1. Basic Information
   1.1. Desiree Number: PL01.06.05.03
   1.2. Title: The Water Supply and Waste Water Collecting System in Lomza and the adjoining gminas.
   1.3. Sector: ESC
   1.4. Location: Poland, Podlaskie voivodship, the town of Lomza, Lomza and Piatnica gminas.

2. Objectives
   2.1. Wider Objective:
       Strengthening economic and social cohesion of the Podlaskie voivodship through improvement of environmental infrastructure
   2.2. Immediate Objectives:
       Enhancing investment attractiveness of the area; Development small and medium-sized enterprises; 30 new enterprises in the project area after 2 years; 90 net jobs related to the investment created after 2 years; Enhancing tourism attractiveness; Improving natural environment; Provide access to municipal infrastructure.
   2.3. Accession Partnership and NPAA priority:
       The project responds to the medium term priority identified in the Accession Partnership - developing national policy for economic and social cohesion and preparing for the implementation of regional development programmes as well as Community Initiatives. It corresponds also with the NPAA priority "Regional and cohesion policy".
   2.4. Contribution to National Development Plan:
       Environmental infrastructure is both a contributor to economic activity and a factor ensuring quality of life in the region. Therefore one of the priorities for the country’s cohesion policy identified in the PNDP is “Creation of conditions for balanced and sustainable development of environmental infrastructure”. These projects shall be complemented and enhanced by the activities carried out in the regions under the priority “Strengthening development potential of regions and counteracting marginalisation of certain areas”. One of the proposed measures under the priority is “Development and modernisation of infrastructure serving to strengthen competitiveness of the regions”. It will be implemented in line with the priorities of ecological policy of the state. Regional projects in waste management, protection against water and air pollution as well as water management shall have a priority as those contributing to the achievement of economic and social cohesion of the country. The project is also in line with the operational programme for Podlaskie voivodship.
   2.5. Cross Border Impact:
       not applicable

3. Description
   3.1 Background and Justification:
       Lomza and the whole Lomza region is situated in the so-called Poland’s Green Lungs, one of the last European territories with pristine nature and unique landscapes. In the vicinity of the town there are some protected nature areas: the Lomza Landscape Park of the Narew Valley, the Biebrza River National Park (the largest national park in Poland) and the Narew River National Park. The urban agglomeration together with the neighbouring gminas has a population of 71,390 people. At present, 88% the town of Lomza is furnished with sewerage. The neighbouring gminas of Lomza and Piatnica, however, are unsewered, which is one of the direct reasons for the lack of investment and poor development of SMEs. The receiving water is the Narew river, with waters of the second class of purity. Qualifying for the first class requires a thorough modernisation of the sewerage in Lomza and the neighbouring gminas. As a result of the local governments’ initiative in the town of Lomza, as well as in Lomza and Piatnica gminas, co-operation has begun with a view to provide a comprehensive water supply and sewerage solution. The idea of constructing sewage treatment plants in the gminas was rejected in favour of using the existing municipal waste water treatment plant in Lomza. Its modernisation was completed in June 2000 and was co-financed by the National Fund for Environmental Protection and Water Management (the water protection programme) and the Danish Environmental Protection Agency. The investment meets EU Directive 91/271/ and it modification 98/15. Waste water treatment consist of three stages: mechanical process, biological process and chemical process. It is expected that the construction of the complex system, planned for a number of years, will create opportunities for the
spatial development of the area, provide water and sewerage in plots with residential and industrial functions. In the town itself, it is expected that it will enhance local enterprises in service, trade and industrial sectors; in the villages, it will support agri-tourism and small businesses. It will also improve the living standards of the local population and reduce the disparities with the European standards. Another expected result is the creation of a conducive environment for the development of small and medium-sized enterprises. As a result of the project, leaky septic tanks will be eliminated and full access to sewerage will be ensured. This will have an immediate and positive impact on the health and sanitary conditions in the project area and in the neighbouring villages. The water main in Podgórze, envisaged in the project, will provide constant and failure-free water supply for Lomza and will allow to equalise pressure in the existing municipal water supply systems, while a new water supply system will provide running water for more people in the town of Lomza and in the Piatnica gmina. Because of the volume of the project influence and planned objective of Social and Economic Cohesion, the project does not qualify for ISPA programme.

