Report Number: ICRR14024

IEG ICR Review
Independent Evaluation Group

1. Project Data:		**Date Posted:**	11/06/2013	
Country:	Mozambique			
Project ID:	P082618		**Appraisal**	**Actual**
Project Name:	Beira Railway Project	**Project Costs (US$M):**	158.0	188.7
L/C Number:	C3991	**Loan/Credit (US$M):**	110.0	115.9
Sector Board:	Transport	**Cofinancing (US$M):**	0	34.9
Cofinanciers:	EIB	**Board Approval Date:**		10/14/2011
		Closing Date:	06/30/2010	12/31/2011
Sector(s):	Railways (100%)			
Theme(s):	Trade facilitation and market access (50% - P); Regional integration (25% - S); Infrastructure services for private sector development (25% - S)			

Prepared by:	**Reviewed by:**	**ICR Review Coordinator:**	**Group:**
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2. Project Objectives and Components:

a. Objectives:

The objectives of the project were to:

(i) make cost effective and efficient transport available for the freight and passenger traffic in the Zambezi valley to accelerate economic growth and reduce poverty in the sub-region;

(ii) increase international traffic through the Beira Railway System; and

(iii) ensure the operational, managerial and financial sustainability of the Beira Railway System

[Source: Development Credit Agreement (p. 22) and Project Appraisal Document (p. 5)]

b.Were the project objectives/key associated outcome targets revised during implementation?

No

c. Components:

Note: The project team provided the actual cost figures in their comments to IEG.

Component 1: Rehabilitation, maintenance and operation of 600 km Sena Railway Line between Dondo and Moatize in accordance with the terms of the Concession Agreement – to be financed by IDA (appraisal cost US$ 123.1 million, actual cost US$175.9 million)

Component 2: Rehabilitation, maintenance and operation of 317 km Machipanda Railway Line – to be financed by the Concessionaire; (appraisal cost US$ 25.0 million, actual cost US$ 9.3 million)

Component 3: Provision of technical assistance, training and consultancy services to the Mozambique

Ports and Railways Enterprise (CFM) so as to enhance its capacity to oversee implementation of the Project, implement its restructured functions, supervise the construction and rehabilitation works, facilitate independent technical and financial audits, conduct transport sector studies, and prepare its long term railway and ports development plans – to be financed by IDA (appraisal cost US$ 5.5 million, actual cost US$ 3.5 million).

d. Comments on Project Cost, Financing, Borrower Contribution, and Dates:

Project Cost and Financing: There is some discrepancy in cost figures: on page 14 the ICR notes that the project experienced cost overrun of more than US$ 50 million, however, on page 22 the cost tables show that actual project cost as US$ 115.9 million which is lower than the the appraisal estimate of US$ 158.0 million.

Also, Table (a) in Annex 1 indicates an undisbursed amount of US$ 4.968 million whereas the ICR mentions elsewhere(p. 9) that the IDA credit was fully disbursed. Furthermore, total cost is different in Table (a) and Table (b) in Annex 1 and Tables (b) and (c) appear mutually inconsistent.

The project team provided the details on project costs and financing. The actual project cost was US$188.7 million.

Borrower Contribution: none.

Dates: In March 2009, the project closing date was extended by 18 months from June 30, 2010 to December 31, 2011. The ICR does not provide reasons for the extension of the closing date.

3. Relevance of Objectives & Design:

a. Relevance of Objectives:

Rated **high**.

The project objectives remained aligned to the first pillar of the current Country Partnership Strategy (FY12-15) which is "Competitiveness and Employment." Under this pillar the Bank aims to play a catalytic role in addressing infrastructure needs especially those with regional scope and implications, take a long-term strategic approach that would help Government prioritize infrastructure investments, and include a strategy to manage and finance the rehabilitation and operation of the railway sector (CPS p. 36).

b. Relevance of Design:

Rated **substantial**.

The project activities of rehabilitation and maintenance of Sena and Machipanda Lines were clearly linked to the objectives of making cost effective and efficient transport available for the freight and passenger traffic in the Zambezi valley and increasing international traffic through the Beira Railway System. The Sena Line passes through the provinces of Sofala and Tete in the Zambezi valley. However, the project activities were not clearly linked to achieve the objective to ensure the operational, managerial, and financial sustainability of the Beira Railway System were not clear. The project aimed at providing technical assistance, training and consultant services to the Mozambique Ports and Railways Enterprise (CFM) to enhance its capacity to oversee implementation of the Project, supervise construction works, and prepare for the long term development of rail and ports. However, the project design did not include activities to develop the institutional capability of CFM to engage with the private sector (i.e. the Concessionaire).

