Ex Post-Evaluation Brief
Albania: Kavaja – Water Supply and Sewage Disposal

Programme/Client	1) Kavaja, Phase I - Sewage disposal 1998 66 005 Kavaja, Phase II - Sewage disposal 2003 66 591 2) WV Kavaja Phase, II - Rural water supply (Manskuria): 2000 65 565	
Programme executing agency	Water and Sewerage Works Kavaja (WSWK)	
Year of sample/ex post evaluation report: 2011*/2011		
	Appraisal (planned)	Ex post evaluation (actual)
Investment costs (total)	(1) EUR 12.9 million (2) EUR 2.63 million	(1) EUR 12.9 million (2) EUR 2.55 million
Counterpart contribution (company)	(1) EUR 0.4 million (2) EUR 0.58 million	(1) EUR 0.4 million (2) EUR 0.50 million
Funding, of which budget funds (BMZ)	(1) EUR 12.5 million (2) EUR 2.05 million	(1) EUR 12.5 million (2) EUR 2.05 million

* random sample; ** evaluated in tandem 2011

Project description: The two Sewage Disposal projects (Phases I & II) financed a sewer network in the city of Kavaja and the first sewage treatment plant in Albania. In addition, the Kavaja/Manskuria II water supply project aimed at meeting the prevailing shortfall in the town's water provision by developing a valley dammed reservoir in Manskuria (Rural Water Supply, Kavaja, Phase II/ Manskuria). However, the Albanian partner decided to use the new water resource mostly for the Golem Beach supply district, to promote the tourism sector. Under the water supply project, a management contract was drafted (BM) aimed at remedying weaknesses identified at the project executing agency, namely the water supply company which supplied the Kavaja region (including Golem Beach).

Objectives:

Sewage Disposal, Kavaja, Phases I and II

Overall objective: To reduce health risks, conserve water resources and protect surface waters. Project objective: To dispose of sewage accruing in Kavaja and the surrounding district (the project area) in a manner which safeguards public health and the environment.

Rural Water Supply, Kavaja Phase II/ Manskuria

Overall objective: 1) To reduce health risks 2) To conserve scarce water resources and 3) To improve the general environment for the economic development of the region.

Project objective: To provide adequate supplies of safe drinking water to the local population on an efficient and sustainable basis.

Sewage Disposal, Kavaja, Phases I and II

Technical and administrative operation is satisfactory; appropriate sludge disposal concept used; the pilot sewage treatment plant serves as a role model within the sector.

Overall rating: **3**

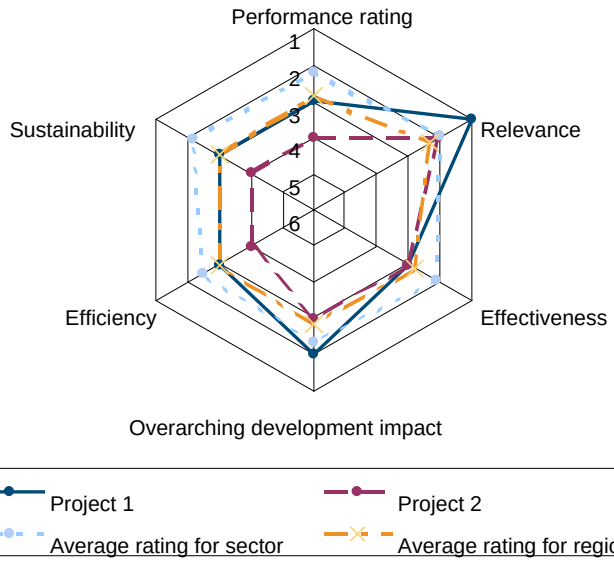
Rural Water Supply, Kavaja II/ Manskuria

Satisfactory technical operation; contribution made to regional development by promoting tourism; inadequate recovery of total production costs.

Overall rating: 4

Points to note: Water supply in tourist regions should achieve full cost recovery.

