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IMPLEMENTATION COMPLETION REPORT
(IDA-26210)

ON A

CREDIT

IN THE AMOUNT OF US$30 MILLION

TO THE

GOVERNMENT OF THE REPUBLIC OF ZAMBIA

FOR A

PETROLEUM REHABILITATION PROJECT

June 28, 2001

Energy Unit
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective June 27, 2001)

Currency Unit = ZMK
ZMK 1 = US$ 0.0003
US$ 1 = ZMK 3730

Government
FISCAL YEAR
January 1 December 31

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
DCA	Development Credit Agreement
EIB	European Investment Bank
ERB	Energy Regulation Board
ICR	Implementation Completion Report
IDA	International Development Association
MEWD	Ministry of Energy and Water Development
OMC	Oil Marketing Companies
OMMC	Consortium of Oil Marketing Companies
SAR	Staff Appraisal Report
TAZAMA	Tazama Pipelines Limited
ZCCM	Zambia Consolidated Copper Mines
ZIMCO	Zambia Industry and Mining Corporation
ZIMOIL	Petroleum Procurement and Supply Division
ZNOC	Zambia National Oil Corporation Limited
ZOC	Zambia Oil Company
ZR	Zambia Railways Limited

Vice President:	Callisto E. Madavo
Country Manager/Director:	Yaw Ansu
Sector Manager/Director:	Ananda M. Covindassamy
Task Team Leader/Task Manager:	Paivi Koljonen

IMPLEMENTATION COMPLETION REPORT
ZAMBIA PETROLEUM REHABILITATION PROJECT

CONTENTS

Project ID: P003252	*Project Name:* PETROLEUM REHAB
Team Leader: Paivi Koljonen	*TL Unit:* AFTEG
ICR Type: Core ICR	*Report Date: June 28, 2001*

1. Project Data

Name:	PETROLEUM REHAB	*L/C/TF Number:*	IDA-26210
Country/Department:	ZAMBIA	*Region:*	Africa Regional Office
Sector/subsector:	GP - Oil & Gas Transportation		

KEY DATES

			Original	*Revised/Actual*
PCD: 02/15/92		*Effective:*	12/30/94	06/27/96
Appraisal: 06/21/93		*MTR:*	06/30/96	
Approval: 05/31/94		*Closing:*	06/30/2000	04/11/2000

Borrower/Implementing Agency: Government of the Republic of Zambia/Tazama Pipelines Ltd.; Zambia National Oil Corporation; Ministry of Energy and Water Development

Other Partners: EIB

STAFF	Current	At Appraisal
Vice President:	Callisto E. Madavo	E.V.K. Jaycox
Country Manager:	Yaw Ansu	Stephen Denning
Sector Manager:	M. Ananda Covindassamy	David Cook
Team Leader at ICR:	Paivi Koljonen	Thuvara S. Nayar
ICR Primary Author:	Matthew Mitchell; Paivi Koljonen	

2. Principal Performance Ratings

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HL=Highly Likely, L=Likely, UN=Unlikely, HUN=Highly Unlikely, HU=Highly Unsatisfactory, H=High, SU=Substantial, M=Modest, N=Negligible)

Outcome: U

Sustainability: UN

Institutional Development Impact: N

Bank Performance: U

Borrower Performance: U

	QAG (if available)	ICR
Quality at Entry:		U
Project at Risk at Any Time:	Yes	

3. Assessment of Development Objective and Design, and of Quality at Entry

3.1 Original Objective:

3.1.1 **Original Objectives.** The Staff Appraisal Report (SAR) states the project's objectives as follows:

- restructure the petroleum industry to become more competitive and cost effective;
- develop policy through encouraging the establishment of a satisfactory regulatory framework and effective competition in petroleum importation and marketing;
- rehabilitate the Tazama pipeline as a least-cost reliable means of transporting oil to Zambia;
- strengthen Tazama's operational and financial management to ensure that the pipeline stays in satisfactory operational condition;
- improve infrastructure facilities to reduce the cost of petroleum product transport and distribution; and
- provide a basis for the private sector companies to facilitate exports by using surplus pipeline capacity.

3.1.2 The statement of objectives in the Development Credit Agreement (DCA) differs somewhat from that of the SAR. It stated the objectives as follows: (a) rehabilitate the pipeline system owned and operated by Tazama in order to make it a least-cost and reliable means of transporting oil into the territory of the Borrower and to strengthen Tazama's institutional setup in order to ensure, through adequate maintenance of the pipeline, that it remains in satisfactory operating condition; (b) improve infrastructure facilities in order to reduce the cost of petroleum; (c) strengthen the technical and financial management of Tazama; and strengthen the Ministry of Energy and Water Development (MEWD). The main difference is that the DCA places the physical rehabilitation and the strengthening of Tazama first instead of sector restructuring. However, sector restructuring is clearly a part of the Government's Letter of Development Policy and the project contained covenants designed to meet restructuring objectives and support the MEWD in this context.

3.1.3 The project's primary objective was to complete the rehabilitation of the Tazama pipeline, which delivered feedstock imported from Tanzania to the refinery in Zambia. Corrosion had posed a major threat to safety and had led to leakage and environmental pollution. Previous rehabilitation work had been successful in returning part of the pipeline to acceptable operation but new leaks had occurred. A detailed survey using mechanical sensors, know as "intelligent pigs," to measure defects, had accurately measured the extent and cost of repairs and replacement in late 1980s (IDA Cr. 1627-ZA). The institutional strengthening of Tazama was important to provide the operational and financial capability to keep the pipeline in efficient, safe, running order. The pipeline's deterioration had resulted from inadequate maintenance and for two years before the project, the company's financial performance had been unsatisfactory.

3.1.4 The expansion and improvements to infrastructure facilities were necessary to help reduce the cost of product distribution within Zambia. The Staff Appraisal Report had calculated that Zambia could save US$1.4 million in transport costs annually by using the railway, instead of road, to transport bulk petroleum products from Ndola to Lusaka. The main constraint was inadequate train loading facilities at the ZNOC's product terminal in Ndola and concerns about the railway's reliability.

3.1.5 In addition to physical investments and institutional strengthening of Tazama, the Bank and the Borrower agreed that a fundamental reform of the relationships among the various public and private entities was necessary. A reform program to improve the efficiency of public enterprises had begun in Zambia and the government was opening operations to the private sector. The Bank, in its lending operations, was giving a high priority to sector reforms for increased competition and private sector participation in order to improve the condition of infrastructure and the delivery of services.

3.1.6 Zambia Industry and Mining Corporation (ZIMCO), an investment holding company for the energy sector, was in the initial stages of reorganization and privatization. The Government of Zambia had converted ZIMCO to an investment holding company in 1993 as part of a reorganization and privatization program[1]. Tazama, the Indeni Refinery, and ZIMOIL were the three petroleum sector parastatal companies operating under ZIMCO. Tazama was under joint ownership of the governments of Tanzania and Zambia. The Indeni Refinery, which was processing the feedstock received from the Tazama pipeline, was not operating efficiently, as it was designed in the early 1970s, before the era of high oil prices. ZIMOIL had a monopoly on the procurement, ownership and bulk storage of petroleum products. It contracted with Tazama for the transport of imported feedstock and with the Indeni Refinery for processing. However, five private companies handled the marketing of petroleum products in Zambia --AGIP Zambia Ltd., Caltex Zambia, Ltd., Mobil Zambia, Ltd., and Total Zambia, Ltd.

3.1.7 The Government had not scheduled Tazama, Indeni, and ZIMOIL for privatization in the immediate future. However, the Government and the Bank agreed to increase competition and efficiency by abolishing ZIMOIL and dividing its functions between a new company, the Zambian Oil Company (ZOC) and a Consortium of Oil Marketing Companies (OMCC). ZOC was to continue procurement of feedstock for the country but sell it to the OMCC at the Dar es Salaam terminal. This consortium in turn would contract with Tazama for transport to Zambia and with Indeni for refining. Also, it was planned that OMCC would take over management of the storage facilities in Ndola. To reduce distribution costs within Zambia, the OMCC would negotiate a contract with the Zambia Railway for the transport of petroleum products from the storage facilities at Ndola to Lusaka, the capital city. The project was to strengthen the Ministry of Energy and Water Development (MEWD) to handle the policy and institutional framework necessary to support these sector changes.

3.1.8 The Bank had originally prepared and negotiated a pipeline rehabilitation project in 1987. However, disbursements to Zambia were suspended from late 1987 to early 1991 and again from September 1991 to January 1992, and all IDA financed assistance to the country was halted during these periods. African Development Bank (AfDB) and European Investment Bank (EIB) carried out some of the most urgent rehabilitation work. The proposed project, approved in May 1994, intended to complete the remaining work.

3.2 Revised Objective:

3.2.1 **Revised Objectives** The project did not revise its objectives during implementation. There was some discussion of restructuring the project within the Bank but formal restructuring never took place. In 1997 the Bank retrofitted the project with a matrix of indicators to improve its structure and clarify the details of meeting objectives, including a risk assessment.

3.3 Original Components:

3.3.1 The project's **physical components** were:

A. TAZAMA pipeline rehabilitation:

(i) Pipeline Rehabilitation:
- the repair and replacement of about 1,500 km of the pipeline;
- corrosion protection;
- refurbishment of 14 pumps and their drives;
- replacement of nine generators in the pump stations;
- improvements to telecommunications;
- provision of vehicles, spare parts and other equipment;
- introduction of environmental practices; and
- provision of consultants and project management's assistance.

(ii) Improving crude oil tank farms at each end of the pipeline through:
- rehabilitation of the crude oil tank farm in Dar es Salaam; and
- construction of a new crude oil tank in Ndola;

B. Expansion of rail loading facilities at the Ndola petroleum product terminal. This consisted of expanding rail loading facilities, with simultaneous loading of 12 wagons, and replacing loading pumps and product measuring instruments.

