1. Basic Information
1.1. Desiree Number: PL01.06.07.01
1.2. Title: Economic development within the Swietokrzyski National Park
1.3. Sector: ESC
1.4. Project Location: Poland, Swietokrzyskie voivodship, Swietokrzyskie Mountains Association of Gminas

2. Objectives
2.1. Wider Objective:
Strengthening economic and social cohesion of Swietokrzyskie voivodship, through the upgrading of the environmental protection infrastructure.

2.2. Immediate Objectives:
Supporting economic development of areas embraced by the Project, creating conditions facilitating business start-ups, enhancing tourism attractiveness of the Swietokrzyski National Park by establishing conditions for extending the use of environmental and natural resources for business development, enhancing economical growth in the Swietokrzyski region by construction and reconstruction of objects for the small-scale water retention, improving the water quality and level of water retention.

2.3. Accession Partnership and NPAA priority:
The project responds to a 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 also corresponds with the NPAA priority "Regional and cohesion policy".

2.4. Contribution to the Preliminary National Development Plan:
The PNDP has a priority “Strengthening development potential of regions and counteracting marginalisation of certain areas”. This will be implemented by means including the development of infrastructure of sub-regional importance and the development of tourism. Within the framework of the measures, projects for environmental protection infrastructure, improving the ecological situation of tourist-oriented areas, will be brought into effect. The project is also in line with the operational programme for Swietokrzyskie voivodship. It will be implemented under the OP priority “Improvement of technical infrastructure as the basis of economic activity aiming for better use of local assets”

2.5. Cross Border Impact: Not applicable

3. Project Description
3.1. Background and Justification:
The need for the implementation of this Project originates from the necessity to support a social and economical development of the region of unique natural, landscape and tourist attributes, and embraced by various forms of nature protection areas. Extension of the tourism sector already existing in the area in question, with simultaneous putting into good order of water and wastewater management and observance of all principles of environment protection, is the only alternative for the development of the area. The location of the Project area within and around Swietokrzyski National Park and its picturesque Lubrzanka River gorges and Jeleniowskie Range creates a solid basis for economic activation of the region via the development of both walking and water tourism and various accompanying forms of service. The Lubrzanka river basin is a buffer zone between the spreading urban and industrial agglomeration of Kielce and the most naturally precious landscape and ecological attributes of the crucial protected areas in the central part of the Swietokrzyskie Mountains. The construction of water reservoirs along with basic infrastructure needed for its tourist and economic utilisation, group wastewater treatment plants and main sewers will create a new social and economic development opportunities and also improve a water economy, water quality in the rivers and reservoirs, thereby meeting another priority of the regional development strategy referred to as Aquifer Protection. On the basis of social and economical results, which have been gained in area surrounding other water reservoirs in the region, we may conclude that construction and extension of small-scale retention reservoirs is one of the most stimulating factor for economical development in our region. On existing reservoirs banks we have numerous hotels, training centres, rest areas, swimming facilities, various water sport resources and various entities for serving all of such activities. The consequent contribution to extending the tourism sector will offer new job opportunities. The number of people taking recreation around the existing retention reservoir of Cedzyna already reaches 5000 a day in summer periods. Another important line is the Swietokrzyski region of gminas Nowa Slupia, Wasińów and Lagów.
Scheduled infrastructure investments in these and other gminas in the region aims to create a new condition for social and economical development in the area of quite heavy tourist traffic which is one of the main income generating factors. In the peak period of the Swietokrzyskie fair the number of tourists in mentioned gminas reaches 10,000 people per day. In addition, Wasniów gmina is adjacent to the newly constructed Wióry retention reservoir, while Lagów gmina is located in the basin supplying the existing Chancza retention reservoir. New investment of infrastructure will create a condition for new business development (new initiatives are quite often denied a permits to enter because of restrictions related to National Park) and also minimise the impact of tourist traffic on the environment and nature within the region. Thanks to investments covered by this project any many others of similar type financed from own or external resources, made by the associated gminas, an economical development of region, despite a acute restriction from the Managing Board of Swietokrzyski National Park, will be undergoing social and economical growth at the pace comparable with other regions of Poland. Planed investments are located in the area (see map) when opportunities for generating the social and economical growth within the union of gminas are the highest ones. It is so mainly because of attractive location on major tourist routs in the region and that way in these places it is an existing tradition on creating new businesses in relation to that.

