PROJECT FICHE
1998 CBC PROGRAMME
SLOVAK REPUBLIC

Project nr.: SR9814.03

1. Title of Project
“Improvement of Water and Wastewater Systems in Malacky District”.

2. Sector and sub-sector
Environment, Wastewater and water supply, pollution control.

3. Precise location of project
The Project is located in Malacky district. Sub-projects are located in Gajary, Malacky, Lozorno and Jablonové.

4. Beneficiaries
The improvement of the environmental conditions in the whole district of Malacky will benefit the local population (almost 25,000 people directly affected by the project in the four villages), the neighbouring population (affected by river Morava and underground water flows) and tourists coming to the district.

5. Recipient institution (partner institution)
The municipalities of Gajary, Malacky, Lozorno and Jablonové are the recipient institutions of the project.

6. Involvement of local authorities
The four municipalities mentioned above are directly involved in the implementation of the sub-projects.

7. Cross border impact
The project implementation will lead to an improvement of water quality in the streams Malina and Suchý potok of the border river Morava, which runs through the region. Both surface and underground water contamination will be reduced. The area has a high potential for the development of tourism (specially coming from Austria). The project will also have positive impact on the ecological potential of protected country-zone Záhorie and Malé Karpaty on the Slovak part and on the nature and environmental quality in National Park Donau-March-Auen on the Austrian part of the river Morava. Project implementation will result in an improvement of the living quality and specially of the drinking water quality in the area.
The cross border impact refers to the following fields:
- Tourism
- Environment
- Infrastructure

8. Contribution to the preparation for EU accession
The project is providing an upgrading of the environmental infrastructure in border area, therefore it is specifically related to the accession process. The environmental standards to be obtained will be in line with the European environmental emission figures.

9. Impact on Regional Development
Through an improvement of the environmental infrastructures with reduction of pollution to surface and groundwater, the project will contribute to generate better living conditions. Impacts on the economic development of Malacky district and Zahorie region in general is mainly given by safer environmental conditions, which will bring better social and economic basis for sustainable development in the area.
10. Project objectives
The general objectives of the project and its four sub-projects are the following:

- Reduce pollution to surface and groundwater in Malacky district and neighbouring villages.
- Environmental improvement of Morava river and its tributaries.
- Improve the health conditions for the inhabitants in the project area.
- Improve potential for tourists and protection of nature heritage (Malé Karpaty).
- Reduce pollution and increase supply of drinking water.

The specific objectives for the four sub-projects are to:

- Complete the sewerage system in Gajary.
- Complete the wastewater treatment plant in Malacky.
- Introduce the sewage system in Lozorno.
- Build the water supply system in Jablonové.

11. Expected results
The project is divided into four sub-projects (Gajary, Malacky, Lozorno and Jablonové) with the following concrete results:

a. The sewage network in the village of Gajary (second stage)
The object of the sub-project is the supply and installation of 1700 m of PVC sewage pipelines (1345 m of sewers DN 400 and 60 houses connections DN 150) which connect the wastewater treatment plant to the village. The first stage has been financed by Phare CBC 1995 and is currently under implementation.

b. Reconstruction of the sewage disposal plant in Malacky (second stage)
The sub-project leads to the completion of the construction of the sewage treatment plant in the town of Malacky with corresponding reduction of pollution into the Morava river. The construction of the plant has been divided into two stages. The first stage has been financed by the 1995 CBC programme and is currently under implementation. Mechanical pre-treatment, dewatering station, biological purification, bio-filters, settling and emsher tanks, and high voltage service line are included in the first stage. The second stage includes civil works and supply of equipment for service building, pumping station, emergency sludge tank and micro filter tumbler purification station.

c. Sewerage communal system at the village of Lozorno
The sub-project will complete the supply and installation of the sewerage system in the village. 4950 m of sewerage, 3 pumping stations and 900 m of discharge pipelines are included in the project.

d. Water supply system for the village of Jablonové
The sub-project includes the supply and installation of pumping station, chlorinating station, water tanks and water distributing network with forcing pipe for the village.

