

Indonesia: Water Supply Palembang

Ex-post evaluation

OECD sector	14030 - Water supply and sanitation – small systems	
BMZ project ID	(a) 1992 66 123 (investment measure) (b) 2002 70 199 (complementary measure)	
Project-executing agency	(a) + (b) Ministry of Public Works/ PDAM Palembang	
Consultant	(a) CES (b) GWK Consult	
Year of ex-post evaluation	2005	
	Project appraisal (planned)	Ex-post evaluation (actual)
Start of implementation	(a) Q 1 1993 (b) Q 3 2002	(a) Q 1 1993 (b) Q 3 2002
Period of implementation	(a) 60 months (b) 16 months	(a) 109 months (b) 16 months
Investment costs	(a) EUR 17.3 million (b) EUR 1.0 million	(a) EUR 22.5 million (b) EUR 1.0 million
Counterpart contribution	(a) EUR 2.4 million (b) ./.	(a) EUR 4.9 million (b) ./.
Financing, of which Financial Cooperation (FC) funds	EUR 14.9 million	EUR 17.6 million
Other institutions/donors involved	ADB	ADB
Performance rating	4	
• Significance / relevance	4	
• Effectiveness	4	
• Efficiency	4	

Brief Description, Overall Objective and Programme Objectives with Indicators

The purpose of the project “Water Supply Palembang” was the rehabilitation and expansion of the water supply system in Palembang in southern Sumatra. The project was implemented under a parallel financing in cooperation with the Asian Development Bank (ADB). The overall objective of the project was to contribute to reducing health risks from water-induced diseases. The project objectives were the continuous provision of approximately 1.2 million inhabitants with water supply and sewage elimination facilities and the improvement of the operation management by the water supply utility. The following indicators were defined to measure the achievement of the project objectives: increase in water consumption, reduction in water losses, increase in collection efficiency, decline in supply disruptions and compliance with water quality standards.

The complementary measure comprised three components (management consulting, further training for the operating staff and reduction in water losses) and was designed to improve the technical and administrative efficiency of the project-executing agency.

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

The investment measures implemented in the context of German Financial Cooperation (FC) with Indonesia comprised the expansion of the production capacities, the new construction of two river water catchment and treatment facilities, the construction of additional water reservoirs and the installation of feeder pipes. The financing share of ADB covered the connection of the production facilities to the urban network, the rehabilitation and expansion of the secondary and tertiary distribution networks including the installation of house connections and the promotion of the project-executing agency. In addition to the drinking water component, the ADB project also covered sewage disposal measures for the inner city.

However, only part of the complementary ADB programme measures were actually implemented. In particular the replacement of defective distribution mains and the installation of house connections were not finalised because at the time the continuation of the FC production component was called into question due to payment arrears of the Republic of Indonesia vis-à-vis the Federal Republic of Germany. The measure planned by ADB to support the project-executing agency in Palembang was implemented only partially, and due to the Asian crisis and the resulting budget constraints in Indonesia the sewage disposal measure was not implemented at all. The FC measures were finally implemented without any major conceptual changes.

In order to contain the negative impacts of the unfinished ADB project as much as possible another complementary measure, which had originally not been planned, was implemented with the aim to enable the PDAM Palembang, the urban water utility responsible for the operation of the facilities, to efficiently operate the installed treatments facilities and the distribution network (which had been left unfinished after the unscheduled termination of the ADB measures). This complementary measure covered management consulting, training of the staff working in the operation and maintenance of the production facilities and support in the reduction of water losses.

Key results of the impact analysis and performance rating

The planned target values for the indicators 'degree of supply' and 'water consumption' from the system were clearly missed. The main reason for this was the fact that the components 'tertiary network' and 'house connections' financed under the ADB project were not concluded.

The target value for the quantitative reliability of supply was not achieved. For hydraulic reasons the distribution must be rationed (except for two urban districts).

According to information provided by the water utility PDAM Palembang the microbiological water quality, measured by the proxy indicator 'coliform bacteria contents', has been achieved. However, no independent control was conducted by the health authority.