3.2 Linked Activities:
Gminas associated in Swietokrzyskie Mountain Union of Gminas have been implementing a numerous infrastructure projects (roads, telecommunication, water supply and waste water treatment) and along with National Park Management Board project on tourist development and region promotion. The project of reservoirs construction is synchronised with the voivodship-wide conception at this sphere. In the year 2001 Association of Gminas will implement the following investment related to this project: Sewage systems in Swieta Katarzyna (1607 m.), Bodzentyn (2000 m) Leszczyny (1000 m) financed from own resources. Waste segregation and wastewater management programmes for several years are supported by the Government of Switzerland. Gminas organised it this Union are participating in the project financed by British Know How Fund on social communication and preparation of local society to preaccession programmes as well as to establish relevant institutional structures and staff readiness to respond to programmes and procedures to be implemented after Poland joining EU.

3.3 Results:
Organising 300 new jobs (120 of them only in summer season), 150 new SME's (65 of them to operate only in summer season), 33 new agro tourist farms, 10% increase in number of tourists, 106 ha of new lots for service&dwelling buildings construction related to water discharge and water treatment investments, 28 ha of new area for business development related to water discharge systems, 44 ha of new investment areas next to water reservoirs, achieving and keeping 1st class water quality of Lubrzanka river, increasing of retentive capacity by 400 000 cu. m and assure protection against flooding.

3.4 Outputs:
2 waste water treatment plants (WWTPs) in Cedzyna and Wasniów of capacity 1200 cu.m/day, 4 sewage discharge systems in Gminas of Bieliny, Masłów, Lagów and Nowa Slupia – 34,3 km, 3 retention reservoirs vol. of 397 500 cu. M and basic infrastructure next to water reservoir supporting development of water recreation services (car parking, sanitation units accession roads etc.)

3.5 Inputs:
The activities to be undertaken to achieve the results intended for the Project comprise the construction of group waste water treatment plants (WWTPs) and main sewers, as well as small retention reservoirs contributing in a manner friendly to the environment and surrounding nature, while influencing water levels along entire watercourses. Aggregated input is as follows: 4 mains sewer and 2 WWTPs valued 5 482 000 Euro with Phare contribution 3 204 000 Euro, 3 retention reservoirs with associated infrastructure, valued 2 890 000 Euro with Phare contribution 1 596 000 Euro, Cost of hiring engineer: 200 000 Euro. Detailed input is as follows: Construction of main sewers in the locality of Bieliny Kapitulne: length of 10,653 running metres, 912,500 Euro; Construction of retention reservoir in Wilków: surface area of 0.14 sq. km, volume of 104,500 cu. m, 632,500 Euro; Construction of WWTPs in the locality of Cedzyna: WWTP capacity 895 m3/day, 1,290,500 Euro; Construction of main sewers in the locality of Piotrów: 12,725 running metres, 1,249,000 Euro; Construction of retention reservoir in locality of Jasło: surface area of 0.1 sq. km, volume of 97,000 cu. m, 758,000.00 Euro; Construction of main sewers in the locality of Domaszowice: 3200 running metres, 601,000 Euro; Construction of main sewers in the locality of Nowa Slupia: 7820 running metres 976,000 Euro; Construction of WWTP in the locality of Wasniów: 4,204,000 Euro.
WWTP capacity of 305.5 m³/day 452,000 Euro, Construction of small retention reservoir in the locality of Umer: surface area of 0.12 sq. km, volume of 196,000 cu. m, 1,500,000 EUR.

4. Institutional Frameworks
The Gminas of Bieliny, Bodzentyn, Górno, Łagów, Laczna, Masłów, Nowa Słupia, Wasniów and Zagnanski plus the Świętokrzyski National Park Board are associated in the Świętokrzyski Mountains Association of Gminas (beneficiaries of the project). All are located within the Large-Scale System of Protected Areas of Świętokrzyski Voivodship, comprising the National Park plus Landscape Parks and Areas of Protected Landscape. The Board of the Świętokrzyski Mountains Association of Gminas will manage the project. The Board shall deal with all tendering and clearing-up procedures (Employer). Immediate supervision of operations shall be carried out with the direct staff and logistical support of the Gmina Boards. On completion, the individual gminas (community ownership) respective to specific jobs shall become the owners of assets generated as a result of Project implementation. An independent Engineer will be chosen by tendering.

