Botswana: Water Supply in Rural Centers II

Ex-post evaluation

OECD sector	Water supply and sewage disposal for poor people	
BMZ project number	1991 65 739	
Project-executing agency	Department of Water Affairs	
Consultant	Dorsch Consult	
Year of evaluation	**2002**	
	Project appraisal	**Ex-post evaluation**
Start of implementation	Q 2/1992	Q 1/1993
Period of implementation	42 months	81 months
Investment costs	EUR 40.90 million	EUR 36.4 million
Counterpart contribution	EUR 15.85 million	EUR 15.81 million
Financing, of which FC funds	EUR 14.32 million	EUR 20.59 million
Other institutions/donors involved	EUR 10.73 million	<>
Performance rating	3	
• Significance / relevance	3	
• Effectiveness	3	
• Efficiency	4	

Brief Description, Overall Objective and Project Purposes with Indicators

The project comprises the expansion of the water supply system in the two rural centers Kanye and Molepolole. This includes wells, pumping stations, transmission mains, elevated tanks, standpipes, the expansion of the distribution network as well as one connection conduit to each of the smaller neighboring communities of Moshupa and Thamaga. Additionally, urgent measures to improve the sewage disposal were financed.

The overall objective was to reduce the health risks resulting from diseases induced by water and excrements.

The project purposes were to supply three-fourths of the target group with the basic amount of water they need via public standpipes, secondly to cover higher consumption by one-fourth of the target group via house and yard connections, to cover non-domestic needs until the year 2005 and to improve the disposal situation.

The following indicators were defined:

- Drinking water connection rate: 95% of the local population,

- Average consumption by standpipe users: 25-30 l/cd,

- Rate of access to disposal services: approximately 50% of the residents have latrines that meet minimum hygiene requirements.

Major Deviations from the original Project Planning and their main Causes

The financing of some 1,800 VIP latrines originally planned in the project appraisal and the supplementary hygiene campaigns were carried out under a nation-wide programme via funds provided by the State of Botswana. The project measures therefore focused solely on the expansion and rehabilitation of the existing disposal systems.

Compared with the schedule in place during the project appraisal, a delay of nearly four years arose due primarily to lengthy preliminary surveys. It should also be taken into account that the final project concept was not yet available during the project appraisal; instead, it was not presented until four years later in connection with a progress review together with a proposal for a fund increase.

Key Results of the Impact Analysis and Performance Rating

The project made it possible to supply the target group with safe drinking water. It seems plausible that it also contributed to the achievement of the overall objective. The provision of sufficient amounts of fresh water was a basic requirement for the economic development of the project region. It can be assumed that, in connection with other structural-policy measures of the Botswanan government, the project helped to ease the migration to large urban centers, as planned.

However, problems included the lack of incentives for water consumption to help conserve the resource such as low water tariffs that do not cover costs and the free water available at the standpipes. The project-executing agency is perfectly aware of these false incentives and the misallocations and is attempting to solve the problem by limiting water amounts by way of chip cards and the tariff reform which has already been passed. It can be assumed that the current, relatively high water consumption of 80-100 l/cd will decline substantially for the house connections when the tariffs cover at least the running expenses or, in the medium term, a portion of the capital costs. The tariff reform gives rise to expectations that the running expenses can be covered in the year 2006.

In the project appraisal report the minimum criterion of coverage of operational costs through revenues is regarded as unrealistic; therefore, corresponding requirements and agreements were dispensed with. Especially in recent times the executing agency has offered proof of both the ability to identify problems and the willingness to reform. Many years ago the Botswanan State set the goal of coverage of the running expenses and of a portion of the capital costs via tariff revenues within the context of its national development plan. A more intensive sector dialogue might possibly have helped to apply the steps that have now been introduced earlier and more consistently. However, over the course of time the possibilities to exert influence are becoming fewer and fewer, particularly since this is the last FC project in Botswana.

Based on the effects already stated, our evaluation of the project's developmental effectiveness is as follows:

- Since the scarcity of drinking water was initially a major developmental bottleneck for the region, the project purposes have been met and the facilities are used in full, in principle the criterion of effectiveness is fulfilled. Since the (free) water at the standpipes is not used solely to meet basic needs for drinking water but is instead being misused for other purposes, we judge the project's overall effectiveness to be adequate (partial evaluation: rating 3).

- The development-policy effects were achieved and it seems plausible that this also contributed to the achievement of the overall objective. Owing to the high level of consumption induced by false price incentives and the frequent misuse of drinking water from the standpipes, the project concept concentrated too strongly on expanding water supplies. We classify the project's relevance and significance as adequate (partial evaluation: rating 3).

- During the evaluation of the project an emphasis was placed on the satisfaction of basic needs and on an improvement in the living conditions in the rural centers. If corresponding economic incentives encouraging economical use of fresh water were available, fewer funds would have sufficed. In view of the lack of allocation efficiency, we judge the project's efficiency to be inadequate overall (partial evaluation: rating 4).

- The sewage disposal components are not assessed separately due to their small scope. Given their unsustainable operation, overall they are rated as inadequate (partial evaluation: rating 4).

When all arguments that have been brought forward are taken into consideration, altogether we judge the project to still have an adequate degree of developmental effectiveness (rating 3). The deciding factors are first of all the fact that the operation and maintenance of the facilities are carried out without difficulty despite the low cost coverage of the executing agency and also the willingness – as shown by the most recent tariff reform that has already been implemented- of the executing agency to pass on the actual costs of the supply system progressively to the consumer. In view of its low share of the total costs (approx. 3%), the negative evaluation of the disposal component has a minimal effect on the overall evaluation of the project.

General Conclusions applicable to all Projects

By consistently promoting the social sectors the State of Botswana succeeded in supplying clean drinking water to nearly all of its population, a situation that is unique for the entire African continent. This result was paid for in the form of extremely high subsidies which will decrease considerably in the coming years, however, due to the tariff reform that has been passed for the water sector.

Given the economic situation in the country it is to be expected that the State of Botswana will not be able to continue the subsidization in the next years without external support. The reliable and sufficient financing of the budget deficit of DWA through the national budget and the economic sustainability that is thus made possible despite a lack of cost coverage are among the conditions specific to Botswana that can hardly be transferred to other developing countries.

One conclusion applicable to all projects that can be stated is that possibilities to exert sector-policy influence on the degree of cost coverage can also be exploited if the sustainable operation is not jeopardized by regular subsidies. This applies in particular to a country like Botswana, whose water resources are scarce, as this is the only way to avoid misallocations of scanty resources. At the same time this project illustrates how difficult it is to call for such

structurally effective changes in sector policy if they have not yet been demanded during the project appraisal in the form of an implementation agreement or a requirement.

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 adequate degree of developmental effectiveness
Developmental failures: Ratings 4 to 6	
Rating 4	Overall inadequate 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 concept)?**
- **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 is 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 its own and generate positive results after the financial, organizational and/or technical support has come to an end.