



EUROPEAN TERRITORIAL CO-OPERATION  
AUSTRIA-CZECH REPUBLIC 2007-2013  
Gemeinsam mehr erreichen. Společně dosáhneme více.

---

# Operational Programme 2014 – 2020

Environmental report

Strategic Environmental Assessment

Version 1.0

17<sup>th</sup> June 2014

Project team:

Dipl.-Ing. Sebastian Beiglböck (project manager; beiglboeck@oir.at | +43 1 533 87 47-49)  
Stefan Philipp

Contact person Programme Managing Authority:

Mag. Dr. Bernhard Köhle, Amt der NÖ Landesregierung, Landhausplatz 1, A-3109 St. Pölten  
(bernhard.koehle@noel.gv.at | +43 2742 9005-15359)

ÖIR GmbH (100% subsidiary of the association Österreichisches Institut für Raumplanung/  
Austrian Institute for Regional Studies and Spatial Planning)

A-1010 Vienna, Franz-Josefs-Kai 27 | Telephone +43 1 533 87 47-0, Fax -66 | www.oir.at

Vienna, June 2014 | ANr. 800616

## CONTENTS

<b>Non-technical summary</b>	<b>6</b>
<b>Introduction</b>	<b>7</b>
<b>1. Outline of the contents, main objectives of the programme and relationship with other relevant plans and programmes</b>	<b>8</b>
<b>2. Framework for the assessment</b>	<b>10</b>
2.1 Assessment depth	10
2.2 Areas and periods of time covered	11
<b>3. Environmental protection objectives analysis and definition of indicators</b>	<b>12</b>
3.1 Methodological notes	12
3.2 Environmental protection objectives analysis	12
3.3 Additional environmental goals of the Czech Republic	15
3.4 Definition of environmental indicators	15
<b>4. The current state of the environment, its likely evolution and existing environmental problems</b>	<b>17</b>
4.1 Methodological notes	17
4.2 Biodiversity, fauna and flora	17
4.3 Population, air and human health	20
4.4 Soil	22
4.5 Water	27
4.6 Climatic factors	30
4.7 Material assets and cultural heritage	31
4.8 Landscape	32
<b>5. Likely significant effects on the environment and measures envisaged to prevent or reduce any significant adverse effects</b>	<b>34</b>
5.1 Methodological notes	34
5.2 Reasonable alternatives to be dealt with	35
5.3 Assessment of Priority axis 1: Strengthening research, technological development and innovation	35
5.3.1 Investment Priority 1a: Enhancing R&I infrastructure and capacities to develop R&I excellence and promoting centres of competence in particular those of European interest	35
5.3.2 Investment Priority 1b: Promoting business investment in R&I, developing links and synergies between enterprises, research and development centres and the higher education sector, in particular promoting investment in product and service development, technology transfer, social innovation, eco-innovation, public service applications, demand stimulation, networking, clusters and open innovation through smart specialisation, and supporting technological and applied research, pilot lines, early product validation actions, advanced manufacturing capabilities and first	

	production, in particular in key enabling technologies and diffusion of general purpose technologies	38
5.4	Assessment of Priority axis 2: Environment and Resources	40
5.4.1	Investment priority 6c: Conserving, protecting, promoting and developing cultural and natural heritage	40
5.4.2	Investment priority 6d: Protecting and restoring biodiversity and soil and promoting ecosystem services including through Natura2000, and green infrastructure	42
5.4.3	Investment priority 6f: Promoting innovative technologies to improve environmental protection and resource efficiency in the waste sector, water sector and with regard to soil, or to reduce air pollution	44
5.5	Assessment of Priority axis 3: Human resources development	45
5.5.1	Investment priority: Investing in education, training and vocational training for skills and lifelong learning by developing and implementing joint education, vocational training and training schemes	45
5.6	Assessment of Priority axis 4: Sustainable networks and institutional co-operation	47
5.6.1	Investment priority 11: Enhancing institutional capacity of public authorities and stakeholders and efficient public administration by promoting legal and administrative cooperation and cooperation between citizens and institutions	47
5.7	Assessment of the interrelationship between environmental issues	49
5.8	Assessment of the programme's effects on the Habitats and Birds Directives	49
6.	Measures envisaged concerning monitoring	50
7.	Difficulties encountered in compiling the required information	51
	Sources	52
	Annex I: Important environmental goals of the Czech Republic	53
	Annex II: Scoping consultations	62

**Tables, maps and figures**

Table 1:	Planned financial allocation by IPs (draft)	9
Table 2:	Environmental objectives and indicators proposed	12
Table 3:	Indicators used for the SEA	16
Table 4:	Qualitative evaluation system likely evolution	17
Table 5:	Qualitative evaluation system measures	34
Table 6:	Assessment of environmental effects of Investment Priority 1a	37
Table 7:	Assessment of environmental effects of Investment Priority 1b	39
Table 8:	Assessment of environmental effects of Investment Priority 6c	41
Table 9:	Assessment of environmental effects of Investment Priority 6d	43
Table 10:	Assessment of environmental effects of Investment Priority 6f	45
Table 11:	Assessment of environmental effects of Investment Priority 11	48
Map 1:	Programme area and SEA area to be covered	11
Map 2:	Protected sites in the Programme area	19
Map 3:	Major roads noise contour Lden in the region	20
Map 4:	Most important contaminated sites in the Czech regions 2008	23
Map 5:	Contaminated sites in the Austrian regions	24
Map 6:	Artificial Areas (Land Cover 2006) in the region	26
Map 7:	State of bathing waters in the region	28
Map 8:	Pressures from urbanisation and transport on semi-natural areas in the region	33
Figure 1:	Water exploitation index	29

## Non-technical summary

The environmental report at hand is the central element of the strategic environmental assessment (SEA) of the future operational programme European Territorial Cooperation Austria – Czech Republic 2014-2020.

The overall finding of the SEA is that with one exception all actions envisaged are environmentally sound. There is one group of actions supported that may under certain circumstances cause significant negative effects on the environment: Investment priority 6c: “Conserving, protecting, promoting and developing cultural and natural heritage” under Priority Axis 2: Environment and Resources.

This group of actions also has positive effects on natural and cultural assets. However, negative effects of accompanying road infrastructure financed under the investment priority would have negative effects on soil (sealing) and landscape (influence on the quality of the natural and cultural landscape, increased landscape fragmentation). The new roads might also increase the attractiveness of using private motorized vehicles and subsequently cause a rising modal share of road transport with various consequences (air quality, noise, greenhouse gas emissions). The effects are in principle not expected to be significant because the focus would be on short stretches of local low order roads. However, given the case that construction would take place in particularly sensitive areas, the effects of landscape fragmentation could be significant (indirectly also for the local fauna). When selecting projects it must be taken into account that new roads do not cut through protected or otherwise sensitive areas to avoid a significant deterioration of the environment. The construction activities have to be carefully monitored when taking place in sensitive areas.

There may be slightly negative but not significant environmental effects in investment priority 1a stemming from small-scale construction work for research facilities (on soil, material assets, cultural heritage and landscape). A number of other measures have positive effects on the environment, some of them significant:

- ▶ improvements for biodiversity, fauna and flora by cross-border development, maintenance and management concepts for protected areas and sensitive areas under investment priority 6d;
- ▶ improvements for population and human health, cultural and other material assets by green Infrastructure measures under investment priority 6d;
- ▶ improvements for air, human health, soil, water and climate by environmental protection and resource efficiency measures under investment priority 6f;
- ▶ improvements for population, air, human health and climate by cooperation on public transport under investment priority 11.
- ▶ improvements for population, human health, and material assets and cultural heritage by cooperation on risk prevention under investment priority 11.

## Introduction

This environmental report is the central part of the strategic environmental assessment (“SEA” hereinafter) of the future programme European Territorial Cooperation Austria-Czech Republic 2014-2020 (“cooperation programme” hereinafter).

With regard to the legal framework for SEA for European Regional Development Fund programmes, article 48(4) of the draft Common provisions regulation states that *“The ex ante evaluation shall incorporate, where appropriate, the requirements for Strategic Environmental Assessment set out in implementation of Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment”*.

In compliance with the requirements set in Article 3 of the Directive 2001/42/EC, it cannot be excluded that the cooperation programme might trigger environmental effects. Accordingly, a SEA was required. The first step in the SEA was the preparation of the Scoping Report. The second step, the full environmental report at hand, is made accessible to environmental authorities for comments and amendments during the consultation phase.

The basis for the assessment is the draft cooperation programme (May, 2014) which is displayed to the public together with the present environmental report.

## 1. Outline of the contents, main objectives of the programme and relationship with other relevant plans and programmes

The implementation of the cooperation programme should support an innovative smart, sustainable and inclusive economic development in a cross border dimension. The thematic objectives and investment priorities were selected following a common strategy based on the analysis of the region taking into account the results of several regional and thematic workshops where representatives of the administration, NGOs, municipalities and other stakeholders discussed their experience and the needs for the next generation of cross border programmes. The main elements of the common strategy were formulated as follows:

- ▶ Strengthening the existing co-operation and communication structures and the institutional capacities
- ▶ Developing an innovative and skill oriented economic and social system
- ▶ Securing the regional, social and cross border accessibility in regard to jobs, housing, public and private services, innovation and know-how, natural and cultural assets
- ▶ Strengthening the regional economies' resilience to climate risks
- ▶ Improving the quality of the natural and cultural resources
- ▶ Harmonising the (regional) legal and institutional framework (cf. Krajasits et al., 2014: 19)

In the Position paper of the EU for the Czech Republic the requirements and specifications for cross border cooperation concentrates on the development of a stronger coherence with programmes under the "investment for growth and jobs" goal and other EU or national programmes in order to exploit synergies for interventions in different thematic areas. Taking into account these goals and the existing disparities and the diversity in this border region the chosen strategic approach leads to a concentration of the programme on four thematic objectives to support a regional development process based on

- ▶ knowledge, research and innovation, integration SMEs into the innovation system and the establishment of systems for cross-border information exchange;
- ▶ a greener, more resource-efficient and competitive economy, including cross-border mobility and taking into account the impacts of climate change;
- ▶ the preservation and the development of the natural and cultural heritage as main elements to strengthen sustainable tourism, as part of a territorial strategy aimed at achieving employment-friendly growth;
- ▶ ecological stability and an improved ecosystem;
- ▶ the development of the administrative capacity and strengthen the cross-border cooperation structures (cf. Krajasits et al., 2014: 19).



Within the next years the programme should contribute to the Europe 2020 strategy by supporting projects and activities in the field of research and innovation involving private and public R& I institutions as well as enterprises (cf. Krajasits et al., 2014: 19).

Table 1: Planned financial allocation by IPs (draft)

IP	Euro	Share (%)
1a	7,419,201	7.58
1b	5,063,100	5.18
6c	32,586,081	33.31
6d	7,475,234	7.64
6f	5,358,234	5.48
10	13,675,112	13.98
11	20,369,075	20.82
Technical Assistance	5,868,896	6.00
<b>Sum</b>	<b>97,814,933</b>	<b>100.00</b>

Source: Programme draft

## 2. Framework for the assessment

The following methodological design was approved by the environmental authorities consulted in the scoping process. Adaptions made compared to the scoping paper methodology are documented in Annex II.

### 2.1 Assessment depth

In contrary to plans and programmes that determine specific land uses or specific projects, the cooperation programme to be assessed is of general strategic nature. It is not possible to locate environmental impacts of the cooperation programme in space. However, environmental impacts usually strongly depend on the very location. The cooperation programme aspects to be assessed will be strategic objectives and descriptions of the type of actions that shall be funded. So it will only be possible to point out potential impacts based on the nature of a funding measure. The concrete effects will mostly depend on the specific place where funded projects will be implemented.

To address this level of generalization that is owed to the cooperation programme's nature, the following corner points will determine the assessment depth:

- ▶ The **cooperation programme as such has no environmental impact**; however it sets the framework for subsequent funding projects that might cause impacts (cf. annex II of the SEA Directive). This means that we need not only assess the cooperation programme itself but also virtually construct *potential projects* resulting from this framework with *potential impacts* on the environment.
- ▶ Environmental objectives need to stay on a strategic level, too, as **it will not be possible to quantify the impact of cooperation programme measures in most cases** anyhow. The analysis will therefore concentrate on more general environmental objectives, mostly on a transnational level. This has been exercised in the past and does also address the international and trans-legislative character of the cooperation programme.
- ▶ **Indicators also need to address this general strategic level.** For example, it often will not be possible to quantify the "loss of species A" as this is dependent on the existence of species A at an unknown project location. Rather a more general indicator such as "potential loss of biodiversity" is appropriate.
- ▶ As real projects will not be assessed impacts cannot usually be quantified as long as there are no quantifications of environmental impacts in the cooperation programme itself (e.g. output indicators like "tons of CO<sub>2</sub> equivalents reduced"). **Qualitative estimations of environmental impacts** of funding measures will be necessary, e.g. "additional soil sealed" instead of "m<sup>2</sup> of soil sealed".

The environmental issues as mentioned in Annex 1 of the SEA directive will be grouped as follows:

- ▶ Biodiversity, fauna and flora
- ▶ Population, air and human health
- ▶ Soil

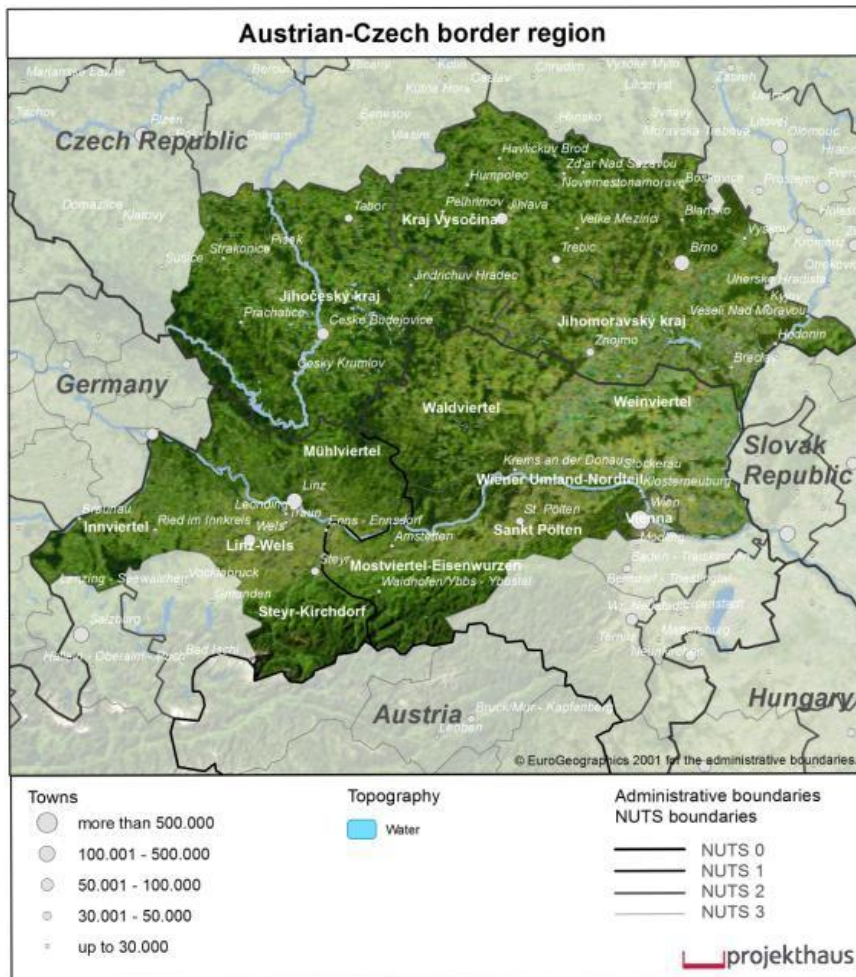
- ▶ Water
- ▶ Climatic factors
- ▶ Material assets and cultural heritage
- ▶ Landscape

## 2.2 Areas and periods of time covered

The **area covered** is defined as the Austrian-Czech border region as in the cooperation programme: in Austria Mostviertel-Eisenwurzen, Sankt Pölten, Waldviertel, Weinviertel, Wiener Umland-Nordteil, Wien, Innviertel, Linz-Wels, Mühlviertel, Steyr-Kirchdorf; in the Czech Republic Jihočeský kraj, Kraj Vysočina, Jihomoravský kraj (cf. Krajasits et al., 2014: 3).

The **period of time covered** is to be covered will be at least the programming period of 2014-2020, albeit longer lasting environmental effects will also be outlined.

Map 1: Programme area and SEA area to be covered



Source: Programme draft

### 3. Environmental protection objectives analysis and definition of indicators

#### 3.1 Methodological notes

For transnational and cross-border SEA purposes ÖIR commands of a **compilation of international environmental legislation**, treaties and other strategic policy documents and their related environmental objectives.

#### 3.2 Environmental protection objectives analysis

The following table gives an overview on the relevant objectives from the above mentioned external documents. Furthermore, generalised objectives are aggregated from the various sources that present the basis for the assessment of environmental impacts.

