

Malawi:
Road Maintenance and Bridge Construction Programme (Programme I)
Road Maintenance Programme (Programme II)

Ex-post evaluation

OECD sector	21020 / Road transport sector	
BMZ project ID	1995 66 845 / 1998 66 245	
Project-executing agency	Ministry of Transport and Public Works (MoTPW)	
Consultant	DIWI Consult, Essen	
Year of ex-post evaluation	2004	
	Project appraisal (planned)	Ex-post evaluation (actual)
Start of implementation	3rd Q. 1996 / 1st Q. 1999	1st Quarter 2004
Period of implementation	36 months / 22 months	
Investment costs in EUR	8.3 million / 6.1 million	7.4 million / 6.9 million
Counterpart contribution in EUR	0.5 million / 0.0 million	0.2 million / 0.0 million
Financing, of which FC amount (EUR)	7.7 million / 6.1 million	7.2 million / 6.9 million
Other institutions/donors involved	World Bank, EU (parallel programmes in the sector)	
Performance rating	3	
• Significance/relevance	3	
• Effectiveness	2	
• Efficiency	3	

Brief Description, Overall Objective and Programme Purpose with Indicators

The measures under Road Maintenance and Bridge Construction Programme I comprised the periodic maintenance on 333 km of bituminous roads and the repair of 152 bridges in rural areas in Malawi. The target group were the road users especially in rural areas. The total programme costs amounted to EUR 7.41 million, EUR 0.17 million of which were contributed by the programme executing agency. The funds available comprised a financial contribution of EUR 7.67 million and residual funds from a predecessor programme in the amount of EUR 0.34 million. The remaining funds (EUR 0.77 million) were used as contractually agreed for the follow-up programme (Programme II).

The Road Maintenance Programme II comprised periodic maintenance measures on 280 km of bituminous roads and erosion protection measures for three bridges. The target group was again the road users. The total cost of the programme amounted to the equivalent of EUR 6.9 million and was financed almost completely from the available FC financial contribution of EUR 6.13 million and residual funds from the predecessor project (Programme I) in the amount of EUR 0.77 million.

The objective of Programme I was to ensure the maintenance of the programme roads in the medium term as well as the use of the roads at low costs by the traffic to be expected (road component) and to open up rural areas on a sustained basis to road traffic (bridge component). The programme objective is considered achieved if by the end of 1999 the bituminous roads up

for periodic maintenance at year-end have been reduced by at least 300 road kilometres and the number of bridges passable year-round have been increased by at least 250. Another indicator is the traffic volume on individual selected road sections, which is to be monitored on a regular basis. In the further course of the project the reference parameter for the traffic volume was fixed at more than 100 vehicles per day.

The overall objective of Programme I is to develop the macroeconomically efficient access to roads in Malawi. No indicators for the achievement of the overall objective were specified.

The objective of Programme II is the cost-efficient (from the viewpoint of the traffic participants) and macroeconomically efficient use of the programme roads and bridges. The following indicators were specified for the achievement of this objective: The proper maintenance of the programme roads and bridges is continued after the conclusion of the programme and the development of the traffic volume on the roads and bridges is not below the national average.

The overall objective of Programme II was to contribute to ensuring the macroeconomically efficient development of roads and traffic in Malawi. The yardstick for measuring whether this objective had been fulfilled was the compliance with the reform plan for the road sector (indicator for the overall objective).

Project Design / Major Deviations from the original Project Planning and their main Causes

The road construction component of Programme I comprised the periodic maintenance of 333 km of road by providing a one-layer bitumen coating on three selected road sections of the main road network. The bridge construction component comprised the installation of standardised reinforced concrete slabs to replace damaged wooden slabs on 152 bridges. The road sections as well as the bridges to be rehabilitated had been selected in agreement with the programme executing agency after an examination conducted by the consultant. The works on the roads were divided into six lots. The bridge rehabilitation component comprised bridges with a span of 4 to 11 metres. This measure helped to ensure the passability of six road sections with a length of altogether 797 km.

Originally it had been foreseen under Programme I that the programme executing agency should itself carry out and finance certain preparatory road and bridge maintenance measures. Due to considerable cuts in the budget of the executing agency in 1997 and 1998 we agreed to include these works in the contracts concluded with the contractors for the rehabilitation measures although this meant a reduction in the estimated quantities. In the end the number of bridges had to be considerably reduced from 300 to 152 and the length of road sections from 400 to 333.

