

Ex Post-Evaluation Brief

Senegal: Water Supply in Regional Towns



Programme/Client	1) Water Supply in Regional Towns 2) Ancillary measures	
Programme executing agency	Société Nationale des Eaux du Sénégal (SONES)	
Year of sample/ex post evaluation report: 2011*/2011		
	Appraisal (planned)	Ex post-evaluation (actual)
Investment costs (total)	(1) EUR 18.90 million (2) EUR 0.25 million	(1) EUR 13.90 million (2) EUR 0.16 million
Counterpart contribution (company)	(1) EUR 0.76 million (2) --	(1) -- (2) --
Funding, of which budget funds (BMZ)	(1) EUR 18.15 million (2) EUR 0.25 million	(1) EUR 13.90 million (2) EUR 0.16 million

* random sample

Project description: This project encompassed the construction and rehabilitation of water supply facilities (including production wells, pipelines, elevated tanks and the distribution network) in eleven towns in the regions of Fatick, Kafrine, Kaolack, Kolda, Thiès and Ziguinchor, and included the construction of Senegal's first fluoride filtration plant in Thiadiaye.

Implementation period: 104 months (41 months planned).

Objective: The aim of the project (the overall objective) was to reduce waterborne infections. This was to be achieved by providing 240,000 people with adequate year-round supplies of clean drinking water in 2010 (the project objective). No indicators were defined for the overall objective; instead it was assumed that achieving the project objectives would mean that the overall objective had also been attained. The project objective indicators were as follows: measured three years after commissioning, average consumption to reach a minimum of 40 L per person per day through domestic connections and 15 L at tapstands; water quality to comply with the health-related parameters set out in the WHO guidelines; no more than three days of operational disruption per supply system in any given year, with breakdowns remedied in a maximum of 24 hours; and adequate annual levels of water production from each system, ranging from 75,000 m³ per annum in Oussouye to 570,000 m³ per annum in Bignona. By current standards, the objectives were not detailed enough in their distinction between different types of supply (domestic connections and tapstands), but they were appropriate for the basic structure.

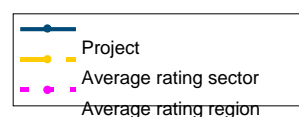
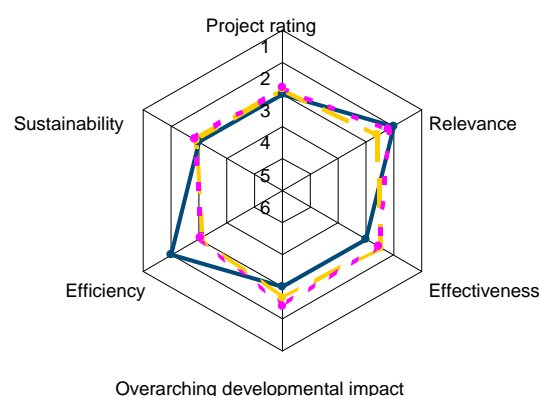
Overall rating: 2

The good level of allocative efficiency achieved and the successful appointment of a private company to provide water supplies (within the framework of a lease and service agreement covering the use of the supply infrastructure, which was provided by the Senegalese state) were decisive in the overall rating awarded.

Note:

Ex post evaluation of the preceding project, "Water Supply in Six River Cities" found similarly good results. Involving private companies in urban water supply has proven its worth.

Rating by DAC criteria



EVALUATION SUMMARY

Overall rating: Based on an overall consideration of the programme's impact and risks, we have assessed the developmental efficacy of this project and its ancillary measures as good (**rating 2**).

Relevance: The programme addresses the core problem of inadequate water supply arising from the lack of development of supply structures in the project regions. Good coordination across the sector, both with other development partners and with the Senegalese side, has had a positive impact on expanding structures of production and distribution. The causal chain which was assumed at project appraisal - that improving water supplies would improve the underlying health situation - remains valid. This programme supported the Government of Senegal in achieving the Millennium Development Goals pertaining to water. We have assessed the project's relevance as good (Sub-rating: 2).

Effectiveness: The rating for objective achievement comprises the following elements:

- Based on an overview of all eleven project locations, the actual mean consumption level (roughly 38 L per person per day) fell only slightly short of target (40 L per person per day). Significant deviations were found in just three towns, with figures of 25 and 29 L per person per day.
- With the exception of two locations, all the water quality parameters that are routinely measured, both physical and chemical, are within safe limits. At 3.95 mg/l, fluoride content in Guinguinéo still represents a serious health risk for the local population.
- Every town frequently experienced supply interruptions lasting considerably longer than three days. However, this is attributable not so much to weaknesses in operational management as to the high number of power outages, which reflects the poor quality of service provided by the state-owned energy supplier.
- Water production was about 10 % below target three years after commissioning and roughly 7 % below target at the time of ex post evaluation, and therefore fell within acceptable limits.
- At 60 %, the actual domestic connection ratio is significantly below the figure of 68 % planned in the feasibility study. Out of a population of 193,800, around 169,000 inhabitants now receive their water supply via domestic connections and tapstands. This equates to a service ratio of 87 %. In the final analysis, taking into account the unacceptable quality of the water in Guinguinéo (due to its high fluoride content), the service ratio drops to 79 %.

