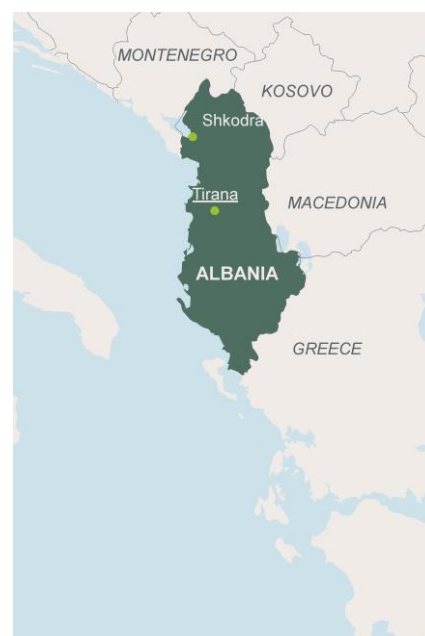


# Ex post evaluation – Albania

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**Sector:** 14020 Water supply and sanitation - large systems  
**Programme/Project:** (A) Korça III sewage disposal (BMZ no.: 2003 66 609)\*, (B) Sewage disposal for the city of Korça IV (BMZ no.: 2007 65 958)  
**Implementing agency:** Ujesjelles Kanalizime Korça (UKKO)



## Ex post evaluation report: 2016

		Project A (Planned)	Project A (Actual)	Project B (Planned)	Project B (Actual)
Investment costs (total)	EUR million	26.9	26.5	20.3	24.3
Counterpart contribution	EUR million	7.2	7.2	5.3	5.3
Funding	EUR million	19.7	19.3	15.0	19.0
of which BMZ budget funds	EUR million	5.0	4.8	15.0	15.0
of which EIB funds	EUR million	14.7	14.5	-	-
of which EU funds	EUR million	-	-	-	4.0**

\*) Project in the 2016 random sample

\*\*) EU delegated funds under the instrument for pre-accession assistance 2010 (2020 60 408)

**Summary:** The project measures of the two sewage projects in Korça included the expansion of a rainwater drainage channel and a ring collector, the rehabilitation and expansion of sewage collectors and the construction of house connections in the city centre as well as the "French Quarter" district which was not previously connected. In Phase IV, parts of the investments were financed by EU delegated funds. The European Investment Bank provided parallel support in the form of funds for maintenance and expansion of sewage collectors in the metropolitan area and the construction of new wastewater treatment plant (pond technology) in Phase III. The FC also provided funding for an additional sewage transportline between Korça and the treatment plant.

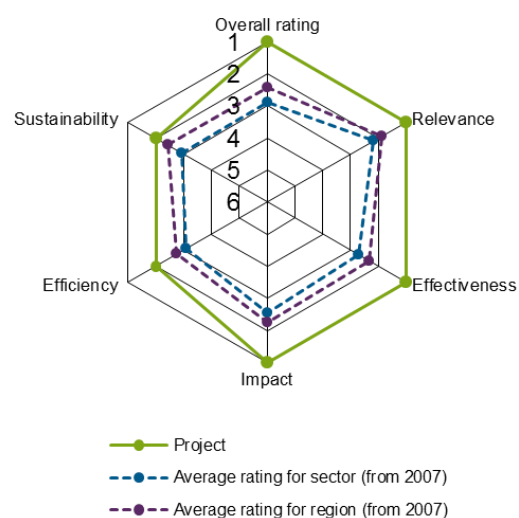
**Development objectives:** Development objectives of the FC measures (overall objective/impact) were to protect the water resources and reduce health risks to the population (Projects A + B). Objective of the FC measures (outcome) was to ensure sustainable, ecological and safe central collection and treatment of sewage in Korça (Projects A + B).

**Target group:** The target group was the population living in Korça as well as some farmers in the surrounding area.

## Overall rating: Rating 1 (both projects)

**Rationale:** EU accession is pushing Albania to improve sewage treatment. The target project indicators were all successfully achieved in full. The executing agency is financially and technically effective and its operation of the systems is exemplary (for example, preventative maintenance). A slight restriction stems from the financial strain placed on the executing agency by Project B even though attempts were made to reduce this strain with onlending conditions. Increased investment subsidies would be desirable in the area of sewage for municipalities with high levels of debt. The project just narrowly rates very good.

