



**Strategic Environmental Assessment Report  
of the Cross Border Cooperation  
Programme Lithuania-Poland 2007-2013**

**Prepared in accordance with the  
Directive 2001/42/EC on the assessment of  
the effects of certain plans and programmes  
on the environment**

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## 1 Non technical summary

The “Territorial Cooperation Programme, Cross Border Cooperation Lithuania - Poland 2007-2013” presented a draft operational programme on the Cross Border Cooperation between Lithuania and Poland. This report is an environmental assessment of this draft Programme, pursuant to the EU Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment.

**Overall Strategic Goal** of the programme is to **foster the sustainable development and of the border region through enhanced economic, social and territorial cohesion of the areas on both sides of the border.**

**Two priorities** are defined:

**Priority 1 “Competitiveness and productivity growth of the cross-border region.”**

**Priority 2 “Cross-border cohesion and enhanced overall quality of the cross-border area.”**

Also a **Priority 3 “Technical Assistance”**

The preparation of the draft operational programme was conducted within a broad Programming Group composed by representatives of National authorities of Lithuania and Poland, regional authorities, environmental authorities as well as external experts providing the Technical Assistance on the Programming, the Ex-ante evaluation of the programme and the team of the Strategic Environmental Assessment (SEA).

All members cooperated closely through a consensus-seeking iterative process. Thus, most remarks and comments of the SEA team have already been incorporated in the draft operational programme.

### **Content of the Environmental Report.**

Environmental needs and priorities in Lithuania and Poland are similar, the cross border region consist of rich environmental and nature values. In the report environmental issues biodiversity, human health, biodiversity including landscape, soil, water, air, climate change factors, efficiency use of natural resource and conservation, cultural heritage were considered.

The SEA describes initially the likely developments in these issues in case the Programme is not implemented and subsequently assesses the relevance of the above mentioned environmental issues to the Programme Priorities and Fields of Activities. Where no relevance is assumed, no further assessment is conducted. Finally the SEA projects the likely positive or negative environmental impact of the specific Priorities and Fields of Activities to the relevant environmental issues.

Geographical scope of the programme is cover most valuable natural territories in Poland and Lithuania, any project financed from the programme should take into consideration nature values in order not to make negative impact to them. In the programme is included supportive activity “common training, monitoring and management of natural resources and protected territories, ecological corridors” it could be mentioned as anticipate positive impact to improve management quality of the protected areas.

The Programme has in most cases a positive or neutral impact on the environment through the introduction of new technologies, elaboration of joint development strategies and documents, improving co-operation, proper selection and management of the projects and promotion of a service-oriented economy.

Most likely negative impacts occur in those fields of activities that have a spatial dimension and consume or exploit space (e.g. tourism, transport etc.). For instance activities which support cross-border business development and tourism will increase the request for enlargements of regional and local road networks and by-pass-routes. On a long term individual transport traffic will increase, with negative impacts on air quality, noise and climate change. Most negative aspects however, have been eliminated through the iterative process between the Programming Group and the SEA team.

Cross Border Cooperation Programmes are implemented through the selection of single projects proposed by the eligible applicants. It is thus beneficial to the environment to define project selection criteria that safeguard the environment. The SEA team suggests focusing on the following topics:

1. Concentrate on improvement of the existing infrastructure vice versus infrastructure development in new territories.
2. Regarding land use change and loss of soil by sealing, as a matter of principle, any new terminals, facilities should be located in brown fields whenever possible unless there are very strong and justified economic and environmental reasons for green-field investments.
3. Environment: impacts on flora, fauna, water systems, biodiversity, landscape and cultural heritage or protected areas (NATURA 2000 sites among others).
4. Tourism in compliance with regional/local ecological and social limitations as well as in combination with public transport. Promote ecological tourism and rational use of natural resources.
5. Raising awareness among tourists, decentralizing tourism activities, taking into account the different levels of annoyance within the region and demanding that tourism facilities supported by the programme should also be open and affordable for permanent residents.
6. Take in account the ecosystem limits when biomass is taken for development renewable energy projects.

This process will be escorted by Monitoring Measures, destined to facilitate the measurement of the environmental impacts during Programme Implementation.

## 2 Main objectives and contents of the programme

In the new programming period 2007-13 the EU has inaugurated a new strategic approach, seeking better coordination of programmes and activities. The following steps in programming are foreseen:

- **Community Strategic Guidelines**, strengthening the linkage between the Structural and Cohesion Funds and the Lisbon and Gothenburg Agendas,
- **National Strategic Reference Frameworks** and
- **Operational Programmes.**

In light of the above and of the renewed Lisbon strategy for growth and jobs, **programmes cofinanced** through the cohesion policy should seek to target resources on the following **three priorities**:

- **improving the attractiveness** of Member States, regions and cities by improving accessibility, ensuring adequate quality and level of services, and preserving their environmental potential;
- **encouraging innovation**, entrepreneurship and the growth of the knowledge economy by research and innovation capacities, including new information and communication technologies; and
- **creating more and better jobs** by attracting more people into employment or entrepreneurial activity, improving adaptability of workers and enterprises and increasing investment in human capital.

In this context the significance of European territorial cooperation, raised to objective status is outlined. The aim of the new cooperation objective is to promote stronger integration of the territory of the Union in all its dimensions.

**Cross border cooperation** is a relevant topic in the European Union, with the **aim to reduce or eliminate the national borders**, which are very often **barriers** for a balanced socio-economic development of the regions concerned.

The Lithuanian-Polish CBC programme shall attempt to contribute to the better integration of the two countries into the wider European political and economical space in so doing preserving their national identity and addressing the challenges of the Lisbon and Gothenburg strategies. The CBC programme shall facilitate the socio-economic cohesion of the border regions, promote their sustainable development, increase competitiveness and ensure social welfare by jointly addressing identified weaknesses, sharing knowledge and experiences and applying the synergy effect. The programme shall address issues that need intervention on both sides on the border. It is also important that the programme become an integral part of Lithuanian and Polish regional policies contributing to the achievement of their strategic goals and objectives. In addition, attempts shall be made to focus on the needs and interests of the local population,

improvement of their living environment and welfare and ensuring that people may benefit from tangible results of the programme, which is not always the case of large national programmes.

The overall goal of the programme is defined as follows:

**Overall Strategic Goal** of the programme is to foster the sustainable development and of the border region through enhanced economic, social and territorial cohesion of the areas on both sides of the border.

The programme set up the following **specific objectives**:

- **To establish a region geared to the needs of competing in a global economy.** Economic growth is a clear prerequisite for enhanced economic and social cohesion in the cross-border region targeted by the programme. Hence this objective emphasises the need to increase the competitiveness of the border regions and improve access to markets across the border.
- **To achieve sustainable development of a region which is forward looking and attractive in terms of its quality of life, social equity, environment and its communication links.** A long-term sustainable economic growth is unlikely without enhanced social and territorial cohesion of the cross-border region, which could be achieved by a progressive integration of local, social and environmental development aspects. Hence this objective emphasises the need eliminate the physical obstacles to cross-border co-operation, strengthen the cross-border social cohesion, cultural identity and environmental quality of the border regions.

### 3 Scoping

The scoping-process aims at defining the investigative frame of the SEA and the tools and methods used within the process.

#### 3.1 Geographical area of relevance

The geographical area of relevance for defining the state of the environment, current trends, but also for assessing possible positive or negative effects of objectives, priorities and proposed measures covers:

- Białostocko-Suwalski Subregion (11 municipalities);
- Elcki Subregion (6 municipalities)
- Lomżyński Subregion as an adjacent region (6 municipalities)
- Olsztynski Subregion as an adjacent region (7 municipalities).
- Marijampole county (5 municipalities)
- Alytus county (5 municipalities)
- Taurage county as an adjacent region (4 municipalities)
- Kaunas county as an adjacent region (8 municipalities)
- Vilnius county as an adjacent area (7 municipalities – does not include Vilnius city municipality)

### 3.2 State of environment and environmental values of the relevant region

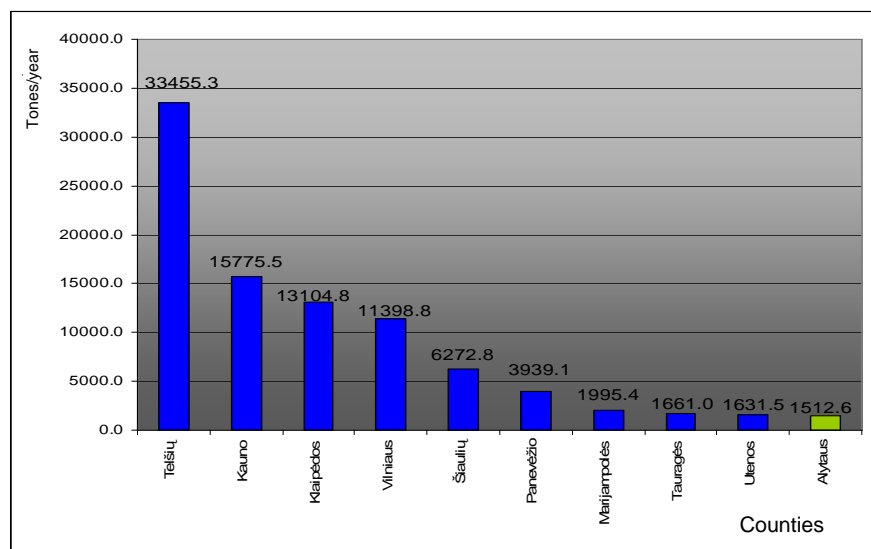
The landscape features of the cross-border area region are relatively similar with large forested plots containing numerous rivers and lakes. It is an area predominately of rolling hills with some marshlands parts of the region being drier with more coniferous forests and sandier soils. The Nemunas, Merkys, Sesupe, Jura, Narew, Biebrza, Pisa and Elk rivers flow through the border area, along with many smaller rivers and many streams. The region includes the unique Great Mazurian Lakes area, Suwalsko Augustowskie Lakes, Zuvintas and Vistytis Lakes, to name a few.

The border area includes 7 National and 16 Regional Parks, 3 State Strict Reserves, 1 State Historical-Cultural Strict Reserves and a number of protected areas established under national legislation as well as 200 NATURA 2000 sites. Total territory of protected areas in the programme geographical scope is 2.284.903 ha from them 572.006 ha protected territories established under national legislation and 1.712.897 ha NATURA 2000 sites. The detailed list of the protected territories is listed in the annex 2. Any activities within the programme in particular in development infrastructure development project should taken into consideration the values of the protected areas in order not to intacto to natural and cultural values.

The Polish border region has been classified as part of the area called “*Green Lungs of Europe*” and in fact encompasses legally protected areas that (in 2004) covered 32,5% of the total territory of Poland (over 10 million ha).

Even though the quality of the environment has improved over the preceding years, and the rate of emissions and their amounts have steadily decreased, still much has to be done in the field of environment protection. First of all, investment expenditures on environmental protection are still unsatisfactory. Furthermore, many other activities should be undertaken in order to improve the quality of the environment in the cross-border area, for example the reduction of pollution emissions by implementing new cleaner technologies in industry.

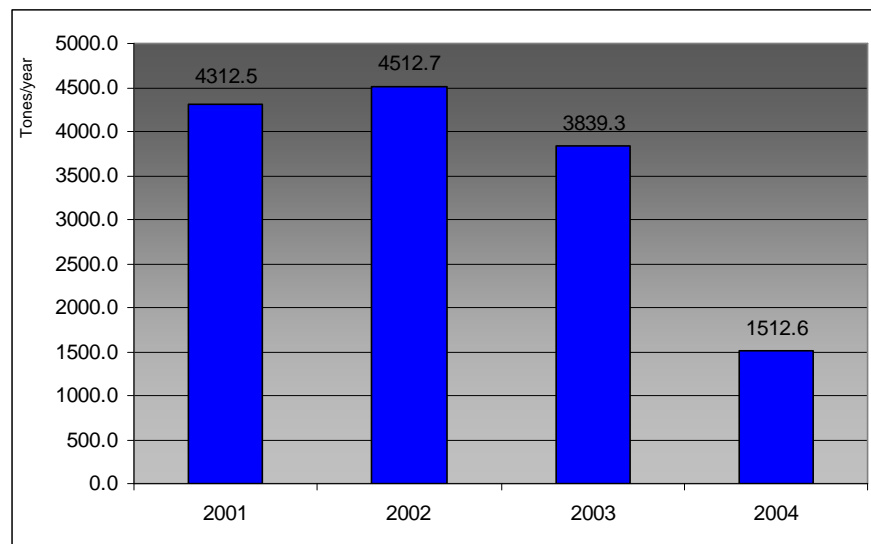
Some effects will be considered in a larger geographical context, e.g. effects on change of global climate.



Graph No.1 Amount of emissions from stationary sources in Lithuanian Counties. (Source Environmental protection agency, 2004)

## Alytus county

Air quality. The main source of emission to ambient air in Alytus County is transport sector in year 2002. There is no reliable data available to provide information what part of emission from mobile sources is in Alytus County. Concerning emission to air from stationary sources the situation in Alytus county is the best compare with other Lithuanian counties (see graph No.) Since 2001 year emission from stationary sources decrease about 3 times (see the graph above).



Emission from stationary sources in Alytus county in 2001 – 2004. (Source Environmental protection agency, 2004)

In particular during cold season impact to air quality is making household from individual house heating boilers.

Water quality. The main contribution of wastewater in Alytus County is industry and household. Unfortunately Alytus as majority of Lithuanian cities do not have biological wastewater treatment plant of proper capacities. In general quality of water due decreasing industry intensity is improving. Important problem remain – pollution from diffused pollution sources such as agriculture. Quality of the biggest Lithuanian river Nemunas is considering as medium polluted. The pollution to Nemunas flows not only from Nemunas' affluent but also significant contribution flows from Belarus. Below Druskininkai and Alytus cities concentration of nitrogen according to the seasons exceed Maximum Allow Concentration (MAC). Phosphorus concentration below main cities increasing but not exceeding MAC<sup>1</sup>. Monitoring of water quality in lakes is executing in 2 lakes Zuvintas and Dusia. Concentration of nitrogen exceed MAC almost twice in Dusia lake at Sutre affluent. In the rest lakes concentration of nutrients elements do not exceed MAC<sup>2</sup>.

Soil quality. Soil quality monitoring in Lithuania is implemented partly, only monitoring of soil acidify and land use changes due urbanization are monitored. Soil pollution concentrated in cities in particular territory of industry enterprises, main transport roads and units. In Alytus County is no concentration of heavy polluted industries so soil pollution determined by industry is not relevant. Soil pollution from agriculture is not exceeding MAC. Another important problem concerning soil quality in Alytus County is soil erosion. In Alytus and Lazdijai districts accordingly 45,8% and 46,9% of territory belongs to Baltic hilliness, in this hilliness important issue is erosion by water. In South part of Alytus County where sandy soil is dominated (about 15 – 20%) soil erosion by wind is an important issue.

<sup>1</sup> Quality of water 2004 in Nemunas and Merkys rivers (in territory of Alytus County). (Environmental Protection Agency, 2004)

<sup>2</sup> Quality of water 2004 in lakes. (Environmental Protection Agency, 2004)

## **Marijampole county**

*Air quality.* The main sources of emission to ambient air in Marijampole county are industry and transport sector. Year 2003 emission to ambient air in Marijampole County was 1895,6 tons in comparison with 2002 decreased by 2,8%. There is no reliable data available to provide information what part of emission from mobile sources is in Marijampole County. In particular during cold season impact to air quality is making households from individual house heating boilers.

*Water quality.* The main contribution of wastewater in Marijampole County is industry and household. In Marijampole County are 100 wastewater treatment plans 62 of them are with biological wastewater treatment facilities. Compare to Lithuanian average of quality discharge wastewater in Marijampole County this indicator is above national average. For instance average in Lithuanian of not fully treated wastewater discharge to surface water is 1.24% as in Marijampole 0.54%, to the norms treated wastewater discharge in Lithuania 1.52, in Marijampole 57.1%<sup>3</sup>.

*Soil quality.* Soil quality monitoring in Lithuania is implemented partly, only monitoring of soil acidify and land use changes due urbanization are monitored. Soil pollution concentrated in cities in particular territory of industry enterprises, main transport roads and units. In Marijampole County is no concentration of heavy polluted industries so soil pollution determined by industry is not relevant. Soil pollution from agriculture is not exceeding MAC. Soil erosion in Marijampole is not considering as relevant problem.

