1. **Basic Information**

   1.1. Désirée-number: HU0105-07
   1.2. Title: Canalisation and Waste Water Management of Ibrány-Nagyhalász (Northern Great Plain)
   1.3. Sector: Economic and Social Cohesion
   1.4. Location: Hungary, North Great Plain Region

2. **Objectives**

   2.1. **Overall objective:**

   Promote economic and social cohesion by improved business climate and increase environmental protection in the Micro region of Ibrány.

   2.2. **Project Purpose:**


   2.3. **Accession Partnership and NPAA priority**

   The project reflects medium-term environmental priorities stated in chapter 3.2 of the Accession Partnership and in the NPAA.

   2.4. **Contribution to National Development Plan:**

   The objectives of the project reflect PNDP 2000 priorities which are based on sectoral strategies and the development strategies of the region. The aims of the project are in line with the priorities of local economy development (PNDP 2000 Chapter II/1.2.1.) enhancing the establishment of environmental facilities, development of business access infrastructure and therefore increasing the growth and competitiveness of the regional economy. (PNDP 2000 II/3.1.6.)

   According to the revised PNDP (2001) based on the regional development strategies the project reflects to the measure II.2.2 “Improvement of the soil and water supply protection…” (PNPD 2001, Chapter 5.5.2, priority II.2.)

   The selected project is clearly anchored to the plan, which constitutes the framework for an integrated approach to the Development of the region.

   The investment projects that will receive funding under the Economic and Social Cohesion component of Phare 2001, including the present one, were selected through the following procedure:

   1. A letter was prepared and sent by National Agency for Regional development to the Regional Development Agencies (RDA) and Regional Development Councils (RDC) of the target regions in July 2000, asking them to submit their project pro-
posals for Phare funding to the NARD by 30 September 2000. Evaluation criteria for the project selection were also prepared and attached to this letter.

2. The RDCs have started the collection of regional project ideas for the Phare programme. The RDCs prepared and sent a letter to all organisations concerned, calling for submission of project proposals according to the regional and national priorities described in the relevant regional and national plans.

3. The following organisations were contacted in the process:
   - The county development councils and agencies,
   - The municipalities of the bigger towns and cities with county rank of the region,
   - The small-regional associations, the mayors of all settlements, which are members of these associations
   - The managers of the sub-regional associations
   - The Regional Marketing Directorates
   - The Regional Tourism Board

4. A priority list was prepared for the collected project proposals based on the evaluation criteria previously provided by NARD. An expert committee whose members were selected by the RDCs prepared the priority list.

5. Based on the priority list of the project proposals, the RDCs selected the projects and submitted them to NARD.

2.5. Cross Border impact: Not applicable.

3. Description

3.1 Background and justification

The aims of the project are the creation of functioning modern wastewater treatment system fulfilling relevant environmental obligations and the increase of economic activity in the region.

An urgent need for additional environment and infrastructure investment exists in Ibrány and its partner settlement Nagyhalász. A large amount of the waste water in the region is still being drained via open sewers. The total number of the concerned inhabitants is 12,784, in 4,251 households.

At present 1,287 households are connected to the canalisation system that will be increased to 3,825 (90 percent of the total related households).

In the framework of the project 55 local enterprises (543 employees) will be connected to the canalisation system in Ibrány and Nagyhalász settlements. From the total amount 11 enterprises employing 438 employees are industrial enterprises, and the remaining enterprises (employing 105 employees) are of commerce and services type.

There is a site in the property of the local government that is appointed for industrial development. There is a Declaration of Intent from the Local Governments of Ibrány and Nagyhalász for the industrial development of the site. By the realisation of the project the connection of this site to the canalisation system will also be possible.
In the lack of the necessary impermeable layer (three-layered zone) in the soil, the area is hydrogeologically extremely sensitive. Due to the relatively high levels of subsoil water and phreatic water, without a closed system of storage and desiccating, polluting materials can freely access the underground-water. The situation is all the more serious as the water supply base in Ibrány region assures the water supply of Nyíregyháza, the county town of Szabolcs-Szatmár-Bereg county, and 11 further settlements.

The present Ibrány waste water plant and its sewerage system were built between 1992 and 1995. Finance for the construction was provided by the state with local and county co-finance contributions.

At the moment the existing treatment plant has a capacity of 500 m$^3$/day (for the treatment of the produced amount of 434 m$^3$ waste water per day by the connected households) that will be developed to 1000 m$^3$ as the amount of the produced waste water will increase to 991 m$^3$ due to the connection of 2,538 households. An amount of 60 m$^3$/day waste water (14 percent of the total 434 m$^3$/day) is industrial waste that will be increased to 110 m$^3$/day (11 percent of the total 991 m$^3$/day). Aiming the sustainability of the percentage of the connected households the development of the plant is necessary by a capacity of 500 m$^3$/day.