Table 2: Environmental objectives and indicators proposed

Environmental objectives from international legislation, treaties and other strategic policy documents	Source	General environmental objectives for SEA
<b>Biodiversity, fauna and flora</b>		
<i>Develop mechanisms to encourage the sustainable development of biosphere reserves carried out in partnership with all sectors of society to ensure the well-being of people and their environment</i>	Madrid Action Plan for Biosphere Reserves	Conservation of wild flora and fauna and their natural habitats
<i>To conserve wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the co-operation of several States [...]</i>	Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 19.IX.1979)	
<i>The Parties acknowledge the importance of migratory species being conserved and of Range States agreeing to take action to this end whenever possible and appropriate, paying special attention to migratory species the conservation status of which is unfavourable, and taking individually or in co-operation appropriate and necessary steps to conserve such species and their habitat</i>	Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)	
<i>The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits</i>	Convention on Biological Diversity	
<i>The Programme aims at: [...] protecting, conserving, restoring and developing the functioning of natural systems, natural habitats, wild flora and fauna with the aim of halting desertification and the loss of biodiversity, including diversity of genetic resources, both in the European Union and on a global scale;</i>	Sixth Community Environment Action Programme 1600/2002/EC	
<i>Avoid ecosystem damage from energy carriers extraction/exploitation.</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>Increase biodiversity through good farming practices.</i>		
<i>Avoid invasive alien species spread</i>		
<i>[...] integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future.</i>	Agenda 21	
<i>Focus on maintaining and enhancing ecosystem services and restoring degraded ecosystems by incorporating green infrastructure in spatial planning.</i>	EU biodiversity strategy to 2020	
<i>The conservation of the species of wild birds naturally occurring in the European territory of the Member States is necessary in order to attain the Community's objectives regarding the improvement of living conditions and sustainable development.</i>	Wild Birds Directive 2009/147/EC	

Table 2: Environmental objectives and indicators proposed [continued]

Environmental objectives from international legislation, treaties and other strategic policy documents	Source	General environmental objectives for SEA
<b>Biodiversity, fauna and flora</b>		
<i>Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage</i>	Convention concerning the Protection of the world cultural and natural heritage	
<i>The objective is to protect, conserve and, where necessary, rehabilitate and natural environment and the countryside, so that ecosystems are able to function, animal and plants species, including their habitats, are preserved, nature's capacity for regeneration and sustained productivity is maintained, and the variety, uniqueness and beauty of nature</i>	Alpine Convention	
<i>Focus on maintaining and enhancing ecosystem services and restoring degraded ecosystems by incorporating green infrastructure in spatial planning.</i>	EU biodiversity strategy to 2020	
<i>Each Contracting Party shall promote the conservation of wetlands and waterfowl by establishing nature reserves on wetlands, whether they are included in the List or not, and provide adequately for their wardening.</i>	Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention)	
<i>Prevent and reduce inputs in the marine environment so as to ensure that there are no significant impacts on or risks to marine biodiversity, marine ecosystems, human health or legitimate uses of the sea.</i>	Marine Strategy Framework Directive DIRECTIVE 2008/56/EC	
<i>Restore fish stocks and eliminate by-catch and discards</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>The aim of this Directive shall be to contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States to which the Treaty applies</i>	Habitats Directive 92/43/EEC	Protection of valuable natural habitats
<b>Population, air and human health</b>		
<i>Prevention of harmful effects of ambient noise</i>	Environmental noise directive 2002/49/EC	Prevention of harmful effects of ambient noise
<i>[...] emissions of harmful air pollutants should be avoided, prevented or reduced and appropriate objectives set for ambient air quality taking into account relevant World Health Organisation standards, guidelines and programmes.</i>	Air quality directive 2008/50/EG	Prevention of harmful effects of air pollution
<i>Air quality that do not give rise to significant negative impacts on, and risks to human health and the environment</i>	Thematic Strategy on air pollution COM(2005) 446 final	
<i>Reduce pollution with harmful substances, in particular via reduced use of fossil fuels;</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>Reduce GHG emissions;</i>		Promote eco-friendly modes of transport
<i>In order to protect human health, ozone concentrations in the air should be limited</i>	Council Directive on air pollution by ozone (92/72/EEC)	
<i>Preventing, reducing and as far as possible eliminating pollution by giving priority to intervention at source and ensuring prudent management of natural resources, in compliance with the "polluter pays" principle and the principle of pollution prevention.</i>	Directive concerning integrated pollution prevention and control 2008/1/EC	
<i>Insbesondere ist Bedacht zu nehmen auf: [...]</i> <i>- den Schutz vor Störungen der Umwelt durch Lärm, Geruch, Strahlung und Erschütterungen;</i>	Oö. Landesraumordnungsprogramm 1998 § 4	Protection from natural and man-made disasters
<i>Insbesondere ist Bedacht zu nehmen auf: [...]</i> <i>- den präventiven Schutz vor Naturgefahren.</i>	Oö. Landesraumordnungsprogramm 1998 § 4	
<b>Soil</b>		
<i>The objective is to ensure the economic and rational use of land and the sound, harmonious development of the whole region, particular emphasis being placed on natural hazards, the avoidance of under and overuse and the conservation or rehabilitation of natural habitats by means of a thorough clarification and evaluation of land use requirements, foresighted integral planning and coordination of the measures taken</i>	Alpine Convention	Safeguarding a spare and rational land use
<i>Promotion of a sustainable use of the soil, with particular attention to preventing erosion, deterioration, contamination and desertification</i>	Sixth Community Environment Action Programme 1600/2002/EC	
<i>Avoid urban sprawl on fertile soil</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>Minimize soil sealing</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	

Table 2: Environmental objectives and indicators proposed [continued]

Environmental objectives from international legislation, treaties and other strategic policy documents	Source	General environmental objectives for SEA
<b>Soil</b>		
<i>The objective is to reduce quantitative and qualitative soil damage, in particular by applying agricultural and forestry methods which do not harm the soil, through minimum interference with soil and control of erosion and the restriction of soil sealing,</i>	Alpine Convention	Prevention of quantitative or qualitative soil detriment
<i>Prevent soil damage by SO<sub>2</sub> and NO<sub>x</sub> emissions;</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>Avoid pollution from fertilizers and pesticides.</i>	Directive concerning integrated pollution prevention and control 2008/1/EC	
<i>The objective of an integrated approach to pollution control is to prevent emissions into air, water or soil [...]</i>	Stockholm Convention on Persistent Organic Pollutants	
<i>[...] the objective of this Convention is to protect human health and the environment from persistent organic pollutants</i>	Stockholm Convention on Persistent Organic Pollutants	
<b>Water</b>		
<i>measures designed to prevent or, where that is not practicable, to reduce emissions in the air, water and land from the abovementioned activities</i>	Directive concerning integrated pollution prevention and control 2008/1/EC	Prevention of harmful effects through pollution of inland waters
<i>To ensure that transboundary waters are used with the aim of ecologically sound and rational water management, conservation of water resources and environmental protection.</i>	UNECE Water Convention	
<i>Die Anliegerstaaten werden in ihrem Gebiet darauf hinwirken, dass der Bodensee vor weiterer Verunreinigung geschützt und seine Wasserbeschaffenheit nach Möglichkeit verbessert wird. Zu diesem Zweck werden sie die in ihrem Gebiet geltenden Gewässerschutzvorschriften für den Bodensee und seine Zuflüsse mit Nachdruck vollziehen</i>	Übereinkommen über den Schutz des Bodensees gegen Verunreinigung	
<i>[...] protection of inland surface waters, transitional waters, coastal waters and groundwater which [...] prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems [and] ensures the progressive reduction of pollution of groundwater and prevents its further pollution</i>	Water framework directive RL 2000/60/EC	
<i>Avoid pollution from fertilizers and pesticides</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>Reduce pollution from water transport</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>[...] the objective of this Convention is to protect human health and the environment from persistent organic pollutants</i>	Stockholm Convention on Persistent Organic Pollutants	
<i>The Contracting Parties shall, in accordance with the provisions of the Convention, take all possible steps to prevent and eliminate pollution and shall take the necessary measures to protect the maritime area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected.</i>	OSPAR Convention	Prevention of harmful effects by polluted seas
<i>The Contracting Parties shall individually or jointly take all appropriate legislative, administrative or other relevant measures in order to prevent and abate pollution and to protect and enhance the marine environment of the Baltic Sea Area (Ostsee).</i>	Helsinki Convention	
<i>To ensure that transboundary waters are used with the aim of ecologically sound and rational water management, conservation of water resources and environmental protection.</i>	UNECE Water Convention	
<i>Protect and preserve the marine environment, prevent its deterioration or, where practicable, restore marine ecosystems in areas where they have been adversely affected;</i>	Marine Strategy Framework Directive 2008/56/EC	
<i>Reduce pollution of coastal areas from fertilizers</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>Avoid marine litter, including from ships</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>The objective is to preserve or reestablish healthy water systems, in particular by keeping lakes and rivers free of pollution, by applying natural hydraulic engineering techniques and by using water power, which serves the interests of both the indigenous population and the environment alike</i>	Alpine Convention	Efficient usage of water as a resource
<i>Improve water efficiency of buildings and appliances</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	

Table 2: Environmental objectives and indicators proposed [continued]

Environmental objectives from international legislation, treaties and other strategic policy documents	Source	General environmental objectives for SEA
<b>Climatic factors</b>		
<i>To achieve [...] stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system</i>	UN Framework Convention on Climate Change	Reduction of greenhouse gas emission
<i>Reducing their overall emissions of [greenhouse] gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012</i>	Kyoto Protocol	
<i>The objective is to introduce methods for the production, distribution and use of energy which preserve the countryside and are environmentally compatible, and to promote energy saving measures</i>	Alpine Convention	Reduction of energy consumption from fossil sources
<i>Reduce fossil fuels use via increased energy efficiency (20% by 2020); substituting for renewable resources (20% by 2020, and 10% in transport).</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	
<i>Increase the share of renewable energy sources in our final energy consumption to 20%</i>	Europe 2020 Strategy COM(2010) 2020	
<b>Material assets and cultural heritage</b>		
<i>Each party undertakes steps to implement appropriate supervision and authorisation procedures as required by the legal protection of the properties in question</i>	Convention for the Protection of the Architectural Heritage of Europe	Preservation of monuments and cultural goods
<i>The aim of this (revised) Convention is to protect the archaeological heritage as a source of the European collective memory and as an instrument for historical and scientific study</i>	European Convention on the Protection of the Archaeological Heritage	
<i>Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage</i>	Convention concerning the Protection of the world cultural and natural heritage	
No specific objectives from international legislation, treaties and other strategic policy documents		Safeguarding material assets
<b>Landscape</b>		
<i>The aims of this Convention are to promote landscape protection, management and planning, and to organise European co-operation on landscape issues.</i>	European Landscape Convention	Protection of the natural and cultural landscape
<i>The Contracting Parties shall pursue a comprehensive policy for the preservation and protection of the Alps by applying the principles of prevention, payment by the polluter (the "polluter pays" principle) and cooperation, after careful consideration of the interests of all the Alpine States, their Alpine regions and the European Economic Community, and through the prudent and sustained use of resources. Transborder cooperation in the Alpine region shall be intensified and extended both in terms of the territory and the number of subjects covered.</i>	Alpine Convention	
<i>Ensure sufficient and connected green spaces as part of green infrastructures.</i>	Roadmap to a Resource Efficient Europe, COM(2011) 571	Protection of coherent landscapes and landscape elements
<i>Minimise impacts of transport infrastructure on land fragmentation.</i>		

Source: ÖIR

### 3.3 Additional environmental goals of the Czech Republic

The most important Czech environmental goals are complementarily listed in Annex I.

### 3.4 Definition of environmental indicators

As already explained, general indicators are required for this type of cooperation programmes as impacts usually cannot be quantified. Detailed and quantified indicators would pretend an accurateness that is not given. Therefore we used the indicators in the following table that are connected to the general environmental objectives.

Table 3: Indicators used for the SEA

General environmental objectives for the SEA	Indicator used for the SEA
<b>Biodiversity, fauna and flora</b>	
Conservation of wild flora and fauna and their natural habitats	Condition of habitats and species of the annexes to the Habitats and Birds Directives
Protection of valuable natural habitats	Conditions of NATURA 2000 and other protected areas
<b>Population, air and human health</b>	
Prevention of harmful effects of ambient noise	Level of ambient noise
Prevention of harmful effects of air pollution	Level of air pollution
Promote eco-friendly modes of transport	Modal share of eco-friendly transport
Protection from natural and man-made disasters	Damage from natural and man-made disasters
<b>Soil</b>	
Prevention of quantitative or qualitative soil detriment	Chemical and physical soil quality
Safeguarding a spare and rational land use	Sealed soil
<b>Water</b>	
Prevention of harmful effects through pollution of inland waters	Quality of inland waters
Efficient usage of water as a resource	Efficiency of water usage
<b>Climatic factors</b>	
Reduction of greenhouse gas emission	Greenhouse gas emissions
Reduction of energy consumption from fossil sources	Energy consumption from fossil sources
<b>Material assets and cultural heritage</b>	
Preservation of monuments and cultural goods	Condition of monuments and cultural heritage
Safeguarding material assets	Condition of other material assets
<b>Landscape</b>	
Protection of the natural and cultural landscape	Quality of the natural and cultural landscape
Protection of coherent landscapes and landscape elements	Degree of landscape fragmentation

Source: ÖIR



## 4. The current state of the environment, its likely evolution and existing environmental problems

### 4.1 Methodological notes

The description of the current state of the environment will be used to identify **existing environmental problems** relevant to the cooperation programme and to estimate the **likely evolution without implementation of the cooperation programme**. For the definition of the likely evolution qualitative trend estimations will be conducted based on existing data and literature. The trend estimation will use a five-part ordinal scale:

Table 4: Qualitative evaluation system likely evolution

Symbol	Trend
↗	improvement
↖↗	partial improvement
↔	stable
↖↘	partial deterioration
↘	deterioration

Source: ÖIR

### 4.2 Biodiversity, fauna and flora

#### Condition of habitats and species of the annexes to the Habitats and Birds Directives

Protected and/or rare Fauna and Flora in the Šumava area include the elk, the lynx, the capercaillie or the grouse. Many species are mentioned in the Annexes to the Habitats and Birds Directives. A total of 65 mammal species (e.g. the Otter, Brandt's Bat, Field Vole, Bi-coloured White-toothed Shrew) and 152 species of birds (e.g. Black Stork, Hoopoe, Honey Buzzard, Tengmalm's Owl, Eagle Owl, Kingfisher) have been recorded on the Podyjí National and Thayatal National Park territory. The most notable of the seven reptile species are the Tree Snake and the Emerald Lizard. Of the amphibians the most significant ones are the Fire Salamander, Great Crested Newt and several frog species.

Among the most interesting specially protected plant species we can mention Black Hellebore, Perennial Honesty, Cyclamen, Hungarian Mullein, Great Pasque Flower, Hungarian Iris, Yellow Ox-eye Daisy, Corn Brome, 18 orchid species and many others.

A continuing trend of extinction of some of the flora and fauna can be observed in the Czech Republic and Austria as well. More than half of all animal and plant species are threatened and/or in decline. The negative trends emerge as a result of an inadequate natural area management. This concerns, for example, the fragmentation of natural habitats, the drainage of areas, the intensification of agriculture, the entry of chemical substances, the disappearance of traditional management methods or the degradation of agricultural and forest land, all of which contribute to the loss of natural habitats.

### Conditions of NATURA 2000 and other protected areas

In the region a number of reserves (National parks, nature parks, natural landscape reserves, Natura 2000 areas) were founded in the last decades to protect natural and cultivated landscapes and preserve them for future generations. However, both in Austria and the Czech Republic new area designations are getting fewer. In the programme area are located:

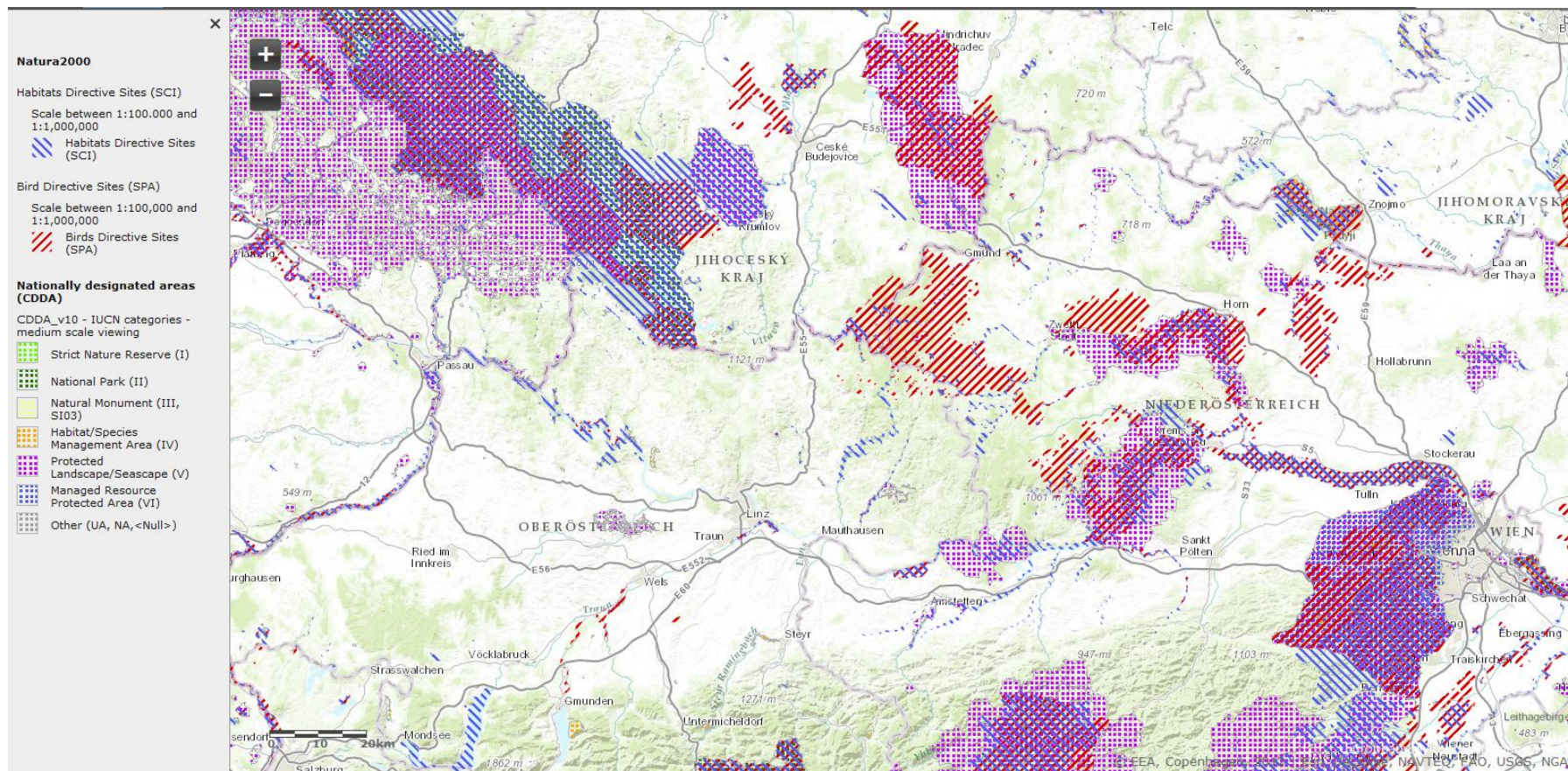
- ▶ Four national parks (Thayatal, Donau-March-Thaya-Auen and Šumava/Böhmerwald National Parks, Podyjí National Park).
- ▶ Eight large protected landscape areas, almost 800 small-size protected areas and nearly 400 “Natura 2000” sites in Bohemia.
- ▶ Nine nature parks and 148 Natura 2000 sites in Austria and the Wienerwald Biosphere Reserve, designated in 2005 (cf. Krajasits et al., 2014: 11).