3.3.2 The project also included ***institutional strengthening components*** to improve the operations of Tazama, MEWD, and the Ndola storage terminal. For Tazama, the strengthening was to consist of filling line management positions (finance, operations, and maintenance) with expert consultants for a period of two years, including training of Tazama staff. At the end of this period (April 1995 to April 1997) Tazama was to have contracted with an experienced company to manage pipeline operations according to a performance-based contract. For MEWD, the focus of institutional strengthening was on the creation of a Technical Cell to frame the necessary regulatory measures and establish policies, and monitor petroleum operations. Studies on pricing and leasing arrangements for the Ndola terminal were in progress at the time of appraisal and the MEWD was to complete a study on petroleum product export potential before the completion of the pipeline's rehabilitation. Also, to improve the management of the Ndola terminal the project included the conclusion of a leasing arrangement with the private sector.

3.3.2 The components for improved operation of the pipeline and storage facilities were well-defined and supported project objectives. The Bank had been involved in the technical aspects of the sector since the mid 1980s and had a clear idea of what was necessary. However, there was much less certainty about the institutional and private sector development aspects. For example, the project's objective for greater railway use depended on private investments by the OMCC in loading/unloading facilities at the Lusaka terminal to complement project investments at the Ndola terminal. Yet the private sector had no obligation to do this under the project.

3.3.3 A key condition of project effectiveness -- the establishment of a consortium of private oil marketing companies to break the government monopoly on sector operations -- was a major change and depended not only on the actions of the Government but also on the actions of private sector companies that were not parties to the project. Ultimately, the formation of the consortium proved not to be feasible. Also, given the magnitude of the expected changes, it seemed important to have a clear regulatory framework in place. While the National Energy Policy had a provision for the establishment of an Energy Regulatory Board (ERB), the Government had not confirmed when that Board would assume regulatory responsibility. The project's covenants were adequate to support the project's objectives except that there was no financial performance covenant for Tazama. The absence of such a covenant seems a major omission given that the company's operational and financial performance was unsatisfactory at the time of project appraisal.

3.3.4 The project was not particularly complex. The technical components involved proven technologies and the proposed sector reforms were appropriate and necessary. However, the project was overloaded with conditions of effectiveness, some of which required a significant magnitude of change[2]. The project had three implementing agencies: Tazama, for the pipeline rehabilitation and its institutional strengthening components; ZOC for the Ndola storage expansion and management components; and MEWD for the studies and technical assistance to strengthen its capability. The project provided sufficient institutional strengthening for Tazama and MEWD to execute their components; the institutional capability of ZOC was not clear at the time of appraisal and hence Tazama agreed to assist it. The Government had shown a reasonable commitment to the project's objectives, which its Letter of Development Policy reflected. There were signs of commitment to restructuring for cost reduction. For example, prior to the project's appraisal, Tazama had reduced its staff from 586 to 471 at a net savings of 97 million kwacha or US$160,000 per year[3]. The project contained a number of dated covenants, which were reasonable for supporting project's ambitious objectives for sector restructuring and policy development[4]

3.4 Revised Components:

3.4.1 **Revised Components.** Project components were not revised during implementation. There were, however, several revisions to the project's design after Board Approval. Because the oil marketing companies were reluctant to take over the management of storage facilities, the Bank modified the effectiveness condition to allow the management of the facilities by a qualified contractor. The change in this condition also involved deleting project covenants that were designed to improve the performance of the Indeni Refinery[5]. This change in the role of the OMCC, essentially returned the bulk of responsibility for petroleum supply to the Government via the newly formed Zambian National Oil Company (ZNOC)[6]. This new company was to: procure the feedstock; contract with Tazama to transport it; contract with the refinery to process it into products; sell it to the oil marketing companies; and enter into a management contract with a qualified external company to manage the storage facilities leased to the OMCs. Furthermore, the one and a half year delay in effectiveness of the project's Development Credit required changes in compliance dates for certain covenants; a new technical evaluation (intelligent pigging) of the extent of pipeline deterioration; and an updated environmental assessment.

3.5 Quality at Entry:

3.51 **Quality at Entry**. There was no rating, by the Bank's Quality Assurance Group, of the project's quality at entry. The ICR has rated quality at entry as unsatisfactory for several reasons. First, although the Government agreed with the Bank on the general direction of reform, and although this direction was correct, there were indications during project implementation that the Government did not fully agree with the Bank on the details of reform. Second, the project's Staff Appraisal Report did not indicate a comprehensive evaluation of lessons learned or an adequate assessment of the risks of not achieving sector restructuring and policy objectives. Third, the Bank left key institutional reform and policy changes as conditions of effectiveness, which, in the event, the Government did not fulfill, and which the Bank then had to waive after 18 months. This approach ignored experience in the Bank, which indicates that there is greater leverage and less likelihood of project delay by making sure an adequate sector structure is in place prior to Board Approval.

3.52 The third reason above is particularly important because the President's Report for the project describes the project's principal feature to be the redefinition and enlargement of the private sector to reduce the presence of Government agencies in the petroleum sub-sector. The Report emphasizes restructuring the petroleum industry to put all key operational responsibilities into the hands of experienced private sector companies as the key to project sustainability. Given this importance of sector restructuring and private sector participation for the project, the Bank should not have approved the project before the Government had confirmed agreement with the private oil marketing companies and secured from them a binding commitment to the establishment of the consortium. The Bank's subsequent decision to declare the project effective even though the Government and the private oil marketing companies could not come to agreement on forming a consortium to take over the storage facilities, undermined the project's design and its objectives.

3.53 An additional issue was that, although the project addressed critical policy and fiscal sustainability issues that the Bank's Country Assistance Strategy supported, the Bank's macroeconomic dialogue did not focus on the petroleum sector. Instead, the privatization of the Zambia Consolidated Copper Mines (ZCCM) - the linchpin of the Zambian economy - emerged during the project's implementation period as the primary driver of the Bank's country program in Zambia.

Endnotes to Section 3

[1] The ZIMCO companies scheduled for privatization employed about 67,000 staff, about 45 percent of the company's total staff (150,000).

[2] This consisted of: Government execution of subsidiary loan agreements with Tazama; Government execution of an agreement with EIB, including fulfillment of EIB's conditions of effectiveness; Government implementation of the first stage of pricing reforms; appointment, by Tazama, of a Project Manager and engineering consultants for project engineering and supervision; the transfer of the management and operation of the Ndola terminal to the OMCC, either by ZIMCO or the newly-formed ZOC.

[3] At the exchange rate of 1 US$ = 600 kwacha.

[4] According to the original design, by December 1994, six months after Board Approval, the Government was to complete sector restructuring by establishing the Zambia Oil Company and the Consortium of Oil Marketing Companies. Then by the end of April 1995, Tazama was to have entered into a transport contract with the Consortium and established transport tariffs to reflect costs. After the new institutional relationships were in place, the Government was to have removed all retail pricing controls on petroleum projects by the end of 1996. Toward the end of the project, by December 1999, just before the completion of pipeline rehabilitation, the Government was to have completed a petroleum export marketing study to assess the profitability of converting the Tazama pipeline for the transport of products.

[5] The management by the OMCs included project covenants for the OMCC to enter into a feedstock processing contract with the refinery, subject to progressively tighter performance standards on operating efficiency and physical losses.

[6] The legal agreements also noted the change of the new Government Company from the Zambian Oil Company (ZOC) Zambian National Oil Company (ZNOC).

4. Achievement of Objective and Outputs

4.1 Outcome/achievement of objective:

Overall Outcome/Achievement of Objectives. *The project outcome was unsatisfactory.* The Bank canceled the project due to more than four years of unsatisfactory progress in project implementation and in meeting development objectives (IDA disbursed about US$5 million of the total credit of US$30 million). The co-financier, EIB, also canceled the balance of its loan (EIB disbursed about EUR 15.7 million of its total loan of EUR 18 million). The following sections review the main objectives and outputs which the Bank and the Borrower agreed to during project implementation.

4.2 Outputs by components:

4.2.1 **TAZAMA Pipeline Rehabilitation.**

Pipeline Rehabilitation. *This output was not achieved.* About 90 percent of the project's cost was to meet the project's primary objective -- rehabilitation of the Tazama oil pipeline. In support of the objective, the only outputs produced were the engagement of consultants for the detailed design, the procurement of vehicles and spare parts, refurbishment of 14 pumps, and the development of operational practices to reduce environmental damage. The technical assessment of the 1,700 km long pipeline (intelligent pigging) was completed after a long delay. As a result, the project did not achieve the planned rehabilitation of the pipeline's operation. These outputs were to have had two main impacts on the system. The first was to have been the operation of the pipeline at its maximum capacity of not less than 125 cubic meters per hour, for a minimum of 345 days per year. The second was to have been a reduction in operating losses from 1 percent in 1996 to 0.3 percent in 1999 and maintenance at that level in the future.

Improving Tank Farms. *This output was partially achieved.* EIB financed the rehabilitation of the Dar es Salaam tank farm and the construction of a new 40,000 m3 tank in Ndola. However, because EIB canceled the balance of its loan, the Dar es Salaam crude oil tanks were only partially rehabilitated. In Ndola, the new tank was 80 percent complete at the time of project closure. This output did not lead to the expected development impact.

4.2.2 **Improving and expanding Ndola terminal.** *This output was marginally achieved.* The management of the facility was contracted to an experienced company. This output led to the expected development impacts. The management reduced the staff from 76 in 1994 to 36 in 1998. They also determined and adhered to a set of performance indicators developed during the project, including the reduction of operating losses and an increase in the volume of oil transported by railroad. The physical components, which consisted of: installing flow and tank meters to track petroleum supplies; establishing computerized loading facilities; extending rail loading facilities; and replacing some loading pumps and related facilities, were not completed. The reason was that by the time bidding documents for these components were ready the project had entered a suspension stage.

