

AFRICAN DEVELOPMENT BANK GROUP



MOZAMBIQUE

TELECOMMUNICATIONS II PROJECT

Project Performance Evaluation Report (PPER)

**OPERATIONS EVALUATION DEPARTMENT
(OPEV)**

12 September 1997

(i)

EQUIVALENTS, ACRONYMS AND ABBREVIATIONS

Currency Equivalents

currency Unit	Metical (MZM)		
Appraisal (September '1983)	UA 1 =	44.4 MZM	= US\$ 1.07867
PCR (May 1996)	UA 1 =	14,998.7 MZM	= US\$ 1.45006
PPAR (June 1997)	UA 1 =	15,852.4 MZM	= US\$ 1.38814

WEIGHTS AND MEASURES

Hertz (Hz)	Frequency unit
Gega hertz (GHz)	10¹² Hz
1 tonne (t)	2.205 pounds
1 kilogram (Kg)	2.205 pounds
1 kilometer (Km)	0.612
1 meter (m)	3.29 feet (ft)
1 square kilometer (Km²)	0.3861 sq. mile
1 hectare (ha)	2.471 acres

FINANCIAL YEAR

1" January to 31"

ABBREVIATIONS

ADB	:	African Development Bank
BADEA	:	Arab Bank for Economic Development in Africa
CFD	:	Caisse Française de Développement
ADF	:	African Development Fund
DL	:	Direct Line
MVA	:	Million Units of Account
TDM	:	Telecommuniçaoes de Mozambique
ERR	:	Economic Rate of Return
FTR	:	Financial Rate of Return
UA	:	Unit of Account
USD	:	United States Dollar
ITU	:	International Telecommunications Union

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(v)

BACKGROUND INFORMATION

Prelimii Data

1. **Country** Mozambique
2. **Project** Telecommunications
3. **Loan Number** : ADB: **CS/MZQ/TL/84/008**
NTF: **CS/MZQ/TL/84/009**
4. **Borrower** Government of Mozambique
5. **Beneficiary** **Telecomunicações** de Mozambique (TDM)
6. **Executing Agency** : **Telecomunicações** de Mozambique (TDM)
Rua da **Sé** Caixa Postal 25. Maputo
Telex: 6-509
Telephone: 258-1-43.19.43

Telecopy: 258-1-43.19.44

A - **Basic Project Data**

	<u>Particulars</u>	<u>Estimate</u>		<u>Actual</u>	
		<u>ADB</u>	<u>NTF</u>	<u>ADB</u>	<u>NTF</u>
1.	Financii Request	NA	NA	May 1981	May 1981
2.	Amount (UA million)	25.90	4.99	25.90	4.99
3.	Interest Rate (%)	9.50	4.00	9.50	4.00
4.	Commitment (%)	1.00	0.75	1.00	0.75
5.	Repayment Period	15	15	15	15
6.	Grace Period	5	5	5	5
7.	Loan Negotiation	NA	NA	11183	11183
8.	Loan Approval	1211983	12/83	8/2/84	8/2/84
9.	Loan Signature	NA	NA	6/6/84	6/6/84
10.	Entry into Force	NA	NA	28/12/84	12/3/85

D - Missions

N°	Type of Mission	Number of Missions	Date	Number of Persons	Staff/Days
1	Identification	NA	-	-	0
2	Preparation	1	8/5/82	2	28
3	Appraisal	1	9/83	2	28
4	Supervision	9	85-86-87 88-89-91 92-93-94	1	70
5	Completion	1	5/96	2	28
6	Post-evaluation	1	3/97	1	9

E - Disbursement (UA million)

	<u>ADB</u>			<u>NTF</u>		
1.	Amount disbursed		21.35			3.90
2.	Undisbursed balance		4.55			1.09
3.	Amount cancelled		1.12			0
4.	Amount re-allocated		3.43			1.09
5.	Reimbursed balance		14.27			2.23
6.	<u>Yearly disbursement (UA million equivalent)</u>					
	<u>Estimate</u>			<u>Actual</u>		
	<u>ADB</u>	<u>NTF</u>	<u>Govt.</u>	<u>ADB</u>	<u>NTF</u>	<u>Govt.</u>
1984	5.328	0.885	0.496	0	0	0
1985	4.550	1.659	0.692	1.605	0.500	0.260
1986	7.200	1.100	0.600	2.307	0.256	0.380
1987	5.100	1.350	0.600	2.175	1.281	0.360
1988	3.720		0.400	3.455	0.122	0.560
1989				2.022	0.381	0.330
1990				1.475	0.742	0.240
1991				3.103	0.443	0.510
1992				3.489	0.167	0.570
1993				1.487		0.290
1994				0.076		
1995		<u>—</u>	<u>—</u>	<u>0.158</u>	<u>-</u>	<u>-</u>
Total	25.898	4.994	2.788	21.354	3.901	3.500

I. SUMMARY OF APPRAISAL

1. Objectives and Scope

1.1 This project performance audit report concerns the Mozambique Telecommunications **II** project funded by the Bank Group in 1984 through an NTF loan amounting to UA 4.99 million for the financing of the rehabilitation component of the tropospheric scatter links, 'and ADB loan of UA 25.9 million for financing the development to the Beira network

1.2 The project's **sectoral** objective is **to** extend the country's coverage. in basic telecommunications services, provide greater access for the populations and improve the quality of these services; its specific objectives **seek** to improve and upgrade long distance **transmission** and provide adequate and efficient services in and around the port city of **Beira**. The project is part of the first phase of the Ten-Year Development Programme (TYDP) 1983-1992, this phase is estimated at UA 159.6 million. Furthermore, it is among a set of actions interdependently financed by the Bank, the last project of which will be completed in 1998.

1.3 The expected achievements of the project are the rehabilitation of the troposcatter link, the installation in Beira of 11.800 new subscriber lines, 100 interurban lines and 120 international lines and in the telecommunication stations, a total of 50,000 pairs-km of cables. Basic telecommunications services in Mozambique are the monopoly of the TDM (**Telecomunicações** of Mozambique) a public enterprise, both loan beneficiary and the project's executing agency assisted in works supervision by the **SWEDEL** (Swedish) **firm** of consultants, financed by Swedish technical assistance. The total cost of the project exclusive of tax and customs duties, was estimated at UA 33.68 million with the Bank financing 92% of this amount representing 100% of foreign exchange costs; the Government of Mozambique **financed** the entire local currency costs representing UA 2.79 million. The estimated duration of the project is 4 years (July 1985 to July 1989) and a financial rate of return of 16.55% is expected from the project.

2. Operating Performance

2.1 The conditions for loan effectiveness were fulfilled nine months following the signing of the loan agreements; the other three conditions were **fulfilled** as work was performed on the project. The quarterly progress reports, and **annual** financial statements have regularly been submitted to the Bank. The project completion report as well as the project's audited accounts have equally been sent to the Bank.

