffic on the project road. During 2003, traffic level on the road was 1236 VPD as compared to the projected traffic level (at appraisal) of 767 VPD; indicating about 60% additional traffic. The current travel time from Beira to Machipanda is 3 to 4 hours as against 6-7 hours prior to rehabilitation i.e. about 45% reduction in travel time. The total vehicle operating cost during 2004 (for a traffic level of 1291 VPD) reduced from US\$ 26.00 million (without rehabilitation) to US\$ 24.98 million (with rehabilitation) i.e. reduction of US\$ 1.20 million - about 5% reduction (Annex 5). This reduction will be to the order of 18% from 2005 onwards when the planned periodic maintenance is carried out.

5.1.2 As required in the terms of the contract, a safety officer was a part of the contractor's team to address the safety aspects during construction and after opening the rehabilitated road. Safety awareness talks were presented at all schools along the route. These talks preceded the construction operations with the specific aim of informing and educating the local population to the safety hazards of the construction process and the completed road. In addition, the safety officer attended to signage at deviations and enforced the safety requirements such as the use of rotating lights on all vehicles and speeding of traffic.

5.1.3 A number of Non-governmental Organisations (NGOs), churches and public institutions are carrying out HIV/AIDS awareness programmes in the project road corridor. These programmes, which are financed by the GOM, World Bank and the ADB, are broad-based targeting both individuals and groups. These programmes consist of: a) information posters in public places, b) availability of socially marketed Jeito condoms for purchase, c) training of Peer Educators drawn from the local communities and labours in HIV/AIDS issues for discussion with colleagues, d) small focus groups for effective transmission of information, e) Theatre Groups and Video presentation, f) promotional bill boards to raise awareness of the integration of road construction and HIV/AIDS activities, and g) inclusion of HIV/AIDS activities in all the villages along the road.

5.1.4 Besides the above, the civil works contractors organized awareness campaigns, education of local communities regarding the social problems of prostitution and the inevitable transmission of diseases of which the most dangerous being Sexually Transmitted Diseases (STD), in particular HIV/AIDS. Also, preventative health facilities were provided in the construction camps.

5.1.5 The three studies (2 road studies and one Airports study) financed by the TAF grant provided the GOM with all the required technical and economic data for taking investment decision with regard to rehabilitation/ improvement of the two roads and the airports.

5.2 Environmental Impact

5.2.1 The project road is situated in an environmentally sensitive area and the provisions of the publication “Environmental Guidelines for Road Works in Mozambique” were implemented and adhered to. The works consisted of the rehabilitation of an existing road therefore; the environmental issues in general, consisted of improvements to the existing situation. The recommendations of the publication were incorporated in the design and contract documents and implemented during construction.

6. PROJECT SUSTAINABILITY

6.1 The Mozambique Roads and Bridges Management and Maintenance Programme (Roads 3) is a ten year (2001 – 2011) programme that is being implemented in three phases. The Roads 3 has significantly improved the condition of the country’s existing network of roads and bridges. This has been accomplished through better maintenance of the road network and through a prioritized programme of rehabilitation. To support these goals, substantial investments have been made to strengthen public sector capacity to manage road sector activities and to establish, effective, efficient and sustainable institutional arrangements for the sector. In particular, the Programme addressed the need to establish sustainable mechanisms for financing road maintenance. Other elements of the Programme focus on promoting the local private sector for roads construction and maintenance, increased attention to road and highway safety matters, and support for efforts to reduce the spread of HIV/AIDS. IDA and other donors including the ADF and the Road Fund would finance the ten-year programme.

6.2 The first phase of the Programme to be implemented over four years (2002 – 2006), would focus on one hundred percent routine maintenance of the “maintainable” network funded exclusively by the Road Fund, periodic maintenance and urgent rehabilitation of paved and unpaved roads, implementing institutional and policy reforms, and completing preparations for the long term investment programme.