5. Budget, value in Euro

<table>
<thead>
<tr>
<th>Phare Support</th>
<th>Investment</th>
<th>IB</th>
<th>Total Phare</th>
<th>National co-financing</th>
<th>IFIs</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineer</td>
<td>200 000</td>
<td></td>
<td>200 000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-project 1</td>
<td>3 204 000</td>
<td>2 278 000</td>
<td>5 482 000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sub-project 2</td>
<td>1 596 000</td>
<td>1 294 000</td>
<td>2 890 000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4 800 000</td>
<td>3 772 000</td>
<td>8 572 000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sub-project 1: sewer systems. Sub-project 2: retention reservoirs. Entire project will be financed exclusively from public funds, without commercial credits. Co-financing will be available.

6. Implementation arrangements
6.1. Implementing Agency:
PAO: Vice - Minister in the Ministry of Regional Development and Construction
Wsypolna 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: Not applicable. DIS regulations of the "Practical guide to Phare, Ispa & Sapard contract procedures" will be followed.

6.4. Contracts:
Total contracts value of the project is 8 572 000 EURO, including Phare 4 800 000 EURO. Two contracts for construction works will be concluded: Contract No. 1 – mains sewer and sewage treatment units – contract value 5 482 000 Euro including Phare 3 204 000 Euro. Contract No. 2 – reservoirs with associated infrastructure – contract value 2 890 000 Euro including Phare 1 596 000 Euro. Additionally the contract with Engineer which total value is 200 000 EUR financed by Polish side will be signed. Significantly different type of works and equipment to be provided for water reservoirs and for investments related to waste water discharge and treatment was the base for Union of gminas decision to implement planned investment under two contracts

7. Implementation schedule
7.2. Start of the Project Activity: 1st/2nd quarter 2002
7.3. Project Completion: 4th quarter 2003

8. Equal Opportunities
Employed tendering procedures and selection of staff for the implementation of specific projects shall ensure equal opportunities for men and women in executing project tasks.

9. Environment
For the all investments planed to be implemented under this project have been prepared an Environmental Impact Assessment Studies (according to requirements of EU Directives 85/337 and 97/11), which is available at the beneficiary’s office. In all cases for planed investment have been analysed a construction side and used technology and its impact on water, air, soil, acoustic and
aesthetic aspects, etc. Planed investments are according to EU Directives 91/271 and its amendment 98/15. Planed process of works, machinery and materials are according to Polish regulation on construction and health safety as well as environmental aspects.

10. Rates of return
Two feasibility studies have been prepared, both available at the beneficiary’s office. One covers the investments on water reservoirs and the second one on waste water discharge and treatment units. Water reservoirs located in the gminas Zagnansk, Bodzentyn and Laczna from economical and social point of view are the feasible projects. Both main evaluation indicators are quite high. That way it is assumed that the investments will generate a significant social and economical new development opportunities in the region. ENPV(5%)=16.260.879,24. ERR=13%. Waste water discharge and treatment units located in the gminas Masłów, Górn, Bieliny, Nowa Słupia, Lagów and Wasniów are feasible from economical and social point and will assure its proper financing to cover operational and maintain costs. NPV(5%)=35.304.579,85PLN. IRR=13 %. ENPV(5%)=48.341.297,73PLN. ERR=16%.

11. Investment criteria
11.1. Catalytic Effect:
Phare support will be conducive to achieving the economic and social cohesion goals set for the Voivodship; goals, which could otherwise only be attained after a much more extended period of time and on a more modest and less efficient scale.

11.2. Co-financing:
The project is to be co-financed by the Polish partners.

11.3. Addionality:
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 will be ready for contracting and disbursement (by the 4th quarter of 2001), as both sub-projects will meet all conditions for co-financing by the start of project implementation. The feasibility studies and environmental impact assessments are ready.

11.5. Sustainability:
The project will contribute to the long-term sustainable development of the region, as described in the Swietokrzyskie Voivodship Operational Programme. After implementation, all maintenance costs related to investments will be covered by the beneficiaries.

11.6. Compliance with State Aid Provisions
All aspects of the project will be developed with respect to the state aid provisions of the Europe Agreement

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

12. Conditioning and sequencing
Important issues which may influence on project’s realisation:
- establishment (by the Gminas’ Association Board) of professional project management team responsible for project implementation
- lands’ acquisition in proper time
- obtaining require permissions and expertises
- contracting construction companies capable of executing works in time.

