

# South-East Finland – Russia CBC 2014–2020

## Environmental report

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CBC 2014-2020  
SOUTH-EAST FINLAND - RUSSIA

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## Abbreviations

CBC	Cross-border Cooperation
ENPI	European Neighbourhood and Partnership Instrument (A commonly used abbreviation in programme period 2007–2013)
ENI	European Neighbourhood Instrument (A commonly used abbreviation in programme period 2014–2020)
SOVA law	Act on Environmental Impact Assessment of Plans and Programmes of Public Authorities (200/2005)
SEA	Directive Strategic Environmental Assessment Directive (Directive of the European Parliament and of the Council on the Assessment of the Effects of Certain Plans and Programmes on the Environment, 2001/42/EC)
JPC	Joint Programming Committee (Programming committee of the programme)
RTF	Regional Task Force (A regional workgroup for preparation of the programme)
SME	Small and medium-sized companies
EU	European Union
EUSBSR	EU Strategy for the Baltic Sea Region UN: United Nations
HELCOM	Helsinki Commission (Baltic Marine Environment Protection Commission)
TEN-T	Trans-European transport networks
CO <sub>2</sub>	Carbon dioxide
BAT	Best available technology
R&D	Research and development
E18	European route E18 (runs from Craigavon in Northern Ireland to St. Petersburg in Russia)
ELY Centre	The Centre for Economic Development, Transport and the Environment (manages State administration's regional implementation and development tasks)
EIA	Environmental impact assessment

## Introduction

The South-East Finland – Russia ENPI CBC programme will be continued during the EU funding period 2014–2020. Programmes implemented jointly by Finnish and Russian partners during the new period will be called CBC (cross-border cooperation) programmes.

The actual programme area covers the regions of Kymenlaakso, South Karelia and South Savo in Finland, and the city of St. Petersburg and the Leningrad Region in Russia. Adjoining regions that may participate in the programme include Uusimaa, Päijät-Häme, North Savo, and North Karelia in Finland and the Republic of Karelia in Russia. In addition, the city of Turku in Finland and the city of Moscow participate in the programme as centres outside the programme area.

The programme supports cross-border cooperation within the programme area. The aim is to promote the activities of SMEs and education within the programme area, improve the state of the environment, and create conditions for smooth cross-border traffic.

The environmental impacts of the CBC programmes will be assessed during preparation. The authorities have an obligation to investigate and assess the environmental impacts of the programmes they are preparing if the implementation of the said programmes can have significant impacts on humans, the environment and its diversity, the built environment, landscape, or natural resources.

This environmental report is a central part of the assessment process of CBC programmes. The report introduces the programme and analyses the main environmental impacts relating to its implementation. The aim of the environmental impact assessment is to encourage dialogue and support the preparation, implementation, and monitoring of the programme.

## General information about the CBC Programme

The South-East Finland – Russia CBC programme supports cross-border cooperation within the programme area. The core regions include South Karelia, South Savo, Kymenlaakso, city of St. Petersburg, and the Leningrad Region. Adjacent regions include Päijät-Häme, Uusimaa, North Savo, and North Karelia in Finland and the Republic of Karelia in Russia. The city of Turku and the city of Moscow are included in the programme as economically and culturally significant centres.

The preparation of the programme is coordinated by the Regional Council of South Karelia, which is the Joint Managing Authority of the current ENPI programme. Decisions concerning the programme are made by the Joint Programming Committee (JPC). A Regional Task Force (RTF) has been established for the preparation of the programme. The aim is to deliver the programme document to the European Commission for processing and approval in early 2015 at the latest.

In total, the EU level ENI funding amounts to around 15 billion euros. The funding of the South-East – Russia CBC programme in the period 2014-2020 will be €72.3 million - €109.7 million, of which EU funding will cover 50 %, Finnish funding 25 %, and Russian funding 25 %.

Each new CBC programme will have a thematic focus, which will be used as a basis for determining their priorities. Within the South-East – Russia CBC programme, funding may, for example, be directed to economic development, improving of the business environment, education and research, promotion of technological development and innovation, environmental protection, climate change adjustment, and improving of cross-border activities and safety.

Each project must have at least one Lead Partner and one project partner from the project's core areas. One partner must be in Finland, and one in Russia. In addition, the funded activities must benefit the core programme area.

For more information about the current ENPI programme and the preparation of the CBC programme, go to: <http://www.southeastfinrusnpi.fi> or [www.twitter.com/sefinrusenpi](http://www.twitter.com/sefinrusenpi)

## The preliminary focus areas of the South-East Finland – Russia CBC 2014-2020 Programme

ENI regulations require that three joint strategic aims shall be included in the programmes. The joint aims shared by all ENI programmes are:

- 1) enhancing economic and social development on either side of the border
- 2) common challenges relating to the environment, public healthcare, and safety
- 3) promoting easier movement of people, goods, and capital

With the aim of improving the focus of the programmes, the European Commission has prepared a list of thematic objectives. Each programme must choose a maximum of four goals. The list includes ten themes: Business and SME development; Support for education, research, technological development and innovation; Promotion of local culture and preservation of historical heritage; Promotion of social inclusion and fight against poverty; Support to local and regional good governance; Environmental protection, climate change adaptation and disasters prevention/management; Improvement of accessibility to the regions, development of transport and communication networks and systems; Common challenges in the field of safety and security; Promotion of energy cooperation; Promotion of border management and border security.

Of the listed themes, the Joint Programming Committee of the South-East Finland – Russia CBC programme selected the following:

- 1) Business and SME development
- 2) Support to education, research, technological development and innovation
- 3) Environmental protection, and climate change mitigation and adaptation
- 4) Promotion of border management and border security, mobility and migration management.

The priorities of the programme will be determined based on these themes. The preliminary priorities are:

- 1) Lively, active, and competitive economy
- 2) Innovative, skilled and well-educated area
- 3) Attractive and clean environment and region
- 4) Well-connected region

## Impact Assessment of the South-East Finland – Russia CBC 2014-2020 Programme

The environmental impacts of CBC programmes are assessed during their preparation.

Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment regulates assessment of the environmental effects of plans and programmes. In Finland, the Directive is implemented with the Act on Environmental Impact Assessment of Plans and Programmes of Public Authorities (200/2005) that took effect on 1 June 2005. Known as SOVA legislation, the act allows for considering environmental aspects better already in the early preparatory stages of plans and programmes. It advances the publicity of the plans of various authorities, and provides opportunities for public participation in their preparation.

SOVA legislation gives residents an opportunity to affect the decisions made on their living environment. Each party to the process is entitled to receiving information and making their opinions known concerning the aims and contents of plans. The aim of the programme assessment is to find the best possible implementation solution, and to mitigate any possible negative impacts.

The aim of SOVA legislation is to promote assessment and consideration of environmental impacts in the preparation and approval of the plans and programmes of public authorities, publicise the plans, and promote sustainable development and opportunities for public participation in the process.

The environmental report is a central document of the assessment process. The report introduces the programme and the alternatives considered, and assesses the likely significant environmental impacts.

The environmental impacts of the CBC programme have been studied separately in Finland and in Russia<sup>1</sup> using separate assessment processes. The present report covers the impacts on Finnish programme areas.

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South-East Finland – Russia CBC 2014-2020.

Expert evaluation of the environmental aspects of the draft programme. An environmental report. Saint Petersburg 2014.

## Coherence with other programmes and plans

Common objectives have been set for ENI programmes that relate to sustainable economic, social, and ecological development on either side of the border. The central aims of the cross-border programme include innovative economic development, smooth cross-border traffic, and promotion of easier movement. Common challenges such as environmental and safety aspects are highlighted.

The aims of the ENI programme are connected to various national and international strategies, programmes, and plans. From the Finnish point of view, EU level commitments and conventions are emphasised. The European regional and structural policies support and supplement Finnish policies. The main plans and programmes have been specified in the draft CBC programme.

The Europe 2020 growth strategy (Europe 2020 strategy for smart, sustainable and inclusive growth, 2010) is a central EU level economic strategy. The aim of the strategy is a smart, sustainable and inclusive economy. These three complementary priorities help the EU and its member states achieve high employment and productivity levels, and promote social cohesion.

Various developmental guidelines have been agreed on the EU level that relate to e.g. sustainable growth, research, competitiveness, resource smartness, and the green economy<sup>2</sup>.