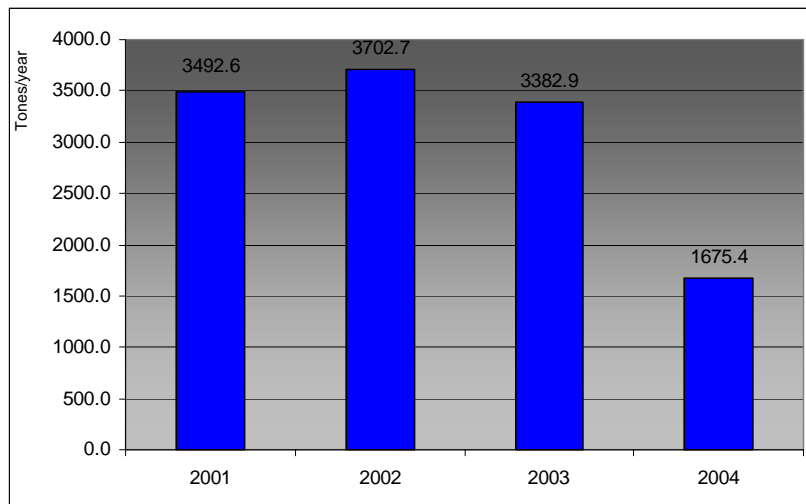
## **Taurage county**

*Air quality.* The main sources of emission to ambient air in Taurage county are industry and transport sector. Pollution emissions from transport consisted about 79% of all emission to ambient air in Taurage County. Since 2001 year emission from stationary sources decrease about 2 times (see the graph below). The main polluters from stationary sources are concentrated in Taurage district, the best situation concerning emissions from stationary sources and in Pagegiai municipality<sup>4</sup>. In particular during cold season impact to air quality is making households from individual house heating boilers.

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<sup>3</sup> General plan of Marijampole County

<sup>4</sup> General plan of Taurage county



Emission from stationary sources in Taurage county in 2001 – 2004. (Source Environmental protection agency, 2004)

**Water quality.** The main contribution of wastewater in Taurage County is industry, agriculture and household. During last decade in Taurage county intensity of agriculture decrease almost twice, so pollution from diffused sources decreased as well. Taurage County contribute to wastewater discharge only 0,05% from total Lithuanian wastewater discharge. Even 72,5% of discharge water in Taurage County consist wastewater not treated accordingly to level required in national regulations. The biggest amount semi treated wastewater was discharged in Taurage municipally (70%), Jurbarkas municipality (19.1%) but in Jurbarkas situation has been improved due introduction new wastewater treatment facility. The important problem of rivers pollution is pollution by nutrients and organic elements from agriculture and urban territories. In period 1993-2002 in Counties rivers concentration of nitrogen and phosphorus decreased but concentration of nitrates remain stable. MAC of nitrogen exceeding in Saltuoja and Jura rivers below Taurage and Sesuvis and Nemunas below Smalininkai. Water quality of Nemunas river during the last decades is remaining stable, Nemunas is considering as semi polluted river.

**Soil quality.** Soil quality monitoring in Lithuania is implemented partly, only monitoring of soil acidify and land use changes due urbanization are monitored. Data concerning soil contamination is very limited. Soil mainly contaminated in cities industrial areas and along main roads. Soil samples taken from formed Pagegiai Soviet military sited indicates heavy pollution in soil by oil, heavy metals. Another problem is acidification of soil arising from usage of nutrient fertilize, intensive agriculture and acid rains.

### **Kaunas county**

**Air quality.** The main sources of emission to ambient air in Kaunas County are industry and transport sector. In Kaunas County is concentrated industry there are 192 industry companies which produce 1/3 from all Lithuanian industry production. The main industry companies are concentrated in Kaunas, Jonava and Kedainiai cities. Kaunas County is second big county from emission to ambient air perspective. Since emissions in Kaunas County are not exceeding MAC but is seeing tendencies for increasing amount of emissions. In Kaunas agglomeration zone in summer time concentration of PM10 exceeding MAC it is mainly influent by dusts which are lifted by transport.

**Water quality.** The main contribution of wastewater in Kaunas County is industry, agriculture and household. Kaunas County contribute to wastewater discharge about 41% from total Lithuanian wastewater discharge. The biggest amount semi treated wastewater was discharged in Kaunas City municipally where biological wastewater treatment plant still not constructed. The

important problem of rivers pollution is pollution by nutrients and organic elements from agriculture and urban territories. The state monitoring is executing in 7<sup>th</sup> County's rivers (Nemunas, Dubysa, Nevezis, Neris, Lomena, Sventoji, Streva) and Kaunas artificial sea<sup>5</sup>. By biological parameters the worse quality of water is in Kaunas artificial sea (Kauno marios)<sup>6</sup>.

Soil quality. Soil quality monitoring in Lithuania is implemented partly, only monitoring of soil acidify and land use changes due urbanization are monitored. Data concerning soil contamination is very limited. Soil mainly contaminated in cities industrial areas and along main roads. Fertile soil is dominating in Kaunas County this determine intensive agriculture activities. But in some districts Prienai and Kaišiadorys there the landscape are hilly or soil are sandy is a risk for soil erosion.

### **Vilnius county (excluding Vilnius city)**

Air quality. Due to economic depression and rapid establishment of means for efficient energy use in the field of energetic, the total quantity of contaminants discharged from household and industry underwent a considerable decline. Although the degree of pollution tends to gradually decrease at national level, still it remains the relevant issue in the largest towns. To solve this problem, as of January 1, 2004, all vehicles for the first time registered in the country have to correspond to the established technical and ecological EU requirements.

Water quality. The main contribution of wastewater in Vilnius County is industry, agriculture and household. Every year, Vilnius County (excluding Vilnius city) discharges 22571,7 thous.m<sup>3</sup> of waste-water<sup>7</sup>. Uneven renovation works of water treatment equipment are carried out across the County. Water treatment equipment was renovated according to the EU standards in Municipalities of Ukmerge and Sirvintos regions. Partial renovation works were carried out in Svencionys and Vilnius regions.

Soil quality. Soil quality monitoring in Lithuania is implemented partly, only monitoring of soil acidify and land use changes due urbanization are monitored. Data concerning soil contamination is very limited. Soil mainly contaminated in cities industrial areas and along main roads. In view of general land distribution, farmland (though with poor soil), forestlands, territorial waters, marshy locations and urbanised territories prevail in the region. Rich clay loam and turfy-boggy soils prevail in the region.

### **Voivodeship Podlaski**

Air quality. The main sources of emission of pollutants into the air in Podlaski Voivodeship are urban boiler houses, industrial or scattered emission sources of the communal-household sector, along with pollutants generated by the sector of transport<sup>8</sup>. Emission amount since 1998 has been decreased but since 2003 there is foreseeing tendency for emission grow mainly due economical grow and economical recovery. The main concentration of emission is in Bialystok city as there is concentrated the industry of the Voivedeship.

Water quality. Municipal wastewater makes up about 84% of all the generated wastewater in Podlaski Voivodeship (84.1% – in 2001, 84.6% – in 2000, 82.2% – in 1999, 81.6% – in 1998). Almost 98.8% of wastewater was treated biologically in 91 municipal wastewater treatment

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<sup>5</sup> Environmental protection agency "Upių ir ežerų monitorinio tinklas"

<sup>6</sup> Environmental protection agency "Lietuvos upių ir ežerų įvertinimas pagal biologinius parametrus"

<sup>7</sup> Environmental protection agency Nuotekų išleidimas savivaldybėse 2005.

<sup>8</sup> Report o Stanie Srodowiska Wjewoodztwa Podlaskiego w latach 2002-2003. Bialystok 2004

plants (83 plants – in 2001). The number of facilities, using technologies with enhanced employment of biogens, is increasing: in 2002, there were 22 such facilities (18 in the year 2001). The amount of municipal wastewater, released into surface waters, showed a significant reduction, from 38.2 hm<sup>3</sup>, released in 1998 (36.5 hm<sup>3</sup> – in 1999, 34.6 hm<sup>3</sup> – in 2000, 32.9 hm<sup>3</sup> – in 2001) to 32.5 hm<sup>3</sup> in 2002. In 2002, industrial wastewater constituted 16.2% of the overall generated wastewater in the Voivodeship (15.9% – in 2001, 15.4% – in 2000, 17.8% – in 1999, 18.3% – in 1998). About 84% of wastewater, requiring treatment, was treated biologically (94.5% – in 2001, 94.5% – in 2000, 75.4% – in 1999, 80.8% – in 1998), while 10.7% was treated with enhanced usage of biogens. There was practically no industrial untreated wastewater released into surface waters. According to the data of the Central Statistical Office (GUS – Główny Urząd Statystyczny), municipal economic entities, industrial plants and other concentrated sources of pollutants in the Voivodeship in the course of the year 2002 generated 38.8 million m<sup>3</sup> of wastewater (2001 – 39.1; 2000 – 40.8; 1999 – 44.4; 1998 – 46.8 million m<sup>3</sup>), 38.1 million m<sup>3</sup> of which required treatment (2001 – 38.5; 2000 – 40.1; 1999 – 43.5; 1998 – 45.6 million m<sup>3</sup>). These are the lowest amounts in the country<sup>9</sup>.

Soil quality. Soil quality monitoring in Poland is implemented partly, only monitoring of soil acidify and land use changes due urbanization are monitored. Data concerning soil contamination is very limited. The soil the Podlachian Voivodeship is considering as acidified. The analysis of the conducted research shows that as much as 88% of the soils, included in the study, are acidified, including 69% which produced a very acidic and acidic reactions. The biggest share of acidified soils are present in the following counties (powiaty): Siemiatycze County – 87%, Kolno County – 82%; Łomża County – 77%; Sokółka County – 76%; Bielsk Podlaski County and Zambrów County – 74% in each. Acidified soils constitute the lowest share in Sejny County – 18%<sup>10</sup>. The contamination of soil by hazardous substances is mainly in urban areas and along the main roads.

### **Voivodeship Warmian-Masurian**

Air quality. The assessment of the emission to ambient air data of 2004 allows to conclude that the quality of air in the Warmian-Masurian Voivodeship is good. Annual average concentrations of the analysed substances did not exceed the allowed values. But in the Voivodeship is increasing amounts of exhaust from transport vehicles, industrial pollutants, pollutants generated by incomplete burning of solid fuel in household furnaces and old worn-out boiler-houses, especially in urban areas with a compact concentration of buildings. The analysis of distribution of measuring stations and the results provided by them allows to state that the best environmental conditions for health, from the point of air quality, exist in areas where the heat is supplied from central boiler-houses or local modernised boiler-houses, located further from major routes communications with significant traffic<sup>11</sup>.

Water quality. The main contribution of wastewater in Warmian-Masurian Voivodeship is industry, agriculture and household. The wastewater discharge to water in Warmian-Masurian Voivodeship, was lower compare to whole territory of Poland. The reduced quality of water is caused, on the one hand, by anthropogenic factors (release of wastewater into rivers, pollution from rural areas, surface flows from agricultural fields), on the other hand, it is related to natural causes (character of the basin, sudden precipitation, hydrological features of a river)<sup>12</sup>.

Soil quality. Soil quality monitoring in Poland is implemented partly, only monitoring of soil acidify and land use changes due urbanization are monitored. Data concerning soil

<sup>9</sup> Report o Stanie Srodowiska Wjewoodztwa Podlaskiego w latach 2002-2003. Bialystok 2004

<sup>10</sup> Report o Stanie Srodowiska Wjewoodztwa Podlaskiego w latach 2002-2003. Bialystok 2004

<sup>11</sup> Report o Stanie Srodowiska Wjewoodztwa Warminsko-Mazurskiego w 2004 roku. Olsztyn 2005

<sup>12</sup> Report o Stanie Srodowiska Wjewoodztwa Warminsko-Mazurskiego w 2004 roku. Olsztyn 2005

contamination is very limited. The soil Warmian-Masurian Voivodeship soil in more than half territory is considering as acidified or much acidified. The biggest share of acidified soils are present in the following counties (powiaty): Braniewo County, Bartoszyce County; Lidzbark Warminski County; Olsztyn County; Ostroda County, Szczytno County, Nidzica County and Dzialdowo County. Acidified soils constitute the lowest share in Goldap County<sup>13</sup>. The contamination of soil by hazardous substances is mainly in urban areas and along the main roads.

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<sup>13</sup> Report o Stanie Srodowiska Wjewoodztwa Warminsko-Mazurskiego w 2004 roku. Olsztyn 2005

### **3.3 Relevant period of time**

Trends and possible positive or negative effects of development objectives, priorities and proposed fields of activities have been assessed over the programming period 2007-2013 and further on until the year, when most of the projects funded by the programme will be finally implemented, probably in 2015.

### **3.4 Environmental issues, objectives and guiding questions**

In accordance with the SEA directive the relevant environmental issues<sup>14</sup> were selected and relevant environmental protection objectives and regulations, established at international, Community or national level<sup>15</sup>, were identified. The following overview shows the selected issues and the objectives relevant for the Lithuania and Poland regions that have been considered.

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<sup>14</sup> SEA Directive, Annex 1, item (f)

<sup>15</sup> SEA Directive, Annex 1, item (e)

Table 2: Relevant environmental issues and objectives – LT and PL:

Issues <sup>16</sup>	Relevant environmental objectives	Reference point/source for the given objectives	Relevant environmental objectives	Reference point/source for the given objectives
	<b>Lithuania</b>		<b>Poland</b>	
<b>Population: human health</b>	<ul style="list-style-type: none"> <li>• Reduce risk to human health, protect and improve health of Lithuanian inhabitants, ensure high quality health care services, ensure health equity and improvement of quality of life.</li> </ul>	<ul style="list-style-type: none"> <li>• National Long-Term Development Strategy (2002)</li> <li>• National Sustainable Development Strategy (2003)</li> <li>• National Strategy of Health Care 2006-2013</li> <li>• Noise management law (2004)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of population exposure to noise, especially when it exceeds relevant standards, and in particular noise generated by transportation means which has the broadest spatial coverage</li> <li>• increasing health security of the work force in Poland</li> </ul>	<ul style="list-style-type: none"> <li>• EU-Directive on Assessment and Management of Environmental Noise (2002/49/EC)</li> <li>• 6th Environment Action Programme (COM(2001)31 final)</li> <li>• The Second Ecological State Policy for years 2007-2013</li> <li>• The National Cohesion Strategy 2007-2013; Operational Programme: Infrastructure and the Environment (2006)</li> <li>• National Development Strategy 2007-2015; SEA (2006)</li> </ul>
<b>Landscape and fauna, flora incl. biodiversity and natural habitats</b>	<ul style="list-style-type: none"> <li>• Preserve landscape and biological diversity, nature and cultural heritage values, promote restoration of damaged natural elements, ensure rational use of landscape and biological diversity.</li> </ul>	<ul style="list-style-type: none"> <li>• UN Convention on Biodiversity (BGBl. Nr. 213/1995)</li> <li>• EU Sustainable Development Strategy (COM (2005)658 final)</li> <li>• EU Action Plan to 2010 and Beyond (COM (2006) 216 final)</li> <li>• European Landscape Convention (2000)</li> <li>• National Long-Term Development Strategy (2002)</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of the state of the environment – removal or reduction of threats to the preservation of biological and landscape diversity.</li> <li>• Preservation, reconstruction and enrichment of natural resources.</li> </ul>	<ul style="list-style-type: none"> <li>• UN Convention on Biodiversity (BGBl. Nr. 213/1995)</li> <li>• EU Sustainable Development Strategy (COM (2005)658 final)</li> <li>• EU Action Plan to 2010 and Beyond (COM (2006) 216 final)</li> <li>• European Landscape Convention (2000)</li> <li>• The Second Ecological State Policy for years 2007-2013</li> </ul>