Sequence of the most important jobs:
1. Establish Project management team – April 2001
3. Select contractors – April 2002
5. Reporting and clearing-up of works – 2002 - 2003
### Annex 1: Logframe planning matrix for projects

<table>
<thead>
<tr>
<th>Project number</th>
<th>Project title</th>
<th>Economic activation of mountainous areas located within the Swietokrzyski National Park</th>
<th>Total Phare EUR:</th>
<th>End Contracting: 15/12/2003 - End Disbursement: 15/12/2004</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>8,572 MEURO</td>
<td>Dec. 2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Planning period: 2002 – 2004</td>
</tr>
</tbody>
</table>

#### Date of drafting: Dec. 2000

**Project title**

- Economic activation of mountainous areas located within the Swietokrzyski National Park

**Total** 8,572 MEURO

**Phare EUR:** 4,800 MEURO

### Wider objective

**Indicators of Achievement**

- 10% decline of unemployment rate in gminas
- 15% increase of investment
- Increase of regional GDP per capita

**Sources of information**

- Periodical and final reports
- Main Statistical Office

**Assumptions and Risks**

- Support of Polish Government and funds / financing institutions involved with environment protection and small retention reservoirs.

#### Immediate Objectives

**Indicators of Achievement**

- 150 new business entities (SME)
- 33 new agrotouristic farms
- 300 new jobs
- Increase in number of tourists by 10%
- Improved of Lubrzanka river water quality up to 1st class
- Increased volume of retention water by 400,000 cu. m

**Sources of information**

- Reports and data on project monitoring
- Data from Regional Statistical Office
- Reports on natural environmental condition
- Gminas’ statistics

**Assumptions and Risks**

- Full utilisation of WWTP capacities.
- Elimination of environmental pollution from non-domestic sources (agriculture, industry) within the area in question.
- Further extension of infrastructure basis around retention reservoirs to utilise economic potential they establish.
- Number of people visiting the region will correspond to tourism absorbency of area.

#### Results/Outputs

**Indicators of Achievement**

- 178 ha of new lots
- Sewers of length 34 km constructed
- 2 WWTP – 1200 cu.m/day constructed
- 3 retention reservoirs constructed
- Physical and chemical / biological parameters of treated wastewater meeting requirements of EU directives

**Sources of information**

- Handover protocols of investments
- Statistical Office reports
- Environmental protection reports

**Assumptions and Risks**

- Efficient project implementation depends on the level of involvement and activation of local community in multi-functional development of mountain areas.

### Activities/Inputs (13)

- Construction of main sewers in the locality of Bieliny Kapitulne: length of 10.653 running metres, 912,500 Euro
- Construction of WWTPs and sewer mains constructed
- New retention reservoirs with associated infrastructure
- Improve water quality in the rivers and water reservoirs
- 178 ha of new lots
- Sewers of length 34 km constructed
- 2 WWTP – 1200 cu.m/day constructed
- 3 retention reservoirs constructed
- Physical and chemical / biological parameters of treated wastewater meeting requirements of EU directives
- Handover protocols of investments
- Statistical Office reports
- Environmental protection reports

Construction of main sewers in the locality of Bieliny Kapitulne: length of 10.653 running metres, 912,500 Euro; Construction of WWTPs and sewer mains constructed; New retention reservoirs with associated infrastructure; Improve water quality in the rivers and water reservoirs; 178 ha of new lots; Sewers of length 34 km constructed; 2 WWTP – 1200 cu.m/day constructed; 3 retention reservoirs constructed; Physical and chemical / biological parameters of treated wastewater meeting requirements of EU directives; Handover protocols of investments; Statistical Office reports; Environmental protection reports.

Construction of retention reservoir in Wilków: surface area of 0.14 sq. km, volume of 104,500 cu. m, 632,500 Euro; Construction of WWTPs in the localities of Cedzyna, capacity 895 cu.m/day, 1,290,500 Euro; Construction of main sewers in the locality of Piotrów: 12,725 running metres, 1,249,000 Euro; Construction of WWTPs in the localities of Cedzyna, capacity 895 cu.m/day, 1,290,500 Euro; Construction of main sewers in the locality of Piotrów: 12,725 running metres, 1,249,000 Euro; Construction of WWTP in the locality of Jasło: area of 0.1 sq. km, volume of 97,000 cu. m, 758,000.00 Euro; Construction of main sewers in the locality of Domaszowice: 3200 running metres, 601,000 Euro; Construction of main sewers in the locality of Nowa Slupia: 7820 running metres 976,000 Euro; Construction of WWTP in the locality of Wasinów: WWTP capacity of 305.5 m³/day, 452,000 Euro; Construction of small retention reservoir in the locality of Umer: surface area of 0.12 sq. km, volume of 196,000 cu. m, 1,500,000 EUR. Total project cost is 8,572,000 Euro, including 4,800,000 Euro Phare co-financing.
### Annex 2-4: Cumulative implementation, contracting and disbursement schedule