Rating by DAC criteria



SUPPLEMENTARY INFORMATION TO THE PROJECT DESCRIPTION

FC funds were to be used to provide drinking water supplies[1] and to finance Albania's first sewage treatment plant for the city of Kavaja and its surrounding area. Following project appraisal, the Albanian government decided to designate the land previously envisaged for the treatment plant as a tourism development area. Consequently the site originally chosen for the plant had to be changed. This, together with the steep rise in building costs in the interim period, led to changes in the original scope of the works. Added to this, assessments carried out at a later date indicated that the number of residents in the city of Kavaja had been overestimated at project appraisal by around 25%. The design of the sewage treatment plant was revised accordingly, to service a smaller population (reduced from 50,000 to 25,000).

The water supply project aimed to meet the needs of the Golem Beach region, based on a resident population of 32,000 plus an extra 30,000 tourists in high season. It was planned that Albanian counterpart contributions would finance an additional pipeline connecting Manskuria to Kavaja city, so that the city and its environs could receive further water supplies in low season. The pipeline was indeed built; however, it was broken during the construction of a new road. This missing section it is still not functioning.

The management contract clearly constitutes an accompanying measure for the water supply project. However, since the overall aim of this measure was to counterbalance the executing agency's technical and administrative deficiencies, the contract arrangement also had a potential influence on the success of the other financial measures, and this must be considered when evaluating the sewage disposal component.

EVALUATION SUMMARY

Overall rating:

Sewage Disposal, Kavaja, Phases I and II

In terms of its technical and administrative operation, the pilot sewage disposal project earned a positive assessment. Primarily for this reason, the project has been rated 'satisfactory'. **Rating: 3.**

Albania: Rural Water Supply, Kavaja

Particularly because it is operating at a loss in the Golem Beach region, this project has been ranked as 'no longer satisfactory'. **Rating: 4.**

Relevance: Improving water supply and sewage disposal is still a priority area for German development cooperation with Albania. Through its 'National Strategy of Water Supply and Sewerage Service Sector', the Albanian government is continuing to make strenuous ef-

[1] The Kavaja Phase I Rural Water Supply project (evaluated ex post in 2010) had already financed a well field to supply the city of Kavaja (cf. TC 3.01).

forts to improve the poor water provision available to both rural and urban areas. The overall project objective - to contribute to reducing health risks - may well have been of secondary importance to both the project areas. However, the logic behind the results chain - that these water supply and sewage disposal projects were both likely to encourage the efficient use and/ or conservation of water resources - is still plausible.

- At project appraisal, the water supply in Kavaja city only worked for two hours per day; however, consumers were assured a round-the-clock supply via intermediate storage facilities, in the form of roof tanks. The original concept at project appraisal clearly envisaged that providing water to the population of Kavaja was the priority. When the project approach was subsequently revised, a new impact logic was adopted, which foresaw that promoting tourism along just one section of beach - to the exclusion of virtually any other activities - would contribute to regional development. This is readily understandable, and is also important for protecting the coast. For example, agriculture had been one of the main sources of income for the local population. As competitiveness declined, it became much less significant in this respect, thereby increasing the pressure on creating other opportunities to earn a living. Migration from the land still continues. Against this background, promoting new sources of income in rural areas is of particular relevance.

- No adequate provision existed for the disposal of sewage. Alongside the sewage treatment plant's main function - contributing to the protection of surface waters - it should also be noted that the plant at Kavaja was the first in Albania, and this was expected to serve as a role model for the Albanian water sector.

The executing agency's performance has certainly improved when compared to project appraisal, but management weaknesses still present a significant obstacle to the development of water supplies in the project area. Whereas an adequate supply of water is assured today, in early 2000, around the time of project appraisal, water supplies broke down (either partially or completely) for a lengthy period of time; and just prior to that appraisal Kavaja city had water losses of 80%. The approach adopted - correcting the situation by means of a management contract, in the context of an accompanying measure - is thus readily understandable.

Coordination between donors has become increasingly important over recent years. As an example, the EU has built upon the foundation provided by these two projects: in a scheme already under construction, they are building a new main sewer connecting Golem Beach to the Kavaja treatment works, which should help to reduce the uncontrolled dumping of sewage. The capacity of the treatment works is being tripled to accommodate this.
In its conceptual design, the pilot sewage project - because its impact methodology is still sound and its rationale plausible - has proved well suited to achieving the intended impacts, and has therefore been awarded (Sub-Rating: 1).