Besides these clearly defined sites, the so-called “Green Belt” stretching along the state border is gaining importance. Due to the restrictions that once accompanied the former “Iron Curtain”, the Green Belt has kept its original character and remained a very valuable landscape (cf. Krajasits et al., 2014: 11).

### Trend rating

Indicator	Trend	Rating
Condition of habitats and species of the annexes to the Habitats and Birds Directives	Increasing number of endangered species in the programme area	↘
Conditions of NATURA 2000 and other protected areas	Many areas are protected, but the designation of new areas has a stagnating tendency	↔↗
Legend	Trend: ↗ Improvement ↔↗ partial improvement ↔ stable ↔↘ partial deterioration ↘ deterioration	

Map 2: Protected sites in the Programme area



Source: EEA, 2013: online.

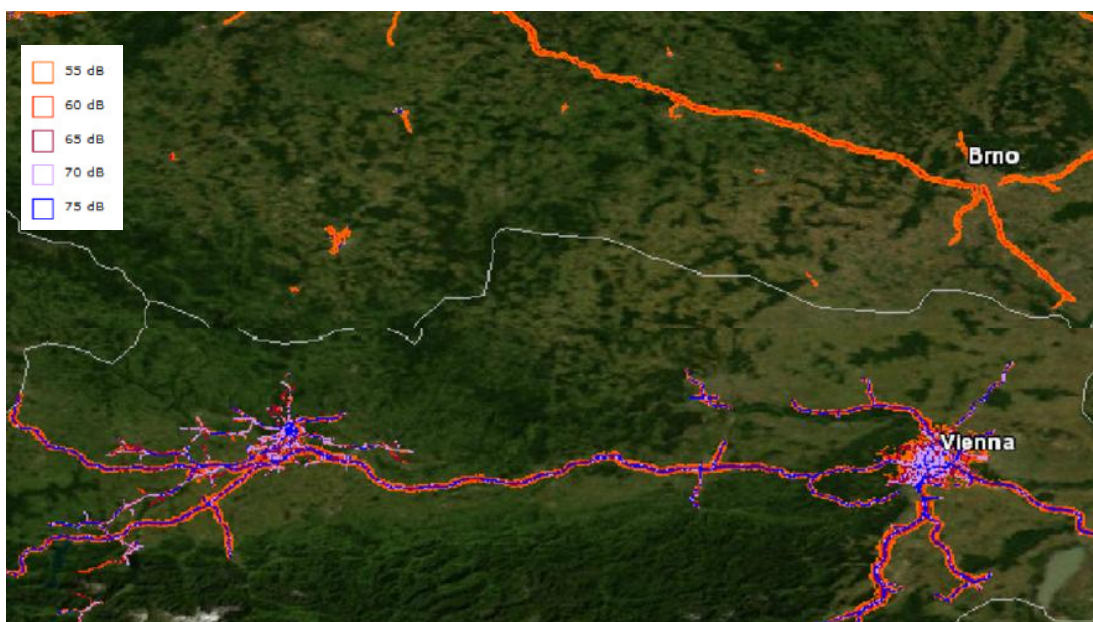
### 4.3 Population, air and human health

#### Level of ambient noise

In the examined region the most important source of ambient noise is caused by car traffic. People living in agglomerations like Vienna, Brno or the region Linz–Wels are exposed to a higher proportion to damaging levels of noise than those in more rural parts of the region. Besides the people living in agglomerations only those who live near the important motorway connections and important other roads are exposed to ambient noise caused by motorized traffic. In general the parts of the Austrian region are exposed to a higher level of noise than the Czech part of the cross border cooperation area.

As road transport is increasing, noise immissions increase gradually, especially in agglomerations.

Map 3: Major roads noise contour Lden in the region



Source: Noise Observation and Information Service for Europe, 2013: online.

#### Level of air pollution

The programme area is located in a belt of prevailing west winds. The wind direction also influences a spread of air pollutants.

The rural peripheral regions are much more privileged than the urban and industrialised regions. The abundance of protected areas, the high proportion of forested lands in the western part of the territory, the settlement structure and the limited number of big polluters within the area result in relatively low degree of air pollution and emission production. Especially the Jihočeský Region along with the Vysočina Region has shown the lowest level of emissions of main pollutants for a long time. This is also true for the rural parts of the Austrian side of the cooperation area (cf. Krajasits et al., 2014: 12).

Industrial districts and urban agglomerations centres (Linz, Wien, České Budějovice, Brno or Tábor) overreach average levels of the CBC region twice or more, especially with rising particulate matter emissions. These are in a big contrast to rural areas with minimum presence of large polluters like traffic and industrial sites (e.g. districts of Vyškov, Třebíč or Prachatice) with approx. half the level, compared to the average level of the CBC region (cf. Krajasits et al., 2014: 12).

### **Modal share of eco-friendly transport**

The density of the railway networks in the region is below average, the local accessibility of peripheral areas (both from the national centres and in a cross border context) is often problematic with the exception of main railway lines. An integrated transport system as one of the tools to increase effectiveness and better competitiveness of public transport has, for the time being, been successfully introduced in the Jihomoravský Region only. The system is currently being introduced in the Jihočeský Region and the Vysočina Region.

For the urban agglomerations the public transport system plays a much more important role in order to organise daily activities. However, in contrast to inner urban mobility habits, where public transport is on the rise, intraregional commuting patterns are still oriented towards motorised traffic (Linz, Vienna).

Insufficient public transport systems and disperse settlement structures are among the main reasons why the use of cars is a necessity. This is particularly the case for the rural regions. Austrian statistics show for example that in the Lower Austrian part of the cross border region the level of motorisation is much higher than in other parts of the province.

In keeping with general trends, the region is making a long-term increase in individual passengers and goods transportation. The globalisation and the general increase in the standard of living, the higher number of cars and other vehicles, the building of satellite settlements and development of suburban areas are resulting in increasing commuting distances which are the main cause for these developments.

### **Damage from natural and man-made disasters**

Transferring the results from international and national projects on climate change and vulnerability into the region, the most important problems caused by the forecasted climate change are:

- ▶ Natural hazards with risks for infrastructure, settlements structures, economic activities
- ▶ Droughts – problems with water supply and consequences for energy production and agriculture
- ▶ Heat waves – risk for cities and urban agglomeration (e.g. health problems for the population, energy and water supply, infrastructure)

In the last 15 years the border region was – nearly annually – confronted with large and some smaller floods. Although all kinds of the flood-protection measures have been enhanced since the last extensive floods (1997 in South Moravia, 2002 South Bohemia, Lower and Upper

Austria) the risk of floods still exists. This was made very clear by the 2013 flood. Activities that increase the flood risk should therefore be avoided.

There are very good national flood-protection systems on both sides of the border both organizational (the integrated protection system, flood forecast and alert services, conceptual protection documents and so on) and infrastructural (a wide range of flood-protection facilities on the rivers and in the landscape). Although all kinds of the flood-protection measures have been enhanced since the last extensive floods in 1997 (South Moravia) and in 2002 (South Bohemia, Lower and Upper Austria), the risk of flood still exists.

### Trend rating

Indicator	Trend	Rating
Level of ambient noise	Noise immissions are increasing gradually	↘
Level of air Pollution	Low level generally but rising trend in urban areas	↔↘
Modal share of eco-friendly transport	Rise of eco-friendly urban transport, stagnation in rural and intraregional transport.	↔↗
Damage from natural and man-made disasters	Disasters may get more frequent, not least due to climate change effects	↘
Legend	Trend: ↗ Improvement ↔↗ partial improvement ↔↔ stable ↔↘ partial deterioration ↘ deterioration	

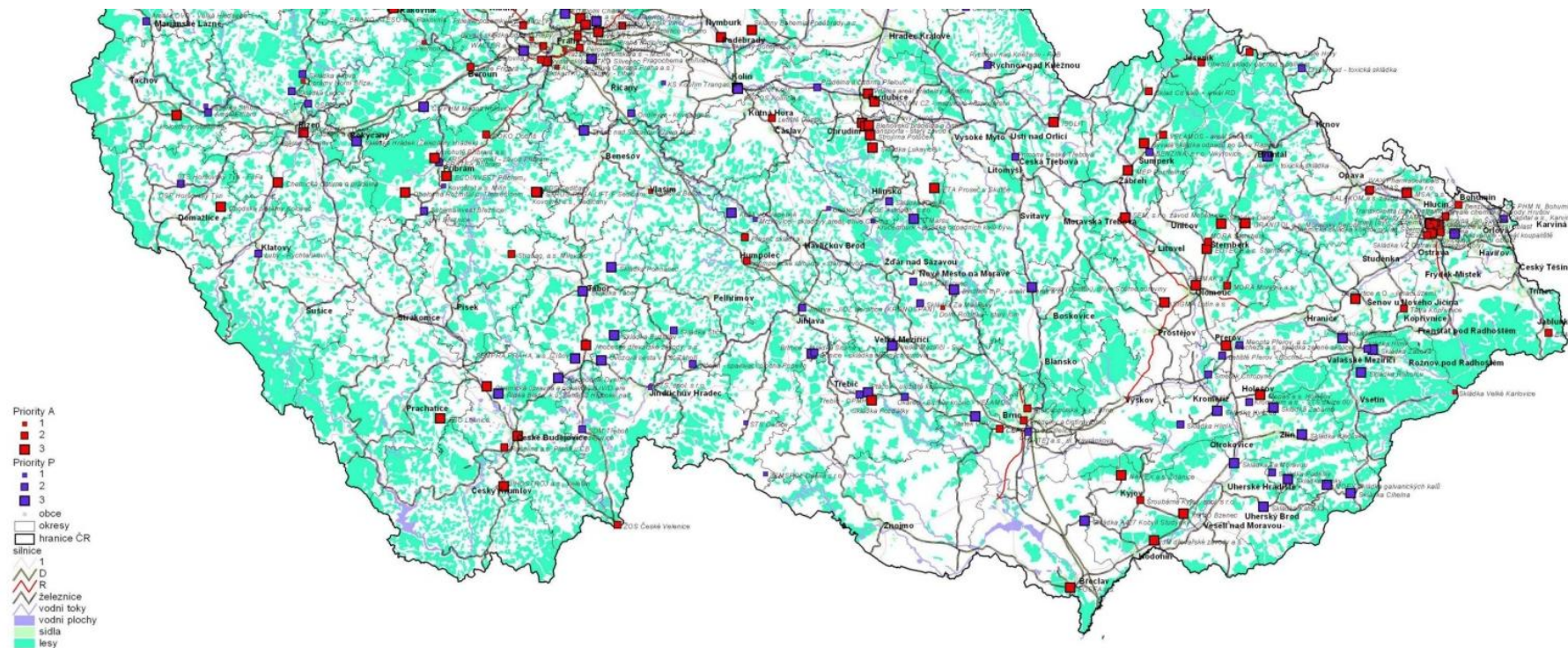
## 4.4 Soil

### Chemical and physical soil quality

With more than 10,000 sites contaminated areas are an important issue in the Czech Republic (Map 4). The industrial age and the Soviet military presence have left traces in the Czech soil. However, also intensive cleaning and redevelopment is on its way.

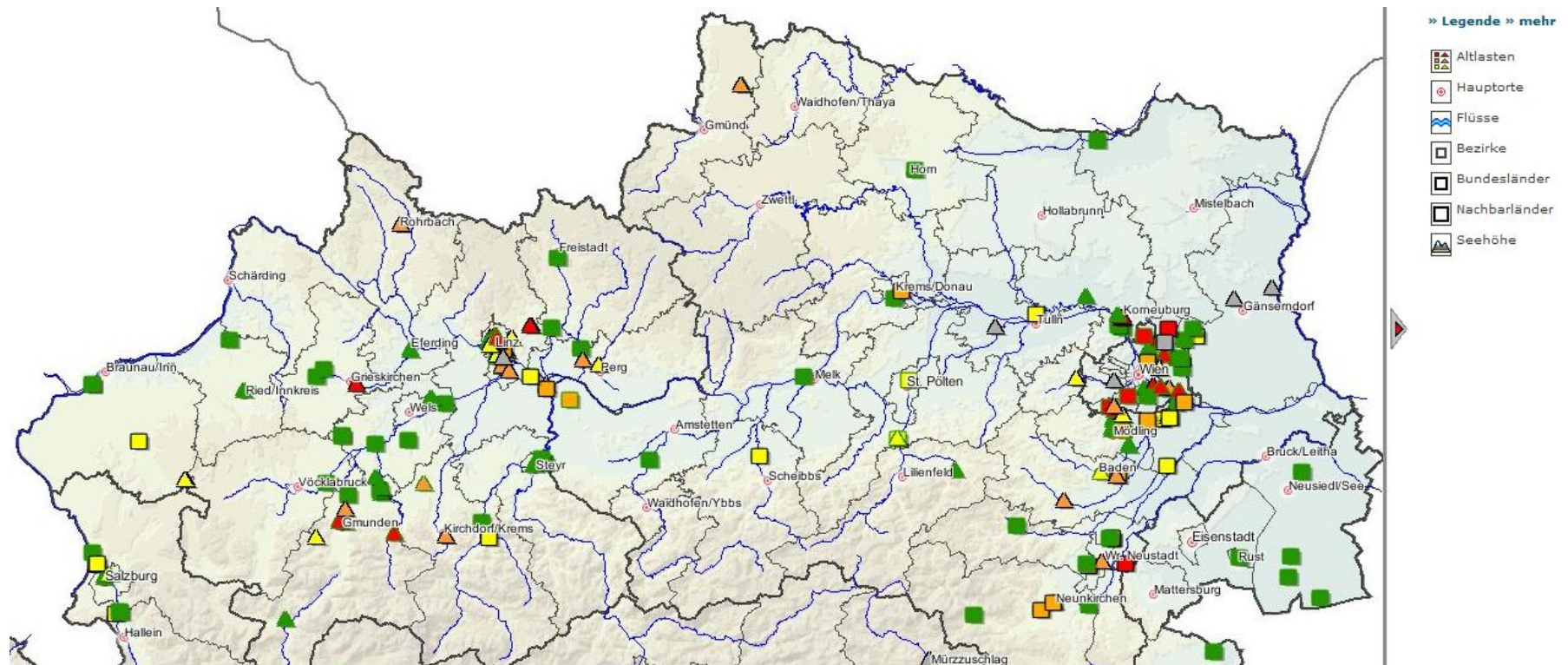
The problem is not as acute in Austria (Map 5). However, the Environment Agency Austria estimates the number of landfill sites by about 80,000. In Lower Austria, there are 40 registered contaminated sites 30 of which have already been cleaned. In Lower Austria, 38 out of 38 registered sites have been cleaned. In Vienna, 10 out of 16 sites have been cleaned (<http://www.umweltbundesamt.at/umweltsituation/altlasten/statistik>).

Map 4: Most important contaminated sites in the Czech regions 2008



Source: Ministry of the Environment of the Czech Republic, 2014: online.

Map 5: Contaminated sites in the Austrian regions



Source: Umweltbundesamt, 2013: online.



The whole Eastern part of the programme area as well as parts of the Danube valley are constituted of rich loess soils and are intensively used by agriculture.

Erosion is not a major problem in the region, the Czech Republic and Austria rank amongst the less vulnerable countries in this respect. Soil erosion by water is however an issue along the major rivers. In the Southern Moravia and North Eastern Austria, wind erosion in sandy, intensively used agricultural areas is an issue. In combination with climate change, some areas might be more affected by erosion in the future by extreme weather events.