<sup>16</sup> That need to be considered under SEA Directive

Issues <sup>16</sup>	Relevant environmental objectives	Reference point/source for the given objectives	Relevant environmental objectives	Reference point/source for the given objectives
	<b>Lithuania</b>		<b>Poland</b>	
		<ul style="list-style-type: none"> <li>• National Sustainable Development Strategy (2003)</li> <li>• Agriculture and Rural Development Strategy (2000)</li> <li>• Strategy for Conservation of Biodiversity (1998)</li> <li>• Law on Environmental Protection (1992, latest edition 2005)</li> <li>• Law on Environmental Monitoring (1997, latest edition 2003)</li> <li>• Law on Plant Protection (1995, latest edition 2001)</li> <li>• Law on National Plant Genetic Resources (2001)</li> <li>• Law on Genetically Modified Organisms (2001, latest edition 2003)</li> <li>• Law on Animal Care, Keeping and Use (1997)</li> <li>• Law on Wild Flora (1999, relevant edition 2004)</li> <li>• Law on Wild Fauna (1997, latest edition 2005)</li> <li>• Law on Hunting (2002, latest edition 2005)</li> <li>• Law on Amateur Fishing (2004)</li> <li>• Law on Forests (1994, latest edition 2005)</li> <li>• Law on Environmental Impact Assessment for Planned</li> </ul>		<ul style="list-style-type: none"> <li>• Protection Strategy of water-marshy areas in Poland</li> <li>• Strategy of the Water Management</li> <li>• National Strategy of protection and balanced utilization of biodiversity reserves together with the Action Plan</li> <li>• National Policy on waste management 2010</li> <li>• Law on forests (1991)</li> <li>• Law on nature protection (2004)</li> <li>• Law on environment protection (2004)</li> <li>• Law on waste (2001)</li> <li>• Law concerning water policy (2001)</li> <li>• Law on plants' protection (2003)</li> <li>• Law on animals' protection (1997)</li> </ul>

Issues <sup>16</sup>	Relevant environmental objectives	Reference point/source for the given objectives	Relevant environmental objectives	Reference point/source for the given objectives
	<b>Lithuania</b>		<b>Poland</b>	
		Economic Activities (1996, latest edition 2005) <ul style="list-style-type: none"> <li>• Law on Protected Animals, Plants, Fungi and Populations (1997, latest edition 2001)</li> <li>• Law on Protected Territories (1993, latest edition 2001)</li> <li>• Law on Territorial Planning (1995, latest edition 2004)</li> <li>• Law on Agriculture and Rural Development (2002)</li> <li>• Law on Fisheries (2000, latest edition 2004)</li> </ul>		
<b>Soil</b>	<ul style="list-style-type: none"> <li>• Develop anti-erosion farming measures and to plant anti-erosion plants.</li> </ul>	<ul style="list-style-type: none"> <li>• National Long-Term Development Strategy (2002)</li> <li>• National Sustainable Development Strategy (2003)</li> <li>• Agricultural and Rural Development Strategy (2000)</li> <li>• Law on Land (1994, version in force – 2004)</li> <li>• Law on Environmental Monitoring (1997, version in force – 2003)</li> <li>• Law on Agricultural and Rural Development (2002)</li> <li>• Law of on Water (1997)</li> </ul>	<ul style="list-style-type: none"> <li>• Ensuring that soil resources available in Poland are used in a sustainable manner that comprises economic sustainability, especially long-term, and environmental sustainability</li> </ul>	<ul style="list-style-type: none"> <li>• The Second Ecological State Policy for years 2007-2013</li> </ul>
<b>Ground and surface water</b>	<ul style="list-style-type: none"> <li>• Establish a modern decentralized river basin water resource management system enabling to supply healthy drinking water meeting EU requirements to</li> </ul>	<ul style="list-style-type: none"> <li>• 2000/60/EC Water Framework Directive</li> <li>• National Long-Term Development Strategy (2002)</li> <li>• National Sustainable Development Strategy (2003)</li> </ul>	<ul style="list-style-type: none"> <li>• Restoration of proper environmental condition of ground and surface waters</li> <li>• The development of water and sewage infrastructure which conditions economic</li> </ul>	<ul style="list-style-type: none"> <li>• 2000/60/EC Water Framework Directive</li> <li>• The Second Ecological State Policy for years 2007-2013</li> <li>• The National Cohesion Strategy 2007-2013;</li> </ul>

Issues <sup>16</sup>	Relevant environmental objectives	Reference point/source for the given objectives	Relevant environmental objectives	Reference point/source for the given objectives
	Lithuania		Poland	
	<p>all inhabitants of the country and securing effective protection of water bodies and water ecosystems, rational use of water resources, high recreation potential as well as diversity of water ecosystems and their biological productivity.</p>	<ul style="list-style-type: none"> <li>• Law on Environmental Protection (1992, latest edition 2005)</li> <li>• Law of on Water (1997)</li> </ul>	<p>development.</p> <ul style="list-style-type: none"> <li>• Providing an appropriate amount of water resources satisfying the needs of the population and the country's economy and minimising the negative effects of natural disasters, as well as serious accidents.</li> </ul>	<p>Operational Programme: Infrastructure and the Environment (2006)</p>
<b>Air</b>	<ul style="list-style-type: none"> <li>• To ensure that amount of pollutant and greenhouse gas emissions into the air per GDP unit is reduced by approximately 50% and, according to this indicator, to reach the current average level of EU countries.</li> <li>• While modernizing country's economy and constructing new objects to ensure implementation of the best available production methods and application of up-to-date technologies that are least harmful to environment and human health.</li> </ul>	<ul style="list-style-type: none"> <li>• National Long-Term Development Strategy (2002)</li> <li>• National Sustainable Development Strategy (2003)</li> <li>• Law on Environmental Protection (1992, version in force – 2005)</li> <li>• Law on Air Protection (1999)</li> <li>• Law on Environmental Monitoring (1997, version in force – 2003)</li> <li>• Law on Pollution Fee (1999, version in force – 2005)</li> <li>• Law on Biological Fuel and Biological Oil (2000, version in force – 2004)</li> <li>• Law on the Principles of the Activities of Transport (1991, version in force – 2005)</li> <li>• Law on Motorless Transport (2000, version in force – 2003)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of particulate emission by 75 per cent on average (the actual value depending on sectoral requirements as stipulated in international legal regulations and the European Union directives); sulphur dioxides emissions by 56 per cent, nitric oxides emissions by 31 per cent, VOC emissions (excluding methane) by 4 per cent and ammonia emissions by 8 per cent, against the 1990 levels</li> </ul>	<ul style="list-style-type: none"> <li>• The Second Ecological State Policy for years 2007-2013</li> </ul>

Issues <sup>16</sup>	Relevant environmental objectives	Reference point/source for the given objectives	Relevant environmental objectives	Reference point/source for the given objectives
	<b>Lithuania</b>		<b>Poland</b>	
<b>Climate change aspects</b>	<ul style="list-style-type: none"> <li>• Achieve twice as slow increase of amounts of pollutant and greenhouse gas emissions into the air than increase in production and services.</li> </ul>	<ul style="list-style-type: none"> <li>• National Long-Term Development Strategy (2002)</li> <li>• National Sustainable Development Strategy (2003)</li> <li>• Long-Term Lithuanian Economy Development Strategy up to 2015 (2002)</li> <li>• National Energy Strategy (2002)</li> <li>• Medium-Term Industry Development Policy (2000)</li> <li>• Long-Term Lithuanian Transport System Development Strategy up to 2025 (2005)</li> <li>• Agricultural and Rural Development Strategy (2000)</li> <li>• National Strategy of the Implementation of the United Nations Framework Convention on Climate Change (1996)</li> <li>• Law on Environmental Protection (1992, version in force – 2005)</li> <li>• Law on Air Protection (1999)</li> <li>• Law on Environmental Monitoring (1997, version in force – 2003)</li> <li>• Law on Pollution Fee (1999, version in force – 2005)</li> <li>• Law on Waste Management (1998, version in force –</li> </ul>	<ul style="list-style-type: none"> <li>• Achievement, in the years 2008-2012, of the GHGs emission not exceeding 94 per cent of 1998 levels and meeting the Kyoto Protocol requirements; two-fold reduction of energy-intensity of the domestic product and introduction of best available technologies in the area of energy efficiency and the use of renewable energy sources</li> </ul>	<ul style="list-style-type: none"> <li>• The Second Ecological State Policy for years 2007-2013</li> </ul>

Issues <sup>16</sup>	Relevant environmental objectives	Reference point/source for the given objectives	Relevant environmental objectives	Reference point/source for the given objectives
	<b>Lithuania</b>		<b>Poland</b>	
		2005) <ul style="list-style-type: none"> <li>• Law on Energy (2002, version in force – 2003)</li> <li>• Law on Electricity (2000, version in force – 2004)</li> <li>• Law on Heat Economy (2003)</li> <li>• Law on Biological Fuel and Biological Oil (2000, version in force – 2004)</li> <li>• Law on the Principles of the Activities of Transport (1991, version in force – 2005)</li> <li>• Law on Motorless Transport (2000, version in force – 2003)</li> <li>• Law on Agricultural and Rural Development (2002)</li> <li>• Law on Forests (1994, version in force – 2005)</li> </ul>		
<b>Cultural heritage</b>	<ul style="list-style-type: none"> <li>• Preservation and conservation Lithuanian historical cultural heritage.</li> </ul>	<ul style="list-style-type: none"> <li>• European Landscape Convention (2000)</li> <li>• Law on Protection of Immovable Cultural Heritage (1994)</li> </ul>	<ul style="list-style-type: none"> <li>• Taking advantage of the cultural potential and cultural heritage of worldwide and European significance in order to increase Poland's attractiveness.</li> </ul>	<ul style="list-style-type: none"> <li>• The National Cohesion Strategy 2007-2013; Operational Programme: Infrastructure and the Environment (2006)</li> </ul>
<b>Efficiency use of natural resource and conservation</b>	<ul style="list-style-type: none"> <li>• Decoupling material consumption from economic growth, reduce total material consumption</li> </ul>	<ul style="list-style-type: none"> <li>• National Long-Term Development Strategy (2002)</li> <li>• National Sustainable Development Strategy (2003)</li> <li>• Law on Environmental Protection (1992, version in force – 2005)</li> <li>• Law on Air Protection (1999)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction in material-intensity and waste-generation of production by 50 per cent against the 1990 levels; their gradual abatement in individual production sectors to the extent ensuring that at least</li> </ul>	<ul style="list-style-type: none"> <li>• The Second Ecological State Policy for years 2007-2013</li> <li>• The National Cohesion Strategy 2007-2013; Operational Programme: Infrastructure and the Environment (2006)</li> </ul>

Issues <sup>16</sup>	Relevant environmental objectives	Reference point/source for the given objectives	Relevant environmental objectives	Reference point/source for the given objectives
	<b>Lithuania</b>		<b>Poland</b>	
		<ul style="list-style-type: none"> <li>• Law on Waste Management (1998, version in force – 2005)</li> </ul>	<p>average OECD levels are achieved (calculated per production unit, production value, or GDP)</p> <ul style="list-style-type: none"> <li>• Increasing economic benefits by reducing the amount of municipal waste disposal and rehabilitating degraded areas and the protection of sea coasts.</li> </ul>	

In order to address the cross-border character of the programme and to analyse the regions from a transboundary perspective, relevant cross-border environmental objectives have been formulated based on the objectives listed in the table above. Guiding questions/indicators were selected to guide the analyses within the SEA process.

*Table 3: Environmental issues and objectives incl. suitable guiding questions/indicators:*

<b>Environmental Issues</b>	<b>Relevant cross-border environmental objectives<sup>17</sup></b>	<b>Guiding questions/indicators</b>
Population: human health	<ul style="list-style-type: none"> <li>Do not exceed level (set up by the national legislation) of noise in particular noise generated by transport</li> <li>Reduce risk ascendant from environmental quality to human health</li> </ul>	<ul style="list-style-type: none"> <li>Exposure of population to excessive noise levels</li> <li>Minimise environmental quality impact to human health</li> </ul>
Landscape and fauna, flora incl. biodiversity and natural habitats	<ul style="list-style-type: none"> <li>Preserve landscape and biological diversity</li> <li>Maintenance and restoration of favourable conservation status of nature habitat types</li> </ul>	<ul style="list-style-type: none"> <li>Condition improved to preserve biological diversity, promotion restoration of damaged natural elements</li> <li>Development of favourable condition of Natura 2000 network (incl. status of bio-corridors)</li> </ul>
Soil	<ul style="list-style-type: none"> <li>Ensure sustainable use of soil resources</li> </ul>	<ul style="list-style-type: none"> <li>Quality of soil and soil pollution</li> <li>Development of anti-erosion measures</li> </ul>
Ground and surface water	<ul style="list-style-type: none"> <li>Implementation of EU Water Framework Directive requirements to reach proper water quality by 2015</li> </ul>	<ul style="list-style-type: none"> <li>Surface water and groundwater status by 2015 related to the Water Framework Directive</li> </ul>
Air	<ul style="list-style-type: none"> <li>Reach level of emissions to ambient air by GDP to achieve current average level of EU-15 countries</li> </ul>	<ul style="list-style-type: none"> <li>Status of air related to the Air Quality Directive</li> </ul>
Climate change issues	<ul style="list-style-type: none"> <li>Reach Kyoto Protocol targets</li> <li>Increase share of renewable energy source</li> </ul>	<ul style="list-style-type: none"> <li>Emission CO<sup>2</sup> equivalent</li> </ul>
Cultural heritage	<ul style="list-style-type: none"> <li>Preservation and conservation national historical cultural heritage</li> </ul>	<ul style="list-style-type: none"> <li>Status of areas protected under national preservation regime</li> <li>Impact of development (humanly initiated actions including tourism)</li> </ul>
Efficiency use of natural resource and conservation	<ul style="list-style-type: none"> <li>Reduction materials consumption and waste generation</li> </ul>	<ul style="list-style-type: none"> <li>Generated municipal waste amount (tonnes per year, tonnes per capita)</li> <li>Status of extraction of use of waste as secondary resources</li> <li>Domestic material consumption (DMC) per Gross Regional Product (GRP)</li> </ul>

<sup>17</sup> Based on objectives listed in table 2

## 4 Current situation, trends and the likely evolution without the programme

<b>Issue:</b> Population: human health <b>Guiding question(s)/indicator(s):</b> <ul style="list-style-type: none"> <li>• Exposure of population to excessive noise levels</li> <li>• Minimise environmental quality impact to human health</li> <li>• Do not debase quality of living appartments</li> <li>• Minimase risk for human health</li> </ul>	
<b>Current state of the environment and trends</b>	<b>Likely evolution if the programme is not implemented</b>
<b>Lithuania</b>	
<p>The noise level is increasing in living areas due increase transport and mechanization industry and agriculture sectors. In majority cities and towns the noise is considering as one of the main ecological problems which has negative impact to the quality of life. Urban noise is reached the level harmful for human health. Cities residents – children and adults – majority of their times providing in residency areas. In majority recreation and resting places the conditions for spare noise regime is not developed. Noise in rest-zones does not let citizens to rest as it impacts to their possibilities to provide more time in fresh air.<sup>18</sup> Attention to quality of living environmental is not sufficient.</p>	<p>The EU Directive on Environmental Noise (Directive 2002/49/EG) aims to avoid, prevent or limit the harmful effects, including annoyance, due to exposure to environmental noise. It requires competent authorities in Member States to draw up "strategic noise maps" for major roads, railways, airports and agglomerations by June 2007 as well as action plans to reduce noise where necessary and maintain environmental noise quality where it is good. Lithuania enforced National Noise management law (2004 10 26 No. IX-2499) where protection from noise is enforced. The noise prevention/reduction measures cannot be introduced if the programme will not be implemented.</p>
<b>Poland</b>	
<p>The state of the environment in areas of intensive industry and urban development is one of the most important factor that influences a general quality of the environment in Poland, and has to a great extent, an impact on the living conditions of the population and the conditions for economic activity. This state, often called "an urban stress", is a consequence of particularly high concentration of emission sources and other disturbances in those areas. Moreover, these areas are densely populated and account for a significant proportion of total country population. Each improvement in environment quality in these areas leads therefore to significant benefits to the environment, economy and population in a countrywide scale. The importance of highly industrialised and urbanised areas for the national environmental policy is also related to the fact that environmental damages or degradations and environmental discomfort are particularly numerous and extensive in these areas and result from the emission of pollutants and disturbance or other forms of human pressure<sup>19</sup>.</p>	<p>The EU Directive on Environmental Noise (Directive 2002/49/EG) aims to avoid, prevent or limit the harmful effects, including annoyance, due to exposure to environmental noise. It requires competent authorities in Member States to draw up "strategic noise maps" for major roads, railways, airports and agglomerations (by June 2007) as well as action plans to reduce noise where necessary and maintain environmental noise quality where it is good. The Directive was transposed to Polish national legislation. Nevertheless noise intensity increased in day- and nighttime and also the number of people exposed to a noise has increased.</p> <p>The programme does not include direct environmental quality measures, the environmental quality impact to human health is considering as neutral if the programme will not be implemented.</p>

