

Malawi: Rural Water Supply for Mangochi District, Phases I and II

Ex post evaluation

OECD sector	14030/Basic drinking water supply and basic sanitation	
BMZ project IDs	1998 65 171 and 2001 65 175	
Project executing agency	Ministry of Irrigation and Water Development	
Consultant	Gitec Consult	
Year of ex post evaluation report	2008	
	Project appraisal (planned)	Ex post evaluation (actual)
Start of implementation	Phase I: Q I 1999 Phase II: Q III 2002	Phase I: Q I 1999 Phase II: Q III 2002
Period of implementation	Phase I: 36 months Phase II: 36 months	Phase I: 36 months Phase II: 48 months
Investment costs	Phase I: EUR 5.1 million Phase II: EUR 5.6 million	Phase I EUR 3.6 million Phase II: EUR 7.1 million
Counterpart contribution	EUR 0/non-quantifiable counterpart contribution	EUR 0/non-quantifiable counterpart contribution
Financing, of which FC funds	100% from FC: Phase I: EUR 5.1 million 100% from FC: Phase II: EUR 5.6 million	100% from FC: Phase I: EUR 3.6 million 100% from FC: Phase II: EUR 7.1 million
Other institutions/donors involved	-	-
Performance rating	2	
• Relevance	2	
• Effectiveness	1	
• Efficiency	2	
• Overarching developmental impact	1	
• Sustainability	2	

Brief description, overall objective and project objectives with indicators

The objective of both phases of the Rural Water Supply for Mangochi District Project was the improved supply to the inhabitants of four sub-regions (traditional authorities - TA) in Mangochi District with an adequate volume of safe drinking water at a reasonable distance from their homes. This was to contribute to reducing the health hazards of water-induced diseases for the inhabitants of this TA (overall objective). Altogether, 260 bore wells were drilled or repaired in Phase I and 594 in Phase II, far more than originally planned. The accompanying measure in preparation for drilling bore wells comprised raising awareness among interested village communities of the community-based management scheme (CBM), training measures for user committees and area mechanics as well as a broad hygiene and health campaign. Achievement of these objectives was to be measured two years after start of operation by the following indicators:

- a) Water consumption by users has increased from 10 l/cd at present to 25 l/cd.
- b) 90,000 inhabitants (about 80% of the current population) have access to bore wells with enough hygienically safe water.
- c) Water quality meets WHO standards.
- d) 80% of the bore wells are fully operational and in good condition.
- e) 85,000 inhabitants have access to safe latrines.
- f) Hygiene behaviour (covered water storage, clean scoops, clean latrines) has verifiably improved.

Project design/major deviations from original planning and main causes

The project comprised the construction and repair of bore wells equipped with hand pumps and the construction or conversion of latrines by distributing concrete latrine slabs (sanplats). In basic sanitation, approx. 34,800 sanplats, i.e. more than the 26,000 planned for both phases together, were delivered free of charge to households that were prepared to improve both the pit and the superstructure with their own inputs.

The project adopted the village level-based operation and management approach (VLOM). Due to the government's or district authorities' lack of technical, personnel and financial resources, there was virtually no option but to apply the VLOM approach, under which the village communities had to be able to make almost all repairs on their own or, if necessary, with help from the area mechanics.

The selection of villages for new wells was based on applications by interested village communities that were prepared to make advance contributions (approximately EUR 25), found user groups and to collaborate actively in planning, preparing and constructing the wells. The accompanying measure included raising villagers' awareness of the need for community-based management (CBM) and for committees to operate the facilities. Making up about a quarter of total costs, this expensive measure also comprised technical training measures for committees

(e.g. instruction in pump operation and maintenance) and area mechanics in the course of privatising the repair service and the hygiene and health campaign. Using simple training materials and in close cooperation with the schools, at village assemblies it imparted the key points of general hygiene habits, hygienic water handling, basic sanitary aspects and the advantages of sanplats as well as knowledge about contraception and the identification of the most common diseases.