In South-East Finland, the significance of the EU Strategy for the Baltic Sea Region, EUSBSR, is emphasised. It is the EU's first macro region strategy. The revised EU Strategy for the Baltic Sea Region was approved in June 2012 and the related action plan was adopted in February 2013. Three main objectives have been set for the strategy: protecting the sea, connecting the region, and increasing prosperity.

Environmental goals are addressed in various national strategies and plans. The main aims and measures of the Finnish climate policy are specified in the long-term energy and climate strategy. The strategic goals relating to waste management are described in the National Waste Plan. Water protection goals are presented e.g. in water management plans.

On a local level, regional councils and ELY Centres take national and international aims into account in the preparation and implementation of their development programmes (regional development plans / regional strategic programmes / waste plans / water management plans, etc.).

On a provincial level, several regional strategies relating to central traffic, environmental, and natural resource matters have been prepared (traffic system plan, climate strategies, etc.).

Global environmental issues are transboundary in nature, so they can only be solved through strong international cooperation. Environmental programmes that are central to the ENI programme relate to e.g. climate policy and the UN Convention on Biological Diversity.

The Finnish Ministry of the Environment's goals for Russian cooperation extend to 2015. The focus areas of cooperation include waste water treatment within the Baltic Sea catchment area and especially in St. Petersburg; reducing the environmental impact of agriculture in the Leningrad Region; reducing risks relating to oil transportation and preventing oil spills; hazardous substance management; and nature conservation.

The programmes and recommendations of the Baltic Marine Environment Protection Commission (HELCOM) play a key role in Baltic Sea protection. HELCOM has e.g. approved the Baltic Sea Action Plan (BSAP).

The Green Belt of Fennoscandia promotes cross-border cooperation to secure environmental diversity. Tripartite cooperation between Finland, Norway, and Russia is based on a memorandum of understanding.

The Transport Strategy for South-East Finland until 2035 is a central strategic document for the traffic system and takes account of EU policies (EU's decision on Trans-European Transport Networks, TEN-T).

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<sup>2</sup> Examples include: The Territorial Agenda of the European Union 2020 - Towards an Inclusive, Smart and Sustainable Europe of Diverse Regions (May 2011); Horizon 2020 - Framework Programme for Research and Innovation 2014-2020 (COM(2011) 809); Programme for the Competitiveness of Enterprises and SMEs 2014 – 2020 (COSME), (COM (2011) 834); The Roadmap for moving to a competitive low-carbon economy in 2050 (COM(2011)112); The Roadmap to a Resource Efficient Europe (COM(2011) 572); Programme for the Environment and Climate Action (LIFE Programme) for the period 2014- 2020 (PE-COS 70/13, 16103/13 ADD1); The Eco-innovation Action Plan (Eco-AP) (COM(2011) 899).

## National and international environmental aims pertaining to the programme

Relevant international environmental objectives have been widely agreed upon on an EU level and Finland is committed to these aims. Below is a topic-specific list of all central EU level directives, strategies, and progress plans and a short description of the key goals.

### Climate and decarbonisation

Until 2020, EU's climate policy is guided internationally by the Kyoto Protocol of the United Nations Framework Convention on Climate Change, and within the EU by the Climate and Energy Package.

In the Kyoto Protocol's first commitment period (2008–2012), the obligation of the EU was to reduce greenhouse gas emissions by eight percent in comparison to the 1990 level. The emission reduction target of the EU for 2020 is 20% below the 1990 level. Finland's country-specific aims are to reduce the emissions by 16% in fields not included in emissions trading (e.g. construction, heating of buildings, housing, agriculture, transportation, and waste management) and increasing the proportion of renewable energy sources to 38%. The main goals and measures of the Finnish climate policy are specified in the long-term energy and climate strategy. The strategy was updated in early 2013. In addition, national climate and energy policy has been envisioned up to 2050 in the Government Foresight Report on Climate and Energy Policy that was approved at the end of 2009. The Government of Finland is preparing the Climate Act, led by the Ministry of the Environment. The central elements of the law include the possible 80% emissions reduction target for 2050. The shift towards a competitive low-carbon economy means that the EU must be prepared to reduce its own emissions by 80% from the 1990 level by 2050 (EU progress plan: a shift towards a competitive low-carbon economy in 2050).

In accordance with the directive on the promotion of the use of energy from renewable sources (2009/28) (Renewable energy sources directive, RES), each member state must verify a national renewable energy action plan. Finland's target for increasing the usage levels of renewable energy sources has been set at 38% by 2020. On a national level, the targets have been provided in the long-term climate and energy strategy.

### Resource smartness and eco-efficiency

EU's Roadmap to a Resource Efficient Europe (COM 2011/571) sets the aims outlining the means to achieve resource-efficient and sustainable growth in Europe.

Member states should adopt incentives that encourage more companies to systematically measure, compare, and improve their resource-efficiency. The incentives adopted should also help companies cooperate in order to use waste and by-products of industrial manufacture. Member states should also ensure the availability of advice and support to SMEs in order to identify and enhance their resource- efficiency and sustainable use of raw materials. Public research funding should be directed to central resource efficiency goals and similar.

Energy Efficiency Directive (2012/27) obliges member states to prepare a national energy efficiency action plan every three years.

Finland intends to fulfil the obligations and objectives under the Energy Efficiency Directive (2012/27) mainly by implementing energy efficiency conventions and monitoring their results. Energy service action plan concerns companies involved in the transmission and distribution of electricity and in district heating. In accordance with the directive, member states must set an indicative national energy efficiency target of 9% and start measures aiming to reach this target by 2016.

Finland's sustainable development goals are specified in *The Finland We Want by 2050*, the National Commission on Sustainable Development, which aims to promote development in all fields of society.

The aim of the Programme to Promote Sustainable Consumption and Production, *More from Less – Wisely*, is to reduce the environmental impacts and greenhouse gas emissions of households and the public sector. Resource smartness and natural resources became a key national issue, e.g. with the Natural Resource Strategy for Finland, *Using Natural Resources Intelligently*.

### **Human health and air**

The Thematic Strategy on Air Pollution (COM 2005 / 446):

The targets set for 2020 include for example reducing the shortening of life expectancy due to exposure to airborne particles by 47%, reducing the acute casualties resulting from ozone by 10%, reducing excessive acid emissions in forested areas by 74% and in freshwater areas by 39%, and reducing the volume of areas affected by eutrophication by 43%.

To achieve these goals, sulphur dioxide emissions must be reduced by 82%, nitrogen oxide emissions by 60%, volatile organic compound emissions by 51%, ammonia emissions by 27%, and primary particles (freed directly into the air) by 59% in comparison to the levels in 2000.

### **Biodiversity**

EU has prepared a biodiversity strategy to 2020 (COM 2011/244 / *Our Life Insurance, Our Natural Capital*). By 2020, biodiversity loss and weakening of ecosystem services within the EU will be stopped and restored to the extent possible and EU's actions to prevent global biodiversity loss will be enhanced. The objectives include implementing the Birds and Habitats Directive, maintaining and restoring ecosystem services, developing a sustainable agriculture and forestry, sustainable use of fish resources and preventing the spreading of non-native species.

The national strategy and action plan for the conservation and sustainable use of biodiversity, *Saving Nature for People*, was approved by a government resolution in December 2012. In accordance with the National Forest Programme 2015 and the operating principle of the National Forest Strategy 2025 currently being prepared, sustainable management and use of forests promote wellbeing. The preparation of the National Forest Strategy is guided by the Forest Policy Report 2050. One of the main procedural entities of the report is securing the diversity of forest environment, ecosystem services, and ecological and social sustainability of forests.

### **Soil**

The aim of the Soil Thematic Strategy (COM 2006/231) is to protect the soil and to ensure that the EU can implement its central activities relating to the environment, economy, society and culture. The strategy proposes measures to prevent soil degradation. The soil is also an important carbon sink, and by building up organic material on the ground agriculture can contribute to the mitigation of the greenhouse effect.

General national goals for soil protection are specified in the *Soil Protection Objectives* report. The Ministry of the Environment appointed a workgroup in 2014, which task is to prepare a proposal for a national restoration strategy of contaminated land areas.

### **Landscape**

EU's European Landscape Convention must be considered in the planning of landscape conservation. Parties to the convention commit to considering the landscape in their legislation as a central part of the living environment, to prepare measures to protect and manage the landscape, and to include landscape aspects in local and city planning and other policies that have an impact on the landscape. In Finland, acts that have a central role in landscape protection include the Land Use and Building Act with regulations on zoning and construction permit procedure.

