1. Basic Information
1.1. Désirée Number: PL0008.03.03
1.2. Title: Lubelskie – Preservation of the waters of the Bug river
1.3. Sector: Environment
1.4. Location: Lubelskie Voivodship, Poland

2. Objectives
2.1. Wider objective:
The wider objective of the project is the creation of conditions for achieving economic and social cohesion of the Lublin region through upgrading the regional capacity for endogenous growth.

2.2. Immediate objectives:
The project has been developed in order to directly address the priorities identified in the Lubelskie Voivodship Preliminary Operational Programme of preserving and recultivating the unique natural environment and cultural heritage, as regional resources which can be used to drive sustainable growth, and its immediate objectives include:
• preserving the natural environment of the area;
• improving the quality of life of the inhabitants of the area;
• creating conditions conducive to the development of environmentally friendly and sustainable alternative business activities, especially in the tourism sector, and creation of jobs.

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.

2.4. Contribution to Preliminary 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 Preliminary National Development Plan (to be annexed to NPAA) 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 therefore in line with both the Preliminary National Development Plan and the operational programme for Lubelskie Voivodship. The latter identifies “Development of infrastructure of regional importance” as one of the priorities. The project, owing to its significant environmental and economic (tourism) impact, will be carried out under this priority.

3. Description
3.1. Background and justification:
The Lubelskie Voivodship Preliminary Operational Programme details a number of factors which will strongly impact the future development of this multi-cultural region, spread over a geographical area characterised by its „border” character. These include, among others, an uncompetitive agricultural sector as the dominating factor in the regional economy, the low quality of life in rural and border areas, the existing risk of the further widening of the development gap, the long term prospects for growth tied to the Eastern European markets just beyond the border, and more effective utilising of internal resources - including the natural environment and cultural heritage - for the development of these areas.

Having identified these issues, the region has put strong emphasis on a number of priorities, designed to address them, including improving the environment protection infrastructure, so as to introduce the core infrastructure necessary for the development of the communities and of businesses within them, without destroying the natural environment which remains in these areas a key strength on which future development should be built. Without such sustainable and environmentally friendly growth, it is difficult to achieve upgrading in the quality of life of the inhabitants in these areas, which in the medium to long term might result in their continuous marginalisation and depopulation.

The project therefore aims to improve the condition of the natural environment of the "Leczynsko-Wlodawski" lake district, of the catchment area of the Bug river and of the Sobibór landscape park. The project directly
targets the upgrading of the quality of the water resources in the region and subsequently growth in the tourism sector. The project area, located next to two lakes and a large forest, is fast becoming the main centre of recreation for Lublin voivodship inhabitants. The area has strong potential for tourism development, which is under-utilised, due to poor infrastructure and underdeveloped tourism services. Having regard to integrated approach in regional development, the preservation of the natural environment is considered an important generator of growth, triggering the development of many sectors of the economy and increasing living standards in the region.

The project is designed as the final stage of the activities launched by the local authorities. The overall value of the projects completed so far, within the current initiative, amounts to over 3.5 million EUR (financed locally). Presently the sewers system in the area included in the project is the following:

- village: Okuninka, Orchówek - approx. 80% of the territory is provided with the sewers system
- village: Rózanka - approx. 40% of the territory is provided with the sewers system

The sewage is treated in three separate facilities: Orchówek, Włodawa, Rózanka. The current development of the system of sewers in Rózanka will result in the closure of the ineffective sewage-treatment facility in this village. The sewage from Rózanka will be treated in the Włodawa facility, which is currently under modernisation. Thanks to expanded sewers systems, this facility will be able to treat the sewage from nearby villages: Suszno, Szuminka, Rózanka, Stawki.

The project, through the completion of the sewage and waste treatment system serving the area, will have a significant impact on the environment, especially on the purity of water in the rivers and lakes located on the territory of the developing leisure zone and in the areas adjacent to the Sobibór Landscape Park and the International Biosphere Reserve.

The design of the project takes into account the requirements and standards of the EU water protection legislation, including directives on wastewater treatment. Completion of this project will make it possible for the area to fulfil the standards of the European Union in the context of Poland's accession to the European Union.