The measures of Programme II comprised the periodic maintenance of 280 km of roads by providing a one-layer bituminous wearing surface for selected sections of the main road network as well as erosion protection measures on three bridges. The sections and bridges had been selected in agreement with the programme executing agency and with the World Bank and the EU, which are also donors active in the road sector, after an examination by the consultant. The envisaged road maintenance measures were divided into five lots and the bridge construction measures into two lots.

Overall, as a result of the implemented rehabilitation measures the year-round passability of the bridges under Programme I is ensured and the roads under Programme I and II are invariably in a good condition. Due to the erosion protection measures implemented on the bridges under Programme II the solidity of the bridges was restored.

Due to several reasons and circumstances it was not possible to implement the works under both programmes on schedule. Especially the bridge component was delayed by more than a

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year due to the small works involved and the extensive coordination required. Works on the last four bridges were concluded even 18 months later than originally agreed. In Programme II the start of implementation had been delayed by about a year due to the late adjustment of the fuel levy. But thereafter the implementation proceeded more or less according to schedule.

Overall, against the background of developments in the road sector the implementation concept of the project as an open programme proved to be suitable and appropriate. The services rendered by the contractors and the consultants as well as the quality of works can be described at good. During the construction works there were neither technical nor any other difficulties worth mentioning. However, the time required for the implementation had rather been underestimated.

Key Results of the Impact Analysis and Performance Rating

Owing to the reform of the road sector conducted in the framework of the Road Maintenance Initiative of the World Bank, the system was put on a new and more efficient basis. The National Roads Authority (NRA) was established as planned and today is an efficient organisation which also has operative responsibility for the Malawi road sector. However, the funds available to the NRA are currently not sufficient, which is due to failings on the part of the Malawi government. Given the current level of the fuel levy (which is a surcharge on the petrol price) the funds flowing into the Road Fund are too low to finance the periodic maintenance of the roads. As a result of the increase in the fuel levy (which will probably be accompanied by a reduction of the main road network) and the continuing donor activities, especially of the European Union (EU), we hold the view that, overall, the level of maintenance implemented on the Malawi road network is sufficient.

The indicators for the achievement of the programme objectives were largely reached. Developments in the sector are largely positive. Compared with the situation in the neighbouring countries, the road network in Malawi is in a good condition because the newly established NRA fulfils its responsibility of monitoring and maintaining the national road network. However, the overall positive assessment is reduced due to the currently too low level of the fuel levy. Thus, the project's developmental **effectiveness** is still sufficient (**partial evaluation: rating 3**). The project was implemented within an acceptable time frame, at acceptable costs and in a good quality. Thus, the production efficiency is sufficient. This also applies to the allocation efficiency since the traffic volume reported by NRA is higher than targeted and is proof that the roads are frequently used. The system of feeding the Road Fund functions. The levy is raised from the road users and directly handed on to the NRA. The weighing stations are ready for operation and the axle-load controls are technically possible, however, are not yet mandatory. Thus, the project's **efficiency** is satisfactory (**partial evaluation: rating 2**). The Programme was and still is relevant. This is apparent when comparing the road condition in 1995 with the condition in 2003. Malawi's main traffic network has become more efficient. It can be assumed that a contribution was made to reducing the transport costs and saving time. The envisaged impacts of the bridge components of Programme I on opening up the country have been achieved since the roads are passable year-round. The structural effectiveness has also been achieved through the implemented sector reform. We assume for reasons of plausibility that the project has developmental effects also beyond the overall objectives. It is undisputed that the transition of road maintenance from force-account work implemented by the MoTPW to the awarding of contracts to private companies, which is now practiced by the NRA, will help to create new structures in the private sector. Direct or indirect poverty-related and income-generating effects in rural areas, which were produced solely through better transport routes as a result of the programmes, could not be proved but are likely. Thus, we classify the project's developmental **relevance and significance** as overall sufficient (**partial evaluation: rating 3**).

Kommentar: Hier noch nach PZ/OZ differenzieren!

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General Conclusions applicable to other Projects

The concept development and implementation of sector reforms in the context of a larger sector programme, in which several donors (World Bank, KfW and EU) participate by providing finance for consultancy and investments, thus, jointly exercising a larger influence, has proven to be effective also in the Malawi road sector.

The only problem that has so far not been solved to the satisfaction of the donors is the size of the fuel levy to be charged to the road users in the future. To date the cash flow received by the Road Fund is still below the level agreed with the donors. However, we expect that the EU, which continues its activities in the transport sector, will bring its influence to bear in this respect.

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 classification during the final evaluation into 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.

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