### **Water**

The aim of water resources management within the EU is to achieve a situation where the quality of surface and groundwater is good or higher (Water Framework Directive 2000/60) in some cases by 2021 and in others by 2027. Also, the quality of water resources must not decrease during this time where it is already good. In South-East Finland, water resources management plans and action plans introduce the current state of water resources, factors affecting their quality, and measures needed to achieve a good state by 2015. In addition, the national implementation programme for water resources management 2010–2015 specifies the actions needed on a national level to achieve a good state of water resources. The water resources management plans are currently being updated for 2016–2021.

The aim of the EU's Marine Strategy Framework Directive (2008/56) is that by 2020 the state of European sea areas is good. The strategic goal is to protect and restore the ecosystems of European seas and to ensure that the economic measures relating to the seas are implemented in accordance with the principles of sustainable development. In Finland, the Marine Strategy Framework Directive is implemented by supplementing the Water Resources Management Act. In future, sea areas will more frequently be included in land use planning, which will become a more integral instrument in reaching the goals of the Marine Strategy. The year 2014 will mark six years since the Baltic Marine Environment Protection Commission HELCOM approved the Baltic Sea Action Plan, BSAP. The aim of the action plan is that the state of the environment of the Baltic Sea will be good by 2021.

### **Transport**

Transport plans have been prepared on the EU level that emphasise environmental aspects. *The Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system* (COM 2011 / 144) is an example of this, with goals such as supporting the increasing traffic volumes and mobility in a manner that allows for reaching the 60% emissions reduction target.

On a national level, the planning of transport systems is directed, for example, by the government's transport policy report that provides guidelines for transport for 2012-2022. Provincial level measures include the preparation of traffic system plans. In the provinces of South-East Finland, international logistics aspects and related environmental challenges such as the increasing volume of oil transportation on the Baltic Sea are emphasised. EU Sulphur Directive (2005/33/EC) includes the valid air pollution prevention requirements of the applicable Annex of the MARPOL convention relating to the sulphur content of marine fuel. This affects marine transportations within the programme area and related environmental matters significantly.

**Waste**

EU's waste policy and Finnish Waste Act are based on the hierarchy of waste targets. The guidelines for national planning work are outlined in the national waste plan *National Waste Plan for 2016 – towards a recycling society*.

*The Waste Plan of Southern and Western Finland for 2020* is a regional waste management development plan that covers 11 provinces. The waste plan outlines the current state, objectives, and measures of waste management. According to the waste plan, the primary aim is to prevent the generation of waste. Recycling of waste to be used as a raw material for new products is secondary. Waste should be burned only when its generation cannot be prevented, or when generated waste cannot be recycled.

The European Commission proposed revisions to EU's waste management legislation in July 2014. The aim of the new recycling targets, changes in calculation methods, reporting requirements, and other revisions is to unify the waste legislation within the EU and to enhance the use of waste as a resource in member states.

**Land use**

Land use planning and management play a central role in improving the integration of land use with environmental aspects. Decisions relating to land use planning and management are made on a local or regional level (regional plan, master plan, and detailed plan). However, European Commission must ensure that member states take environmental aspects into account in their land use and regional development plans and implement integrated land use strategies. Negotiations are currently underway regarding e.g. the implementation of the EU's Marine Spatial Planning Directive. Marine spatial planning is one of the aids in improving the condition of the seas to a satisfactory level by 2020, as stipulated by the directive.

## Scope

The scope of the programme mainly covers the core programme area and the adjacent regions. The core programme area includes South Karelia, South Savo, Kymenlaakso, city of St. Petersburg, and the Leningrad Region. The adjacent areas include Päijät-Häme, Uusimaa, North Savo, and North Karelia in Finland, and the Republic of Karelia in Russia. Partners from the adjoining regions must have expertise or knowhow that is not available in the core area. Such knowhow includes, for example, the health cluster, food products, and water and air processes (North Savo), medical technologies and processes (Uusimaa), cleantech, water and waste management (industrial and service sectors) and design (Päijät-Häme), forest bio-economy, technology and materials (North Karelia), and nature tourism and forest-related knowhow (Republic of Karelia). Turku and Moscow are included in the programme as economically and culturally significant centres.

In addition, the programme affects areas bordering the programme area.

**South-East Finland - Russia CBC 2014-2020 Programme area**



## Description of the assessment method

The assessment process is described in detail in the participation and assessment plan of the CBC programme.

Frank Hering from the Regional Council of Kymenlaakso has been responsible for the implementation of the assessment process. The Regional Council of Kymenlaakso has acted as the responsible administrative authority.

The assessment work has been integrated with the preparation of the actual CBC programme. This has made it possible to influence the contents of the CBC programme, and to observe central environmental aspects already during the assessment process.

Central economic, socio-cultural, and environmental impacts are considered in the assessment. Each priority included in the programme is assessed separately. In addition, their combined impacts are assessed. The main means of the assessment is the use of assessment tables. In the event of significant impacts, further descriptions are also provided.

The law on the assessment of the effects of certain plans and programmes (200/2005) will be applied to the assessment process. This law corresponds to the EU's SEA directive (Strategic Environmental Assessment). The accuracy of the assessment is related to the general level of the programme.

The Southeast Finland Centre for Economic Development, Transport, and the Environment (ELY Centre) has acted as the responsible authority as required by the SOVA law. The authorities responsible for the SOVA law within the South Savo Ely Centre have been consulted and invited to official negotiations.

## Considering alternatives

According to the SOVA legislation, alternative approaches must be considered in the assessment. At the minimum, the assessment must cover two alternatives: implementing the project, and not implementing it. (The latter is the so-called zero alternative).

The assessment of the South-East Finland CBC programme covers two alternatives: Alternative 0 (the actions proposed in the programme are not executed) and Alternative 1 (the programme is executed in its entirety).

## Evaluation of the current situation

The current economic, social, and environmental state of the programme area is described in detail in the CBC programme document (Chapter 2: Description and analysis of the programme area). This assessment of the current state included in the environmental report only covers the central matters relating to environmental aspects and environmental assessment.

The programme area consists of several parts that differ in various respects. Differences between scarcely populated programme areas and city areas are huge. Youth emigration, ageing of the population, and, in places, poor employment situation is a problem in the countryside and also in many small towns. With a population of five million, St. Petersburg is the fourth largest city in Europe and the most northernmost metropolis in the world. The impacts of the St. Petersburg economic area extend to the entire programme area. This also creates special challenges to the environment.

The central natural elements in the programme area include the Baltic Sea, extensive forests and waterways, and various mire and wetland areas. In the provinces, the landscape is characterised by the mosaic of agricultural land. More extensive open fields are found in few places only within the programme area.

The main environmental problem in the area is the poor state of the Baltic Sea. Eutrophication is among the main problems caused by over a century of excessive nutrient loading by human population. The loading is caused by housing, the industrial sector, agriculture, and forestry of the countries in the Baltic region. The wastewater loading of St. Petersburg has been reduced in recent years. However, there is still room for improvement in wastewater treatment in Russian parts of the programme area.

Hazardous substance and oil shipment volumes are constantly increasing in the Gulf of Finland constituting a significant environmental risk for the Baltic Sea and its coastal areas. Also large agricultural units (e.g. poultry farms) and industrial facilities and similar pose an environmental risk relating to leakages and exceptional situations.

Underwater nature of the Finnish territorial waters of the Baltic Sea has been carefully inventoried in the last decade. Inventory and research projects are currently underway in Russia also. The results of research and inventories create new tools for marine spatial planning and at the same time support the sustainable use of marine areas in future.

In addition to the Baltic Sea, eutrophication has affected the state of many lakes and rivers. However, the number of point pollution sources has reduced significantly over the past years. The diffuse pollution from agriculture remains a major challenge. The restoration needs of waterways are emphasised, because many lakes, rivers, and wetlands are very important for biodiversity.

There are a lot of forests in the programme area, most of which are commercial forests. The network of conservation areas has been developed but there are defects in the protection of old natural forests in particular. A forest conservation programme based on voluntary conservation has been established in Finland as one solution to this problem.

Apart from the Eastern Gulf of Finland National Park, there are no other cross-border national parks or significantly large conservation areas in South-East Finland. The linking of nature conservation areas is poor in many places and the conservation network is not comprehensive in all respects. The pressure for land use at border crossing points, for example, is emphasised in South-East Finland.