2.2 As per its initial definition, the project recorded an overall slippage of 23 months in its implementation, due to a slow and sluggish procurement process and to successive modifications made to the project due to political instability. The rehabilitation of the tropospheric scatter link for the long distance liaison of Beira, Quelimane and **Tête** was implemented after a delay of 2 years; the Maputo-Beira connection was replaced by satellite links financed by other donor sources. The realization of infrastructures under the "development" component was delayed for nine months.

the TDM is improving, and from 1993 to 1995 the rate of telephone break-downs decreased from 86 to 54 for 100 lines and the percentages .of breakdowns repaired in 72 hours from 65 to 73. The actual impact of the improvement of service quality resides in the increase of **communications** traffic which rose from 25 to 30% per **annum** on average since **1989** of which only 10% were due to new connections.

4.4 The financial performance of the TDM is marked by the context of a strong devaluation of the **metical** and the considerable exchange losses incurred by the enterprise in terms of its external debt, on-lent, (including exchange risks) and its external exchanges. As from 1993 its performance has steadily improved with a notable improvement of its gross profit.' The net income of the enterprise, excluding exchange losses, gradually improved, but the charging of these losses changed the net profit into losses in 1993 and **marginalized** net profit made in 1994 and 1995. The project's equipments' rate of return is unsatisfactory (6.8%) well below estimates at appraisal (16.5%) and was more of less due either to the low utilization rates of the equipments, to obsolescence or to the lack of demand.

4 . 5 This **counter-performance** is the result of political instability at the time and to the emergency nature of the project as regards the "rehabilitation" component. Although identified in the appraisal report, project risks have not been adequately measured and integrated for the definition and design of project equipment, and this evidently to the detriment of the return rate of the investments, to that of the country's debt situation and to the financial equilibrium of the enterprise.

4.6 There is no tariffs policy as such but tariff readjustment guidelines and directives do exist. Telecommunication tariffs for basic services are regularly adjusted on the basis of the exchange and **inflation** differentials, but these adjustments reflect neither actual costs nor the development trends of the market. It is therefore necessary to **carry out an indepth** tariffs' study, taking into account the actual costs and local market constraints.

5. Sustainability

5.1 The project's sustainability is from the institutional and technological view points almost guaranteed with respect to the equipments for the networks; it is however still aleatory from the **financial** view-point since the financial viability of the enterprise, account taken of actual results, has not in the long-run been established.

5.2 On the technical front, the good performance of the project has been counter-balanced by the rehabilitation, by the project of obsolete transmission equipment which was not fully utilized for 4 to 5 years and by the under-utilization of switching equipment due to a stagnant market. If this situation persists, the risk of cannibalizing these equipments into spare parts may occur and the network concerned will need considerable investments for its rehabilitation and development. The under-utilization of the networks has a negative **influence** on **TDM's** income, and is one of the financial risk factors for the sustainability of the project's outputs.

5.3 If **from** the institutional viewpoint the results of actions undertaken by the Operational Management Programme (**OMP**) permits us to say that the TDM has the capacity to exploit and maintain these equipment, its ability to generate the funds necessary for meeting operational charges and recurrent costs has still to be proved.

- b) to carry out a study on tariffs, based on reliable cost accounting, an **indepth** and detailed market study of current market trends and international competition (diversity of service, tariff reduction), in view (i) of defining a coherent tariffs policy as well as a commercial and financial policy; and (ii) introduce an appropriate tariffs, billing and recovery system (**para. IV.2.4.1** and 2.5);
- c) to seek ways and means of widening its income base in the private market while facilitating their access to basic services through an increased sub-contracting of collective or community communication sites (telephone and fax facilities) (**para. IV. 1.8** and 2.2.3);
- d) to set up a mechanism or take the necessary measures to lift **the** mortgage or **the** exchange risk mortgage, (cf. **IV.1.5** and 2.2.2) such as: i) the opening of a foreign **exchange** account (acquired in principle) and revising the foreign exchange income share retained by the TDM for coverage of purchases made in foreign currency as well as **the** service of all or part of the external debt re-conveyed to it; and ii) consolidate the capital **re-evaluation** reserves.

9.2 To the Bank the recommendations are centered around the Bank's emergency intervention policy and rehabilitation, as well as the need to propose measures of actions **that** should limit risks and management short comings identified at **the** time of appraisal, which essentially are:

- a) reviewing of the Bank's emergency intervention policy and related rules and procedures (definition, conditions of eligibility, types and scope of works, amendment of the list and procurement of goods and services, disbursements, financing sources. . . .) and **this** in order to meet the needs of maintaining a minimum vital economic activity, in the shortest possible time pending **the** reconstruction or rehabilitation of the productive systems destroyed (**para. IV.1.3** and 1.4);
- b) **defining the** Bank's policy on rehabilitation and the evaluation guidelines of such projects that should address the nature of continuity and long-term sustainability whilst assessing all the related factors (technology, financial and institutional viability) in **the** same way as for new projects (**para. V.2**);
- c) ensuring coordiited action and the exchange of information among **the co-**financiers of projects belonging to the same **sectorial** programme. Dialogue with other donors should be continuous and systematic and specific arrangements for this coordination should be **defined** at the time of appraisal (**para. III.2**);
- d) defining and seeing to it that mechanisms regulating and lessening exchange and financial risks do exist, that they are carefully assessed and are part of **the** loan conditions; institutional, organic or regulatory weaknesses identified and which should equally be addressed (**para. IV.1.5** and 2.2.2).

1.4 More recently, the GDP which had shrunk by 30% between 1982 to 1985 rose steadily by 6.7% per annum over the 1987 - 1995 period. **The** economic growth rate stood in actual terms at 19.3% in 1993, 5.4% in 1994 and **3%** in 1995. The budgetary deficit (excluding grants) which had fallen to 22.3% of GDP in 1993 rose again to 29.5 % as a result of expenditure incurred during the consolidation phase of the peace process and the balance of payment deficits fell sharply from 23.8% of GDP (1991) to 9.3% in 1995. The average annual inflationary growth rate rose **from** 26.4% between 1980 and 1985 to 73% between 1985 to 1990, falling back between 1990 and 1995 to 47.6%. For 1996, the economic indicators are quite positive since the economic **growth** rate was roughly 6.4% with **the inflation** rate settling at 17% and standing in 1994 at 70%.

1.5 Telecommunications are under **the** authority of the Ministry of Transport and **Communications(MTC)** and the TDM which holds the monopoly of public telecommunications services, exploits, maintains and develops local and **international** telecommunication services. TDM which as far back as 1981 (separation of the postal services from telecommunications) was a **para-statal structure** of the MTC has evolved to its present status as a public enterprise, endowed with administrative, legal and financial autonomy. Law No. **22/92** defines **sectoral** policies and strategies as well as the framework for the establishment, management and exploitation of telecommunications, infrastructures and services. The Telecommunications Coordination Commission (TCC) an advisory body is in charge of coordinating **this** development. The National Institute of Communications created in 1992, is responsible for the control of **the** sector.

1.6 **Inorder** to orientate the development and growth of this sector, the government had adopted in April 1983, a Ten-Year National Telecommunications Development Plan (1983 - 1992). **This** plan whose investments were estimated at roughly UA 380 million was geared towards: i) **the** universal access to basic telecommunications services; ii) a high quality of services in terms of supply, reliability and variety; iii) the accessibility of basic services to all users, whatever their level of income, including **the** lowest income brackets of rural populations; and iv) the financial viability of the sector's operations through an appropriate tariffs system ensuring costs coverage and a cash-flow margin for **the** sector's sustainable development. In 1989, an Operational Management Plan (OMP) for the purpose of strengthening **TDM's** institutional capacity was appended to this plan.