4. Achievement of Objectives (Efficacy):

(i) Make cost effective and efficient transport available for the freight and passenger traffic in the Zambezi valley to accelerate economic growth and reduce poverty in the sub-region: achievement rated **negligible**.

The ICR (p. 14) reports that the Zambezi valley and regional traffic still cannot use the Sena and Machipanda Lines. The rehabilitation of the Sena Line was expected to be completed within four years but was delayed by over two years. Several technical issues remain after completion, posing latent risks to the safety of the operations on the Sena Line and reducing its ability to handle the expected level of freight and passenger volumes. The Machipanda Line suffers from inadequate maintenance. The Sena Line was open to coal traffic on August 8, 2011 after a temporary tariff agreement with the coal miners. However, the delay in rehabilitation has contributed to potential traffic seeking alternatives. Only 27% of the target was achieved. The 25 year Concession contract signed August 30, 2004 was terminated on December 7, 2011. There is no evidence that the project interventions resulted in cost effective and efficient transport. There were no indicators to measure the impact of improved railway services on economic growth and poverty reduction in the Zambezi valley.

(ii) Increase international traffic through the Beira Railway System: achievement rated **negligible**.

International traffic from Zimbabwe on Machipanda Line declined from 498,000 metric tons in December 2004 to 387,000 metric tons at project closing and was much lower than the target of 650,000 metric tons. Most of international traffic from Zimbabwe uses the railway and port of Durban in South Africa rather than the shorter and more direct route through Mozambique (ICR p. 13). The link to railways in Malawi was not established.

The project aimed to rehabilitate 317 km of Machipanda Line, however, since the handover of this Line to the Concessionaire, the Line has not been rehabilitated and has deteriorated further. Insufficient maintenance of the Machipanda Line and rolling stock coupled with and numerous derailments has resulted in much lower international traffic.

(iii) Ensure operational, managerial and financial sustainability of the Beira Railway System: achievement rated **negligible.**

The operational capacity of Mozambique Ports and Railways Enterprise (CFM) was not enhanced. The institutional strengthening component comprised technical assistance, training and consultant services to CFM so as to enhance its capacity to oversee implementation of the Project, supervise construction works and prepare for the long term development of rail and ports. However, this component was not designed to develop the institutional capability of CFM to productively engage with the private sector (i.e. the Concessionaire) (ICR p. 25). The design of the project did not clarify the role of CFM. Acting as operator, client, regulator and policy maker simultaneously did not provide a framework to clarify the skills and capability needed. At the managerial level, the Concessionaire Beira Railway Company llacked the capacity to coordinate train operations, and struggled to meet rolling stock requirements (ICR p. 8). The Beira Railways reliability indicators were not achieved. Staff productivity increased from 0.35 million traffic units per employee per annum to 0.9 but was less than the appraisal target of 1.3. The Beira Railway System is not financially sustained and the working ratio did not improve. At the end of the project, the two lines required cash injections for operation.

5. Efficiency:

At appraisal separate economic analysis was conducted for rehabilitation of the Sena and Machipanda Lines. The ex-ante Economic Rate of Return (ERR) for both the Sena Line and the Machipanda Line was 18 percent but the analysis had some shortcomings: (a) it was based on overly optimistic assumptions about the benefits that could accrue from construction or rehabilitation of the rail Lines – the volume of traffic that was expected to be diverted from the road transport and the value of these benefits was overstated; (b) the economic activities that would be catalyzed by the new rail line were also exaggerated; and (c) the revenues were not based on a clear understanding of the volumes of coal traffic which was potentially the main source of revenue (ICR p. 28).

The ICR did not conduct ex-post ERR analysis according to the OPCS guidelines for ICRs (appendix G, page 53). The guidelines state that 'if an NPV or ERR could not be re-estimated, the ICR should cite the reason (e.g. project not fully implemented or inadequate data)'. The ICR states in several paragraphs the unambiguous findings which led to a decision not to carry out post-project re-estimation of NPV and ERR. According tot the project team, an ex-post analysis would have been an academic exercise since the project was assessed as a failure in any event.

No other measure of efficiency was provided by the ICR. There were significant delays in execution of the construction phase resulting in the extension of the project closing date by eighteen months. The rehabilitation of the Sena Line was expected to be completed within four years but was delayed by over two years. The Project experienced cost overrun of more than US$50 million (ICR p. 14). The 25 year Concession contract signed on August 30, 2004 was terminated on December 7, 2011 (the project closed on December 31, 2011).