3.2 Linked Activities:
The investment is a stage in the process of aligning the region with EU standards and requirements. The beneficiaries of the project have already been co-financed by the EU with 158,335 EUR for environmental protection investment projects under the STRUDER 2 programme. As part of the STRUDER 2 Programme, in 1998-1999, in the gmina of Piatnica, the investment: The Water Supply System Construction in Villages: Peza, Stary Drozdecin, Nagórki with a Pumping Station in the Village of Czarnocin was completed. As part of the STRUDER 2 Programme, the EU has co-financed the municipal waste management system servicing Lomza and the neighbouring gminas. As part of the Phare 2000 Programme, the modernisation of Rybaki Street will be conducted. The municipal wastewater treatment plant has been modernised with the financial support of the National Fund for Environmental Protection and the Danish Environmental Protection Agency. The expansion of the sewerage system in the town of Lomza is being done with the support from the Voivodship Fund for Environmental Protection and Water Management.

3.3 Results:
Creation 160 new jobs; Increase of the number of inhabitants/businesses connected to the new infrastructure; Development of investment areas; Increase in tourist accommodations by 10%; Increased use of the modernised existing sewage treatment plant by 1,800 m³ per day; Decrease of untreated sewage let out to the river Narew.

3.4 Outputs:
Construction of: 17.9 km of a sewer system including 1.8 km of pumping canal; 2.6 km of a storm drain; 7.9 km of water supply system.

3.5 Inputs:
Total cost of the project is 4.05 MEUR while the Phare inputs amount to 2.0 MEUR. The local governments’ expenditures (2.05 MEUR) are the following: the Municipality of Lomza – 1.45 MEUR, the Gmina of Lomza – 0.15 MEUR, the Gmina of Piatnica – 0.45 MEUR.
The Municipality of Lomza: The investment will be conducted in the streets: Zdrojowa, Waska, Szosa Zambrowska, Poznanska. It comprises: sewerage system – ca 5,556 metres of sewers, storm-water drainage – ca 2,567 metres, construction and modernisation of the water supply system – ca 6,674 metres, construction of pressure sewers with pumping stations – ca 629 metres + 2 pumping stations, reconstruction of road pavement – ca 4,537 metres. The investment will also include a reserve water supply main for Lomza at the water intake in Podgórze – water main ca 4,757 metres.
Piatnica Gmina: Pumping station with a pressure sewer – ca 1,150 metres, including 150 metres under the Narew river bottom, pressure-gravity sewerage in Piatnica – ca 3,800 metres, pressure-gravity sewerage in Czarnocin – ca 4,855 metres, 64 household pumping stations, water supply system in Czarnocin in one ditch with the sewerage – ca 3,118 metres, 107 terminal connections – ca 2,531 metres.
Lomza Gmina: pressure sewerage with individual pumping stations – ca 4000 metres, 140 terminal connections.

4. Institutional Framework
The implementation of the project will be based on the agreement between: the Municipal Council of Lomza, Piatnica Gmina Council and Lomza Gmina Council. The detailed agreement for joint project implementation is to be signed by December 2001. The Supervisory Engineer will be selected by tender. The investment will be conducted in compliance with the procedures of the “Practical Guide to Phare,
Ispa and Sapard contract procedures”. The owners of the assets after project completion will be: the Municipal Council of Lomza, the Gmina of Lomza and the Gmina of Piatnica. The project will not result in any changes in the institutional framework described above.

5. Detailed Budget, value in Euro

<table>
<thead>
<tr>
<th>Phare Support</th>
<th>Investment Support</th>
<th>Institution Building IB</th>
<th>Total Phare</th>
<th>National Co-financing</th>
<th>IFI</th>
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<td>Project</td>
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<td></td>
<td>4 050 000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2 000 000</td>
<td>2 000 000</td>
<td>2 050 000</td>
<td></td>
<td></td>
<td>4 050 000</td>
</tr>
</tbody>
</table>

Engineer will be financed out of gmina resources under the budget of the project – approximately 170 000 Euro. Co-financing funds will be available.

6. Implementation Arrangements

6.1 Implementing Agency:
PAO: Vice - Minister in the Ministry of Regional Development and Construction
Wspolna 4 St., 00-926 Warsaw, phone: + 48 22 661 91 19, fax: + 48 22 661 91 45
Implementing Agency: Polish Agency for Regional Development, Zurawia 4a St., 00-503 Warsaw, Phone:+48 22 629 28 88, Fax: + 48 22 627 22 46

6.2 Twinning:
Not applicable

6.3 Non-standard Aspects:
The investment will be conducted in compliance with the procedures of the “Practical Guide to Phare, Ispa and Sapard contract procedures”

6.4 Contracts:
The total value of the project is 4 050 000 Euro. The project will be implemented under works contract, expected value of the works contract is 3 880 000 EURO, including PHARE resources 2 000 000 EURO. Additionally the contract with Engineer which total value is 170 000 EUR financed by Polish side will be signed.

