1. Basic Information

1.1. Project Number  CZ 01.12.05

1.2. Project Title  Aš – Upgrading of the WWTP, Sewage System

1.3. Sector  Environment

1.4. Project Location

<table>
<thead>
<tr>
<th>Euroregion:</th>
<th>EGRENSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-border region:</td>
<td>Czech Republic – Germany</td>
</tr>
<tr>
<td>District:</td>
<td>Cheb</td>
</tr>
<tr>
<td>Municipality:</td>
<td>Aš, Krásná, Podhradí</td>
</tr>
<tr>
<td>Cadastral territory:</td>
<td>Aš, Krásná, Podhradí</td>
</tr>
</tbody>
</table>

2. Objectives

2.1. Overall Objective(s)

The project is in compliance with the Joint Programming Document (JPD), Czech Republic – Germany medium-term strategy and priorities for the Interreg III A - Phare CBC programmes. It fits within the priority of developing the area and its environment. The project is targeted at:

- Reduction in environmental loads and risks aimed at a sustainable and environment-friendly development of border regions;
- Creation of better infrastructure conditions for economic development in the cross-border area.

2.2. Project Purpose

**Reduced pollution of surface and ground waters**

The project implementation will reduce pollution of the Bílý Halštrov (Weisse Elster) border stream and improve the protection of ground water springs used for medical cures in Bad Elster situated in the Saxon part of the border region.

**Reduced soil pollution in the Podhradí and Krásná municipalities**

When connecting 300 equivalent units in Podhradí and 490 equivalent units in Krásná to the WWTP Aš soil pollution in these municipalities will be reduced.

**Creating conditions for connecting further equivalent units**

The project implementation will create conditions for further 350 equivalent units in the Kopanina and Doubrava municipalities and further equivalent units in Aš to the municipal WWTP.
Reduced pollution of waste waters

Through the updating and increased capacity of WWTP, the 92% efficiency of $\text{BOD}_5$ and 85% of COD will be achieved together with the following quantitative reduction in pollutants.

<table>
<thead>
<tr>
<th>Unit (mg/l)</th>
<th>Before project implementation*</th>
<th>Before project implementation**</th>
<th>After project implementation***</th>
<th>Norms CR</th>
<th>Norms EU</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOD</td>
<td>260</td>
<td>20</td>
<td>15</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>COD</td>
<td>290</td>
<td>95</td>
<td>80</td>
<td>90</td>
<td>125</td>
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<tr>
<td>NL</td>
<td>240</td>
<td>21</td>
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<td>20</td>
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<tr>
<td>N-total</td>
<td>30</td>
<td>21</td>
<td>15</td>
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<tr>
<td>P-total</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

* Values of pollutants from Krásná and Podhradí discharged into the water stream without treatment (only cesspools and septic-plant tanks in place)

** The current values of discharge from the WWTP before its reconstruction and the linking up of adjacent municipalities

*** Values at the discharge from the WWTP including treatment of waste water from the adjacent municipalities

Enhanced attractiveness of the region

The project implementation will contribute significantly to the re-vitalisation of water flows and protection of nature and landscape, and therefore indirectly to better living conditions of the population on both sides of the border and creation of pre-conditions for local economic development in the area.

2.3 Accession Partnership and NPAA Priority

Enhanced environmental quality and partial achievement of the EU standards in the environmental sphere, together with support to economic development, are among the priority tasks of the pre-accession period.

The project is in compliance with the Accession Partnership document and with objectives of the National Programme for the Adoption of Acquis (NPAA) in the sphere of the environment and support to economic development.

2.4 Cross-border Impact of the Project

The project will have positive impacts on the purity of surface water on both sides of the border. Quality of the Bílý Hlaštrov (Weisse Elster) stream influences the quality of the Saxonian Saale and of the German part of the Elbe. Bad Elster, one of the biggest Saxonian spa, is situated close to the border with the Czech Republic. The Weisse Elster flows through this spa.

The draft project is based on a pressing need of solving the environmental issues which constitute the main problem in Czech-German relations, especially in border regions.
3. Description

3.1 Background and Justification

Aš and Krásná municipalities are situated close to the border with Bavaria and in the distance of 8 km from the border with Saxony. Podhradí, a village, is situated 4 km from the border with Saxony.