The approach adopted - contributing to regional development by improving the supply of drinking water to the Golem Beach tourism area, which has since become very popular - is readily understandable. On a critical note, development and spatial planning was, and still remains, unsatisfactory. Taken altogether, the relevance of the water supply project was assessed a 'good' (Sub-Rating: 2).

Effectiveness: Despite the cost increases which unexpectedly arose during the construction phase, the sewage disposal project largely achieved its declared objective of connecting 50% of the population of Kavaja to the sewage treatment facility. During the planning phase it proved necessary to change the location of the plant, as insufficient building land had been made available by the executing agency. This, together with the steep rise in construction costs seen in Albania (and throughout the entire Eastern European region) over the interim period, led to changes in the original scope of the works. In the meantime the Albanian Government had decided to designate the proposed building land as a tourism development area. Furthermore, estimates compiled later than the data originally used (which came from the residence registration office) led to a revised assessment of the population size. This indicated that the actual number of residents had been overestimated by around 25% at project appraisal. Added to this, population growth stagnated. To match this reduction, the design scope of the sewage treatment plant was scaled down to serve a population of 25,000 instead of 50,000. Despite this reduction in capacity, follow-on finance was still required to cover the interim increase in construction costs. This was provided in 2003 (Kavaja Phase II, Sewage Disposal). By halving the sewage treatment capacity originally planned (to what was, in retrospect, the correct capacity) and by using a comparatively simple cleaning technology, it proved possible to connect the majority of the urban population to the sewage system, despite the cost pressure. Because of the simple, cost-effective technology adopted, expanding the network in future should be straightforward (see the current expansion of the treatment facility by the EU). Apart from isolated instances where threshold values have been slightly exceeded, the treatment capacity that was planned for the facility (over 90% of the BOD_5)[2] is being consistently achieved. Sludge disposal, meanwhile, is working satisfactorily. Based on the level of performance attained, effectiveness has been ranked as 'satisfactory'. (Sub-Rating: 3).

The objective of providing a continuous supply of water to the Golem Beach region was almost secured; by developing the Manskuria reservoir, an availability of 20 hours per day was achieved. The exact level of daily, pro capita consumption is difficult to estimate. If we assume that water is drawn from every connection throughout the year, this gives a consumption figure of 60 L per person per day, which is still acceptable. Since tourists make up the majority of consumers, it may be – certainly in the tourist season, which only lasts three months – that pro-capita consumption is actually much higher. The quality of the wa-

[2] Measure of the amount of oxygen dissolved in water, this being necessary for the biological digestion of organic compounds dissolved in the wastewater.

ter supplied to Golem Strand is good. In 2010 a total of 106 tests were conducted, and no evidence of microbiological contamination was detected. Furthermore, residual chlorine content exceeded the prescribed level in only 6 out of 549 analyses conducted. However, drawing supplies from roof storage tanks carries with it the risk of the recontamination of clean drinking water. Even in Golem Beach, where supplies are now available almost round-the-clock, water tanks are still the norm; but as the water here flows almost continuously, this is seen as less of a problem. However, point of use tests are not being carried out. The objective of achieving a connection rate above 95% has proved unrealistic, due to uncontrolled building activity.

The shift in project concept toward tourism promotion has not been suitably reflected in the objective indicators. Indicators should have been introduced to measure changes in tourist activity (number of overnight stays, spend per tourist per day), and economic development in the region should also have been measured (change in average income, types of income sources etc.). Due to the lack of data available, it is not possible to make a reliable retrospective assessment. However, it is noticeable that, over the last decade, tourism has shown very positive development, at least in terms of numbers, and Golem Beach has become one of Albania's main tourist centres. A similar situation can be seen in the area around Golem Strand, which has experienced a construction boom in recent years.

As at today the planned pipeline, which was intended to supply Kavaja city with water outside the tourist season, has still not been completed. Hence the burden on the Harizaj well field, which is only just managing to supply the city's water requirements, has not been alleviated.

In contrast to Golem Beach, only half the population (1,300 residents) of nearby Golem village, who were not in the project's target group, receive mains water supplies; and this supply flows for only roughly half an hour per day, through a dilapidated pipeline. Hence the quality of water supplied may also be worse than that in Golem Beach.

