# SEA Evaluation Report

## **1.Process of the Strategic Environmental Assessment**

### 1.1Purpose and scope

Preliminaries and objectives:

This document provides the basis concerning the strategic environmental assessment (SEA) of the *Hungary–Croatia Cross-border Co-operation Programme*. The aim of the SEA is to improve quality and consistency of the Programme, especially in a sustainability context, by transferring feedbacks from professionals and stakeholders to Programme planners. SEA is a useful tool to highlight potential positive environmental impacts of a program and hinder measures that might be harmful for the environment, so SEA can improve a programme’s environmental outcome.

The **purposes** of SEA elaboration are as follows:

* to identify the existing environmental problems relevant to the programme, assessing the environmental effects of the programme, by giving an overview of the possible favourable and unfavourable environmental impacts,
* to enhance the contribution of the programme to sustainable development,
* to set the relevant environmental protection objectives that should be considered within the programme and the SEA process, examining the coherence with the environmental and sustainable development policies on community, national and regional level.

Rules and Legislation:

The SEA of the Hungary–Croatia Cross-border Cooperation Programme is planned and carried out in line with the **2001/42/EC Directive** (that defines strategic environmental assessment and introduces it into the planning process of programmes supported by EU Funds) and its national adaptation.

**EC 42/2001 SEA Directive:**

aims “*to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development*” (Article 1).

These objectives are to be achieved by:

ensuring first, that “*an environmental assessment is carried out of certain plans and programmes which are* ***likely to have significant effects on the environment*** ” (Article 1) and second, that the “*effects of implementing [these] plans and programmes are taken into account during their preparation and before their adoption*” (Preamble, paragraph 4).

Moreover, this Directive requires:

*“Where an assessment is required by this Directive, an environmental report should be prepared containing relevant information as set out in this Directive,* ***identifying, describing and evaluating the likely significant environmental effects*** *of implementing the plan or programme, and reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme; Member States should communicate to the Commission any measures they take concerning the quality of environmental reports.”*

*“In order to contribute to more* ***transparent decision making*** *and with the aim of ensuring that the information supplied for the assessment is comprehensive and reliable, it is necessary to provide that* ***authorities with relevant environmental responsibilities and the public are to be consulted*** *during the assessment of plans and programmes, and that appropriate time frames are set, allowing sufficient time for consultations, including the expression of opinion.”*

*“****The environmental report*** *and the opinions expressed by the relevant authorities and the public, as well as the results of any transboundary consultation, should be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure.*

*The authorities and the public shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme or its submission to the legislative procedure.”*

The Annex I of the guidance on ex-ante evaluation says that:

„*If the SEA Directive is applicable to a transnational or* ***cross-border programme****, the managing authority should decide* ***whether to carry out separate SEAs procedures*** *in each Member State according to their national rules or* ***whether*** *some of the steps could be* ***carried out jointly****. For instance, it could be envisaged to elaborate a joint environmental report that would be subject to separate consultations – in each Member State - of the environmental authorities and of the public. When a SEA is carried out for a transnational and cross-border programme, separate Article 9(1) statements (prepared separately or jointly by the managing authorities) should be made available in each Member State.*”

This guidance shall also be strictly followed during the process.

After examining advantages and disadvantages, the Task Force and the relevant authorities decided to carry out **SEA process separately**. This means that a **joint environmental report** is elaborated and the **consultation process** is carried out **separately** in accordance with the national regulation.

Overview of the European Territorial Cooperation:

based on the proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (2012) on specific provisions for the support from the European Regional Development Fund to the European territorial cooperation goal.

Under the European territorial cooperation goal, the ERDF supports cross-border, transnational and interregional cooperation. **Cross-border cooperation** should aim to tackle common challenges identified jointly in the border regions (such as poor accessibility, inappropriate business environment, lack of networks among local and regional administrations, research and innovation and take-up of information and communication technologies, environmental pollution, risk prevention, negative attitudes towards neighbouring country citizens) and exploit the untapped potentials in the border area (development of cross-border research and innovation facilities and clusters, cross-border labour market integration, cooperation among universities or health centres), while enhancing the cooperation process for the purpose of the overall harmonious development of the Union.