**Issue:**

Landscape and fauna, flora incl. biodiversity and natural habitats

**Guiding question(s)/indicator(s):**

- Condition improved to preserve biological diversity, promotion restoration of damaged natural

<sup>18</sup> Valstybinė triukšmo strateginio kartografavimo programa

<sup>19</sup> Polish the Second Environmental Policy

elements	
<ul style="list-style-type: none"> <li>• Development of favourable condition of Natura 2000 network (incl. status of bio-corridors)</li> </ul>	
Current state of the environment and trends	Likely evolution if the programme is not implemented
Lithuania	
<p>Intensive economic development will more and more endanger elements of the natural landscape, protected and recreational territories. Rapid land privatization processes will increase the number of owners of land in the territories that are most valuable from nature and recreation point of view. Thus, public accessibility to such land will become limited and soon construction activities in these territories may take pace. Ongoing changes in the purpose of land use will bring more new conflicts in the management of landscape. Intensifying economic activities at the Baltic coastline will increase the negative impact on unique landscape of the coastline. A gap between landscape and biodiversity conservation measures and actions outlined in the laws and legal acts will appear if sufficient funds are not allocated.</p> <p>As traditional economic activities wane, if effective nature management measures are not implemented protected biodiversity objects might become endangered<sup>20</sup>.</p>	<p>The objectives of the UN Convention of Biological Diversity (UNCBD) are comprehensively transposed to the national legislation. The provisions of the Strategy for the Conservation of Landscape and Biological Diversity were included into the National Long-Term Development Strategy (2002), National Strategy for Sustainable Development (2003), and Agriculture and Rural Development Strategy (2000).</p> <p>The programme does not include direct landscape and biological diversity conservation measures.</p> <p>The CBC programme includes activities related to the preservation and joint management of natural resources and protected areas, in case the programme will not be implemented it could negatively impact to quality of management the projected areas in particular these which has a cross boarder nature values and habitats.</p>
Poland	
<p>Environmental safety of the country requires, <i>inter alia</i>, maintenance of domestic biological and landscape diversity at a proper level as well as enlargement of protected areas as to cover one third of the country area. Some of the objectives of the new environmental policy include intensification of reclamation and re-naturalisation of degraded land, prevention of environmental quality deterioration, termination of cultural monuments degradation, and improvement of effectiveness of conservation exercised on areas already legally protected. Protection of biological and landscape diversity is one of the more important issues related to the national environmental safety.</p>	<p>Poland stipulates that the State should care about nature conservation and the considerate use of natural resources. The Nature Protection Act provides the main legislative framework for appropriate nature and landscape management.</p> <p>The EU accession process has been the driving force to revise the legislative framework. The latest amendment to the <u>Act on Protection of Nature and Landscape</u> transposes the EU Birds and Habitats Directives. The country has a variety of programmes for nature conservation and landscape protection, supported in part by EU funds. The new legislation requires assessing project and conception impact to Nature 2000 sites. It's a very strong tool for Nature 2000 conservation.</p> <p>The pressures for new infrastructure are very strong. The CBC programme includes activities related to the preservation and joint management of natural resources and protected areas, in case the programme will not be implemented it could negatively impact to quality of management the projected areas in particular these which has a cross boarder nature values and habitats</p>

<b>Issue:</b>	
Soil	
<b>Guiding question(s)/indicator(s):</b>	
<ul style="list-style-type: none"> <li>• Quality of soil and soil pollution</li> <li>• Development of anti-erosion measures</li> </ul>	
Current state of the environment and trends	Likely evolution if the programme is not implemented
Lithuania	
<p>A Strategy for Agriculture Development foresees a rapid growth of productivity in growing grain and other agricultural crops. This may have a significant</p>	<p>The objectives of the UN Convention to Combat Desertification (UNCCD) are based on the national legislation. Lithuania is not yet treated as "an affected</p>

<sup>20</sup> Lithuanian Sustainable development strategy

influence on the increased use of pesticides and mineral fertilizers that will, in turn, endanger soil contamination with pesticide residues and increase leakage of nitrogen compounds into groundwater and surface water bodies. Liming of previously artificially de-acidified soil has to start in time otherwise soil acidity intensifies and fertility decreases <sup>21</sup> .	country” from the UNCCD scope. The main measures for soil protection were included into the National Long-Term Development Strategy (2002), National Strategy for Sustainable Development (2003), and Agriculture and Rural Development Strategy (2000). The programme does not include direct soil improvement measures.
<b>Poland</b>	
According to the State Inspectorate for Environmental Protection, the share of degraded soil in Poland, including industrial areas, amounts to 2.7% of the total territory of Poland. Degradation comprises 0.5% at a high and a very high degree, whereas medium and low degradation encompasses 2.2% of the total <sup>22</sup> .	Main problems in soil problematic are soil erosion, fast high – quality soil decrease on behalf of urban areas and toxicants in soil. Protection of soil is one of the objectives of the Polish Environmental Policy, under Environmental Protection law there is a decree on Soil and Land quality standards. Therefore National Waste Management Plan 2010” has been approved in 2006. The programme does not include direct soil improvement measures

<b>Issue:</b> Ground and surface water	
<b>Guiding question(s)/indicator(s):</b> • Surface water and groundwater status by 2015 related to the Water Framework Directive	
<b>Current state of the environment and trends</b>	<b>Likely evolution if the programme is not implemented</b>
<b>Lithuania</b>	
With the reviving economy in Lithuania, pollution of surface water bodies will increase and groundwater pollution will begin due to leaky sewerage networks. In order to avoid this situation, the EU assistance has to be used effectively, private capital has to be involved, wastewater treatment plants and sewerage networks renovated in time, and control requirements for industrial discharges changed to stricter ones. Without a timely renovated water supply sector, sufficient water quality will not be ensured and threats to human health will start increasing. It is important to ensure that proper attention is paid to the supply of good water quality to people in the countryside and the expansion of drinking water supply networks as well as the establishment of a network of deep wells. Otherwise a major threat to human health in the countryside will persist <sup>23</sup> .	The water quality of Lithuanian surface has improving character. In compliance with EU environmental Directives Lithuania is selected 4 river basins (Nemunas, Venta, Daugava, Lielupe).  The programme within priority 1 has activity related to development of environmental infrastructure. In case of programme is not implemented it could have a negative impact to achieve EU Water framework Directive requirements by 2015.
<b>Poland</b>	
Key issue for the improvement of the quality of life and achievement of sustainable development is a provision of adequate supply of water of sufficient quality in the entire country territory, without causing distortion to natural environmental balance. This requires a change in the attitude towards water resources management. Municipal management (drinking water), industry (technological water), energy sector (cooling), agriculture (irrigation), and tourism (bathing water) are highly dependent on the access to water of suitable quality and in satisfactory quantities. At the same they are the main water polluters.	The water quality of Polish ground and surface water resources has improving character. Compliance with EU Water Framework Directives is requiring a considerable financial input from Polish Government. Water Law from 2001 impose an obligation on Polish government to prepare and approve The National Program of Municipal Wastewater Treatment (2003) This Program directly transposes objectives of the EU water directives.  The programme within priority 1 has activity related to development of environmental infrastructure. In case of programme is not implemented it could have a negative impact to achieve EU Water framework Directive

<sup>21</sup> Lithuanian Sustainable development strategy

<sup>22</sup> Anna Janczewska. Remediation of Contaminated Sites // <http://www.ecolinks.org/ewebeditpro/items/O50F2351.doc>

<sup>23</sup> Lithuanian Sustainable development strategy

	requirements by 2015.
<b>Issue:</b> Air <b>Guiding question(s)/indicator(s):</b> • Status of air related to the Air Quality Directive	
<b>Current state of the environment and trends</b>	<b>Likely evolution if the programme is not implemented</b>
<b>Lithuania</b>	
<p>In case of failure to modernize the central heat supply systems, to increase energy consumption efficiency and to decrease energy supply losses in the short run, heat provision decentralization might arrive too rapidly and increase emissions into the atmosphere. In order to avoid a situation where a rapidly developing car fleet may affect air quality in the largest Lithuanian cities, it is necessary to take actions to renew the car fleet and improve control of exhaust gases from vehicles by introducing the responsibility principle (polluter pays), while improving the traffic regulation as well as the state of public transport in time. Having Russia as an exclusive supplier of natural gas, thermal power plants and boiler houses that use gas, Lithuania will always face a substantive threat to meet sulphur dioxide emission requirements in case the gas supply is limited or prices are increased. Emission of pollutants into the air will significantly increase if appropriate actions are not taken to prepare for decommissioning of Ignalina NPP and to implement proper environmental protection measures at thermal power plants<sup>24</sup>.</p>	<p>All emissions discussed under this topic are based in following sectors: energy supply sector, small combustion, industry, transport, agriculture and household.</p> <p>The main task of the CBC programme should be to ensure that the development of these sectors will be in line of the National Sustainable development strategy goals.</p>
<b>Poland</b>	
<p>Protection of air against pollution is the most sensitive among activities in environmental protection, as it focuses the attention of industry and local communities who breathe direct impact of air pollution on health of staff and inhabitants. It also focuses the attention of governments and international community for such reasons as: transport of pollutants on long distances, impact on climate change, initiating adverse processes in the stratosphere (mostly in the ozone layer). Pollutants disperse in the air very quickly and immediately affect people, living organisms, plants, waters, soils, buildings, and monuments</p>	<p>As a Member State of the European Union, Poland adopted the basis regulations and directives of European Commission in the field of ambient air protection, particularly defining the levels of some substances:</p> <p>Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management, the Air Quality Framework Directive with its related daughter directives:</p> <ul style="list-style-type: none"> <li>- 1st Daughter Directive relating to limit values for NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>2.5</sub>, PM<sub>10</sub> and Pb in ambient air</li> <li>- Council Directive 1999/30/EC of April 22, 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air.</li> <li>2nd Daughter Directive relating to benzene and carbon monoxide in ambient air - Directive 2000/69/EC of the European Parliament and of the Council of 16 November 2000 relating to limit values for benzene and carbon monoxide in ambient air.</li> <li>- 3rd Daughter Directive relating to ozone in ambient air - Directive 2000/3/EC of the European Parliament of the Council of 12 February 2002 relating to ozone in ambient air.</li> <li>- 4th Daughter Directive relating to As, Cd, HG, Ni and PAHs in ambient air - Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic hydrocarbons in ambient air.</li> </ul>

<sup>24</sup> Lithuanian Sustainable development strategy

<b>Issue:</b> Climate change aspects <b>Guiding question(s)/indicator(s):</b> <ul style="list-style-type: none"> <li>Emission CO<sup>2</sup> equivalent</li> </ul>	
Current state of the environment and trends	Likely evolution if the programme is not implemented
<b>Lithuania</b>	
Considering annual climate fluctuations in Lithuania is the tendency for climate warming <sup>25</sup> .	The objectives of the UN Framework Convention on Climate Changes (UNFCCC) are comprehensively transposed to the national legislation; the National Implementation of UNFCCC Strategy was approved in 1996. The strategic objectives of the UNFCCC are included in the National Long-Term Development Strategy (2002), the National Strategy for Sustainable Development (2003), as well as in strategic documents of economic, energy, transport, and rural development sectors. There is a risk if the programme will not implement measures concerning energy efficiency and renewable energy development, the CO <sub>2</sub> emission grow could not reach a targets of the National Sustainable development strategy.
<b>Poland</b>	
Analysis of predicted emission changes by particular sector indicates its slow growth in 2000. However, the prediction results of carbon dioxide emissions for the whole economy, as obtained from macro-economic reference scenarios are: from 408 thousand Gg for passive scenario (assuming decreasing rate of economy restructuring and privatisation) up-to 413 thousand Gg for the baseline scenario (assuming intensification of economy restructuring and privatisation) in 2010, and from 421 thousand Gg up-to 464 thousand Gg in 2020, respectively. This means, that in case of each scenario, the level determined by the commitments in the Kyoto Protocol will not be exceeded <sup>26</sup> .	Environmental Law entered into force in 2001, that introduces general principles concerning all of the environmental legal acts, as well as it indicates the principles according to which specific regulations shall be laid down concerning the protection of particular environmental components, including air. <sup>27</sup> There is a risk if the programme will not implement measures concerning energy efficiency and renewable and renewable energy development, the CO <sup>2</sup> emission grows could not reach a targets of the Kyoto Protocol.

<b>Issue:</b> Cultural heritage <b>Guiding question(s)/indicator(s):</b> <ul style="list-style-type: none"> <li>Status of areas protected under national preservation regime</li> <li>Impact of development (humanly initiated actions including tourism)</li> </ul>	
Current state of the environment and trends	Likely evolution if the programme is not implemented
<b>Lithuania</b>	
Management of cultural heritage revealing its cognitive value and adapting it for public use and development of cultural activities (dissemination of culture and created cultural properties) creates favourable conditions for tourism, recreational activities, improves social and business environment, raises the quality of life in Lithuania <sup>28</sup> .	Related to the regional, national and international legislation and agreements the state of cultural heritage and archaeological and architectural heritage are guaranteed by the national legislation. There is a risk if the programme will not implement the cultural heritage sites located in Lithuanian – Poland CBC region will not be renovated and not adopted to tourism use purpose.
<b>Poland</b>	

<sup>25</sup> Lithuanian State of environment Report 2005

<sup>26</sup> Polish Third National Communication to the Conference of the Parties To The United Nations

<sup>27</sup> Ibin

Framework Convention on Climate Change

<sup>28</sup> Lithuanian long-term development strategy

<p>The cultural heritage objects located in the country sides are in better situation due to small atmosphere pollution but it often depends on their owners. High class monuments are in keeping of national or provincial conservators' offices. Many objects have private owners which take care of the maintenance, restoration, renovation and proper conditions of the use their under specialised surveillance of the conservators. But there is a group of smaller class objects, used by different institutions e.g. schools, factories devoid of conservators' care due to lack of finance<sup>29</sup>.</p>	<p>Monument Protection in Poland following the Act of 23 July 2003 on the Protection of Monuments (Journal of Laws No. 162 item 1568, as amended).</p> <p>There is a risk if the programme will not implement the cultural heritage sites located in Lithuanian – Poland CBC region will not be renovated and not adopted to tourism use purpose.</p>
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<p><b>Issue:</b> Efficiency use of natural resource and conservation</p> <p><b>Guiding question(s)/indicator(s):</b></p> <ul style="list-style-type: none"> <li>• Generated municipal waste amount (tonnes per year, tonnes per capita)</li> <li>• Status of extraction of use of waste as secondary resources</li> <li>• Domestic material consumption (DMC) per Gross Regional Product (GRP)</li> </ul>	
Current state of the environment and trends	Likely evolution if the programme is not implemented
<b>Lithuania</b>	
<p>The intensive urban development may escalate conflict of interests among rational use and restoration of natural resources, protection of environment and urban development. If the use of natural resources is not regulated clearly enough, it may be a reason for too high anthropogenic load on valuable natural territories. Economic interests of energy importing and re-producing companies may block the development of indigenous renewable energy resource usage. Global climate change, regional and local environmental pollution may cause negative long-term quantitative and qualitative changes of some natural resources (biological, recreational resources)<sup>30</sup>.</p>	<p>The objectives of waste management in Lithuania are amended according to EU Waste Framework Directive, the investment to infrastructure improvement in some regions is still not reached objectives of the EU WFD. Prevention/recycling and Waste Treatment are in the line of Lithuanian waste management strategy (2002), municipalities have a targets for collection of recycle and biodegradable waste. Per unit GDP material intensity is higher than EU – 15 countries.</p> <p>If the programme will not be implemented there is the risk for decreasing investments for new energy/resource efficient technologies.</p>
<b>Poland</b>	
<p>Reduction of material-intensity and waste-generation in production processes is one of the major objectives of the environmental policy as it is one of the ways to implement the principle of pollution prevention at source, which additionally allows to achieve economic benefits such as lower production outlays and as a consequence leads to the reduction of citizen's share in costs of the use of environmental resources and environmental protection.</p>	<p>Domestic Material Consumption (DMC) per GDP in 2000 (in unit: kg/euro) in Poland is higher than average in EU25, but lower than average for newcomer states (and amounts 3,45, whereas eg. in Lithuania 5,49)<sup>31</sup></p> <p>If the programme will not be implemented there is the risk for decreasing investments for new energy/resource efficient technologies.</p>

<sup>29</sup> Joanna Kobus Assessment of the Environmental Risk of Cultural Heritage Objects in Poland// [http://www.arcchip.cz/w06/w06\\_kobus.pdf](http://www.arcchip.cz/w06/w06_kobus.pdf)

<sup>30</sup> Lithuanian Sustainable development strategy

<sup>31</sup> [http://reports.eea.europa.eu/eea\\_report\\_2005\\_9/en/EEA\\_report\\_9\\_2005.pdf](http://reports.eea.europa.eu/eea_report_2005_9/en/EEA_report_9_2005.pdf)

## 5 Method of the assessment

### 5.1 Method of assessment

The assessment has been done by a qualitative description of likely significant positive or negative effects possibly induced by priorities and fields of activities of the programming document. Furthermore the synergies and conflicts between the relevant environmental objectives and the specific development objectives and priorities/fields of activities proposed in the programming document were analysed. As already mentioned the zero-option of not implementing the programme represents the “baseline” for the overall assessment process within the SEA process.

