KfW

Swaziland: Matsapha Industrial Park

Ex-post evaluation

OECD sector	32120/Industrial development	
BMZ project numbers	1989 65 212 (Real investment) 1989 70 527 (Complementary measure) AF 92103 (Personnel assistance)	
Project-executing agency	Ministry of Enterprise and Employment and Swaziland Water Services Corporation	
Consultant	GKW, Mannheim PEM-Consult, Düsseldorf	
Year of evaluation	**2002**	
	Project appraisal (planned)	**Ex-post evaluation (actual)**
Start of implementation	Q2 1989	Q3 1992
Implementation period	46 months	92 months
Investment costs	EUR 16.47 million	EUR 20.27 million
Counterpart contribution	EUR 5.48 million	EUR 7.01 million
Financing, of which Financial Cooperation funds	EUR 10.99 million (100%)	EUR 13.26 million (100%)
Other institutions/donors involved	None	None
Performance rating	**Overall sufficient (Rating 3)**	
• Significance/relevance	Overall sufficient (Rating 3)	
• Effectiveness	Overall sufficient (Rating 3)	
• Efficiency	Overall sufficient (Rating 3)	

Brief Description, Overall Objective and Project Objectives with Indicators

The project comprised the repair, extension and expansion of infrastructure in Matsapha Industrial Park to improve locational conditions for existing industrial enterprises and develop additional land for new ones to locate. The personnel assistance measures (complementary measures and training measures) imparted to the staff of the Ministry of Enterprise and Employment (MEE) and the Matsapha Town Board (MTB), i.e. the industrial park administration, the necessary know-how to organize new locations of industry, run waste disposal and maintain roads and surface drainage in the industrial park. The personnel of the Swaziland Water Services Corporation (SWSC) received advice and training in operating and maintaining the

facilities refurbished or extended in the project, such as waterworks, supply grid, wastewater grid and wastewater treatment plant.

The overall objective of the project was to secure income and employment in the industrial park in compliance with acceptable environmental standards. The following indicators were defined for its achievement:

- Total of 221 ha built-over industrial land by 2000
- A workforce of 15,000 in the industrial park by 2000
- No wastewater discharge into the Usutu River and no unauthorized industrial water discharge into the sewerage system

The project objectives were to secure the accessibility of plots, guard against flooding (roads, surface drainage) and guarantee adequate water supply and wastewater disposal. The following indicators were applied:

- All sold, rented and developed plots are connected to the roadways and all plots in use are protected against flooding
- Regular refuse collection at least once a week and proper waste deposition
- Waterworks capacity of 25,700 m³/day
- The share of water supplied free of charge is under 25% of total output
- Supply stoppages are under 10% of stoppages at project appraisal
- Mean water consumption by industry amounts to at least 4,100 m³/day 2 years after startup of the new water supply system
- Treatment plant purification efficiency of at least 85%
- Treatment plant operation at 80% of all measurements below 30 mg BOS Grade 5 (biochemical oxygen demand) per litre
- The treatment basins are desludged at least once every three years and proper disposal of sludge

These targets were to be met through the following project measures:

- Construction of roads, drainage systems, water supply and wastewater disposal plant as well as a landfill, consulting services
- Assistance to MEE in preparing and supervising project implementation, upgrading staff responsible for the management of Matsapha Industrial Park
- Conduct of a training programme for the technical personnel at SWSC for proper operation of project-funded water and wastewater plants

Project Conception/Major Deviations from original Project Planning and their main Causes

Some layout alterations were made to the plans at project appraisal. Due to the unexpectedly high offer prices in the invitation to tender, the planned erection of a new supply point facility with connection to a drinking water treatment plant was not carried out and instead, the available facility was refurbished. After the delayed commencement of the project, it was also necessary to enlarge the sewerage system beyond the planned scale due to the progress made in industrial park development, while fewer funds than earmarked were needed to overhaul and expand the roadways.

Another major deviation from the original project conception was the decision of the project-executing agency at the end of 2000 to stop the originally scheduled land sales in the industrial park and start instead to erect state-financed industrial halls on the remaining 50 ha and rent these out at subsidized rates to locating enterprises. This was therefore also a departure from the principle of full investment cost recovery via land sale prices as intended at project appraisal. Due to uncertainties in future tax revenue, it is impossible to put a figure to the subsidy needs for Swaziland's budget at present. In the medium term, however, we too expect that wage income and tax revenue generated from the economic activities in the industrial park will increase and the resultant budgetary improvements will rebalance subsidies. Considering the competition for industrial locations in the region and the specific features of the solicited textile industry, which would certainly be deterred by land sales at market prices, the MEE measures to utilize the industrial park are understandable and make sense.