**Economic activation of mountainous areas located within the Swietokrzyski National Park**

**Planning period:** 2002-2004

**Date of drafting:** Dec.2000

<table>
<thead>
<tr>
<th></th>
<th>PLANNED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IV’01</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
</tr>
<tr>
<td>schedule</td>
<td>I</td>
</tr>
<tr>
<td></td>
<td>D/C</td>
</tr>
<tr>
<td>Contracting schedule</td>
<td>-</td>
</tr>
<tr>
<td>Disbursement schedule</td>
<td>-</td>
</tr>
</tbody>
</table>

**Legend**
- D = design of sub-project
- C = tendering and contracting
- I = contact implementation and payment

**Phare**
in MEURO

Legend for cost estimate Phare in MEURO
Annex 5.1 ENVIRONMENTAL IMPACT ASSESSMENT STUDY (EXECUTIVE SUMMARY)

To finance this project, the Association decided to apply for co-financing from Phare 2001 pre-access fund. The applying Swietokrzyskie Mountains Commune Association with its seat in Bodzentyn unites nine communes: Bieliny, Bodzentyn, Górno, Łagów, Laczna, Masłów, Nowa Słupia, Wasniów and Zagnansk. Swietokrzyskie Mountains Commune Association shall be responsible for implementing the project. Together with a project supervising engineer, the Association shall appoint the project contractor by direct tendering procedure. The tendering procedure shall be in accordance with the procedure described under “Practical Guide to Phare, Ispa & Sapard contract procedures”.

Water reservoirs

In Swietokrzyskie Voivodship, in the location of three communes belonging to the Swietokrzyskie Mountains Commune Association, establishing of three small retention reservoirs is scheduled (Wilków reservoir, Bodzentyn Commune, Umer reservoir, Zagnansk Commune, Jasle reservoir, Laczna Commune). As much as 66.6% of the Voivodship area is included in a surface form of nature protection. All scheduled reservoirs are located in lagging of parks.

Basic parameters of the reservoirs are as below:

<table>
<thead>
<tr>
<th>Reservoir’s name</th>
<th>River</th>
<th>Character - destination</th>
<th>Surface area [ha]</th>
<th>Volume [x1,000 m³]</th>
<th>Maximum depth [m]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wilków</td>
<td>Water Course from Sw. Katarzyna</td>
<td>retention / rest</td>
<td>9.30</td>
<td>104.5</td>
<td>2.80</td>
</tr>
<tr>
<td>Umer</td>
<td>Bobrza</td>
<td>retention / rest</td>
<td>11.90</td>
<td>196.0</td>
<td>3.00</td>
</tr>
<tr>
<td>Jasle</td>
<td>Jasłana Water Course</td>
<td>retention / rest</td>
<td>3.70</td>
<td>80.0</td>
<td>3.50</td>
</tr>
</tbody>
</table>

When selecting the reservoirs’ location, existing site conditions was taken into account to utilise them in the best possible way, both to minimise the investment outlays and to improve the environment conditions in terms of ecology.

Prior to production of the documentation of reservoirs’ construction, each authority collected opinions of the inhabitants in respective area. In every case there was a broad interest and support for the project. In every commune there is a compliance of the reservoir location with commune development plan. All reservoirs are also included in the Swietokrzyskie Voivodship Small Retention Programme produced in 1999. The Swietokrzyski National Park Protection Plan also mentions the need of reservoirs establishing.

The designed retention reservoirs located on surface waters in the Swietokrzyskie Mountains Commune Association and within the lagging of Swietokrzyski National Park (Wilków reservoir) and Suchedniowsko - Oblegorski Landscape Park (Umer and Jasle reservoirs) shall not negatively contribute to the environment. Quite contrary, their establishing shall contribute to elimination of the reported local threats to water retention, reduction of water circulation as well as it shall make the landscape more attractive, make recreation possible, indirectly contribute to economical development of the areas involved in the project and establish friendly conditions for activating business development.