The project’s implementation will increase the attractiveness of the area for visitors. The number of people which can be hosted in the area during the summertime will increase up to 15 thousand people (5 thousand in the leisure centres, 7 thousand in the private summerhouses, 3 thousand at the public camping grounds). Moreover the new investments will make it possible to extend the local tourism season from the current 3 months/year, up to 6 months/year; and in 30% of the existing leisure centres – up to a full year capacity.

In the years 1989-1999 the development of tourism services in the project area has led to the establishment of 30 new SMEs and the creation of 50 new jobs. The project’s implementation will lead to the establishment of 50 new SMEs and 290 additional jobs in the leisure centres and in complementary services. The project implementation should lead to a decrease in the unemployment rate in the area, which currently stands at c.a. 20%.

3.2. Linked activities:

Several environmental projects have been carried out within the borders of Lubelskie voivodship under PL9207 STRUDER programme. These included 5 projects in the area of waste water treatments, water supply systems, sewage systems, totalling 1 130 000 EUR, of which 292 000 EUR from Phare.

Under the regional development programmes, the Lubelskie voivodship is a beneficiary of Phare Special Preparatory Program for Structural Funds (PL9808) programme as well as World Bank projects supporting the preparation of regional development strategies. Regional Objective 1-type operational programme will be drawn up under Phare 99 “Regional development in Mazury and Podkarpackie regions”.

3.3. Results:

The direct measurable results of the project:
- 100% coverage of project area with water supply system for local inhabitants and recreational/tourism facilities (500 end users, including 200 new beneficiaries);
- 100% coverage of project area with sewage disposal system (750 end users, including 400 new beneficiaries);
- expanding the existing sanitary systems of sewers, based on gravitation and pressure, by 14 km:
  - \( L = 7.0 \text{ km} \), encompassing the area inhabited by 1.8 thousand people (Okuninka, Orchówek and recreational area)
  - \( L = 7.0 \text{ km} \) for the village Rózanka inhabited by 1.2 thousand people
- development and modernisation of two sewage-treatment facilities and increasing their capacity to 7900 m³/d - the standard of the European Union,
  - the sewage-treatment facility in Włodawa, present capacity \( Q = 4 800 \text{ m³/d} \), serving urban and rural territories (Włodawa, Suszno, Szuminka, Rózanka, Stawki), inhabited by 24 thousand people,
  - mechanical and bio-chemical sewage-treatment facility in Orchówek, present capacity \( Q = 3 100 \text{ m³/d} \)}
m3/d, serving the rural and tourist complex (Okuninka, Orchówek and NZPS "Polesie") inhabited by 15 thousand people,

- expanding the waterworks by 4 km (L = 4.0 km) for the inhabitants of Okuninka, Orchówek and recreational area - 1.8 thousand people
- water treatment plant (ammonia removal) in Okuninka with the capacity of Q=2 000 m3/d serving the rural and tourist complex (Okuninka, Orchówek) inhabited by 15 thousand people.
- raising the purity of water in the Bug river by one class (removal of nitrogen 70 tonnes/year, phosphorus – 30 tonnes/year)
- purification of drinking water up to 2000 m3/day (reduction of ammonia from 1.0 mg/l to 0.2 mg/l in the amount up to 1.6 kg/day)
- creation of 50 new SMEs (new recreation centres and complementary services)
- creation of a minimum 290 new jobs (c.a. 250 in new SMES + 40 in existing centres which will become operational for the whole year)

Other results of the project implementation:

- adapting European Union environment protection standards (water supply and sewage treatment) in this tourism oriented area;
- increasing ratios of respondents (local inhabitants) confirming willingness to remain in the area over next 5 year period;
- improving the living standard of the local population, confirmed in opinion polls and compared to non-supported similar areas;
- preservation of the Bug river flowing into the Zegrzynski reservoir - the source of water for the city of Warsaw;
- statistically confirmed improvement of the health of the inhabitants of the border areas through reduced water contamination after 5 and 10 year period;
- improving the condition of fauna and flora in the rivers of the region and increasing the number of fish in the ecosystem;
- realisation of chapter IV, art. 28, sec. 1 of the treaty between the Republic of Poland and Ukraine, dated 12th January 1993, on legal relations on Polish-Ukrainian border and on co-operation and mutual assistance in the border issues (the treaty provides that the condition of the environment will be improved, including the waters, soil and forests as well as the protection of flora and fauna in the border areas; the objective will be completed in relation to Belarus, a member of the Euroregion "Bug").