The potential of the target areas for development and diversification into tourism and other new economic activities has hardly been tapped. The increased scale of business and tourism related activities can only be sustained if an adequate infrastructure is put in place. The resulting environmental contamination is both a constraint on economic development and a cause of deteriorating quality of life. Several investors have been showing an interest in settling in Ibrány. Yet, one important impediment has been the absence of proper treatment facilities for industrial wastewater.

3.2 Linked activities

The Hungarian Central Environment Protection Fund has co-financed the first programme phase including a partial canalisation of the connected settlements and the construction of a biological waste water management plant with a capacity of 500 m$^3$/d.

The development of the Ibrány wastewater treatment facilities will complement other measures of Phare 2001 promoting economic and social cohesion. It will help unlock the development potential of the region’s SMEs at key sites of industrial, commercial and tourism activity.

With a view to previous Phare projects, linked activities can be found especially in the fields of regional development. The Northern Great Plain Region benefited from the regional development schemes summarised in the following table.
<table>
<thead>
<tr>
<th>Year</th>
<th>Target area / focus</th>
<th>Objectives of intervention</th>
</tr>
</thead>
</table>
| 1992 | Nation-wide / county focus (pilot counties: Borsod/North Hungary and Szabolcs/Northern Great Plain) | • Institution building/ legal framework  
• Strategic programming on county level  
• Setting up county development agencies  
• Pilot actions at county/community level |
| 1997 | North Hungary/Northern Great Plain - regional focus Southern Transdanubia | • Further development of regional institutions, capacity development  
• Co-financing of regional level programme implementation |

With a view to the future, investment in business-related infrastructure can receive funding from SAPARD as described in the Hungarian Rural Development Plan (measures 1308). Projects receiving fund from SAPARD are excluded from the support included in this fiche. The ISPA programme will co-finance investments contributing to the practical application of the Acquis in the environmental and transport sectors above € 5 million.

Connecting to the objectives of the project and ensuring the sufficient implementation of the regional development plan further developments and technical assistant activities will be carried out in the region which depends on financial opportunities for the next years of the partners interested in the regional development.

3.3 Results

- Canalisation network including 42,849 m drain connecting about 90 percent of the Ibrány and Nagyhalász households and the industrial site to the system.
- The capacity of the wastewater treatment plant in Ibrány will be increased by a capacity of 500 m³/d managing 478 m³ wastewater/day.

By these results the project contributes to the following objectives:
- The capacity of the wastewater treatment plant will ensure appropriate infrastructure for installing enterprises.

By protecting the regional water supply base, the project will ensure the drinking water demand of 135,000 inhabitants. This amount includes the inhabitants of 13 settlements in the area (including Nyíregyháza county town) since the Tiszabercel water base is situated in the administrative area of Ibrány.

- The wastewater treatment will produce 912.5 m³ wastewater mud per year which can be used as fertiliser for the regional agriculture.

3.4 Activities

All studies and plans for the project have been completed. The project will be carried out in the framework of one open local works tender. Tender documentation and supervision of the construction work will be provided by the Local Government of Ibrány. The Local Government of Ibrány will appoint a firm with relevant experience to act as Supervising Engineer before the award of the Works contract.

In the frame of the project, the following facilities will be constructed.
- Canalisation network including 42,849 m drain.
• The extension of the wastewater treatment plant in Ibrány in order to increase its capacity by a maximum of 500 m³/d allowing the management of 478 m³ wastewater/day with an efficiency of 96 percent.

• A biological treatment plant that ensures the treatment of 11,078 Inhabitant Equivalent waste water.

4. Institutional Framework

The beneficiary will be the Local Government of Ibrány. The beneficiary will appoint the project manager which have both suitable capacity and relevant experience in the management of Phare projects.

The IA is responsible for the selection of the supervising engineer. The supervising engineer is financed by national resources.

(a) The project manager and responsible engineer will be provided by Nyírségvíz Joint Stock Company.

(b) The “Employer” will be the Local Government of Ibrány.

(c) The owner of the asset after project completion will be the Local Government of Ibrány in 87.5% and the Local Government of Nagyhalász in 12.5%.

All necessary documents such as Technical Feasibility Study, Economic Feasibility Study, Environmental Impact Study, Technical Specifications, Water Rules Permission and all related permissions, with the exception of the Construction Plans, are provided. The Construction Plans will be prepared and approved until the signature of the Financing Memorandum.
5. Detailed budget (MEUR)

<table>
<thead>
<tr>
<th>Contracts</th>
<th>Phare Support</th>
<th>National co-financing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Investment Support I</td>
<td>Institution Building IB</td>
</tr>
<tr>
<td>Works contract</td>
<td>2.00</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>2.00</td>
<td>-</td>
</tr>
</tbody>
</table>

National co-financing will cover 57% of the total project budget including 5% (0.25 MEUR) central national co-financing and 52% (2.40 MEUR) from the two local governments.