In order to deliver on the targets and objectives of smart, sustainable and inclusive growth set out in the Europe 2020 strategy, the ERDF should contribute under the European territorial cooperation goal to the thematic objectives of developing an economy based on knowledge, research and innovation, promoting a greener, more resource-efficient and competitive economy, fostering high employment that delivers social and territorial cohesion, and developing administrative capacity.

On 29 June 2011, the Commission adopted a proposal for the next multi-annual financial framework for the period 2014-2020: a budget for delivering the Europe 2020 strategy. The Commission proposed a number of important changes to the way cohesion policy is designed and implemented. Concentrating funding on a smaller number of priorities better linked to the Europe 2020 Strategy, focusing on results, monitoring progress towards agreed objectives, increasing the use of conditionality and simplifying the delivery are among the major hallmarks of the proposal.

This Regulation sets out the general provisions governing European Territorial Cooperation. European Territorial Cooperation is one of the goals of cohesion policy and provides a framework for the implementation of joint actions and policy exchanges between national, regional and local actors from different Member States.

European Territorial Cooperation is of particular value because:

* Transboundary problems can most effectively be solved with the cooperation of all regions concerned to avoid disproportionate costs for some, and free-riding by others (e.g. cross-border environmental pollution).
* Cooperation can provide an effective mechanism for sharing good practice and learning to spread know-how (e.g. enhancing competitiveness).
* Cooperation can ensure that a solution to a specific problem becomes more effective due to economies of scale and the achievement of a critical mass (establishment of clusters to foster research and innovation).
* Governance can improve as a result of coordination of the sector policies, actions and investments on a cross-border and transnational scale.
* Relations with EU neighbours through cooperation programmes on the EU’s external borders can contribute to safety and stability, and mutually beneficial relationships.
* In some contexts such as sea basins and coastal regions, cooperation and transnational action are indispensable to support growth, employment and ecosystem-based management

**Synergies and complementarities** between programmes under the European Territorial Cooperation goal and programmes financed under external instruments shall be promoted.

### Link to other parts of the planning process

The programming process has been coordinated by the Task Force consisting of relevant ministries and regional/county level organizations from Hungary and Croatia. From Hungary: Prime Minister’s Office, Széchenyi Programme Office, the Ministry of Public Administration and Justice, the Ministry for National Economy, Baranya County, Somogy County, Zala County and the National Development Agency. From Croatia: border counties ( Međimurska, Koprivničko-križevačka, Virovitičko-podravska and Osječko-baranjska) and four other counties participate (Varaždinska, Bjelovarsko-bilogorska, Požeško-slavonska and Vukovarsko-srijemska županija) National level institutions from Croatia: Ministry of Regional Development and EU funds, Agency for Science and Higher Education, Croatian Environment Agency, Croatian Employment Service, Croatian Waters, Ministry of Culture, Ministry of Entrepreneurships and Crafts, Ministry of Environment and Nature Protection, Ministry of Maritime Affairs, Transport and Infrastructure, Ministry of Tourism.

The Joint Technical Secretariat and the Managing Authority is also involved in the programming process. The planning work of the Task Force is assisted by an external expert consortium.

Ex-ante evaluation report has to include the most important statements of the environmental report and of the consultation process.

SEA is related to ex-ante evaluation process as follows:

– Assessment of key environmental and sustainability impacts of the Programme.

– Assessment of action intended to promote sustainable development and to protect the environment.

– Examination of coherence and relevance to Community and national environmental and sustainability objectives.

– Evaluation of environmental indicators, drafting recommendations.