6.3 Financing of periodic maintenance is, in principle, the responsibility of Road Fund but in the medium term, several donors, including IDA will continue to provide support for periodic maintenance. In Phase I approximately 75% of periodic maintenance has been financed by donors. This share will decline during Phases II and III respectively, with goal of increasing the Road Fund share to 100% by the end of Roads 3.

6.4 Fuel levies have been significantly eroded since 1997 (from average of US12.1c to US 7.5c per litre in 2001), the last time the fuel levy was statutorily changed. The Government policy is to return the fuel levies (which make up the largest portion of Road Revenues) to their 1997 level by gradually increasing the levy rates from US 9.0c per litre in 2002, US 10.5c per litre in 2005.

6.5 The restructuring of the ANE and the Road Fund in 2003 has improved financial management. The Road Fund has been separated from ANE and is now an autonomous and independent entity with clearly separate financing and road works execution functions in the roads administration, thereby increasing accountability and transparency.

6.6 Initially, the Road Fund is responsible for financing routine and periodic maintenance through road user charges that will be collected by the Ministry of Planning and Finance and transferred to the Road Fund. Roads 3 addresses this issue by ensuring that financing is adequate to fund the maintenance-first strategy by focusing on road user charges as the means of providing the necessary resources for this activity. Road user charges channeled to the Road Fund will finance 100% of routine maintenance and 75 % of periodic maintenance in Phase I, rising to 85% of periodic maintenance requirements in Phase III. Donors, already identified to meet the need in Phase I, will meet the remaining periodic maintenance requirements. Periodic maintenance of the Beira – Machipanda road could be financed by the European Union under Phase II of the Roads III project.

7. PERFORMANCE OF THE BORROWER AND THE BANK

7.1 The rehabilitation of the project reduced road transport costs over the project corridor and also enhanced safer driving. The present condition of the road is not satisfactory in some sections but in general it still serves the purpose for which it was designed. Given that the works were completed over 7 years ago the Borrower and considering the political situation in Mozambique at the time of implementation of the project the Borrower's performance could be assessed as fair.

7.2 During project implementation, the Bank supervised the project through 8 missions in which technical and disbursement issues were discussed and problems solved. The Bank responded within reasonable time to the problems arising from project execution. Overall the performance of the Borrower and the Bank was satisfactory.

8. OVERALL PERFORMANCE AND RATING

8.1 The overall project (civil works and studies) completion was delayed by some 44 months when compared to Appraisal forecast. This delay in completion was due to the delay in fulfillment of the loan conditions for effectiveness. However, when the project commenced it was completed within the contract period and budget.

8.2 In accordance with the implementation performance indicators (Annex 5), the overall assessment of implementation performance and project outcome are satisfactory with a rating of 2.8 out of 4 maximum. The rating for the Bank's performance is 3 out of 4 maximum indicating high satisfactory level of performance.

9. CONCLUSIONS, LESSONS AND RECOMMENDATIONS

9.1 Conclusions

Road Rehabilitation

9.1.1 The rehabilitated road vastly improved communications and access to services by residents of villages along the route. There is faster access to better health facilities, particularly in emergency situations. Road transport costs have been reduced and also passenger travel time on the Beira – Machipanda road. The improved road has increased trade and tourist traffic through the area to a very modest extent. The GOM could not undertake periodic maintenance (due within 5 years of rehabilitation) on this road due to

paucity of resources. However, the GOM have put in place adequate measures (Section 6) to ensure proper and regular maintenance of the road network.

Studies

9.1.2 The overall objective of the studies component of the project has been achieved. All the three studies of the Transport Programme were satisfactorily completed. Further, the GOM has implemented the recommendations of the two road studies. While the rehabilitation of the Pemba-Montepuetz Road (financed by ADF) was completed in 2002, that of the Vanduzi-Changara Road is currently under implementation (financed by ADF). Based on the recommendations of the Airports Study, the GOM has prepared an action plan for rehabilitation/improvement of airports in Mozambique. The GOM has already undertaken some emergency works, to the tune of about US\$ 3 million, at the airports of Maputo, Beira, Pemba and Inchope using their internal resources and borrowings from commercial banks. Further, based on the recommendations of the study, the GOM has drawn up a 3-year (2005-07) investment programme, which is estimated at US\$ 23 million. The major problem hindering the implementation of the programme is the availability of required resources. The GOM is approaching international funding agencies for this purpose.