**Highlights:** To meet the electricity needs of the sewage treatment plant, the executing agency self-funded a photovoltaic system which was constructed right next to the treatment plant. This almost completely meets electricity requirements. Furthermore, a fruit and vegetable garden is kept on the treatment plant for demo purposes and to encourage farmers to use the dried sludge. Analyses necessary for sludge quality were already conducted as part of a sludge study financed by FC.



## Rating according to DAC criteria

### Overall rating: Rating 1 (both projects)

#### General conditions and classification of the project

The projects Korça sewage disposal III and IV build on the water supply projects financed by the FC (BMZ no. 1996 65 415, 1996 70 340, 2001 66 751) which secured the supply of drinking water in Korça between 1998 and 2003. The sewage components originally included had to be shifted to these projects as a result of cost increases. In Phase III, the European Investment Bank (EIB) funded some of the measures in parallel. For Phase IV of the project, the European Union (EU) designated funds from pre-accession assistance.

#### Relevance

Prior to the implementation of the two projects, the city of Korça drained its waste water in open sewers. One of the open sewers discharged directly into the Turani well field which serves as the sole source of drinking water for the city of Korça. The well field was not directly threatened because the wells already take their water from the third layer of groundwater as a precaution and a seal (watertight membrane) was provided between the groundwater layers when the wells were drilled. There was, however, a medium-term threat and thus the core problem identified in the project appraisal (PA) was and is relevant also from an ex post perspective. Project A pursued the right approach to solving the problem by collecting and treating the sewage.

Even though the other open sewers did not drain directly into the well field, they still discharged into the irrigation and drainage ditches for agricultural purposes as well as to smaller streams around Korça. In the interest of preventative environmental protection and from a health standpoint, central sewage collection and treatment is the right approach for improving the water quality of the ditches and streams.

Project B also identified the problem that the sewerage system of the city was more than one hundred years old and very dilapidated. Cracks in the sewage collectors allowed untreated sewage to seep into the groundwater. The cellars of the adjacent buildings were also flooded regularly with mixed water. There were also no maintenance and inspection shafts which meant that the channels were often clogged which caused the sewage, combined sewage and rain water also flooded the roads. Project B was also suitable for playing a role in solving this problem.

Project B faced the conceptual problem that improving sewage disposal reached its limits due to the desire to cover costs on the one hand and social compatibility of the prices on the other. FC was only able to tackle this problem to the extent that it tried to reach an agreement on financially feasible on lending conditions for the executing agency UKKO.

Improving water supply and sewage disposal is a priority of German DC with Albania. The project is also consistent with the priorities of the Albanian government that considers water a Nexus issue (water for people, water for food, water for energy), and an interministerial committee has been entrusted with this issue. The development objective of protecting the water resources is in line with the goals and guidelines of the Water Sector Strategy of the Federal Ministry for Economic Cooperation and Development (BMZ).

The donor coordination outlined in the project concept with parallel financing from the EIB and EU (delegated funds) was suitable for making a contribution to solving the basic problems.

Even today, the focus of the cooperation is to help Albania gradually reach the EU standard. In the area of water/sewage, the EU aims above all to make progress in terms of compliance with the accession criteria as well as in the area of wastewater management. In this context, it is important to keep in mind that compliance with the European acquis (common rights and obligations) in the area of water/sewage is in a very early stage in Albania. Currently there are around ten sewage treatment plants in Albania which, according to different information, are only partially in operation. They work with different methods and often only comply with the limits for carbon elimination and filterable substances, while initially foregoing phosphorous and nitrogen elimination. The sewage treatment technology selected for the city of Korça (ventilated

and unventilated ponds) will also not make it possible to comply with EU discharge values for phosphorous and nitrogen. However, it was already determined during the PA that the constructed sewage treatment plant can be gradually supplemented with an activated sludge plant which is then capable of fulfilling EU requirements if Albania becomes an EU member. We judge the project concepts to be appropriate from an operational and cost point of view and because sewage treatment is in the initial stages in Albania.