The SEA is searching for good solutions focusing only on two aspects:

* sustainable development
* environmental protection

According to our interpretation, the **OP is regarded as a planning tool**, investigates the adequacy and the likely effectiveness of the OP in the frame of ex ante evaluation, while the SEA is examining the **OP as factors** such as environmental factors which may affect the state of the environment.



### Consultation process

This chapter will be further elaborated in the final draft version of the report. Hhowever, formal procedural steps of the process of public consultations within the SEA can be outlined.

The procedure of developing Strategic Environmental Assessment within the scope of cross border operational programmes is determined by the country of origin of the managing authority. In the case of OP HU-HR 2014-2020, Hungarian authorities have responsibility for launching the SEA process, while Croatian authorities should mirror Hungarian methodology and identify and involve relevant national stakeholders in the process in cooperation with the Ministry of Regional Development and EU Funds and the Ministry of Environment and Nature Protection.

In regards to public consultations with the relevant environmental stakeholders, the procedure in Croatia has consists of two steps.

The first deals with the scope of the SEA report (Scoping Report) and the second with the strategic impact assessment.

Scoping Report

- public consultations with the following national authorities have to be carried out within 30 days: Ministry of Agriculture (for parts related to impact on soil, waters and forests), Ministry of Health (health, noise), Ministry of Environmental and Nature Protection (nature, air, waste), Ministry of Culture (cultural heritage) and sectorial bodies such as Ministry of Economy

-- stakeholders can submit their comments on the scope of SEA report within maximum of 30 days after which Scoping Report is made and publicly available for further comments

-after the expiry of 30 days for submission of comments, Scoping Report is sent to the Managing Authority

Strategic Environmental Assessment

- according to the Croatian legislation, public consultations on the content of SEA can last for 30 days;

- within public consultation one or more public presentations can be organized;

- SEA needs to be publicly available and delivered to all the relevant national authorities which have 30 days for submitting their comments;

- after the period for submitting comments expires, SEA is sent to the Managing Authority

### The impact of recommendations on planning the Programme

**The chapter will be elaborated in the final draft version.**

### Methodology and specificity of the SEA

Following relevant methodological guidelines and materials will be taken into account:

* experiences and conclusions of the previous SEAs
* Guidance on Integrating Climate Change and Biodiversity into Strategic Environmental Assessment
* MONITORING AND EVALUATION OF EUROPEAN COHESION POLICY - Guidance document on ex-ante evaluation for the Programming Period 2014-2020
* Guidelines on Climate Change and Natura 2000

The strategic environmental assessment process shall be composed of the following parts:

* Environmental Report
* Consultation

(The authorities and the public shall be given an opportunity to express their opinion on the draft Programme Document and the accompanying Environmental Report - Non-technical Summary - before the adoption or its submission to the legislative procedure.)

* Integration of recommendations from the consultation process
* Information about the Decision
* Monitoring of the significant environmental impacts
* Submission to Program Committee, follow-up

The SEA aims to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of the Programme Document with a view to promoting sustainable development. Managing Authorities and Environmental Authorities (EAs) should agree on the procedure to be followed when starting the preparation of the Programme. Practical issues such as scope of the report, the preparation of a single or joint report(s), the timing and organisation of consultations should be decided early in the process. To ensure appropriate public participation, relevant information (draft programme and at least non-technical summary) should be made available in the languages of the Member States involved.

**The main issues to be reviewed the following:**

* To what extent could improve the state of environment and could the Programme provide a positive change in terms of sustainability?
* Could the targeted actions reduce the adverse effects of significant environmental pressure and lead to a significant improvement of the cross border area?
* Could the proposed measures result in positive shift towards sustainable development, and could the developments contribute to the reduction of regional imbalances?