9.1.3 The performance of the study consultants, supervision consultant, the contractor, Borrower and the Bank was satisfactory and the overall assessment of implementation was found to be satisfactory with a rating of 2.8 out of 4 (maximum).

9.2 Lessons Learned

9.2.1 The bad condition of the section of road between Chimoio and Machipanda (85 km) is a glaring example of the results of not carrying out timely periodic maintenance. The lesson is that there should be commitment in the planning and executing of routine and periodic maintenance. GOM is carrying out pothole patching and spot resealing to protect the pavement from further deterioration. Sustained inspections followed by consistent maintenance are necessary for the roads to be in reasonable condition.

9.2.2 Carrying out of studies as part of projects lead to potential projects in the pipeline for future Bank financing. The strategy will help to build up the Borrower's portfolio of projects and also that of the project preparation missions in recommending viable projects for the Bank's intervention.

3. Recommendations

9.3.1 It is recommended:

To the Bank

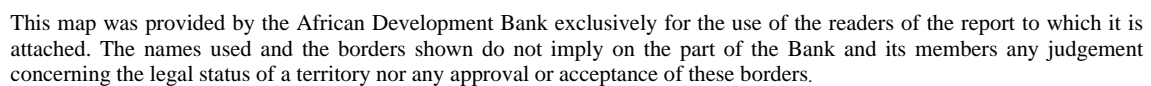
Two out of the three studies have led to new projects financed by the Bank and the Airports Study has helped the GOM prepare an action plan for rehabilitation/improvement of airports in Mozambique. It is therefore recommended that the Bank continue to prepare projects through funding studies through grants that lead to new projects.