4.2.3 **Sector Policies**. In strengthening the Ministry of Energy, the main focus was on establishing a capacity for supervising and monitoring the gradual deregulation of the sector. *The project produced only one of the four expected outputs* that were to help meet this objective. It completed the study for the creation of the Technical Cell but did not complete: the study on petroleum export potential; staff training;

or the institutional reform review. The only expected impact that resulted was the development of a transparent formula for regulated prices and tariffs, for refinery feedstock, transport and refining operations. The other planned impacts, which did not take place, were: the establishment of an adequate regulatory framework; the set-up of a qualified Technical Cell addressing pricing and reform issues as well as monitoring sector operations; and the abolition of retail price controls in the industry. Subsequently, the ERB has taken over the price monitoring role.

4.2.4 **Institutional Strengthening.** The main focus was on giving Tazama the financial, operational and managerial capability to implement and maintain the investment in the pipeline and related infrastructure. *The project produced only one of the four planned outputs* supporting this objective: the recruitment of three line managers, covering operations, maintenance, and finance. It did not make significant progress in producing the other outputs, which were: the detailed design of the pipeline rehabilitation component; the conclusion of a performance-based contract with an experienced company for managing Tazama; and the training of Tazama staff in the areas which the expatriate line managers were supervising. As a result, the project did not have the planned impact of: determining and adhering to key indicators for improving overall performance; making a significant reduction in excess staff; lowering operations and management costs; establishing transport tariffs that reflect the costs of efficiently-managed operations; and providing for a reasonable return on investment as well as sufficient funds for maintenance. After the cancellation of the project Government has simplified Tazama's management structure. It is, however, difficult to assess the impact of this action, because Tazama has not been in operation for about two years, following the fire at Indeni.

4.3 Net Present Value/Economic rate of return:

4.3.1 **Net Present Value and Economic Rate of Return**. At the time of project appraisal, the economic analysis of the pipeline rehabilitation, the main investment component, compared investment costs of using the pipeline for imports with the next least cost alternative, the use of the Tazara Railway, which runs parallel to the pipeline originating in Dar es Salaam, Tanzania. The Staff Appraisal Report estimated the economic rate of return at over 100 percent[7]. Since the investment did not take place, a re-estimate of the economic rate of return is not applicable.

4.3.2 For the extension and improvement of product loading/unloading facilities at Ndola (near the refinery) and Lusaka (the capital), the Bank at appraisal calculated that the major benefits would be reduced transport costs from a shift from road haulage to improved railway transportation. The result was a 15 percent economic rate of return on the investment in these new facilities to enhance the switch to transport by the Zambia Railway. The ICR did not re-estimate the economic rate of return on this component because the investment was not made; the Bank canceled the project before completion.

4.3.3 The Bank also evaluated the economics of the Indeni refinery. Though it was not explicitly part of the project, it was nevertheless a key element in determining the economics of petroleum supply and the rehabilitation and maintenance of the Tazama pipeline, which originally was designed to carry petroleum products and not crude oil for the refinery. The Bank considered two cases. The first was making energy efficiency improvements to the existing refinery. The second was closing the refinery's processing facilities but using the remaining facilities as a terminal for receiving bulk petroleum products. The second option was to involve the conversion of the Tazama pipeline to multi-product transport. The Bank analyzed both options based on three assumptions for demand: domestic demand only; domestic demand plus 75,000 tons of product exports; and domestic demand with the maximum exports using full pipeline capacity.

4.3.4 The analysis found that the least-cost option to satisfy both domestic and export demand would be closing the refinery and importing products through the Tazama Pipeline (Annex 3). However, the Bank noted that closure could be postponed until a major refinery expenditure becomes necessary. At the end of the project, the Bank took another look at the economics of petroleum supply options. In June, 1999, the Bank's economic analysis estimated that the closing of the refinery and the conversion of the Tazama pipeline for the transport of finished petroleum products would save the country US$4-6 million per year compared to importing the feedstock and producing products in the refinery. The analysis also estimated a potential additional revenue of US$17 million per year from the export of finished products to other landlocked countries in the region.

4.4 Financial rate of return:

4.4.1 **Financial Rate of Return**. The Bank did not calculate a financial rate of return in the SAR on the project. In addition, most of the investment planned under the project did not take place, so the re-estimation of a financial rate of return is not applicable to this project.

4.4.2 **Financial Condition of Tazama**. The Staff Appraisal Report did not contain any covenants specifying improvements in Tazama's financial performance, which was precarious throughout the project. However, the project's DCA (Section 3.01) called for the Borrower to cause Tazama to implement the pipeline rehabilitation and institutional strengthening components with due diligence and efficiency in conformity with appropriate administrative and financial practice and to provide the necessary funds, services or other obligations to ensure this. To ensure adherence to this covenant, the Bank, during supervision, specified an action plan for financial improvement, which had two key elements. The first was clearing about US$6 million in arrears that ZNOC owed to Tazama and preparing an action program to improve the company's financial situation. The second was the establishment of a robust payment mechanism that would ensure Tazama's full and timely remuneration for its services. This called for a Government decision to allow open and equal access to the pipeline by all private oil companies and not to require Tazama to provide service to non-paying entities. Although Tazama, towards the end of the project, finally did receive ZNOC's long overdue payments, the Government did not firmly establish a sustainable payment mechanism.

4.5 Institutional development impact:

4.5.1 The project's institutional development impact was negligible.

Endnotes to Section 4:

[7]The Staff Appraisal does not provide background data in this analysis, including the net present value of the investments.

5. Major Factors Affecting Implementation and Outcome

5.1 Factors outside the control of government or implementing agency:

5.1.1 **Factors Outside the Control of the Government and the Implementing Agency.** The main factor, which was unforeseen, was a serious fire at the Indeni Refinery in May 1999, which made the refinery inoperable. The damage to the refinery, Tazama's only customer, caused the shutdown of the pipeline, exacerbating the deterioration of the company's financial situation [8)]. Over the past two years since the fire, the company has operated only one month. The resulting high-cost alternative -- road transport from Tanzania to Zambia-- increased the urgency for moving forward with the conversion of the pipeline to the transport of finished petroleum products, which the Bank already had demonstrated to be the most economic option. Compared to pipeline transport at US$23 per ton, road transport was costing US$165 per ton. The Bank also estimated that the net annual savings of converting the pipeline from crude oil to transporting products would be around US$4-6 million per year. In addition, Zambia could earn additional revenue of around US$17 million annually through exports of finished products to different land-locked countries in the region. However, the Government decided to repair the refinery instead.

5.2 Factors generally subject to government control:

5.2.1 **Factors Generally Subject to Government Control.** The Government had control over its main role in the project, which was to make sure that the implementing agencies had the institutional support and financial means to implement the project as agreed with the Bank. Because the Government did not cause ZNOC to pay Tazama promptly for its services, Tazama was constantly short of funds and at one point during the project was unable to make timely payments on its outstanding loans to EIB. This led EIB to suspend its funding for the work to evaluate the condition of the pipeline (intelligent pigging). This evaluation was critical to defining the repair and replacement work for the pipeline and therefore contributed to delaying the pipeline's rehabilitation. Also, without assurances from the Government in terms of a viable payment mechanism, it was not certain that Tazama would be able to sustain the investment in the pipeline through maintenance and spare parts.

5.2.2 The Government also was responsible for causing the MEWD to produce the studies necessary for creating a pricing structure and regulatory framework to support the Government's commitment to "encourage efficient procurement, transportation, processing, distribution, and consumption of petroleum and/or petroleum products in the country" and to "permit the private sector to undertake all commercial roles in the sub-sector". Furthermore the Government had agreed that it would "not make any pricing decisions but shall make full use of the regulatory mechanism to ensure that prices in the sector recover all costs, allow a reasonable profit, and are equitable to all stakeholders in the sector[9]. However, by the end of the project, neither the regulatory framework nor the pricing policy was functioning in a way that would support these objectives. The Government's commitment to the agreed reforms varied with the changes in the management of the line ministry.

5.3 Factors generally subject to implementing agency control:

5.3.1 **Factors Generally Subject to Implementing Agency Control.** Tazama had control over the timely rehabilitation of the pipeline and the establishment of sound technical, financial, and managerial capacity to sustain the viability of the investment. However, the company only had partial control over the finances necessary to complete the rehabilitation. During project implementation, Tazama failed to service its previous loans to the EIB in a timely manner. However, ZNOC was in arrears on its payments to Tazama. These arrears eroded Tazama's financial condition and the extent to which the company could meet its operating expenses and other financial obligations. However, Tazama was not timely in meeting its obligations when it had full control either. For example, after EIB resumed disbursements and Tazama completed the evaluation work, the company was not consistent in its management of the consultant responsible for processing the bidding documents. This resulted in a long delay in finalizing the bidding documents for the pipeline components following the completion of the technical investigation. Tazama also had to redo the bidding documents for the Ndola crude oil storage tank as the initial design did not adhere to the specifications agreed during appraisal. Some procurement delays were caused by factors outside Tazama's control, such as the need to repackage some contracts because of co-financing considerations. Furthermore, Tazama delayed filling key line manager positions. Two managers left the project reportedly because they did not have the autonomy to do their job effectively.

5.3.2 For the MEWD, the factors under its control were the timely completion of key studies and the development of a technical capacity to develop the detailed policy and institutional framework to support the Government's sector development policy. The only study completed concerned detailed recommendations for setting up the Technical Cell. However, the Ministry had not created this unit by the end of the project. The weak project implementation arrangements at the Ministry contributed to the lack of progress. The Energy Regulatory Board, though established, was not functioning as intended -- it was supposed to be an ex-post review board for prices set by the individual oil marketing companies. Instead, the Government continued its ex ante involvement in price determination, which was contrary to the concept of liberalization, as intended in the project agreements.

5.3.3 ZNOC had control over procurement, refining and transport and storage of petroleum products. It procured the feedstock through Tanzania and contracted with: Tazama, to transport the feedstock to Zambia and with the Indeni Refinery for processing. It also sold the products to the private OMCs, which were in charge of marketing and distribution. However, the company did not make timely payments to Tazama for the use of the pipeline and thus eroded Tazama's financial situation. ZNOC's failure due to its financial problems to ensure stable availability of crude oil in the pipeline delayed the "intelligent pigging" operation.