12. Project Background and Description
The background of the four sub-projects is the following:

a. The sewage network in the village of Gajary (second stage)
The village of Gajary (population 2 526), is located on the Slovak-Austrian border. The Morava River forms the border with Austria. On the opposite bank of the river lies the Austrian village of Durnkrut. The Morava River is highly polluted. Part of the pollution is caused by the fact that there is no sewage disposal plant nor a sewerage system in the Gajary area. The sewage is collected in cesspools or piped to ditches. Such an inadequate sewerage system leads to the excessive pollution of both groundwater and the river Morava. There is an urgent need for the construction of a sewage disposal plant and sewerage system. Currently there is no piped public drinking water system in the village. Water in the
local wells is polluted. Fresh drinking water has to be transported twice a day into the village. However, in the past few years, the frequency of water deliveries has decreased and at present, the water is being transported into the village only four times a week. The water consumption is free, all expenses (currently amounting to SK 280 000/yr) related to the deliveries are totally incurred by the authority in Gajary. It is proposed that concurrent with the construction of sewage system, a piped public drinking water system is provided.

b. Reconstruction of the sewage disposal plant in Malacky (second stage)
The town of Malacky (population 17,743) is in the centre of Zahorie, a border region with the Republic of Austria. The border river Morava is considerably polluted, as a consequence of there being limited sewage disposal plants and public sewerage systems in the villages of the river basin. The town has a sewerage system servicing 65% of the inhabitants. The sewerage network was monitored by EkoFond Foundation of Austria. Currently, the town has the sewage disposal plant which has been in operation since 1963. Its capacity is exceeded threefold, and reconstruction and extension are now unavoidable. The reconstruction of the sewage disposal plant will contribute to the environmental improvement of the region. The implementation of both the new sewerage system and the refurbishment and increase in treatment capacity of the sewage plant are necessary to achieve the required environmental and health targets.

c. Sewerage communal system at the village of Lozorno
The village of Lozorno (population 2700) is located on the Slovak Austrian border region, district Malacky. The village has a partial surface water sewerage system with no system for raw sewage. The Morava River forms the border with Austria. This river is highly polluted. The river Morava is polluted because of a lack of sewerage systems and sewage disposal plants in this region and existing geological conditions too. At present, in the village of Lozorno raw sewage is in general collected in cesspools. The cesspools are emptied infrequently in accordance with financial possibilities of inhabitants. Such an inadequate sewerage system leads to the excessive pollution of groundwater, the river Malina and Suchý potok (stream), which flow into the border river Morava. There is an urgent need for the construction of a sewerage system in the village. Therefore in 1991 the village started with construction of public sewerage system and sewage disposal plant. Until December 31, 1996 for the construction has been spent 23 mil. SKK, and constructed 5,807 m of sewerage and mechanical - biological sewage disposal plant with third level of final cleaning. In building part the sewage disposal plant has been constructed for projected capacity of 4,000 equivalent inhabitants with the view to the year 2015. In technological part 2 lines of biological cleanings were build in with capacity of 2,000 equivalent inhabitants. At present the capacity is for 1,090 equivalent inhabitants and sewage disposal plant impermanent performance reaches projected parameters.

d. Water supply system for the village of Jablonové
The village of Jablonové is located in the district of Malacky in the altitude of 229 m a. s. l., in the southern part of the Lowlands of Zahorie between the Morava River and mountains Malé Karpaty. Through the middle of the village runs the Jablonovský Brook discharging into the Morava River. The village is one of the most ancient ones in region of Zahorie. A written mention of it dates from the year 1206. The present number of inhabitants amounts to 1 050. At present time there is no piped public drinking water system in the village. The realisation of the sub-project brings a significant improvement in providing the population with drinking water and subsequently also in the quality of environment in the village and the broad surroundings too.
The water-supply system consists of:
- existing well HL-5
- pumping station
- chlorinating station
- distribution network in the village
- water tank 2 x 100 m³

[Signature]
13. Implementation Status
The sub-projects in Gajary and Malacky are the continuation of previous stages, which are currently under implementation. The new stages will be tendered after signature of financing memorandum. The sub-project in Lozorno is also a continuation of works already started with national and local budgets. Feasibility study and project documentation are available. All surveying and project works for construction have been completed and all respective permits have been issued. For the sub-project in Jablonové all preparatory works for the construction (geodesic works, geological survey and realisation projects) are available.

14. Relation between the project and other programmes

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<td>Bilateral</td>
<td>The sub-project of Gajary is related to the sewer network and sewage disposal plant built in the Austrian border village of Durnkrut.</td>
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15. Project components
1. Construction works
2. Supply of equipment and materials
3. Detail design, tender documents, permits
Details of the components for each of the sub-projects are available at CBC PMU.

16. Cost breakdown (thousand ECU)

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17. Implementation schedule (by quarter)

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18. Contracting schedule (thousand ECU) cumulative figures by semester

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19. Co-funding arrangements
The State and local budgets will co-finance the project budget.

20. Risks and Assumptions
After the financing for the project is secured, the project does not present technical difficulties for the implementation. No specific risks are foreseen.

21. Initial Environmental Assessment (IEA)
The aim of the project is to increase environmental protection in the district of Malacky and surrounding region. The construction works will not affect the environment and the benefits of all the sub-projects will improve environmental standards and reduce pollution to surface and groundwater.