We rate relevance to be very good for both projects.

**Relevance rating: 1 (both projects)**

### Effectiveness

The objective of both FC measures (outcome) was sustainable, ecological and safe central collection and treatment of sewage in Korça (Projects A + B). The measure objective and the defined indicators were largely realistic. Overall the sewage can be transported safely through the various sewers and main collectors past the well field in the direction of the newly constructed wastewater treatment plant.

The achievement of the project target indicators which were slightly adjusted during the ex post evaluation (EPE) can be summarised as follows:

Indicator	PA target value	Status PA (2004)	Status EPE
(1) At least 85% of the population is connected to and uses the central wastewater system (Projects A + B)	85%	76%	95% 2016 -> Indicator clearly exceeded
(2) The discharge values of the wastewater treatment plant are far below the target value in the 24-hour mixed sample (Project A + B).	< 25 mg/l BSB <sub>5</sub>	n.a.	< 25 mg/l -> Indicator fulfilled
(3) No evidence of organic contaminants is found in the raw water of the well field (Project A).	Fulfilled	Fulfilled	No organic contamination found in the water analyses. -> Indicator fulfilled
(4) After the project is over, sewage is no longer discharged regularly into the Turani ditch (Project A).	-	-	No more sewage is discharged into the Turani ditch. -> Indicator fulfilled
(5) The sewage occurring in the wastewater system is completely treated by the wastewater treatment plant (Project B).	-	-	Fulfilled.

The target value of **Indicator 1**, connection of the population to the central wastewater management system and use of the house connections, has been clearly exceeded with 95% at the time of the EPE. This high connection rate was mainly achieved through the implementation of the Korça IV sewage disposal project and the delegated EU funds not foreseeable at the time of the PA. But even after the completion of the work of Phase III, the connection rate was already 88%.

The discharge values of the wastewater treatment plant (**Indicator 2**) are constantly below 25 mg/l BSB<sub>5</sub> both in summer and winter. This indicator has therefore been fulfilled.

**Indicator 3** (Project A), which relates to decontaminating the well field, was also fulfilled. The project has prevented a risk of contaminated groundwater. Since the end of the project and at the time of the EPE, no organic contaminants were found in the raw water.

The Turani ditch is also largely kept free of sewage (**Indicator 4**, Project A). The ditch, however, still serves as a receiving body of water in the event of heavy rainfall. According to the UKKO at the time of the EPE, this only happens 2-5 times a year. Because this is a system with different kinds of water, the sewage is then heavily diluted with rainwater when discharged. As a result, the Turani well field is no longer contaminated. **Indicator 5** (Project B) is also fulfilled because the sewage occurring in the wastewater system is completely treated by the treatment plant.

The operation by UKKO makes a very well-organised and forward-looking impression. The wastewater installations are maintained preventatively by UKKO. In the responsible department, monthly, weekly and daily interventions are planned and documented. The sewers are flushed out regularly and the shafts inspected. Based on the results of the visual inspections, repairs are planned and the repair teams given a weekly and daily action plan. The repair logs are also linked to warehouse stocks to be able to keep the management of spare parts updated. Compared to most other FC executing agencies in the water and sewage area, this operational practice is considered exemplary.

The wastewater treatment plant, which was financed in part by the EIB and by the Korça IV sewage disposal project, is currently working at a capacity utilisation of approx. 90%. The average sewage volume in 2015 was 13,000 m<sup>3</sup>/d instead of the planned 14,000 m<sup>3</sup>/d, whereby the hydraulic capacity of the wastewater treatment plant is utilised more (103%) in the winter months (November-April) and only 83% in the summer months. We consider utilisation to date to be reasonable overall. There are smaller areas in the east that are illegally settled and therefore not yet connected. After legalisation, which is scheduled to occur soon, the sewage from this residential area could be gravity-fed to the existing sewage treatment plant. The required discharge values of the sewage treatment plant can be reliably complied with in summer and winter.