Aš, a town with the population of 12264, avails of a combined mechanical and biological WWTP with the capacity of 14 545 m3/day. Currently it treats waters from 16 500 equivalent units at Aš. The plant is outdated and its quality of treatment does not meet the EU standards. Its technological equipment is worn out with high failure rate. Replacement of parts of the equipment is impossible, as it was produced in the former GDR; repairs are therefore increasingly difficult and expensive. If its poor state of repair is not improved speedily, there is the danger of shutting down the facility, as further repairs will become impossible.

The modernization of the WWTP will significantly increase the efficiency of treatment measured against the EU standards, it will reduce the electricity costs thanks to its lower consumption, make the maintenance easier, decrease the operating costs and increase the reliability of the WWTP. It will also allow for the connection of adjacent villages, which still lack a unified sewage system. These are Krásná, Podhradí, Kopaniny and Doubrava where the wastewaters are pre-treated only mechanically (septic-plant tanks etc.) or discharged directly into the Bílý Hlaštrov border stream. Krásná, a municipality with 471 inhabitants, has a water distribution network with a central source of potable water. Podhradí with 123 inhabitants has an outdated water distribution network with an unfit source of potable water. A project dossier is being prepared for the intensification of WWTP Aš and the construction of sewage systems at Krásná and Podhradí linked to the municipal WWTP at Aš.

3.2. Linked Activities

Currently the implementation of the 1st stage of the project is going on – the sewers, pump station Krásná and discharge Krásná – WWTP Aš, to which the draft project is closely linked. A project for a sewage system for the adjacent villages Kopanina and Doubrava with a connection to WWTP at Aš is being prepared.

In 2001 works will be launched on the potable water supply main Aš ( Háj) - Podhradí - Studánka and on the replacement of the outdated parts of the water supply system at Podhradí. CHEVAK Cheb, a.s., is the investor, completion of works is planned for 2003.

3.3. Results

The project implementation will provide for an upgraded combined mechanical and biological WWTP at Aš with the intensity of waste water treatment complying with the EU standards, and for the construction of sewage systems in the municipalities of Podhradí and Krásná.

3.4. Activities

The project implementation includes the completion of all necessary construction works and technological supplies linked to the upgrading of WWTP Aš and construction of sewage systems in the adjacent municipalities of Krásná and Podhradí. Within the project the following activities will be implemented:

Upgrading of the technological equipment of WWTP Aš
Reconstruction of the screening unit and introduction of a fine-bubble aeration technology. Adjustment of the current D-N system allowing for the removal of N-total complemented by chemical co-algulation of phosphorus.

**Construction of a new sewage system at Krásná**
Sewage system + discharge sewers approx. 5.267 m
Sewer mains and collecting pipes – stoneware pipes DN 300, 400 and 500
Discharge sewers - LT DN 150
Sewage service pipes - DN 150

**Construction of a new sewage system at Podhradí**
Sewage system + discharge sewers approx. 6.725 m
Sewer mains and collecting pipes – stoneware pipes DN 300, 400 a 500
Discharge sewers - LT DN 150
Sewage service pipes - DN 150.

**4. Institutional Framework**
The National Aid Coordinator (NAC) has an overall responsibility for programming, monitoring and implementation of the Phare programme. The National Fund (NF), managed by the National Authorising Officer (NAO), will supervise financial management of the programme and will be responsible for reporting to the European Commission.

The Ministry for Regional Development, in cooperation with the Centre for Regional Development, is the programme Implementing Agency (IA) with the overall responsibility for the project implementation. The NF will be transferring funds from the Phare resources to accounts managed by IA as authorised by the Financing Agreement signed between the MF/NF and IA.

The IA is managed by the Programme Authorising Officer (PAO) nominated by the Ministry for Regional Development and approved by the NAO and agreed by NAC. The PAO is responsible for all activities of the IA.

The investor is responsible for the Czech contribution to co-financing, for acquiring a land-use decision and a building permit, for preparing and launching the tender for a contractor, preparing a contract, supervising the works and for the final acceptance.