1.7 TDM is in charge of setting up the entire programme and particularly its **first** phase which integrates this project financed by **the** Bank Group. **The** project covers the northern part of the country (Quelimane, T&e) for the rehabilitation of **the** transmission network and in the Beira region (**centre-east**) for its development.

2. **Background of Operations**

2.1 In 1978, the Bank Group granted Mozambique an NTF loan of UA 1.9 million to finance the Telecommunications I project considered as an emergency operation. Financing was intended for **the** procurement and installation of a relay transmitter in Masingo so as to establish **the** link between Maputo and Xiluvo whose relay transmitter installed in Chicualacuala had just been destroyed by **the Rhodesian** army.

5. Objectives and Scow of Appraisal

5.1 The project contributes in **the** diversification and improvement of the quality of services of **the** telecommunications network both in the country and with the outside world. **The** specific objectives of the project are by way of the “development” component, the provision of a range of diversified services of quality in and around in Beira.

5.2 The Logical Framework Approach (**LFA**) did not exist at the time of project appraisal, thus the objectives formulated at appraisal lack precision and do not contain quantifiable indicators for measuring their rate of realization. The PCR later redesigned **the** project matrix, but loopholes still exist and the project performance analysis scaled-down. The project’s retrospective matrix in the PPAR found in **Annex 2** supplements **the** findings of the PCR.

5.3 **The** technical out-puts expected from **the** project are **the** renovation of the different equipments of the tropospheric scatter network, the installation in **Beira** of 11,800 new subscriber digital lines, 100 interurban lines, 120 international lines and a total of 50,000 km pairs of cables for the renovation of **the** local networks. The project however, underwent changes during the course of its implementation so as to respond to the security imperatives in some geographical **zones** of the project and to a demand update. A financial rate of return of 16.55% is expected **from the** project.

6. Financial Provisions

The Bank is **financing** the foreign exchange cost of **the** project to the tune of UA 30.9 million (91.7% of **the** project cost) whereas **the** Government and the TDM are financing the entire local currency cost, amounting to UA 2.79 million representing 8.3% of the estimated total cost of the project.

7. Methodology and Appraisal Approach

7.1 The appraisal of the project completion report of Telecommunications II Project judged the project of good quality and in line **with** the format recommended by **the** design guidelines of the completion reports of the Operations Manual. The project’s context as well as the external and internal constraints to the development of the sector are analyzed in detail and its institutional performance well developed. However, operational and financial performances have been found too abstract and do not make it possible to draw the necessary conclusions on the sustainability of the project’s achievements. On the other hand, **the** financial analysis failed to mention **the** high devaluation context and did not make the usual corrections. Consequently, it was recommended to proceed with an intermediary audit of the project’s performances after a data collection mission to Mozambique and to await the completion of the other interdependent projects before carrying out an **indepth** audit of all Bank’s operations in the sector.

7.2 **The** mission took place from 16 to 25 March, 1997 and concentrated on the collection of data relating to the operational and financial operations as well as on the content of **the** Ten-Year Development Programme and **the** OMP. This report, prepared after **the** audit mission refers to **the** appraisal and project completion reports and is based on: i) information

4.. **Reporting**

The TDM provided regular quarterly progress reports which were deemed satisfactory as well as a project completion report. Audited financial statements of the enterprise were regularly received only as from 1993, consequent to the effective change of status of the **TDM** into an autonomous public enterprise. The audited accounts of the project were submitted to the Bank following the reminder sent by the PCR mission through the PPAR mission.

5. **Procurement of Goods and Services**

The conditions relating to the procurement of goods and services laid down at appraisal were generally complied to. They are detailed in paragraph 4.5 of the PCR.

6. **Project Costs**

The total project costs amounted to UA 28.75 million including UA 25.25 million in foreign currency, **representing** an initial savings of about 15%. These savings were mainly derived from: (i) an over-estimation at appraisal of the equipments; (ii) the non recourse to provisions for contingencies but equally; (iii) the **realization** of certain installations through the recovery of down-graded equipment. The different gains in cost and their utilization are contained in paragraphs 4.6.1 and 4.6.5 of the PCR.

7. **Disbursements and Financial Sources**

7.1 The disbursement formula retained for expenditure incurred under the “rehabilitation” component and for certain additional goods was done on the basis of the revolving fund whereas, the direct payment or letter of credit method was retained for the “development” component. The disbursement period set off with a year’s delay and was spread over a period of 10 **years** rather than the 5 years as was initially planned, due to the different set-backs experienced by the project. Several disbursement errors, rectified later on were observed by the Bank. This aspect was described in detail in paragraphs 4.6.3 and 4.6.4 of the PCR.

7.2 The foreign currency costs under the “development” component of the Telecommunications II Project is financed by the **ADB** and those under the “rehabilitation” component by the NTP. The Bank **Group** thus financed 87.8% of the project costs compared to 91.7% according to estimates at appraisal. The actual contribution of the Government was around UA 3.5 million to finance local costs representing 12.2% of the project as against 8.3% at appraisal. The details are given in paragraphs 4.6.1 and 4.6.2 of the PCR.

8. **Application of Loan Agreement Conditions and Provisions**

8.1 The post evaluation exercise is in line with the developments contained in paragraphs **4.1.2, 4.1.3** and 7.5 of the **PCR**; the borrower fulfilled the preliminary conditions of the loan agreements nine months after their signing and all the other conditions were applied during the course of execution. However, the condition consisting in **“taking all legal and administrative actions to reinforce the legal, financial and operational autonomy of TDM and to this end give full effect to the provisions of Decree No. 5/8 1.. . and Law No 2/8 1.. .”** was

1.5 The output of the equipment under the “development” component encountered a few problems in terms of quality of service provided by some suppliers. These problems were soon resolved. Certain exploitation difficulties regarding the Beira installations have been pointed out, they are inherent to the mal-function between the high junction capacities and that of the local network. Generally, throughout the region of Beira and Quelimane where the outputs of the “development” component of the project are concentrated, the installations are running smoothly, but are under-utilized due to a stagnation of demand, the network’s capacity increased by about 250% whereas that of subscribers hardly reached 50%.

1.6 The rate of utilization of installed capacity in Beira is very low (34.8%) and demand growth since 1989, is far from reflecting the forecasts made at appraisal which banked on an important expansion in the Beira corridor (ref. Table 4.1). The disconnection rate compared to that of new connections is equally high (about 75 %) and does not augur a more effective utilization of the network before any effective economic recovery in the country and in region nor in the efficiency of the transit infrastructures and in their coordination. The break down rate decreased to 15/100 DL in 1996 and 99% of repairs are carried out within 72 hours. The capacity utilization of the Quelimane network is good (66.5 %) and according to recent forecasts of TDM, it would be saturated by the end of 1998. The breakdown rate which was **89/100** subscribers in 1994, decreased to 79 in 1996 and **levelling** off at 66 in 1993. Table 4.1 below shows the performance trend of the Beira and Quelimane divisions.