In a **first step** the relevant environmental issues were selected for each priority/field of activity (relevance-matrix, see Chapter 5.1.) as part of the scoping process. In a **second step** the assessment of likely positive and/or negative effects of specific proposals in the programming document on environmental issues was accomplished.

### 5.2 Generation and assessment of reasonable alternatives

The assessment on the level of fields of activities resulted in suggestions for alternative formulations of fields of activities, proposals for new activities and general project selection criteria. These measures to prevent, reduce and offset adverse effects are regarded as required reasonable alternatives according SEA directive.

## 6 Assessment of likely significant environmental effects

The SEA assessed the positive and/or negative effects of the programme’s fields of activity on the relevant environmental issues and objectives and considered alternative options – reformulations and suggestions for new activities - for the proposed fields of activities. The assessment is done by a qualitative comment. Additionally project selection criteria that are suitable from the environmental point of view are proposed.

### 6.1 Relevance matrix

To obtain a quick overview on the assessment results see the relevance-matrix below, where the relationship between environmental issues and fields of activity are shown: If there is any kind of effect of programme activities on the issue and guiding question/indicator the field is marked with an “X”, if there isn’t any, it is marked with “--“.

*Table 6: Programme Fields of Activity*

<b>Priority 1: Competitiveness and productivity growth of the cross-border region</b>	
Field of Activity 1.1	Modernisation of economic infrastructure
Field of Activity 1.2	Promotion of business environment

Field of Activity 1.3	Development of sustainable cross-border tourism and preservation of cultural/historical heritage
<b>Priority 2: Cross-border cohesion and enhanced overall quality of the the cross-border area</b>	
Field of Activity 2.1	Development of new and strengthening of existing co-operation social and cultural networks
Field of Activity 2.2	Improvement of living environment
<b>Priority 3: Technical Assistance</b>	

<b>Relevance matrix</b>	<b>Relevant cross-border environmental objectives</b>	<b>Priority 1:</b>			<b>Priority 2:</b>	
<b>Environmental Issue</b>		<b>Fields of Activity</b>			<b>Fields of Activity</b>	
		<b>1.1</b>	<b>1.2</b>	<b>1.3</b>	<b>2.1</b>	<b>2.2</b>
<b>Population: human health</b>		<b>X</b>	<b>--</b>	<b>X</b>	<b>--</b>	<b>X</b>
<b>Landscape and fauna, flora incl. biodiversity and natural habitats</b>		<b>X</b>	<b>--</b>	<b>X</b>	<b>--</b>	<b>X</b>
<b>Soil</b>		<b>X</b>	<b>--</b>	<b>X</b>	<b>--</b>	<b>X</b>
<b>Ground and surface water</b>		<b>X</b>	<b>--</b>	<b>X</b>	<b>--</b>	<b>X</b>
<b>Air</b>		<b>X</b>	<b>--</b>	<b>X</b>	<b>--</b>	<b>X</b>
<b>Climate change issues</b>		<b>X</b>	<b>--</b>	<b>X</b>	<b>--</b>	<b>X</b>
<b>Cultural heritage</b>		<b>X</b>	<b>--</b>	<b>X</b>	<b>--</b>	<b>X</b>
<b>Efficiency use of natural resource and conservation</b>		<b>X</b>	<b>--</b>	<b>X</b>	<b>--</b>	<b>X</b>

## 6.2 Assessment tables

The assessment in this chapter is based on the national Environmental Reports. In the assessment of the likely significant impacts of the field of activity on the respective environmental issues were analyzed along the selected guiding questions and indicators.

<b>Priority 1: Competitiveness and productivity growth of the cross-border region</b>			
<b>Field of Activity 1.1: Modernisation of economic infrastructure</b>			
<b>Relevant environmental issue</b>	<b>Relevant cross-border environmental objectives</b>	<b>Relevant indicators or guiding questions</b>	<b>Assessment of the likely significant impacts</b>
Population: human health	<ul style="list-style-type: none"> <li>Do not exceed level (set up by the national legislation) of noise in particular noise generated by transport</li> <li>Reduce risk ascendant from environmental quality to human health</li> </ul>	<ul style="list-style-type: none"> <li>Exposure of population to excessive noise levels</li> <li>Minimise environmental quality impact to human health</li> </ul>	The anticipated activity could have a positive impact if in the roads infrastructure will improve on existing networks or the transport flow will be redirected from the living/residential areas. Obligation for the project to have a noise reduction measures should be included into the project selection criteria.
Landscape and fauna, flora incl. biodiversity and natural habitats	<ul style="list-style-type: none"> <li>Preserve landscape and biological diversity</li> <li>Maintenance and restoration of favourable conservation status of nature habitat types</li> </ul>	<ul style="list-style-type: none"> <li>Condition improved to preserve biological diversity, promotion restoration of damaged natural elements</li> <li>Development of favourable condition of Natura 2000 network (incl. status of bio-corridors)</li> </ul>	Within this activity is foreseen to develop a local roads networks, energy, logistic infrastructures which can have a negative impact to the landscape and biodiversity. At the projects evaluation stage is important take into consideration if the proposed infrastructure project were developed within EU landscape and biodiversity management legislation, landscape and biodiversity expert should be integrated into the project evaluation expert's team to reduce the risk to landscape and biodiversity damage. Within the new construction it is recommended to chose a brown areas or areas which already has developed infrastructure.
Soil	<ul style="list-style-type: none"> <li>Ensure sustainable use of soil resources</li> </ul>	<ul style="list-style-type: none"> <li>Quality of soil and soil pollution</li> <li>Development of anti-erosion measures</li> </ul>	Infrastructure project which will have land use change aspects (construction new roads, buildings) will have a direct negative impact on soil quality. The neutral impact could be achieved by using existing infrastructure (local roads, buildings) and promote investments for existing infrastructure improvements (asphalting, energy efficiency measures).
Ground and surface water	<ul style="list-style-type: none"> <li>Implementation of EU Water Framework Directive requirements to reach proper water quality by</li> </ul>	<ul style="list-style-type: none"> <li>Surface water and groundwater status related to the Water Framework Directive 2015</li> </ul>	Water management infrastructure will be implemented within this activity. A positive impact will be achieved by supporting the implementation of best available technologies in water management.

<b>Priority 1: Competitiveness and productivity growth of the cross-border region</b>			
<b>Field of Activity 1.1: Modernisation of economic infrastructure</b>			
<b>Relevant environmental issue</b>	<b>Relevant cross-border environmental objectives</b>	<b>Relevant indicators or guiding questions</b>	<b>Assessment of the likely significant impacts</b>
	2015		
Air	<ul style="list-style-type: none"> <li>Reach level of emissions to ambient air by GDP to reach current average level of EU-15 countries</li> </ul>	<ul style="list-style-type: none"> <li>Status of air related to the Air Quality Directive</li> </ul>	The shift to a more service-oriented economy and the adoption of “new technologies” will reduce possible negative impacts of economic activity on air quality. A positive impact will be achieved by supporting the implementation of environmental measure in development of the new infrastructural projects.
Climate change issues	<ul style="list-style-type: none"> <li>Reach Kyoto Protocol targets</li> <li>Increase share of renewable energy source</li> </ul>	<ul style="list-style-type: none"> <li>Emission CO<sup>2</sup> equivalent</li> </ul>	The activity will have a positive impact to climate change in case if the new available technologies will be implemented in the new projects. The negative impact will be in the land use change and increasing use of fossil fuel energy sources. It is recommended that in the energy infrastructure project domestic and renewable energy sources will be promoted
Cultural heritage	<ul style="list-style-type: none"> <li>Preservation and conservation national historical cultural heritage</li> </ul>	<ul style="list-style-type: none"> <li>Status of areas protected under national preservation regime</li> <li>Impact of development (humanly initiated actions including tourism)</li> </ul>	The activity is sensitive for material cultural heritage it is very important at the development and new project selection stages seriously take into consideration the EU and nationals' legislation to avoid negative impact to cultural monuments. It is recommended to include cultural heritage specialist in the projects evaluation team to avoid the negative impact from the project's activities.
Efficiency use of natural resource and conservation	<ul style="list-style-type: none"> <li>Reduction materials consumption and waste generation</li> </ul>	<ul style="list-style-type: none"> <li>Generated municipal waste amount (tonnes per year, tonnes per capita)</li> <li>Status of extraction of use of waste as secondary resources</li> <li>Domestic material consumption (DMC) per Gross Regional Product (GRP)</li> </ul>	The activity will have a positive impact if the new available technologies will be used/integrated in all projects. It is recommended that in the project usage of domestic and renewable energy will be promoted.
<b>Proposed amendments to the field of activity:</b>			
<ul style="list-style-type: none"> <li>Give a priority to the project which will improve existing infrastructure.</li> <li>In the join spatial and regional plans development take into consideration ecosystems approach.</li> </ul>			

<b>Priority 1: Competitiveness and productivity growth of the cross-border region</b>			
<b>Field of Activity 1.1: Modernisation of economic infrastructure</b>			
<b>Relevant environmental issue</b>	<b>Relevant cross-border environmental objectives</b>	<b>Relevant indicators or guiding questions</b>	<b>Assessment of the likely significant impacts</b>
<ul style="list-style-type: none"> <li>• Within the promotion of transit activities take into consideration sustainable development principle to avoid major negative impacts to the environmental quality and cultural heritage sites.</li> </ul>			
<b>New activities:</b>			
<ul style="list-style-type: none"> <li>• Non</li> </ul>			

<b>Priority 1: Competitiveness and productivity growth of the cross-border region</b>			
<b>Field of Activity 1.3: Development of sustainable cross-border tourism and preservation of cultural/historical heritage</b>			
<b>Relevant environmental issue</b>	<b>Relevant cross-border environmental objectives</b>	<b>Relevant indicators or guiding questions</b>	<b>Assessment of the likely significant impacts</b>
Population: human health	<ul style="list-style-type: none"> <li>• Do not exceed level (set up by the national legislation) of noise in particular noise generated by transport</li> <li>• Reduce risk ascendant from environmental quality to human health</li> </ul>	<ul style="list-style-type: none"> <li>• Exposure of population to excessive noise levels</li> <li>• Minimise environmental quality impact to human health</li> </ul>	Noise in country site tourism farms is a new and growing problem. Since there is not legal binding regulations on noise management in tourist sites it is very important within the development the new tourism products and infrastructural project to take into consideration noise management issues to reduce negative impact to human health. The tourism projects with integration the public transport in particular rail should be promoted additionally.
Landscape and fauna, flora incl. biodiversity and natural habitats	<ul style="list-style-type: none"> <li>• Preserve landscape and biological diversity</li> <li>• Maintenance and restoration of favourable conservation status of nature habitat types</li> </ul>	<ul style="list-style-type: none"> <li>• Condition improved to preserve biological diversity, promotion restoration of damaged natural elements</li> <li>• Development of favourable condition of Natura 2000 network (incl. status of bio-corridors)</li> </ul>	If not pursued adequately, tourism development is likely to negatively affect protected areas and valuable natural habitats. The CBC programme support should therefore be used to strengthen the protection of existing nature protection areas. In this context the suggested building-up of thematic trails is likely to result in positive impacts as this allows controlled access and “discovery” of protected areas.
Soil	<ul style="list-style-type: none"> <li>• Ensure sustainable use of</li> </ul>	<ul style="list-style-type: none"> <li>• Quality of soil and soil</li> </ul>	The main impact to soil is land use change in development of the tourism

<b>Priority 1: Competitiveness and productivity growth of the cross-border region</b>			
<b>Field of Activity 1.3: Development of sustainable cross-border tourism and preservation of cultural/historical heritage</b>			
<b>Relevant environmental issue</b>	<b>Relevant cross-border environmental objectives</b>	<b>Relevant indicators or guiding questions</b>	<b>Assessment of the likely significant impacts</b>
	soil resources	pollution • Development of anti-erosion measures	infrastructure projects. It is recommended to request from the project compensated measure not to reduce GHG absorption capacities. As an integrated measure tourism in eco-farms should be promoted additionally.
Ground and surface water	• Implementation of EU Water Framework Directive requirements to reach proper water quality by 2015	• Surface water and groundwater status related to the Water Framework Directive 2015	Usage of water will increase due increasing the tourism infrastructure. It is important to promote sustainable usage of water resources in tourism sites. Projects which will have an environmental management measures such us ISO 14.000, EMAS, Eco-labels, green purchases should additionally promoted.
Air	• Reach level of emissions to ambient air by GDP to reach current average level of EU-15 countries	• Status of air related to the Air Quality Directive	Negative impact to air quality and climate change is anticipated due increase of transport intensity and increase of energy use in the region. To minimize the impact the projects with integration of the public transport and use of renewable energy should be additionally promoted.
Climate change issues	• Reach Kyoto Protocol targets • Increase share of renewable energy source	• Emission CO <sup>2</sup> equivalent	
Cultural heritage	• Preservation and conservation national historical cultural heritage	• Status of areas protected under national preservation regime • Impact of development (humanly initiated actions including tourism)	The impact to cultural heritage is foreseen as positive. The renovation of cultural heritage sites and its adaptation for tourism purpose is one of the possible activities.
Efficiency use of natural resource and conservation	• Reduction materials consumption and waste generation	• Generated municipal waste amount (tonnes per year, tonnes per capita) • Status of extraction of use of waste as secondary resources • Domestic material consumption (DMC) per Gross Regional Product	Usage of natural resources will increase due increasing the tourism infrastructure. It is important to promote sustainable usage of water resources in tourism sites. Projects which will have an environmental management measures such us ISO 14.000, EMAS, Eco-labels, green purchases as well as projects which will integrate the public transport and use of renewable energy should be additionally promoted.