Investor: CHEVAK Cheb, a.s.
Tršnická 11, 350 02 Cheb
Contact person: Ing. Jirí Pivrnec – Chairman of the Board
phone.: +420 (0)166 / 414 111, fax: +420 (0)166 / 433 554

CHEVAK Cheb, a.s., the investor, is a joint-stock company which operates and owns facilities for potable water supplies, sewage and disposal of waste waters. The company has the following ownership structure: 66,72 % - municipalities, 30 % - NGW, a German company, 3,28 % - other minor owners.
5. Detailed Budget (MEUR)

<table>
<thead>
<tr>
<th>Phare</th>
<th>Investment Support</th>
<th>Institution Building</th>
<th>Total Phare (=I+IB)</th>
<th>National co-financing share</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction works</td>
<td>2,000</td>
<td>0,000</td>
<td>2,000</td>
<td>0,763</td>
<td>2,763</td>
</tr>
<tr>
<td>Total</td>
<td>2,000</td>
<td>0,000</td>
<td>2,000</td>
<td>0,763</td>
<td>2,763</td>
</tr>
</tbody>
</table>

The co-financing share of the Czech party amounting to 28% of the total project investment costs will be fully covered from the investor’s own resources.

6. Implementation Arrangements

6.1 Implementing Agency

The Ministry for Regional Development in conjunction with the Centre for Regional Development CR.

PAO: RNDr. Jirí Horácek, director, Department of EU programmes, MRD CR
Address: Staromestské nám. 6, 110 15 Praha 1
Phone: + 420-2 2486 1398
Fax: + 420-2 2486 1415

Implementing Agency:
Director: RNDr. Ivo Ryšlavý
Address: Centre for Regional Development CR, Vinohradská 46, 120 00 Praha 2
Phone: + 420-2 21 580 285
Fax: + 420-2 21 580 229

6.2 Non-standard Aspects

The project will be managed using the methodology specified for Candidate Countries in the manual for the management of programmes supported from the EU sources – “Practical Guide for Phare, Ispa and SAPARD”.

6.3 Contracts (MEUR)

<table>
<thead>
<tr>
<th>No.</th>
<th>Type of contract</th>
<th>Description</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Works contract</td>
<td>Upgrading the technological equipment WWTP, construction of sewage systems</td>
<td>2,763</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>2,763</td>
</tr>
</tbody>
</table>

7. Implementation Schedule

Start of tendering: 08 / 2002
8. Equal Opportunity

Principles and procedures applied during the project implementation will ensure equal opportunities for all participants of the project.

9. Environment

The Environmental Impact Assessment was prepared in February 2001 by a certified expert: Ing. Hana Henyšová, certificate No. 9823/1105/OPVŽP/97. The EIA is available at the investor’s office at the address: CHEVAK Cheb, a.s., Tršnická 11, 350 02 Cheb, Ing. Jirí Pivrnec.

The study assesses environmental impacts of the project during the execution of works and after their completion.

With the planned wastewater treatment efficiency the unit load will be reduced under the required standard value. The sewage system will limit the possibility of groundwater pollution and enhance potential for further development in the area with positive impacts on the environmental quality. The whole project is aimed at preventing the unacceptable discharging of waste waters from Krásná and Podhradí and through improved quality of water in the Bílý Halštrov (Weiße Elster) stream it will bring benefits to the neighbouring Germany.

No environmental aspects linked to the project implementation and its consequent operation were found out, that could explicitly hinder its implementation.

10. Rates of Return

The economic rate of return is based on a prepared feasibility study. The period assessed was defined in compliance with the period applying to the depreciation of the investment.

\[ IRR = 2.08 \]

The feasibility study was prepared by CHEVAK Cheb, a.s. and is available at the investor’s office: CHEVAK Cheb, a.s., Tršnická 11, 350 02 Cheb, contact person: Ing. Jirí Pivrnec, tel.: +420(0)166/414111, fax: +420(0)166/433554.

11. Investment Criteria

Catalytic Effect

The project is of public nature and complies with the regional priorities. In the years to come, the action could not be implemented without support from the EU sources.
Co-financing
The co-financing share of the Czech party equals 28% of the total project investment costs. The co-financing share will be fully covered from the investor’s own resources - CHEVAK Cheb, a.s.

Additionality
The project is of public nature and is not suitable for funding from private sources due to the low financial rate of return of the funds invested. Should the co-financing be provided from a bank loan, the implemented works would not generate resources sufficient for their renewal after their lifetime.