The committees are generally made up of 10 members. The results monitoring revealed that more than 98% of all committees are still in operation. Accounting for approx. 60% of the committee members, the women often appear to be more active. The task of the committees is to operate 'their' well, keep it clean, service and repair it if necessary as well as collect contributions for repairs and spare parts from the users. Ninety-four percent of all committees ran a maintenance fund, which amounted on average to about EUR 8.00 at the time of results monitoring in 2006. A complete set of frequently needed spare parts with the main wearing parts would have cost some EUR 10.

Key results of impact analysis and performance rating

The overall objective of the project can be deemed to have been achieved, because the data received from the health authority clearly confirms a decline in the incidence of disease, despite concurrent population increase. The project can be assumed to have made a significant contribution to this decline.

As regards the project objective indicators, water consumption has risen to 33 l/cd. The figure includes 7.7 l/cd water for laundry, but the relatively high indicator was nevertheless met and in part surpassed.

Approximately 148,000 (or 82%) of the district inhabitants in the programme area today have access to clean drinking water, 58,000 or 64% more than expected at appraisal. This indicator has therefore been exceeded by a large margin.

As a rule, hygiene quality is already assured by the mode of construction of bore wells. No notable chemical or mineral pollution of groundwater has been reported, nor have water analyses provided any indications of impairment.

At final inspection in 2007, 99% of the wells were operational. This excellent result was roughly confirmed at ex post evaluation, so the indicator has been well surpassed.

Currently, 90% of households have basic sanitary facilities and 75%, or approximately 110,000 inhabitants, have installed a sanplat over the latrine pit. If we define this as a safe latrine, this indicator has also been clearly met.

The results monitoring and the ex post evaluation confirm that hygiene habits have improved and more hygienic conditions have been established in general. The indicators for Phase I were identical with those for Phase II.

Costs per well averaged about EUR 9,400 in both phases or EUR 38 per user. Dynamic generation costs amount to EUR 0.4/m³ and consist almost solely of investment costs. Operating costs amounting to approx. EUR 0.04/m³ are only incurred by hand pump maintenance and repair. These prime costs are very low both in absolute terms and by regional standards. In two similar rural programmes in Guinea and Benin, these prime costs were more than twice as high. The hand pumps need little maintenance, usually none in the initial years after commissioning. Many committees have already collected sufficient money for a repair kit. But even if no money has been collected, a contribution of only EUR 0.25 per household (with 40 households per well) for a spare parts set and for well repair can be financed. The amounts are so small that they make up less than 1% of income even for absolutely poor people (income: < USD 1/day) so they can be considered as affordable. The target group also appears prepared to raise the money themselves if necessary. From a microeconomic standpoint, the programme is economical and efficient for the target group.

Fetching water is almost exclusively the task of women and girls in the programme region. Women have therefore benefited far more from the improvements made. Much shorter transport distances to and from the bore wells ease their workload, leaving them with more time for other tasks. Health risks, particularly of diarrhoea, have evidently declined, reducing the need for medical care.

The large majority of the project target group is poor. Since the users organise the operation and maintenance of the bore wells on their own in committees, the project approach provides help towards self-help in a predominantly poor target group.

In a country with such unsatisfactory health indicators as in Malawi, the relevance of a rural water and sanitation project is extremely high. With its marked emphasis on improvements in hygiene and user participation, the implementation clearly merits the designation best practice. We assess relevance overall as good (**rating 2**).

The project, the specific project objective achievement, has been effective in all respects, with some objective indicators even surpassed in large measure. We therefore assess effectiveness as very good (**rating 1**).

Altogether, the efficiency of the project merits a positive assessment, since the specific costs per well are lower than expected in the appraisal report and costs per person supplied are also much smaller. Consultancy costs are considerably higher, though. Altogether, due to the lower specific costs than expected, we still rate efficiency as good (**rating 2**).

In hindsight, the overarching developmental impact of the project lies in the improvements made in health and living standards. Thanks to the larger scope of investment than planned due to the low specific costs and successful implementation, the original expectations were surpassed also in terms of potential impact. Improvements in quality of life due to shorter distances, better water quality and a much higher water consumption are very important for the population. Altogether, impact merits the rating very good (**rating 1**).