### Sealed soil

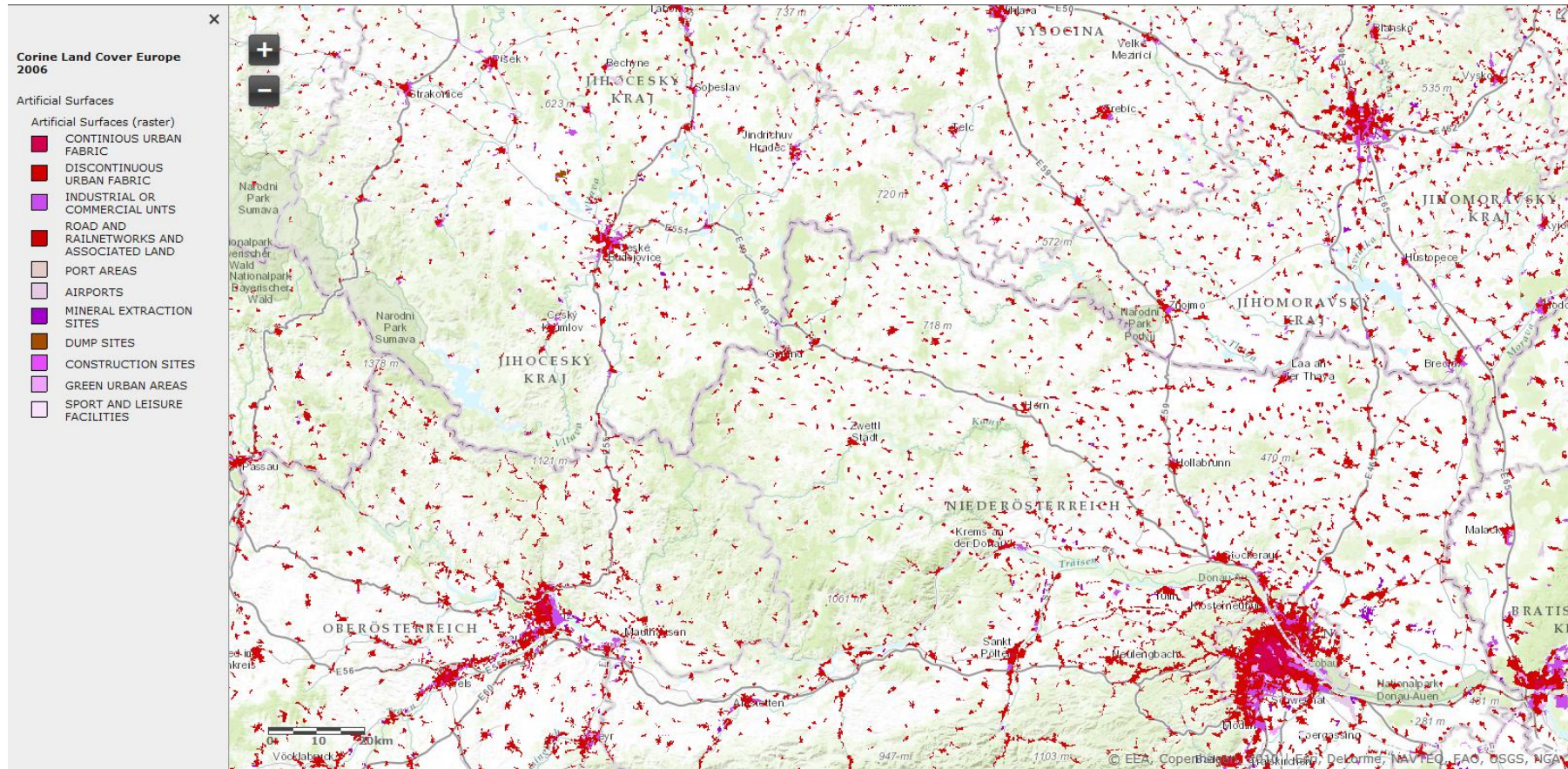
The eastern part of the programming area (Moravia, Weinviertel) represents an intensively developed area. Here the landscape has considerably changed compared to the original natural landscape. Among other reasons this is mainly caused by the enormous proportion of arable lands reaching nearly 50 percent of total area (46.7 in Vysočina and 49.2 in Jihomoravský region). Also the Innviertel, located in the south-western part of the programming area, has a high share of intensively used arable land. Apart from that, sealing of arable soil due to construction activities is focused on the regions of České Budějovice, Brno, Vienna and Linz/Wels (red spots in the “hot spot analysis” in Map 6). Lower and Upper Austria are amongst the Austrian regions with the highest increase in sealed soil (Lower Austria +20% from 2002-2012, Upper Austria +17%; source: umweltbundesamt.at).

In the Eastern parts of the programming area (Southern Bohemia, Mühlviertel), natural and semi-natural area prevail and only limited settlement activity takes place (cf. Map 6).

### Trend rating

Indicator	Trend	Rating
Chemical and physical soil quality	Knowledge on contaminated sites increases, decontamination and depollution is on its way	↗
Sealed soil	Soil sealing is still increasing in the more urbanised parts of the programme area	↘
Legend	Trend: ↗ Improvement ←↗ partial improvement ↔ stable ←↘ partial deterioration ↘ deterioration	

Map 6: Artificial Areas (Land Cover 2006) in the region



Source: EEA (Interactive maps), 2013: online.

## 4.5 Water

### Quality of inland waters

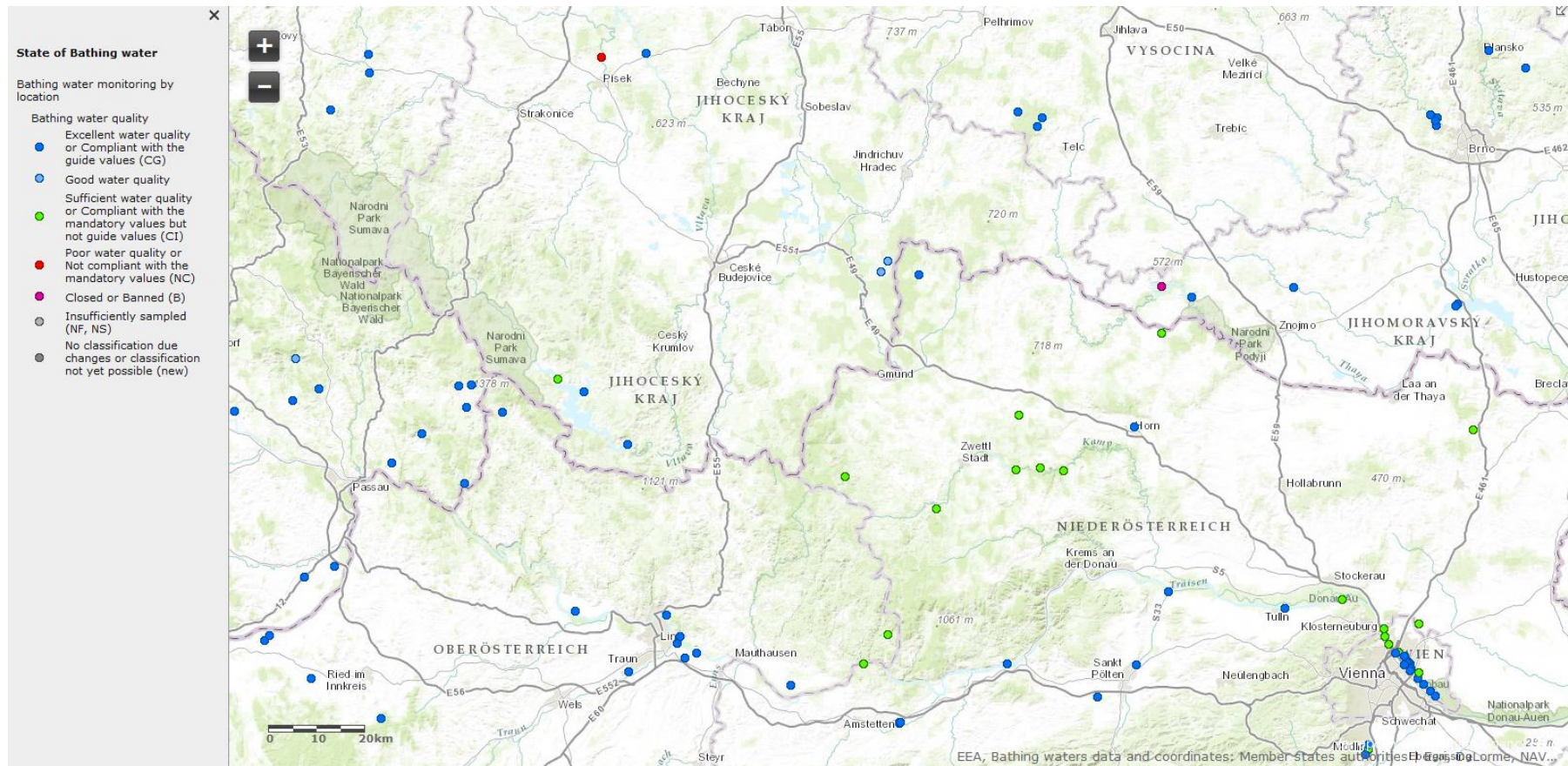
In the programme area (the Vysočina Region) the main continental (European) divide between the Elbe and Danube river systems is located. So the Bohemian section is part of two watershed areas: the Jihočeský Region is drained to the north by the Vltava River into the North Sea, same as the north-western part of the Vysočina Region. The exception in the Jihočeský Region is the eastern part of the Jindřichův Hradec District which is, same as the south-eastern part of Vysočina and practically all the Jihomoravský Region, drained to the south, to the Austrian side of the border, into the Black Sea. This geographic situation has immediate influence upon the watercourses or water regimes in the border region and is important for analysing the risks regarding flood protection and water pollution (cf. Krajasits et al., 2013a: 18).

In Austria only eight percent of the surface water bodies have a poor and two percent have a bad ecological status. The situation in the border region is good and has improved during the last decades because of wastewater management measures, however, some problems are identified in the eastern part of the region (ground water contamination by nitrates) (cf. Krajasits et al., 2013a: 18).

Also in the Czech regions the quality of surface water has improved. The significantly improvement during the last ten or 15 years in the Bohemian part of the region is especially noticeable in the Vysočina and Jihomoravský Regions where the water pollution in the monitored sections has decreased by ten percent. The Bohemian part of the region, however, still does not meet the Aquis water treatment requirements. The deficit is especially obvious in the Vysočina Region. In 2008, 85% of surface water was treated here which is the lowest proportion in the Czech Republic. The Jihočeský and Jihomoravský Regions are doing better with around 95% in 2008 (cf. Krajasits et al., 2013a: 18).

Most bathing water sides are of excellent water quality; in the northern part of Lower Austria and Vienna several water sides with only sufficient water quality can be found. In the Czech Republic two sides do not comply with the standards.

Map 7: State of bathing waters in the region

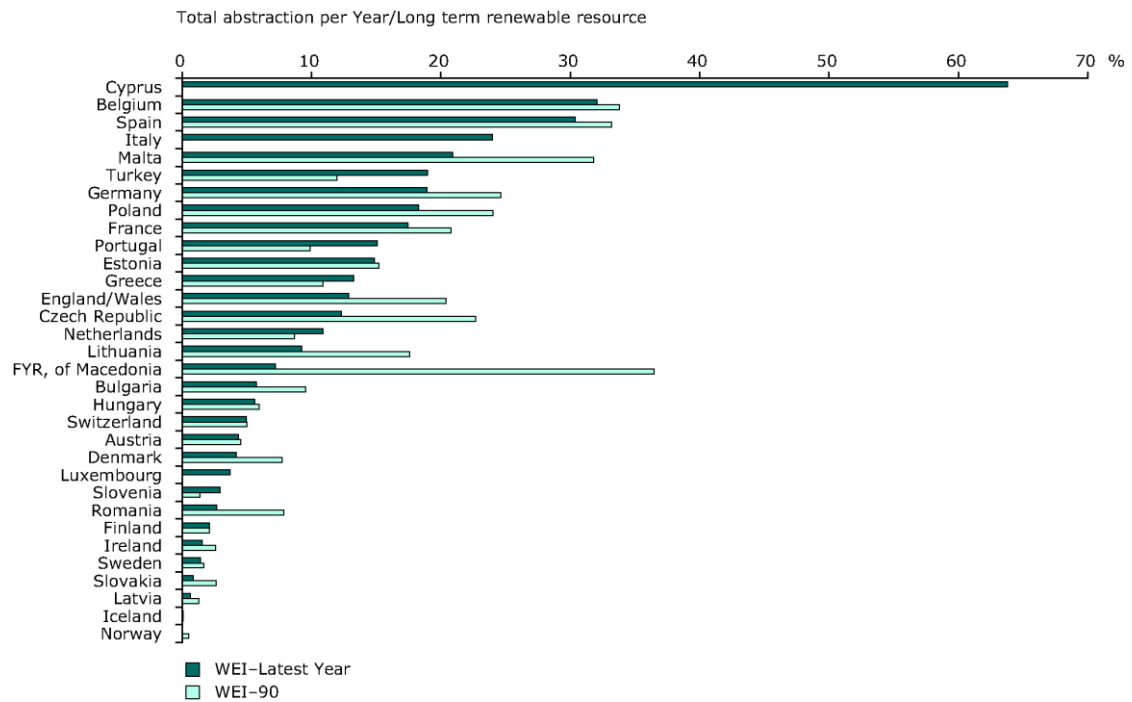


Source: EEA, 2013b: online.

### Efficiency of water usage

Water exploitation in the area does not constitute a major problem compared to other European regions. Water as a natural resource is available in great quantities in the area due to the natural environment. The Czech Republic managed to significantly reduce its water exploitation during the last decades (Figure 1). Austria has been and is even more efficient in this respect.

Figure 1: Water exploitation index



Source: EEA, 2014: online.

### Trend rating

Indicator	Trend	Rating
Quality of inland waters	Water quality has generally improved however with regional exceptions	↔↗
Efficiency of water usage	The efficiency of water usage is increasing	↗
Legend	Trend: ↗ Improvement ↔↗ partial improvement ↔↔ stable ↔↘ partial deterioration ↘ deterioration	

## 4.6 Climatic factors

### Greenhouse gas emissions

The two countries perform very differently regarding greenhouse gas emissions, which is mainly due to their changing industrial structure but also because of measures in the emitting sectors such as transport. On the one hand side, the Czech republic managed to decrease its greenhouse gas emissions by -8.9% up to 2010 since 1990 instead of the -8.0% declared in the Kyoto Protocol (cf. UNFCCC 2012: *National greenhouse gas inventory data for the period 1990–2010*). On the other hand side, Austria is one of the weakest performing Kyoto protocol countries an increased its greenhouse gas emissions by 8.2% up to 2010 instead of decreasing them by 13%.

However, measured in absolute greenhouse gas emissions, the Czech Republic as a country of comparable size but heavily industrialised still exceeds Austria by around 60% in CO<sub>2</sub> equivalents (cf. EUROSTAT). In both countries, greenhouse gas emissions from the transport sector are most notably increasing.

### Energy consumption from fossil sources

The region has good preconditions for power generation from renewable sources: wind (Niederösterreich, Vysočina), solar energy (South Moravia), water and bioenergy in almost all areas but the large cities. The conditions of producing energy by renewable sources are different in Austria and the Czech Republic. In Austria more than one third of the energy production as well as two-thirds of electricity production are carried out by renewable sources, about 30% of that by using the water resources. In the Czech Republic the share of renewable energy production accounts by about ten percent (cf. Krajasits et al., 2013a: 19).

However, the regions along the southern border rank among those regions in the Czech Republic that utilize renewable resources most. If compared with their own consumption, the overall energy production in the programme area regions was 9.9% in Vysočina and 8.4% Jihočeský Region, which are ones of the highest values within the Czech Republic (cf. Krajasits et al., 2013a: 19).

New renewable sources are constantly made accessible in the region but however depend on the policy framework and market design as some of them still cannot compete with traditional sources. The utilization of renewable resources will however be limited by such an extent that will not come into conflict with the sustainable development of landscape (limited installations in protected areas that would otherwise be suitable for wind generators, limited installations of solar power plants on arable lands, limited growing of plants suitable for renewable sources, e.g. biomass etc.).

### Trend rating

Indicator	Trend	Rating
Greenhouse gas emissions	Decreasing greenhouse gas emissions in CZ, increasing greenhouse gas emissions in AT	↗/↘
Energy consumption from fossil sources	More and more renewable sources are used in the programme area	↗
Legend	Trend: ↗ Improvement ←↗ partial improvement ↔ stable ←↘ partial deterioration ↘ deterioration	

## 4.7 Material assets and cultural heritage

### Condition of monuments and cultural heritage

The variety of cultural heritage and activities in the Austrian-Czech border region is unique. There are sights of global importance (UNESCO sights) like the historic centre of Vienna, the palace and gardens of Schönbrunn, Wachau Cultural Landscape, Historic Centre of Český Krumlov, Historic Centre of Telč, Holašovice Historical Village Reservation, Jewish Quarter and St Procopius' Basilica in Třebíč, Lednice-Valtice Cultural Landscape, Tugendhat Villa in Brno. Besides those mentioned most important sites there is a great number of historical value and protected buildings in the programme area. Hundreds of them are open to the public and host thousands of cultural events every year (exhibitions, concerts, theatrical performances, etc.) (cf. Krajasits et al., 2013a: 20).