The information presented above is the summary based on detailed environment impact assessment study for each of the reservoirs. The analysis were produced for, and based on, the requirements of EU laws. The EU regulations require that the infrastructure projects - retention reservoirs should be accompanied by the environmental impact appraisal (the Council Directive No. 85/337/EC dated 27th June 1985). When producing the appraisal, the laws stipulated in the following directives were also used: 97/11/EC, 76/160/EC, 80/779/EC, 85/203/EEC, 85/884/EEC, 96/62/EC, 70/15/EU, 76/160/EU.

Waste Water Treatment Plants (WWTP)

Waste Water Treatment Plants are planed by two communes belonging to Swietokrzyskie Mountains Communes Association. These are Górno and Wasniów.

Górno Commune is located East of Kielce and makes a recreation background for the region. Cedzyna water reservoir established on Lubrzanka River on the border of communes is a main attraction. This water basin of the surface area of 65 ha is a popular recreation place, a centre of water sports and attractive fishing place for fishermen.

Wasniów Commune is located in North part of Swietokrzyskie Voivodship, partly within Swietokrzyskie Mountains and Sandomierska Upland. Part of the Commune is located within the location of Sieradowicki Landscape Park.
Equipment and process operation design employed in Cedzyna WWTP, Górno Commune, and Wasniów WWTP will assure meeting the requirements of environment protection and land formation and shall not generate any noxiousness to air, earth surface, nature, landscape, surface and ground waters nor noise protection. No deposits are expected to be exploited near the WWTP. Impact on specific components of environment does not extend over the area to which the Investor is legally entitled. Below please find the table specification of the parameters of sewage to be discharged to recipients from both WWTPs, and requirements for treated sewage provided by both Polish and EU regulations:

<table>
<thead>
<tr>
<th>WWTP</th>
<th>Capacity</th>
<th>Pollutant indicators</th>
<th>Pollutant indicators [mg/dm$^3$]</th>
<th>acc. to Polish law</th>
<th>acc. to EU law</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cedzyna, Górno Commune</td>
<td>1,200 m$^3$/d</td>
<td>BOD</td>
<td>20.0</td>
<td>30.0</td>
<td>25.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COD</td>
<td>100.0</td>
<td>150.0</td>
<td>125.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SS</td>
<td>30.0</td>
<td>50.0</td>
<td>35.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total-N</td>
<td>22.0</td>
<td>30.0</td>
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<tr>
<td></td>
<td></td>
<td>Total-P</td>
<td>2.0</td>
<td>5.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Wasniów</td>
<td>200 m$^3$/d</td>
<td>BOD</td>
<td>22.0</td>
<td>30.0</td>
<td>25.0</td>
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<tr>
<td></td>
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<td>COD</td>
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<td>150.0</td>
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<td>50.0</td>
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<tr>
<td></td>
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<td>Total-N</td>
<td>22.0</td>
<td>30.0</td>
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</tr>
<tr>
<td></td>
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<td>Total-P</td>
<td>4.0</td>
<td>5.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

1) in case of discharging sewage from WWTP of 10,000 to 100,000 PE

Each of the designed WWTPs shall service less than 10,000 PE. Obtained results of treatment of sewage discharged from each of above mentioned WWTP to the recipient meet the requirements provided in Polish law regulations and EU directives. With WWTPs below 10,000 PE standards on total nitrogen and total phosphorus are not required for regardless a recipient type.

*The designed WWTPs in Cedzyna, Górno Commune, and Wasniów are not going to influence natural environment in a negative manner, and there is no need to establish a limited use zone for any of them.*

**Sewage systems**

In Swietokrzyskie Voivodship, in Kielce District, establishing and extension of sewage mains is scheduled within the location of four communes united in Swietokrzyskie Mountains Communes Association. The project is going to be developed in the communes of Nowa Słupia, Lagów, Bieliny and Masłów. All communes involved in the project are located within the areas requiring protection. At the same time the areas involved are attractive in terms of tourism. Establishing and extension of the sewage mains within the area in terms shall increase the ecological standard of individual localities and protect the naturally valuable region against negative effects of antropho-pressure.