To the Borrower

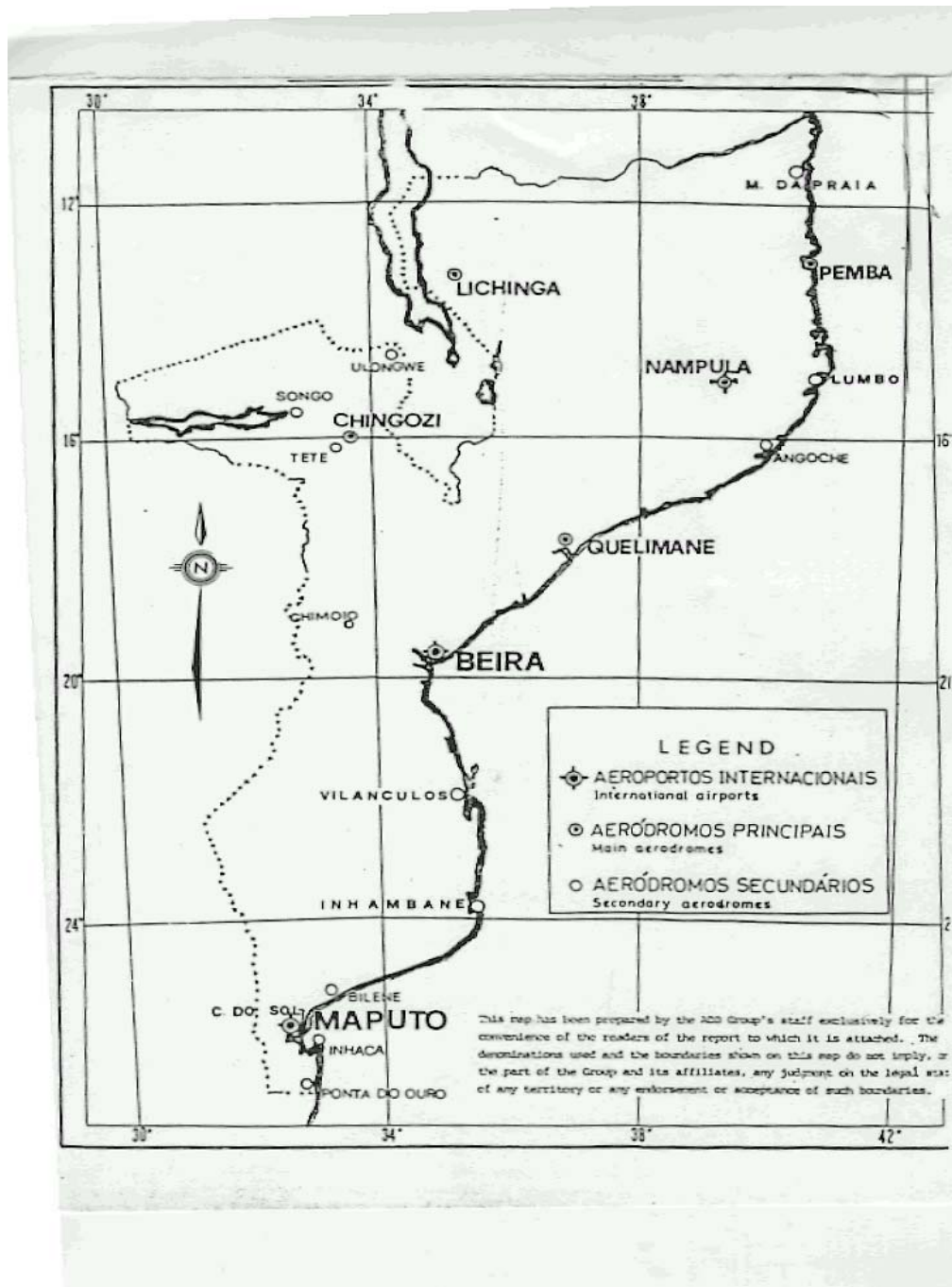
(a) Normal preventive maintenance activities should be routinely performed to guarantee that the pavement would carry the projected 20-year design traffic volume. Maintenance crews should be equipped to address distress problems as soon as they are manifested.

(b) Positive steps should be taken to safeguard the sovereignty of the road reserve. Action should be taken against members of the public who indulge in the indiscriminate sale of fuel along the road, cultivate areas of the road reserve, establish informal businesses at random points along the road and, access the road at random.

A matrix of recommendations is presented in Annex 7.