We rate effectiveness to be very good as the objectives have been reached in their entirety and due to the very good operation of the systems.

**Effectiveness rating: 1 (both projects)**

## Efficiency

For Phase III and IV there are specific costs of EUR 476 for each resident connected (in relation to 85,000 residents). These costs seem just barely reasonable compared to other projects. The high costs can be attributed, on the one hand, to the fact that after the construction work of Phase IV was completed, roads in the old town needed to be repaved with natural stones due to the strict requirements for the protection of historical monuments and, on the other, that a system combining sewage, combined sewage and rainwater was constructed which prevents the faulty connections common in developing countries. The costs of the treatment technology can be considered low. For consulting services of the various project components (FC, EIB, EU), a total of EUR 3.1 million was spent from FC funds in both phases. This represents 6% of the total costs spread across all components and can therefore be considered acceptable.

Project A was completed with a delay of around two years, among other things due to problems with the construction contractor. The high collection rate (see section on sustainability) is an indication of a good willingness to pay and a high regard for the work of UKKO.

Overall both projects have good production efficiency.

The technologies were compared in the feasibility studies. This mainly involved the technology of the sewage treatment plant. The selected design of pond technology was the alternative with the best cost-benefit ratio. In the case of the sewage drainage, there were more advantages to retaining the system combining sewage, combined sewage and rainwater. From the ex post perspective, this appears sensible. We rate allocation efficiency to be good (both projects). The overall efficiency is judged to be good (both projects).

**Efficiency rating: 2 (both projects)**

## Impact

The sewage projects have played a role in protecting water resources in and around the city of Korça. Sewage was prevented from seeping into the groundwater. As groundwater is not monitored except for the water taken from the Turani well field, there is no data available.

Other positive impacts of the project included the improvement of the living conditions of the population, mainly in the densely populated old town areas, and the development of tourism in Korça. The cellars of the houses in the old town can be used again because they are no longer full of sewage. In addition, pools of sewage from overflowing sewers no longer form on the edge of the city after it rains. The executing agency also ensures that the cess pits in the villages of Turan, Ciflig and Mborje - villages which are connected to the drinking water systems - are emptied and the sludge disposed of in the treatment plant. The improvement in the water supply and sewage disposal system was accompanied by rehabilitation of old houses in the city which has created a boom in weekend tourism with visitors from Tirana and other Albanian cities.

During the PA for Phase III, it was also planned to eliminate the use of wastewater for irrigation purposes. This is also especially the case because the sewage of the city of Korça is now routed to the treatment plant in closed channels. However, not all residents of Korça have been connected to the central sewage disposal system yet. Particularly in the unorganised peripheries of the city, houses are built without permits and UKKO cannot connect these houses to the system. Currently, efforts are under way to legalise these areas. This means that a small amount of untreated sewage still flows into the channels/irrigation channels outside of the city. The treated (process of the wastewater treatment plant) and untreated water in these channels is used by some farmers for irrigation. We recommended to the executing agency that an awareness-raising campaign on the proper use of the water taken from the ditches be carried out by the competent agricultural or health authorities.

The improvement of the health situation pertained to the people living next to the old sewage channels whose cellars regularly flooded. These floods no longer occur. Also affected were the farmers living in the vicinity of the city who irrigated their crops with the untreated wastewater. It is very likely that their health situation has also improved because only very little untreated wastewater still flows into the irrigation channels. The health data available, however, suggests that the health situation had already improved significantly when the water supply projects were completed, meaning that water-related illnesses were no longer a real problem at the time of the PA. However, eliminating the smell of sewage from the streets of the city has a value of its own.

The project can be used for demonstration purposes. Both the supplier UKKO and the local authority worked hand-in-hand to produce mutual benefits. Moreover the treatment plant (EIB financing and FC financing in Phase IV) is one of the few functioning treatment plants in all of Albania.

Our rating for the overarching impact is very good.