5.4 Costs and financing:

5.4.1 **Costs and Financing.** At appraisal, the total estimated project cost was US$48 million. Due to the cancellation of the project's major components, the actual cost was about US$19 million, or 40 percent of the total estimated at appraisal (Annex 2). The project's co-financier, the European Investment Bank, financed most of the cost (US$ 13.9 million) which mainly supported the intelligent pigging operation and the Ndola and Dar es Salaam terminals at each end of the pipeline. Compared to appraisal estimates, EIB financed about 93 percent of the amount anticipated at appraisal. The Bank financed about US$5 million out of an estimated US$30 million at appraisal. Most of Bank funds supported technical assistance for the institutional strengthening of Tazama and the MEWD.

Endnotes to Section 5:

[8] In fact, Tazama's only customer is ZNOC, which transports the imported crude oil for processing at the Indeni Refinery.

[9] Quotations from the Government's Letter of Energy Development Policy, 1994.

6. Sustainability

6.1 Rationale for sustainability rating:

6.1.1 **Rationale for Sustainability Rating**. The project's achievements were minimal with respect to objectives and most of the project's components were canceled. Thus, the sustainability of the objectives, within the context of the project, is unlikely.

6.2 Transition arrangement to regular operations:

6.2.1 **Transition to Regular Operation**. Because the Bank canceled the project due to the lack of sufficient commitment from the Borrower and non-compliance with key covenants, there are no transition arrangements within the context of this project. However, the Fiscal Sustainability Credit (Cr. 3392-ZA), which was approved in June 2000, will continue to address the major policy issues in the petroleum sector.

6.2.2 In May 2000, the Government agreed to offer for sale the majority controlling interest in the Indeni refinery, the Tazama pipeline, and the Ndola product terminal as a package. The partner taking the controlling interest would determine whether or not the pipeline would operate with crude oil or refined products. The Government also agreed to take steps to liberalize petroleum product prices and approve open access to the pipeline and other common facilities in the sector to all licensed marketers. The Bank agreed to an increase in the amount of the Fiscal Sustainability Credit to fund the remaining rehabilitation of the Tazama pipeline if the above conditions were met.

6.2.3 Although imports and pricing have not yet been formally liberalized, after the fire at Indeni in mid-1999, the Government allowed the private oil marketing companies to import petroleum products. It also did not enforce price ceilings during the period when the refinery was being repaired. As a result, ZNOC's market share has declined from 100% to around 10%. Currently, at least one company imports crude oil through the Tazama pipeline, which has only recently resumed operations.

6.2.4 In early 2001, the Government further defined its action plan for sector reform under the Fiscal Sustainability credit:

- Government will notify the private sector oil marketing companies that they are free to import crude oil as well as petroleum products. Licenses to do so will be given by ERB, provided a set of transparent criteria are met.

- Government will abolish ex-ante price setting by ERB. ERB will agree on a transparent pricing formula with the oil marketing companies and will monitor prices on an ex-post basis using this formula.

- Representatives of OMCs and ERB will establish a committee to manage importation of crude oil through the TAZAMA pipeline.

- ZNOC will cease its involvement in importation, marketing, and distribution of crude and of petroleum products.

- Government will reduce its shareholding in Indeni to no less than 50%, and a private company will continue to manage the refinery.

- Government will offer the TAZAMA pipeline for sale and/or give it out in long-term concession to private sector operators through a transparent and competitive bidding process.
- Government will offer the Ndola storage tank for sale and/or give it out in long-term concession to private sector operators through a transparent and competitive bidding process.
- The TAZAMA and NDOLA tank concessions could be packaged as one and given to a single operator.
- ZNOC will maintain strategic stock, which role it could perform by contracting with a private operator.

6.25 Most recently, the Government, through the Zambia Privatization Agency, advertised for expressions of interest from consulting firms to review the sector structure, propose suitable privatization options, and to carry out the privatization transactions. However, the process of engaging these consultants seems to have slowed down recently. ERB has completed a study on the oil marketing companies' cost structure, which it intends to use as a basis for price monitoring (Cr. 2406 – PIRTA financed this study).

7. Bank and Borrower Performance

Bank
7.1 Lending:

7.1.1 **Lending**. The Bank's identification of the project overall was satisfactory. The focus of sector reform and the physical objectives on infrastructure rehabilitation was consistent with the Government's investment policy and the Bank's country assistance strategy, which was giving a high priority to investments for improving infrastructure and the environment, as well as private sector development.

7.1.2 The Bank's assistance to the Government in preparing the project's physical components was satisfactory. They were clearly defined and based on a thorough analysis of the pipeline's rehabilitation needs. The SAR also documented the project's environmental aspects and indicators to monitor performance. The preparation of institutional development and restructuring components appears unsatisfactory for several reasons:

7.1.3 First, the omission of the refinery from project scope was a weakness in project design. During project preparation, the Bank brought the uneconomic operation of the refinery to the Government's attention and believed that the closing of the refinery and the return of the pipeline to its original use -- the transport of petroleum products instead of crude oil -- to be key features of improved efficiency in the petroleum sector. Furthermore, interviews with the project's engineer during ICR preparation indicated that the transport of crude oil instead of petroleum products had been a factor in the deterioration of the pipeline. However, the Government did not want the refinery issue to be part of the project. The Bank seems to have agreed to this reluctantly. Early in the project's implementation, Bank staff brought up the issue again and used calculations that indicated the refinery was uneconomic. The mention of the refinery issue at one point caused some strain in relations with the Government. Since the economics of the refinery were questionable and there were indications that its operation was likely a factor in the deterioration of the main infrastructure the project addressed, with hindsight, it appears that the omission of any component related to the refinery was a deficiency in project design.

7.1.4 Second, the SAR contained no explicit account of lessons the Bank had learned from projects in Zambia and from similar petroleum sector rehabilitation projects in other countries. The report does mention a problem in financing an earlier Credit the Bank had negotiated with the Borrower for meeting the same physical objectives as the project under review. This previous project never received Board approval because the Bank suspended all IDA assistance to Zambia in 1987. However, it does not elaborate on the reasons for suspension and it draws no lessons from this experience and does not mention, in the section on project risks, the prospect that a similar situation might recur. This was an omission since a fundamental problem in the Government's operations and its relationships with cofinanciers remained unresolved. And a similar situation did in fact recur. The EIB withheld disbursements for a key component of the project due to arrears in Government payments on loans and the Bank stopped disbursements due to unsatisfactory project performance.

7.1.5 Third, interviews with staff involved in the project's appraisal suggested that the desire for taking the project to the Board by the end of fiscal year 1994, combined with the urgent need for pipeline repairs greatly affected the extent to which the necessary institutional framework for the project -- which required Government making fundamental changes in the structure of the petroleum industry -- could be in place prior to Board Approval. With hindsight, the project's design was too optimistic about the pace of the

Government's reform program and left too much of policy/institutional framework to be done after Board Approval -- prior to effectiveness and during the project. The project's original design essentially made the private oil marketing companies the key agents of change in the sector. The preparation and appraisal of the project included discussions with these companies. However, as noted earlier, these companies were not parties to any project agreements and the SAR did not provide enough information to suggest their willingness to enter into a number of new contractual arrangements with public sector companies. The project was thus not ready for implementation at the time of approval. Appraisal staff seem to have acknowledged this in a section of the appraisal report entitled "Systematic Client Consultation". This section of the report states that ".....The project will make a serious effort to listen to the beneficiaries of the credit and to adjust project components based on feedback received.....". While this mechanism was important to the relationship with the beneficiaries, it could not make up for fundamental problems in project design.

7.1.6 The project's appraisal showed reasonable evidence of Government commitment and provided a reasonable economic analysis of investment components. However, with hindsight the Bank and the Borrower did not have a consensus on priorities in terms of detailed actions for meeting sector objectives. Furthermore, the Staff Appraisal Report provided no assessment of institutional and restructuring risks. Considering all of the above factors, the ICR has rated appraisal overall as unsatisfactory.

7.2 Supervision:

7.2.1 **Supervision.** The Bank's performance in supervision was mixed and it could not overcome the design problems nor the Government's wavering commitment to the project's objectives. Generally, the Bank, adhered to the supervision plan of fielding at least two missions per year[9] and gave sound technical, economic, and financial advice according to internationally accepted economic criteria. Although the project was supervised by five task managers from appraisal to closure, the continued participation of the petroleum engineer involved in appraisal gave the project a significant continuity. The staff of the Resident Mission handled financial management issues and procurement review. The Bank adequately reported on implementation progress and promptly brought problems to the Government's attention. Also, the project record shows that the Bank tried to improve on the deficiencies in project design by retroactively developing performance indicators and modifying components to the evolving needs of the Borrower. While the Bank was flexible in amending conditionalities and extending deadlines to accommodate the Government's needs, it remained firm about adhering to the project's objectives. In particular, the Bank would not compromise on the need for a viable institutional framework to sustain project investments to which the Bank was making a sizable contribution (US$30 million).

7.2.2 Recognizing the importance of the project to Zambia, the Bank had an intensive dialogue with the Borrower on implementation issues. It also offered finance additional assistance to addressing policy issues, such as the petroleum sector regulatory framework and reviewing the merits of different oil supply options. After Board approval, the Bank assisted the Government in preparing the arrangements for the establishment of the consortium of Oil Marketing Companies (OMCC) and the contract for the storage facility - it appeared at that time that the Government and the oil marketing companies were making serious efforts to come to an agreement. During the intermediate years, while the technical evaluation of the pipeline was ongoing, both the Government's and the Bank's efforts seem to have focused more on the privatization of the Zambia Consolidated Copper Mines (ZCCM) and the preparation of the Power Rehabilitation project, the first power sector operation in Zambia in 20 years (approved in February 1998).