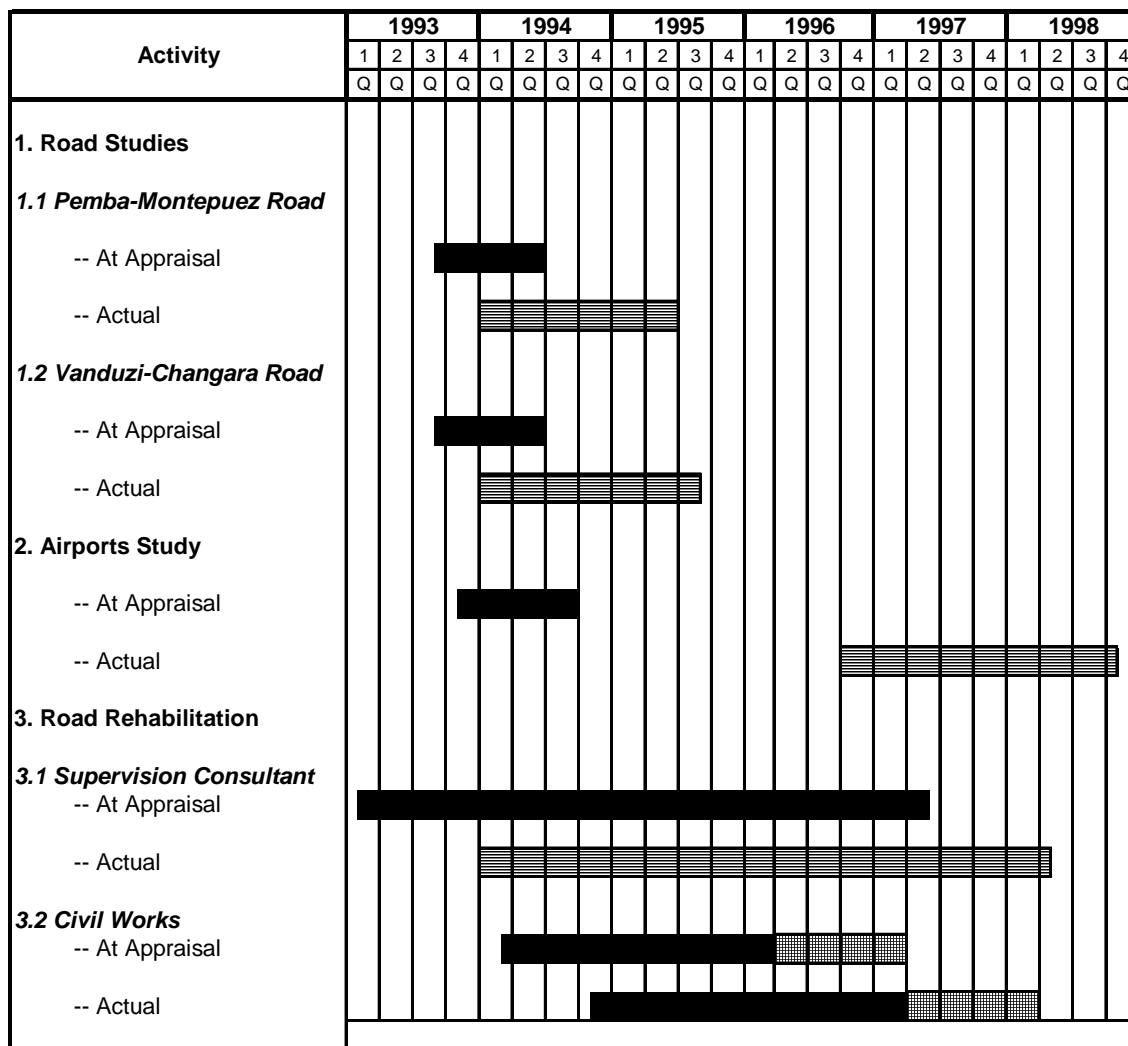


REPUBLIC OF MOZAMBIQUE
TRANSPORT PROGRAMME: PROJECT COMPLETION REPORT
AIRPORTS STUDY



This map was provided by the African Development Bank exclusively for the use of the readers of the report to which it is attached. The names used and the borders shown do not imply on the part of the Bank and its members any judgement concerning the legal status of a territory nor any approval or acceptance of these borders.

**GOVERNMENT OF MOZAMBIQUE
TRANSPORT PROGRAMME PROJECT: PROJECT COMPLETION REPORT
IMPLEMENTATION SCHEDULE: APPRAISAL VERSUS ACTUAL**



Note:  : Maintenance Period

ANNEX 3

MOZAMBIQUE
TRANSPORT PROGRAMME
PROJECT COMPLETION REPORT
Summary of Beira – Machinpanda Road Rehabilitation Costs
(US Dollars)

ORIGINAL		ADDENDUM No. 2		ADDENDUM No. 3	
Description	Amount	Description	Amount	Description	Amount
1. Original Contract Amount	19,721,670.38	1. Additional Vehicle	50,000.00	1. Claim	3,700,000.00
		2. Additional Quantities	2,200,000.00	2. Rise & fall	1,650,000.00
		3. Rise & Fall	2,100,000.00	3. Retroactive R & F	1,700,000.00
		4. Variation Order No.1	193,500.00		
		5. Variation Order No. 2	67,500.00		
		6. Variation Order No. 3	270,000.00		
		7. Shoulder Double Seal	370,000.00		
		8.Contingency	525,100.00		
SUB-TOTAL	19,721,670.38	SUB-TOTAL	5,776,100.00	SUB-TOTAL	7,050,000.00
				TOTAL (APPRAISAL)	32,547,770.38
					35,800,000.00