The Phare amount is binding as a maximum amount available for the project. Up to this maximum, the ratio between the Phare and national amount is also binding and has to be applied to the final net contract price.

6. Implementation arrangements

6.1 Implementing Agency

The project will be implemented under the overall co-ordination and supervision of the Ministry of Agriculture and Regional Development, whose representative, Dr. Peter Szaló, Deputy Secretary of State, will be designated as PAO.

The Ministry for Agriculture and Regional Development, through its National Agency for Regional Development (H- 1016 Budapest, Gellérthegy u. 30-32), will be responsible for all aspects of tendering and contracting as well as administrative and financial matters of the implementation.

Address: Ministry for Agriculture and Regional Development
National Agency for Regional Development
1016 Budapest, Gellérthegy u. 30-32.
Phone: 488-7171
Fax: 488-7188

6.2 Twinning

Not applicable.

6.3 Non-standard aspects

The rules of the Practical Guide for Phare, ISPA and SAPARD Contract procedures will be strictly followed.

6.4 Contracts

The project will be carried out according to the relevant PRAG rules. The contract has an estimated value of 4.65 MEUR.
7. Implementation schedule

<table>
<thead>
<tr>
<th>Component</th>
<th>Start of Tendering</th>
<th>Start of Project Activity</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Works contract</td>
<td>December 2001</td>
<td>August 2002</td>
<td>December 2003</td>
</tr>
</tbody>
</table>

8. Equal opportunity
Equal participation by women and men will be assured during project implementation and after project completion.

9. Environment
The whole project is aimed at the protection of the natural environment. With the introduction of the proposed biological treatment technologies, the ammoniac and phosphorous pollution of the adjacent sensitive aquifers is expected to stop. The treated water flows into the III. internal water canal.

<table>
<thead>
<tr>
<th>Water quality data</th>
<th>Water quality data in the reach where treated water flows in</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOIG</td>
<td>KOIG</td>
</tr>
<tr>
<td>NH4</td>
<td>NH4</td>
</tr>
<tr>
<td>Total dissolved material</td>
<td>Total dissolved material</td>
</tr>
<tr>
<td>19 mg/l</td>
<td>43 mg/l</td>
</tr>
<tr>
<td>0.53 mg/l</td>
<td>0.6 mg/l</td>
</tr>
<tr>
<td>730 mg/l</td>
<td>940 mg/l</td>
</tr>
</tbody>
</table>

The above signed data are relevant to the Hungarian and EU regulations (see Annex 5.) and are all below the accepted limit values.

Sustainability and recycling is also ensured by the agricultural reutilization of 912.5 m³ wastewater mud per year.

Moreover, thanks to the foreseen constructions some 500 m³/day polluted water (of which 50 m³/day is industrial) will not arrive directly to the soil and access freely the underground-water, but will be drained via the canalisation and treated in the sewage system.

The tender dossier and the work contract will take into account the requirements of the Environmental Impact Assessment study.

10. Rates of return
The feasibility study proved that the project will have an internal financial rate of return of 2.63 % for a 13-year period. The economic rate of return is estimated at 5.26 % for a 13-year period.

The Direct Revenue and the Operating and the Maintenance Cost of the Calculation on the Expected Returns table were defined by the Feasibility Study.

To predict the Economic Rate of Return the following factors are taken into consideration on the basis of the preliminary feasibility study:

- diminishing pollution of the soil
decreased pollution of the groundwater as well as protection of the drinking water supply.

the diminishing “BOI content” of the water after treatment, which contributes to reduce further treatment costs related to the drinking water production,

the faster transit of the wastewater will contribute to the improvement of the area’s environmental condition,

the infrastructure development will probably result in the increase of trade and commerce etc.

the rising number of new employments will decrease social allocations, thus decreasing the social costs of the Municipality,

Since the above-mentioned impacts are complex and difficult to define in monetary terms, the Economic Rate of Return could only be estimated.

11. Investment criteria

11.1 Catalytic effect
The project accelerates the economic development in the area. Without Phare support, the environmental rehabilitation and the expected positive effects for the business conditions would take place much later.

11.2 Co-financing
National co-financing will cover 57% of the total project budget including 5% (0.25 MEUR) central national co-financing and 52% (2.40 MEUR) from the two local governments.

11.3 Additionality
The Phare intervention does not displace other financiers, neither from the private sector nor from IFIs.

11.4 Project readiness and size
The project complies with the minimum project size requirements. A detailed economic feasibility study has been prepared. The tender documentation will be prepared according to the time schedule of Annex 2.