The materials designed for establishing of the sewage main and its fittings provide leaktightness and high quality of the system. The designed pumping stations shall be furnished with submersible pumps with grinders therefore they shall be screenings-free. Lamps and horns shall signal the emergency situations of pump stations operation. A possibility of signals transmitting via radio to operators on duty on WWTPs shall be also expected. Polish standards and EU standards provide employing of small diameter up-to-date PVC manholes.

Discussions on the need and possibilities of sewage main were conducted with the inhabitants of individual localities. The noxiousnesses resulting from lack of sewage main and further need of evacuating the domestic sewage from pits recommend urgent need of project implementation.

Establishing of the designed sewage main shall improve the condition of purity of the following waters: Słupianka River in Kamienna River basin, Lagowica River in Czarna Staszowska River basin and Lubrzanka River in Czarna Nida River basin. Sewage collected and discharged to the existing WWTPs shall not generate a hazard for surface and ground waters quality any more. Blind sewage pits, usually operated in wrong manner and untight, were a hazard for quality of waters. WWTPs to which sewage shall be discharged feature with correct operation of the facilities. Concentration of the pollutants in treated sewage to be discharged to recipients complies with Polish laws and EU directives.

On the basis of the produced “Environmental Impact Appraisal” it could be concluded that the solutions designed in the projects, employed materials and plants fully comply with Polish and EU laws requirements. Protection of the natural environment does not require any further means to be employed thus not extra capital costs shall be deemed necessary. Completed sewage main project shall improve
the standard of living and make further tourism and economic development of the communes in terms possible.

The designed sewage mains and pumping stations in Masłów, Bieliny, Nowa Slupia, Piotrowa and Wisniowa localities, Lagów Commune, shall not impact on the environment condition in a negative manner.

The production has been developed on the basis of the following legal acts:

- the Regulation of the Minister of Environment Protection, Natural Resources and Forestry dated 14th July 1998 on the requirements to be met by environment impact appraisals for the project not included among particularly harmful for natural environment and health of people or projects likely to deteriorate the natural environment condition, or works to modify water relations (Official Legislation Gazette No. 93, item 590),
- the Regulation of the Cabinet dated 19th May 1999 (Official Legislation Gazette No. 50, item 501) on the conditions of waste water discharging to waste water facilities being municipal ownership,
- the Council Directive No. 85/337/EC dated 27th June 1985 on evaluating the environmental effects of some public and private undertakings,
Annex 5.2 Executive summary of the Feasibility Study

General
The investments aim at creating infrastructure conditions, which will intensify the social and economic development of the adjoining areas and tourism.

The Applicants:
Swietokrzyskie Mountains Communes Associations
Marek Krak, President of the Board
28-100 Bodzentyn
Suchedniowska Street 3

Project location
The project shall be developed in the location of Swietokrzyskie Mountains Communes Association which unites the communes of Bieliny, Bodzentyn, Górno, Lagów, Lacznà, Masłów, Nowa Słupia, Wasiów and Zagnansk, and Swietokrzyski National Park. The Association's area covers the entire region of Swietokrzyskie Mountains.

Basic parameters of the investments:
Water reservoirs - Wilków (9.3 ha), Umer (11.9 ha), Jasle (3.7 ha)
Sewage systems: Lagów (12.7 km), Nowa Słupia, Bieliny and Masłów.
Waste water treatment plants: Górno (1200 m³/d), Wasiów (200 m³/d)

Projects influence on socio-economic development

Water reservoirs
Subsequent to project implementation three small retention reservoirs of total water table surface area of 25 ha and volume of 380,000 cu. m shall be established. The reservoirs shall perform two basic functions, i.e. retention / protection in relation to ground waters, and tourism / rest. The reservoir shall increase tourism attractiveness of the commune and contribute to more efficient use of the existing monuments of technique as accompanying attractions. Moreover, the commune authorities planned additional activities aiming toward more efficient use of the rest function of the reservoir, i.e. establishing the access road and car parking, adopting of school building in Umer to operate as a hostel, cultural and art monuments development.

As a result of these activities, the Zagnansk Commune authorities expect: increase of Umer village district regular inhabitants (new inhabitants coming), establishing in a 5-year period on project completion some 5 entities servicing tourists visiting the reservoir, and establishing some 5 agri-tourism farms in Umer locality. Expected number of newly established places of employment in above mentioned period shall be some 10 to 20 regular posts. The commune authorities also expect that tourism traffic shall be increased by some 15% with regard to development of the existing cultural monuments.