7.2.3 The Bank first discussed the possibility of a cancellation or restructuring in late 1997. However, in early 1998, the project's performance appeared to be improving. Government took actions that suggested progress on two key policy issues. First, the Government notified the Bank of its intention to liberalize the retail prices of petroleum products by April 1998. It sent the Bank a copy of a letter addressed to the oil marketing companies informing them of the forthcoming liberalization. Second, in May 1998, the Government confirmed its acceptance of the management contract for Tazama and the draft terms of reference the previous supervision mission had prepared. The impression of improvement was reinforced with the completion of the technical evaluation of the pipeline in July 1998. However, in November 1998 the Government instructed the oil companies not to deviate from the prices the Government had set. Subsequently, the March 1999 deadline for the conclusion of the management arrangement passed without any action from Government's side. As a result of these set-backs the Bank's management, in December 1998, decided to temporarily postpone no-objections to the issuance of bidding documents until the next mission, which was scheduled for January, had clarified how the Government intended to continue implementing the project, including how it planned to address policy issues. This action was necessary because of the major uncertainties about the project's way forward. Following this manager-level mission in January 1999 to discuss the implementation problems, the Bank, in February 1999, notified the Borrower of its noncompliance with credit covenants and proposed a mutual cancellation of the project. A second management-level mission visited Zambia in June 1999 with the objective of seeking agreement with the Government on a course of action. During this mission, the Government indicated its lack of agreement with key actions required for satisfactory implementation. In July 1999, the Bank warned the Borrower of disbursement suspension for noncompliance with key agreements and in October 1999, the suspension went into effect. The Bank canceled the project in April 2000.

7.2.4 The main weaknesses in Bank performance during supervision were: declaring the credit effective even though the Borrower had not met a key condition; being too accommodating of Government's requests and thus allowing the unsatisfactory status to continue for too long without proposing restructuring or cancellation; and failing to adequately back-up the project with a strong dialogue at the macroeconomic level. However, the Government also made things difficult by insisting going back on its commitments as it requested the removal of major policy covenants that were the foundation of the project. Furthermore, it was not until after four years of project implementation and the warning of suspension that the Government indicated its lack of agreement with key actions required for satisfactory implementation. Given the impasse in discussions toward the end of the project and the lack of institutional progress, there was no adequate mechanism in place to ensure the viability of investments in the Tazama pipeline. Therefore, the Bank's decision to cancel the project was appropriate.

7.3 Overall Bank performance:

7.3.1 **Overall Performance**. The Bank's overall performance was unsatisfactory because: (i) the Bank, in preparing and appraising the project, did not take sufficient precautions to ensure the project would be ready for implementation; and (ii) it declared the credit effective without the Borrower's meeting an agreed condition-- the creation of a consortium of private oil companies that would play a major role in meeting the project's institutional objectives. At the time of effectiveness, the Bank had a chance to modify the condition, instead of abandoning it altogether; for example, it could have created a dated covenant. Instead, the Bank agreed to the Government's proposal of a management contract arrangement for the storage facility. However, this arrangement resulted in only a marginal degree of reform and did not significantly increase private sector involvement in the sub-sector. These initial decisions hampered subsequent supervision of the project, but the Bank also allowed the unsatisfactory status to continue for too long. The Bank's performance improved towards the end of the project and the decision to cancel it turned out to be a catalyst for dialogue with the Government for the development of a new project addressing similar objectives that the canceled project could not achieve.

Borrower
7.4 Preparation:

7.4.1 **Preparation.** The preparation of the technical components was satisfactory. However, it seems that the institutional and restructuring components did not have sufficient preparation. While the Government, in its Letter of Development Policy, showed a commitment to efficiency in the supply of petroleum products, it supported the inefficient operations of the refinery -- a key link in the supply chain for petroleum products. Also, the Government committed itself to institutional changes, such as the contract management of Tazama, which it ultimately was not prepared to support. Therefore, the ICR has rated the Borrower's preparation as unsatisfactory.

7.5 Government implementation performance:

7.5.1 **Implementation.** The implementation performance of the Government overall was unsatisfactory because it never fully "took ownership" of the project; that is the Government did not take the lead in keeping the project on track as an important vehicle for advancing the goals stated in its Letter of Sector Development Policy. In particular, it also did not convey a sense of urgency to complete the rehabilitation of the pipeline to avert safety and environmental problems as well as provide a greater income for Tazama. During the entire implementation period of nearly four years, the project's implementation consistently received an unsatisfactory rating.

7.6 Implementing Agency:

7.6.1 **TAZAMA.** Tazama's performance during preparation was satisfactory. During implementation its procurement performance was generally satisfactory. The overall performance of Tazama is rated unsatisfactory, however, because it did not make best use of institutional strengthening assistance provided under the project.

7.6.2 **ZNOC.** The ICR has rated its performance overall as unsatisfactory because of its long delay in the payment of funds to Tazama; this delay undermined the timely rehabilitation of the pipeline and Tazama's financial position.

7.6.3 **MEWD.** The performance of the Ministry of Energy and Water Development was unsatisfactory because: it did not put in place adequate project implementation arrangements; it delayed implementing technical assistance components; and the fact that by the end of the project a fully functioning regulatory system and pricing policy, as agreed with the Bank, was not in place.

7.7 Overall Borrower performance:

7.7.1 Overall borrower performance was unsatisfactory for the above reasons.

Endnotes to Section 7

[9] Except in 1998, at which time it seemed the project performance was improving, despite the unsatisfactory rating.

8. Lessons Learned

Project Preparation and Appraisal

- The project has shown that leaving a critical part of the petroleum supply chain, the Indeni Refinery, outside the scope of the project, contributed to the delays in the technical evaluation of the pipeline and to Tazama's financial problems. Because Indeni experienced frequent shutdowns, the pipeline could not maintain the steady crude flow that was required for moving the mechanical pigs. Because the OMCC did not materialize, the project also left ZNOC outside its scope. ZNOC's financial difficulties during implementation seriously affected Tazama's financial situation and contributed to delays in the technical evaluation of the pipeline.

- If a project's implementation progress depends on key actions of private sector companies that are not parties to the project, it is important that these actions take place before Board Approval. In this project, the private oil marketing companies were ultimately not prepared to enter into the envisioned contracts with the public sector entities. This significantly affected the achievement of objectives. A similar project in Tanzania indicated that including the private oil marketing companies as project beneficiaries can improve implementation and the achievement of development objectives.

- If a petroleum sector project requires major institutional changes, it is important to have a comprehensive risk assessment with possible mitigation measures and contingency plans. Borrower commitment to institutional changes in particular must be carefully assessed at appraisal. As evidenced by this project, without full ownership, the Borrower is a weak and ineffectual partner in implementing such changes.

Project Supervision

- The long delay in effectiveness led to the need for another technical evaluation of the pipeline. This delay was unfortunate, as it postponed implementation of the investment components and diminished the implementing agencies' and the Bank's enthusiasm for the project. This shows the importance of designing projects to minimize effectiveness delays.

- The Bank needs to encourage the Borrower to express its views more and the Bank should make a special effort to incorporate these views formally into the reporting system. This may help the Borrower take greater ownership of the project. It is important for the Government to assume full responsibility for the project and take actions based on its belief that the project is a priority and will do some good for the country, not to merely fulfill conditions.

- A solid policy dialogue as part of the Bank's overall macroeconomic framework should support a petroleum sector investment project with ambitious institutional reform objectives. A comparison of this project with a similar project in Tanzania, which achieved its main development objectives, illustrates this issue. In Tanzania, the Bank's policy dialogue put petroleum sector reforms high on its agenda and designed railway and ports modernization projects to support these reforms. However, even with this approach, sector reforms were slow. In Zambia, this policy dialogue is now being strengthened under the Fiscal Sustainability Credit.

- An objective criteria for restructuring a project or cancelling a project, defined at the outset, could have helped clarify the relationship between the Bank and the Borrower, facilitating supervision.

- Project cancellation was a beneficial action for both the Bank and the Borrower, serving as a catalyst to new dialogue and the development of a more effective vehicle for meeting sector objectives.

9. Partner Comments

(a) Borrower/implementing agency:

A. Comments from the Ministry of Finance and Economic Development:

Kindly refer to the draft Implementation Completion Report (ICR) that you submitted to the Government for comments and suggestions before the document is finalized. Let me take this opportunity to commend your staff for their efforts in preparing this important report. The lessons from the failure of this project should help us all to focus on our shortcomings in the design and implementation of future interventions in this important sector in particular, and the country portfolio in general. On the issues raised in the report, let me highlight some of my concerns with the report.

1. Institutional Reform

The institutional and private sector development was not well thought out in the project. The objectives for greater railway use in transporting oil products depended on the investment by the private Oil Marketing Companies Consortium (OMCC) in loading/off-loading facilities at the Lusaka terminal to complement investments at Ndola terminal, which were to be undertaken by the project. The belief that the OMCC would be established, and make such investments required at the Lusaka terminal was a serious misplacement of trust in third parties which the Government had advised against. It was safer if these investments had been included in the project.

We have consistently argued that the OMCs have not been willing to bear any further costs, including such risk of importation of the crude oil apart from lifting the finished petroleum products from the terminal in Ndola to their pumps. This can also been seen from the fact that the OMC have not taken advantage of the equal access to the pipeline as advised by IDA to import their own feedstock despite being allowed to do so.

2. TAZAMA Pipeline Rehabilitation

Rehabilitation was the cornerstone of this project. Despite the efforts made by European Investment Bank (EIB) to complete the identification of areas of the pipeline that needed rehabilitation by intelligent pigging, the project was unfortunately canceled. It will require further investments in this identification exercise again due to the time elapsed, as the pipeline is likely to have deteriorated further in order to effectively utilize the US$20 million under the Fiscal Sustainability Credit.