11.5 Sustainability
The wastewater treatment facility is sustainable in the long term beyond the date of the EU accession. Future maintenance and operation costs will be built into the service charges.

11.6 Compliance with state aids provisions
All actions financed will respect the competition provisions of the European Agreement.
No conditionalities are foreseen.
ANNEXES TO PROJECT FICHE

1. Logical framework matrix in standard format
2. Detailed implementation chart
3. Contracting and disbursement schedule by quarter for full duration of programme (including disbursement period)
4. Reference to feasibility /pre-feasibility studies. For all investment projects, the executive summary of the economic and financial appraisals, and the environmental impact assessment should be attached
5. List of relevant Laws and Regulations
6. Reference to relevant Government Strategic plans and studies (may include Institution Development Plan, Business plans, Sector studies etc)
LOGFRAME PLANNING MATRIX FOR

Project:

**Canalisation and waste water management of Ibrány-Nagyhalász (II. Phase)**

<table>
<thead>
<tr>
<th>Programme Name and Number</th>
<th>Ibrány Sewage System HU0105-07</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contracting Period Expires</td>
<td>11/03</td>
</tr>
<tr>
<td>Disbursement Period Expires:</td>
<td>11/04</td>
</tr>
<tr>
<td>Total Budget:</td>
<td>4.65 MEUR</td>
</tr>
<tr>
<td>Phare Budget:</td>
<td>2.0 Million EUR</td>
</tr>
</tbody>
</table>

**Overall Objective**
Economic and social cohesion by increased business activity and increase environment protection in the Micro region of Ibrány

**Objectively Verifiable Indicators:**
- Income growth and employment growth in the micro region of Ibrány
- Ratio of decrease in accessing the underground-water level by polluting materials

**Source of Verification**
- Reports and statistics of the Central Statistical Office

**Project Purpose:**
Functioning modern wastewater treatment system in the Micro region of Ibrány-Nagyhalász
Increasing economic activity in the region.

**Objectively Verifiable Indicators:**
- Decrease of the waste water emission penalty (73,924 HUF/year)
- Increase of the proportion of the connected enterprises in the production
- Increase of the proportion of the connected households up to 90%

**Source of Verification**
- Environmental Protection Inspectorate
- Local government

**Assumptions**
- Functioning backward and forward linkages to other relevant business sectors

**Results**
- Canalisation network including 42,849 m drain connecting about 90 percent of the Ibrány and Nagyhalász households to the system and 55 local enterprises.
- The capacity of the wastewater treatment plant in Ibrány will be increased by a capacity of 500 m³/d managing 478 m³ wastewater/day

**Objectively Verifiable Indicators:**
- All contracts carried out in time, within budget, and at the contracted level of quality

**Source of Verification:**
- Handing-over notes

**Assumptions**
- Competent organisation for the management of the sewage system
- Local population can pay cost covering fees for the use of the sewage system

**Activities**
Completion of plans, site preparation, tendering and conclusion of one works contract, construction work

**Means:**
2.0 MEUR of Phare support to be matched by co-finance contributions of 0.25 MEUR from central budgets and 2.4 MEUR from local budgets

**Source of Verification:**
- Project reports of the stakeholders

**Assumptions**
- High quality project management
- Co-finance contributions available when required

**Preconditions**
- Feasibility study and other preparation studies have been completed
- All required permits have been granted
- Construction plans prepared and approved
- Institutional structure to implement and operate the project is in place
<table>
<thead>
<tr>
<th>Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction works</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Design (25%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tendering and contracting (50%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract implementation and payments (100%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>--------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>Commitment</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disbursement</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*) Phare contribution only
Reference to feasibility/pre-feasibility studies

The Feasibility study for the "Phase II of the sewage canal system and the sewage purification plant of Nagyhalasz-Ibrany" was completed in September 1999, by Komutterv-M'93 BT. The feasibility Study was prepared on request of the local Governments of Nyisegviz and Ibrany.

All necessary documents such as Technical Feasibility Study, Economic Feasibility Study, Environmental Impact Study, Technical Specifications, Water rules permission and all related permissions, with the exception of the Construction Plans, have been prepared.
Canalisation and waste water management of Ibrány-Nagyhalász

List of relevant Laws and Regulations

1. Act XXI/1996 on Regional Development and Physical Planning;
5. 75/442/EEC on waste
8. Commission Decision No. 97/662/EC on the reports on the implementation of certain prescriptions relating to waste (91/689, 94/62)
Canalisation and waste water management of Ibrány-Nagyhalász
Reference to relevant Government Strategic plans and studies

- **Title:** Comprehensive waste management information system for planning regional waste management policy.

- **Government strategic plans:** The planned work is in accordance with the targets set out in the "National Environmental Program".


- Preliminary National Development Plan 2000 and 2001

- Northern Great Plain Regional Development Plan