The intangible heritage represented by folk traditions, handicrafts, folklore with typical folk dances (one of them, a South Moravian dance, has been entered in the UNESCO List of Intangible Heritage) and other persisting activities is a not less important common sign of the cross-border region (cf. Krajasits et al., 2013a: 20).

Through the detailed inventory of the current state of monuments the possibilities for the preservation of monuments tend to increase.

### Condition of other material assets

As in any populated region there are of course numerous material assets in the region – fixed and mobile ones, public and private property. Among the more notable material assets are some infrastructures: especially in South Bohemia and Moravia, there are numerous dam lakes. All over the region smaller artificial ponds can be found that are often used for fish breeding.

As other important material assets, a number of abandoned railroad border crossings exist in the region: Gmünd – České Velenice (narrow-gauge), Fratres – Slavonice, Laa an der Thaya – Hevlín, Wildendürnbach – Novosedly-Drnholec. Reactivation of the connections Fratres – Slavonice and Laa an der Thaya – Hevlín for which a reactivation have often been discussed in the past.

### Trend rating

Indicator	Trend	Rating
Condition of monuments and cultural heritage	The possibilities for the preservation of monuments tend to increase.	↗
Condition of other material assets	<i>No trend assessment possible due to the numerous material assets</i>	n.A.
Legend	Trend: ↗ Improvement ←↗ partial improvement ↔ stable ←↘ partial deterioration ↘ deterioration	

## 4.8 Landscape

### Quality of the natural and cultural landscape

The Austrian – Czech border region covers an area of 49,738 km<sup>2</sup> and offers a variety of different landscapes. The Western part of the border region (Jižní Čechy, Mühlviertel, parts of Waldviertel) is characterized by the low mountain range of one of the oldest geological formations in Europe Český les, Šumava, Českomoravská vrchovina a Novohradské hory. The Danube valley forms the southern boundary of this part. Towards the Eastern part (Waldviertel, Weinviertel, Vysočina, Jižní Morava) the landscape changes into hills and the granite and gneiss highlands, valleys and lowlands. The Carpathian region forms the border in the southeast. Moravský kraj is one of the most significant *karst* areas in Central Europe. The northern Vienna Basin (which consists of the natural areas of Marchfeld and Weinviertel) is a depression between the Alps. The river systems Danube, the Thaya/Dyje and the March/Morava do not only form the character of the landscape, they are also the living environment of specific fauna and flora and part of the National park system in the region (cf. Krajasits et al., 2013a: 16).

However, agricultural and pasture land in the less-favoured areas of the program area decreases, especially in the Czech Republic, but also in the Wald- and Mühlviertel.

### Degree of landscape fragmentation

Compared to the rest of extra-Alpine Central Europe, the fragmentation in the programme area is relatively low. Especially the Böhmerwald massive in the Czech Republic as well as in Austria is still a relatively natural area and one of the few unfragmented large forests remaining in Europe.

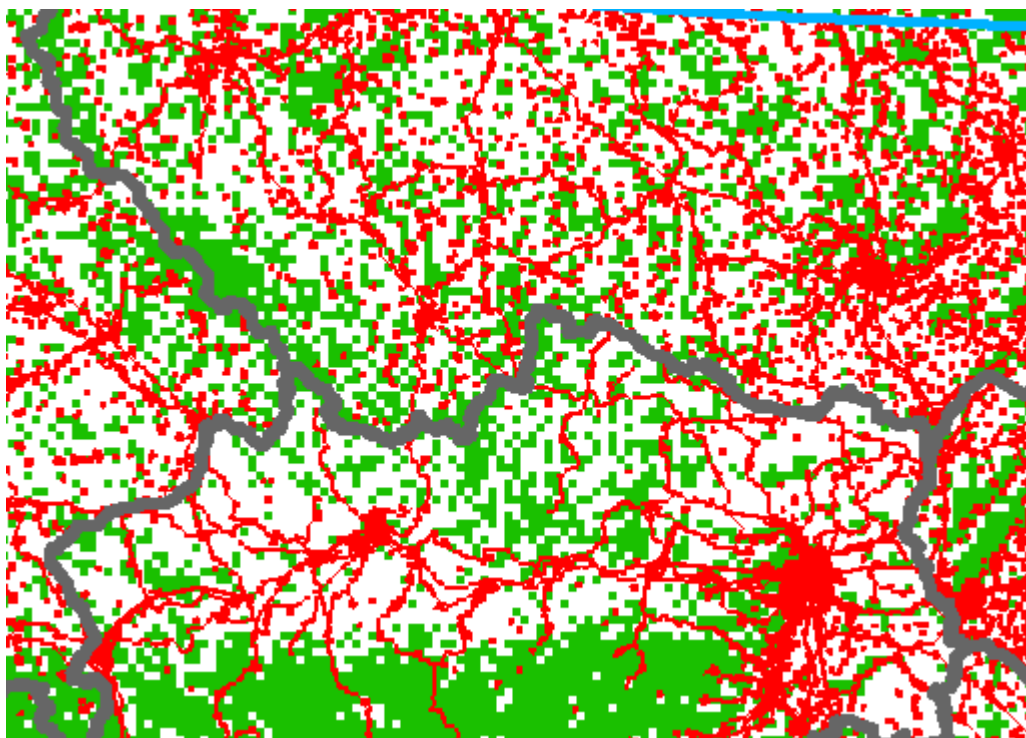
However, for a relatively sparsely populated area out of the major agglomerations, the infrastructure network between the smaller urban nodes is dense and growing, which leads to further fragmentation. In and around the larger agglomerations Brno, Linz-Wels and Vienna, fragmentation is comparatively high.

### Trend rating

Indicator	Trend	Rating
Quality of the natural and cultural landscape	The traditional landscape is under pressure in some areas	↔↘
Degree of landscape fragmentation	The impact of new transport infrastructure and settlements activities leads to increasing landscape fragmentation.	↘
Legend	↗ Improvement ↔↗ partial improvement ↔↔ stable ↔↘ partial deterioration ↘ deterioration	



Map 8: Pressures from urbanisation and transport on semi-natural areas in the region



Source: EEA, 2014b: online.

## 5. Likely significant effects on the environment and measures envisaged to prevent or reduce any significant adverse effects

### 5.1 Methodological notes

The assessment is structured along investment priorities on the **measure level** (with related output indicators) being the most detailed information on the cooperation programme effects available. For all cooperation programme measures we will provide statements on the effects on the environment with respect to the selected environmental indicators. The structure of the SEA will be exactly oriented to the structure of the cooperation programme priorities and measures. Thus, it can be ensured that all impacts are evaluated in the SEA. We use qualitative measurements for the indicators. Negative as well as positive environmental impacts will be possible.

To achieve comparability of the individual indicators selected, a five-part ordinal scale will be provided in an ordinal scale for all environmental indicators:

Table 5: Qualitative evaluation system measures

Symbol	Trend
++	significant improvement of the environment
+	slight improvement of the environmental situation
0	no significant change in the environmental situation
–	slight deterioration of the environmental situation
—	significant deterioration of the environment
x	evaluation not possible

Source: ÖIR

All cooperation programme measures are assessed using standardised impact matrices. These provide an overview on environmental issues, indicators, the likely evolution of the environment without implementation of the cooperation programme and with implementation.

As a basis for assessing the significance of environmental effects, the list in Annex II SEA Directive is used as a basis. Since the affected area is very large and future projects and other activities cannot yet be located, the criteria of the areas likely to be affected can be used only conditionally. Also the trans-boundary character is inherent for the effects of a cross-border programme and therefore only considered together with other criteria. Therefore, the following set of criteria was used for the present evaluation:

1. *The characteristics of plans and programmes, having regard, in particular, to*
  - *the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources,*
  - *the degree to which the plan or programme influences other plans and programmes including those in a hierarchy,*
  - *the relevance of the plan or programme for the integration of environmental considerations in particular with a view to promoting sustainable development,*

- *environmental problems relevant to the plan or programme,*
  - *the relevance of the plan or programme for the implementation of Community legislation on the environment (e.g. plans and programmes linked to waste-management or water protection).*
2. *Characteristics of the effects and of the area likely to be affected, having regard, in particular, to*
- *the probability, duration, frequency and reversibility of the effects,*
  - *the cumulative nature of the effects,*
  - *the transboundary nature of the effects,*
  - *the risks to human health or the environment (e.g. due to accidents),*
  - *the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected),*
  - *the value and vulnerability of the area likely to be affected due to:*
    - *special natural characteristics or cultural heritage,*
    - *exceeded environmental quality standards or limit values,*
    - *intensive land-use,*
  - *the effects on areas or landscapes which have a recognised national, Community or international protection status.*

All measures will be assessed using standardised impact matrices.

## **5.2 Reasonable alternatives to be dealt with**

The only alternative that is reasonable due to the different objectives of the programme and the necessity for political coordination is that the programme would not be implemented. It is not reasonable to deal with an alternative, completely different programme. We do, however, make propositions for alternatives to aspects of the programme as measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the programme.

## **5.3 Assessment of Priority axis 1: Strengthening research, technological development and innovation**

### **5.3.1 Investment Priority 1a: Enhancing R&I infrastructure and capacities to develop R&I excellence and promoting centres of competence in particular those of European interest**

#### **Actions to be supported under the investment priority**

Within this investment priority and with the aim to reach the specific objective, the following types of activities as examples will be realized:

- (a) Preparatory studies and planning activities for investments in R&I infrastructure which will be jointly used/shared by cooperating R&I institutions from both sides of the border

- (b) Investments in new jointly used/shared R&I facilities or extension and modernisation of technology facilities, research capacities, laboratories which are of regional/cross border interest
- (c) Supporting concrete joint cross-border R&I activities (projects) using existing R&I capacities on one and/or the other side of the border with the aim to realize economies of scale and by joint use to increase utilisation of existing capacities, instead of purchasing similar capacities on both sides of the border and fostering the preparation of the implementation of results (cf. Krajasits et al., 2014: 23)

## Assessment of environmental effects

Table 6: Assessment of environmental effects of Investment Priority 1a

Environmental issues	Indicators	Trend	Effects
Biodiversity, fauna and flora	Condition of habitats and species of the annexes to the Habitats and Birds Directives	↘	0
	Conditions of NATURA 2000 and other protected areas	↔↗	0
Population, air and human health	Level of ambient noise	↘	0
	Level of air pollution	↔↘	0
	Modal share of eco-friendly transport	↔↗	0
	Damage from natural and man-made disasters	↘	0
Soil	Chemical and physical soil quality	↗	0
	Soil sealing	↘	–
Water	Quality of inland waters	↔↗	0
	Efficiency of water usage	↗	0
Climatic factors	Greenhouse gas emissions	↗/↘	0
	Energy consumption from fossil sources	↗	0
Material assets and cultural heritage	Condition of monuments and cultural heritage	↗	–
	Condition of other material assets	n.A.	–
Landscape	Quality of the natural and cultural landscape	↔↘	–
	Degree of landscape fragmentation	↘	0
Rationale of the assessment compared to the likely evolution	Through grants for research projects no relevant positive or negative environmental effects will arise. Technical equipment and minor construction work for facilities however can have effects on land use, buildings and the landscape. Depending on the specific project the environmental issues soil (indicator <i>soil sealing</i> ), material assets and cultural heritage (indicators <i>condition of monuments and cultural heritage</i> , <i>condition of other material assets</i> ) and landscape (indicator <i>quality of the natural and cultural landscapes</i> ) can be negatively affected.		
Matching criteria for the significance of environmental effects	Investments in “R&I facilities or extension and modernisation of technology facilities” and the overall resources available for the investment priority do not indicate particularly large projects or a significant use of natural resources, which is why effects are rated to be not significant.		
Reasonable alternatives to be dealt with and measures envisage	In the scope of the common approval procedures on the subsequent planning levels also slightly negative effects can be expected to be avoided or minimized by taking countermeasures.		
Legend	<p>Rating of the likely evolution (trend): ↗ improvement ↔↗ partial improvement ↔↔ stable ↔↘ partial deterioration ↘ deterioration</p> <p>Rating of the des AT-CZ programme compared to the likely evolution: ++ significant environmental improvement + slight improvement of the environmental situation 0 no significant change in the environmental situation – slight deterioration of the environmental situation — significant deterioration of the environment x evaluation not possible</p>		

Source: ÖIR

**5.3.2 Investment Priority 1b: Promoting business investment in R&I, developing links and synergies between enterprises, research and development centres and the higher education sector, in particular promoting investment in product and service development, technology transfer, social innovation, eco-innovation, public service applications, demand stimulation, networking, clusters and open innovation through smart specialisation, and supporting technological and applied research, pilot lines, early product validation actions, advanced manufacturing capabilities and first production, in particular in key enabling technologies and diffusion of general purpose technologies**

**Actions to be supported under the investment priority**

Based on the existing national and regional innovation strategies it is very important to concentrate on the unutilized cross border potential in the business sector as well as in the cooperation of public and private research institutions (incl. universities) with the business sector – primarily SMEs as a key segment of local and regional economies in cross border area but also a large enterprises acting as “innovation regional leaders” having potential to boost the innovativeness and form innovative networks and chains. The planned interventions will support these approaches in the following way:

- ▶ The business sector (primarily SMEs) will be empowered in their innovative orientation by cooperation with research institutions or by establishing cluster and networks of branches
- ▶ Know-how and information transfer will be fostered to improve the commercial viability of the business partners
- ▶ enterprises (primarily SMEs) will be integrated in the regional innovation system to bring them closer to the R&I results
- ▶ Institutional cross border networks will be promoted to secure a systematic development of cooperation and capacity building

Within the investment priority following types of activity will be supported:

- (a) Joint research projects, technology transfer and know-how transfer between research/technology institutions and businesses (incl. necessary R&I equipment)
- (b) Systemic measures to facilitate enterprises (primarily SMEs) in joining the innovation system and using results of regional R&I system (incl. specific services in R&I sector – intermediation of information, contacts, consultancy and other assistance to enterprises (primarily SMEs) aiming at their increased innovativeness)
- (c) Promoting networking and cooperation activities among research institutions, education/research institutions, universities and businesses.

Support will be provided to networking and cooperative actions that enable enterprises (primarily SMEs) to use results of R&I, increase their innovativeness and support them in entering the innovation system (cf. Krajasits et al., 2014: 26).

## Assessment of environmental effects

Table 7: Assessment of environmental effects of Investment Priority 1b

Environmental issues	Indicators	Trend	Effects
Biodiversity, fauna and flora	Condition of habitats and species of the annexes to the Habitats and Birds Directives	↘	0
	Conditions of NATURA 2000 and other protected areas	↔↗	0
Population, air and human health	Level of ambient noise	↘	0
	Level of air pollution	↔↘	0
	Modal share of eco-friendly transport	↔↗	0
	Damage from natural and man-made disasters	↘	0
Soil	Chemical and physical soil quality	↗	0
	Soil sealing	↘	0
Water	Quality of inland waters	↔↗	0
	Efficiency of water usage	↗	0
Climatic factors	Greenhouse gas emissions	↗/↘	0
	Energy consumption from fossil sources	↗	0
Material assets and cultural heritage	Condition of monuments and cultural heritage	↗	0
	Condition of other material assets	n.A.	0
Landscape	Quality of the natural and cultural landscape	↔↘	0
	Degree of landscape fragmentation	↘	0
Rationale of the assessment compared to the likely evolution	The cross-border initiation of co-operation between SMEs and/or R&I facilities and the promotion of cluster and network activities have at most marginal environmental effects (such as increased cross-border missions) that are not measurable at the scope of view.		
Matching criteria for the significance of environmental effects	none		
Reasonable alternatives to be dealt with and measures envisage	not required		
Legend	<p>Trend rating: ↗ improvement ↔↗ partial improvement ↔↔ stable ↔↘ partial deterioration ↘ deterioration</p> <p>Rating of the effects: ++ significant environmental improvement + slight improvement of the environmental situation 0 no significant change in the environmental situation – slight deterioration of the environmental situation — significant deterioration of the environment x evaluation not possible</p>		

Source: ÖIR

## 5.4 Assessment of Priority axis 2: Environment and Resources

### 5.4.1 Investment priority 6c: Conserving, protecting, promoting and developing cultural and natural heritage

#### Actions to be supported under the investment priority

The supported actions will contribute to protect, promote and develop the rich and diverse cultural and natural heritage in the Czech-Austrian border region in a sustainable and resource efficient way.

All the mentioned activities are envisaged (also if undertaken on only one side of the border) to improve the status and potential for further sustainable utilization of cultural/natural sights and monuments as long as they are based on national, regional or common strategies. The interventions need to have the potential for triggering a noticeable positive impact for the local economies and/or the common identity of the regional population.

Local and regional touristic development is strongly connected with the development of the existing transport infrastructure. Especially in rural and peripheral region the reconstruction and the development of the transport facilities is a basic asset for starting and increasing the touristic dynamic. On the other hand a high touristic intensity often leads to pressure on the local and regional transport infrastructure especially in regions where the level and the quality are not in accordance with the standards necessary for advanced touristic locations and/or do not have the capacity to absorb the existing traffic (e.g. locations of international interest).

In this sense supported actions within this Investment Priority may target the following areas (types of actions):

- (a) Systemic measures of common character (e.g. studies, strategies, plans, systematic promotional activities) in the field of preservation, development and utilization of cultural/natural heritage
- (b) Reconstruction, recovery and promotion of cultural/natural sights and monuments
- (c) Preservation, development and promotion of the cross-border region's intangible cultural heritage
- (d) Support the utilization of the cultural/natural heritage potential by investment in sustainable public touristic infrastructure and information facilities
- (e) Reconstruction, upgrading and improving transport infrastructure and management of traffic flows in context with touristic locations and with the need to improve accessibility of existing cultural and natural heritage (cf. Krajasits et al., 2014: 31).