Further bottlenecks that affected implementation of the various components of the project surfaced mainly from the World Bank's rigidity on the sequencing of implementation of these components. There were contracts that could not be initiated. The reason the Bank gave was the core purpose of the project i.e. pipeline rehabilitation had not been completed despite their not being in the critical path of the rehabilitation exercise. These included all phase four contracts : (i) Supply of Equipment & Motor Vehicles; (ii) Supply & Delivery of 12 Seater Marine Tug Boat; (iii) Supply of 20 Ton Jib Crane; (iv) Supply & Delivery of 1 No.10 Ton general purpose truck; (v) Supply & Delivery of 1 No. excavator tractor; and (vi) 1 No. Low Loader Horse and Trailer. *(IDA's Response: The IDA credit financed the above contracts and Tazama received the equipment early in the project's implementation.)*

3. Factors Outside the Control of Government and the Implementing Agency

Under this heading the report refers to Indeni Oil Refinery Limited as the only customer for TAZAMA Pipeline Limited. The only customer for TAZAMA Pipeline Limited is actually ZNOC, which transports the imported crude through the pipeline for processing by Indeni Oil Refinery Limited. ZNOC therefore has separate contracts with TAZAMA Pipeline Limited for transporting and with Indeni Oil Refinery Limited for processing the crude oil (*the ICR has incorporated this comment*).

The repair of Indeni Oil Refinery Limited after the fire had commenced when the World Bank came to suggest that we convert the pipeline to product mode. It would have been unfortunate to abandon rehabilitation with financing from insurance that had already commenced. Furthermore, the Government has always maintained that adequate studies had been undertaken before the pipeline initially designed to transport finished products was converted from transporting finished products to crude oil. The basis of conversion remains valid today as it was then. The Bank's continued to argue otherwise is most unfortunate. It is important here to mention that petroleum products for Zambia as a landlocked country are looked at as a strategic resource, and the Government has consistently maintained the importance of maintaining a presence in the sector (*IDA's response: the fire at Indeni was in May 1999 and the Bank mission visited Zambia and the refinery in June 1999. Rehabilitation of Indeni had not started at the time of the Bank's mission*).

4. Financial Condition of TAZAMA Pipeline Limited

To improve the financial condition of TAZAMA Pipeline Limited, the Bank's supervision mission specified an action plan for financial improvement, which included clearing all arrears that ZNOC owed to TAZAMA Pipeline Limited and preparing an action plan to improve the company's financial position, and establishing a robust payment mechanism that would ensure TAZAMA Pipeline Limited's full and timely remuneration for its services. The repayment of outstanding arrears was achieved, and further efforts to improve the financial position of the company included the rationalization of centering on reducing staff both at senior management level as well as excess operational staff.

However, the establishment of a robust repayment mechanism was not achieved as the project closed before Indeni Oil Refinery Limited became operational. The Government had in preparation for this, allowed equal access to TAZAMA Pipeline Limited by all OMCs to import crude, and a payment mechanism to be used when Indeni Oil Refinery Limited became operational was developed with the aim of ensuring full timely remuneration for services. However, this mechanism was not tried as the project was canceled before Indeni Oil Refinery Limited became operational again.

5. Government Implementation Performance

Government implementation performance has been rated as unsatisfactory as it did not fully take a lead in the implementation. It may be important to mention here a number of concerns in the project that the Government repeatedly raised. In particular, the Government Coordination had no logistical support such as transport, requisites and other operational expenses. No resources were devoted to the basic requirement by the project to ensure that the Government could put in place a team to spearhead the activities of the project. This resulted in the coordination function being relegated to a part-time function, over and above the incumbents line duties which resulted in the general lack of proactivity in executing the required duties. This definitely had a negative effect on the project in terms of the leadership of the activities of the project (

IDA's response: the ICR agrees that the coordination function was inadequate. However, the agreed financing plan for the project included $300,000 co-financing from Government to develop capacity at the MEWD, but it appears that these funds were not made available to MEWD).

The lack of urgency in the rehabilitation cannot be attributed to the Government as this fell under the management of the implementation agency, TAZAMA Pipeline Limited (*The ICR argues that the Government had control over many of the factors that delayed the technical assessment of the pipeline - for instance it could have ensured that ZNOC has the financial means to maintain an adequate level of feedstock in the pipeline during the assessment's period. The Government could also have prevented Tazama from accruing arrears to EIB and thus prevented EIB's suspension of its credit*).

6. MEWD Implementation Performance

The MEWD had difficulties in implementing the technical assistance (TA) as a result of lack of an implementation unit, which should have a full-time basis spread headed this component. The Bank was unwilling to see things the Government's way.

An act of law, and the establishment of the operational Energy Regulatory Board (ERB) set up the regulatory system. However, the failure to implement the TA by MEWD, which included training for ERB as well as lack of logistical support from the project, also affected this. A lot of ground has been achieved by ERB with support from CR. 2406 – PIRTA. This included training of staff members as well as logistical support. They have already finalized the study of the cost structure of petroleum product to facilitate ex-post review of liberalized petroleum prices.

Generally, the structuring of the petroleum sector still remains an important challenge in the development of Zambia since not much was achieved by the project. While we hope that the critical policy evolution for the sector will be enhanced by conditions of disbursement under the Fiscal Sustainability Credit, the general management for rehabilitation will not be undertaken, as it would have happened in a project environment with the technical supervision that the Bank provides. I still hope that these outstanding requirements will be dealt with.

Finally it is essential to understand that the failure of the project was equally to IDA's insensitivity to Zambia's strategic interests inadequate technical data to convince Government of the rationale for some of the reasons behind these reforms and third party assumptions. The design of the project was far from satisfactory. (*The ICR maintains that the Government had agreed to the reforms described in the Development Credit Agreement and which were pursued under the project. No reforms were added to the project's scope during implementation. The review of the Indeni Refinery was in line with the SAR.*)

B. Comments from TAZAMA Ltd.

TAZAMA Pipeline Rehabilitation:

1. **Pipeline Rehabilitation** – "125 cubic meters per year........." to read "125 cubic meters per hour...." (*the ICR has incorporated this comment*).

2. **Improving Tanks Farms.** The cancellation of financing by European Investment Bank (EIB) left the project component in the following unfinished status (*the ICR has incorporated this comment*):

Dar es Salaam	-	Tank 2 bottom plate and floating roof demolished and left unusable
	-	One tank at 90 percent completion but unusable
	-	One tank untouched
Ndola Tank	-	At 80 percent completion but unusable

In all, not a single tank covered by the components has been completed and put to use.

3. **Item 5.1.1. Factors Outside the Control of the Government and the Implementing Agency**:

The sentence reading, "Furthermore, the Bank envisaged that it would take only 2-3 months to prepare the pipeline for product transport compared to 7-8 months for the repair of the Refinery" is misrepresentative of facts. While it may be correct to assume that the pipeline can be prepared for product transport while the Refinery is in operation, the situation became more complicated once the refinery went down.

Conversion of the pipeline while the refinery is on stream assumes an immediate pump down of products while the refinery continues to process the dead stock crude oil, including the interface until the pipeline is fully cleaned for products transportation. With the refinery down, the only viable solution was to pump the dead stock crude oil back to Dar es Salaam. TAZAMA did an analysis for the Bank, which highlighted problems inherent with this approach (*document available in Project Files*).

Given all this, it was and still is TAZAMA's view that conversion of the pipeline to transportation of products is easy and most viable if done while the refinery is on stream. While it can also be done under refinery shutdown condition, the exercise becomes costly and will take not less than one year to complete – not 2 to 3 months as envisaged by the Bank (*the ICR has incorporated this comment but it notes that the refinery was in-operational for more than one and a half years after the fire*).

4. **Item 5.3.1 – Factors Generally Subject to Implementing Agency Control**

4.1 Processing of bidding documents

The Project consultants had the bid documents for the pipeline ready long before the intelligent pigging exercise was completed. However, they needed the pigging results before they could finalize them. When the results were finally sent to them, it was during the traditional vacation period of Israel and Europe resulting in a delay of 2 months in completion of the final bid document. Anyhow, this cannot be the reason for not completing all the IDA funded components, let alone, the pipeline component. It is obvious that the Bank had already taken a decision not to progress any of the components, unless and until Government had made movement on the sectoral institutional reforms. A lot of clearances to enable the various components' progress were withheld by the Bank for over a year before the credit was finally suspended and later canceled. (*The Bank responds to this comment as follows: The Bank warned the Borrower of non-compliance with credit covenants and proposed the cancellation of the project in February 1999; it suspended project disbursements in October 1999; and canceled the project in April 2000. It was not possible to process procurement matters during this period when the project's way forward was uncertain. The ICR has incorporated this response in section 7.2.3*).

4.2 Line Managers

On the issue of line managers, the problems started at the early stage of defining their job descriptions and reporting relationships, which was done by TAZAMA Pipelines Limited and the Bank before recruitment. After TAZAMA managed to get at least three candidates for each of the jobs, two of them, one for operations and one for maintenance told the interviewing panel they would not be taking up the positions if selected for reasons of reporting relationships. Even after the selections and commencement of duties, there was a lot of resistance to the reporting relationship which in TAZAMA's view was the main cause leading to two of them leaving the project. The autonomy talked about refers to this problem. Even their replacements had a similar problem though their major one according to TAZAMA related to their inability to produce results. TAZAMA considers the exercise of having line managers a waste of resources and opportunities as approximately US$1.1 million of project funds was spent on them, without achieving the desired result as required by their respective job descriptions.

The job descriptions called on them to evaluate and update operating and maintenance systems thus:

a. Operations manual
b. Maintenance manual
c. New organizational charts with job specifications for each position
d. Guidelines for stores and materials management
e. Environmental guidelines
f. Training programme in line with new organization chart
g. Financing and accounting manual
h. Procurement guidelines
i. Delegation of authority
j. On the job training of subordinate staff

Up to the time of conclusion of the contracts, only a feeble effort was made by the Operations Manager on the operations manual. While milestones were set for completing the assignments and the Bank supervisory team was informed of the lack of achievement by line managers, the Bank's task team leader of that time, rather than resolve the matter resorted to holding separate closed door meetings whereupon he was told by the line managers of the lack of autonomy. From then on, the managers became unmanageable by TAZAMA until they left as they believed and behaved like they were only answerable to the Bank. It is TAZAMA's view therefore that the non-achievement of the line management function should be apportioned equally to TAZAMA and the Bank (*the ICR argues that Tazama should have utilized the line managers better and in accordance with the project agreements*).