The aims of the *Green Belt of Fennoscandia* cooperation between Norway, Russia and Finland include establishing nature conservation cooperation and developing the linking of nature areas. The nature conservation cooperation is connected to, for example, developing of nature conservation network, Baltic Sea conservation, Lake Ladoga, seal conservation at Saimaa, and migratory fish protection.

The level of nature and environmental conservation is higher in Finland than in Russia. This poses challenges to environmental cooperation. The environmental legislation and standards and the working methods clearly differ in the EU and Russia. Unlike in Russia, challenges posed by climate change and decarbonisation are key aspects and the shift towards a bio-economy has been made a central developmental goal in many provinces.

Carbon dioxide (CO<sub>2</sub>) emissions have declined significantly in South-East Finland from the level in 1990. For example in Kymenlaakso, the reduction was over 50 % and in South Karelia over 25 % (Regional Eco-Efficiency Monitoring Programme, ECOREG, South-East Finland). CO<sub>2</sub> emissions generated by fossil fuels used by the industry and in energy production in South-Savo have also reduced. This is due to the fuel choices, technological developments, and investments made in enhancing the use of wood fuels. However, the main reason for the decrease in the level of emission levels in Kymenlaakso is structural changes within the forest industry.

In Kymenlaakso and South-Karelia, over 70% of the energy used is produced using renewable energy sources. In Etelä-Savo, the usage rate of renewable energy sources was around 50% (Regional Eco-Efficiency Monitoring Programme, ECOREG, South-East Finland). Black liquor used by the forest industry contributes significantly to these percentages. The production of wind and solar power develops slowly in the area. The aim is that the use of fossil fuels is discontinued either to the extent possible or entirely in future. Eco-efficiency is considered an important developmental goal.

The changing climate and extreme weather conditions, which are becoming more common, require action, and the threats posed by global warming need to be prepared for. Some of the industrial and residential areas in the coastal parts of the programme area are prone to flooding. Climate change may also have other unforeseeable consequences. For example, it is expected that the temperature of the Baltic Sea will rise significantly.

EU's waste policy and Finnish Waste Act are based on the hierarchy of waste targets. According to them, the primary aim is to prevent the generation of waste. Recycling of waste to be used as a raw material for new products is secondary. Waste should be burned only when its generation cannot be prevented or generated waste cannot be recycled. The utilisation rate of waste has increased in recent years significantly, as new waste incineration plants have been commenced. In Kymenlaakso, for example, the waste utilisation rate is over 90%.

The position of the entire programme area as an energy and economic corridor between Russia and EU is emphasised. The position of South-Karelia and Kymenlaakso in particular as internationally significant logistics provinces is constantly strengthening. Due to busy traffic and industrial operations, many residents of the programme area are exposed to poor air quality as well as smell, vibration, and noise disturbance. In Finland, air pollution problems are notably less severe than in the St. Petersburg metropolitan area.

The impact of the St. Petersburg economic area is very significant to the bordering Finnish provinces. Although the standard of living in the St. Petersburg region is above the Russian national average, the gross national product per resident is significantly lower than in Finland. This is reflected, for example, in the volume of cross-border shopping trips in South-East Finland so that in 2013, 73 % of cross-border shoppers were from the St. Petersburg area. Large shopping centres and tourist destinations that are significant on an international scale have been constructed and are being planned in Finnish bordering provinces, which have a significant impact on community structure and traffic volumes.

## Assessment of the impacts of the measures

### Priority 1: Lively, active and competitive economy

The central aim of the priority is to develop the economy of the programme area and to support the operations of SMEs in particular.

Table: Environmental viewpoints, opportunities for improving the state of the environment, and possible threats related to this priority.

Supported activities	Central environmental viewpoints	Opportunities	Threats
1) Developing the operating conditions and business operations of SMEs	<p>Environmental impacts relating to production and company's operations must be identified, and the level of environmental protection increased.</p> <p>Environmental expertise is becoming an increasingly important instrument of competition and an essential precondition for a company's success.</p> <p>Many SMEs have a high potential for eco- and resource efficiency.</p> <p>Companies must respond to the changing legal requirements and customer expectations quicker and quicker.</p> <p>The challenge is to separate the use of energy and natural resources from economic growth.</p>	<p>Included in the draft programme:</p> <ul style="list-style-type: none"> <li>Developing energy cooperation, eco-efficient logistics systems (cf. supported activities 4 and 5)</li> <li>Developing sustainable product and service solutions (as a result of corporate cooperation)</li> </ul> <p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>Separating the use of energy and natural resources from economic growth</li> </ul> <p>Priority 3 specifies central environmental goals that can be implemented through development actions by SMEs: eco-efficiency and resource smartness, environmental management, development of waste management system and recycling, favouring best available technologies, etc.</p>	<ul style="list-style-type: none"> <li>Environmental matters / sustainable development are not made the goal of developing the business operations</li> <li>Attitude prevents development and innovation operations</li> <li>Small companies lack the financial resources or skills to develop environmental matters</li> </ul>
2) Supporting trade and investments	<p>The environmental impacts of trade are related to e.g. transportation and related emissions, waste, storing, and energy consumption. Investments in outdated technology result in an increased environmental load.</p>	<ul style="list-style-type: none"> <li>As above</li> </ul>	<ul style="list-style-type: none"> <li>Environmental aspects / sustainable development are not made the goal of trade and investments</li> <li>Attitude prevents development and innovation operations</li> </ul>

3) Culture and tourism	<p>Tourism is a strongly developing sector, so related environmental impacts require special attention.</p> <p>Traffic generates emissions and tourism puts a strain on the local nature.</p> <p>Cultural activities can also put pressure on the environment for example in connection to (major) events.</p>	<p>Included in the draft programme: Sustainable tourism</p> <p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Developing tourist services so that they promote environmental protection and on the terms of the natural world and local culture</li> <li>• Eco-efficient product and service solutions</li> <li>• Applying the principles of sustainable tourism</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental aspects / sustainable development are not the goal of developing travel companies</li> <li>• Attitude prevents development and innovation operations</li> <li>• Nature destinations suffer</li> <li>• Negative impacts of traffic increase (emissions, noise, etc.)</li> <li>• Negative impacts of tourism that requires plentiful space, or is based on motorised transport</li> <li>• Services that require a lot of energy (e.g. skiing tunnels and surfing equipment of indoor sports halls)</li> </ul>
4) Rural development	<p>CBC programme cannot directly affect the operating conditions of agriculture and forestry.</p> <p>Rural tourism is a growing sector based on the natural conditions and resources of the countryside and small businesses. It is easy to implement sustainably.</p>	<p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Utilisation of local special characteristics and regional originality (organic and local food etc.)</li> <li>• Sustainable development of bioenergy production</li> <li>• Sustainable utilisation of ecosystem services such as landscape values and tranquillity</li> </ul>	<ul style="list-style-type: none"> <li>• Insufficiency of the technical network (e.g. relating to waste water treatment) can worsen the environmental impact</li> </ul>
	<p>In terms of the environment, significant development relates to e.g. bioenergy entrepreneurship, local food, and organic production.</p> <p>The environmental challenges relating to technical maintenance (traffic, water treatment, data network etc.) are emphasised in rural areas.</p>	<ul style="list-style-type: none"> <li>• Following the principles of sustainable rural tourism.</li> <li>• Improving the environment (landscape management projects, water treatment projects, etc.)</li> </ul>	