3.4. Activities:
The project involves three tasks:
1. development and modernisation of the sewage-treatment facility in Wlodawa
2. development and modernisation of mechanical and bio-chemical sewage-treatment facility in Orchówek
3. development of sanitary sewers system in Okuninka, Orchówek and Rózanka, expanding the existing waterworks in Okuninka and Orchówek as well as erecting the water treatment plant in Okuninka.

All project activities will be implemented with the use of the project impact assessment guidelines developed for the Phare 2000 Economic and Social Cohesion Programme by the Implementing Agency. These will include comparative benchmarking analyses of beneficiaries and non-beneficiaries, in order to gather statistically significant data for future programming exercises.

4. Institutional framework
Gmina of Wlodawa and the town of Wlodawa will be the direct beneficiaries of the project. The owners of the assets after project completion will be as follows:

- sewage-treatment facility in Wlodawa – self-government of the town of Wlodawa
- sewage-treatment facility in Orchówek, sanitary sewers system and waterworks in Okuninka and Orchówek, water treatment plant in Okuninka. - the publicly owned company "Spółka Wodno-Sciekowa Jezioro Białe-Glinki" based in Orchówek
- sanitary sewers system in Rózanka – self-government of the gmina Wlodawa

Based on the agreement of 18 October 1999 between the gmina of Wlodawa and the town of Wlodawa, the town (municipal gmina) of Wlodawa will be the Employer. FIDIC rules will be applied and a clear distinction will be made between the Employer and the Engineer, the latter to be contracted on the basis of a competitive procedure.
5. Detailed Budget:

<table>
<thead>
<tr>
<th>Contract</th>
<th>Investment Support</th>
<th>Institution Building</th>
<th>National Co-financing</th>
<th>IFI*</th>
<th>TOTAL</th>
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<td>TOTAL</td>
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<td>-</td>
<td>2.6</td>
<td>0.865</td>
<td>3.465</td>
</tr>
</tbody>
</table>

6. Implementation arrangements

6.1. Implementing Agency
PAO: Undersecretary of State at the Ministry of Regional Development
Implementing Agency: Polish Agency for Regional Development

6.2. Twinning: n.a.

6.3. Non-standard aspects
All works will be tendered and contracted according to DIS and FIDIC rules.

6.4. Contracts
In order to implement the project one contract will be signed.

7. Implementation schedule:

7.1. Start of tendering/call for proposals: TORs and/or project specification will be ready by January 2001. The tendering process is planned for March 2001.

7.2. Start of project of activity: Project activities will start in September 2001.

7.3 Project Completion: The project completion is planned for September 2003 (last disbursement is planned for September 2003)

8. Equal opportunity:
Procedures related to employment during project implementation will be based on Polish law ensuring equal opportunity for all interested entities and physical persons irrespective of their sex, race and nationality. Participation of men and women in employment will be based on applied standards of the European Community concerning EOE (Equal Opportunity of Employment) which will be ensured in the official advertisement in press at the recruitment of employees.

9. Environment:
An appropriate environmental impact assessment of the project has been prepared (Polish and English language versions) according to 85/337/EEC Directive.
Initial estimates show that as an immediate result of the project the contamination of the surface and underground water will decrease. This will become possible after modernisation of the two sewage-treatment facilities and shutting down the facility funneling the sewage into the Bug River. As a result of improved sewage handling a number of cesspools and outhouses will be eliminated, which will improve the quality of underground and surface waters, i.e. lakes - Biale and Glinki, rivers - Tarasienka, Wlodawka and the border river - Bug. As an indirect result the water quality in Zegrzynski reservoir, the source of potable water for Warsaw, will also improve.
Erecting the water-treatment plant will improve the quality of water supply in the tourist centres of the Lubelskie Voivodship (Okuninka, Orchówek), an area inhabited by 15 thousand people, excluding tourists from the entire country and from abroad - Germany, Canada, the Netherlands, and other countries. Completion of the project will have a positive influence upon the environmental preservation in the area of Sobibor landscape park and the International Biosphere Reservation.

