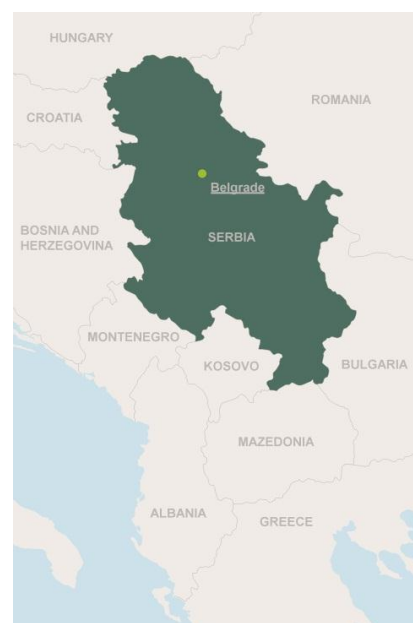


Ex post evaluation – Serbia

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Sector: Water, sanitation and waste water management (1402000)
Programme/Project: Water supply and waste water disposal, Phases II and III (BMZ No. 2001 40 624*, 2002 65 330 and 2002 70 165 (AM))
Implementing agency: Four local water utilities



Ex post evaluation report: 2015

		Planned	Actual
Investment costs (total)	EUR million	17.69	17.89
Own contribution	EUR million	4.58	4.35
Funding	EUR million	13.11	13.54
of which BMZ budget funds, Phase II	EUR million	5.11	5.60
of which BMZ budget funds, Phase III	EUR million	8.00	7.94
PS measure EUR million	EUR million	2.00	2.09

*) Random sample 2014

Summary: This programme comprised rehabilitation measures for existing water supply systems in Niš, Belgrade, Novi Sad and Kragujevac (de facto no waste water components were implemented). The investments were implemented in the distribution network for the most part. Pumping stations were rehabilitated, software purchased and an ozone plant constructed as well. Furthermore, the executing agencies benefited from the programme's personnel support measures.

Objectives: Overarching objectives: 1) Contribute to improving living conditions and reducing the health risks to the population in Belgrade, Niš, Kragujevac and Novi Sad; 2) Promote the prudent use of environmental resources (water).

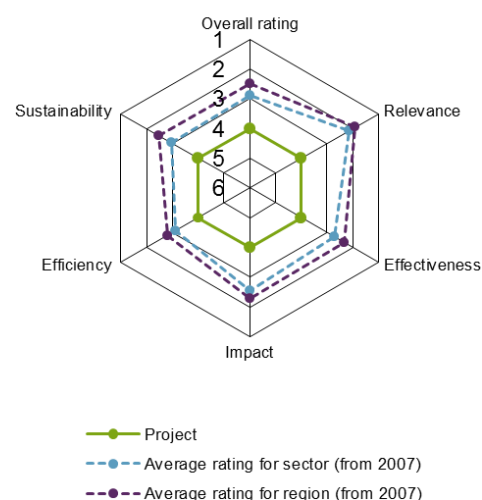
Project objectives: 1) sustainable securing of drinking water supply and waste water disposal in the cities at socially acceptable prices that cover costs; 2) reduction of water losses and wasted drinking water.

Target group: Inhabitants of the four cities of Novi Sad, Niš, Kragujevac and Belgrade.

Overall rating: 4 (both phases)

Rationale: The programme objectives were only partially realised. In particular, the objective of reducing the high technical and administrative water losses was missed, rather these have increased in all project locations. The measures were not always realised efficiently. In light of the overly ambitious objectives, the unrealistic planning assumptions and the funding which was too low as a result, the developmental effectiveness was only limited. The revenues of the utility companies are not sufficient to fund the necessary replacement investments. The programme was only partly relevant.

Highlights: The FC funds were diluted by being divided across 4 cities, which meant the invested sum in all cities was too low to trigger a significant reduction in the water losses. The project's contribution towards conserving energy was a highlight. In retrospect it would presumably have been more sensible to dedicate the funds to one single city, which could then have served as an example of best practice.



Rating according to DAC criteria

Overall rating: 4

Relevance

The project design was not in line with the prevailing deficits. The supply security of the population was ensured before the start of the programme. There were no public health risks as a result of contaminated drinking water at any time. The scale and type of the selected measures were not suitable for helping to achieve a significant reduction in water losses and water wastage. As the funds were also divided between four programme cities, there were not enough funds available for each city to achieve a loss reduction.

The prioritisation of the required investments was determined at various working meetings held between the consultant, the waterworks and KfW. Donor coordination was not necessary here because the waterworks only received little funds from other donors for the project duration.

Relevance rating: Phase II – 4; Phase III – 4

Effectiveness

The following indicators were defined for the aforementioned project objectives:

Indicator	City			
	Belgrade	Niš	Novi Sad	Kragujevac
Phase II	Belgrade	Niš		
The revenues from water sales have been gradually raised to cover the calculated operating costs (without preventative maintenance/repair).	Yes	Yes		
The central water supply of the entire connected population, trade and industry operates without interruptions.	Yes*	Yes*		
The technical and administrative losses are measurably reduced by five percentage points, compared with the losses of 2001.	No	No		
Collection efficiency is at least 75 %.	Yes*	Yes*		
Phase III	Belgrade	Niš	Novi Sad	Kragujevac
The continuous drinking water supply (24 hours/day) is still guaranteed throughout the year in accordance with the WHO standard.	Yes*	Yes*	Yes*	Yes*
The technical and administrative losses (non-revenue water according to the IWA definition) are a maximum of 35 % (medium-term objective is a maximum of 25-30 %).	No	No	Yes*	No