Efficiency is rated **negligible**.

a. If available, enter the Economic Rate of Return (ERR)/Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation :

	Rate Available?	Point Value	Coverage/Scope*
Appraisal	Yes	18%	96.5%
ICR estimate	No		

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome:

The relevance of objectives was high and the relevance of design was substantial. The achievement of all objectives was negligible. Project efficacy was negligible.

a. Outcome Rating : Unsatisfactory

7. Rationale for Risk to Development Outcome Rating:

The risk to development outcome rating is rated high for the following reasons:

(i) the 25 year Concession contract signed on August 30, 2004 was terminated on December 7, 2011;

(ii) although the rehabilitation of the Sena Line was completed, several technical issues remain, posing latent risks to the safety of the operation of the Sena Line and to its ability to handle the freight and passenger traffic volume expected (ICR p. 4);

(iii) the Machipanda Line has deteriorated due to insufficient maintenance – the Concessionaire left it to deteriorate rather than rehabilitate the track as envisaged under the concession agreement; and

(iv) significant additional investment is required to improve the quality of the railway system (ICR p.13).

a. Risk to Development Outcome Rating : High

8. Assessment of Bank Performance:

a. Quality at entry:

The project development objectives were realistic and overall the M&E framework was adequate. However, the project design had a number of shortcomings:
(i) the project included components for rehabilitation and maintenance of the Sena and Machipanda Lines in accordance with the terms of the Concession Agreement. In the case of Sena, the railway Concession ended some 25 kilometers short of the port and there was little clarity on responsibility for rehabilitating the final leg (Dondo – Beira). As a result, the vital link to the Port of Beira for traffic coming from Tete/Moatize was not assured (ICR p. 6);

(ii) traffic risk, which was considered critical to the success of the concession, was not fully analyzed. While best practice is to allocate the risks to the party best able to mitigate or control them (p. 10), the Concessionaire was allocated risks for freight traffic on the Sena Line and risks of fluctuating regional traffic over which it had no control;

(iii) the project was optimistic about the potential for private sector participation in the rail Concession although only a few bidders expressed interest in the rail concession. Moreover, all the shortlisted companies had limited experience in private sector construction, operation and management of rail systems. The consortium which went on to win the Concession had consultancy experience in Mozambique, Zimbabwe and Malawi. However, it had no proven experience of actually running successful rail operations (ICR p. 6);

(iv) the concession agreement was poorly designed. The project team clarified that the clause that was used to terminate the concession was Article 25 1 "the Conceding Authority can use his right to terminate the concession when there is a failure by the licensee to the rules laid down by Article 25.3". According to the ICR, Concession Agreement of clause 5.2.2, stipulating that failure to agree on a tariff with the coal miners might lead, at the discretion of the Conceding Authority, to termination of the Concession. The ICR indicates that according to the Borrower, this clause was included on the advice of IFC, who was at the time the Government's strategic advisor on mining developments and this clause was later used used to terminate the concession; and

(v) the institutional strengthening component was not designed to develop the institutional capability of the Mozambique Ports and Railways Enterprise (CFM) to productively engage with the private sector (i.e. the Concessionaire) (ICR p. 25).

Quality-at-Entry Rating : Unsatisfactory

b. Quality of supervision:

While supervision missions were carried out regularly, the Bank's supervision team did not have the requisite technical engineering skills and the competencies needed to supervise the Sena Line rehabilitation contract (ICR p. 9). Despite the persistent negative reports by the Independent Engineer the Bank's supervision reports during 2005-2010 gave the project an overall rating of satisfactory or moderately satisfactory. The Independent Engineer's concerns were not addressed during the mid-term review and only reflected in the ISRs in late 2010. It was only after IDA funding had been substantially disbursed and senior management was alerted by the Client to the threat of termination of the Concession in 2009, that issues were raised. By then, the Credit had already been almost fully disbursed, and there was little scope to restructure the project (ICR p. 9).

Quality of Supervision Rating : Unsatisfactory

Overall Bank Performance Rating : Unsatisfactory

9. Assessment of Borrower Performance:

a. Government Performance:

The Government was not consistent in its actions regarding the Concession agreement – at times it threatened to invoke contractual provisions, while at others it seemed to use its influence outside of the contract to get resolution (ICR p. 17). As a result of this varying and non-assertive stance the issue of termination dragged on for over two years. The negotiations over the rail coal tariff with the off-taker (coal mining companies) were complicated. While the Mozambique Ports and Railways Enterprise (CFM) was trying to negotiate a coal tariff with the mining companies under the stipulations of the Concession Agreement, parallel negotiations were being held between the Ministry of Mines and the same mining companies to set up mining Concession Agreements. There was therefore no incentive for the mining companies to negotiate a fair value for the rail access when clearly for them the best option would have been to work towards taking over the rail line and combining the rail and coal mining Concessions (ICR p. 7).