Table 4.1
Trend of Performance of Beira and Quelimane Division

	1984	1989	1991	1993	1996
<u>1. Beira Network</u>					
a) network capacity	N A	12750	18300	18300	19072
b) utilized	5828	5828	6953	7146	6645
c) waiting list	4808	1503	NA	0	NA
d) new connections, net annual	NA	0	810	-170	1268
<u>2. Quelimane Network</u>					
a) network capacity	1200	1200	3500	3500	3500
b) rate of utilization	93.3	NA	NA	46.0	66.25
c) waiting list	620	NA	NA	66	53

1.7 During the course of the period, thanks to the setting up of the Ten-Year Development Plan and the OMP, the characteristic features of the network and the overall performance of the TDM improved in a great way. The country’s communication capacity practically doubled, rising from 56.129 DL in 1986 to **108.000** in 1996. In this regard, telephone density increased from 0.27 DL for 100 inhabitants in 1982, to 0.35 in 1996, it is still below that of other countries in the sub-region (excluding South Africa) but, comparable on average to African countries south of the Sahara. The distribution of this capacity and telephone density is however very uneven and the 10 most important urban

2. Financial Performance

2.1 Operating Results

2.1.1 The past financial statements of the enterprise are heterogeneous due to its gradual change of status from a **para-statal** body to an autonomous public enterprise and comparably difficult in terms of the reliability of accounting information since accounting procedures have frequently changed to suit the legal status of the enterprise. The financial performance of TDM based on these financial statements held in local currency have been analyzed in detail in chapter 7 of the PCR. These financial statements show an unsatisfactory financial situation with losses rising from 3.8 billion meticals in 1987 to 82.5 billion in 1993, whereas the turn-over has gone up from 5 billion to 284.3 billion; these results improved regularly as from 1993 but the imputation of considerable exchange losses swung the net profit into losses in 1993 and the increase of profits in 1994 and in 1995 was **marginalized**.

2.1.2 The appraisal of the financial performance of the TDM based on the financial statement prepared in local currency is of little import in the hyper-inflationary context of the country and the strong devaluation of the **metical**. The financial statements of the TDM should have been prepared, at least for the intention of donors in a strong and more stable currency; this is all the more important as it concerns a high capital intensive sector, a sector endowed with a state of the art technology where equipments are expensive, are procured in foreign currency, and where international communications are accounted for and settled in foreign currency. In this report the financial analysis is recalculated **on** the basis of the financial statements of the TDM and translated into US dollars. The audited balance sheets of the TDM are found in Annexes 3 and 4 and Tables 4.3 and 4.4 below provide a summary of the major elements.

Table 4.3
Summary of Operating Income

	<u>1986</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>
T - v e r	28.8	42.4	69.3	60.2	13.4	13.2	105.8	127.6
Total operating charges	24.8	52.8	67.4	62.0	94.7	65.1	101.6	124.2
including consumption	11.3	13.9	35.3	24.1	24.6	18.3	26.0	41.6
Personnel	5.1	3.2	4.5	5.3	6.3	6.4	11.0	19.1
Net Accounting Result	4.0	-10.4	1.9	-1.8	-21.3	8.1	4.2	3.3
Cash flow	10.8	20.9	21.8	8.1	-11.9	18.8	20.5	36.2
Value added	17.6	28.5	34.0	36.1	48.8	54.9	79.8	86.0
Operating ratio (%)	86.1	124.5	97.2	103.0	130.0	88.9	96.0	97.4

2.1.3 Consequently, the large autonomy of management granted to the enterprise as from 1993 and the usual practice of tariff adjustments, the cash flow and net result of the TDM heavily burdened by considerable exchange losses due to its debt situation and external exchanges (traffic, supplies...) is improving and moving in the right direction. This trend

ii) consolidate capital reevaluation reserves.

2.3 Return on Investment

2.3.1 Based on the assumptions in **Annex 5**, the financial rate of return of the project is around **6.84%**, well below the rate of 16.5% estimated at appraisal but very close to the rate of return of investments reevaluated at 6.3% according to TDM calculations in 1993. This return is quite sensitive to income fluctuations, because a 10% decrease in turn-over (resulting from a lower connection demand, or communication **traffic** or inadequate tariffs) results in a short-fall of 1.5 points of the rate of return. The calculation of the financial rate of return is found in Annex 6.

2.3.2 This performance is rather unsatisfactory for a telecommunications sector project considered to be financially profitable (minimum 10%): the reasons for this poor performance is the delay in project implementation, the **mis-use** of installed capacity due to the obsolescence of transmission equipment or the **dysfunctioning** of the equipment **in** place, and especially to a very low demand growth compared to estimates at appraisal.

2.4 Accounting, Audit

2.4.1 The accounting and audit system is detailed from paragraphs 6.6.1 to 6.6.5 of the PCR. Thanks to the setting up of the new structure and the establishment of a general finance directorate, the launching of specific actions under the OMP financed by the Bank, it is expected that accounting services and procedures will be strengthened in the area of computerization and regional decentralization and in the diligence with which reliable financial statements will be produced. The introduction of a rigorous tariff system equally pre-supposes that a cost accounting system would be put **in** place.

2.4.2 The mission encountered a lot of **difficulties** in collecting **financial** and accounting documents, difficulties due in part to poor documentation and communication with regional **centres**; thus, data on investments made during the course of the Ten Year Development Plan could not be provided.

2.5 Tariffing

2.5.1 The principles of the tariffs policy and the updated tariffing situation are detailed in paragraphs **6.5.1** and 6.5.2 of the PCR. It is however worth coming back to the actual level of tariffs. **Inorder** to take into account the low purchasing power of users, the tariffs of the basic services have been maintained at a minimal level; these tariffs still remain a constraint and are among the main causes of the actual stagnation of the market.

2.5.2 International tariffs are very high and they subsidize local service tariffs. This strategy has upto now paid off and has enabled the TDM to strengthen its financial liquidity base, but it has its own limitations and will in time be counter-productive for the income of the enterprise. In fact, the technological blend of computer-technology and telecommunications in the form of a call-back service will have a very negative influence on the telecommunication enterprises of developing countries operating on this type of tariffs policy, and unless the TDM carries out a readjustment of its tariffs, income obtained from international services will be diverted by this system.

3.3 The **first** phase of telecommunications development aimed at **densifying** and upgrading the quality of the strategic urban networks (**Maputo**, Beira and Nacala) corresponding to the transit corridors leading to the ports of the Indian Ocean, will itself generate the development of new and more sophisticated services and lead in the short run to the development of the private sector and the economic fabric in general, will provide employment and contribute to a decrease in unemployment. The development of the telecommunications networks and economic activities will on one hand help in gradually stabilizing the populations in the small urban centers and rural areas as the **sectoral** development plan is being unfolded. Urban development will in turn lead to the development of health services, education and other public utilities and infrastructure that will enhance the standard of living of the populations.

4. Social and Institutional Performance

4.1 The project contained no specific institutional component except for the local and overseas training of technicians and engineers. The development of the institutional, legal and organizational framework is described in paragraphs 6.1 and 6.2 of the PCR. Since its change of status in 1993 into a public autonomous enterprise (from the financial, legal and operational view points) a three year contract programme **defines** the contractual relations between the State and the TDM. The contract programme lays down the strategic operations of the TDM, its overall objectives and development, tariffs for basic public services, its social, economic and financial orientations (wage bill, investments, financing requirements...) its estimated results and appraisal criteria and performance indicators. State obligations are limited to **budgetizing** customs duties on equipments.