Under the leadership and authority of the consultant appointed under the management contract (the accompanying measure), major reforms were successfully implemented, including the introduction of an IT-based invoicing system, technical training sessions etc. These measures also made a crucial contribution to improving the performance of the executing agency, and have therefore been assessed as satisfactory.

Based on the satisfactory technical operation of the plant and the contribution made to enhancing the region's appeal to tourists, project effectiveness has been assessed as 'satisfactory' (Sub-Rating: 3).

Efficiency: At EUR 515 per connected resident, specific costs for the sewage disposal project were quite high, but can still be justified. When assessing the costs of the sewage facilities, the additional costs of the basic change in design must be taken into account.

Overall, the technology that was finally used is considered cost-effective. This assessment has been confirmed by representatives from the EU, who conducted their own appraisal of the facilities in the context of their plans to connect Golem Beach to the Kavaja treatment plant. In view of the various design changes which took place (due to plant relocation and capacity reduction), the costs for the implementation consultant on the sewage disposal project are, at around 19% of total costs, acceptable. Hence the project's production efficiency has been assessed as satisfactory. Since sewage charges are invoiced together with water supply charges, it is extremely difficult to formulate a business assessment of the sewage disposal component in isolation. Overall recovery for total operating costs stands at around 60% (WSWK figures). This is considered too low, and is the result of a low tariff level and high energy prices. Production cost calculations show that, even at a collection efficiency of 100%, only 88% of total operating costs would be covered. The tariff required for full cost recovery has been calculated at LEK 60. However, on a positive note, the water supply tariff was raised from LEK 31 in 2007 to LEK 38 in 2010. A corresponding increase was applied to sewage charges in 2009, with charges raised by LEK 2.5 to LEK 15. Although operating cost recovery for the sewage treatment component (as a separate entity) has increased (from around 8% in 2007 to around 40%, according to the operating company), the highly ambitious objective of 100% set at project appraisal has not been met. Comparative data for Albania is scarce, since to date only one other plant (in Pogradec) is in operation, and this employs different technology. Operating cost recovery at Pogradec presently stands at 90%. Since Pogradec is a significantly wealthier district than Kavaja, comparing performance data is of only limited value. Due to the restricted scope of the funding provided under the FC project, not all households in Kavaja city have yet been connected to the treatment plant, and as a result the facility's capacity is not yet being fully utilised. Presently the plant is being used to around 70% of capacity.

Despite the shortcomings associated with the water supply in Kavaja that have already described, project efficiency - due primarily to its cost-effective operation (one employee per 1,000 connections) - is still assessed as 'satisfactory' (Sub-Rating: 3).

At EUR 75 per resident - in spite of the short, three-month duration of the tourist season - specific costs for the water supply project (based on 25,000 residents connected) are considered appropriate. The same applies to the implementing consultant costs, which represented around 12% of total costs for the Golem Beach water supply project. The production efficiency of this project is thus also assessed as satisfactory. In view of the design changes that were made, the delays which arose are acceptable. The system supplying water from Manskuria was completed using simple technology. But some reservations must be expressed: a large proportion of those customers in Golem who are now connected to the mains water supply only use the system during the three-month tourist season, and an insufficient number pay their bills. It is especially important to note that, whilst technical losses in this comparatively new network are negligible, only 70% of the volume of water produced is actually being invoiced. This is principally due to illegal connections. Furthermore, only 50% to 70% of the charges invoiced are actually being paid. The pre-

sumed reason for this is that, once the tourists (most of whom are foreign) return home, the supply company can no longer reach them to collect payment. Production cost calculations for the water supply from Manskuria yield a figure of EUR 46 LEK/m^3 as the tariff needed to cover operating costs (based on an assumed collection efficiency of 100%). Hence the existing tariff level is insufficient, even at a collection efficiency of 100%, for full operating cost recovery: assuming a collection efficiency of 100%, a maximum of 83% of operating costs would be covered.