<p>5) Traffic and logistics</p>	<p>The principal environmental load is related to the emissions and energy consumption of traffic and logistics operations.</p> <p>Well-functioning and efficient logistics system and smooth border-crossing can, however, reduce the negative impacts significantly.</p> <p>Road transportation and private motoring puts more pressure on the environment than rail / sea transportations.</p> <p>Safety and health risks and problems relating to the comfort of living are emphasised (risk of environmental hazards, space requirement of traffic areas, noise and light pollution, etc.)</p>	<p>Included in the draft programme:</p> <ul style="list-style-type: none"> <li>• Developing a functional and effective traffic system</li> </ul> <p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Efficient combining of road transportation with rail and sea transportation or replacing road transportations with rail transportations</li> <li>• Developing the conditions for public transport / using existing traffic infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Increased traffic and emission volumes</li> <li>• Environmental risks such as oil transportation accidents</li> <li>• Favouring solutions based on private motoring</li> <li>• Urban sprawl</li> </ul>
<p>6) Research and education / innovations and technologies</p>	<p>Environmental expertise promotes the development and introduction of environmental innovations.</p> <p>Research and education operations create technical and knowledge- based tools for solving environmental challenges. Environmental awareness and education affect consumer behaviour.</p>	<p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Supporting environmental innovations</li> <li>• Enhancing eco-efficiency</li> <li>• Developing resource smartness</li> <li>• Managing environmental risks</li> <li>• Preventing environmental impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Attitude prevents development and innovation operations</li> <li>• Environmental matters are not made the goal of R&amp;D operations and the education sectors</li> <li>• Insufficient investment in environmental innovations</li> </ul>
<p>7) Cooperation in the energy sector</p>	<p>Emissions from energy production are a central factor contributing to climate change.</p> <p>Increasing the use of renewable energy sources / bioenergy has a positive impact on the climate.</p> <p>Diversifying the energy sector requires that the energy network is developed intelligently (intelligent networks).</p> <p>Production peaks must be levelled (e.g. output levelling of wind power generation with solar energy, batteries, etc.)</p>	<p>Included in the draft programme:</p> <p>Developing energy cooperation (developing eco-efficiency, use of renewable energy sources, utilisation of BAT environmental technologies, environmental management)</p> <p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Extensive introduction of renewable energy sources.</li> <li>• Discontinuation of the use of fossil fuels</li> <li>• Development of intelligent networks</li> <li>• Output levelling of production peaks and international cooperation</li> </ul>	<ul style="list-style-type: none"> <li>• Russia perceives a threat to its interests in the EU's long-term aim of abandoning use of fossil fuels.</li> </ul>

Impact area -specific assessment of the impacts of the priority

Impacts (green = positive, yellow = neutral, red = negative (negative impacts are locally possible or possible if	1	2	3	4	5	6	7	Combined impacts
<b>Social impacts on:</b>								
human health								
living conditions and recreation								
education and competence								
employment								
wellbeing								
safety								
comfort of living								
equality								
local identity								
<b>Ecological impacts on:</b>								
biodiversity								
continuous natural areas and green corridors								
soil								
water								
air								
climate/climate change prevention								
prevention of environmental risks								
<b>Cultural impacts on:</b>								
community structure								
built environment								
negative effects of traffic								
landscape								
cityscape								
cultural heritage								
<b>Economic impacts on:</b>								
production and training								
consumption of energy and natural resources (environmental impacts)								
economic development								
competitiveness								
regional image								
tourism								

## A description of central environmental impacts

Although the combined impacts of Priority 1 are neutral, it is the only alternative that contains potentially negative impacts on the environment. Its central goal is to develop the operations of SMEs, therefore contributing to economic growth. Economic growth adds to environmental pressure if environmental aspects are not considered. The challenges include separating the use of energy and natural resources from economic growth. The main environmental impacts of SME operations are related to the emissions and loading resulting from production, traffic, and energy consumption. Special attention should be paid to environmental risks (leaks, environmental hazards, etc.). Impacts on the comfort of living (e.g. noise disturbance) and diversity of housing can be negative (e.g. near valuable sites in case of nature tourism).

However, the impacts of the programme are indirect because it does not facilitate the implementation of extensive construction/infrastructure projects by SMEs. The programme will primarily support investments in human capital, i.e. employee expertise. If the aim of the development, education, and innovation work is to actively improve ecological efficiency, it is possible that economic growth will not increase environmental load. Development of a functional and efficient logistics and traffic system can significantly mitigate environmental pressure.

Enhancing bioenergy production would have a positive impact on the climate as well as on the employment situation in and vitality of rural areas. Conflicts can occur between the need to use renewable energy sources, and the need to protect biodiversity (e.g. efficient use of forests vs. upholding environmental values). The priority will have clearly positive impacts on economic and social welfare. It includes various opportunities for eliminating the pressure on the environment and even for improving the state of the environment so that the combined environmental impacts of the priority are mainly neutral. Opportunities for improving the state of the environment and to prevent the threats listed in the assessment table must be included in the programme.

## Suggested measures to prevent negative impacts

- Projects related to climate change prevention must be supported
- Improving eco-efficiency should be made a significant developmental objective in SMEs and a means to mitigate climate change. The possible goals include reducing the material dependency of products and services, reducing energy dependency, improving energy efficiency, reducing the use of harmful substances, increasing the suitability of materials for recycling, promoting the sustainable use of renewable natural resources, increasing the durability and life expectancy of products, and increasing the proportion of services in the production of commodities.
- Promotion of environmental management must be made a developmental goal of SMEs and the commitment of companies to sustainable development required in projects
- Alternative aims include promoting or supporting introduction of environmental management systems.
- The development of environmental innovations must be made a priority in research and development work.
- The use of renewable energy sources and developing their production processes must be made a special developmental goal.
- Measures to promote environmental awareness and environmental education should be supported.
- The opportunities to improve the state of the environment and to prevent threats presented in the assessment table must be clearly included in the programme.
- The proposed activities are closely related to the goals set in Priority 3. It must be emphasised in the programme that SMEs are important in implementing the environmental goals of Priority 3.

## Priority 2: Innovative, skilled and well-educated area

The priority will primarily support investments in human capital, i.e. employee expertise.

Table: Environmental viewpoints, opportunities for improving the state of the environment, and probable threats related to this priority.

Supported activities	Central environmental viewpoints	Opportunities	Threats
1) Research and education	No immediate environmental impacts  Environmental aspects are not emphasised in the priority nor are concrete measures/developmental objectives relating to the environment set	<ul style="list-style-type: none"> <li>Integrating environmental aspects in the research and education activities of various fields</li> <li>Supporting environmental innovations (e.g. new ICT solutions to solve environmental challenges)</li> <li>Developing research and education relating to eco-efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Attitude prevents development and innovation activities in the environmental sector</li> <li>Environmental aspects are not made a research and education topic</li> </ul>
2) Innovations and technological development	No immediate environmental impacts	<ul style="list-style-type: none"> <li>As above</li> </ul>	<ul style="list-style-type: none"> <li>No investments are made into environmental innovations</li> <li>The importance of and opportunities offered by environmental innovations are not recognised.</li> </ul>
3) Development of knowledge base and lifelong learning	No immediate environmental impacts	<ul style="list-style-type: none"> <li>As above</li> </ul>	<ul style="list-style-type: none"> <li>Attitude prevents development and innovation activities in the environmental sector</li> </ul>

Impacts (green = positive, yellow = neutral, red = negative (negative impacts are possible locally))	1	2	3					Combined impacts
<b>Social impacts on:</b>								
human health	yellow	yellow	yellow					yellow
living conditions and recreation	yellow	yellow	yellow					yellow
education and competence	green	green	green					green
employment	green	green	green					green
wellbeing	green	green	green					green
safety	yellow	yellow	yellow					yellow
comfort of living	yellow	yellow	yellow					yellow
equality	yellow	yellow	yellow					yellow
local identity	yellow	yellow	yellow					yellow
<b>Ecological impacts on:</b>								
biodiversity	yellow	yellow	yellow					yellow
continuous natural areas and green corridors	yellow	yellow	yellow					yellow
soil	yellow	yellow	yellow					yellow
water	yellow	yellow	yellow					yellow
air	yellow	yellow	yellow					yellow
climate/climate change prevention	yellow	yellow	yellow					yellow
prevention of environmental risks	yellow	yellow	yellow					yellow
<b>Cultural impacts on:</b>								
community structure	yellow	yellow	yellow					yellow
built environment	yellow	yellow	yellow					yellow
negative impacts of traffic	yellow	yellow	yellow					yellow
landscape	yellow	yellow	yellow					yellow
cityscape	yellow	yellow	yellow					yellow
cultural heritage	yellow	yellow	yellow					yellow
<b>Economic impacts on:</b>								
production and training	yellow	yellow	yellow					yellow
consumption of energy and natural resources (environmental impacts)	yellow	yellow	yellow					yellow
economic development	green	green	green					green
competitiveness	green	green	green					green
regional image	yellow	yellow	yellow					yellow
tourism	yellow	yellow	yellow					yellow

### A description of central environmental impacts

Implementation of this priority will not have significant negative environmental impacts. It provides opportunities for developing education, research, and innovation operations in the environmental sector. It also creates a basis for distributing practices that follow the principles of sustainable development and for enhancing environmental awareness. The priority will primarily support investments in human capital, i.e. employee expertise.