4.2 Under the direction of a dynamic and efficient Board of Directors, the launch of the different actions of the Operational Management Plan helped to build the institutional capacity of the TDM. New operational structures have been created (corporate strategic planning, internal audit and marketing) new operational procedures and modern management methods (computerized management system) are under study or already in place at the level of the finance, operations and commercial directorates, and finally substantial changes in the qualitative and quantitative composition of staff have been achieved (cf. PCR paragraph 6.3).

4.3 In 1996 the upgrading of the quality of client services was the primary objective of the enterprise, with specific focus on commerce. The Board of Directors has accordingly been modified with the appointment of Commercial Executive Directors. Actions initiated on the operational front (essentially maintenance) go hand in hand with this programme. Furthermore, a study on computer technology is underway with applications in client management, operations management and maintenance, financial and stock management, staff management and management of development projects. The integration of these different sub-systems in the **computerized** management system (CMS) will contribute to the setting up of a **management control** tool vital to the present stage of development of the enterprise.

4.4 TDM holds the monopoly of basic telecommunications services (telephone and telex) and the development and exploitation of telecommunications infrastructure. The additional telecommunications services or those called "value added" services are open to competition from the public or private sector and are allocated by government. Equity participation in a mixed enterprise with foreign capital is authorized up to the level of 50%.

3. The investments realized under the "rehabilitation" component have been made on a grant basis; the equipment are obsolete. This system will invariably be replaced by a more modern and reliable system before the end of the year.

4. Financially, **TDM's** bill of health is still cause for concern and this situation is worsened **by the** low utilization rate of the existing equipment and poor investment **returns**. If on **the** institutional plane, the track record of OMP permits us to state that the TDM has the capacity to exploit and maintain the existing equipment, its capacity to generate the necessary funds in order to cover operating and recurrent costs still remains to be established. The pursuit of the OMP actions, a strict resource management and the introduction of an appropriate tariffs system are the prerequisites to the recovery of **TDMs** management and an improvement of its financial situation, this all the more so as the present trend of macro-economic indicators are pointing towards a more favourable outlook of the **country's** economic development.

5. The government is strongly convinced and committed to the development of this sector and has lifted the major **institutional** constraints impeding the action of the TDM in this diion. The latter now has a clear vision of the constraints that hamper its operations and impede development. In **this** regard, it has launched parallel to the equipment plan, a set of **institutional** actions, in view of a modern and optimum management of its property. Furthermore, due to certain market **constraints** and the strategic need for a minimum rate of coverage countrywide, the privatization of the sector is for the time **being** limited to **value-**added peripheral services by way of mixed enterprises.

VI. PERFORMANCE RATING

The detailed rating of the project's performance is found in Annexes 7, 8, 9 and **summarized** in the paragraphs hereunder:

1. Operating Performance

Inspite of the climate of insecurity which prevailed during the execution of the project, implementation performance is generally satisfactory notwithstanding the relatively important slippage. Project management and monitoring were well carried out by the TDM with the help of **SWEDTEL** technical assistance which made it possible to rapidly resolve problems and constraints as and when they **occured**, thus limiting long delays and budget overruns.

2. Performance of the Bank

The performance of the Bank is satisfactory, project preparation was partial, but its appraisal was satisfactory, although project risks, most of which were identified were not integrated. The Bank did not question the essence of the "rehabilitation" component contained in the initial emergency programme **inspite** of the considerable lag in the commencement of works, the evident obsolescence of the transmission system concerned by this rehabilitation and the different sets of new equipment provided by the other donors under the Ten-Year Development Programme. The investments made under this component, considering the rate of equipment utilization, can be regarded as "on a grant basis" and this to the detriment of the country's debt burden and to that of the financial equilibrium of the

of the different users, and the necessary commercial and financial viability of the TDM should be put in place. To do this, a comprehensive **study** on tariffs is necessary and should be based on reliable cost-accounting data and on a detailed and precise market **study** elasticity of demand (Prices per socioeconomic and professional category) and taking also into consideration the trends of the international market (tariffs, diversity and sophistication of services).

1.6 The prerequisites to the sustainability of the effects of the project are familiar to the TDM, it has therefore launched a set of actions under the OMP to build its institutional capacity. The implementation of these actions has already had a very positive impact on the outputs of the TDM which are steadily improving. The human resources, structure has changed for the better with an upgrading of the quality of staff through training and the recruitment of highly qualified staff.

2. Conclusions and Recommendations

Lessons

2.1 The audit confii the overall lessons called “generic” drawn from the PCR (financing of the audit of accounts, improvement of disbursement. procedures) and recommends the following:

- (a) Exchange risk inherent in the context of high devaluation and associated to a hyper-inflationary economy not integrated in the project’s appraisal alters the financial return of investments and consequently, the probable sustainability of its achievements particularly when the project is financed by the **non-concessional** ADB window (IV. 1.5);
- (b) The identification at appraisal of the weaknesses or absence of management systems (accounting and financial systems, accounting procedures, management control tariffs policy and system, maintenance policy. .) are futile and of no interest to the project if they are not followed and strengthened by the loan conditions and a specific action plan to make good these shortcomings (IV 1.5);
- (c) An impottant slippage at the commencement of operations, of an emergency intervention project detracts from this project its urgent **nature** and can partially or completely call into question its initial conception and sustainability (IV 1.4).

Recommendations

In view of the foregoing, it is recommended:

- (b) to **define** the Bank's policy on rehabilitation, the evaluation guidelines of such projects should address their **long-term** sustainability **nature** while assessing all the related factors (technology, financial and institutional viability . .) in the same way as for new projects (V.2);
- (c) to ensure coordinated action and the exchange of information among **co-financiers** of projects belonging to the same **sectoral investment programme**. Dialogue with other donors should be continuous and systematic, special **provisions** for this coordination will be defined at appraisal (III. 2);
- (d) to **define** and see to it that mechanisms regulating and lessening exchange and financial risks do exist, that they are carefully assessed and should, if necessary, be part of the loan **conditions** (IV. 1.5 and 2.2.2);
- (e) to match the loan agreement with conditions and an action plan that should compensate for institutional, organic or regulatory **weaknesses** identified at appraisal (IV. 1.5).

3. Monitoring

3.1 Actions relating to the above-mentioned recommendations are detailed in the matrix of activities in Annex 1 of this report. The major monitoring actions recommended to the Bank are: (i) the review and strengthening of operational guidelines to take into account donor coordination on co-financed projects; the inclusion of risk factors in project appraisal; the mid-term review of projects; and (ii) the setting up or review of emergency intervention projects and rehabilitation of projects.

3.2 To the TDM, the main monitoring actions recommended are: (i) the introduction of an appropriate tariffs policy and system; (ii) the assessment of the impact of the OMP, its eventual review and continued implementation; (iii) the much needed stimulation of the market in the Beira region; and (iv) the introduction of measures restoring the balance of the financial **structure** and especially off-setting exchange risks and losses.