22. Economic and Financial Assessment of Project Benefits
Both financial and economic benefits are foreseen as result of the project. The rehabilitation and upgrading of wastewater and sewerage systems have consistent impacts on the social and environmental conditions for the local populations as well as for visitors. The availability of the systems will also allow local municipalities to recollect enough fees for the proper maintenance of the systems.
Under the financial point of view the investment has been analyzed in the framework of the whole Malacky district. A preliminary financial analysis based on available data shows an internal rate of return (IRR) of 15.7% and a net present value (NPV) of almost 1 MECU (preliminary financial analysis is attached). This is due to the relatively low investment cost for the whole Malacky district.
The project shows also that is affordable for the local population in terms of resources to pay for the maintenance and eventual replace of the system after 20-25 years.

23. Project Sustainability
The maintenance of the wastewater plants, sewerage systems and water supply networks is responsibility of the recipient municipalities.

Recipient institutions
Local Authority Gajary,
address:
SK-900 61 Gajary,
Slovakia
Contact Person;
Mrs. Terézia Šebírányová, Village Mayor,
Telephone: ++421 703 97 132 or
          ++421 703 97 419

Municipal authority Malacky
Mierove nam. 10
901 01 Malacky
Ing. Vladimir Moravčík, CSc., the town mayor
Local Authority Lozorno
address:
SK-900 55 Lozorno
Slovakia
Tel: ++ 421 5968 122
Fax: ++ 421 5968 122
Contact person
Lubomír Haramia, Mayor
Tel: ++ 421 5968 122
Fax: ++ 421 5968 122

Local Authority Jablonové,
address:
SK-900 54 Jablonové,
Slovakia
Contact Person:
Mr. Kotes, Village Mayor,
Telephone: ++421/703/998 132
Fax: ++421/703/998 132

Implementing Authority
Office for Development Strategy of Society, Science and Technology of Slovak Republic
Lamacká cesta 8
PO BOX 22
SK - 830 07 Bratislava 37
Slovakia

Appendixes:
financial analysis
Malacky District Waste Water and Sewerage Systems

financial analysis

- investment cost: 3 710 thousand ECU
- yearly operation & maintenance cost: 24 thousand ECU
- Number of inhabitants: 64 000
- people per household: 2.5
- number of households: 25 600
- tariff household: 0.21 ECU/m³
- tariff industries: 0.58 ECU/m³
- daily consumption per inhabitant: 120,00 liters
- annual consumption households: 2 803 200 m³
- annual consumption industries: n.a.
- project life: 15 years

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Financial Internal Rate of Return: 15.67%

discount rate: 10%

Net Present Value: 0.936 Million ECU
# LOGFRAME PLANNING MATRIX FOR PROJECT

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## Immediate Objective

1. Reduce pollution to surface and groundwater in Malacky district and neighbouring villages.
2. Environmental improvement of Morava river and its tributaries.
3. Improve the health conditions for the inhabitants in the project area.
4. Improve potential for tourists and protection of nature heritage (Malé Karpaty).
5. Reduce pollution and increase supply of drinking water

## Indicators of Achievement

- Increase of health in local population and decrease of sicknesses
- Increase of average income in project area
- New settlements in project localities because of better living conditions
- Improvement of environmental data

## Sources of Information

- Ministry of Environment
- Municipalities in the project area
- Environmental monitoring reports
- Local, national and international press

## Assumptions and Risks

- Availability of funds
- Stability in the political commitment towards investment in environmental infrastructure

## Results of Project/Sub-project

1. Complete the sewerage system in Gajary with the supply and installation of 1700 m of PVC pipelines
2. Complete the wastewater treatment plant in Malacky
3. Introduce the sewage system in Lozorno by supplying and installing 4950 m of servers, 3 pumping stations, and 900 m of discharge pipelines
4. Build the water supply and distribution system in Jablonové
5. Increase the environmental standards in border areas according to Agenda 2000 recommendations

## Indicators of Achievement

- Decrease of pollution to surface and groundwater
- Increase of fishing activity on Morava river and its tributaries
- Compliance with EU environmental standards
- Decrease in the payment of charges and fees for environmental pollution

## Sources of Information

- Sub-project reports
- Construction supervision reports
- Ministry of Environment
- Municipalities in the project area
- Environmental monitoring reports and data on BOD₅, COD and other suspended particles
- EU mission reports
- CBC PMU

## Assumptions and Risks

- Timely availability of funds
- Timely implementation of works
- Stability of construction, material and equipment prices
ANNEX 1

Project nr. SR9814.03
“Improvement of water and wastewater systems in Malacky District”

**Cumulative Quarterly Disbursement Schedule (MECU)**

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