

Zambia: Manyinga-Mwinilunga Road

Ex-post evaluation

OECD area of promotion	21020 / Road traffic	
BMZ project number	1994 65 196	
Project-executing agency	Ministry of Works and Supply, Roads Department	
Consultant	Gauff Ingenieure	
Year of evaluation	2003	
	Project appraisal (planned)	Ex-post evaluation (actual)
Start of implementation	2nd quarter 1994	2nd quarter 1994
Period of implementation	29 months	52 months
Investment costs	EUR 5.2 million	EUR 8.1 million
Counterpart contribution	EUR 2.1 million	EUR 3.0 million
Financing	EUR 3.1 million	EUR 5.1 million
Other institutions/donors involved	--	--
Performance rating	4	
• Significance/relevance	4	
• Effectiveness	4	
• Efficiency	4	

Brief Description, Overall Objective and Project Purposes with Indicators

The project comprises the upgrading of the about 220-km road between the towns of Manyinga and Mwinilunga situated in the North West Province into a gravel road passable year-round and the extension of the maintenance component, which was started or continued in the context of the previous projects ("Mutanda-Zambezi M8 Road", M8-Kasempa and Zambizi-Chavuma Roads"), until the termination of the construction measures of this project. In addition, flood-related emergency measures along a 90-km gravel road leading from Mwinilunga in the north to the Angolan border were financed from residual funds.

The project purpose is to appropriately open up and connect the project region situated in the North West Province of Zambia to the road network. The indicators defined to measure the achievement of the project purpose were the year-round passability of the project road for medium-size vehicles and an average daily traffic volume of 15 vehicles in the southern section of Manyinga-Lusongwa, of 8 vehicles in the middle section of Lusongwa-Chiwoma and of 25 vehicles in the northern section of Chiwoma-Mwinilunga to be achieved by 1998. Though the year-round passability of the road is currently still given it is not ensured in the long term, as

goes for savings in operating costs, unless the road will be properly maintained in the future. The targeted traffic figures were not reached or only with delay. In 2003, when the first counts were made, the traffic volume was 15 vehicles in the southern section, only 15 vehicles in the northern section and 6 vehicles in the middle section. The overall objective of the project was to make a contribution to reducing overall economic transport costs and to increasing the aggregate economic production. There was no significant increase in the aggregate economic production. The result of the economic efficiency calculation was determined as the indicator for the achievement of the overall objective. Due to increased investment costs, low traffic and a very limited maintenance the calculated internal rate of return is - 0.6% and is thus clearly below the target figure of at least 6%. Thus, this target was missed.

The target group of the project is the rural population in the catchment area of the project road, which benefits from the improved and more cost efficient traffic development, even though this development has shown little effect in terms of an improved supply of goods, better transport and the use of marketing opportunities. The road was used mainly for bicycle journeys and transport by bicycle. The project also directly benefits the few owners of motor vehicles, who use the road for the transport of goods and passengers.

Project Conception / Major Deviations from the original Project Appraisal and their main Causes

As planned, the project comprised the upgrading of the 220-km road between the towns of Manyinga and Mwinilunga into a gravel road which can be maintained and is passable year-round. In addition, project funds were used to support the regional maintenance shops in the continued application of the maintenance concept developed in the course of the previous projects. Moreover, residual funds were used for a construction measure to eliminate flood damage on the Mwinilunga-Ikelenge-Jimba Road (T5).

The construction time scheduled for 29 months was far exceeded and took 52 months. Major reasons for the repeated disruptions and stoppages of construction works were due to the fact that the agreed financial contributions of the Zambian side were not provided on time and when required. Thus, the road was only completed in August 1998, that is two years later than scheduled.

Key Results of the Impact Analysis and Performance Rating

Only one of the target indicators for the achievement of the project objectives was reached: the year-round passability of the project road for medium-size vehicles. However, despite the progress made so far in the structural reform of road maintenance management there is still a risk of insufficient maintenance. This risk is due on the one hand to the weaknesses and deficiencies that may occur in the implementation of the new road maintenance procedures. On the other hand, even under optimistic assumptions, the means to be obtained for the Road Fund are not sufficient for the routine maintenance of the network of core roads. In order to ensure a periodic maintenance the inclusion of other user fees would be required but this measure has not in any way been considered by the government so far. Moreover, similar situations and financing bottlenecks have to be feared for the future as well due to the fact that only half of the fees scheduled for the year 2002 were actually paid into the Road Fund. If the maintenance is not, or not properly, carried out in the future the year-round passability of the road might soon be impaired.