REPUBLIC OF MOZAMBIQUE
TRANSPORT PROGRAMME PROJECT
PROJECT COMPLETION REPORT

Actual and Projected Traffic on Inchope-Machipanda Road
(Number of Vehicles per Day)

Year	Car/ Pick Up	MGV	HGV	BUS	Total
A. Actual Traffic (1997 to 2003)					
1997	294	164	147	92	696
1998	308	172	154	96	731
1999	344	139	131	86	700
2000	295	108	156	81	640
2001	300	131	164	81	675
2002	634	227	205	106	1172
2003	739	212	204	81	1236
B. Projected Traffic (2004 to 2018)					
2004	772	221	213	84	1291
2005	807	231	223	88	1349
2006	835	239	231	91	1396
2007	865	248	239	94	1445
2008	895	256	247	98	1496
2009	926	265	256	101	1548
2010	959	275	265	105	1602
2011	992	284	274	108	1659
2012	1027	294	284	112	1717
2013	1063	304	294	116	1777
2014	1100	315	304	120	1839
2015	1138	326	315	124	1903
2016	1178	337	326	129	1970
2017	1219	349	337	133	2039
2018	1262	362	349	138	2110

REPUBLIC OF MOZAMBIQUE
TRANSPORT PROGRAMME PROJECT
PROJECT COMPLETION REPORT
(In US\$ in Million – 1997 Price Level)

Year	With the Project (With Rehabilitation)					Without the Project (Without Rehabilitation)			Net Benefits
	Capital Cost ^a	Maintenance Cost		VOC ^d	Total	Routine Maintenance Cost ^e	VOC ^d	Total	
		Periodic ^b	Routine ^c						
		(1)	(2)						
1994	2.58				2.58			0.00	-2.58
1995	7.23				7.23			0.00	-7.23
1996	10.00				10.00			0.00	-10.00
1997	6.52		0.06	9.68	16.26	0.77	12.07	12.84	-3.42
1998	0.04		0.08	13.55	13.67	1.02	16.89	17.91	4.25
1999			0.08	12.34	12.42	1.02	15.29	16.31	3.88
2000			0.08	11.75	11.83	1.02	14.61	15.63	3.80
2001			0.08	14.79	14.87	1.02	15.59	16.61	1.73
2002			0.08	23.56	23.64	1.02	24.66	25.68	2.04
2003			0.08	23.90	23.98	1.02	24.88	25.90	1.92
2004			0.08	24.98	25.06	1.02	26.00	27.02	1.96
2005		7.66	0.08	22.27	30.01	1.02	27.17	28.19	-1.82
2006			0.08	23.05	23.13	1.02	28.12	29.14	6.01
2007			0.08	23.85	23.94	1.02	29.10	30.12	6.19
2008			0.08	24.69	24.77	1.02	30.12	31.14	6.37
2009			0.08	25.55	25.63	1.02	31.18	32.20	6.56
2010			0.08	26.45	26.53	1.02	32.27	33.29	6.76
2011			0.08	27.37	27.45	1.02	33.40	34.42	6.96
2012		7.66	0.08	28.33	36.07	1.02	34.57	35.59	-0.48
2013			0.08	29.32	29.40	1.02	35.78	36.80	7.39
2014			0.08	30.35	30.43	1.02	37.03	38.05	7.62
2015			0.08	31.41	31.49	1.02	38.33	39.35	7.85
2016			0.08	32.51	32.59	1.02	39.67	40.69	8.10
2017	-11.86		0.08	33.65	21.87	1.02	41.06	42.08	20.21
Economic Internal Rate of Return (EIRR)									13.00%
Net Present Value at 12% (US\$ million)									1.66