Environmental aspects are not emphasised in the priority, nor are there yet any concrete measures/developmental aims relating to the environment.

### Suggested measures to prevent negative impacts

- Measures promoting environmental education and environmental awareness and environmental expertise must be supported inter-disciplinarily where possible in the education and research operations of various fields.
- Investments must be made in environmental investments.
- The programme must include opportunities for improving the environment and to prevent the threats listed in the assessment table.

### Priority 3: Attractive and clean environment and region

Table: Environmental viewpoints, opportunities for improving the state of the environment, and possible threats related to this priority.

Supported activities	Central environmental viewpoints	Opportunities	Threats
1) Environmental protection and efficient management and use of natural resources	<p>Priority 3 constitutes a set of actions aiming at environmental protection.</p> <p>The proposed actions have positive environmental impacts. Key factors include sustainable use of natural resources, nature conservation, Baltic Sea protection, eco-efficiency and environmental management, use of renewable energy sources, decarbonisation, and climate change prevention, promotion of environmental awareness, environmental risk management, and development of planning tools.</p> <p>Environmental knowledge and research is strengthened.</p>	<p>The priority includes various opportunities for eliminating pressure on the environment and for improving the state of the environment.</p> <p>Included in the draft programme:</p> <ul style="list-style-type: none"> <li>• Sustainable use of natural resources and related R&amp;D operations</li> <li>• Reducing emissions</li> <li>• Implementing the goals of low-carbon society</li> <li>• Developing eco-efficiency (more goods and services / less emissions and pollution)</li> <li>• Enhancing resource efficiency</li> <li>• Developing environmental management and subsequently competitiveness</li> <li>• Introduction of auditing, certification, and review tools</li> <li>• Enhancing environmental awareness</li> <li>• Environmental risk management / preventing accidents</li> </ul> <p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Separating the use of energy and natural resources from economic growth</li> </ul>	<ul style="list-style-type: none"> <li>• No significant threats can be identified</li> </ul>

<p>2) Waste and waste management</p>	<p>The programme mentions waste hierarchy.</p> <p>According to the programme, the primary aim is to prevent the generation of waste. Recycling of waste for use as raw material for new products is secondary. Waste should be burned only when its generation cannot be prevented, or when generated waste cannot be recycled.</p>	<p>Included in the draft programme:</p> <ul style="list-style-type: none"> <li>• Developing waste treatment systems / observing the goals of waste hierarchy</li> </ul> <p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Minimising waste disposal</li> <li>• Changing the concept of waste: from waste into a raw material</li> <li>• Shifting towards a recycling society</li> <li>• Using methane emissions from landfill sites</li> </ul>	<ul style="list-style-type: none"> <li>• Burning of waste instead of making use of it</li> </ul>
<p>3) Biodiversity</p>	<p>Sustainable use of natural resources sets conditions for the use of raw materials. Preserving environmental values is emphasised outside conservation areas also.</p> <p>The conservation area network creates a basis for the preservation of diversity. The importance of the linking of valuable sites is highlighted in fragmented environments and in areas with pressure on land use in particular.</p>	<p>Included in the draft programme:</p> <ul style="list-style-type: none"> <li>• Maintaining biodiversity</li> <li>• Improving the efficiency of Baltic Sea conservation</li> <li>• Promoting use of intelligent and sustainable use of natural resources</li> <li>• Improving the state of conservation</li> </ul> <p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• The value of functional nature / creating, developing, and preserving a conservation area network</li> <li>• Creating green corridors</li> <li>• Using marine spatial planning tools</li> <li>• Preserving underwater environmental values</li> </ul>	<ul style="list-style-type: none"> <li>• No significant threats can be identified</li> </ul>
<p>4) Adaptation to climate change</p>	<p>In addition to climate change prevention, challenges relating to adaptation are emphasised (preparing for floods etc.)</p>	<p>Included in the draft programme:</p> <ul style="list-style-type: none"> <li>• Cooperation relating to climate change prevention</li> <li>• Climate models and adaptation options</li> </ul> <p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Responding to the challenges posed by climate change</li> <li>• Promoting the aim of a low- carbon society</li> </ul>	<ul style="list-style-type: none"> <li>• Focus on adaptation to climate change instead of prevention</li> </ul>

Impacts (green = positive, yellow = neutral, red = negative (negative impacts are possible locally))	1	2	3	4				Combined impacts
<b>Social impacts on:</b>								
human health	Green	Green	Yellow	Green				Green
living conditions and recreation	Green	Green	Green	Green				Green
education and competence	Green	Green	Green	Green				Green
employment	Yellow	Yellow	Yellow	Yellow				Yellow
wellbeing	Yellow	Yellow	Yellow	Yellow				Yellow
safety	Yellow	Yellow	Yellow	Green				Yellow
comfort of living	Yellow	Yellow	Yellow	Yellow				Yellow
equality	Yellow	Yellow	Yellow	Yellow				Yellow
local identity	Yellow	Yellow	Yellow	Yellow				Yellow
<b>Ecological impacts on:</b>								
biodiversity	Green	Yellow	Green	Green				Green
continuous natural areas and green corridors	Green	Yellow	Green	Green				Green
soil	Green	Green	Green	Green				Green
water	Green	Green	Green	Green				Green
air	Green	Green	Green	Green				Green
climate/climate change prevention	Green	Green	Green	Green				Green
prevention of environmental risks	Green	Green	Green	Green				Green
<b>Cultural impacts on:</b>								
community structure	Yellow	Yellow	Yellow	Yellow				Yellow
built environment	Yellow	Yellow	Yellow	Yellow				Yellow
negative impacts of traffic	Yellow	Yellow	Yellow	Yellow				Yellow
landscape	Yellow	Yellow	Yellow	Yellow				Yellow
cityscape	Yellow	Yellow	Yellow	Yellow				Yellow
cultural heritage	Yellow	Yellow	Yellow	Yellow				Yellow
<b>Economic impacts on:</b>								
production and training	Yellow	Yellow	Yellow	Yellow				Yellow
consumption of energy and natural resources (environmental impacts)	Green	Green	Yellow	Green				Green
economic development	Yellow	Yellow	Yellow	Yellow				Yellow
competitiveness	Green	Yellow	Yellow	Yellow				Yellow
regional image	Green	Green	Green	Green				Green
tourism	Yellow	Yellow	Green	Yellow				Yellow

### A description of central environmental impacts

The aim of the priority is to develop the programme area into a sustainable and attractive operating environment. The aim is to promote environmental and nature conservation comprehensively, and therefore the combined environmental impacts of the priority are clearly positive.

The central developmental aims of the priority include development of the waste management system, sustainable use of natural resources, nature conservation, Baltic Sea conservation, eco-efficiency and environmental management, use of renewable energy sources, decarbonisation, environmental awareness, and development of planning tools. Environmental knowledge and research is also strengthened. Sustainable use of natural resources is one of the developmental areas, and related research and development operations are supported.

The priority aims to develop residential and operating environments and prevent environmental risks, and has a positive impact on the living conditions and health of the residents. A clean and diverse natural environment is essential for the development of tourism, and enhances the image of the region.

The priority takes account of topical environmental challenges and allows for the implementation of related projects.

### Suggested measures to prevent negative impacts

- In terms of waste systems, it must be ensured that implementing the aims of waste hierarchy is being advanced.
- Based on the hierarchy, waste should be burned only when its generation cannot be prevented, or when generated waste cannot be recycled.
- All operators must also invest in climate change prevention – not only in adaptation.
- The opportunities to improve the state of the environment and to prevent threats presented in the assessment table must be clearly included in the programme.

### Priority 4: Well-connected region

The primary aim of this priority is to enhance the smoothness and safety of border crossing.

Table: Environmental viewpoints, opportunities for improving the state of the environment, and possible threats related to this priority.