Even five years after the completion of the road the second target indicator, the traffic volume, is on average for individual road sections still below or just reaches the target figures originally set to be achieved two years after completion. So far there has been no increase in productive activities, mainly in agriculture, which had been expected as a result of the additional traffic. Currently it cannot be predicted whether these expectations might be fulfilled in the foreseeable future by implementing additional incentives and promotional measures. However, it has to be mentioned that the project had a positive impact on bicycle traffic and thus meant an improvement for the population. Bicycles are a much more important means of transport for the population than motor vehicles. Overall, however, the project's effectiveness is much lower than expected. Despite the positive developments for the non-motorized traffic and the contribution to the supply of basic infrastructure in the project region we assign the project a slightly insufficient effectiveness (partial evaluation: rating 4). Due to the low impact of the project on increasing agricultural production and thus the low use of the road by motorized vehicles the quantifiable benefit (reduction in the vehicle operating costs) is very low. Thus, the indicator for the overall objective, that is an economic internal rate of return of at least 6% as a result of the calculation of economic efficiency, which is negatively affected anyway by the increased investment costs, cannot be achieved. From the current perspective traffic on the road will remain low for the foreseeable future and thus, a positive cost-benefit ratio is not to be expected. Given this clear result and also the obviously low non-quantifiable benefit of the project the overall efficiency is clearly insufficient. The project purposes were equally not reached: neither was the use of funds appropriate (production efficiency) nor is the road adequately used (allocation efficiency) (partial evaluation: rating 4). The continued low level of agricultural production has not been improved to any significant extent as a result of the project. In consequence, the project only insufficiently contributed to improving the conditions of life of the population along the project road and thus, to achieving the overall objective. But still the project made a contribution to establishing a basic infrastructure, though at too high a cost. Overall, the developmental significance and relevance of the project are lower than expected and are overall slightly insufficient (partial evaluation: rating 4).

Positive impacts of the project worth mentioning are the opening up of the project region, whose population was before largely cut off from the rest of the country, and the ensuing potential development opportunities. However, the expected developmental impacts materialized only to a very limited extent. It appears that the road is a necessary but not a sufficient prerequisite for this. In general the programme has a slightly inadequate degree of developmental effectiveness (rating 4).

General Conclusions applicable to all Projects

Upon project appraisal it was assumed that the insufficient connection to the road network was the central bottleneck hampering agricultural production and marketing and thus the development of the region. Any complementary measures for regional development were not explicitly assumed, even though a connection with the planned rural development programmes of the GTZ and IFAD was noted. This assumption proved not to be correct. Thus, the question of major obstacles to regional development have to be carefully examined during the preparation of rural road projects. Where appropriate, complementarity with other promotional measures of rural development has to be made sure.

Legend

Developmentally successful: Ratings 1 to 3

Rating 1 Very high or high degree of developmental effectiveness

Rating 2 Satisfactory degree of developmental effectiveness

Rating 3 Overall sufficient degree of developmental effectiveness

Developmental failures: Ratings 4 to 6

Rating 4 Overall slightly insufficient degree of developmental effectiveness

Rating 5 Clearly insufficient degree of developmental effectiveness

Rating 6 The project is a total failure

Criteria for the Evaluation of Project Success

The evaluation of a project's "developmental effectiveness" and its assignment during the final evaluation to one of the various levels of success described below in more detail concentrate on the following fundamental questions:

- Are the **project objectives** reached to a sufficient degree (aspect of project **effectiveness**)?
- Does the project generate sufficient **significant developmental effects** (project **relevance** and **significance** measured by the achievement of the overall development-policy objective defined beforehand and its effects in political, institutional, socio-economic and socio-cultural as well as ecological terms)?
- Are the **funds/expenses** that were and are being employed/incurred to reach the objectives appropriate and how can the project's microeconomic and macroeconomic impact be measured (aspect of **efficiency** of the project conception)?
- To the extent that undesired (**side**) **effects** occur, are these tolerable?

We do not treat **sustainability**, a key aspect to consider for project evaluation, as a separate category of evaluation but instead as a cross-cutting element of all four fundamental questions on project success. A project is sustainable if the project-executing agency and/or the target group are able to continue to use the project facilities that have been built for a period of time that is, overall, adequate in economic terms or to carry on with the project activities on their own and generate positive results after the financial, organizational and/or technical support has come to an end.