Contrary to the assumptions at project appraisal, the project failed to get some industrial plants to pretreat highly contaminated wastewater and prevent the discharge of overly contaminated wastewater into the sewerage system. As a consequence of these discharges and deficits in operating the wastewater treatment facility the whole biological process has been repeatedly put out of balance, resulting also in the generally unsatisfactory cleaning capacity of the waste treatment ponds.

Key Results of Impact Analysis and Performance Rating

The project largely achieved its targets for the efficiency of infrastructure in the industrial park. The planned amount of additional industrial plots were developed; they are accessible and protected against flooding. Water supply to the enterprises in the industrial park is regular and also sufficient for the next 10 years. We gauge the operation and upkeep of the transport infrastructure and the water supply system to be sustainable. Due to the organizational shortcomings of the operators, however, the operation of the wastewater disposal plant (treatment plant) is unsatisfactory; despite indisputable improvements compared with the situation at project appraisal, the environmental targets have not been attained to a satisfactory degree. On account of its large contribution to improving the efficiency of the industrial park, we attest the project sufficient effectiveness altogether (Rating 3), despite the clearly unsatisfactory attainment of its environmental targets.

The enlarged industrial park plays a key role for the investment promotion and employment strategy in Swaziland. Although this strategy geared to the volatile textile industry with its necessary tax concessions in the face of regional competition and in part adverse social

conditions for the workforce also poses risks, there is no evident option under the general conditions prevailing in Swaziland. It was therefore right in development terms to finance the expansion of the industrial park. The project has successfully contributed to securing income and employment in the industrial park and hence the country as a whole. Here too though, the insufficient attainment of the environmental components in the overall objective is a shortcoming, which is why we also only gauge the significance and relevance of the project as altogether sufficient (Rating 3).

Considering the specific investment costs, the cost efficiency of the investment project can be rated as good. Average tariff revenue exceeds the dynamic cost prices accounting for collection efficiency. This would also be the case, even if the operator actually made the necessary input to run the treatment plant properly, which it is not currently doing. The income earned by the project-executing agency from fees for running the industrial park also permits the cost-effective upkeep of the remaining infrastructure outside the water sector. So the allocative efficiency of the investment project is good. The environmental goals of the project have not, however, been achieved by appropriate means, since the objectives achievement of these components is altogether unsatisfactory due to current operating problems with wastewater disposal. Weighing up all these aspects, however, we assess the project's efficiency to be sufficient overall (Rating 3).

Based on the assessment of the individual key criteria for the project's developmental performance and particularly due to the key function an efficient industrial park - largely secured by the FC project - has for the investment and employment promotion strategy of Swaziland, we attest the project an **overall sufficient degree of effectiveness (Rating 3)**.

General Conclusions applicable to all Projects

- Those in charge at the Swaziland Water Services Corporation, which is responsible for water management, stressed repeatedly during the field ex-post evaluation that they had at no point during the project identified with the technological approach adopted for wastewater treatment. Even though independent expert reports concluded that the option chosen was adequate for the conditions in the industrial park provided it was properly operated, the problems that have arisen clearly show that it only ultimately makes sense to implement solutions that are also fully endorsed by all project participants, particularly the subsequent operator.

- Considering how important wastewater pretreatment or the controlled discharge of heavily contaminated wastewater is for viable wastewater treatment, the project should have paid closer attention to the strict implementation of relevant provisions. Recommendations in this connection made in progress reviews and final follow-up were ineffectual. At the same time, the impression gained during the ex-post evaluation in the field was that at least the enterprises visited were quite prepared to collaborate on a joint solution to the problem. Here, however, there is a conflict of interest amongst the different institutions involved. While the Ministry of Enterprise and Employment and the Swaziland Investment Promotion Agency are reticent to trouble the enterprises with regulations and penalties and tacitly even solicit with relatively lax environmental regulations, the Swaziland Water Services Corporation confines itself to imposing (insufficient) fines for discharges. In this type of case, the project should identify these divergent interests and liaise between the few enterprises responsible for hazardous discharges and the project-executing organizations.

- In future similar FC projects, KfW must address the problem of adequate working conditions in the enterprises locating with their help. The analysis of national labour legislation and compliance with acceptable social minimum standards in practice should make up part of project appraisal and monitoring and be addressed in policy dialogue.

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 in more detail below 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 impacts** (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 its own and generate positive results after the financial, organizational and/or technical support has come to an end.