**Time schedule**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Oct 2013** | **Nov 2013** | **Dec 2013** | **Jan 2014** | **Febr 2014** | **March 2014** | **2014** | **2015** | **2016** |
| **Preparation and Planning** |  |  |  |  |  |  |  |  |  |
| **Environmental Report** |  |  |  |  |  |  |  |  |  |
| **Consultation Process** |  |  |  |  |  |  |  |  |  |
| **Integration of expressed opinions** |  |  |  |  |  |  |  |  |  |
| **Final version of the report together with Non-technical Summary** |  |  |  |  |  |  |  |  |  |
| **Monitoring** |  |  |  |  |  |  |  |  |  |

**To elaborate the final version of the Environmental Report and the Non-technical Summary a finalized Programme Document is required at least in a version of prepared for social consultation.**

***Main phases of SEA process***

**Is there any problem related to impact and effectiveness?**

**Recommendations for monitoring acceptable impacts and risks**

NO

**Impact Assessment**

YES

**Recommendations in order to modify the OP**

**Principles applied during elaboration:**

* Compliance
* Applicability
* Justification
* Consistency
* Relevance
* Partnership

## Brief description of the Programme Document

The Hungarian-Croatian cross-border co-operation started in 2002, when local actors along the border initiated the creation of the Hungary-Croatia Pilot Small Projects Fund within the framework of the Hungarian National Phare Programme. Being so-called INTERREG Phare Programmes, their main goal was to support non-profit cross-border co-operation and to prepare potential candidates for future INTERREG funding opportunities. In the period of 2004-2006, the cross-border co-operation between Hungary and Croatia formed a trilateral co-operation completed with Slovenia in the Neighbourhood Programme. The Hungary-Croatia IPA Cross-border Co-operation Programme belongs to the “new generation” of cross- border co-operation programmes in the budgetary period 2007-2013. In this Programme the participating countries, Hungary and Croatia, have established their Programme management as “shared management system”. Considering that the main goal of this bilateral EU funded Programme has been the development of the cross-border region by means of assistance of Hungary as a Member State to Croatia on its accession to the European Union, it is on the right way to success. Hence Croatia joined to the EU, border-crossing potential is strengthened, showing that the co-operation has a sense and possibility for further improvements.

The 2014-2020 Cross-border Cooperation Programme shall **deepen and enlarge cooperation**.

Regarding the current state of affairs, the Task Force coordinating the preparation for the new programming period has been set up and working. Also, the on-going evaluation of the 2007-2013 programme has already launched, running parallel to the ex-ante evaluation, allowing for the incorporation of some preliminary findings to the new programme. **Therefore there is an opportunity for continuous cooperation between the planners, ex-ante and on-going evaluators.**

As in July 2013 Croatia has joined to EU and became member state, the *Hungary-Croatia Cross-border Co-operation Programme* will be operating between 2014 and 2020 as a CBC Programme in which the border becomes internal border of the EU with a perspective of Croatia becoming part of the Schengen area within the next programme period.

## 2.1Short summary of the Programme analysed

The programming work has been implemented through a series of workshops and interviews with both local and sectoral stakeholders involved in the programme implementation and national/regional authorities responsible for preparing the 2014-2020 development plans from both Croatia and Hungary.

The overall objective of the program is the following:

**“*Creating a harmonic region with an intensified economic cooperation through sustainable use of natural and cultural resources*.”**

The achievement of the overall objective can be ensured by applying the following strategy and interventions. In general, the **location of the border region is peripheral**, characterized by socially and economically backward situation, including aging and decreasing population, level of incomes and education below the national average, however, internal structure of the region is not homogenous.

The thematic objectives shall be concentrated as follows: **up to 4 thematic objectives** shall be selected for each cross-border cooperation programme.

The selected thematic objectives are:

* Enhancing the competitiveness of SMEs (TO3)
* Preserving and protecting the environment and promoting resource efficiency (TO6)
* Enhancing institutional capacity and an efficient public administration (TO11)
* Investing in education, training, including vocational training for skills and lifelong learning by developing education and training infrastructure (TO10)

The impacts are referring to partly environmental purposes and partly to sustainable development and the environmental impacts are related to its social consequences.