Supported activities	Central environmental viewpoints	Opportunities	Threats
1) Effective and secure borders	<p>Effective border-crossing mitigates pressure on the environment and environmental risks.</p> <p>Increasing volume of heavy traffic and private cars creates environmental pressure (emissions, noise, spatial requirements, and environmental risks). Favouring rail and sea transportation is justified from an environmental viewpoint.</p> <p>The priority does not emphasise environmental viewpoints; impacts are indirect.</p>	<p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Improving the smoothness of border-crossing</li> <li>• Eliminating traffic jams and related environmental pressure</li> <li>• Supporting eco- efficient logistics system</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing traffic volumes add to the environmental impacts of the traffic (private motoring increases)</li> <li>• The proportion of road transportation of goods increases</li> <li>• The risk of environmental accidents increases</li> <li>• Extensive construction at border crossing points affects the environment and land use in the area</li> </ul>
2) Improving the infrastructure and equipping of border crossing points	<p>Well-functioning border crossing points reduce environmental pressure and risks Increasing volume of heavy traffic and private cars creates environmental pressure (emissions, noise, spatial requirements).</p> <p>Extensive construction at border crossing points affects the local environment and land use. The priority does not emphasise environmental viewpoints; impacts are indirect.</p>	<p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Improving the smoothness of border-crossing</li> <li>• Eliminating traffic jams and related environmental pressure</li> <li>• Observing / extending the green highway concept in the development and construction of border crossings</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing traffic volumes add to the environmental impacts of the traffic (private motoring increases)</li> <li>• The proportion of road transportation of goods increases</li> <li>• The risk of environmental accidents increases</li> <li>• Extensive construction at border crossing points affects the environment and land use in the area</li> </ul>
3) Improving border control and clearance methods, developing the Visa process	<p>Well-functioning border crossing reduces environmental pressure (no unnecessary waiting, eliminating congestion).</p>	<p>The priority facilitates:</p> <ul style="list-style-type: none"> <li>• Improving the smoothness of border-crossing</li> <li>• Eliminating traffic jams and related environmental pressure</li> </ul>	<ul style="list-style-type: none"> <li>• Increasing traffic volumes add to the environmental impacts of the traffic (private motoring increases)</li> <li>• The proportion of road transportation of goods increases</li> <li>• The risk of environmental accidents increases</li> <li>• Extensive construction at border crossing points affects the environment and land use in the area</li> </ul>

Impacts (green = positive, yellow = neutral, red = negative (negative impacts are possible locally))	1	2	3					Combined impacts
<b>Social impacts on:</b>								
human health	yellow	yellow	yellow					yellow
living conditions and recreation	yellow	yellow	yellow					yellow
education and competence	yellow	yellow	yellow					yellow
employment	yellow	yellow	yellow					yellow
wellbeing	yellow	yellow	yellow					yellow
safety	green	green	green					green
comfort of living	yellow	yellow	yellow					yellow
equality	yellow	yellow	yellow					yellow
local identity	yellow	yellow	yellow					yellow
<b>Ecological impacts on:</b>								
biodiversity	yellow	yellow	yellow					yellow
continuous natural areas and green corridors	yellow	yellow	yellow					yellow
soil	yellow	yellow	yellow					yellow
water	yellow	yellow	yellow					yellow
air	yellow	yellow	yellow					yellow
climate/climate change prevention	yellow	yellow	yellow					yellow
prevention of environmental risks	yellow	yellow	yellow					yellow
<b>Cultural impacts on:</b>								
community structure	yellow	-	yellow					yellow
built environment	yellow	yellow	yellow					yellow
negative impacts of traffic	-	-	-		-			yellow
landscape	yellow	yellow	yellow					yellow
cityscape	yellow	yellow	yellow					yellow
cultural heritage	yellow	yellow	yellow					yellow
<b>Economic impacts on:</b>								
production and training	yellow	yellow	yellow					yellow
consumption of energy and natural resources (environmental impacts)	yellow	yellow	yellow					yellow
economic development	green	green	green					green
competitiveness	yellow	yellow	yellow					yellow
regional image	yellow	yellow	yellow					yellow
tourism	yellow	yellow	yellow					yellow

### A description of central environmental impacts

The priority facilitates the development of infrastructure and improving the equipping of border-crossing points. This is the only priority included in the programme that concerns certain geographical locations: border-crossing points. Developing border crossing points may increase traffic volume, but it also eliminates current bottlenecks and related traffic jam and traffic safety problems. Construction of infrastructure can create environmental pressure relating to the use of space and natural resources, temporary noise disturbance, and others. Actions are directed to areas with existing community structural conditions for the development of border infrastructure. New border crossing points are not currently being planned. The developed border crossing points are currently in use, and have been included in various land use plans and traffic systems.

Parikkala border crossing point (Parikkala-Syväoro) is a temporary border crossing point. At present, it is not an international border crossing point and can therefore be used by Finnish and Russian citizens only. The option of making Parikkala-Syväoro an international border crossing point has been investigated repeatedly. Infrastructural projects aimed at developing the border crossing point would have local environmental impacts (including environmental impacts relating to the construction project and space requirement). Vaalimaa is the busiest border crossing point to and from Russia for passenger traffic. The extensive construction began some years ago. Developing the border area into an international centre for traffic, tourism, and shopping will affect traffic volumes and communal structure. This development has been taken into account in the valid regional plan and other regional level plans. The priority will only support border crossing infrastructure and measures to improve the safety and smoothness of border crossing. These development measures have many positive environmental impacts including improved smoothness of border crossing, eliminating traffic jams and related environmental pressure, supporting eco-efficient logistics system, and improving traffic safety.

Environmental aspects are not emphasised in the priority, nor are they yet any concrete measures/developmental aims relating to the environment.

### Suggested measures to prevent negative impacts

- Attention must be paid to increasing traffic volumes and related environmental pressure in the border region. In case of infrastructure projects at border-crossing points, it should be required that the growth is realised while preserving space, natural resources, and other environmental values. The measures must also promote the integrity of the community structure.
- The Finnish section of the E18 highway ends at the Vaalimaa border. The road has been constructed as a "Green Highway". The aim of the green highway -project is to turn E18 that runs through the region into a showroom of ecological solutions, renewable energy sources, new biofuels, and electric cars. Construction solutions are based on eco-efficiency of construction, use of new forms of energy, and recycling of materials. New practical solutions are developed constantly and they include reducing the consumption of electricity through intelligent control, solar panels and led lights, and the use of geothermal heat in the heating of service buildings. The aims of the concept must be observed systematically in the border-crossing region also.
- The opportunities to improve the state of the environment and to prevent threats presented in the assessment table must be included in the programme.

## Cross-cutting themes

Tourism and culture have been suggested as the cross-cutting themes of the programme. These themes are closely linked to the development of the actions such as to the development of SMEs and education and to environmental protection. The expected impacts of the development of culture and tourism are specified in the assessment section of Priority 1.

Ecological sustainability is a central requirement for and goal of the CBC programme. The sustainability principle has been made the common theme of the EU's ENI programme. For this reason, environmental aspects are considered carefully in the CBC programme document. The programme describes e.g. the central environmental aims, the current state of the environment, and current environmental challenges.

## Combined impacts

The combined impacts of the programme on the environment are, for the most part, neutral or slightly positive. Environmental challenges are related to traffic, energy consumption, and emissions. However, these negative impacts are only theoretical, because the programme will affect traffic, energy consumption, and emissions only indirectly. In addition, together the priorities provide sufficient opportunities for the mitigation and prevention of the aforementioned negative impacts by e.g. improving environmental expertise and environmental cooperation.

The projected financial and social impacts of the programme are positive.

The aims of the programme are based on the view that economic growth, social development, and environmental protection all improve the quality of life. Innovations and environmentally friendly technology can improve the competitiveness of the economic area and therefore create jobs.

The priorities complement each other in achieving the environmental aims. Negative impacts can be prevented and mitigated.

The potentially negative environmental impacts of the programme are mainly indirect and minor in significance. The programme will primarily support investments in human capital, i.e. employee expertise.