Government Performance Rating Unsatisfactory

b. Implementing Agency Performance:

The Mozambique Ports and Railways Enterprise (CFM) was the implementing agency. The role CFM was unclear i.e. whether it was a regulator, policy maker, client or operator. During the course of the Project, CFM played all these roles; at times simultaneously. The ICR notes that "CFM appears to be undermining the Concession with hope of taking over rail infrastructure management and operations" (ICR p. 18). The Project Team subsequently clarified that although CFM was aware of the difficulties in the project implementation, there was little they could do, as minority shareholders. Their main role was to keep a close watch at events, and accumulate grievances that would be eventually used against the concessionaire (including on tariff issues, which turned to be a critical element for them in their eventual negotiations with the miners). We believe they could have played a better (and more pivotal) role in proposing alternative solutions on key issues facing the concession. The PIU's supervisory capacity was limited as the skilled engineers were prematurely sent back by the Concessionaire, and subsequently replaced by incompetent staff, with the approval of the PIU. The Project Team clarified that this was just plain cost savings and (bad) resources management: skilled and probably badly-needed-elsewhere engineers were replaced by lesser brass. The Concessionaire failed to realize the importance of growing engineering issues at this stage of the rehabilitation. Despite repeated objections by Mozambique Ports and Railways Enterprise (CFM) and the GoM, no action was taken to reverse these decisions (ICR p. 8). The annual financial audit was submitted regularly (p. 11). However, the ICR does not explicitly state if the Bank's fiduciary policy was complied with and it is silent on the Natural Habitats safeguard.

Implementing Agency Performance Rating : Unsatisfactory

Overall Borrower Performance Rating : Unsatisfactory

10. M&E Design, Implementation, & Utilization:

a. M&E Design:

The PAD included a number of output and intermediate outcome indicators such as: (i) increase in Freight and passenger traffic on Sena Line from 0 to 1,000,000 metric tons per annum by the end of the

Project in December 2009; (ii) increase in international traffic from Zimbabwe on the Machipanda Line by 30 percent (from 498,000 metric tons in December 2004 to 650,000 metric tons by the end of the Project in December 2009; and (iii) Beira Railway system operating reliably with track under temporary restriction falling from 10 percent in December 2004 to 2 percent by the end of the Project in December 2009, average km between failure of locomotives from a base of 10,000 in December 2004 to 100,000 by the end of the Project in December 2009, wagon delays between demand and supply from four days to two days by the end of the Project in December 2009, and staff productivity (net-ton km plus pass-km per employee per annum in millions) rising from 0.35 to 1.3 by the end of the Project in December 2009. These indicators were appropriate for measuring the achievement of the second and third PDOs. However, there was no indicator to measure the first PDO – the impact of improved railway services on economic growth and poverty reduction in the Zambezi valley.

b. M&E Implementation:

At the beginning of the project a baseline was established and the Mozambique Ports and Railways Enterprise (CFM) collected the relevant data.

c. M&E Utilization:

M&E reports were used for Board evaluations and decisions, but these decisions were not implemented for several reasons including lack of interest by the Concessionaire.

M&E Quality Rating : Modest

11. Other Issues

a. Safeguards:

The project was categorized as an Environmental Category B project. According to the PAD, three safeguards were triggered: Environmental, Natural Habitats, and Involuntary Resettlement. According to the ICR, compliance with the Environmental safeguard was satisfactory. The compliance with occupational health and safety compliance was not addressed adequately (ICR p. 12). In March 2011 environmental and health and safety violations were reported: (i) many of the issues involving construction waste and issues with borrow pit restoration were still outstanding; and (ii) occupational health and safety compliance had not been addressed, the Health and Safety at work standards at all sites were extremely low and the work conditions were often hazardous. The CFM and the Independent Engineer did intervene several times, to the extreme of expelling some managers, stopping work and closing workers' camps. These elements, documented in the reports, could have been the base for more stringent actions by the Bank to enforce best-practice standards or even force cancellation of contracts with contravening contractors, but this was never done.