Obviously, it is based on currently available information and changing the priorities or specific objectives, or the type of activities could modify this approach.

| **Thematic Priorities and the proposed content of the priorities** | **Specific Objectives** | **Indicators** | **Types of activities (examples)** | **Potential and significant effects to be analysed** |
| --- | --- | --- | --- | --- |
| **1 Economic development**  **Enhancing the competitiveness of SMEs (TO3)**  1.1 Developing and implementing new business models for SMEs, in particular with regard to internationalisation (3b)  1.2 Supporting the capacity of SMEs to grow in regional, national and international markets, and in innovation processes (3bb) | 1 Fostering business linkages between SMEs operating on different sides of the border | Increased density of operating linkages between SMEs operating on different sides of the border | * Establishment of a cross-border SME development consortium * Implementation of joint projects of cooperating SMEs   (via “de minimis” support in the field: joint technology, service and product development; jointly developed energy efficiency actions; actions for prevention of solid waste production; joint economic clusters; joint development of marketing, promotional facilities and services )   * *Additional actions can be:*   *small scale infrastructure on 10 border crossing points* | Synergetic effects with other plans and programmes  Improvement of accessibility  Green infrastucture, Green economy  *In case of infrastructure development:*  *reduce pollutant emissions, avoiding carbon intensive technologies,* |
| 2 Fostering collaborative research & innovation capacities of SMEs operating on different sides of the border | Increased density of operating linkages between research institutions and SMEs | * Support of cross-border technology and know-how transfer between research or technology transfer institutions and SMEs * Development of demonstration facilities to help SMEs develop more innovative products, processes, marketing and services and diversify the cross-border activities * Exchange of experiences in the field of business and innovation development, identification of the best practices, furthermore elaboration and development of common concepts or programmes | Sustainable, ’low carbon’ products, services  R+D+I activity |
| |  |  | | --- | --- | | **2 Sustainable use of natural and cultural assets** |  |   **Preserving and protecting the environment and promoting resource efficiency (TO6)**  2.1 Conserving, protecting and developing cultural and natural heritage (6c)  2.2 protecting and restoring biodiversity, soil protection and restoration and promoting ecosystem services including NATURA 2000 and green infrastructures (6d)  2.3 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 (6ea) | 3 Increase the potential of the region to generate economic value-added by the sustainable use of its natural and cultural heritage  4 Improve the conservation status and the degree of protection of the region‟s natural assets and ecosystems  5 Enhanced collaboration in restoration of biodiversity and protection and promotion of ecosystems in the border areas  6 Promoting technological innovation and effective management of waste and water | Level of valorisation of cultural and natural heritage  Level of information on the status of natural assets and ecosystems  Level of cross border cooperation in development and integration of nature management  Quantity of prevented and diverted (recycled or materially or energetically reused) waste in cross border cooperation | * Preparation and implementation of joint strategies of sustainable tourism and culture-based tourism and pilot investments * Preservation, promotion and utilization of common or complementary elements of cultural and natural heritage * Development of a common offer of products and services in the area of sustainable tourism regarding cultural and natural heritage * Joint development of management plans for Natura 2000 sights and other protected areas * Preparation and implementation of joint management/action plans for the conservation of key species and habitats * Implementing joint activities aimed at conservation and restoration of cross-border ecosystems, especially in relation to Natura 2000 sites and other protected areas * Implementing joint research, data collection and monitoring projects aiming to support biodiversity, soil protection * Valorisation and promotion of ecosystem services * Investments in nature interpretation infrastructure * Awareness-rising, education and training in relation to nature conservation * Actions supporting community involvement in nature protection planning, monitoring and conservation activities * Improving cooperation and supporting the exchange of experiences and knowledge among nature