Collection efficiency is at least 80 % relative to a date 6 months after billing.	Yes*	Yes*	Yes*	Yes*
The tariff revenues cover 100 % of the operating costs in the area of drinking water, including the necessary preventative maintenance and a share of the necessary investment costs in the water and waste water area to be established after detailed analysis of the state of the network (by accumulating reserves).	No	No	No	No
Poor groups of the population do not have to devote more than 5 % of their income to water and waste water tariffs.	Yes*	Yes*	Yes*	Yes*
An appropriate operation and maintenance concept exists and is implemented.	partially	partially	partially	partially
Household consumption is constantly decreasing and tends to be 150 litres per person per day or below.	No	No	Yes	Yes

* already achieved before the start of the programme

Some of the indicators were already achieved before the start of the project (Phase II: 2 out of 4 indicators, Phase III, 3 out of 7). This particularly concerns the indicator for uninterrupted water supply. Covering operating costs (including preventive maintenance) with revenues is still a problem in all programme cities. This has not been achieved in any of the programme cities. The indicator determined for this in Phase II is not suitable because it does not take any preventative repairs into account. The collection efficiency of the companies was and is generally good. However, illegal connections, which are not included in the collection efficiency, are problematic. The second problem is the inefficient use of water resources. On the one hand this relates to the losses in the supply networks, and on the other hand to the high per capita consumption of households. The share of NRW has even increased in all four project locations. The maximum value for household consumption of 150 litres per person per day is only achieved in Novi Sad and Kragujevac, which is mostly attributable to tariff increases in these two cities. Technical losses could not be reduced to a significant degree with the investment measures executed – with the exception of Novi Sad where there was a pressure reduction – because only a small part of the supply network and the house connections were replaced. The potential to reduce administrative losses was utilised to varying extents by the utility companies. An extended support period from the project executing agency would have been necessary in this case. All the utility companies fulfilled the indicator for tariffs being socially acceptable as the water and waste water tariffs are still low. With the exception of the objective indicators achieved before the start of the project as well as the indicators formulated too modestly from today's perspective, only the target level for the maximum household consumption was achieved, and this only in two out of four cities.

Effectiveness rating: Phase II – 4; Phase III – 4

Efficiency

In accordance with the programme design, the technical measures were selected and planned by the individual water companies. They were executed according to local quality and cost standards. The improvements suggested by the international technical experts in relation to technologies to be used, quality and costs could only be implemented to a limited extent and with significant delays (planned period ex-

ceeded six-fold) as a result of time-consuming approval processes. There were delays because a construction permit can only be issued based on a plan confirmed by a Serbian engineering office, and this fact was not taken into account in the planning. As the used funds were divided between four cities they were not sufficient for achieving significant improvements. In some cases other investment measures and to some extent larger investments as well as resultant higher specific project costs would have been necessary for the targeted project objectives. The specific investment costs are nevertheless appropriate relative to the implemented investments per inhabitant, taking into account the funds for investment and the local counterpart contributions. The introduction of measures in the institutional field was in part only limited and delayed. In some cases there was discord between the management of the waterworks and the consultant with regard to prioritising the necessary investment measures and implementing the suggestions of the consultant. As the investments were not suitable for achieving the objective, the allocation efficiency must be regarded as insufficient. In particular they did not make a significant contribution to a more efficient use of resources.

Efficiency rating: Phase II – 4; Phase III – 4

Impact

The financed measures were not relevant for achieving the first overall objective (contribution to improving the living conditions and reducing the health risks to the population in the programme cities) in the absence of related deficits in the water supply. The second objective – promoting the prudent use of environmental resources (water) – was too ambitious to be achieved as part of the measures. The design of the programme does not facilitate the achievement of this objective because far more extensive network rehabilitation measures would have been necessary for a significant reduction of water losses. However, it can be assumed that the long overdue investments in the technical infrastructure of the utilities tended to have a positive effect, and without the FC funds provided this would only have happened much later, if at all. A positive side effect is the contribution towards improving energy efficiency. Some companies were able to reduce their energy consumption and as a result their energy costs thanks to the implemented measures. As they consequently achieved financial savings their awareness in this area rose.

Impact rating: Phase II – 4; Phase III – 4

Sustainability

The condition of the FC-funded facilities is appropriate for their age. Although replacement investments are not yet necessary, they are also not guaranteed in the long term. In some areas, replacement parts are not obtained in sufficient quantities. The sustainable operation of the supply facilities is not guaranteed because the low water and waste water tariffs are not sufficient for suitable maintenance and long-term replacement investments. This is particularly a problem because the inadequate revenues are not sufficiently compensated by the regional authorities. The budget allocations from the communities thus far only allow for the sustainable operation of the facilities to a limited extent. Thus the funds for necessary replacement investments were neither generated nor provided by public funding in the past. Additionally, the utility companies have extended the economic useful lives of their facilities on their balance sheets since 2009, which has led to reduced depreciation. Although the companies thereby prevent losses being reported, they are not in a position to record necessary depreciation and therefore build up the necessary capital reserves for replacement investments. The personnel support measure strengthened the project-executing agencies institutionally, but the successful implementation of recommendations varies depending on the agency.

Sustainability rating: Phase II – 4; Phase III – 4

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:

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

Rating levels 1-3 denote a positive assessment or successful project while rating levels 4-6 denote a negative 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. Rating levels 1-3 of the overall rating denote a "successful" project while rating levels 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" (level 3).