7 Implementation Schedule
7.1 Start of Tendering: January 2002.
7.2 Start of Project Activity: May 2002.
7.3 Project Completion: end of September 2004.

8 Equal Opportunity
At all stages of the project implementation, the problem of equal opportunities for women and men will be taken into consideration.

9 Environment.
The environmental impact assessment was completed in August 2000 and is available at the beneficiary’s office. The investment project: expansion of the water supply and sewerage system in the town of Lomza and the gminas of Lomza and Piatnica is compliant with local spatial development plans. The proposed implementation meets the requirements of environmental protection and can be regarded as environmentally friendly since it will have a positive impact on the local environment and the Narew River. The Narew is the main receiving water of wastewater from the town of Lomza and the area of the neighbouring gminas covered in the project. The expansion of the water supply system in the town of Lomza and in Piatnica is based on the intakes of groundwater intended for collective drinking water supply. The quality of the water supplied from these intakes for present and future users will comply, after the completion of the investment, with the standards described in to the Council Directive 80/778/EEC of 15 July 1980 on the quality of water intended for human consumption and the Council Directive 98/83/EC of 3 November 1998. The water supplied by the supply system will be periodically monitored. The expansion of the sewerage and treatment of sewage in the municipal treatment plant in Lomza complies with the requirements described in the Council Directive 91/271/EEC of 21 May 1991 on municipal wastewater treatment. The existing reserve capacity in the plant allows for the reception of wastewater from the neighbouring gminas. Its modernisation and modern technologies installed ensure proper treatment of sewage, which will protect the receiving water, the Narew River, against pollution.
Modern, environment-friendly materials, which were used in the project, eliminate the risk of a negative impact of the investment on human health and natural environment.

10 Rates of Return
The Project Feasibility Study was completed in August 2000 and is available at the beneficiary’s office. The Economic Rate of Return is presented in the table below:

<table>
<thead>
<tr>
<th>ENVP for</th>
<th></th>
<th>PLN</th>
</tr>
</thead>
<tbody>
<tr>
<td>4%</td>
<td>=</td>
<td>17,994.62</td>
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<tr>
<td>8%</td>
<td>=</td>
<td>4,856.96</td>
</tr>
<tr>
<td>12%</td>
<td>=</td>
<td>-1,712.14</td>
</tr>
<tr>
<td>ERR</td>
<td>=</td>
<td>9.51%</td>
</tr>
</tbody>
</table>

11 Investment Criteria
11.1 Catalytic Effect:
The PHARE financial support will promote regional development and enable faster achievement of the aim, which is improved socio-economic cohesion of the region.

11.2 Co-financing:
51% of the project will be co-financed by the budgets of three self-governments: the Municipality of Lomza and the Gminas of Lomza and Piatnica.

11.3 Additionality:
The Phare project is not displacing other financing sources, especially from the private sector and IFI system, it is co-financing identified priorities and not taking the place of national resources.

11.4 Project readiness and size:
The project is ready for contracting and disbursement, as the subproject will meet all conditions for co-financing by the start of project implementation; planning documents for the development of the tourism potential of the area include detailed descriptions of project scopes and costs analyses.

11.5 Sustainability:
The project will contribute to the long-term sustainable development of the region, as described in the Podlaskie voivodship Operational Programme. The investment is sustainable and does not demand further expenditure.

11.6 Compliance with state aids provisions:
All aspects of the project will be developed with respect to the state aids provisions of the Europe Agreement.

11.7 Contribution to National Development Plan:
The project is in line with the Preliminary National Development Plan and as such will contribute to increase of economic and social cohesion of the country and region.

12 Conditionality and Sequencing
Co-funding of specific activities will be conditional on:
- co-financing of project by the beneficiary;
- maintaining timetable set in the programme;
- obtaining building permission before the start of tendering;
- all tendering, contracting, reporting and monitoring conditions met;
- selecting contractor enable for proper realisation of works.