(b) Cofinanciers:

Comments from the European Investment Bank (EIB):

Detailed comments:

Ad 4.2.1 (second paragraph on "tank farms"): It is questionable whether this output can be considered substantially achieved. Although most of the works on the tanks have been physically completed, it remains that the tanks cannot be used unless the works are finalized. It would be more appropriate to state that although the physical works are substantially achieved, the output/objective is not. We would agree with TAZAMA's comments on this point.

Ad 5.2.1 (Factors Generally Subject to Government Control): The way the paragraph is worded, the reader could get the false impression that EIB's suspension of disbursement was the major cause delaying the pipeline's rehabilitation. In fact EIB only suspended disbursements (due to non-servicing by the

Government/TAZAMA of a previous loan to TAZAMA) for a couple of months end-1998. Other factors probably had a much larger impact on the overall delay of the project. One is the non-compliance of the Government with the conditions on sector reform. This has in turn delayed the tender procedure for the IDA-funded pipeline rehabilitation (Contract 4(a)), even though the intelligent pigging results were available in December 1998.

Ad 5.3.1 (Factors Generally Subject to Implementing Agency Control): Again, too much weight is given to the couple of months interim suspension of disbursements by the Bank. The same arguments as for 5.2.1 hold.

General comments:

1. Subject to the few remarks made above, the report gives a fair picture of this very complex project.

2. It is probably fair to say that the two major causes for the project's failure have been over-ambitious sector policy conditions and a lack of commitment and ownership from the promoter's side. With a less ambitious project, Zambia would most likely have been better off than at present.

3. To achieve its ambitious targets, the project had numerous conditions for loan effectiveness on the side of the World Bank, and consequently on EIB's side, due to loan cross-conditionality. Some conditions required significant structural changes in the sector, which in the end did not materialize. As a result, the project became very complex. In the end, none of the major project components has been fully implemented or is operational today. The project failed its main purposes, i.e. to restore the technical viability of the pipeline and to improve the crude storage logistics.

4. Although the decision to suspend EIB disbursement was justified on cross-conditionality grounds and to increase the WB's leverage in encouraging the Government to implement its sector reform programme, it would probably have been preferable to finish the construction works on the tanks. As it stands today, the promoter has substantial new debt resulting from the project without being able to operate the items financed. Additionally, the unfinished installations and the material available to finish the works suffer in the meantime from significant corrosion.

(c) Other partners (NGOs/private sector):

10. Additional Information

Summary of Petroleum Sector Structure before and after the Project

	Before the Project	**Expected Based on the Appraisal Report's Design**	**Based on the Design Modified during the Project**	**Actual Situation at the end of the project**
Oil Procurement and Ownership	*ZIMOIL*, the petroleum procurement and supply division of *ZIMCO*	*ZOC* to sell the refinery feedstock, to a Consortium of private Oil Marketing Companies, at the Dar es Salaam terminal.	*ZOC* renamed *ZNOC*, to retain ownership of the feedstock.	*ZNOC* and *oil marketing companies*
Ownership and Operation of Storage Facilities	*ZIMOIL*	*Oil Marketing Company Consortium* to take over the ownership of storage facilities prior to Credit effectiveness.	*ZNOC* through a management contract with a qualified firm. Oil Marketing Companies to lease the facilities from ZNOC.	*ZNOC* ownership and operation by the *Indeni Refinery*.
Refining	*Indeni Refinery* processed the feedstock procured by *ZIMOIL*.	*Oil Marketing Companies* according to a contract with Indeni which includes improved refinery performance.	*Indeni Refinery*, in contract with ZNOC	*Indeni Refinery* in contract with ZNOC and oil marketing companies.
Transport from Dar es Salaam to Zambia	*Tazama* pipeline transported the refinery feedstock from Tanzania to the *Indeni Refinery*.	*Tazama* in contract with the private Oil Marketing Companies, with improved performance standards.	*Tazama*, in contract with ZNOC	Same as in the modified design.
Marketing and Bulk Transport within Zambia	*Oil Marketing Companies*, using mainly road transport, at a higher cost than rail transport.	*Oil Marketing Companies* in contract with the *Zambia Railway*, with improved performance standards.	Same except improved performance standards not included.	The *Tazama* pipeline was not operating because Indeni was being repaired after a fire. ZNOC and the oil marketing companies were procuring petroleum products and transporting them by road at higher cost than before the project.

Pricing	*ZIMOIL* fixed wholesale prices. Marketing margins revised from time to time through negotiation.	Progressive deregulation, leading to removal of all retail pricing controls by the end of 1996.	The date for removal of retail pricing controls postponed.	Prices controlled by *Energy Regulatory Board* (ERB).
Regulation	*ZIMCO* was regulating the sector pending the establishment of an autonomous Energy Regulatory Board.	The establishment of an autonomous *Energy Regulatory Board*, responsible for ex-post review of prices.	Same as in the original project design.	*Energy Regulatory Board* has been established but it is conducting an ex-ante review of prices.

Annex 1. Key Performance Indicators/Log Frame Matrix

Outcome / Impact Indicators:

Indicator/Matrix	Projected in last PSR[1]	Actual/Latest Estimate
Implementing Agency - MEWD		
i) Adequate regulatory and monitoring framework	Not achieved.	Not achieved by project closing
ii) Establishment of a qualified Technical Cell at the MEWD addressing sector policy, reform and pricing issues and monitoring petroleum operations by 1999	Not achieved.	Not achieved
iii) Abolition of all controls on retail petroleum prices June 1998	Not achieved.	The Government did not fully liberalize retail prices during the project's implementation and this was one of the key reasons for Bank's cancellation of the project
iv) Petroleum Sector Institutional Review carried out by project midterm review and action plans implemented by 2000	Not achieved.	Because of long effectiveness delays, the planned mid-term review did not take place in 1996. At project closing the Government had not taken adequate measures to meet its commitment to sector reform
Implementing Agency - TAZAMA		
i) The length of poor cathodic protection reduced from 470 km to 0 km by 1999	Not achieved.	Not achieved Pipeline rehabilitation did not take place under the project
ii) Operating losses reduced to 0.3% of volume handled by 1999	Not achieved.	Not achieved
iii) Pipeline will be able to operate at its maximum capacity (not less than 110 cum per hour) for not less than 345 days per year	Not achieved.	Not achieved
iv) TAZAMA's financial and operational performance in line with performance indicators in Management Contract (specific targets to be defined when Contract is negotiated)	Not achieved.	Not achieved
Implementing Agency - ZNOC		
i) Operating product losses reduced to less than 0.6 % of product handled at Ndola terminal by 1999	Achieved.	Achieved.
ii) Volume handled by rail substantially increased from 1996 level by 1999	Data not available.	Data not available.
iii) Number of staff reduced from 76 in 1994 to 44 (including management) by 1997 and to 36 by 1998	Achieved.	Achieved.

Output Indicators:

Indicator/Matrix	Projected in last PSR[1]	Actual/Latest Estimate
MEWD:		
Consultants engaged to design Technical cell.	Achieved.	Achieved.
Study on petroleum exports completed.	Not achieved.	Not achieved.
Staff trained.	Marginally achieved.	Marginally achieved.
TAZAMA.:		
Pipeline rehabilitated.	Not achieved.	Not achieved.
Ndola crude oil tank constructed.	80% achieved	80% achieved.
Dar es Salaam crude oil terminal refurbished.	90% achieved.	90 % achieved.
Management strengthened.	Marginally achieved.	Marginally achieved.
ZNOC:		
Oil product depot expanded.	Not achieved.	Not achieved.
Terminal management contracted out.	Achieved.	Achieved.

[1] End of project

Annex 2. Project Costs and Financing

Project Cost by Component (in US$ million equivalent)

Project Cost By Component	Appraisal Estimate US$ million	Actual/Latest Estimate US$ million	Percentage of Appraisal
TAZAMA - Pipeline Rehabilitation	31.50	15.83	52
TAZAMA - Project Management	0.70	1.43	143
TAZAMA - Institutional Strengthening	2.70	1.02	74
ZOC/ZNOC	2.00	0.50	25
MEWD	2.50	0.09	6
Total Baseline Cost	39.40	18.87	
Physical Contingencies	8.60		
Total Project Costs	48.00	18.87	
Total Financing Required	48.00	18.87	

Of the US$48 million, US$45 million was foreign currency cost.

Project Costs by Procurement Arrangements (Appraisal Estimate) (US$ million equivalent)

Expenditure Category	Procurement Method[1] ICB	NCB	Other[2]	N.B.F.	Total Cost
1. Works	21.50 (6.50)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	21.50 (6.50)
2. Goods	13.60 (13.60)	0.00 (0.00)	3.00 (3.00)	0.00 (0.00)	16.60 (16.60)
3. Services Consultancies	0.00 (0.00)	0.00 (0.00)	6.20 (6.20)	0.00 (0.00)	6.20 (6.20)
5. Training	0.00 (0.00)	0.00 (0.00)	0.70 (0.70)	0.00 (0.00)	0.70 (0.70)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Total	35.10 (20.10)	0.00 (0.00)	9.90 (9.90)	0.00 (0.00)	45.00 (30.00)

Project Costs by Procurement Arrangements (Actual/Latest Estimate) (US$ million equivalent)

Expenditure Category	Procurement Method[1] ICB	NCB	Other[2]	N.B.F.	Total Cost
1. Works	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	11.46 ()	11.46 (0.00)
2. Goods	1.93 (1.93)	0.00 (0.00)	0.00 (0.00)	0.55 ()	2.48 (1.93)
3. Services Consultancies	2.45 (2.45)	0.00 (0.00)	0.09 (0.09)	1.89 ()	4.43 (2.54)
5. Training	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
6. Miscellaneous	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.50 (0.00)	0.50 (0.00)
Total	4.38 (4.38)	0.00 (0.00)	0.09 (0.09)	14.40 (0.00)	18.87 (4.47)

IDA disbursements (excl. SA replenishments of about $1 million) were about $4.5 million. This may, however, change depending on how IDA recovers the two outstanding Special Accounts. If Tazama and MEWD refund their respective SAs, the disbursed amount will remain at the above level, but if they provide documentation of eligible expenditures, the amount may increase. The amounts in the above table are based on disbursement data that was available at the time of the ICR preparation.