MOZAMBIQUE: TELECOMMUNICATIONS-II PROJECT
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Monitoring Matrix

Observations - Conclusions	Recommendations	Monitoring
<p>Project formulation & justification</p> <ol style="list-style-type: none"> 1. Project objectives were qualitative, and performance indicators undefined. 2. The weaknesses and risk factors identified at appraisal were not taken into account in project appraisal. The projects rate of return was over-estimated and the sustainability of its achievements highly compromised. 3. The appraisal report failed to deal with the problem of coordination between donors of the Ten 	<ol style="list-style-type: none"> 1. Compliance with the elaboration of the logical framework matrix should be strengthened, the retroactive effect of this measure should be extended to on-going projects and to PCRs. 2. Identified institutional weaknesses or shortcomings and risk factors should be assessed and their impact taken into account; furthermore they should be the subject of mitigating measures and or/conditions in the loan agreement in order to eliminate them. 3. Set up a systematic coordination between donors of projects 	<ol style="list-style-type: none"> 1. Strengthen operational guidelines with an exhaust list of performance indicators verifiable by sector or sub-sector. 2. Review, develop and strengthen project appraisal operational guidelines. Define a methodology for assessment and integration of risk factors in the sustainability of the effects of projects/programmes. 3. Introduce operational guidelines for preparation, for coordination of a sectoral <p>I., 2. and 3: ADB; FPOP OPVP OPEV</p>

<u>Project Performance</u>			
<p>10. The utilization rate of installed capacities is low.</p> <p>11. The rehabilitated transmission equipment is obsolete.</p> <p>12. The operating results and the financial structure of the TDM have been weakened by endemic exchange losses.</p> <p>13. From the institutional viewpoint, the achievements are important but still insufficient and need consolidation.</p>	<p>10. Demand should be stimulated to make the best use of installed equipment.</p> <p>11. A rehabilitation project should assess all sustainability factors and particularly technological ones. If this concerns an emergency operation, the intervention should be confined to works necessary to the maintenance to a minimum but vital economic activity.</p> <p>12. Measures for rational management should rapidly be set up.</p> <p>13. The introduction of measures for management rehabilitation and institutional strengthening should be pursued.</p>	<p>10. Demand stimulation measures in the Beira region should be undertaken to make the best use of equipment in place.</p> <p>11. Define emergency intervention policies, guidelines and procedures as well as for rehabilitation projects.</p> <p>12. Offset exchange risks and losses by a mechanism or punctual reduction measures.</p> <p>13. Assess the performance of the OMP, revise if necessary and proceed with the acceleration and introduction of pending actions.</p>	<p>10. TOM</p> <p>11. <u>ADB:</u> FPQP OPVP</p> <p>12. TDM</p> <p>13. TDM</p>
<p><u>Sustainability</u> : the perennality of the effects of the project could be compromised by:</p> <p>14. the financial equilibrium of the TDM and the low return of investments.</p> <p>15. the absence of a tariffs policy and a coherent tariff system.</p>	<p>14. Measures for the institutional capacity building of the enterprise and particularly, accounting, financial and commercial functions should be maintained.</p> <p>15. Re-organization of clients files, the reduction of client deadlines improvement of collection rate and regular tariff adjustments should be maintained.</p>	<p>14. See 10</p> <p>15. A regular tariff adjustment should be pursued. A coherent tariffs policy with international market trends and commercial and financial objectives should be formulated and put in place.</p>	<p>14. TDM</p> <p>15. TDM</p>

**MOZAMBIQUE: TELECOMMUNICATION II PROJECT
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Retrospective Matrix

Description	Indicators Verifiable	Means of Control	Assumption Risks
<p>Sectoral Objectives: Contribute in: 1. Providing an extensive coverage countrywide and greater access for populations. 2. Improve quality of service.</p>	<p><u>Estimated or Actual (*)</u> Telephone sets 1/100 inhab in 1992 Exchange capacity 49,831 DL in 1986 LD connections 39,151 in 1986 * Automation of networks: 100% in 1992 Digitalizat. of networks in 1984* : 0% Breakdowns/100 tel. in 1986* : 166 Breakdowns repaired within 72 hours in 1986* : about 60% 73%</p> <p><u>Realised (1996)</u> 0,96/hab 108,000 61,175 96% about 80% 54</p>	<p>A - Annual statistics of the TDM and the Min. of Fin. & Planning B - ITU and World Bank statistics</p>	
<p>Project Objectives 1. Improvement of long distance communications 2. Provide adequate and efficient service in the Beira region.</p>	<p>1. Rehabilitation of the system of transmission: temporal availability of the system is about 97% but actual use in only between 20 and 30%</p> <p>2. Exchange Networks: <u>1986</u> Exchange capacity 7,030 LD LD connections 6,845 Breakdowns/100 tel. 44 B/downs repaired in 72h ND 99% Waiting list 4,808</p> <p>3. Rate of financial return: 16,5% at appraisal 12,4% at completion 6,84% at post evaluation</p>	<p>A - Annual progress reports and TDM statistics. B - Programme contracts</p>	<p>* Economic reforms have been introduced; * Persisting war situation upto project completion, this limiting economic growth; * The other projects in the sectoral development plan have been realized.</p>

<p>B - Development Component</p> <p>B1 - Equipment 1. Installation of 11800 new digital lines in Beira (4200 at the main exchange to be linked by 1170 junction cables to 4 concentrators of 7600 lines). 2. 450 junctions between the digital exchanges and the stronger exchanges. 3. 1000 inter urban trunks. 120 international trunks. 4. 50.000 pairs km of cables. 5. 10.000 subscriber installations 6. Billing equipment B2 - Instrumentation, spare parts 1. Test equipment. tools 2. Spare parts B3 - Transport 1. IO vehicles for installation of equipment and maintenance. B4 - Construction I. I Building of 12 15 m² B5 - Training 1. 20 locally trained technicians and 18 trained overseas.</p>	<p>B - Development Component</p> <p>B1 - Equipments I. I Beira: 18.968 lines (8296 main lines and the rest on 5 concentrators) 1.2 Quelimane: 2560 main digital lines installed. 2. No junction made as stronger exchanges no longer necessary. 3. 1000 interurban trunks, 120 international trunks. 4. 50,000 pairs km of cables installed. 5. 10.000 subscriber installations. 6. Billing equipment acquired. B2 - Instrumentation, spare parts 1. Test equipment and tools acquired. 2. Batch of spare parts acquired, B3 - Transport I. No vehicle acquired. B4 - Construction 1. 2 Buildings constructed 1 in Beira and 1 in Quelimane B5 - Training I. 41 Technicians and 4 trainers received local training.</p>	<p>idem</p>																																										
<p>Activities:</p> <p>1. Procurement of equipment, cables. spare pans. tools instruments and vehicles.</p> <p>2. Contract award for works, construction and assembly.</p> <p>3. Training</p>	<p><u>Financing</u> (in UA million)</p> <table border="1"> <thead> <tr> <th></th> <th colspan="2">At Appraisal</th> <th colspan="3">At Completion</th> </tr> <tr> <th></th> <th><u>Curr.</u></th> <th><u>C</u></th> <th><u>Total</u></th> <th><u>F.C.</u></th> <th><u>L.C.</u></th> <th><u>Total</u></th> </tr> </thead> <tbody> <tr> <td>ADB</td> <td>25.90</td> <td>-</td> <td>25.90</td> <td>21.35</td> <td>-</td> <td>21.35</td> </tr> <tr> <td>FSN</td> <td>4</td> <td>9 9</td> <td>4.99</td> <td>3.90</td> <td>-</td> <td>3 9 0</td> </tr> <tr> <td>Gvt</td> <td></td> <td>2.79</td> <td>2.79</td> <td></td> <td>3.50</td> <td>3.50</td> </tr> <tr> <td>Total</td> <td>30.90</td> <td>2.79</td> <td>33.68</td> <td>25.25</td> <td>3.50</td> <td>28.75</td> </tr> </tbody> </table>		At Appraisal		At Completion				<u>Curr.</u>	<u>C</u>	<u>Total</u>	<u>F.C.</u>	<u>L.C.</u>	<u>Total</u>	ADB	25.90	-	25.90	21.35	-	21.35	FSN	4	9 9	4.99	3.90	-	3 9 0	Gvt		2.79	2.79		3.50	3.50	Total	30.90	2.79	33.68	25.25	3.50	28.75	<p>A - Quarterly Progress Reports.</p> <p>B - Back-to-Office reports.</p>	<ul style="list-style-type: none"> Financing provided: War situation impeded works and resulted in modification of outputs; Performance of contractor for works, assembly and supervision was satisfactory.
	At Appraisal		At Completion																																									
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INCOME STATEMENT