Benchmarks:
- Financing memorandum signed by end of 2001
- Construction designs prepared by December 2001
- Preparation of tender documentation by January 2002
- Beneficiary contracts project activities by May 2002.
**Annex 1: Logframe planning matrix for project**

**Date of drafting:** August 2000  
**Planning period:** 2002-2004

| Project number | Total budget 4.05 MEURO  
|----------------|--------------------------|
| Date of drafting: | August 2000  
| **Wider objective** |  
| Strengthening economic and social cohesion of the Podlaskie voivodship through improvement of environmental infrastructure |  
| **Indicators of achievement** | Increase of regional GDP per capita  
| | Decrease of unemployment rate |
| | Sources of information | Main Statistical Office  
| | | Experts' reports |
| | Assumptions and Risks | Fast track growth of Polish economy  
| | | Implementation of active forms of combating unemployment  
| | | Continued process of UE integration |
| **Immediate objectives** |  
| Enhancing investment attractiveness of the area  
| Enhancing tourism attractiveness  
| Improving natural environment |  
| **Indicators of achievement** | 30 new enterprises in the project area after 2 years. 90 net jobs related to the investment created after 2 years. 6 agrotourism farms created after 2 years. Increase of number of beds from 425 to 467 (10% increase) after 2 years. Increase of number of tourists from 10147 to 11000 after 2 years. Decline of BOD5 below outlet point by 3.45% after 1 year (from 2.9 mg/l to 2.8 mg/l). Decline of COD below outlet point by 0.54% after 1 year (from 55.5 mg/l to 55.2 mg/l). Decline of total nitrogen below outlet point by 1.15% after 1 year (from 2.6 mg/l to 2.57 mg/l). Decline of total phosphorus below outlet point by 4.17% after 1 year (from 0.24 mg/l to 0.23 mg/l). Decline of total suspended solids below outlet point by 0.85% after 1 year (from 16.5 mg/l to 16.36 mg/l) |
| | Sources of information | Beneficiary data  
| | | Gmina data  
| | | Voivodship Statistical Office  
| | | Expert reports |
| | Assumptions and Risks | Economic policy of provincial authorities and local governments, Proinvestment policy of local governments, Delays in transportation infrastructure creation, Insufficient financial resources, Lack of organizational aid for small and medium-sized enterprises, Lack of means of counteracting unemployment. |
| **Results/Outputs** |  
| Construction of a sewer system. Construction of a storm drain. Construction and modernisation of water supply system. Increased length of the sewer system. Decrease of untreated sewage let out to the river Narew. Better utilisation of existing waste water treatment plant  
| Decline of pollutants let out to the river Narew  
| Increase of the number of inhabitants / businesses connected to the new infrastructure  
| Development of investment areas  
| Creation of the new jobs | 17.9 km of a sewer system constructed. 2.6 km of a storm drain constructed. 7.9 km of water supply system. Increase of the sewer system from 78.3 km to 96.2 km. Decrease of untreated sewage by 1800 m³/24h. Decrease of untreated sewage from 29% to 12%. Increase of WWTP capacity from 7410 m³/24h to 9210 m³/24h (from 37% to 46%). Decline of BOD5 = 94 tO₂/year Decline of COD= 191 tO₂/year. Decline of total suspended solids = 97 t/year. Decline of total nitrogen = 15 t N/year. Decline of total phosphorus = 4 t P/year. 3000 inhabitants and 95 firms connected to the water supply system. 11 ha of investment areas with access to the system. 160 new jobs created after realization of the project |
| | Sources of information | Expert reports  
| | | Beneficiary data |
| | Assumptions and Risks | Economic development of the province, Cross-border cooperation, Development of transport infrastructure, Lack of support policy for small and medium-sized enterprises, Lack of promotion and marketing of the regional touristic product, Fashion for holiday in the region, Lack of financial resources in municipalities, insufficient transport infrastructure |

| **Activities/Input** |  
| - Construction of 17.9 km of a sewer system  
| - Construction of 2.6 km of a storm drain  
| - Construction of 7.9 km of water supply system | Financial input: 4 050 000 EUR, including 2 000 000 EUR from Phare |
### Annex 2-4: Cumulative implementation, contracting and disbursement schedule

The Water Supply and Waste Water Collecting System in Lomza and the adjoining gminas

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#### Cost estimate

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</tr>
<tr>
<td>I</td>
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<tr>
<td>---</td>
</tr>
<tr>
<td>I</td>
</tr>
<tr>
<td>(1)</td>
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</table>

**Implementation schedule**

<table>
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<th>I</th>
<th>I</th>
<th>I</th>
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**Contracting schedule** *

<table>
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**Disbursement schedule**

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<th>1.70</th>
<th>1.80</th>
<th>2.00</th>
<th>2.00</th>
</tr>
</thead>
</table>

**Legenda:**

- D = design of sub-projects
- C = tendering and contracting
- I = contract implementation and payment
- * in Meuro growing
5.1. Feasibility Study Summary, Summary of the Economic and Financial Appraisals of the Project Assessment, Taking Social Aspects into Consideration.