As the rehabilitation measures on the distribution network originally planned in the context of the ADB component were implemented only partially the water losses are still very high, at 54%.

Though house connections were equipped with water meters in the context of the project it is still not possible to bill the quantities consumed on the basis of the values read on the meters. Due to this fact people tend to waste water and it is not possible to

make a reliable assessment of the technical condition of the network. As a result the specific consumption per capita is very high, at 130 litres.

The financial situation of the water utility PDAM Palembang is marked by high over-indebtedness, high accounts receivable and a critical liquidity situation and is thus very strained.

Due to the financial bottlenecks important operational tasks, such as the consistent continuation of measures to reduce water losses, are not being implemented. In our opinion, the proper operation of the facilities is jeopardized in the medium to long term due to the situation described above.

According to the comparison between the dynamic production costs and the current average tariff revenues 157% of the dynamic operating costs and 65% of the dynamic production costs are covered. Due to the high per-capita consumption the sector policy paper for water and sanitation of the German Ministry of Economic Cooperation (BMZ) requires full cost coverage, which is not achieved in this case.

Due to the low supply level it cannot be assumed that the project will have any substantial positive impacts on the health situation.

The project had the potential to support gender equality. However, since the project did not relieve the women in the area of care for sick family members it can be assumed that the project did not finally contribute to improving gender equality. The project has direct poverty relevance due to the increase in the supply rate especially also in the poorer urban fringes.

In summary and taking account of existing risks we gauge the project impacts as follows:

- Overall, the project objectives were not achieved to a sufficient extent. Moreover, as the executing agency does not invest enough in the maintenance of the facilities it is to be expected that the technical operativeness of the financed facilities cannot be ensured for the entire expected useful life. This is all the more so given the fact that the working capital required for operation has already been partly consumed. After weighing the individual aspects, we have come to the conclusion that the programme's **effectiveness** is slightly insufficient (**sub-rating 4**).
- Overall, the project concept was suited to contribute to solving the existing problems. Due to insufficient coordination with the ADB component, however, the project implementation mainly focused on the expansion of water production and distribution, while the replacement of defective existing pipes and the increase in the number of house connections was only carried out partially. As the connection rate was very low and the reliability of supplies not satisfactory the project did not have any noticeable positive impacts on the health situation. Overall, the project's **significance and relevance** are slightly insufficient (**sub-rating 4**).
- The per-capita investment costs are acceptable. For this reason the production efficiency is sufficient: Due to the high per-capita consumption the sector concept for water and sanitation requires full cost coverage for the programme to be eligible for support. Though this was not achieved the dynamic operating costs are covered 157%. Therefore the project's **allocation efficiency** is rated slightly insufficient. Taking the two sub-criteria into account, we assess its efficiency to be slightly insufficient overall (**sub-rating 4**).

Based on the criteria of significance/relevance, effectiveness and efficiency we rate the project "Water Supply Palembang" as **having a slightly insufficient degree of developmental effectiveness (rating 4)**.

General Conclusions and Recommendations

This project confirms the experience gained in other projects that close donor coordination from the start of implementation of a parallel financing project is required, in particular if the sectoral conditions are deteriorating. In addition, already at the time of the project appraisal KfW should seek close coordination on the disbursement conditions with the donors involved. Only close donor coordination offers sufficient leverage through dialogue with the government and with the project-executing agency.

The present project example shows that simply imposing conditions with regard to tariffs is not sufficient if the performance of the executing agency is bad. In such cases, besides demanding tariff increases, KfW should also make other requirements with regard to other performance-related aspects that can be influenced by the executing agency itself, for instance the collection efficiency.

Abbreviations

ADB Asian Development Bank

FC Financial Cooperation

Legend

Developmentally successful: Ratings 1 to 3	
Rating 1	Very high or high degree of developmental effectiveness
Rating 2	Satisfactory 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 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 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 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, organisational and/or technical support has come to an end.