The Bodzentyn Commune authorities expect establishing in a 5-year period on project completion some 15 new entities servicing tourists visiting the reservoir, and establishing some 18 agri-tourism farms in surrounding localities. Expected number of newly established places of employment in above mentioned period shall be some 30 to 40 regular posts.

The Laczna Commune authorities expect establishing in a 5-year period on project completion some 15 new entities servicing tourists visiting the reservoir and drivers. Moreover some 18 agri-tourism farms shall be established in surrounding localities. Expected number of newly established places of employment in above mentioned period shall be some 40 regular posts.

Sewage systems and waste water treatment plants
Two waste water treatment plants with the capacity of 1400 m³/d and four sewage systems 42.8km long will be constructed. The planned plants will operate for 1600 inhabitants of the Górno and Wasiów communes (the number can reach 5400 inhabitants). The sewage systems will operate for 3700 inhabitants of other communes included in the project (the number can reach 14970 inhabitants). The investment impact on people’s lives in the area of investment is beyond dispute. The life standard will improve and the value of developed areas will increase by 20%. The survey shows that people living in the area of investment are interested in the investment and they participate in the costs (house sewer construction). It proves that there is social support for this kind of investment especially when one takes into consideration the fact that planned investments cover the countryside area.

In Cedzyna and Leszczyny service areas of 10ha and housing areas of 15ha were set by the Górno commune authorities.
The Górnio authorities assume that the number of inhabitants of the Cedzyna district will increase (influx of new inhabitants), 30 new enterprises will appear during five years after completion of the investment and 8 agricultural recreation farms in Cedzyna and Leszczyny will appear. During this period 30 - 40 job vacancies should appear. The authorities assume that the tourism will increase by 15%.

In Wasniów the commune authorities set service areas of 10ha and housing areas of 15ha. The Wasniów authorities assume that 10 new enterprises will appear during five years after completion of the investment and 8 agricultural recreation farms in Wasniów will appear. During this period 10 - 15 job vacancies should appear. Owing to the planned investment on the new areas and development of tourism the authorities assume that the tourism will increase by 10%.

In Domaszowice the commune authorities set service areas of 20ha and housing areas of 16ha. The Masłów authorities assume that 7 new SME’s will appear during five years after the completion of the investment and 3 catering buildings will appear in Domaszowice. During this period 40 - 50 job vacancies should appear. Owing to the planned investment on the new areas and development of tourism the authorities assume that the number of inhabitants in the village administrator district will increase by 10%.

The Bieliny authorities assume that 3 new SME’s will appear during five years after the completion of the investment. During this period 10 - 15 job vacancies should appear. Due to the planned investment on the new areas and development of tourism the authorities assume that the number of inhabitants in the village administrator district will increase by 8%.

In Nowa Słupia housing areas and areas for tourist purposes covering 10ha were set by the commune authorities. The Nowa Słupia commune authorities assume that 15 new subjects and 20 new accommodation buildings will appear during five years after the completion of the investment. During this period about 20 job vacancies should appear.

In Łagów 3ha of service areas and 10ha of housing areas were set by the commune authorities in Piotrów, while in Łagów 6ha of production-service areas and about 2ha of tourist service areas near the planned ring road on road No. 74. The Łagów commune authorities assume that 5 new subjects and about 5 agricultural recreation farms will appear during five years after the completion of the investment. Because of the expansion of the present buildings about 20 accommodation buildings, summer hostel and camping site will appear. During this period about 15 job vacancies should appear. Due to the planned investment on the new areas and service development the authorities assume that the number of inhabitants in the village administrator district will increase.

Financial analysis

Economic net present value for water reservoirs (ENPV) is 16,260,879.24 while economic internal rate of return (ERR) is 13.0%.

In case of sewage systems and WWTP (calculation of the values is based on 5% discount rate) net present value (NPV) and internal rate of return (IRR) are:

NPV = 35,304,579.85 zł
IRR = 13%

Economic present value (ENPV) and economic rate of return (ERR) are:

ENPV in is 48,341,297.73 zł, while ERR is 16%

ENPV and ERR values prove that the investment is profitable. By analogy with IRR and NPV the investment brings more social-economic benefits than costs.

Taking into account the above calculations the all investments planned by Swietokrzyskie Mountains Associations investment should be considered to be effective from social and economic point of view.