<b>Priority 1: Competitiveness and productivity growth of the cross-border region</b>			
<b>Field of Activity 1.3: Development of sustainable cross-border tourism and preservation of cultural/historical heritage</b>			
<b>Relevant environmental issue</b>	<b>Relevant cross-border environmental objectives</b>	<b>Relevant indicators or guiding questions</b>	<b>Assessment of the likely significant impacts</b>
		(GRP)	
<b>Proposed amendments to the field of activity:</b> <ul style="list-style-type: none"> <li>• Non</li> </ul> <b>New activities:</b> <ul style="list-style-type: none"> <li>• Define more precise possible activities to guide the potential applicants in the context of marketing regional products and services (e.g. cottage cheese or bread festival).</li> <li>• Promote cross border public transport means in tourism (link to field of activity 1.1).</li> </ul>			

<b>Priority 2: Cross-border cohesion and enhanced overall quality of the cross-border area</b>			
<b>Field of Activity 2.2: Improvement of living environment</b>			
<b>Relevant environmental issue</b>	<b>Relevant cross-border environmental objectives</b>	<b>Relevant indicators or guiding questions</b>	<b>Assessment of the likely significant impacts</b>
Population: human health	<ul style="list-style-type: none"> <li>• Do not exceed level (set up by the national legislation) of noise in particular noise generated by transport</li> <li>• Reduce risk ascendant from environmental quality to human health</li> </ul>	<ul style="list-style-type: none"> <li>• Exposure of population to excessive noise levels</li> <li>• Minimise environmental quality impact to human health</li> </ul>	The activity will provide opportunities to improve social and health care infrastructures as will have a positive effect to human health. Noise management issues are not subject of the present activity.
Landscape and fauna, flora incl. biodiversity and natural habitats	<ul style="list-style-type: none"> <li>• Preserve landscape and biological diversity</li> <li>• Maintenance and restoration of favourable conservation status of nature habitat types</li> </ul>	<ul style="list-style-type: none"> <li>• Condition improved to preserve biological diversity, promotion restoration of damaged natural elements</li> <li>• Development of favourable condition of Natura 2000 network (incl. status of bio-corridors)</li> </ul>	Development of cross-border natural resources' and nature protected areas' management plans will have a positive effect to landscape and biodiversity management. It will create opportunities to develop nature management plants taking into consideration of nature values but not physical borders. Promotion of renewable energy sources could have both negative and positive effect. To avoid a negative effect usage of biomass from natural forests, linkage biomass to biodiversity should be

<b>Priority 2: Cross-border cohesion and enhanced overall quality of the cross-border area</b>			
<b>Field of Activity 2.2: Improvement of living environment</b>			
<b>Relevant environmental issue</b>	<b>Relevant cross-border environmental objectives</b>	<b>Relevant indicators or guiding questions</b>	<b>Assessment of the likely significant impacts</b>
			taken into consideration. Positive effect will be indirect due reduction impact to climate change issues which changes have impact to biodiversity.
Soil	<ul style="list-style-type: none"> <li>• Ensure sustainable use of soil resources</li> </ul>	<ul style="list-style-type: none"> <li>• Quality of soil and soil pollution</li> <li>• Development of anti-erosion measures</li> </ul>	If there will not be a new construction the impact to soil quality is neutral, as a positive impact join management of natural resources could be mentioned.
Ground and surface water	<ul style="list-style-type: none"> <li>• Implementation of EU Water Framework Directive requirements to reach proper water quality by 2015</li> </ul>	<ul style="list-style-type: none"> <li>• Surface water and groundwater status related to the Water Framework Directive 2015</li> </ul>	Improvement of the existing social, education and health care infrastructure and installation in them new efficient and modern technologies will have a positive effect to ground and surface water resources management.
Air	<ul style="list-style-type: none"> <li>• Reach level of emissions to ambient air by GDP to reach current average level of EU-15 countries</li> </ul>	<ul style="list-style-type: none"> <li>• Status of air related to the Air Quality Directive</li> </ul>	Improvement of the existing social, education and health care infrastructure and installation in them new energy efficient and modern technologies will have a positive effect to air quality.
Climate change issues	<ul style="list-style-type: none"> <li>• Reach Kyoto Protocol targets</li> <li>• Increase share of renewable energy source</li> </ul>	<ul style="list-style-type: none"> <li>• Emission CO<sup>2</sup> equivalent</li> </ul>	Increase share of renewable energy sources in the region as well as modernization of social, education and health care infrastructure to increase energy efficiency will have a positive effect to climate change as regionally as globally.
Cultural heritage	<ul style="list-style-type: none"> <li>• Preservation and conservation national historical cultural heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Status of areas protected under national preservation regime</li> <li>• Impact of development (humanly initiated actions including tourism)</li> </ul>	Development of cross-border natural resources' and nature protected areas' management plans will have a positive effect to cultural heritage protection. It will create opportunities to develop cross-border nature protected areas management plants taking into consideration of cultural heritage values.
Efficiency use of natural resource and conservation	<ul style="list-style-type: none"> <li>• Reduction materials consumption and waste generation</li> </ul>	<ul style="list-style-type: none"> <li>• Generated municipal waste amount (tonnes per year, tonnes per capita)</li> <li>• Status of extraction of use of waste as secondary</li> </ul>	Development of cross-border natural resources' management plans will have a positive effect to efficiency use of natural resources and conservation.

<b>Priority 2: Cross-border cohesion and enhanced overall quality of the cross-border area</b>			
<b>Field of Activity 2.2: Improvement of living environment</b>			
<b>Relevant environmental issue</b>	<b>Relevant cross-border environmental objectives</b>	<b>Relevant indicators or guiding questions</b>	<b>Assessment of the likely significant impacts</b>
		resources <ul style="list-style-type: none"> <li>• Domestic material consumption (DMC) per Gross Regional Product (GRP)</li> </ul>	
<b>Proposed amendments to the field of activity:</b> <ul style="list-style-type: none"> <li>• Non</li> </ul>			
<b>New activities:</b> <ul style="list-style-type: none"> <li>• Non</li> </ul>			

## 7 Summary on effects and proposed alternatives and projects selection criteria

This chapter summarizes the effects expected by the implementation of the programme and its fields of activity. The tables for each field of activity also contain the remaining comments and suggestions for the implementation of the programme (including measures to enhance positive or offset negative effects).

<p><b>Priority 1: Competitiveness and productivity growth of the cross-border region</b>  <b>Field of Activity 1.1: Modernisation of economic infrastructure</b></p>
<p><b>Adoption of SEA alternatives and recommendations in the programme:</b>  All reformulations and new activities suggested in the course of the SEA process have been incorporated into the Programme documents and have been approved presented to the Joint Task Force by the SEA group. The suggestion to give extra points to projects which will promote “public transport and bicycles infrastructure development in towns and cities” will be considering during development of project selection criteria.</p>
<p><b>General Conclusion:</b>  The field of activity address the physical development of infrastructure. The proposed activities “development of local transport, logistics, energy infrastructure” and “investment into local roads networks and local and regional logistic centres, in turn leading to the promotion of transit activities, improvement of border crossing permeability” may have significant adverse impacts. Some activities such us “investment into environmental infrastructure and environmentally friendly technologies” will have a positive environmental effect by improving existing or constructing new environmental infrastructure as well as reducing usage of natural resources as well as decreasing emissions and waste amounts.</p> <p><u>Remaining recommendations:</u></p> <ul style="list-style-type: none"> <li>• In order to minimise possible adverse impacts, it is suggested that priority will be given to the projects witch will improve existing roads infrastructure than constructing new roads.</li> <li>• In order to avoid possible adverse impacts regarding land take and loss of soil by sealing, as a matter of principle, any new terminals and facilities should be located in brown fields whenever possible unless there are very strong and justified economic and environmental reasons for green-field investments.</li> <li>• In case of the new infrastructure developments in green areas during the EIA phase should be taken into consideration not only impact to the existing protected areas but as well as eco corridors as well as considering impact to the ecosystems.</li> </ul>
<p><b>Main selection criteria or conditions for programme implementation:</b></p> <ul style="list-style-type: none"> <li>• Is the support of environmental infrastructure and environmental friendly technologies connected to the adoption of “best available technologies” addressing emission control, energy efficiency and reduction of non-renewable resource demand?</li> <li>• Does the “development of local transport” reduce the volume of private and business-oriented transport demand?</li> </ul>

<p><b>Priority 1: Competitiveness and productivity growth of the cross-border region</b>  <b>Field of Activity 1.3: Development of sustainable cross-border tourism and preservation of cultural/historical heritage</b></p>
<p><b>Adoption of SEA alternatives and recommendations in the programme:</b>  All reformulations and new activities suggested in the course of the SEA process have been incorporated into the Programme documents and have been approved presented to the Joint Task Force by the SEA group.</p>
<p><b>General conclusion:</b>  In general, positive aspects of the activity could be achieved by promoting sustainable or ecotourism products. It names the natural resources and cultural heritage of the cross border region as the most important common potential for tourism in this region. However, since the activities mainly will support “hard” infrastructure</p>

<p><b>Priority 1: Competitiveness and productivity growth of the cross-border region</b></p> <p><b>Field of Activity 1.3: Development of sustainable cross-border tourism and preservation of cultural/historical heritage</b></p>
<p>projects a slightly negative effects (on fauna, flora , biodiversity and natural habitats, soil, air, ground and surface water) cannot be excluded at this stage, but they can be kept to a minimum or fully offset by observing the SEA recommendations and selection criteria during programme implementation.</p> <p><u>Remaining recommendations:</u></p> <ul style="list-style-type: none"> <li>• The positive impacts expected from the implementation of this field of activities could be enhanced by promoting Eco-labels, Environmental Management Systems, ISO 14.000 and other environmental management instruments such us green purchases to the tourism industry.</li> <li>• Additional benefits may be achieved by awareness-raising among tourists, decentralising tourism activities, taking into account the different levels of annoyance within the region and demanding that tourism facilities supported by the programme should also be open and affordable for permanent residents.</li> <li>• When new tourism facilities are developed, existing infrastructure and brown fields should be used if possible. Utilization conflicts with residential areas should be paid attention too.</li> <li>• Optimal linking the activities with 1.1 related to investment into environmental infrastructure and environmentally friendly technologies to the tourism industry, positive impacts can be achieved.</li> <li>• In order to keep the adverse environmental effects of increased levels of traffic to a minimum support usage cross border public transport means in tourism.</li> </ul>
<p><b>Main selection criteria or conditions for implementation:</b></p> <ul style="list-style-type: none"> <li>• Does it decentralise tourism activities in time and territory and decrease excessive concentration of tourism activities in certain heavily visited areas?</li> <li>• When decentralising tourism activities, does it use existing infrastructure?</li> <li>• Does it increase the environmental awareness of the visitors?</li> <li>• Is the activity designed in compliance with regional/local ecological and social limitations?</li> <li>• Does it avoid adverse impacts on protected areas or NATURA 2000 sites?</li> <li>• Does it improve the efficiency of natural resources use in the tourism sector?</li> <li>• Does it promote the uptake of ISO 14.000/EMAS respectively “Eco-labelling”?</li> <li>• Does it increase energy efficiency and the use of renewable energy in the tourism sector?</li> </ul>
<p><b>Priority 2: Cross-border cohesion and enhanced overall quality of the cross-border area</b></p> <p><b>Field of Activity 2.2: Improvement of living environment</b></p>
<p><b>Adoption of SEA alternatives and recommendations in the programme:</b></p> <p>No specific reformulations or new activities have been suggested in the course of the SEA process as no adverse impacts are expected from the implementation of this field of activities.</p>
<p><b>General conclusion:</b></p> <p>This field of activity is expected to result slightly positive impacts regarding the environmental issues “Landscape and fauna, flora incl. biodiversity and natural habitats, air, climate change and cultural heritage” Activity “development of cross-border natural resources’ and nature protected areas management plans” will have a positive effect to landscape and biodiversity management. It will create opportunities to develop nature management plants taking into consideration of nature values without consideration of the State borders. Promotion of renewable energy sources could have both negative and positive effect. Positive effect will be indirect due reduction impact to climate change issues which changes have impact to biodiversity. Increase share of renewable energy sources in the region as well as modernization of social, education and health care infrastructure to increase energy efficiency will have a positive effect to climate change as regionally as globally.</p> <p><u>Recommendations:</u></p> <ul style="list-style-type: none"> <li>• With respect to “promotion of renewable energy sources” to minimize a negative environmental effect in projects which will use of biomass from natural forests, consider linkage of biomass use to impact for biodiversity.</li> </ul>
<p><b>Main selection criteria or conditions for implementation:</b></p> <ul style="list-style-type: none"> <li>• No specific selection criteria or conditions for implementation are necessary in the context of this field of</li> </ul>

<b>Priority 2:</b> Cross-border cohesion and enhanced overall quality of the cross-border area
<b>Field of Activity 2.2:</b> Improvement of living environment activity.

## **8 Significant cumulative effects**

There are no significant negative impacts on environmental issues by implementation of the operational programme. Possible negative impacts can be minimized by existing national legal frameworks and projects selection proper project assessment criteria as well as including appropriate experts for project evaluation.

### **8.1 Possible negative cumulative effects**

Activities which support cross-border business development and tourism will increase the request for enlargements of regional and local road networks and by-pass-routes. On a long term individual transport traffic will increase, with negative impacts on air quality, noise and climate change.

### **8.2 Possible positive cumulative effects:**

There could be substantial synergies between environmental technology transfer, business development and growing tourism activities. Technology transfer networks could support the implementation of energy efficiency principles into most of business or public investment decision with positive impact on air quality, climate change and sustainable resource management.

## **9 Monitoring of slighty environmental impact of the programme**

### **9.1 Commentary on the context**

The monitoring aims at investigating the impact to environment of the implementation of the “Cross Border Cooperation Lithuania – Poland 2007–2013” Programme. It shall enable the programme authorities to take remedial action when unexpected environmental effects occur.

The monitoring of the significant environmental impacts should be an integrated part of the mid-term and ex post evaluation of the programme. It will be important when preparing the mid-term and ex post evaluations to include an explicit requirement on assessing the significant effects of activities and projects on the relevant environmental key objectives elaborated further below. Also an explicit requirement should be included to the mid-term evaluation to propose corrective measures if the evaluation shows unexpected adverse environmental effects.

The SEA Directive, Art. 10, does not contain any specific requirements on the mode of monitoring. This flexibility is needed in order to develop solutions corresponding to the various plans and programmes.

### **9.2 Proposed monitoring scheme**

The monitoring of the programme should be implemented on two levels: projects and programme. Every project within the interim and final reports should submit the matrices **A** and the programme impact to environment should be monitored using data from the matrices **A** and compiled in the programmes monitoring matrices **B**.

## Matrices A

<b>Project:</b>						
<b>Priority and activity</b>	<b>Relevant environmental objective</b>	<b>Specific environmental objective</b>	<b>Indicator</b>	<b>Source of information</b>	<b>Frequency</b>	<b>Limited values, when the action should be taken</b>
<b>Priority 1:</b> Competitiveness and productivity growth of the cross-border region  <b>Activity 1.1:</b> Modernisation of economic infrastructure	Population: human health	Noise level at residential areas	Noise level reach the level than allow in the project activities areas conglomeration zones $\mu\text{g}/\text{m}^3$ is above 40 not more than 35 times per year	Counties/municipalities noise management conglomeration strategic maps. Competitive authorities (in LT and PL) responsible for collection information on noise Air quality monitoring reports	Once pre year	The noise level is above limited values in concrete conglomeration zone  $\mu\text{g}/\text{m}^3$ is above 40 more than 35 times per year
	Landscape and fauna, flora incl. biodiversity and natural habitats	Impact to landscape, urban sprawl Impact to protected areas, NATURA 2000 sites, bio-corridors (New roads infrastructure development Traffic intensity Areas drained)	# km of new roads constructed Cases of the infrastructure developed in protected areas # Ha of drained areas # of biodiversity conservation measures (animals)	Project report Ministries of environmental reports Reports of the competitive institutions for managing protected areas	After the project end	Institutions responsible for biodiversity monitoring sending warnings concerning significant impact to biodiversity

			crossing points, etc) installed			
	Soil	Land use changes Soil degradation	# Ha of land used changes # Ha of degraded soil	Territorial planning documents Soil monitoring reports	Once per year	More than 50 ha degraded as the result of the project activities
	Ground and surface water	Emissions to surface water Ground water contamination	Impaired quality of surface and ground water compare to the project start baseline	Ground and surface water monitoring reports	Before the project start and once per year	Emission to water exceed limited values
	Air	Emission to ambient air	Emission in conglomerated zones decreased compare to the project start baseline	Air quality monitoring reports	Before the project start and once per year	Emission to ambient air exceed limited values
	Climate change issues	Land use changes Decreasing of absorption capacities Increasing GHG emission	# Ha of land used changes # Ha of forest cut as the direct project impact	Reports of the state forest enterprises Annual state of environmental reports	Before the project start and once per year	UNFCCC convention focal points send warnings
	Cultural heritage	Impact to cultural heritage	# destroyed, affected cultural monuments by the project activities	Reports of the state authorities responsible for protection material cultural heritage	Once per year	If any of the cultural monument will be affected by the project activities.
	Efficiency use of natural resource and conservation	Energy efficiency	# m <sup>2</sup> of isolated buildings # of new efficient technologies installed	Project report	With the final project report	Only in case if the new infrastructure will be developed without instalment of modern energy

						efficient technologies
<p><b>Priority 1:</b> Competitiveness and productivity growth of the cross-border region</p> <p><b>Activity 1.3:</b> Development of sustainable cross-border tourism and preservation of cultural/historical heritage</p>	Population: human health	Noise level at residential areas	Noise reach the level than allow in the project activities conglomeration zones $\mu\text{g}/\text{m}^3$ is above 40 not more than 35 times per year	Counties/municipalities noise management conglomeration strategic maps. Competitive authorities (in LT and PL) responsible for collection information on noise Air quality monitoring reports	Once pre year	The noise level is above limited values in concrete conglomeration zone  $\mu\text{g}/\text{m}^3$ is above 40 more than 35 times per year
	Landscape and fauna, flora incl. biodiversity and natural habitats	Urbanization Impact to protected areas, NATURA 2000 sites,  Traffic intensity	Cases of the infrastructure developed in protected areas # of tourists using public transport	Project report	After the project end	Institutions responsible for managing of the protected areas sending warnings concerning tourism activities negative impact to protected areas/biodiversity
	Soil	Land use changes Soil degradation	# Ha of land used changes # Ha of degraded soil	Territorial planning documents Soil monitoring reports	Once per year	More than 50 ha degraded as the result of the project activities
	Ground and surface water	Emissions to surface water	Impaired quality of surface and ground	Ground and surface water monitoring	Before the project start and	Emission to water exceed limited