Note:

- Capital Costs includes cost of civil works and supervision (excluding price escalation) net of taxes and other transfer payments.
- Periodic maintenance on the rehabilitated road has been assumed to be undertaken every seven years and estimated to cost US\$ 55,136 per km (1997 prices).
- Routine maintenance on the rehabilitated road includes normal routine maintenance works and estimated to cost US\$ 583 per km/year (1997 prices).
- Vehicle Operating Cost (VOC)
- Routine maintenance activities under “without rehabilitation” situation are broadly the same as under “with rehabilitation” but more patching would be required under “without rehabilitation” situation. Routine maintenance under this situation is estimated to cost US\$ 7344 per km/year.
- Salvage Value (45% of initial investment).

REPUBLIC OF MOZAMBIQUE
TRANSPORT PROGRAMME PROJECT
PROJECT COMPLETION REPORT

Performance Rating Scale and Evaluation Criteria

1. Rating Scale

$X \geq 3$	<i>Highly satisfactory</i>
$2 \leq X < 3$	<i>Satisfactory</i>
$1 \leq X < 2$	<i>Unsatisfactory</i>
$X < 1$	<i>Highly unsatisfactory</i>

Where X is the value assigned to a performance variable.

Classification: Implementation performance is considered satisfactory if the average value of X is ≥ 2 .

2. Evaluation Results

Component Indicators	Score (1-4)	Remarks
1. Adherence to time schedule	2	Delay of 12 months for road rehabilitation and 12-24 months for studies was mainly on account of delay in loan effectiveness and procurement.
2. Adherence to cost schedule	3	Project completed well within the budget.
3. Compliance with covenants	3	-----
4. Adequacy of monitoring & evaluation and reporting	2	All Reports submitted, though late some times
5. Satisfactory Operations (if applicable)	3	VOC, travel time and accidents decreased, traffic flow higher than the projection.
TOTAL	13	
<u>Overall Assessment of Implementation Performance</u>	2.6	Satisfactory

REPUBLIC OF MOZAMBIQUE
TRANSPORT PROGRAMME PROJECT
PROJECT COMPLETION REPORT

FORM BP 1

BANK PERFORMANCE

Component Indicators	Score (1 to 4)	Remarks
1. At Identification	3	The project was a component of the Beira Corridor Transport System Project funded by Bank in 1988 and a part ROCS project funded by donors.
2. At preparation of project	-	
3. At appraisal	3	All the relevant issues were addressed and a well designed and viable project was formulated.
4. At supervision	3	Most of the problems were resolved in time and adequate measures taken.
Overall assessment of Bank Performance	3	Highly Satisfactory

REPUBLIC OF MOZAMBIQUE
TRANSPORT PROGRAMME PROJECT
PROJECT COMPLETION REPORT
FORM PO 1
PROJECT OUTCOME

No.	Component Indicators	Score (1 to 4)	Remarks
1	<u>Relevance and Achievement of Objectives</u>		
i)	Macro-economic policy	3	
ii)	Sector Policy	3	With ROCS 1, 2 ,3 and Roads & Institutional changes
iii)	Physical (incl. Production)	3	Well designed 153.5 km 2-lane bitumen road and bankable three study reports.
iv)	Financial		
v)	Poverty alleviation, social & gender	2	
vi)	Environment	3	All provisions of Environmental Guidelines were implemented.
vii)	Private sector development	3	
viii)	Other (Specify)		
2	Institutional Development (ID)		
i)	Institutional framework incl. Restructuring	3	Created ANE and Road Fund
ii)	Financial and Management Information Systems including Audit Systems	3	Computerized Financial and MIS installed in ANE. Annual Auditing of the project was done.
iii)	Transfer of Technology	3	Two DNEP technicians were benefited from on-the-job training during the road rehabilitation.
iv)	Staffing by qualified persons (incl. Turnover), training & counter-part staff		