## Assessment of environmental effects

Table 8: Assessment of environmental effects of Investment Priority 6c

Environmental issues	Indicators	Trend	Effects
Biodiversity, fauna and flora	Condition of habitats and species of the annexes to the Habitats and Birds Directives	↘	0 (-)
	Conditions of NATURA 2000 and other protected areas	↔↗	0
Population, air and human health	Level of ambient noise	↘	-
	Level of air pollution	↔↘	-
	Modal share of eco-friendly transport	↔↗	-
	Damage from natural and man-made disasters	↘	0
Soil	Chemical and physical soil quality	↗	0
	Soil sealing	↘	-
Water	Quality of inland waters	↔↗	0
	Efficiency of water usage	↗	0
Climatic factors	Greenhouse gas emissions	↗/↘	-
	Energy consumption from fossil sources	↗	-
Material assets and cultural heritage	Condition of monuments and cultural heritage	↗	+
	Condition of other material assets	n.A.	0
Landscape	Quality of the natural and cultural landscape	↔↘	+/-
	Degree of landscape fragmentation	↘	-(-)
Rationale of the assessment compared to the likely evolution	The state of the cultural heritage and the natural and cultural landscapes would clearly be improved by the planned measures. Negative effects of accompanying linear infrastructure financed under the programme, especially roads, would on the other hand have negative effects on the environmental issues soil (indicator <i>soil sealing</i> ) and landscape (indicators <i>quality of the natural and cultural landscape</i> , <i>degree of landscape fragmentation</i> ). The new roads might also increase the attractiveness of using private motorized vehicles and subsequently cause negative effects on human health (indicators <i>level of ambient noise</i> , level of air pollution, <i>modal share of eco-friendly transport</i> ) and climate (indicators <i>greenhouse gas emissions</i> , <i>energy consumption from fossil sources</i> ).		
Matching criteria for the significance of environmental effects	Measures to safeguard the cultural heritage can, in case of the cultural goods being important, be significant. The negative effects of the accompanying infrastructure are not expected to be significant because the focus will be on local low order roads. However, given the case that road construction would take place in particularly sensitive areas (cf. SEA directive Annex II), the effects of landscape fragmentation could nonetheless be significant (indirectly also for the local fauna).		
Reasonable alternatives to be dealt with and measures envisage	When selecting projects it must be taken into account that roads do not cut through sensitive areas to avoid significant deterioration of the environment.		
Legend	<p>Trend rating: ↗ improvement ↔↗ partial improvement ↔↔ stable ↔↘ partial deterioration ↘ deterioration</p> <p>Rating of the effects: ++ significant environmental improvement + slight improvement of the environmental situation 0 no significant change in the environmental situation - slight deterioration of the environmental situation -- significant deterioration of the environment x evaluation not possible</p>		

Source: ÖIR

#### 5.4.2 Investment priority 6d: Protecting and restoring biodiversity and soil and promoting ecosystem services including through Natura2000, and green infrastructure

##### Actions to be supported under the investment priority

To protect and restore the variety of species and to secure the ecosystem in the region it is essential for obtaining the living conditions and for sustainable socio-economic development of the region. In both countries for the biosphere strategies the Ecosystem approach is the leading principle in ecosystem management. This means an integrated management of land, water and living resources, that promotes their conservation and sustainable use in an equitable way. Following the national strategies and goals the interventions of interventions under this IP can be summarized under the following bundles:

##### *Coordination, Management, Public awareness*

In the region there is a plurality of different protected areas – national parks, nature parks, RAMSAR and NATURA 2000, biosphere reserve areas and others. Only few of them have special management structures, the systems of monitoring are different. On both side of the border there is a need to increase the understanding of the importance of biodiversity conservation and sustainable use.

##### *Ecosystem services and risk prevention*

Ecosystem based strategies and measures are the most sustainable and effective instruments against the impacts of the climate change. With new innovative solutions using the components and the natural potential of the green infrastructure the risk for natural disasters can be reduced. The measures of Green infrastructure are planned to be supported as an instrument helping to maintain biodiversity, interlink natural habitats, combat the fragmentation of landscapes and assist the ecosystems to function properly.

Following types of actions will be promoted:

- (a) Investments in Green infrastructure, i.e. natural and landscape elements that are contributing to:
  - Prevention of flooding and/or water retention (such as floodplain restoration, wetlands, re-naturalizing rivers and river banks etc.),
  - adaptation to climate change or the mitigation of negative effects (incl. measures dealing with droughts),
  - Easier migration of species in the joint region (artificial landscape elements etc.)
- (b) Coordinated preparation and/or implementation of NATURA 2000 and other concepts for protected areas and other measures supporting the preservation of biodiversity.
- (c) Preparation and implementation of joint cross border mechanisms – like researches, studies, strategies, plans, coordinated management approaches, awareness raising and education activities and other structural cooperative measures in the field of nature and landscape protection and utilization (cf. Krajasits et al., 2014: 35f.).

## Assessment of environmental effects

Table 9: Assessment of environmental effects of Investment Priority 6d

Environmental issues	Indicators	Trend	Effects
Biodiversity, fauna and flora	Condition of habitats and species of the annexes to the Habitats and Birds Directives	↘	++
	Conditions of NATURA 2000 and other protected areas	↔↗	++
Population, air and human health	Level of ambient noise	↘	0
	Level of air pollution	↔↘	0
	Modal share of eco-friendly transport	↔↗	0
	Damage from natural and man-made disasters	↘	++
Soil	Chemical and physical soil quality	↗	0
	Soil sealing	↘	+
Water	Quality of inland waters	↔↗	0
	Efficiency of water usage	↗	0
Climatic factors	Greenhouse gas emissions	↗/↘	0
	Energy consumption from fossil sources	↗	0
Material assets and cultural heritage	Condition of monuments and cultural heritage	↗	++
	Condition of other material assets	n.A.	++
Landscape	Quality of the natural and cultural landscape	↔↘	+
	Degree of landscape fragmentation	↘	+
Rationale of the assessment compared to the likely evolution	<p>Cross-border development, maintenance and management concepts for protected areas and sensitive areas, green Infrastructure and restoration measures have positive effects on a number of environmental issues. Oriented at natural habitats, improvements can especially be expected for biodiversity, fauna and flora (indicators <i>condition of habitats and species of the annexes to the Habitats and Birds Directives, conditions of NATURA 2000 and other protected areas</i>), soil (indicator <i>soil sealing</i>) and landscape (indicators <i>quality of the natural and cultural landscapes, degree of landscape fragmentation</i>).</p> <p>Green Infrastructure measures have the additional benefit of flood protection and therefore positive effects on population and human health (indicator <i>damage from natural and man-made disasters</i>) and cultural assets and other real assets (indicators <i>condition of monuments and cultural heritage, condition of other material assets</i>).</p>		
Matching criteria for the significance of environmental effects	<p>Since large risks to human health, cultural heritage and other material goods can be reduced with flood protection, the positive effects are rated as significant.</p> <p>Actions supported would have positive effects on Natura 2000 (according to the Habitats Directive) great importance for the implementation of Community environmental legislation. Therefore, the positive effect on animals, plants and biodiversity are also rated as significant.</p>		
Reasonable alternatives to be dealt with and measures envisaged	not required		
Legend	<p>Trend rating: ↗ improvement ↔↗ partial improvement ↔↔ stable ↔↘ partial deterioration ↘ deterioration</p> <p>Rating of the effects: ++ significant environmental improvement + slight improvement of the environmental situation 0 no significant change in the environmental situation – slight deterioration of the environmental situation — significant deterioration of the environment x evaluation not possible</p>		

Source: ÖIR

### **5.4.3 Investment priority 6f: Promoting innovative technologies to improve environmental protection and resource efficiency in the waste sector, water sector and with regard to soil, or to reduce air pollution**

#### **Actions to be supported under the investment priority**

Eco-innovation is understood as any form of innovation aiming at significant and demonstrable progress towards the goal of sustainable development. This can be achieved either by reducing the environmental impact or achieving a more efficient and responsible use of resources.

Such kind of innovations will be supported in cases where such a significant and demonstrable progress towards the goal of sustainable development is realized new to the whole programme area as well as cases when such a progress is new to its part – e.g. introduction of innovative processes which are being successfully realized in one part of programme area and through the supported cooperation action introduced at another part of programme area (as a pilot project, transfer-know how, good practice etc.).

Following types of actions will be supported:

- (a) Realization of cooperation pilot projects for testing and implementing innovative technologies and approaches to improve environmental protection in joint region (e.g. waste management)
- (b) Innovative projects realized cross-border that focus on energy efficiency incl. implementation of low-energy solutions (management plans, pilot actions, know-how and good practice transfer etc.).
- (c) Research, studies, strategies, plans and other mechanisms realized cross-border to promote innovative technologies and approaches in the field of environment protection and resource efficiency (cf. Krajasits et al., 2014: 39).

## Assessment of environmental effects

Table 10: Assessment of environmental effects of Investment Priority 6f

Environmental issues	Indicators	Trend	Effects
Biodiversity, fauna and flora	Condition of habitats and species of the annexes to the Habitats and Birds Directives	↘	0
	Conditions of NATURA 2000 and other protected areas	↔↗	0
Population, air and human health	Level of ambient noise	↘	0
	Level of air pollution	↔↘	+
	Modal share of eco-friendly transport	↔↗	0
	Damage from natural and man-made disasters	↘	0
Soil	Chemical and physical soil quality	↗	+
	Soil sealing	↘	0
Water	Quality of inland waters	↔↗	+
	Efficiency of water usage	↗	+
Climatic factors	Greenhouse gas emissions	↗/↘	+
	Energy consumption from fossil sources	↗	+
Material assets and cultural heritage	Condition of monuments and cultural heritage	↗	0
	Condition of other material assets	n.A.	0
Landscape	Quality of the natural and cultural landscape	↔↘	0
	Degree of landscape fragmentation	↘	0
Rationale of the assessment compared to the likely evolution	Innovative technologies to improve environmental protection and resource efficiency measures have positive effects on a number of environmental issues. Improvements can especially be expected for population, air and human health (indicators <i>Level of ambient noise</i> , <i>Level of air pollution</i> ), soil (indicator <i>chemical and physical soil quality</i> ) water (indicators <i>quality of inland waters</i> , <i>efficiency of water usage</i> ) and climate (indicators <i>greenhouse gas emissions</i> , <i>energy consumption from fossil sources</i> ). Biodiversity, fauna and flora could also profit indirectly.		
Matching criteria for the significance of environmental effects	Positive effects may be significant but the actions described are very vaguely so the significance cannot be evaluated.		
Reasonable alternatives to be dealt with and measures envisage	not required		
Legend	<p>Trend rating: ↗ improvement ↔↗ partial improvement ↔↔ stable ↔↘ partial deterioration ↘ deterioration</p> <p>Rating of the effects: ++ significant environmental improvement + slight improvement of the environmental situation 0 no significant change in the environmental situation – slight deterioration of the environmental situation — significant deterioration of the environment x evaluation not possible</p>		

Source: ÖIR

## 5.5 Assessment of Priority axis 3: Human resources development

### 5.5.1 Investment priority: Investing in education, training and vocational training for skills and lifelong learning by developing and implementing joint education, vocational training and training schemes

#### Actions to be supported under the investment priority

In the border regions the students and learners are confronted with several problems such as access to the education systems is restricted, the administrative structures and certification

systems are not standardised, different languages and cultural values as well as historical aspects have influence on the growing together. These problems determine in a great extent the daily life of the inhabitants and the exchange flows. Apart from the technical and economic capabilities language learning and thus an insight into other cultures is still one of the most important issues for the further development of the cross border region (including labour market) and the integration process. Education institutions face the challenge of contributing to economic and social harmonisation and to the cultural and psychological integration of border regions.

Within the IP and with the aim to reach the specific objective, following types of activities as examples may be realized:

- (a) Adaption of educational conditions/systems to the economic and cultural needs of joint region (meeting the needs of labour market etc.)
- (b) Actions to support harmonisation of the vocational education system for meeting the needs of joint labour market (e.g. joint schemes to support long-term traineeship of students in companies across the border – “Dual education”)
- (c) Development and implementation of common systemic measures and jointly realised programmes in the field of education in form of:
  - study plans/curricula,
  - student and staff exchange,
  - preparing basic principles for harmonization and acceptance of qualifications,
  - specialised bilateral trainings schemes
  - language learning
- (d) The types of envisaged interventions cover studies and expertise, planning activities, as well as investment in infrastructure, equipment and facilities (under conditions given as specific selection criteria) (cf. Krajasits et al., 2014: 44f.).

### **Assessment of environmental effects**

The environmental effects of the action group “developing and implementing joint education and training schemes” (then under Priority 2) were identified as not relevant in the relevance rating during the scoping consultations. As the contents have not changed since, the assessment is not deepened anymore.

## 5.6 Assessment of Priority axis 4: Sustainable networks and institutional co-operation

### 5.6.1 Investment priority 11: Enhancing institutional capacity of public authorities and stakeholders and efficient public administration by promoting legal and administrative cooperation and cooperation between citizens and institutions

#### Actions to be supported under the investment priority

Within the investment priority and with the aim to reach the specific objective the following types of activities may be realized:

- (a) Fostering the cooperation of municipalities, cities and regions and other institutions within public sector
- (b) Strengthening of networks (esp. of NGOs) on local/regional level and fostering the potential to extend cooperation with clear cross border approach and targets
- (c) Fostering small scale integration, cooperation between citizens and institutions and other local cohesion activities (SPF).

Such a special fund may be established to support cooperative activities and cross-border exchange between local people and local and regional initiatives and institutions in the field of social, cultural regional integration and development for better mutual understanding and the development of a common regional identity.

Examples of concrete areas/activities within above mentioned types:

- ▶ Joint social, cultural and other similar cooperation activities contributing to mutual understanding and cohesion in cross border area
- ▶ Systemic cooperation of educational and labour market institutions
- ▶ Cooperation activities in the field of transport – measures for better coordination and harmonization of public transport operation in the cross-border region, measures for coordination of transport network development etc.
- ▶ Cooperation activities of bodies responsible for risk management
- ▶ Cooperation activities of schools and others educational institutions (mutual meetings, activities for children etc.)
- ▶ Other cooperation measures in the field of public services and activities of public interest (cf. Krajasits et al., 2014: 50).

## Assessment of environmental effects

Table 11: Assessment of environmental effects of Investment Priority 11

Environmental issues	Indicators	Trend	Effects
Biodiversity, fauna and flora	Condition of habitats and species of the annexes to the Habitats and Birds Directives	↘	x
	Conditions of NATURA 2000 and other protected areas	↔↗	x
Population, air and human health	Level of ambient noise	↘	+ (x)
	Level of air pollution	↔↘	+ (x)
	Modal share of eco-friendly transport	↔↗	+ (x)
	Damage from natural and man-made disasters	↘	+ (x)
Soil	Chemical and physical soil quality	↗	x
	Soil sealing	↘	x
Water	Quality of inland waters	↔↗	x
	Efficiency of water usage	↗	x
Climatic factors	Greenhouse gas emissions	↗/↘	x
	Energy consumption from fossil sources	↗	x
Material assets and cultural heritage	Condition of monuments and cultural heritage	↗	+ (x)
	Condition of other material assets	n.A.	+ (x)
Landscape	Quality of the natural and cultural landscape	↔↘	x
	Degree of landscape fragmentation	↘	x
Rationale of the assessment compared to the likely evolution	<p>The effects within the small scale special fund cannot fully be judged as there is a very broad thematic orientation. Projects in the mentioned fields of coordination and harmonization of public transport operation and cooperation activities of bodies responsible for risk management would however have positive effects of the environment:</p> <p>Cooperation on public transport would have positive effects on population, air and human health (indicators <i>level of ambient noise</i>, <i>level of air pollution</i>, <i>modal share of eco-friendly transport</i>) and climate (indicators <i>greenhouse gas emissions</i>, <i>energy consumption from fossil sources</i>). Cooperation on risk prevention would have positive effects on population and human health (<i>indicator damage from natural and man-made disasters</i>) and material assets and cultural heritage (indicators <i>condition of monuments and cultural heritage</i>, <i>condition of other material assets</i>).</p>		
Matching criteria for the significance of environmental effects	These small scale projects on limited budget are not likely to have significant effects that can be measured within the scope of view.		
Reasonable alternatives to be dealt with and measures envisaged	Not required at programme level as there are no significant effects to be expected. In small scale special fund it should be ensured that no projects with significant negative effects on the environment are funded or that adequate mitigation or compensation measures are foreseen.		
Legend	<p>Trend rating: ↗ improvement ↔↗ partial improvement ↔↔ stable ↔↘ partial deterioration ↘ deterioration</p> <p>Rating of the effects: ++ significant environmental improvement + slight improvement of the environmental situation 0 no significant change in the environmental situation – slight deterioration of the environmental situation — significant deterioration of the environment x evaluation not possible</p>		

Source: ÖIR



## **5.7 Assessment of the interrelationship between environmental issues**

The environmental effects of the programme do not only include direct effects on the individual subjects of protection, but also the indirect effects, which can arise due to interactions between environmental issues. These can switch between the subjects of protection directly through displacement effects (indirect interaction), or occur because of more complex interdependencies. However, many interactions can be taken into account only at the later project level.