conservation institutions * Elaboration of a CBC solid waste management strategy and action plan for the border region * Implementation of solid waste management projects to promote reusing, recycling and energetic usage of solid waste * Implementation of innovative pilot and demonstration projects on solid waste prevention * Implementation of innovative pilot and demonstration projects regarding water management and soil protection | Development and support of sustainable services - eco-tourism  Level of valorization of cultural and natural heritage  Ecological footprint reduction  Benefits (cost-effectiveness) of joint management plans for nature conservation (of key species and habitats and Natura2000 + other protected areas)  Increasing energy efficiency, '0 ' waste solutions  Effects on energy dependency |
| **3. COOPERATION**  **Enhancing institutional capacity and an efficient public administration (TO11)**  3.1 Enhancing institutional capacity and an efficient public administration by promoting legal and administrative cooperation and cooperation between citizens and institutions (CBC) | 7 Strengthening the institutional environment for future cross border co-operations, regional and territorial governance | Improved coherence and synergy of institutional, sector and territorial strategies, plans and ways of operation | * Support HE institutions in researching relevant issues of the programme area. * Support cooperation between local authorities to develop joint initiatives and policies on cross border issues * Support capacity building actions of organisations in charge of nature conservation and also the ones in charge of water management by developing good practices, exchange of staff, training and research * Support joint programming, project preparation and demonstration actions of local governments, non-profit organisations, development and energy agencies in the field of renewable energy and energy efficiency |  |
| 8 Increasing motivation of individuals and small communities to cooperate | Increased level of knowledge and understanding of the habits and behaviour of the communities at the other side of the border at the level of individuals and small communities | * Designing and delivering a series of joint cultural events in the border area ensuring that people meet and interact (“people to people” actions) * Joint actions between civil society organisations (environmental, cultural, minority, etc) | Potential environmental and sustainability content.  Social equality, improving underdeveloped regions |
| **4. Education**  **Investing in education, training, including vocational training for skills and lifelong**  **learning by developing education and training infrastructure (TO10)**  4.1 Investing in skills, education and lifelong learning by developing and implementing joint education, vocational training and training schemes | 9 Increase the quality of services provided by the higher education institutions  10 Widened common knowledge-base and improved mutual willingness and motivation to cooperate between children and young people  11 Improved specific skills in harmony with needs of the cross-border labour market | Increased knowledge of pre-school, primary school and secondary school‟s children about the culture of the region and the neighbouring country and people  Networks created for the involvement of disadvantaged groups zo training schemes in the programme area  Number of common skills and harmonized qualifications available | * Support to studies and events to support HE institutions in developing joint approaches to teaching in the programme area * Support t o surveys, studies and plans to support HE institutions‟ joint design and delivery of courses aiming at responding to market needs of the border area * Support to systems, studies and events to improve the cooperation and exchange between teaching staff of vocational training institutions and higher education * Improving language skills of graduates and potential stakeholders * developing and delivering joint courses, events or materials to improve language communication between students * developing and delivering joint courses, events or materials to support cultural exchanges between schools as part of joint educational activities * developing and delivering incentives and events to increase the educational participation from underrepresented groups * Studies, events and plans to harmonise qualification standards * Events and incentives to developing more relevant content and delivery mechanism of vocational trainings * Incentive scheme to support graduates‟ transition to the border region labour market * Developing and delivering joint schemes to support exchange of apprentices in skills or employment sectors represented in the border area | Potential environmental and sustainability content |