Project Readiness and Size
The project complies with all the required technical criteria. The project dossier for the land use decision and parts of the building permit dossier will be issued by July 2001. A feasibility study and EIA are available. The project will be ready for implementation including required tender documentation by the time of the signature of Financing Memorandum.

Sustainability
Results of the feasibility study proved that the draft project is of a sustainable nature as it meets all the European norms and standards and complies with the EU legislation in the relevant area.

The investor from fees will cover the operating and maintenance costs for potable water and sewage.

Compliance with State Aid Provisions
The project and the award of the Phare subsidy are in compliance with the relevant rules on state aids as defined in the European Agreement; its implementation is not going to harm the market environment or the competition rules.

Contribution to National Development Plan
The project respects short-term and medium-term priorities of the National Development Plan with the aim of balancing the quality of the environment in areas bordering the EU countries. The project is in compliance with regional priorities and measures laid down in the cross-border regional development strategy defined in the Joint Programming Document (JPD) Czech Republic – Germany for the CBC Phare programmes.

Priority: III – Development of the area and the environment
Measure No.: 1 - Reduction in environmental loads and risks with the aim of supporting sustainable, environment-friendly development in border areas

12. Conditionality and Sequencing
The investor is responsible for the preparation of studies and project dossiers necessary for the execution of works, and for the preparation of documents for the selection of a contractor for the works. The investor must observe its commitment of financial participation in the
project and is responsible for the quality of the works executed. He must also provide for the activities the contractor is not qualified to execute.

After the completion of the project the investor shall ensure the launching of full operation of the works with a view to its use. He shall ensure regular maintenance and repairs in compliance with the international standards.

**Annexes**

1. Phare Log Frame
2. Implementation Time Chart
3. Commitment and disbursement schedule
4. Reference to feasibility study
## ANNEX 1

### Phare log frame

<table>
<thead>
<tr>
<th>LOGFRAME PLANNING MATRIX FOR</th>
<th>Programme name and number</th>
<th>Czech Republic / Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td>Phare CBC 2001</td>
<td></td>
</tr>
<tr>
<td>Aš – Upgrading of the WWTP, Sewage System</td>
<td>Contracting period expires</td>
<td>Disbursement period expires</td>
</tr>
<tr>
<td></td>
<td>Total budget : 2,763 MEUR</td>
<td>Phare budget : 2,000 MEUR</td>
</tr>
</tbody>
</table>

### Overall objective

- Reduction of environmental loads and risks aimed at the sustainable and environment-friendly development of border regions
- Creation of better infrastructure conditions for economic development in the cross-border area

### Objectively verifiable indicators

- Environment quality indicators of the area affected
- Tax revenues and purchasing power of local residents

### Sources of Verification

- Government bodies and environment agencies at both sides of the border
- Statistic data, tax authorities, municipalities
- Economic surveys

### Project purpose

- Reduce pollution of the Bílý Halštrov (Weisse Elster) stream and improve protection of ground water springs used for medical cures in Bad Elster in Saxony at the other side of the border
- Reduce soil pollution in communities of Podhradí and Krásná
- Enable the connection of more

### Objectively verifiable indicators

- Water quality of Weisse Elster,
- The border stream
- Discharges from the WWTP at Aš (BOD reduced by 92 % and COD by 85 %)
- Waste water treatment efficiency in compliance with the

### Sources of Verification

- Laboratory measurements carried out by waste water treatment plants operators and by the funder
- Measurements and analyses
- Project evaluation reports

### Assumptions

- Amount of waste water to be treated at the WWTP will correspond to the calculated amount
- Stable price of waste water treatment
- Stable and reasonable regional economy development
<table>
<thead>
<tr>
<th>Results</th>
<th>Objectively verifiable indicators</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increased efficiency of waste water treatment in the upgraded WWTP at Aš</td>
<td>• Significant increase in efficiency and reliability of the WWTP at Aš (waste water treatment in compliance with the EU standards)</td>
<td>• Project Final Evaluation Report</td>
<td>• Work delivered by an experienced, reliable and well performing contractor</td>
</tr>
<tr>
<td>• New sewage system at Krásná</td>
<td>• Community of Krásná – discharge sewage system approx. 5,267 meters long</td>
<td>• As-built documentation provided as part of the project acceptance procedure</td>
<td>• Efficient co-ordination between the project funder, sub-contractors and IA</td>
</tr>
<tr>
<td>• New sewage system at Podhradí</td>
<td>• Community of Podhradí – discharge sewage system approx. 6,725 meters long</td>
<td>• Individual works turn-over and acceptance documents</td>
<td>• Appropriate monitoring and supervision of civil work</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities</th>
<th>Means</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| Construction work and delivery of equipment necessary for the upgrade and new sewage system at communities of Krásná and Podhradí. | • Available funds  
• Construction resources  
• Materials, equipment  
• Design documentation  
• Engineering supervision | • Existence and interest of building companies with required experience and qualified staff  
• Efficient co-ordination between the project funder, sub-contractors and IA  
• Smooth and timely funding |