To avoid too complex assessments, interactions between affected subjects of protection are not treated separately as long as they can be logically related (e.g. local fauna is concerned from increased landscape fragmentation). They are only mentioned when they cannot be directly related to the direct effects. An accumulation of environmental effects is, however, treated in the assessment of the significance of effects (set of criteria based on the SEA Directive Annex II).

## **5.8 Assessment of the programme's effects on the Habitats and Birds Directives**

Effects on the "Natura 2000" network (EU habitats and bird protection areas) cannot be assessed on programme level as long as possible project locations are not known. Therefore we have to refer to the project level and the subsequent planning, approval or authorization processes.

## 6. Measures envisaged concerning monitoring

As the field of action with potentially significant negative environmental effects, Investment priority 6c: "Conserving, protecting, promoting and developing cultural and natural heritage" under Axis 2 Environment and Resources, was identified. These effects would occur from construction of new roads, particularly in sensitive areas (landscape fragmentation). The following indicators are suitable to measure these effects in the context of project implementation:

- ▶ Sealed soil (m<sup>2</sup>)
- ▶ New and reconstructed roads (km)
- ▶ New and reconstructed roads in environmentally protected areas (km)

For the remaining measures of the program, no significant environmental effects are expected.

## 7. Difficulties encountered in compiling the required information

The abstractness of the program (lack of information at project level and on locations) and the resulting level of detail of the environmental report are restrictions to the assessment of environmental effects. Only potential environmental effects can be identified based on fictional projects. A more detailed assessment can only take place on the subsequent planning or on project level.

A difficulty concerning indicators used is that some data was only available for entire regions or countries but not specifically for the programming area. A dedicated calculation of values for the very project area would have been desirable, however in the scope given by the legislation it was not appropriate to do such work without overly consuming public resources. Therefore we tried to fill gaps in the quantitative information using qualitative information from studies or reports.

## Sources

- CZSO 2012, Czech Statistical Office – Statistical Yearbook of the Czech Republic 2012, [http://www.czso.cz/csu/2012edicniplan.nsf/eng/A6004C2345/\\$File/000112.pdf](http://www.czso.cz/csu/2012edicniplan.nsf/eng/A6004C2345/$File/000112.pdf), (25/09/2013)
- EEA 2010, European Environment Agency – GIS area of Natura 2000 network, <http://www.eea.europa.eu/themes/biodiversity/document-library/natura-2000/natura-2000-network-statistics/area-calculations-2007-to-2009/gis-area-of-natura-2000-network-1>, (01/10/2013)
- EEA 2013, Protected Sites in Europe, <http://www.eea.europa.eu/data-and-maps/explore-interactive-maps/european-protected-areas>, (30/07/2013)
- EEA 2013b, State of bathing waters, <http://www.eea.europa.eu/themes/water/interactive/bathing/state-of-bathing-waters>, (30/07/2013)
- EEA 2014, Water exploitation index (WEI), <http://www.eea.europa.eu/data-and-maps/figures/water-exploitation-index-wei-3>, (17/06/2014)
- EEA 2014b, Pressures from urbanisation and transport on semi-natural areas, <http://www.eea.europa.eu/data-and-maps/figures/pressures-from-urbanisation-and-transport-on-semi-natural-areas>, (17/06/2014)
- Krajasits, Cornelia; Skoda, Jiri; Reiner, Karl; Kojan, Manfred (2013b): Operational Programme 2014-2020. Version 1.0. November 2013.
- Krajasits, Cornelia; Skoda, Jiri; Reiner, Karl; Kojan, Manfred (2014): Operational Programme 2014-2020. Version 1.2. May 2014.
- Krajasits, Cornelia; Skoda, Jiri; Reiner, Karl; Wittrich, Judith (2013a): Operational Programme 2014-2020. Version 0.0. January 2013.
- National Heritage Institute 2013, MonumNet online, <http://monumnet.npu.cz/chruzemi/list.php?KrOk=&Typy%5B%5D=NP&Nazev=&Start=0>, (17/10/2013)
- MZP online 2013, Ministry of the Environment of the Czech Republic – Species protection, [http://www.mzp.cz/en/species\\_protection](http://www.mzp.cz/en/species_protection), (01/10/2013)
- MZP online 2014, Ministry of the Environment of the Czech Republic – Contaminated sites, [http://www.mzp.cz/en/contaminated\\_sites](http://www.mzp.cz/en/contaminated_sites), (17/06/2014)
- Noise Observation and Information Service for Europe 2013 – Noise Observation, <http://noise.eionet.europa.eu/viewer.html>, (17/06/2014)
- Umweltbundesamt 2013, Altlastenkarte, <http://gis.umweltbundesamt.at/austria/altlasten>, (31/7/2013)

## Annex I: Important environmental goals of the Czech Republic

Source: Dohoda o Partnerství pro programové období 2014-2020, p. 73-83 (SEA partnership agreement)

### Státní politika životního prostředí ČR

Základní strategický dokument formulující cíle a priority rezortu ochrany životního prostředí. SPŽP stanovuje cíle ve čtyřech okruzích:

#### *Ochrana klimatu a zlepšení kvality ovzduší*

1. Snižování emisí skleníkových plynů a omezování negativních dopadů klimatické změny
2. Snížení úrovně znečištění ovzduší
3. Efektivní a přírodě šetrné využívání obnovitelných zdrojů energie

#### *Ochrana a udržitelné využívání zdrojů*

4. Zajištění ochrany vod a zlepšování jejich stavu
5. Omezování vzniku odpadů a jejich negativního vlivu na životní prostředí a podpora jejich využívání jako náhrady přírodních surovin
6. Ochrana a udržitelné využívání půdního a horninového prostředí

#### *Ochrana biologické rozmanitosti a environmentálně šetrné užívání krajiny*

7. Ochrana přírodních stanovišť, původních druhů rostlin a živočichů, cenných částí přírody a přírodních procesů
8. Zachování přírodních a kulturně-historických hodnot krajiny a jejich přirozených funkcí
9. Zlepšení kvality prostředí v sídlech

#### *Bezpečné prostředí*

10. Předcházení rizik
11. Ochrana prostředí před negativními dopady krizových situací způsobenými antropogenními nebo přírodními hrozbami

Z hlediska strategických cílů relevantních pro dílčí složky životního prostředí je rovněž možné citovat řadu dokumentů na mezinárodní i národní úrovni.

### Změna klima

V oblasti ochrany klimatu je klíčovým naplňování cílů **Rámcové úmluvy OSN o změně klimatu a Kjótského protokolu**. Závazky stanovené pro období 2008-2012 ČR splnila.

Ze společného závazku EU (prosinec 2008) snížit do roku 2020 emise skleníkových plynů o nejméně 20% ve srovnání s rokem 1990 a v případě dosažení nové mezinárodní dohody k

navýšení tohoto cíle na 30%. Pro ČR vyplývá z klimaticko-energetického balíčku závazek snížit emise v odvětvích spadajících do EU ETS o 21% do roku 2020 ve srovnání s rokem 2005 a v odvětvích mimo EU ETS nezvýšit emise o více než 9% v průběhu stejného období.

Další vývoj energetické politiky EU je v současné době předmětem diskusí, informace o představě EK dává „**Zelená kniha: Evropská strategie pro bezpečnou, konkurenceschopnou a udržitelnou energetiku**“. Konkrétní cíle nicméně v této fázi nebyly definovány. Budoucí cíle budou vycházet z cílů, které Komise stanovila v roce 2011 v plánu přechodu ke konkurenceschopnému nízkouhlíkovému hospodářství do roku 2050, v energetickém plánu do roku 2050 a v bílé knize o dopravě. Jedná se o tyto výchozí plány:

- ▶ do roku 2030 snížit emise skleníkových plynů v EU o 40%, aby se do roku 2050 podařilo tyto emise snížit o 80–95% oproti roku 1990,
- ▶ zvýšit podíl energie z obnovitelných zdrojů, zlepšit energetickou účinnost a využívat lepší a inteligentnější energetické infrastruktury,
- ▶ do roku 2030 dosáhnout 30% podíl OZE na výrobě energie,
- ▶ značně investovat do modernizace energetického systému, ať už s dekarbonizací nebo bez, což ovlivní ceny energie v období do roku 2030.

V rámci ČR jsou redukční cíle k roku 2020 stanoveny **Národním programem na zmírnění dopadů změny klimatu v ČR** (2004), tj. snížit v porovnání s rokem 2000 do roku 2020:

- a) měrné emise CO<sub>2</sub> na obyvatele o 30%,
- b) agregované emise o 25%.

V současné době se připravuje nový dokument „**Politika ochrany klimatu**“, který by měl nahradit Národní program na zmírnění dopadů změny klimatu v ČR. Předložení dokumentu se očekává v roce 2014. **Státní politika životního prostředí pro období 2012-2020** stanovila jako další emisní cíl snížení měrných emisí skleníkových plynů na obyvatele do roku 2020 přinejmenším na průměrnou hodnotu EU-27 z roku 2005 (10,5 t CO<sub>2</sub> ekv./obyv.).

V oblasti přizpůsobování se změně klimatu (adaptace) byla zveřejněno **Sdělení Komise KOM(2013)216 final, Strategie EU pro přizpůsobení se změně klimatu** a dokumenty EK, na které se tato strategie odkazuje. Při zvažování možných dopadů byla využita Zpráva EEA č. 12/2012 „Climate change, impacts and vulnerability in Europe 2012“, která identifikuje rizikové sektory.

## Ochrana ovzduší

Z hlediska ochrany ovzduší stanovuje rámcové cíle na úrovni politiky životního prostředí EU **Tematická strategie o znečišťování ovzduší**, definující hlavní cíl jako dosažení „úrovně jakosti vzduchu, která nepředstavuje rizika pro lidské zdraví a pro životní prostředí, ani na ně nemá výrazně negativní dopad“.

Vzhledem k synergickým efektům politiky ochrany klimatu a ochrany ovzduší jsou pro zlepšování kvality ovzduší relevantní rovněž cíle výše zmíněvaného Návrhu **7. Akčního programu EU pro životní prostředí**:

Prioritní cíl č. 1: Chránit, zachovávat a zvětšovat přírodní bohatství EU: Za účelem ochrany, zachovávání a zvětšování přírodního bohatství EU program na období do roku 2020 zajistí, aby: d) byly dále zmírněny dopady znečištění ovzduší na ekosystémy a biologickou rozmanitost; za tímto účelem je zapotřebí zejména zvýšit úsilí o dosažení plného souladu s právními předpisy EU v oblasti kvality ovzduší a vymezit strategické cíle a opatření na období po roce 2020

Prioritní cíl č. 2: Přeměnit EU v zelené a konkurenceschopné nízkouhlíkové hospodářství účinně využívající zdroje, tak, aby do roku 2020:

- a) EU splnila své cíle v oblasti klimatu a energetiky stanovené pro rok 2020 a nadále usilovala o to, aby do roku 2050 snížila emise skleníkových plynů o 80–95% v porovnání s rokem 1990, v rámci celosvětového úsilí o omezení průměrného nárůstu teploty na méně než 2 °C;
- b) byl výrazně snížen celkový dopad průmyslu EU na životní prostředí ve všech hlavních průmyslových odvětvích a proto, aby byly účinněji využívány zdroje; za tímto účelem je zapotřebí zejména zevšeobecnit uplatňování „nejlepších dostupných technik“ a zvýšit úsilí o podporu zavádění nových inovačních technologií, postupů a služeb;

Prioritní cíl č. 3: Chránit občany EU před environmentálními tlaky a riziky ovlivňujícími jejich zdraví a dobré životní podmínky, tak, aby do roku 2020 byla výrazně zlepšena kvalita ovzduší v EU.

Za tímto účelem je zapotřebí zejména zavést aktualizovanou politiku EU v oblasti kvality ovzduší, která je v souladu s nejnovějšími vědeckými poznatky, a opatření zaměřená na boj proti znečištění ovzduší u zdroje;

Klíčovým dokumentem na úrovni ČR je **Národní program snižování emisí ČR**. Globálním cílem Programu je snížit, s důrazem na podporu nových environmentálně šetrných technologií a využití potenciálu energetických úspor, zátěž životního prostředí látkami poškozujícími ekosystémy a vegetaci a vytvořit předpoklady pro regeneraci postižených složek životního prostředí a pro snižování rizik pro lidské zdraví, která plynou ze znečištění ovzduší a tím přispět k naplnění strategického cíle Environmentálního pilíře Strategie udržitelného rozvoje České republiky.

Vybrané specifické cíle Programu jsou:

- ▶ přispět ke snížení úrovně znečištění ovzduší PM<sub>10</sub> pod platné imisní limity,
- ▶ přispět ke snížení úrovně znečištění ovzduší benzo(a)pyrenem pod platný imisní limit

## Ochrana půd a horninového prostředí

Z hlediska ochrany půdy a souvisejících složek životního prostředí jsou rozhodující především cíle stanovené na úrovni **Společné zemědělské politiky EU** a národních zemědělských koncepčních a strategických dokumentů. **Národní strategický plán rozvoje venkova České republiky na období 2007-2013** například zdůrazňuje podporu zemědělských postupů šetrných k životnímu prostředí ve venkovské krajině a ochranu vody

a půdy prostřednictvím opatření zaměřených na protierozní ochranu a vhodné používání zemědělského půdního fondu. Riziko vodní a větrné eroze spolu s dalšími způsoby degradace půdy (např. zhutňováním) uvádí jako závažný problém i **Koncepce agrární politiky ČR po vstupu do EU (2004-2013)** a **Strategický rámec udržitelného rozvoje ČR. Akční plán ČR pro rozvoj ekologického zemědělství** v letech 2011-2015 zdůrazňuje podporu zajišťování mimoprodukčních funkcí ekologického zemědělství, které přispívají k obnově a stabilitě přirozených procesů v půdě. Jednou z podporovaných oblastí, na kterou se zaměřují evropské i národní dotační programy, je právě udržitelné hospodaření na zemědělské půdě. Vyplácení přímých podpor pro zemědělce podle nařízení Rady (ES) č. 73/2009 a dalších vybraných dotací je podmíněno právě plněním podmínek chránících půdu před zrychlenou erozí a vedoucích k zachování **Dobrého zemědělského a environmentálního stavu (GAEC)**. Důraz je kladen především na protierozní ochranu půdy na svažitých pozemcích, na ochranu půdy před vodní erozí a na snahu omezit negativní důsledky eroze. V ČR je vyplácení přímých plateb a dalších evropských podpor pro zemědělce podmíněno, mimo jiné, i plněním **Standardů Dobrého zemědělského a environmentálního stavu (GAEC)**, **Povinných požadavků na hospodaření (SMR)** a **Minimálních požadavků pro použití hnojiv a přípravků na ochranu rostlin v rámci agroenvironmentálních opatření**.

Jedním z hlavních témat současné zemědělské politiky je řešení negativních dopadů zemědělství na krajinu a životní prostředí. Do této problematiky patří i ochrana půdy před znečištěním souvisejícím se zemědělskou činností. **Národní akční plán ke snížení používání pesticidů v ČR** přijatý v roce 2012 byl připraven na základě požadavku **Směrnice 2009/128/ES, kterou se stanoví rámec pro činnost Společenství za účelem používání optimálního minima pesticidů**. Národní akční plán si klade za hlavní cíle omezení rizik vycházejících z používání přípravků na ochranu rostlin, a to v oblastech ochrany zdraví lidí, ochrany vod a ochrany životního prostředí, a optimalizaci využívání přípravků bez omezení rozsahu zemědělské produkce a kvality rostlinných produktů. Národní akční plán a uvedená směrnice mají úzkou návaznost na opatření v oblasti ochrany vod. Souvislost lze hledat především se **Směrnicí Rady 91/676/EHS o ochraně vod před znečištěním dusičnany ze zemědělských zdrojů** (tzv. nitrátová směrnice). Cílem této směrnice je snížit znečištění vod způsobené dusičnany ze zemědělských zdrojů a předcházet dalšímu takovému znečištění, a to zejména pro zajištění dostatku kvalitní pitné vody. Akční program vyhlášený podle uvedené směrnice představuje systém povinných opatření v tzv. zranitelných oblastech, který má za cíl redukovat riziko vyplavování dusíku do povrchových a podzemních vod.

Ekologické zemědělství představuje jeden z principů trvale udržitelného rozvoje. Evropská komise přijala v roce 2004 na podporu rozvoje ekologického zemědělství **Evropský akční plán pro biopotraviny a ekologické zemědělství**, který je zacílen na zlepšení povědomí o ekologickém zemědělství, podnícení jeho veřejné podpory prostřednictvím rozvoje venkova, zlepšení norem produkce a posílení výzkumu v této zájmové oblasti. ČR přijala v roce 2010 **Akční plán ČR pro rozvoj ekologického zemědělství** v letech 2011-2015. Tento Akční plán podporuje zejména oblasti ekologického zemědělství, které nejsou dostatečně rozvinuty, např. výzkum a vzdělávání zemědělců, domácí trh s produkty ekologického zemědělství, informovanost veřejnosti aj. V Akčním plánu jsou pro rok 2015 stanoveny cíle dosažení 15% podílu ekologického zemědělství z celkové plochy zemědělské půdy v ČR a minimálně 20% podílu orné půdy z celkové výměry půdy v ekologickém zemědělství. Dále je



cílem Akčního plánu navýšení podílu biopotravin na celkové spotřebě potravin na 3% a zvýšení podílu českých biopotravin na domácím trhu až na 60%.