(In USD million)

	1986	1987	1990	1991	1992	1993	1994	1995	1996
ASSETS									
TURNOVER (TAX FREE)	28.821	17.423	42.399	69.296	60.205	73.369	73.164	105.606	127.556
CONSUMABLES	2.690	1.494	2.447	3.209	2.532	2.960	3.660	4.367	6.559
EXTERNAL SERVICES	6.164	2.160	9.726	29.763	16.516	20.246	13.296	13.972	21.134
OTHER COSTS	0.397	0.412	1.717	2.360	5.043	1.401	1.067	2.647	13.661
VALUE ADDED	17.551	13.336	26.509	33.966	36.111	46.760	54.922	79.620	66.004
PERSONNEL COSTS	5.134	1.566	3.155	4.479	5.267	6.316	6.427	10.966	19.142
DUTIES AND TAXES	0.973	0.464	4.143	6.661	6.396	10.967	6,969	12.437	17.667
GROSS OPERATING INCOME	11.443	11.266	21.210	22.627	22.447	31.475	39.506	56.417	46.975
FINANCIAL CHARGES	0.690	0.399	0.360	0.179	14.394	4.591	4.231	6.764	11.169
ALLOCATION FOR AMORT.	6.752	5.360	31.216	19.657	9.652	9.422	10.712	16.377	32.630
ALLOCATION PROV. FOR OPERATIONS						6.220	2.455	5.242	0.000
EXCHANGE LOSS/PROVISIONS		16.547		0.665		30.533	14.016	21.634	1.643
NET ACCOUNTING PERFORMANCE	4.000	(13.020)	(10.366)	1.926	(1.799)	(21.291)	6.092	4.200	3.332
OPERATING CASH FLOW	10.75	(7.66)	20.65	21.76	6.05	(11.67)	16.60	20.56	36.16

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BALANCE SHEETS
(In US\$ millions)

<u>ASSETS</u>	1966	1967	1990	1991	1992	1993	1994	1995	1996
CURRENT ASSETS	57.152	21.246	36.755	56.591	143.720	79.373	71.730	137.305	126.391
BANK	34.320	10.220	9.051	9.577	94.449	22.265	37.968	74.447	99.372
OTHERS	12.703	3.996	3.934	5.798	8.027	7.674	6.387	22.566	1.852
CLIENTCREDIT	6.640	5.965	21.653	36.754	36.390	46.966	23.366	37.705	23.301
STATE CREDIT	0.069	0.104	3.536	3.774	2.171	1.610	1.165	1.165	0.000
INVENTORY	1.400	0.959	0.566	0.668	0.663	0.416	0.603	1.419	1.366
FIXED ASSETS	23.756	32.824	24.616	7.713	3.117	104.573	74.691	101.467	139.740
NET FIXED ASSETS	23.759	32.824	23.539	7.713	2.515	102.527	72.754	94.247	139.740
OTHERASSETS			1.220		0.602	2.046	2.136	7.220	
TOTAL ASSETS	60.912	54.069	63.573	66.304	146.637	163.946	146.621	236.772	266.131
<u>LIABILITIES</u>									
SHORT-TERM DEBTS	24.776	57.310	45.321	44.654	41.316	44.523	20.243	45.804	63.716
SUPPLIER CREDIT	12.770	36.465	23.777	27.160	30.279	14.964	9.007	13.541	31.453
STATE	0.000	0.026	0.166	0.055	0.161	0.329	0.314	0.633	0.000
OTHER CREDITORS	12.008	20.775	21.316	17.391	10.662	7.214	4.306	6.276	32.263
SHORT-TERM FINANCING - 1 YEAR	0.000	0.023	0.041	0.027	0.015	22.016	6.616	23.353	0.000
LONG AND MEDIUM TERM DEBTS	0.762	0.109	-	-	99.333	63.701	71.615	126.077	143.606
EQUITY	55.353	(3.346)	16.253	21.651	6.187	55.722	54.563	66.692	56.609
INCOME			(16.660)	3.933	(5.152)	(21.291)	8.092	4.200	1.333
BALANCE CARRIED FORWARD	13.930	(9.107)	(10.643)	(19.121)	(6.657)		(13.660)	(1.927)	11.420
SUBSIDIES/GRANTS									
SOCIAL FUND	3.460	0.483	0.151	0.098	0.056		1.265	3.041	0.000
RESERVES	17.690	2.460	6.666	5.697	3.270	16.075	17.224	13.569	16.629
SHARE CAPITAL	20.253	2.816	40.737	31.044	16.670	44.776	26.728	26.728	28.728
INVESTMENT CAPITAL	56.135	(3.240)	16.253	21.651	105.520	139.423	126.378	192.969	202.415
TOTAL LIABILITY	60.912	54.071	63.573	66.304	146.636	163.946	146.620	236.772	266.131
<u>RATIOS</u>									
CASH AVAILABILITY	2.31	0.37	0.66	1.31	3.46	1.76	3.54	3.00	1.96
FINANCIAL EQUILIBRIUM	2.36	-0.10	0.74	2.61	33.06	1.33	1.69	1.90	1.45
DMLT/EQUITY	0.01	(0.03)			16.06	1.50	1.32	1.88	2.45

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Annex 5

FINANCIAL RATE OF RETURN

Assumptions

1. The calculation of the projects financial rate of return was done on the basis of the costs and income derived from the project's additional capacities. The financial rate of return of Bank's investments were recalculated based on the operating ratios of the TDM carried out between 1990 and 1996. The operating **costs/DL** installed depreciation and financial charges not included, are the actual costs observed until 1996, hoping that from 1997 they will gradually reach their 1995 level. Income based on DL installed vary from **US\$ 0.89** to **US\$ 1.31** between 1990 and 1996 depending on the year; for our calculation, the assumption is based on an income of **US\$ 1.1/DL** gradually decreasing to take into account a long term anticipated tariff reduction.