A notable positive aspect in assessing sustainability is that the failure rates for bore wells from Phase I, which have now been in operation for 10 years, are hardly any higher than those from the second phase and almost all the related committees are still operating, too. Altogether, the high operational availability and good condition of the wells as well as the high number of user organisations still in existence merit a positive assessment. As enough spare parts for the Afridev pumps in nationwide use are on offer in the two centres Mangochi and Namwera, supply poses no great problem. Yet hardly any of the user groups could pay for a replacement investment, such as a completely new pump. In all, we gauge sustainability to be good (**rating 2**).

Weighing up the above individual ratings to attain an assessment of general performance, the small extent of government involvement gives rise to misgivings despite the positive results. Even assuming that the project was implemented successfully, greater involvement would have been desirable to strengthen national capacity. The government would then also have had to provide sustainable budgeting and finance, however. Considering the marked weakness of the executing agency even by regional standards, we consider a **rating of 2** (good developmental efficacy) as appropriate.

General conclusions and recommendations

The project took consistent account of the extreme weakness of the executing agency by implementing the measures without much cooperation on its part, assigning the entire operation and maintenance to the user committees. This was very costly due to the necessary consultancy assignment but considering the restricted resources of this programme, extensive executing agency capacities at district level would have been less successful for lack of integration in a pre-established scheme for basic, national sectoral reform. The current reform efforts do not yet allow for this approach, as evident from the lack of resources available to the District Water Offices.

Since the developmental priorities of the German Government had changed during its term, the programme was discontinued. This is particularly regrettable as this participatory, successful, long tried and tested approach closely aligned with target-group conditions and needs could easily have been transferred to other parts of the district or other regions of Malawi.

Notes on the methods used to evaluate project success

Assessment criteria

Projects are evaluated on a six-point scale, the criteria being relevance, effectiveness, overarching developmental impact and sustainability. The ratings are also used to arrive at a final assessment of a project's overall developmental efficacy. The scale is as follows:

Developmentally successful: ratings 1 to 3	
Rating 1	Very good result that clearly exceeds expectations
Rating 2	Good result, fully in line with expectations and without any significant shortcomings
Rating 3	Satisfactory result – project falls short of expectations but the positive results dominate
Developmental failures: ratings 4 to 6	
Rating 4	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
Rating 5	Clearly inadequate result - despite some positive partial results, the negative results clearly dominate
Rating 6	The project has no impact or the situation has actually deteriorated

Sustainability is evaluated according to the following four-point scale:

Rating 1	Very good sustainability	The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.
Rating 2	Good sustainability	The developmental efficacy of the project (positive to date) is very likely to decline only minimally but remain positive overall. (This is what can normally be expected.)
Rating 3	Satisfactory sustainability	The developmental efficacy of the project (positive to date) is very likely to decline significantly but remain positive overall. This rating is also assigned if the sustainability of a project is considered inadequate up to the time of the ex post evaluation but is very likely to evolve positively so that the project will ultimately achieve positive developmental efficacy.
Rating 4	Inadequate sustainability	The developmental efficacy of the project is inadequate up to the time of the ex post evaluation and an improvement that would be strong enough to allow the achievement of positive developmental efficacy is very unlikely to occur. This rating is also assigned if the developmental efficacy that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.

Criteria for the evaluation of project success

The evaluation of the developmental effectiveness of a project and its classification during the ex post evaluation into one of the various levels of success described in more detail above focus on the following fundamental questions:

Relevance	Was the development measure applied in accordance with the concept (developmental priority, impact mechanism, coherence, coordination)?
Effectiveness	Is the extent of the achievement of the project objective to date by the development measures – also in accordance with current criteria and state of knowledge – appropriate?
Efficiency	To what extent was the input, measured in terms of the impact achieved, generally justified?
Overarching developmental impact	What outcomes were observed at the time of the ex post evaluation in the political, institutional, socio-economic, socio-cultural and ecological field? What side-effects, which had no direct relation to the achievement of the project objective, can be observed?
Sustainability	To what extent can the positive and negative changes and impacts by the development measure be assessed as durable?