<table>
<thead>
<tr>
<th>Preconditions</th>
<th></th>
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<tbody>
<tr>
<td>• Signature of the Financial Memorandum</td>
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</table>
## Implementation Time Chart

|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|

- **T**: Tendering
- **C**: Contracting
- **I**: Implementation
- **D**: Disbursement
### Commitment Schedule

#### Commitment Schedule

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</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Construction works</td>
<td>2 000 000</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>2 000 000</strong></td>
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<td>0</td>
<td>0</td>
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### Disbursement Schedule

#### Disbursement Schedule

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<tbody>
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<td>01</td>
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<td>330 000</td>
<td>330 000</td>
<td>200 000</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>200 000</td>
<td>270 000</td>
<td>340 000</td>
<td>330 000</td>
<td>330 000</td>
<td>330 000</td>
<td>200 000</td>
<td>0</td>
</tr>
</tbody>
</table>
Reference to Feasibility Study

The project is aimed at the upgrade of mechanical and biological WWTP at Aš for 16,500 equivalent units and a new sewage system built at Krásná and Podhradí for 800 equivalent units. The proposed project is driven by the regional need to reduce surface and ground water pollution and increase the efficiency of waste water treatment to the EU levels at Aš and surrounding communities.

Market Analysis

The target group is represented by 16,500 equivalent units at Aš and surrounding communities.

The WWTP upgrade and a new sewage system is in line with the regional development strategy the main priorities of which are new job opportunities and housing development. The increased efficiency of waste water treatment at lower operating costs will have a positive impact on prices paid by customers for waste water treatment which will be below the national average. The survey carried out at Krásná and Podhradí demonstrated that majority of households is interested in connection to the public sewage system. The analysis results demonstrated the project sustainability.

Organisation of Operations

The upgraded WWTP and new sewage system will remain in the ownership of CHEVAK Cheb a.s., the project funder and operator, in which municipalities have a majority share and which is the only water utility operating in the region. This will ensure a high professional level of the future operation. Operating costs will be fully covered by the revenues from sewage treatment and therefore their coverage does not pose any project risk.

Results of Financial Analysis

The financial analysis result based on 30 years period is IRR = 2.08%. The analysis demonstrated that the project revenues will generate sufficient funds to cover both the operating costs and financial provisions for the necessary project renewal after the end of its life provided the price paid for sewage treatment will go up as currently planned. A certain risk could be posed by a dramatic increase of fees charged by CHEVAK Cheb a.s. which has a natural monopoly in the region.

This is a typical public services project and therefore it is not suitable for funding by private capital due to a low rate of return on capital engaged.

Results of Economic Analysis

The WWTP upgrade and increased capacity will result in the treatment efficiency in compliance with EU standards (BOD by 92 % and COD by 85 %). The pollution of Bílý Halštrov (Weisse Elster) river will be reduced and spa springs at Bad Elster located at Saxon side of the region will be better protected against potential
contamination. The project is in line with the national and regional medium-term strategies and it will reduce environmental loads and risks thus contributing to the sustainable regional development.

The results of the study demonstrated project feasibility without any significant risks which could threaten its implementation. The Project can be recommended to be included into a relevant programme supported by the EU funds.

Environmental Impact Assessment

Environmental Impact Assessment was carried out in compliance with Directive 97/11/EC of 3rd March 1997. It includes both environmental impacts during project construction and operation. The project will have minor adverse environmental impacts on air and land only during the construction stage. The commissioned project will significantly reduce the contamination of surface water. The project will improve the quality of the environment in the border region and based on the EIA performed it is recommended for implementation.