1/ Figures in parenthesis are the amounts to be financed by the IDA Credit. All costs include contingencies.

2/ Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (i) managing the project, and (ii) re-lending project funds to local government units.

Project Financing by Component
(in US$ million equivalent)

Component	Appraisal Estimate			Actual/Latest Estimate			Percentage of Appraisal		
	IDA	Govt.	CoF.	IDA	Govt.	CoF.	IDA	Govt.	CoF.
TAZAMA	25.10	2.20	15.00	4.38	0.00	13.90	17.5	0.0	92.7
ZOC/ZNOC	2.10	0.50		0.00	0.50	0.00	0.0	100.0	
MEWD	2.80	0.30		0.09	0.00	0.00	3.2	0.0	
Total	30.00	3.00	15.00	4.47	0.50	13.90	14.9	16.7	92.7

Cofinancing came from the European Investment Bank (EIB) and a Canadian Trust Fund for an environmental survey.

Annex 3. Economic Costs and Benefits

Components	Present Value of Flows			
	Economic Analysis		Financial Analysis[1]	
	Appraisal	Latest Estimates[2]	Appraisal	Latest Estimates
Rehabilitation of Loading and Unloading Facilities (IRR)	15.7 percent			
Refinery Investment for efficiency improvement and exports of 75,000 tpy NPV of Costs in US$ 000	1, 081, 360			
Refinery and Efficiency Improvements with no Exports NPV of Costs in US$ 000	1, 091, 134			
Closing of Refinery and Conversion of Crude Oil pipeline for Exports				
NPV of cost in US$ thousand Full Export from beginning of operation Full Export from Year 3 of Operation	 945,898 947, 735			

[1]The SAR for the project did not give a financial rate of return on the major investment components.
[2]The ICR did not do a re-estimate of the economic analysis because the project was canceled before the major investments were made.

Annex 4. Bank Inputs

(a) Missions:

Stage of Project Cycle	No. of Persons and Specialty (e.g. 2 Economists, 1 FMS, etc.)		Performance Rating	
Month/Year	Count	Specialty	Implementation Progress	Development Objective
Identification/Preparation				
June 1986	3	2EC, 1FA		
September 1992	3	2EC, 1CE		
February 1993	3	1EC, 1 CE, 1FA		
Appraisal/Negotiation				
June 1993	4	1CE, 1EIS, 1EC, 1FA		
Supervision				
June 1994	2	1EIS, 1EC		
October 1994	4	1EC, 1ES, 1PE, 1EMS		
February 1995	5	1EC, 1ES, 1CE, 2C		
June 1995	2	2EC		
March 1996		Update of PSR.	U	S
August1996	4	1PE, 1CE, 1PA, 1EC	S	S
March 1997	4	1PE, 1CE, 1EC, 1PA	U	U
August 1997	4	1PE, 1CE, 1EC, 1PA	U	U
March 1998	4	1PE, 1CE, 1EC, 1PA	U	U
January 1999	1	1 SM		
March 1999	2	1 PE, 1CE,	U	U
June 1999	3	1SM, 1EC, 1CE	U	HU
ICR				

SM=Sector Manager, PE=Power Engineer, FA= Financial Analyst, CE=Chemical Engineer, PA= Procurement Specialist EC=Economist, DA=Disbursement Specialist, EIS=Energy/Industrial Specialist, EMS=Engineer/Management Specialist, C=Consultant, ES=Energy Specialist.

The Financial Management Specialist at the Resident Mission provided support on financial matters during implementation. Between 1996-1998, the project was supervised together with the Power Rehabilitation project.

(b) Staff:

Stage of Project Cycle	Actual/Latest Estimate	
	No. Staff weeks	US$ ('000)
Identification/Preparation	78.0	220.6
Appraisal/Negotiation	42.9	148.9
Supervision	142.7	669.8
ICR	6.0	25.0
Total	269.6	1,063.3

Annex 5. Ratings for Achievement of Objectives/Outputs of Components

(H=High, SU=Substantial, M=Modest, N=Negligible, NA=Not Applicable)

	Rating
☐ *Macro policies*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☒ *Sector Policies*	○ *H* ○ *SU* ○ *M* ● *N* ○ *NA*
☒ *Physical*	○ *H* ○ *SU* ● *M* ○ *N* ○ *NA*
☒ *Financial*	○ *H* ○ *SU* ○ *M* ● *N* ○ *NA*
☒ *Institutional Development*	○ *H* ○ *SU* ○ *M* ● *N* ○ *NA*
☒ *Environmental*	○ *H* ○ *SU* ○ *M* ● *N* ○ *NA*
Social	
☐ *Poverty Reduction*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Gender*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☐ *Other (Please specify)*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*
☒ *Private sector development*	○ *H* ○ *SU* ○ *M* ● *N* ○ *NA*
☒ *Public sector management*	○ *H* ○ *SU* ○ *M* ● *N* ○ *NA*
☐ *Other (Please specify)*	○ *H* ○ *SU* ○ *M* ○ *N* ● *NA*

Annex 6. Ratings of Bank and Borrower Performance

(HS=Highly Satisfactory, S=Satisfactory, U=Unsatisfactory, HU=Highly Unsatisfactory)

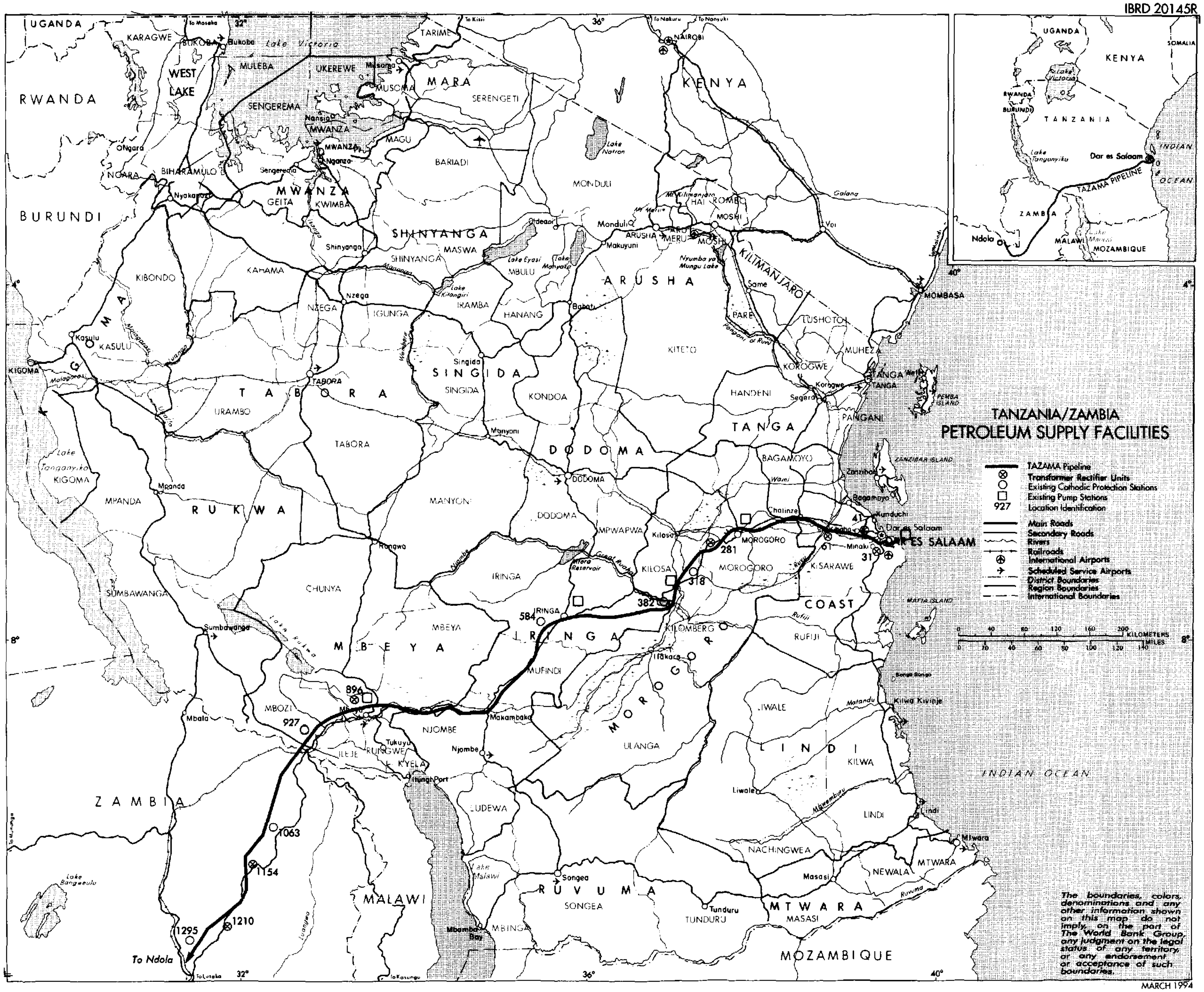
6.1 Bank performance	*Rating*
☒ *Lending*	○ *HS* ○ *S* ● *U* ○ *HU*
☒ *Supervision*	○ *HS* ○ *S* ● *U* ○ *HU*
☒ *Overall*	○ *HS* ○ *S* ● *U* ○ *HU*

6.2 Borrower performance	*Rating*
☒ *Preparation*	○ *HS* ○ *S* ● *U* ○ *HU*
☒ *Government implementation performance*	○ *HS* ○ *S* ● *U* ○ *HU*
☒ *Implementation agency performance*	○ *HS* ○ *S* ● *U* ○ *HU*
☐ *Overall*	○ *HS* ○ *S* ● *U* ○ *HU*

Annex 7. List of Supporting Documents

Staff Appraisal Report No. 12607-ZAM. May 6, 1994
Memorandum of the President. May 6, 1994
Development Credit Agreement and Project Agreement
Aide Memoires of Supervision Missions
Letters between the Bank and the Borrower
Project Progress Reports

IBRD 20145R



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