If one considers the total supply area served by WSWK, overall improvements in invoicing and collection efficiency have been evident in recent years, especially through the deployment of a private operator who assumed operational responsibility from 2003-2007 under a management contract. By its own account, WSWK has profited from this private sector involvement, principally in the areas of process organisation, accounting, debt collection and customer orientation. However, the target group for the water supply project is mostly comprised of comparatively affluent tourists. They are in effect being subsidised, both by the low tariff level and the inadequate efforts on the part of the operator to raise collection efficiency; and it was for their benefit that the connection to Golem village was shelved. Consequently it is no longer reasonable to assume that the system is operating efficiently, and on this basis the efficiency of the project has been assessed as 'no longer satisfactory' (Sub-Rating: 4).

Overarching developmental impact: The sewage disposal project has basically helped to ensure hygienic living conditions in the connected areas of Kavaja. More important, however, was the provision of a sewage disposal system - and, in particular, a system which conserves resources and is environmentally friendly - for the urban coastal region that was connected to the network. The Kavaja project was the first central wastewater system with a sewage treatment plant in Albania; it therefore serves as a pilot project, and will provide a reference for other projects in this area. Moreover, the EU is expanding the plant's capacity, in order to connect the Golem Beach region to the treatment works. It has been reported that further plants are to be constructed, and that the experience gained with this plant will be put to use, with due reference to local requirements.

Because of the positive environmental effects achieved under this sewage disposal project and its importance as a pilot for the wastewater sector in Albania, overarching developmental impact has been assessed as 'good' (Sub-Rating: 2).

Connecting Golem Beach to the mains water supply has improved the area's infrastructure and increased its appeal to tourists. Consequently, houses with a mains water connection are selling for prices up to 20% than those without. Local systems for wastewater disposal, not connected to the mains sewers (septic tanks), have now been in operation for only two years. According to WSWK, these are emptied on a regular basis by private operators; but their contents are not being disposed of through the treatment works. It can therefore be assumed that, until the EU-financed main sewer connection is completed, this sewage is

being dumped in an uncontrolled fashion out in the countryside or into the sea, damaging the environment in the process. Legally, the Kavaja water supply company is responsible for the proper disposal of sewage. Another negative consequence of tourism here is that large areas of the pine woods which are typical for the region have had to make way for the uncontrolled building activity. But this development is to be seen along many stretches of Albania's coast, and it cannot be attributed to the project funded here. Based on the fact that the Golem Beach district has developed into one of the main centres of the rapidly growing tourism sector in Albania, it is reasonable to assume that the project has contributed to regional development. Nevertheless, a substantial proportion of the jobs created is in seasonal work, and are mostly taken by seasonal workers from other parts of Albania. Some posts offer employment which is not just seasonal, such as guards and caretakers, or working in the building trade. Jobs in the latter sector are expected to see a sharp decline once the construction boom in Golem Beach comes to an end. There is already a surplus of holiday apartments. Out of those holiday apartments connected to the mains water supply from Manskuria, more than 2,000 (approx. 25%) are still unoccupied.

Despite the logging of coastal pine woods and the brief duration of the three-month high season, and although sewage disposal remains unsatisfactory (at least for the present), it is accepted that, overall, the contribution to regional development in the Golem area and the district of Kavaja outweighs this.

In summary, we therefore rate the overarching developmental impact of the water supply project as 'satisfactory' (Sub-Rating: 3).

Sustainability: From a technical perspective, the treatment plant at Kavaja is in good condition, and has now been running for six years without any major complaints. Servicing and repairs are being duly undertaken. The EU is presently financing a threefold increase in the capacity of the Kavaja plant. Whilst this expansion is welcome, there is a risk that cost pressures will constrain the recruitment of staff with the qualifications needed to guarantee proper operation of the expanded sewage treatment infrastructure. A further problem is that, unless collection efficiency is drastically improved, the Golem Beach tourist area will need further subsidies. As sewage disposal costs accrue, this will increase pressure on the supplier's ability to cover its costs. Although there is still room for improvement in the executing agency's business performance, and despite the risks that accompany the expansion of operating capacity at the treatment works, sustainability at the sewage treatment plant has still just achieved a 'satisfactory' assessment (Sub-Rating: 3).

Of the total amount invoiced for water consumption, only a maximum of 70% is being paid for by customers; and current tariff levels in the tourist area suffice to cover only 85% of operating costs at most. The extent of under-recovery in the Golem Strand water supply system is so striking that the project's sustainability has been assessed as 'unsatisfactory' (Sub-Rating: 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:

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).