2. The installed capacity by the Telecommunications II project is roughly 21,050 DL and actual connections were 5.830 in Beira and 1.200 in Quelimane, representing a post project additional capacity connection of 14.500 DL. In the calculation, we take into account for the period **1990/1996** the actual additional capacity obtained and from 1997 new connections will increase from 1500 to 2000 **inorder** to attain the 95% of the additional installed capacity. Furthermore, a gradual development of communications traffic has been earmarked to attain in the year 2005, 25% of present traffic.

3. No residual value of investments have been retained, this **inorder** to partially offset the effect of investments made on a grant basis relating to the rehabilitation component of the tropo scatter system, the utilization of which was limited in time and in capacity (20 to 30%). The rate of return of these investments could only be released by including in proportion to the use of other transmission systems in the project's sphere of influence, the investment costs of these system, which costs the mission could not obtain.

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PR. FORMULA 1

OPERATING PERFORMANCE

Indicators	Rating	Observations
1. Compliance with implementation schedule.	2	A considerable delay of 23 months observed on the implementation of the "Rehabilitation" component.
2. Cost compliance	3	The overall gap on costs is about 15% due to the non-utilization of provisions for unforeseen and the modification of the project's components in the course of implementation.
3. Compliance with loan agreement conditionalities	2	A slippage in the fulfillment of two conditions including one re-condition.
4. Adequate monitoring and appraisal and quarterly progress reports	4	The transmission of progress reports is regular and site monitoring adequate.
5. Satisfactory exploitation	2	Operating performance is affected by the low-utilization rate of equipment in the "development" component and the obsolescence of the rehabilitated transmission systems.
Overall assessment of operation performance	2.6	Generally satisfactory in spite of implementation slippages.

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FORMULA 1

PROJECT PERFORMANCE

N°	Indicators	Ranking	Observations
1	Project relevance and output	2.40	Performance is satisfactory
i)	Macroeconomic policy	2	The political and macro-economic context during project implementation upto 1992 was not satisfactory. Nevertheless considerable progress has been made with the introduction as far back as 1987 of reforms within the framework of the structural adjustment programme.
ii)	Sectoral policy	3	The sectoral development policy is coherent, in terms of the technological choices, diversification of services and the place reserved to the private sector in this development.
iii)	Physical outputs	2	The equipment of the network are running smoothly but their rate of utilization remain low. The rehabilitated transmission system is obsolete and not in full use.
iv)	Financial performance	2	Performance was altered by (i) exchange losses due to the economic context (ii) high fixed costs consequent to the low utilization capacity of equipments and (iii) an inappropriate tariffs system.
v)	Poverty reduction, social aspects and women in development.	N.A.	---
vi)	Environment	N.A.	---
vii)	Private sector development.	3	The strengthening of basic infrastructure, the re-organization of the sector and the TDM have opened the way to private sector participation both in project implementation and in some peripheral and specialized services in collaboration with the TDM.
viii)	Others	N.A.	---
2	Institutional Development	2.5	Performance is satisfactory.
i)	Institutional framework and re-organization.	3	The status of the TDM has been modified and its organic operational, legal and financial autonomy are strong enabling it to meet its responsibilities more effectively and so gradually lift constraints for a rational management of its property.

v)	Financial viability including a cost recovery system.	1	Tariffs are very often adjusted but it is urgent to put in place a coherent tariffs policy and in this regard carry out an indepth tariffs study based on actual and precise costs obtained from a reliable cost accounting service to be set up, and which should equally take into account, demand and elasticity of prices, therefore a good market segmentation.
vi)	Economic viability.	2	The presence of a developed and reliable telecommunications network is vital for the country's economy because of the vast distances separating the major ports and centres of economic importance, and as a transit poor for enclaved neighbouring countries. The project's economic viability is ensured with the return to peace and the consequent development of activities..
vii)	Environmental viability.	N.A.	—
viii)	Operating and maintenance mechanisms (availability of revolving fund, foreign currency, spare parts and maintenance workshop	3	The setting up of the OMP is in line with staff training and the putting in place of different maintenance centres. The change of status enables the TDM to effectively manage its resources according to its needs, particularly its foreign currency resources necessary for the procurement of spare parts.
4	Rate of financial return	1	The rate of financial return of 6.84% is much lower than the expected rate of 16.5% at appraisal. Such a poor performance is the result of a low capacity utilization of the installations and poor tariff adequacy.
5	<u>Overall assessment of outputs</u>	2.05	Project performance has generally been satisfactory, but this is mainly due to factors not directly linked to the project. Intrinsicly this performance is unsatisfactory due account take of a much delayed implementation, the obsolescence of the rehabilitated equipment a low capacity utilization rate, and a low investment return rate of return.

Description of Phase 1 of the Ten-Year Development Plan

1. This phase covers the nine regions of Maputo, Nampula, Nacala, Chimoio, Xai Xai, Chokwe, **Songo, Manica**, Beira and Tete. The expected outputs are as follows:

A - Southern region of Maputo, Xai Xai and Chokwe:

- a national and international transit centre - 2000 lines
- 27,100 new digital subscriber lines
- 50,000 pairs-km of cables for the domestic network
- 2,064 pairs-km of junction cables
- 3,627 digital junctions
- Wireless liaison between Maputo - Xai Xai with a branching on Chokwe

B - Central region of Beira, Chimoio, Tete, **Songo** and **Manica**:

- 19,200 new digital subscriber lines
- 45,000 pairs km of cable for the domestic network
- 760 pairs-km of junction cables
- 1,110 of digital junctions
- Wireless liaison between Beira-Chimoio-Manica

C - Northern region of Nampula and Nacala:

- 6,800 new digital subscriber lines
- 18,000 pairs-km cables for the domestic network
- 80 pairs-km junction cables
- 120 digital junctions
- Wireless liaison between Nampula and Nacala

2. The **TDM** was the executing agency for all the projects under this phase and was assisted by the project implementation unit (**PIU**) for coordination and supervision of works. The PIU was assisted by a financial control department, three technical departments (transmission, switching and external networks) and an administrative department under the responsibility of a permanent manager seconded by the TDM and an official of SWEDTEL, a consultant financed by Swedish cooperation. Works supervision as well as provisional reception tests were carried out by the Italian consulting firm CONSULTEL financed by Italian cooperation.

3. 188 staff of the TDM were trained in project management, **implementation and** operating of installations during the execution phase of the Ten-Year Development Plan including 21 engineers, 92 senior technicians and 75 technicians.

4. The level of investment for the first phase of the TYDP (1985-1989) was around US\$ 10 million, representing an annual average of 28 million per annum. Phase 1 of the TYDP was financed by the Italian Government (**US\$ 50** million), the Swedish Government through SIDA (**US\$ 3** million), the Arab Bank for African Economic Development (**US\$ 10** million) and by the ADB to the tune of US\$ 36.25 million. For Phase II (1991-1995) investments would amount to US\$ 175 million **including** 20 million in technical assistance.