		Ground water contamination	water compare to the project start baseline	reports	once per year	values
	Air	Emission to ambient air	Emission in conglomerated zones decreased compare to the project start baseline	Air quality monitoring reports	Before the project start and once per year	Emission to ambient air exceed limited values
	Climate change issues	Land use changes Decreasing of absorption capacities Increasing GHG emission	# Ha of land used changes # Ha of forest cut as the direct project impact	Reports of the state forest enterprises Annual state of environmental reports	Before the project start and once per year	UNFCCC convention focal points warnings
	Cultural heritage	Impact to cultural heritage	# destroyed, affected cultural monuments by the project activities	Reports of the state authorities responsible for protection material cultural heritage	Once per year	If any of the cultural monument will be affected by the project activities.
	Efficiency use of natural resource and conservation	Energy efficiency	# m <sup>2</sup> of isolated buildings # of new efficient technologies installed	Project report	With the final project report	Only in case if the new infrastructure will be developed without instalment of modern energy efficient technologies
<b>Priority 2: Cross-border cohesion and enhanced overall quality of the cross-border area</b>  <b>Activity 2.2: Improvement of living environment</b>	Population: human health	Not applicable				
	Landscape and fauna, flora incl. biodiversity and natural habitats	Development of cross border protected areas management plans	# of cross boarder meetings concerning development cross border protected	Project report	After the project end	Not negative impact has been anticipated

			<p>areas management plans</p> <p># of approved cross border protected areas management plans</p> <p># of concrete cross border means for conservation/protection of species/habitants (which is common in cross boarder territories)</p>			
	Soil	Not applicable				
	Ground and surface water	Emissions to surface water Ground water contamination	Impaired quality of surface and ground water compare to the project start baseline	Ground and surface water monitoring reports	Before the project start and once per year	Emission to water exceed limited values
	Air	Emission to ambient air	Emission in conglomerated zones decreased compare to the project start baseline	Air quality monitoring reports	Before the project start and once per year	Emission to ambient air exceed limited values
	Climate change issues	Land use changes Decreasing of absorption capacities Increasing GHG emission Promotion of	# Ha of land used changes # Ha of forest cut as the direct project impact # MW of renewable energy installed	Reports of the state forest enterprises Annual state of environmental reports Annual Energy agencies reports	Before the project start and once per year	UNFCCC convention focal points warnings

		renewable energy sources		Projects reports		
	Cultural heritage	Impact to cultural heritage	# destroyed, affected cultural monuments by the project activities	Reports of the state authorities responsible for protection material cultural heritage	Once per year	If any of the cultural monument will be affected by the project activities.
	Efficiency use of natural resource and conservation	Energy efficiency	# m <sup>2</sup> of isolated buildings # of new efficient technologies installed	Project report	With the final project report	Only in case if the new infrastructure will be developed without instalment of modern energy efficient technologies

## Matrices B

Priority and activity	Relevant environmental objective	Specific environmental objective	Indicator	Source of information	Frequency	Limited values, when the action should be taken
<p><b>Priority 1:</b> Competitiveness and productivity growth of the cross-border region</p> <p><b>Activity 1.1:</b> Modernisation of economic infrastructure</p>	Population: human health	Noise level at residential areas	Noise level is above the level than allow in conglomeration zones µg/m3 is above 40 not more than 35 times per year	Counties/municipalities noise management conglomeration strategic maps. Competitive authorities (in LT and PL) responsible for collection information on noise Air quality monitoring reports	Once pre year	The noise level is above limited values in concrete conglomeration zone  µg/m3 is above 40 more than 35 times per year
	Landscape and fauna, flora incl. biodiversity and natural habitats	Impact to landscape, urban sprawl Impact to protected areas, NATURA 2000 sites, bio-corridors (New roads infrastructure development Traffic intensity Areas drained)	# km of new roads constructed Cases of the infrastructure developed in protected areas # Ha of drained areas # of biodiversity conservation measures (animals crossing points, etc)	Project report Ministries of environmental reports Reports of the competitive institutions for managing protected areas	Once pre year	Institutions responsible for biodiversity monitoring sending warnings concerning significant impact to biodiversity

			installed			
	Soil	Land use changes Soil degradation	# Ha of land used changes # Ha of degraded soil	Territorial planning documents Soil monitoring reports	Once per year	More than 100 ha degraded as the result of the programme activities
	Ground and surface water	Emissions to surface water Ground water contamination	Impaired quality of surface and ground water compare to the programme start baseline	Ground and surface water monitoring reports	Before the programme start and once per year	Emission to water exceed limited values
	Air	Emission to ambient air	Emission in conglomerated zones decreased compare to the programme start baseline	Air quality monitoring reports	Before the programme start and once per year	Emission to ambient air exceed limited values
	Climate change issues	Land use changes Decreasing of absorption capacities Increasing GHG emission	# Ha of land used changes # Ha of forest cut as the direct programme impact	Reports of the state forest enterprises Annual state of environmental reports	Before the programme start and once per year	UNFCCC convention focal points send warnings
	Cultural heritage	Impact to cultural heritage	# destroyed, affected cultural monuments by the programme activities	Reports of the state authorities responsible for protection of material cultural heritage	Once per year	If any of the cultural monument will be affected by the programme activities.
	Efficiency use of natural resource	Energy efficiency	# m <sup>2</sup> of isolated buildings	Projects reports	Once per year	Only in case if the new infrastructure

	and conservation		# of new efficient technologies installed			will be developed without instalment of modern energy efficient technologies
<b>Priority 1:</b> Competitiveness and productivity growth of the cross-border region  <b>Activity 1.3:</b> Development of sustainable cross-border tourism and preservation of cultural/historical heritage	Population: human health	Noise level at residential areas	Noise level is above the level than allow in conglomeration zones µg/m <sup>3</sup> is above 40 not more than 35 times per year	Counties/municipalities noise management conglomeration strategic maps. Competitive authorities (in LT and PL) responsible for collection information on noise Air quality monitoring reports	Once pre year	The noise level is above limited values in concrete conglomeration zone  µg/m <sup>3</sup> is above 40 more than 35 times per year
	Landscape and fauna, flora incl. biodiversity and natural habitats	Urbanization Impact to protected areas, NATURA 2000 sites  Traffic intensity	Cases of the infrastructure developed in protected areas # of tourists using public transport	Projects reports	Once per year	Institutions responsible for managing of the protected areas sending warnings concerning tourism activities negative impact to protected areas/biodiversity
	Soil	Land use changes Soil degradation	# Ha of land used changes # Ha of degraded soil	Territorial planning documents Soil monitoring	Once per year	More than 100 ha degraded as the result of the

				reports		programme activities
	Ground and surface water	Emissions to surface water Ground water contamination	Impaired quality of surface and ground water compare to the programme start baseline	Ground and surface water monitoring reports	Before the programme start and once per year	Emission to water exceed limited values
	Air	Emission to ambient air	Emission in conglomerated zones decreased compare to the programme start baseline	Air quality monitoring reports	Before the programme start and once per year	Emission to ambient air exceed limited values
	Climate change issues	Land use changes Decreasing of absorption capacities Increasing GHG emission	# Ha of land used changes # Ha of forest cut as the direct programme impact	Reports of the state forest enterprises Annual state of environmental reports	Before the programme start and once per year	UNFCCC convention focal points warnings
	Cultural heritage	Impact to cultural heritage	# destroyed, affected cultural monuments by the programme activities	Reports of the state authorities responsible for protection material cultural heritage	Once per year	If any of the cultural monument will be affected by the programme activities.
	Efficiency use of natural resource and conservation	Energy efficiency	# m <sup>2</sup> of isolated buildings # of new efficient technologies installed	Projects reports	Once per year	Only in case if the new infrastructure will be developed without instalment of modern energy efficient technologies

<b>Priority 2: Cross-border cohesion and enhanced overall quality of the cross-border area</b>  <b>Activity 2.2: Improvement of living environment</b>	Population: human health	Not applicable				
	Landscape and fauna, flora incl. biodiversity and natural habitats	Development of cross border protected areas management plans	# of cross boarder meetings concerning development cross border protected areas management plans # of approved cross border protected areas management plans # of concrete cross border means for conservation/protection of species/habitants (which is common in cross boarder territories)	Project report	After the project end	Not negative impact has been anticipated
	Soil	Not applicable				
	Ground and surface water	Emissions to surface water Ground water contamination	Impaired quality of surface and ground water compare to the programme start baseline	Ground and surface water monitoring reports	Before the programme start and once per year	Emission to water exceed limited values
	Air	Emission to ambient air	Emission in conglomerated zones decreased compare to the programme start	Air quality monitoring reports	Before the programme start and once per year	Emission to ambient air exceed limited values

			baseline			
	Climate change issues	Land use changes Decreasing of absorption capacities Increased GHG emission Promotion of renewable energy sources	# Ha of land used changes # Ha of forest cut as the direct project impact # MW of renewable energy installed	Reports of the state forest enterprises Annual state of environmental reports	Before the programme start and once per year	UNFCCC convention focal points warnings
	Cultural heritage	Impact to cultural heritage	# destroyed, affected cultural monuments by the project activities	Reports of the state authorities responsible for protection material cultural heritage	Once per year	If any of the cultural monument will be affected by the project activities.
	Efficiency use of natural resource and conservation	Energy efficiency	# m <sup>2</sup> of isolated buildings # of new efficient technologies installed	Project report	With the final project report	Only in case if the new infrastructure will be developed without instalment of modern energy efficient technologies

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ANNEX 1: Compliance with the Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, Overview.

The Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment defines in Annex 1 the information to be provided within the Environmental Report. The following table provides an overview and reference guide on the requirements of the Directive and the contents of the present Environmental Report.

Directive provision	Chapter, Environmental Report	Comment
Lit. a) outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	Chapter 2	The final draft of the programme and the herein outlined activities and priorities are the product of continuous interaction between the SEA team and the Programming Group.
Lit. b) relevant aspects of the current state of the environment and the likely evolution thereof without implementation	Chapter 4	
Lit. c) the environmental characteristics of areas likely to be significantly affected	Chapter 4	Most environmental data is available on a national or regional base. CBC programmes being by definition transboundary pose a challenge for a coherent yet differentiated description.
Lit. d.) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	Chapter 4	
Lit. e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation;	Chapter 4	
Lit. f) (f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water,	Chapter 6	The Definition Of The Likely Significant Effects On The Environment Of The Programme Priorities Was Approached With Great Attention And Depth Of

air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors		Detail, Providing Comments And Incentives For Reformulation To The Programming Group.
Lit. g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	Chapter 8	The main concern of the SEA team was the incorporation of their remarks and comments to the formulation of the Programme Priorities and Fields of activities. Thus the proposed "measures" are already part of the Programme.
Lit. h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling	Chapter 8	Cross Border Cooperation Programmes are implemented through the selection of single projects proposed by the eligible applicants. It is thus beneficial to the environment to define project selection criteria that safeguard the environment.
Lit. i) a description of the measures envisaged concerning monitoring in accordance with Article 10	Chapter 9	
Lit. j) a non-technical summary of the information provided under the above headings	Chapter 1	

## ANNEX 2 Territories which could be significant impacted by programme activities and NATURA 2000 sites.

No.	Category Name	Area (ha)	Municipality
<i>State strict nature reserves</i>			
1.	Cepkeliai	11212	Varena
2.	Viesvile	3216	Taurage, Jurbarkas
<i>State biosphere reserves</i>			
3.	Zuvintas	18490	Alytus, Lazdijai, Marijampole
<i>State strict historical cultural reserves</i>			
4.	Kernave	194,4	Sirvintos
<i>National parks</i>			
5.	Dzukija	55040	Varena, Alytus, Druskininkai
6.	Aukstaitija	40570	Svencionys, Ignalina, Utena
7.	Trakai	8200	Trakai, Elektrenai
8.	Biebrza	59233	Białostocko-suwalski Łomżyński
9.	Białowieski	10502	Białostocko-suwalski
10.	Narwiański	6810	Łomżyński
11.	Wigry	14956	Białostocko-suwalski
<i>Regional parks</i>			
12.	Meteliai	17729	Lazdijai Alytus
13.	Nemuno kilpos	25171	Prienai, Alytus
14.	Veisiejai	12200	Lazdijai
15.	Panemuniai	11563	Jurbarkas, Kaunas, Sakiai
16.	Vistytis	10833	Vilkaviskis
17.	Varniai	33800	Telsiai, Kelme, Silale
18.	Pagramantis	14420	Silale, Taurage
19.	Rambynas	4520	Pagegiai
20.	Kauno marios	10221	Kaunas, Kasiadorys
21.	Dubysa	10571	Raseiniai, Kelme
22.	Tytuvenai	10152	Raseiniai, Kelme, Radviliskis
23.	Aukstadvaris	15350	Trakai, Prienai, Kasiadorys
24.	Neris	10587	Vilnius, Trakai, Elektrenai, Sirvintos
25.	Dieveniskes historical	8794	Salcininkai
26.	Asveja	11589	Vilnius district, Svencionys, Moletai

27.	Sirveta	8735	Svencionys, Ignalina
28.	Labanoras	55344	Svencionys, Moletai
<i>Landscape reserves</i>			
29.	Raigardas	1095	Druskininkai
30.	Taurupys	381	Varena
31.	Ula	6779	Varena
32.	Kazlu Ruda	857	Kazlu Ruda
33.	Lieke	204	Sakiai
34.	Sesupe	266	Sakiai
35.	Ancia	309	Taurage
36.	Stempliai	579	Silale, Silute
37.	Lomena	532	Jonava, Kaisiadorys
38.	Sirvintos	1043	Jonava, Ukmerge, Sirvintos
39.	Budeliai	407	Kaisiadorys, Sirvintos
40.	Strosiunai	3138	Kaisiadorys, Elektrenai
41.	Jiesia	382	Kaunas and Kaunas district
42.	Nevezis	1118	Kedainiai, Kaunas district
43.	Laucyte	355	Kedainiai
44.	Susve	496	Kedainiai
45.	Pasesuvis	294	Raseiniai
46.	Baravykines	2278	Vilnius district
47.	Cirkiskis	854	Svencionys
48.	Daubenai	674	Vilnius district
49.	Europos centro	909	Vilnius district
50.	Rudninku	1802	Salcininkai
51.	Siesartis	746	Ukmerge
52.	Visincia	774	Salcininkai
53.	Zeimena	943	Svencionys
54.	Zuvinte	234	Ukmerge
<i>Geological reserves</i>			
55.	Akmens	72	Varena

56.	Armona	146	Ukmerge
57.	Navakoniai	6	Salcininkai
<i>Geomorphologic reserves</i>			
58.	Pivašiunai	447	Alytus
59.	Sudvajai	302	Alytus
60.	Aguonio	329	Kalvarija
61.	Aukspirtos	107	Sakiai
62.	Jotilijos	93	Sakiai
63.	Novos	450	Sakiai
64.	Sirvintos	184	Vilkaviskio
65.	Upyna	576	Silale
66.	Kaskalnis	906	Jurbarkas
67.	Kulva	815	Jonava
68.	Lapes	1168	Kaunas
69.	Paieslys	478	Kedainiai
70.	Skriaudziai	196	Prienai
71.	Jukainiai	263	Raseiniai
72.	Grioviu	575	Vilnius district, Vilnius city
73.	Juozapines	258	Vilnius district
74.	Kruopynes	331	Vilnius district
75.	Kuosines	1360	Vilnius district
76.	Medziakalnio	768	Vilnius district
77.	Pipiriskiai	517	Elektrenai
78.	Skersabalai	793	Vilnius district
79.	Sarkuciai	770	Salcininkai
80.	Taucionys	338	Trakai
81.	Vanagyne	303	Vilnius district
82.	Verdeikiai	499	Vilnius district
83.	Zygmantiskiai	2259	Salcininkai
<i>Hydrographical reserves</i>			
84.	Avire	308	Druskininkai
85.	Glebas	250	Varena
86.	Spengla	275	Varena
87.	Aitra	546	Silale, Plunge
88.	Mituva	138	Jurbarkas
89.	Lietava	143	Jonava