We have assessed overall progress towards the objective as satisfactory (Sub-rating: 3).

Efficiency: With regard to production efficiency, we rate as good both the per capita investment costs and the negligible level of physical water losses. The considerable operational risks involved in the fluoride filtration plant in Thiadiaye, the renunciation to build a similar facility in Guinguinéo (which was deemed a necessity in the feasibility study) and the substantially extended period of implementation have all imposed substantial restrictions on the project's production efficiency.

We have not identified any alternative project design (using different technical and operational concepts) which would be more cost-effective. Operational costs were covered across all projects on average by 200% of the tariff revenues. Full cost recovery is being achieved in four of the eleven projects. The remaining projects either fall marginally short of full cost recovery or show definite progress towards full recovery. Similarly good results in terms of microeconomic efficiency were previously identified in the ex post evaluation of the project "Water Supply in Six River Cities" (BMZ No. 1993 65 305). The basis for this can be found in the comparatively low level of investment costs and operating costs, as well as the negligible volumes of physical losses and the high allocative efficiency achieved. Furthermore, the tariff system, with its substantial difference in charges between the first and second levels, is also another important reason for this good microeconomic outcome. The tariff accounts for some 7 % to 13 % of household expenditure. This is a significant burden, but in view of the limited alternative supplies of safe drinking water available, it is still acceptable. The restricted level of production efficiency achieved has been more than offset by the excellent results in allocative efficiency, which far exceeded expectations. Taken overall, we have assessed efficiency as good (Sub-rating: 2).

Overarching developmental impact: No overall objective indicators were set at project appraisal. It was not possible during ex post evaluation to develop any indicators in this area, such as diarrhoeal episodes in children under five, since the relevant statistics were not recorded in the health stations serving the project location catchment areas. Even statistics regularly compiled by the Senegalese Ministry of Finance and the Economy on the social and economic situation in the project regions do not permit reliable conclusions to be drawn regarding improvements in health resulting from the improved water supply. Nevertheless, detailed investigations (by the WHO, for example) have satisfactorily established the positive correlation between water and health. On this basis we believe that this project has also made a fundamentally positive contribution to social and economic development in the region. The project has achieved its intended structural effects. Support for the Société Nationale des Eaux du Sénégal (SONES) in financing investments outside the major supply centres enabled the private sector concern Sénégalaise des Eaux (SDE) to expand its activities at the national level. Taking into account the limitations described earlier regarding the verification of the project's impact on health, and the continued existence of health risks from excessive fluoride levels in the drinking water in Guinguinéo, we have rated overarching developmental impact as good (Sub-rating: 2).

Sustainability: At present, risks to sustainability can be seen at two levels in this project. SONES is responsible for the provision of supply infrastructure to the water supply company, on the basis of a lease and service agreement. The failure to apply the tariff increases which the Senegalese government has promised but not applied in recent years threatens not only SONES' capability but also its liquidity, which is essential for debt servicing and for obtaining new loans. This contract with SDE, the private sector supply company, runs out in mid-2012. According to the views of the current government, the country's urban water supply should be subject to fresh regulation. However, it is not yet clear which conceptual and strategic approaches will be pursued and implemented in the context of these new regulations. At this point in time, therefore, it is not possible to foresee how operations in these eleven regional towns will be organised beyond the short 2012 time horizon. Consequently, any factually based assessment of sustainability must confine itself to the period before the foregoing contracts expire. Taking into account the present government's recognised weaknesses in controlling infrastructure and delivering infrastructure solutions, it is assumed that, beyond this short period of time, the project's developmental efficacy will most probably suffer a marked decline, but still remain positive overall. Taken altogether, we have assessed sustainability as satisfactory (Sub-rating: 3).

Notes on the methods used to evaluate project success (project rating)

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

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

Ratings 1-3 denote a positive or successful assessment while ratings 4-6 denote a not positive or unsuccessful assessment

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

Sustainability level 1 (very good sustainability) The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.

Sustainability level 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).

Sustainability level 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.

Sustainability level 4 (inadequate sustainability): The developmental efficacy of the project is inadequate up to the time of the ex post evaluation and is very unlikely to improve. This rating is also assigned if the sustainability that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.

The overall rating on the six-point scale is compiled from a weighting of all five individual criteria as appropriate to the project in question. Ratings 1-3 of the overall rating denote a "successful" project while ratings 4-6 denote an "unsuccessful" project. It should be noted that a project can generally be considered developmentally "successful" only if the achievement of the project objective ("effectiveness"), the impact on the overall objective ("overarching developmental impact") and the sustainability are rated at least "satisfactory" (rating 3).