REPUBLIC OF MOZAMBIQUE
TRANSPORT PROGRAMME PROJECT
PROJECT COMPLETION REPORT

FORM PO 1
PROJECT OUTCOME

3	Sustainability	Score	Remarks
i)	Continued Borrower Commitment	3	Borrower has shown commitment to road maintenance by increasing its annual budgets and establishing a dedicated Road Fund.
ii)	Environmental Policy	3	The National Directorate for Environment Impact Assessment is staffed with qualified and experienced environmentalists. The Policy is appropriately followed.
iii)	Institutional Framework	3	Created ANE and Road Fund to ensure sustainability of investments in road infrastructure.
iv)	Technical Viability and Staffing		
v)	Financial viability including cost recovery systems	-	
vi)	Economic Viability	2	Indicates viable rate of return
vii)	Environmental Viability	3	All projects are well monitored to ensure compliance with environmental policies and requirements.
viii)	O&M facilitation (availability of recurrent funding, foreign exchange, spare parts, workshop facilities etc.)	-	
4	Economic Internal Rate of Return	2	Indicates viable rate of return
	TOTAL	42	
	Overall Assessment of Outcome	2.8	Satisfactory

REPUBLIC OF MOZAMBIQUE
TRANSPORT PROGRAMME PROJECT
PROJECT COMPLETION REPORT
RECOMMENDATIONS AND FOLLOW-UP MATRIX

Main Findings & Conclusions	Lessons Learned/ Recommendations	Follow-up Actions	Responsibility
Formulation & Project Rational: The project was a component of the Beira Corridor Transport system Project financed by the Bank in 1988.	Studies funded by the Bank leading to projects for future intervention by the Bank.	Bank to continue its policy of funding studies	ADB
Project Implementation: 1. Time overrun mainly due to delay in loan effectiveness and procurement	GOM should endeavour to expedite the process of fulfillment of loan conditions and procurement so as to avoid implementation delays.	Minimise start-up delays in project implementation.	GOM / ADB
Compliance with Loan Conditions & Covenants: 1. All reports submitted.	-----	-----	-----
Performance Evaluation & Project Outcome: The overall project performance rating was satisfactory and the project objective was substantially achieved.	Though the project outcome is a well designed 2-lane bitumen road and three bankable study reports, the value of the project would have further enhanced (in terms of cost and time) if this had been completed as per appraisal schedule.	The GOM should endeavour to adhere to implementation schedules.	GOM
Sustainability: There is a risk that the routine and periodic maintenance budget allocation may not be adequate.	GOM has already established a Road Fund and instituted measures to generate adequate resources for road construction/rehabilitation and maintenance.	GOM should ensure availability of adequate funds to Road Fund to implement the planned road maintenance programme.	GOM

REPUBLIC OF MOZAMBIQUE
PEMBA-MONTEPUEZ ROAD REHABILITATION PROJECT
PROJECT COMPLETION REPORT

SOURCES OF INFORMATION

1. Borrower's Project Completion Report on Transport Programme, MPWH, December 2004. (The Borrower's PCR is on the file with ONIN 3.)
2. Engineer's Final Construction Report, CPP
3. Appraisal Report on Transport Sector Project, September 1992.
4. Contract Document, MPWH.
5. Consultants Services Contract, MPWH
6. Project Files.
7. Project Implementation Plan – Phase 1 of the Mozambique Roads and Bridges Management and Maintenance Programme (Roads III) – Draft Updated Final Version (January 2003)
8. Mozambique Transport Sector Review – Final Report (July 2002)
9. Mozambican Airport Study – Final Report – Executive Summary (Volume V) – May 1998

ANNEX : 9

MOZAMBIQUE
PEMBA-MONTEPUEZ ROAD PROJECT
BORROWER'S PCR

The Borrower's PCR is on the project file with ONIN.

REPUBLIC OF MOZAMBIQUE
PEMBA-MONTEPUEZ ROAD PROJECT
EXECUTING AGENCY COMMENTS ON THE BANK'S PCR

No comments were received from the Executing Agency.