90.	Aluona	180	Kaunas, Kedainiai
91.	Alsia	264	Prienai
92.	Balcia	450	Raseiniai
93.	Kena	165	Vilnius district
94.	Salcia	761	Salcininkai
95.	Vilnia	1222	Vilnius district
96.	Visincia	466	Salcininkai
<i>Pedological (soil) reserves</i>			
97.	Sabaliske	130	Alytus
98.	Varcia	99	Alytus
99.	Baltkoju	160	Sakiai
100.	Varnabudes	112	Marijampole
101.	Gabriliava	119	Kaisiadorys
102.	Antanai	135	Svencionys
103.	Azubale	93	Salcininkai
<i>Botanical reserves</i>			
104.	Balkasodis	240	Alytus
105.	Druskininkai	5	Druskininkai
106.	Vidzgiris	387	Alytus city
107.	Vilko	121	Druskininkai
108.	Virbalgis	364	Vilkaviskis
109.	Jura	18,2	Silale
110.	Lapgiriai	139	Silale
111.	Upninkai	101	Jonava
112.	Lapainia	222	Kaisiadorys
113.	Buda	780	Kaisiadorys
114.	Kaukine	1134	Kaisiadorys
115.	Pastuva	243	Kaunas
116.	Kamsa	318	Kaunas
117.	Pavejuonis	66	Kaunas
118.	Azuolai	265	Prienai
119.	Pavirsulio tyrelio	3292	Raseiniai, Radviliskis
120.	Gelednes	522	Svencionys
121.	Ilgucio	58	Trakai
122.	Medininkai	16	Vilnius district
123.	Pravalo	99	Vilnius district

124.	Silines	163	Salcininkai
<i>Zoological reserves:</i>			
<i>Ornithological reserves</i>			
125.	Cimakavas	372	Druskininkai
126.	Pertako	374	Lazdijai
127.	Novaraistis	827	Kaunas, Sakiai
128.	Senosios Rusnes	90,6 (1495,06 including buffer zone)	Pagegiai
129.	Kazimieravo	145	Vilnius district
130.	Papio	306	Salcininkai, Trakai, Vilnius district
131.	Taurijos	506	Vilnius district
<i>Herpetological reserves</i>			
132.	Baltosios Ancios	13	Druskininkai
133.	Kuciuliskes	80	Lazdijai
134.	Straciunu	23	Lazdijai
<i>Ichthyologic reserves</i>			
135.	Merkio	210,3	Salcininkai, Varena
136.	Jura	1513	Jurbarkas, Silale, Taurage, Pagegiai
137.	Dubysa	29,4 km	Jurbarkas, Kaunas, Raseiniai
138.	Sventoji	335 km	Jonava, Ukmerge, Anyksciai
139.	Karkle	12 km	Kaunas
140.	Zeimena	1028	Svencionys, Vilnius district
<i>Entomologic reserves</i>			
141.	Gerdasiai	13	Druskininkai
142.	Nerepa	27	Kaunas
143.	Ringove	209	Kaunas
144.	Dukstynos	46	Ukmerge
<i>Teriological reserves</i>			
145.	Kaunas	9	Kaunas
<i>Telmological reserves</i>			
146.	Ilgininkai	283	Varena
147.	Krakinys	181	Lazdijai
148.	Kuzapiške	19	Lazdijai
149.	Pleine	276	Silute, Pagegiai
150.	Palraistis	342	Kaisiadorys
151.	Adutiskis	846	Svencionys, Ignalina

152.	Algirdenu	91	Svencionys
153.	Alionys	2096	Sirvintos, Vilnius district
154.	Baltasamenes	606	Svencionys
155.	Barnenai	24	Ukmerge
156.	Barkutiskis	198	Sirvintos
157.	Eituniskes	154	Svencionys
158.	Gejus	659	Trakai
159.	Kernavas	1449	Salcininkai
160.	Laukenai	213	Ukmerge
161.	Lygiaraistis	427	Sirvintos
162.	Raudonosios balos	135	Vilnius district
163.	Sesuoleliai	509	Sirvintos
NATURA 2000 sites			
164.	Vizgiris forest	389	Alytus
165.	Noriunai forest	243	Alytus
166.	Punia pinewood	2700	Alytus
167.	Nemuno kilpos regional park	25171	Alytus, Birstonas
168.	Zuvintas	18490	Alytus, Lazdijai, Marijampole
169.	Dusia, Meteliai and Obelija lakes	4480	Alytus, Lazdijai
170.	Dainava forest (Dzukija national park)	55849	Alytus, Druskininkai, Lazdijai
171.	Niedus and Veisiejai lakes	119	Lazdijai
172.	Pertakas forest	1123	Lazdijai
173.	Ancia lake	19	Lazdijai
174.	Balsys lake	35	Lazdijai
175.	Baltoji Ancia valley	16	Lazdijai
176.	Dainaviskes wetland	55	Lazdijai
177.	Algininkas forest	80	Lazdijai
178.	Ilgis lake	59	Lazdijai
179.	Liunelis forest	75	Lazdijai
180.	Liunelis lake	30	Lazdijai
181.	Petroskos forest	566	Lazdijai
182.	Krakinis swamp	177	Lazdijai
183.	Kuciuliskes	84	Lazdijai
184.	Zervynos lake	24	Lazdijai
185.	Slavantele valley	4	Lazdijai

186.	Dirzazemiai wetland	65	Varena
187.	Grybaulia ponds	742	Varena
188.	Derezne river	127	Varena
189.	Geidukonys wetland	76	Varena
190.	Cepkeliai wetland	11227	Varena
191.	Spengla river and its valley	254	Varena
192.	Stoja meadows	94	Varena
193.	Ula river down from Rudnia	359	Varena
194.	Azuolu Buda forest	860	Marijampole
195.	Virbagiris forest	368	Vilkaviskis
196.	Grybingirio forest	355	Vilkaviskis
197.	Sirvinta valley	496	Vilkaviskis
198.	Pavistytis meadow	25	Vilkaviskis
199.	Drausgiris forest	594	Vilkaviskis
200.	Tataride and Vistygiris forest	1198	Vilkaviskis
201.	Novaraistis	827	Kaunas, Kazlu Ruda, Sakiai
202.	Oak-hornbeam forest of Nemunas valley from Kriukai to Gelgaudiskis	1290	Sakiai
203.	Dubysa valley	1117	Jurbarkas
204.	Klagiai meadows	31	Jurbarkas
205.	Margupiai <i>Juniperus communis</i>	4	Jurbarkas
206.	Armena exposure	228	Jurbarkas
207.	Gystus valley	147	Jurbarkas
208.	Balandine wetland	155	Jurbarkas
209.	Bauzaiciai wetland	202	Jurbarkas
210.	Saltuona valley	70	Jurbarkas
211.	Karsuva forest	38314	Taurage, Silute, Jurbarkas
212.	Wetlands of Viesvile river upstream	5693	Jurbarkas, Taurage
213.	Meadows of Nemunas valley close to Viesvile	595	Jurbarkas
214.	Sesuva and Jura valleys	1353	Jurbarkas
215.	Medows of Nemunas valley between Raudone and Gelgaudiskis	760	Jurbarkas
216.	Banks and islands of Nemunas between Kulautuva and Smalininkai	3532	Jurbarkas

217.	Siline suraunding	37	Jurbarkas
218.	Seredzius meadows	15	Jurbarkas
219.	Ancia valley	338	Taurage
220.	Jura river down from Taurage	622	Jurbarkas, Silute, Taurage
221.	Pagramantis regional park	11466	Taurage, Silale
222.	Sesuvius river down from Pasesuvius	560	Taurage
223.	Gojus oak-hornbeam forest	12	Silale
224.	Medvegalis meadows	44	Silale
225.	Complex of Parsazeris – Lukstas wetlands	2876	Silale, Telsiai
226.	Balbieriskis exposure	6	Prienai
227.	Nemunas kilpos	1269	Prienai
228.	Revuona headwaters	135	Prienai
229.	Rudgiriai wetland	29	Prienai
230.	Prienai pinewood	469	Prienai
231.	Tartokas wetland	39	Prienai
232.	Verkne valley	594	Prienai
233.	Verkne midlestream	419	Prienai
234.	Vizdija valley	198	Prienai
235.	Osvencia river valley	472	Prienai
236.	Siponiai exposure	4	Birstonas
237.	Skemoniu exposure	1	Birstonas
238.	Julijanava fort	23	Kaunas city
239.	Zagariskiai fort	16	Kaunas city
240.	Kaunas oak forest	76	Kaunas city
241.	Kauno marios regional park	6465	Kaunas district, Kaisiadorys
242.	Kamsa forest	321	Kaunas district
243.	Dubysa river down from Lyduvenai	1054	Jurbarkas, Kaunas, Raseiniai
244.	Babtai-Varluva forest	4419	Kaunas district
245.	Valley of Nevezis besides Romainiai	26	Kaunas district
246.	Dumbrava old forest	109	Kaunas district
247.	Padauguva forest	5783	Kaunas district
248.	Ringove forest	215	Kaunas district
249.	Milikonys fort	17	Kaunas city
250.	N.Freda fort	30	Kaunas city

251.	Rokai fort	26	
252.	Labunava forest biosphere reserve	401	Jonava, Kaunas, Kedainiai
253.	Lanciunava forest	5222	Kedainiai
254.	Dotnuva-Josvainiai forest	5781	Kedainiai
255.	Buda-Pravieniskes forest	5173	Kaisiadorys
256.	Kaukine	1135	Kaisiadorys
257.	Strevininkai forest	191	Kaisiadorys
258.	Vaiguva forest	681	Kaisiadorys
259.	Sventoji valley beside Upninkai	106	Jonava
260.	Paazuolyne peatbog	68	Jonava
261.	Jukainiai forest	267	Raseiniai
262.	Blistrubiskis forest	2215	Raseiniai
263.	Merkys river	2381	Salcininkai, Varena
264.	Verseka river	83	Salcininkai, Varena
265.	Rudininkai forest	20094	Salcininkai, Varena
266.	Baltoji Voke's wetlands complex	1391	Salcininkai
267.	Visincia river besides Gudeliai	21	Salcininkai
268.	Gauja valley	483	Salcininkai
269.	Stakiai forest	692	Salcininkai
270.	Jurgelionys meadows	15	Salcininkai
271.	Kernavas wetland	1449	Salcininkai
272.	Papys lake	1391	Salcininkai, Trakai, Vilnius district
273.	Skaistis lake	288	Trakai
274.	Solis lake	207	Trakai
275.	Plomenai wetland	54	Trakai
276.	Valley of Brazuole river	51	Trakai, Elektrenai
277.	Paneriai forest	230	Elektrenai
278.	Akis lake	7	Trakai
279.	Mergiskiu kalvos forest	11	Trakai
280.	Skrebys forest	119	Trakai
281.	Spindzius forest	1382	Trakai
282.	Jurgionys forest	659	Trakai
283.	Bitiniskiai lake	34	Trakai
284.	Mosia lake	38	Trakai
285.	Sirmukas lake	5	Trakai

286.	Varkikai forest	611	Trakai
287.	Zytkaimis wetland	100	Trakai
288.	Surroundings of Skilieriai lakes	88	Trakai
289.	Raudonoji bala wetland	135	Vilnius district
290.	Taurija forest	506	Vilnius district
291.	Geguzine wetland	51	Vilnius district
292.	Giedraitiskiai wetland	68	Vilnius district
293.	Girija forest	122	Vilnius district
294.	Ezereliai complex	105	Vilnius district
295.	Daubenai	282	Vilnius district
296.	Part of Sutkiskiai forest	5	Vilnius district
297.	Kazimieravas wetland	145	Vilnius district
298.	Pravalas lake	99	Vilnius district
299.	Valley of Riese river	64	Vilnius district
300.	Sveicarija forest	674	Vilnius district
301.	Neris river	2168	Svencionys, Vilnius, Trakai, Kaisiadorys, Sirvintos, Jonava, Kaunas
302.	Asveja lakes	10451	Vilnius district, Svencionys, Moletai
303.	Alionys forest	427	Sirvintos
304.	Astrava forest	427	Sirvintos
305.	Gerviraistis wetland	198	Sirvintos
306.	Sesuoeliai forest	509	Sirvintos
307.	Taujenai-Lenas forest	22532	Ukmerge, Panevezys
308.	Sventoji river down from Adrioniskis	1736	Anyksciai, Jonava, Ukmerge
309.	Meadow of Sventoji river	2	Ukmerge
310.	Siesartis river and its valley	164	Ukmerge
311.	Gemeliskis village meadows	23	Ukmerge
312.	Svirpline wetland	19	Ukmerge
313.	Kazimieravas wetland	77	Ukmerge
314.	Adomiskes wetland	25	Ukmerge
315.	Dirvonas lake and wetland	37	Ukmerge
316.	Duksnyna forest	39	Ukmerge
317.	Viliukai forest	1397	Ukmerge
318.	Acintas and Perunas wetland	1044	Svencionys
319.	Adutiskis wetland	4076	Svencionys
320.	Kretuonas lake	1971	Svencionys

321.	Saria river	85	Svencionys
322.	Algirdiskes wetland	91	Svencionys
323.	Salotis lake	90	Svencionys
324.	Setike river and its valley	49	Svencionys
325.	Zeimena river	1048	Svencionys
326.	Pabrade polygon	410	Svencionys
327.	Neversciai forest	11	Svencionys
328.	Ilgis lake	15	Svencionys
329.	Baltasamanes wetland	606	Svencionys
330.	Labanoras forest	53198	Svencionys
331.	Mergezeris lake	11	Svencionys
332.	Mera river with valley	134	Svencionys
333.	Puszcza Knyszyńska	136145	Białostocko-suwański
334.	Puszcza Białowieska	63148	Białostocko-suwański
335.	Jelieniewo	0,4	Białostocko-suwański
336.	Narwiańskie Bagna	6823	Białostocko-suwański
337.	Ostoja Suwańska	6284	Białostocko-suwański
338.	Ostoja Wigierska	15085	Białostocko-suwański
339.	Puszcza Augustowska	134378	Białostocko-suwański
340.	Bagienna Dolina Narwi	23471	Białostocko-suwański, Łomżyński
341.	Ostoja Biebrzańska	149929	Białostocko-suwański, Łomżyński
342.	Dolina Górnej Narwi	18384	Białostocko-suwański, Łomżyński
343.	Dolina Biebrzy	121003	Białostocko-suwański, Łomżyński
344.	Przełomowa Dolina Narwi	7649	Łomżyński
345.	Rzeka Pasłęka	6682	Elbląski, Olsztyński
346.	Dolina Drwęcy	6931	Elbląski, Toruńsko-włocławski, Olsztyński
347.	Puszcza Borecka	18963	Elcki
348.	Ostoja Poligon Orzysz	21208	Elcki
349.	Mamerki	162	Elcki
350.	Puszcza Romincka	14754	Elcki
351.	Bagna Nietlickie	4081	Elcki, Olsztyński
352.	Jeziro Oświn i okolice	2516	Elcki, Olsztyński
353.	Jeziro Dobskie	6452	Elcki, Olsztyński
354.	Jeziro Łuknajno	1380	Olsztyński
355.	Gierłoż	57	Olsztyński
356.	Dolina Pasłęki	20670	Olsztyński, Elbląski

357.	Ostoja Warmińska	142016	Olsztyński, Elbląski, Ełcki
358.	Puszcza Piska	172802	Olsztyński, Ełcki, Łomżyński, Ostrołęcko-siedlecki
359.	Puszcza Napiwodzko-Ramucka	116605	Olsztyński, Ostrołęcko-siedlecki
360.	Ostoja Nadbużańska	46037	Ostrołęcko-siedlecki, Białkopodlaski, Białostocko-suwalski, Warszawski, Łomżyński
361.	Dolina Dolnego Bugu	74398	Ostrołęcko-siedlecki, Białostocko-suwalski, Białkopodlaski, Warszawski, Łomżyński
362.	Dolina Dolnej Narwi	25907	Łomżyński, Ostrołęcko-siedlecki
363.	Ostoja Borecka	25340	Ełcki
364.	Doliny Omulwi i Płodownicy	34387	Ostrołęcko-siedlecki, Olsztyński