The project’s feasibility study was based on an economic model constructed using a spreadsheet. The calculation results are presented in the enclosed tables.

The model was constructed using fixed prices from August 2000 on the assumption that the inflation would similarly affect both costs and incomes.

The analysis was conducted for the period of 30 years based on the guidelines for submitting an application for a subsidy within the EU and taking into account social benefits emerging in case of non-profit projects, and a municipal investment in infrastructure is definitely one. The measure of the expected social benefit used in the project is the assumed 5% increase in the own income of the gminas from taxes: personal income tax, corporate income tax and property tax.

At the same time, the co-called social consumer discount rate with reference to the environmental goods was used. It was set at the level of 4%, as established by the congress of environmental economists in Venice held in 1999.

Additionally, a revaluation of investment expenditures was made in the economic calculations conducted from the societal point of view. It was assumed that some of the construction workers will be the potentially unemployed. The social cost of employing the unemployed, regarded as opportunity cost of their work, is close to none.

The Economic Rate of Return is presented in the table below:

| ENVP for 4%  | PLN 17 994.62 |
| ENVP for 8%  | PLN 4 856.96 |
| ENVP for 12% | PLN -1 712.14 |
| ERR          | 9.51%          |

The final conclusion of the study: The project is ready to be implemented.

5.2. The Summary of the Environmental Impact Assessment:

The expansion of the water supply system in the town and gmina of Piatnica is based on the intakes of groundwater intended as a drinking water supply. The water conforms to the Regulation of the Minister of Health and Social Welfare of 31 May 1997 on the standards required for drinking and commercial water, as amended by the Regulation of 4 May 1990.

After the investment completion, the quality of water supplied from these intakes to present and future users will comply with the requirements described in Appendix I to the Council Directive 80/778/EEC of 15 July 1980 on the quality of water intended for human consumption and the Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption. Pursuant to the directive, the supplied water will be periodically monitored. The monitoring authority will be the Poviat Sanitary Inspection in Lomza, which is competent and fully entitled to systematically assess the quality of water, as well as sanitary and technical condition of the installations used for drawing, treatment and supply of water. Additionally, the operator of installation for the drawing of groundwater is obliged to periodically test the quality of the drawn water.


- the sewerage system described in the project is compliant with the requirements for wastewater treatment and will be built using materials which are allowed in Poland and guarantee sustainability and tightness of the system;
- the treatment plant has an efficiency reserve providing for all possible climatic conditions in the region;
- wastewater treatment in the treatment plant consists of two stages: the mechanical phase with the use of screens, grit chambers and preliminary settling tanks, and the biological phase in aerated reactors with dephosphatation and denitrification processes;
- the quality of wastewater discharged into the receiving water (the Narew river) complies with the standards described in the table 1 in Annex I to the above-mentioned directive;
- in the modernised treatment plant, wastewater will undergo sludge treatment and methanated fermentation with the use of biogas formed in the process;
• the monitoring of the quality of discharged wastewater and the clarity of the receiving water is conducted by the operator of the treatment plant; meanwhile, the controlling organ, the Voivodship Inspection for Environmental Protection, monitors and runs the measurements.

The expansion of the water supply and sewerage system in the town of Lomza and the gminas of Lomza and Piatnica is compliant with the local spatial development plans.

The implementation schedule, especially in its part relating to sewerage and storm-water drainage systems, fulfils the requirements of environmental protection and can be regarded as environmentally-friendly since it will improve the condition of the local environment and the Narew river.

The existing capacity reserve in the plant allows for the reception of wastewater from the neighbouring gminas. The fact that it has been modernised with the use of advanced technologies guarantees proper treatment of sewage.

Modern, environmentally friendly and certified materials and equipment used in the project eliminate the risk of a negative impact of the investment on human health and natural environment. The investor is obliged to obtain permits for discharging storm-water into the receiving water, cutting trees and discharging hazardous oil-derived waste and separators.