10. Rates of return:
The economic and financial analysis of the project has been prepared in March 2000.
Main economic indicators:
- cost of treatment and transfer of 1 m³ of waste water – 0.26-0.88 Euro
- cost of purification and transfer of 1 m³ of water – 0.23 Euro
- NPV (net present value) – 602 127 calculated for 7% discount rate for the period of 25 years
- IRR (internal rate of return) – 3.8%

11. Investment criteria:
11.1. Catalytic effect
Phare support will be conducive to achieving economic and social cohesion goals in the Lublin region, which otherwise could be attained only after a much more extended period of time and on a more modest and less efficient scale. Thanks to the resources obtained from the Phare Programme the project will be completed by the end of the year 2003. In case of local project financing the estimated time of completion would be 2010. The implementation of the project will be facilitate the development of the tourism and other business sectors of the border area.

11.2. Co-financing
The project demonstrates clear co-financing by the Polish partners. The project will be financed from the resources of the local government, citizens, corporate bodies and proprietors of recreational areas. The “NZPS Polesie” will co-finance the modernisation of the sewage-treatment facility in Orchówek. The local resources will cover 25% of all necessary expenditures.

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 feasibility study and environmental impact assessment have been concluded. The technical designs will be completed by 31 May 2000. Land acquisition for tasks 1 and 2 is completed, for task 3 is in progress. Construction permissions are expected to be issued after 31 May 2000.

11.5. Sustainability
The project will contribute to the long term sustainable development of the region, as described in the Lubelskie Voivodship Operational Programme; Costs of future maintenance will be covered by operational revenue.

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 two priorities of 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;
• all contracting, reporting and monitoring conditions are met.
# Annex 1: LOGFRAME PLANNING MATRIX FOR PROJECT

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Lubelskie – Bug river</th>
<th>Sources of Information</th>
<th>Assumptions and Risks</th>
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<tbody>
<tr>
<td>Wider Objective</td>
<td>Indicators of Achievement</td>
<td>Sources of Information</td>
<td>Assumptions and Risks</td>
<td></td>
</tr>
<tr>
<td>Create conditions for achieving economic and social cohesion of the Lublin region through upgrading the regional capacity for endogenous growth</td>
<td>Increased economic growth of the region; Improved living standards of the region’s inhabitants; Decreased development gap in comparison with national and EU average</td>
<td>Progress report on the implementation of Preliminary NDP Progress report on Poland’s application for membership of the European Union Opinion polls</td>
<td>General growth rate and economic development of Poland and the voivodship will be maintained Polish Government meeting the obligations included in strategic documents i.e. NPAA and AP</td>
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<tr>
<td>Immediate Objectives</td>
<td>Indicators of Achievement</td>
<td>Sources of Information</td>
<td>Assumptions and Risks</td>
<td></td>
</tr>
<tr>
<td>Preserve the natural environment of the area Improve the quality of life of the region’s inhabitants Create conditions conducive to the development of environmentally friendly and sustainable alternative business activities, especially in the tourism sector Creation of 290 new jobs.</td>
<td>Improvement of the health of the inhabitants of the border areas through reduced water contamination after 5 and 10 year period; The contamination of the Bug river reduced by statistically significant ratios; EU environment protection standards (water supply and sewage treatment) in the tourism oriented area adopted; Ratios of local inhabitants confirming willingness to remain in the area over next 5 years increased</td>
<td>Project progress reports Reports of institutions involved Reports on audits at the beneficiary institutions Opinion polls</td>
<td>Effective co-operation of institutions engaged in the project implementation; Voivodship authorities strongly determined to support development of the region Meeting the timetable set for each of the sub-projects; Polish authorities determined to realise the provisions of international treaties on co-operation and mutual assistance in border issues, environment protection including</td>
<td></td>
</tr>
<tr>
<td>Results of Project</td>
<td>Indicators of Achievement</td>
<td>Sources of Information</td>
<td>Assumptions and Risks</td>
<td></td>
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<tr>
<td>100% coverage of project area with water supply system for local inhabitants and recreational/tourism facilities (500 end users, including 200 new beneficiaries); 100% coverage of project area with sewage disposal system (750 end users, including 400 new beneficiaries); Expanding the existing sanitary systems of sewers, based on gravitation and pressure, by 14 km; Development and modernisation of two sewage-treatment facilities and increasing their capacity to 7900 m3/d; Expanding the waterworks by 4 km (L = 4.0 km) for the inhabitants of Okuninka, Orchówek and recreational area - 1.8 thousand people; Water treatment plant (ammonia removal) in Okuninka with the capacity of Q=2 000 m3/d serving the rural and tourist complex (Okuninka, Orchówek) inhabited by 15 thousand people; Raising the purity of water in the Bug river by one class (removal of nitrogen 70 tonnes/year, phosphorus – 30 tonnes/year); Purification of drinking water up to 2000 m3/day (reduction of ammonia from 1.0 mg/l to 0.2 mg/l in the amount up to 1.6 kg/day); Creation of 50 new SMEs</td>
<td>The sewage-treatment facility in Wlodawa developed, modernised and fully operational Mechanical and bio-chemical sewage treatment facility in Orchówek developed, modernised and fully operational Sanitary sewers system in Okuninka, Orchówek and Rózanka developed and fully operational Existing waterworks in Okuninka, Orchówek expanded and fully operational Water treatment plant in Okuninka constructed and fully operational</td>
<td>Project documentation Project progress reports Reports of institutions involved Reports on audits at the beneficiary institutions Official publications and statistics</td>
<td>High level of services provided by contractors Effective co-operation among institutions involved in the project implementation Appropriate maintenance of the facilities co-financed by the project</td>
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## Annex 2: Cumulative implementation, contracting and disbursement schedule