### Coherence with other relevant plans and programmes

Clearly, assessing climate change and biodiversity issues in SEAs will facilitate compliance with the SEA Directive and national SEA laws. Moreover, climate change and biodiversity are the subjects of a many pieces of EU legislation, policies and strategies, including binding targets for Member States. Each Member State is also likely to have a suite of legislative instruments relevant to climate change and biodiversity.

According to current rules and regulations regarding the Programming Phase 2014-2020, each development should meet the following requirements:

* Do not reduce biodiversity and ecosystem services
* Green areas should not be reduced
* Do not increase the adverse social and territorial imbalances
* Promote climate change adaptation
* Contribute to the strengthening of social solidarity

Aspects of environmental protection and nature conservation, as well as sustainability is reviewed in frame of coherence analysis related to the set of objectives in key national and EU strategic documents.

At Community level:

**Europe 2020** puts forward three mutually reinforcing priorities:

++: direct

+: indirect

|  |  |
| --- | --- |
| **Smart growth:** developing an economy based on knowledge and innovation.  **TO3 - Enhancing the competitiveness of SMEs** | **++** |
| **Sustainable growth:** promoting a more resource efficient, greener and more competitive economy  **TO6 - Preserving and protecting the environment and promoting resource efficiency** | **++** |
| **Inclusive growth:** fostering a high-employment economy delivering social and territorial cohesion  **TO10 - Investing in education, skills and lifelong learning**  **TO11 - Enhancing institutional capacity and an efficient public administration** | **++** |

There is a direct contribution to the defined targets, especially to the followings:

* 3% of the EU's GDP should be invested in R&D
* The "20/20/20" climate/energy targets should be met

The selected thematic objectives will definitely contribute to the results of the strategy.

**Territorial Agenda 2020**

includes the Territorial Priorities for the Development of the European Union:

++: direct

+: indirect

|  |  |
| --- | --- |
| Promote polycentric and balanced territorial development | **+** |
| Encouraging integrated development in cities, rural and specific regions | **+** |
| **Territorial integration in cross-border and transnational functional regions** | **++** |
| **Ensuring global competitiveness of the regions based on strong local economies** | **++** |
| **Improving territorial connectivity for individuals, communities and enterprises** | **++** |
| **Managing and connecting ecological, landscape and cultural values of regions** | **++** |

All of the above mentioned principle was taken into account during programming phase, as a consequence objectives are coherent.

Besides, community rules and targets, the Programme is harmonizing with another level of cooperation - the **Strategy of Danube Region** – and its 3 priorities.

++: direct

+: indirect

|  |  |
| --- | --- |
| (1) To improve mobility and multimodality (covering road, rail and air links as well as inland waterways) | **+ (+)** |
| (2) To encourage more sustainable energy (covering energy infrastructure, markets and clean energy) | **++** |
| 3) To promote culture and tourism, people to people contacts | **++** |

At national level:

**Hungary:**

**The coherence with the National Development Concept and the mainstream Operative Programmes of the new budgetary period 2014+ is included in the final version.**

In addition, for the new programming period of 2014-2020 several new **national sectoral strategies** and programs have been elaborated and some of them are not accepted by the government (e.g: 4th Environmental Program). The following table shows the coherence of the CBC Programme’s thematic objectives with the relevant sectoral strategies.