Compliance with the Involuntary Resettlement safeguard was also satisfactory (ICR p. 12). The ICR is silent on the Natural Habitats safeguard.

b. Fiduciary Compliance:

The ICR does not report on fiduciary compliance.

c. Unintended Impacts (positive or negative):

- The initiation of the project resulted in the development of coal mining. The issue of the huge coal prospects in the Moatize region was being discussed since the 1980s. But the chicken and egg situation came in very late – which should come first – the rail link or the mine development. Each stake player was unwilling to invest unless there was positive development on the other side.

- The collapse of the rail Concession has sharpened focus of the Government on the critical role of efficient transport systems in fulfilling national objectives. The discovery of sizeable deposits of coal and other minerals has confirmed the need for Government policy to enable integration of good rail and port infrastructure.
- The project highlighted the need for a regulatory framework (rail infrastructure access, tariffs, and customs) to facilitate and promote long term sustainability of the rail system.

d. Other:

None reported in the ICR.

12. Ratings:	ICR	IEG Review	Reason for Disagreement /Comments
Outcome:	Unsatisfactory	Unsatisfactory	
Risk to Development Outcome:	Significant	High	The risk to development outcome rating is rated high for the following reasons: (i) the 25 year Concession contract signed on August 30, 2004 was terminated on December 7, 2011; (ii) although the rehabilitation of the Sena Line was completed, several technical issues remain, posing latent risks to the safety of the operation of the Sena Line and to its ability to handle the freight and passenger traffic volume expected (ICR p. 4); (iii) the Machipanda Line has deteriorated due to insufficient maintenance – the Concessionaire left it to deteriorate rather than rehabilitate the track as envisaged under the concession agreement; and (iv) significant additional investment is required to improve the quality of the railway system (ICR p.13).
Bank Performance :	Unsatisfactory	Unsatisfactory	
Borrower Performance :	Moderately Unsatisfactory	Unsatisfactory	The Government was not consistent in its actions regarding the Concession agreement. The negotiations over the rail coal tariff with the off-taker (coal mining companies) were

			complicated. While the Mozambique Ports and Railways Enterprise (CFM) was trying to negotiate a coal tariff with the mining companies under the stipulations of the Concession Agreement, parallel negotiations were being held between the Ministry of Mines and the same mining companies to set up mining Concession Agreements.
Quality of ICR :		Satisfactory	

NOTES:
- When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
- The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons:

From ICR:

Establishment of an effective regulatory body. In the case of Beira, no clear Government regulatory function was set up - or maybe not deemed necessary, as the Government had secured its own 49 percent stake. As a result, during disputes such as the ones regarding the coal tariff and health and safety, there was no regulator and no regulations to enable settlement of issues.

Inter-modality and integration. The Beira Railway Project might have had a different outcome if the links between the rail and port modes were clearly seen as part of an efficient logistics link targeting the major users. In the case of Beira, more effort would have been made to establish the volumes of coal (which have turned out to be the main off-taker for the Sena line) and the link between Beira and Dondo would have been rehabilitated to complete the link to the port and the Machipanda line.

Ensure strong technical skills on the World Bank supervision team. A major weakness of the Beira Railway Project was that the Bank supervision team did not have technical engineering skills to make sense of the issues – and only hired short term consultants. This is critical for all major infrastructure projects but more so for concessions since important decisions require a detailed understanding of how infrastructure is designed, constructed, operated and maintained. Without this expertise the Bank supervision team was unable to adequately monitor the contract and identify problems early enough.

14. Assessment Recommended?

○ Yes ● No

15. Comments on Quality of ICR:

The ICR is concise and candid and provides evidence to evaluate the project. The lessons are based on evidence. However, there are some shortcomings:

(i) the ICR provides conflicting information on costs, for example, on page 14 the ICR notes that the Project experienced cost overrun of more than US$50 million, however, on page 22 the cost tables show that actual project cost as US$115.9 million against the appraisal estimate of US$158.0 million. Also, Table (a) in Annex 1 indicates an undisbursed amount of US$ 4.968 million whereas the ICR mentions elsewhere(p. 9) that the IDA credit was fully disbursed. Furthermore, total cost is different in Table (a) and Table (b) in Annnex 1 and Tables (b) and (c) appear mutually inconsistent. The project team provided the funding and project cost figures to IEG;

(ii) the ICR is silent on the Natural Habitats safeguard;

(iii) the ICR does not report on fiduciary compliance; and

(iv) the ICR does not provide any information on actual financial results of the Concession even though summary projections were included in the PAD.

a.Quality of ICR Rating : Satisfactory