**Impact rating: 1 (both projects)**

## Sustainability

During the PA it was planned to cover, at a minimum, the operating and maintenance costs as well as the debt servicing of the drinking water supply and sewage disposal with income generated by the water supplier. At the time of the EPE, the complete costs (operating costs, financing costs, depreciation and taxes) were completely covered. UKKO, unlike most Albanian water utilities, receives no central government subsidies for the ongoing operations of water/sewage systems. However, UKKO received local investment subsidies on a small scale during implementation of Phase IV. Most long-term expansion investments are funded by international donors through loans which is why the debt ratio of the executing agency is now so high.

UKKO has good performance indicators: the collection rate has reached the high level of 95% (target value for the inspections: 85%) and the employee ratio per 1,000 household connections is very good for the water and sewage sector at 4.2. The water losses are acceptable 25%. 8-10% of these losses are administrative and the rest technical.

The city of Korça has some of the highest water and sewage rates in Albania. They have been increased every year over the last few years. The rate rises were necessary in light of the many loans that Korça had to take out for construction work (FC Phases I and II: IDA loans, FC Phase IV: composite financing, EIB loan for Phase III), to maintain the financial standing of the executing agency. However, in the meantime, the ability of the population to meet its financial obligations has been pushed to its limits as a result. The charges for the average household are currently 4.3% of household income according to information from the Albanian water regulatory body. For households in the lower income groups, the expenditures for water supply and sewage disposal assuming reasonable water consumption is very likely above the nationally valid maximum limit of 5% because there is only one quantity-driven model rate for the rate group "Households".

According to information from the executing agency, less well-off households, however, are granted accommodation for payment by extending payment deadlines and, in cases of particular hardship, debt cancellation. Albania, however, is currently in the process of reforming its unofficially practiced subsidy system for the water sector. It aims to eliminate the practice of assuming the energy costs for the water supply. There is, among other things, a plan to have the water tariffs of poorer households financed through social assistance by the Ministry of Social Welfare and Youth. It has not yet been decided specifically in what form this will take place. This means that an important problem will presumably be resolved in the foreseeable future.

Generally speaking, the system that has been constructed is in a good condition. This statement must be slightly qualified in terms of the integration of the shafts of the ring road into the road pavement where cracks are evident in the support ring and in the surrounding asphalt. The other installations inspected (shafts in the city centre, rain overflow basins, rain overflow, treatment plant) are in good to very good condition. Operation of the systems is forward-looking, the channels are flushed out regularly and the shafts inspected at the same time. Repairs are carried out quickly and documented. The wastewater treatment plant is operated automatically, gives a well-maintained impression and does not emit any relevant odours. Operation reports are issued monthly.

One key challenge for the executing agency UKKO is the most recent regional reform which has been in force since June 2015. UKKO must integrate a total of 65 villages in the surroundings into its supply area. The villages are up to 20 km away from the city and in some cases have their own supply systems. Sewage is usually disposed of decentrally through cesspools/. To date, the supply systems have been operated by a small handful of experts in the villages and most are in very poor condition. Invoicing, collection rate and rate levels have varied considerably so far. UKKO had the existing systems evaluated by a financial auditing agency and must integrate them into the accounting system by the end of the year. However, the company has made it clear that it can only make bigger investments in these villages with grants from international donors. Applications for four villages have been submitted to the Albanian development fund which, among other things, functions as an executing agency for rural water supply for FC. As long as no commitments have been made in this area, UKKO will only be able to make investments on a small scale and hire just a few additional staff. We thus do not expect any massive impact on the performance capacity of UKKO and thus on the sustainability of the evaluated systems.

From today's perspective, we judge the sustainability of both projects to be good, however, with strong evidence that the financial strain on the executing agency will increase drastically starting in 2019 when the FC loan starts being repaid.

**Sustainability rating: 2 (both projects)**

### 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:

<b>Level 1</b>	Very good result that clearly exceeds expectations
<b>Level 2</b>	Good result, fully in line with expectations and without any significant shortcomings
<b>Level 3</b>	Satisfactory result – project falls short of expectations but the positive results dominate
<b>Level 4</b>	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
<b>Level 5</b>	Clearly inadequate result – despite some positive partial results, the negative results clearly dominate
<b>Level 6</b>	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).