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<th>Lubelskie – Bug river</th>
<th>Date of drafting</th>
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Annex 3 - Reference to feasibility /pre-feasibility studies.

Feasibility Study

The Feasibility Study has been prepared in March 2000 and is available at Marshal’s Office in Lublin.

The project covers the following elements:

3. Expanding the sanitary system of sewers based on gravitation and pressure by 14 km (L = 7.0 km + L = 7.0 km).
4. Expanding the waterworks by 4 km (L = 4.0 km).
5. Water treatment plant (ammonia removal) in Okuninka.

The economic and financial analysis of the project has shown that for the net present value NPV is 602,127 euro calculated for 7% discount rate for the period of 25 years and IRR rate is 3.8%. Such indicators constitute an acceptable value for both the investors and the end users of an environmental project of this type.

The conducted project sensitivity analysis to the changes of water sewage fees and the change in operating costs has shown that the project is not sensitive to @10% change in those figures. NPV and IRR only change by @2% which guarantees financial stability of the project.

Natural environment

An appropriate environmental impact assessment of each subproject has been prepared. The documents are available at Marshal’s Office in Lublin. The documents are prepared with respect to the 85/337/EEC Directive.

It shows that as an immediate result of the project the contamination of the surface and underground water will decrease. This will become possible after modernisation of the two sewage-treatment facilities and shutting down the facility funnelling the sewage into the Bug River. As a result of improved sewage handling a number of cesspools and outhouses will be eliminated, which will improve the quality of underground and surface waters, i.e. lakes - Biale and Glinki, rivers - Tarasienka, Wlodawka and the border river - Bug. As an indirect result the water quality in Zegrzynski reservoir, the source of potable water for Warsaw, will also improve.

Erecting the water-treatment plant will improve the quality of water supply in the tourist centres of the Lubelskie Voivodship (Okuninka, Orchówek), an area inhabited by 15 thousand people, excluding tourists from the entire country and from abroad - Germany, Canada, the Netherlands, etc. Completion of the project will have a positive influence upon the environmental preservation in the area of Sobibor landscape park and the International Biosphere Reservation.

Sewage treatment facilities as well as sewage system will work in accordance with the Annexes No 1 and 2 to the 91/271/EEC Directive.