Pravidla v oblasti ekologického zemědělství jsou upravena především Nařízením Rady (ES) č. 834/2007 o ekologické produkci a označování ekologických produktů, Nařízením Komise (ES) č. 889/2008, kterým se stanoví prováděcí pravidla k nařízení Rady (ES) č. 834/2007, a zákonem č. 242/2000 Sb. o ekologickém zemědělství.

Evropská komise v červenci 2010 vydala také **Pokyny k provádění těžebních prací mimo energetický sektor v souladu s požadavky NATURA 2000**. Tyto pokyny se zabývají možnostmi, jak snížit dopad těžební činnosti na přírodu a biologickou rozmanitost na co nejnižší míru nebo jak takovému vlivu zcela zabránit. Evropská komise přijala v únoru 2011 také novou **Surovinovou strategii EU**, ve které definuje konkrétní opatření, jež zabezpečí a zlepší přístup EU k surovinám. Cíl této strategie je založen na následujících třech pilířích: Spravedlivé a udržitelné dodávky surovin ze světových trhů; Podpora udržitelných dodávek surovin v rámci EU; Zvýšení účinnosti zdrojů a podpora recyklace.

## Ochrana vod

Koncepční a strategické dokumenty věnující se politice v oblasti ochrany vod v ČR si kladou za cíl ochranu životního prostředí před nepříznivými účinky vypouštění odpadních vod a jsou tak napojeny na evropskou legislativu zastoupenou **Směrnicí Rady č. 91/271/EHS o čištění městských odpadních vod. Koncepce vodohospodářské politiky Ministerstva zemědělství** do roku 2015 v souladu s obecným cílem, principy a zásadami státní politiky v oblasti vod, dlouhodobými cíli stanovenými v Plánu hlavních povodí ČR a zmiňovanou směrnicí klade důraz na efektivní likvidaci odpadních vod bez negativních dopadů na životní prostředí. Je především nutné zajistit sekundární čištění městských odpadních vod v tzv. citlivých oblastech dle nitrátové směrnice, a to hlavně výstavbou chybějící vodohospodářské infrastruktury (zejména ČOV a kanalizačních systémů), rekonstrukcí a zlepšením technologie čištění odpadních vod ve všech aglomeracích nad 2 000 EO.

Základní koncepční dokument přímo věnovaný čištění odpadních vod představuje **Plán rozvoje vodovodů a kanalizací území ČR**. Jedná se o střednědobou koncepci státní politiky v oboru vodovodů a kanalizací do roku 2015, která navazuje na další strategické dokumenty a rovněž respektuje požadavky vyplývající z příslušných předpisů EU (např. směrnice Rady č. 91/271/EHS o čištění městských odpadních vod). Prvotním cílem v oblasti čištění odpadních vod je zvyšování podílu obyvatel připojených na kanalizaci pro veřejnou potřebu a zvyšování podílu obyvatel připojených na kanalizaci zakončenou ČOV. Pro **Plány rozvoje vodovodů a kanalizací území krajů ČR** se každoročně zvyšuje počet vydaných stanovisek MZe k navrhovaným změnám technického řešení zásobování pitnou vodou, odkanalizování a čištění odpadních vod.

Snižování objemu odpadních vod a množství znečištění vypouštěného do vod je základním prostředkem ke zlepšování jakosti vod a zachování dobrého stavu vodních útvarů. Zároveň je předpokladem udržitelného využívání přírodních zdrojů. Hlavní národní strategické a koncepční dokumenty mají toto téma implementované do svých prioritních os. **Strategický rámec udržitelného rozvoje ČR** si mimo jiné klade za cíl snižovat zdravotní rizika související s negativními faktory životního prostředí a s bezpečností potravin či zlepšovat

životní styl a zdravotní stav populace snižováním dopadů spotřeby obyvatel na ekonomickou, sociální a environmentální oblast. Dále klade důraz na udržitelné materiálové hospodářství podporou environmentálně šetrných technologií a jejich výzkumem a vývojem.

Stejně tak další národní strategické dokumenty, především Koncepce vodohospodářské politiky Ministerstva zemědělství do roku 2015 a Plán rozvoje vodovodů a kanalizací území ČR, zdůrazňují nutnost omezování vnosu znečišťujících látek do vod zejména stanovením emisních limitů pro jednotlivé ukazatele znečištění (v souladu se směrnicí Evropského parlamentu a Rady č. 2000/60/ES, která ustavuje rámec pro činnost Společenství v oblasti vodní politiky), minimalizací vnosu živin a nebezpečných látek do vodního prostředí (v souladu se směrnicí Evropského parlamentu a Rady č. 2006/11/ES o znečišťování některými nebezpečnými látkami vypouštěnými do vodního prostředí Společenství nebo směrnicí Rady č. 91/676/EHS o ochraně vod před znečišťováním dusičnany ze zemědělských zdrojů) a podporou výstavby a rekonstrukcí ČOV (v souladu s požadavky směrnice Rady 91/271/EHS o čištění městských odpadních vod).

**Plán hlavních povodí ČR** mimo jiné zdůrazňuje potřebu zavádění nejlepších dostupných technik (BAT) do výrobních procesů a nejlepších dostupných technologií do oblasti odstraňování odpadních vod. Konkrétní cíle a programy opatření ke zlepšování jakosti povrchových a podzemních vod jsou stanoveny v **Plánech oblastí povodí**. Od roku 2010 byly realizovány přijaté programy opatření a v průběhu roku 2012 probíhalo zhodnocení stavu a průběhu realizace těchto opatření.

Základní koncepční a strategické dokumenty týkající se životního prostředí se zaměřují na komplexní ochranu kvality i kvantity vody, prevenci zhoršování jakosti vody a podporují opatření, která vedou k dosažení dobrého stavu vod a s nimi spojených ekosystémů. Cíl dosažení alespoň tzv. dobrého stavu povrchových a podzemních vod do roku 2027 vychází ze **Směrnice Evropského parlamentu a Rady č. 2000/60/ES, kterou se stanoví rámec pro činnost Společenství v oblasti vodní politiky** (tzv. rámcová směrnice). Konkrétní cíle a programy opatření ke zlepšování jakosti vod jsou stanoveny v Plánech povodí zpracovaných v současnosti pro 8 oblastí povodí. Hlavní opatření vztahující se k ochraně vod a ostatní opatření, která bezprostředně s ochranou vod nesouvisí, ale která v konečném důsledku k jejich ochraně přispívají, specifikuje i **Program na snížení znečištění povrchových vod nebezpečnými látkami a zvláště nebezpečnými látkami**. Tento program byl platný pro celé území ČR pro období od 1. ledna 2010 do 22. prosince 2013 a týká se látek nebo skupin látek nebezpečných pro vodní prostředí (nebo jeho prostřednictvím), uvedených v příloze č. 1 zákona č. 254/2001 Sb. (vodní zákon). Důležitým nástrojem z hlediska ochrany vod před prioritními nebezpečnými látkami se stala **směrnice Evropského parlamentu a Rady 2008/105/ES o normách environmentální kvality v oblasti vodní politiky**. Dosažení těchto norem je povinností do konce roku 2015.

Významným zdrojem znečišťujících látek je i plošné znečištění související se zemědělstvím. Ochrana jakosti povrchových a podzemních vodních zdrojů prostřednictvím opatření souvisejících se zemědělskou činností se věnuje i jedna z os **Národního strategického plánu rozvoje venkova ČR** na období 2007-2013. Vzhledem k plošnému znečištění je významná **směrnice Rady 91/676/EHS o ochraně vod před znečišťováním dusičnany ze zemědělských zdrojů** (tzv. nitrátová směrnice).

## Ochrana přírody a krajiny

Z hlediska ochrany přírody a krajiny je na mezinárodní úrovni významná pro ČR zejména legislativa EU (Direktiva o ptácích a direktiva o stanovištích) stanovující ochranu lokalit systému Natura 2000. Mezi strategickými dokumenty vytyčujícími cíle je aktuální **EU Strategie ochrany biodiverzity do roku 2020**, zahrnující šest hlavních cílů:

- ▶ Plnou implementaci evropské legislativy k ochraně biodiverzity
- ▶ Lepší ochranu ekosystémů a větší využití zelené infrastruktury
- ▶ Udržitelnější zemědělství a lesnictví
- ▶ Lepší management rybích populací
- ▶ Přísnější kontrola invazivních druhů
- ▶ Větší příspěvek EU k zastavení globálního úbytku biodiverzity.

Na národní úrovni věnuje problematice ochrany přírody a krajiny pozornost již vzpomínaná **Státní politika životního prostředí ČR**, zejména důrazem na následující cíle:

- ▶ Zvýšení ekologické stability krajiny
- ▶ Obnova vodního režimu krajiny
- ▶ Omezení a zmírnění dopadů fragmentace krajiny
- ▶ Udržitelné a šetrné zemědělské a lesnické hospodaření
- ▶ Zajištění ochrany a péče o nejcennější části přírody a krajiny
- ▶ Omezení úbytku původních druhů a přírodních stanovišť
- ▶ Omezení negativního vlivu nepůvodních invazivních druhů na biodiverzitu
- ▶ Zlepšení systému zeleně v sídlech a jeho struktury
- ▶ Posílení regenerace brownfields s pozitivním vlivem na kvalitu prostředí v sídlech

V podrobnější rovině formuluje cíle Státní program ochrany přírody a krajiny:

- ▶ Udržet a zvyšovat ekologickou stabilitu krajiny – s mozaikou vzájemně propojených biologicky funkčních prvků a částí, schopných odolávat vnějším negativním vlivům včetně změn klimatu
- ▶ Udržet a zvyšovat přírodní a estetické hodnoty krajiny
- ▶ Zajistit udržitelné využívání krajiny jako celku především omezením zástavby krajiny, zachováním její prostupnosti a omezením další fragmentace s přednostním využitím ploch v sídelních útvarech, případně ve vazbě na ně.
- ▶ Zajistit odpovídající péči o optimalizovanou soustavu ZCHÚ a vymezený ÚSES jako o nezastupitelný základ přírodní infrastruktury krajiny, zajišťující zachování biologické rozmanitosti a fungování přírodních, pro život lidí nezbytných procesů.
- ▶ Udržení dostatečně početných a tím i geneticky kvalitních populací původních planě rostoucích rostlin a volně žijících živočichů, schopných dlouhodobé samostatné existence. Minimalizace rizik zavádění nových invazivních nepůvodních druhů v ČR,

omezení dalšího rozšiřování již přítomných invazních nepůvodních druhů a jejich regulace a odstraňování v přírodně hodnotných územích, a to i s ohledem na probíhající a očekávané změny podnebí.

Řada dílčích cílů směřujících k naplnění mezinárodního cíle zastavení či významné zpomalení úbytku biodiverzity obsahuje rovněž **Strategie ochrany biologické rozmanitosti ČR** (původně do r. 2010).

Cíle stanovené v relevantních strategiích na národní (i mezinárodní) úrovni jsou doposud naplňovány spíše jen dílčím způsobem. V některých oblastech se negativní trendy prohlubují (zejména úbytek přírodních stanovišť a druhů, fragmentace krajiny, zástavba volné krajiny, zemědělské a lesnické hospodaření, nevhodné využívání ZCHÚ).

## Odpadové hospodářství

Z hlediska evropské legislativy je klíčovým dokumentem **směrnice Evropského parlamentu a Rady č. 2008/98/ES o odpadech**, která stanovuje požadavky na nakládání s odpady spíše jen na obecné úrovni, konkrétní řešení stanovuje vždy národní legislativa. Implementace požadavků evropské směrnice byla provedena prostřednictvím novely zákona č. 185/2001 Sb., o odpadech již v roce 2010, nicméně i v dalších letech probíhaly novelizace jak tohoto hlavního legislativního předpisu, tak i jeho prováděcích právních předpisů.

Základním dokumentem v oblasti odpadového hospodářství je **Plán odpadového hospodářství na roky 2003-2013**, který určuje základní opatření a zásady pro všechny podstatné aspekty tohoto odvětví. V souvislosti se současným trendem, kdy dominují snahy o předcházení vzniku odpadů, případně jeho minimalizaci, jsou stanovena i opatření vedoucí k podpoře změny výrobních postupů, dále je doporučeno vypracovávat v této souvislosti i analýzy životního cyklu výrobků apod. Významný prostor je v Plánu věnován také nebezpečným odpadům, a to jak možnostem předcházení jejich vzniku, tak i nakládání s nimi. Platnost Plánu odpadového hospodářství je v současné době prodloužena do konce roku 2014, ale v současnosti je již řada cílů, definovaných v POH, naplněna. V přípravě je nový Plán odpadového hospodářství.

Dalším významným dokumentem zastřešujícím oblast odpadového hospodářství je i **Státní politika ŽP ČR**, která vychází ze základních opatření stanovených Plánem odpadového hospodářství. Oblast odpadů spadá do kapitoly „Udržitelné využívání přírodních zdrojů, materiálové toky a nakládání s odpady“. Zdůrazňuje se zde především potřeba předcházet využívání primárních zdrojů surovin a naopak s druhotnými zdroji nakládat efektivněji prostřednictvím jejich opětovného využití.

Oblast nakládání s odpady je upravena především **rámcovou směrnicí o odpadech**, která mimo jiné definuje i základní hierarchii nakládání s odpady. Na prvním místě je samotné předcházení vzniku odpadů, dále následuje opětovné použití, materiálové využití, energetické využití a posledním bodem v hierarchii je odstraňování odpadů. Tato hierarchie byla doporučena k implementaci do národních strategických a legislativních dokumentů, na úrovni ČR. V roce 2012 byla zároveň zahájena příprava **Plánů předcházení vzniku odpadů**, jejichž povinnost všem členským státům stanovuje rámcová směrnice o odpadech.

Problematika hierarchie nakládání s odpady, resp. upřednostňování opětovného použití a materiálového či energetického využití, je dále řešena i v jiných strategických dokumentech. Jedná se zejména o **SPŽP ČR** a **Strategický rámec udržitelného rozvoje ČR**. V těchto dokumentech je doporučováno především vytváření jednotné a přiměřené sítě zařízení k nakládání s odpady a zároveň je v souladu s hierarchií nakládání s odpady kladen důraz na nepodporování výstavby dalších skládek odpadů. Studie Life Cycle Assessment (LCA) mohou být podporou pro preventivní přístup v oblasti nakládání s odpady, stejně jako zavedení další související legislativy do praxe, především s důrazem na používání BAT technologií.

## Annex II: Scoping consultations

For the scoping consultations, the following steps were taken:

- ▶ a scoping report that included the methodological concept and the programme contents that were already known at this stage
- ▶ the opportunity for written comments on the scoping report and to propose additional elements

The authorities consulted were:

- ▶ Federal Ministry of Agriculture, Forestry, Environment and Water Management in Austria, Sektion V – Allgemeine Umweltpolitik
- ▶ Ministry of Environment of the Czech Republic, Department of Environmental Impact Assessment unit of SEA
- ▶ Amt der Oö. Landesregierung, Direktion Umwelt und Wasserwirtschaft, Abteilung Umweltschutz
- ▶ Amt der NÖ Landesregierung, Gruppe Raumordnung, Umwelt und Verkehr
- ▶ Magistrat der Stadt Wien, Magistratsabteilung 22 Umweltschutz

The comments during the scoping process, which led to changes in the methodological concept, were as follows:

Comment from Ursula Platzer-Schneider Federal Ministry of Agriculture, Forestry, Environment and Water Management, Division V/1:

*"[...] We suggest to add the indicator 'traffic' to the environmental indicators. Though the negative effects could be summarised in air quality, noise or other tasks, we think that this indicator describes better the negative effects. With this indicator also the environmental relevance of the programme could change (table 3) as a lot of soft measures would require meetings, conferences or locations. A traffic indicator would show the need for public transport facilities or raise the awareness to implement the proposed measures in easy accessible places (including the venue of the monitoring committees of the programme"*

- ▶ Adaption for the environmental report: introduction of the environmental objective **"promote eco-friendly modes of transport"**.

Comment from Regina Pürmayr, Amt der Oö. Landesregierung, Direktion Umwelt und Wasserwirtschaft:

*„[...] Auf einen Punkt möchten im Zusammenhang mit dem Thema Klimaschutz bzw. Luftreinhaltung gerne hinweisen, der im Umweltbericht eingearbeitet werden soll:*

*Aus Sicht Oberösterreichs soll bei der Prüfung der künftigen [...] Programme[...] auch auf das Thema Kernenergie eingegangen werden. Es darf hier aus unserer Sicht auf keinen Fall zu irgendeiner Unterstützung von Kernenergie im allgemeinen, aber auch im Bereich der Bewusstseinsbildung oder Forschung kommen. Auch wenn es in anderen*

*Bereichen zu positiven Effekten kommen sollte, wäre dies aus unserer Sicht ein No-Go Kriterium.“*

We therefore complemented one more environmental objective:

- ▶ Adaption for the environmental report: introduction of the environmental objective **“protection from natural and man-made disasters“**.

For a better differentiation we also sharpened the definitions of the Biodiversity, fauna and flora indicators that overlapped in the Scoping version:

- ▶ **“Condition of wild flora and fauna and their natural habitats“** was changed into **“Condition of habitats and species of the annexes to the Habitats and Birds Directives“**
- ▶ **„Condition of NATURA 2000 areas and protected species“** was changed into **„Conditions of NATURA 2000 and other protected areas“**.

Compared to the methodology in the Scoping Report a new set of criteria for the significance of environmental effects was introduced to improve the clarity and transparency of the assessment.