Impacts (green = positive, yellow = neutral, red = negative (negative impacts are possible locally))	1	2	3	4				Combined impacts
<b>Social impacts on:</b>								
human health	yellow	yellow	green	yellow				yellow
living conditions and recreation	yellow	yellow	green	yellow				yellow
education and competence	green	green	green	yellow				green
employment	green	green	yellow	yellow				+
wellbeing	green	green	yellow	yellow				+
safety	yellow	yellow	yellow	green				yellow
comfort of living	yellow	yellow	yellow	yellow				yellow
equality	yellow	yellow	yellow	yellow				yellow
local identity	yellow	yellow	yellow	yellow				yellow
<b>Ecological impacts on:</b>								
biodiversity	yellow	yellow	green	yellow				yellow
continuous natural areas and green corridors	yellow	yellow	green	yellow				yellow
soil	yellow	yellow	green	yellow				yellow
water	yellow	yellow	green	yellow				yellow
air	yellow	yellow	green	yellow				yellow
climate/climate change prevention	yellow	yellow	green	yellow				yellow
prevention of environmental risks	yellow	yellow	green	yellow				yellow
<b>Cultural impacts on:</b>								
community structure	yellow	-	yellow	yellow				yellow
built environment	yellow	yellow	yellow	yellow				yellow
negative impacts of traffic	-	-	-	yellow	-			yellow
landscape	yellow	yellow	yellow	yellow				yellow
cityscape	yellow	yellow	yellow	yellow				yellow
cultural heritage	yellow	yellow	yellow	yellow				yellow
<b>Economic impacts on:</b>								
production and training	green	yellow	yellow	yellow				yellow
consumption of energy and natural resources (environmental impacts)	yellow	yellow	green	yellow				yellow
economic development	green	green	yellow	green				green
competitiveness	green	green	yellow	yellow				+
regional image	yellow	yellow	green	yellow				yellow
tourism	green	yellow	yellow	yellow				yellow

## Interrelationships between the environmental impacts

The programme introduces four priorities, which address environmental aspects in different ways. Priority 3 is central from an environmental point of view, as it considers the environment as a separate set of goals. In Priority 1, environmental aspects are considered as a permeating theme only. While Priorities 2 and 4 do not emphasise environmental aspects, they allow for related development operations.

Interrelationships exist within and between the priorities. If all priorities are implemented equally, they will complement each other and allow for reducing negative impacts. Potential negative impacts of any one developmental area can be mitigated or prevented by suitable measures (e.g. developing the operations of SMEs /developing environmental innovations through investments in research and education).

## Likely development if the programme is not implemented

This section describes the impacts of the 0 alternative (see section Considering alternatives).

The CBC programme aims to create economic growth that takes the targets of sustainable development into account. Not implementing the programme could result in growth that is based on market powers only. That would be likely to have negative impacts, e.g. on the state of the environment.

The programme promotes the development of environmental knowledge, sets eco-efficiency as an aim, and invests in the prevention of environmental risks. Not implementing the programme could result in these topics not being sufficiently included in the common cross-border development aims.

Many of the development measures included in the programme can improve the state of the environment. Not implementing the programme could result in insufficient support for environmental innovations (e.g. in terms of bioenergy and eco-efficiency).

Environmental pressure related to traffic would be likely to increase. The volume of traffic is likely to increase significantly regardless of whether or not the programme is implemented. Implementing the programme would promote the measures to prevent related risks and to mitigate negative impacts.

The expected positive impacts relate to the service structure and economy and, in particular, to skills development.

## Presumptions and uncertainties

The actions of Russia in the Crimean crisis and the subsequent economic sanctions imposed by the EU on Russia have resulted in economic uncertainty and political tension. This can significantly affect the implementation of the CBC programme.

## Suggested measures for the prevention of harmful impacts

The principal rule in the implementation and funding of the projects should be that the environmental impacts be investigated before any decisions are made considering the said projects. Projects that have significant negative impacts on the environment must not be granted public financing. In allocating public funding and when applying other guidance measures, it should be ensured that the best of the available methods from the environmental point of view, as determined during the EIA process, be used in projects with significant environmental impacts.

The party applying for project funding must investigate the environmental impacts of their project. The financing authority must inspect the assessment and report any negative environmental impacts or significant environmental aspects to the party making the funding decision.

If there is uncertainty about the environmental impacts of any one project during the programme and the project is expected to have very significant impacts on the environment, opinions or a statement can be requested from an expert body such as the ELY-Centre.

The significance of eco-efficiency will be emphasised in the programme. Developing eco-efficiency will mitigate environmental pressure especially when it is observed in all sectors.

## Proposal for the monitoring programme

The implementation of the South-East Finland – Russia ENPI CBC programme will be monitored and a Joint Monitoring Committee established for this purpose. The organisation of the monitoring is stated in section 4 of the CBC joint operational programme.

Environmental aspects are inspected during the project application procedure. Applicants must assess the environmental impacts of their project and identify the possible negative impacts. This assessment will be inspected during the project application process. Funding will not be provided to projects that have clearly negative environmental impacts.

In Finland, the sustainable development indicators used by the environmental administration can be used in monitoring the environmental impacts and assessing the state of the environment. South-Savo Ely Centre will monitor the reaching of the goals of the South-Savo Environmental Programme based on its own sustainable development indicators. Kymenlaakso and South-Karelia have a Regional Eco-Efficiency Monitoring Programme, ECOREG ([www.aavistus.fi](http://www.aavistus.fi)).

## Summary

The draft of the CBC programme does not propose measures that would have significant negative impacts on people or on the environment. Promoting social, economic, and ecological sustainability will provide a basis for the development of the priorities. Ecological sustainability is set as a condition and common theme of ENI programmes on an EU level. The programme will allow for several measures to decrease environmental pressure and to improve the state of the environment.

The negative environmental impacts of the programme are mainly indirect and minor in significance. The programme will primarily support investments in human capital, i.e. expertise of people.

Priority 1 theoretically contains potentially negative impacts, as economic growth often increases the pressure placed on the environment. These potentially negative impacts are related to traffic, energy consumption, and emissions. Improving eco-efficiency and environmental expertise may, however, be used to mitigate these negative impacts and even improve the state of the environment.

Implementation of Priority 2 will not have significant negative environmental impacts. The priority will principally support investments in the expertise of people. It provides opportunities for developing education, research, and innovation operations in the environmental sector.

The aim of Priority 3 is to develop the programme area into a sustainable and attractive operating environment. The aim is to promote environmental and nature conservation comprehensively. For this reason, the environmental impacts of the priority are clearly positive.

Priority 4 relates to the development of border-crossing points. The development activities can increase traffic volumes on the border and in the surrounding areas but will also eliminate traffic jam and safety problems. The development of the border crossing points is the only priority included in the programme that concerns certain geographical locations.

The combined impacts of the programme on the environment are, for the most part, neutral or slightly positive in both the short and the long term. Investigated separately, each priority also meets the essential requirements of sustainable development.

The impacts of the programme on community structure are neutral. The construction of infrastructure can cause environmental pressure at border-crossing points and in the surrounding areas. However, the present priorities are directed to areas with existing community structural conditions for the development of border infrastructure (land use plans such as the regional plan that support the priorities).

Economic growth often leads to increased traffic volumes. Traffic volume is already a significant challenge in the logistically important regions of South-East Finland. The increased volume of traffic at border-crossing points, both by water or land, increases environmental risks and can have negative impacts on the climate, comfort of living, and the quality of the living environment (such as noise disturbance). The programme sets aims for the mitigation of negative impacts of traffic and accident risks (e.g. marine safety, sustainable logistics system, etc.).

The aim of the programme is to develop the operations of SMEs. This may have negative impacts on energy consumption, emissions, air quality, and the climate. If the aim of the development work is to actively improve eco-efficiency, it is possible that economic growth will not increase the environmental load. Ecological efficiency is proposed as a means to control climate change. Activities relating to adaptation are supported.

From an economic point of view, impacts on consumption and production and on material property are likely to be positive. If investment is not made in environmental expertise, increasing consumption and production can result in e.g. increased waste load or speeding up of the increase in consumption. However, developing waste management is included in the supported activities.

The impacts of the programme on the landscape can relate to infrastructural projects in the surroundings of border crossing points, for example. The environmental impacts of significant projects will be investigated as part of the EIA process.

The programme proposes viewpoints and measures concerning the protection of cultural and natural heritage that could have a positive impact on the landscape, cityscape, and cultural heritage.

The implementation of the programme will not have a direct negative impact on the region's natural values or the environmental values of e.g. the sites included in the Natura 2000 programme. The programme's goals related to water areas and the Baltic Sea will have a positive impact on the soil and water and the health of humans.

The impacts of the programme on the health and wellbeing of humans are mostly positive. The promotion of economic wellbeing is emphasised in Priority 1, but also in the other priorities. All the priorities have mainly positive impacts on the living conditions and comfort of living of the residents. Increasing volume of traffic can be seen as an environmental challenge.

The impacts of the programme on research and education are positive. This is primarily due to considering investments in expertise and human capital as key factors in the promotion of competitiveness and growth. Developmental aims relating to research and education are brought up clearly.

The programme complies with international, EU, national, and regional environmental goals. Environmental aspects have been observed at an early stage during the preparation of the CBC programme.