++: direct

+: indirect

|  | **1. Economic Develop-ment** | **2. Sustainable use of natural and cultural assets** | **3. Co-operation** | **4. Education** |
| --- | --- | --- | --- | --- |
| **National Sustainable Development Strategy (2012-2024)** | | | | |
| **Human resources:**  demography, health, knowledge (equal access)  Social cohesion - integration of deprived groups (against ethnic exclusion) | + |  | + | + |
| **Social resources:**  Strengthening the ’trust infrastructure’, social conditions of work, enhancing family values​​,  Conservation of historical heritage, the development of cultural services (cultural traditions revival, recognition of cultural diversity, the preservation ​​and sustainable use of intellectual, physical and cultural heritage, values) |  | ++ | + | + |
| **Natural resources:**  Biodiversity, renewable natural resources, reducing environmental pressures, non-renewable natural resources (sustainable use) | ++ | ++ | + |  |
| **Economic resources:**  Strengthening the enterprise capital and the innovation (development of their business environment to be sustainable, strengthening the ’trust infrastructure’, increasing innovation expenditures and efficiency of resource use, reducing the environmental impact with new technologies, stimulate the increase in employment)  Fiscal policy  Supporting career-models, | ++ | + | + | + |
| **4th National Environmental Program (2014-2019)** | | | | |
| Improving the quality of life and environmental conditions of human health. (air and water quality). | + | ++ | + | + |
| Protection of natural values and resources and their sustainable use | ++ | ++ | + |  |
| Improving resource-savings and efficiency, greening the economy | ++ | ++ | + | + |
| Related: improving environmental safety | + |  | + |  |
| Horizontal:strengthening environmental awareness | ++ | ++ | ++ | + |
| **National Rural Development Strategy (2012-2020)** | | | | |
| The overall objective: to improve self-supplying and population retaining capacity of rural areas | + |  | + | + |
| Conservation of natural resources and values |  | ++ |  |  |
| Diverse and viable agricultural production | + |  |  | + |
| Food safety |  |  |  |  |
| Providing the basis for the rural economy and increasing rural employment |  | + | + | + |
| Reinforcement of rural communities, improving the quality of life of rural population | + | + | + | + |
| **National Water Strategy (2013-2021)** | | | | |
| Achieving "good status" of surface waters and groundwater in terms of quality and quantity and long-term sustainable management |  | + |  |  |
| Climate change mitigation, including drought management tasks, drought strategy |  | + |  |  |
| Strengthening international cooperation in water management |  | ++ | + |  |
| Strengthening of monitoring activities, development of monitoring systems and databases |  | + |  |  |
| **National R+D+I Strategy (2014-2020)** | | | | |
| By 2020, Hungary will increase the spending in R & D to 1.8% of GDP, by 2030 to 3% | + |  |  |  |
| Additional objective: by 2020 businesses will increase their R & D expenditures to 1.2% (% of GDP). | + |  |  |  |
| **National Energy Strategy 2030** | | | | |
| Utilization of domestic renewable energy resources | + | + | + |  |
| Long-term maintenance of nuclear energy |  |  |  |  |
| Increasing energy efficiency, especially related to energy consumption of buildings | + |  | + | + |
| Infrastructural developments expanding the cross border capacity |  |  | + |  |
| Operating governmental institutional system |  |  | + |  |

**Croatia:**

### 

|  | **1. Economic Develop-ment** | **2. Sustainable use of natural and cultural assets** | **3. Co-operation** | **4. Education** |
| --- | --- | --- | --- | --- |
| **National Sustainable Development Strategy (2009)** | | | | |
| **Human resources:**  Halting negative demographic trends, social inclusion, improvement and strengthening of health services | + |  | + | ++ |
| **Social resources:**  Conservation of cultural and natural values, polycentric and integrated development, equal rights and opportunities, improvement of infrastructure | + | ++ | + | + |
| **Natural resources:**  Efficient and rational nature and environmental resources management, sustainable use of agricultural land and forests, rational use of non-renewable resources, reliable energy supply | ++ | ++ | + |  |
| **Economic resources:**  Economic value added by efficient and rational use of natural and cultural resources, new technological and innovative solutions, | + | ++ | + |  |
| **National Environmental Protection Strategy and Environmental Action Plan (2002)** | | | | |
| Preserving and improving quality of water, air and soil | + | ++ | + | + |
| Maintaining current biological diversity | + | ++ | + |  |
| Preserving natural values, especially protected natural areas | + | ++ | + | + |
| **National Rural Development Programme (Draft, 2014 – 2020)** | | | | |
| Strengthening sustainable agricultural practices | ++ | ++ | + | + |
| Increasing knowledge on new technologies, information exchange and promoting cooperation and collaboration through agricultural clusters | + | + | + | ++ |
| Promoting diversification of agricultural production | + | + | + | ++ |
| Strengthening competitiveness and productivity of food processing industry | ++ |  | + | + |
| **National Water Management Strategy (2009)** | | | | |
| Achieving and maintaining "good status" of all waters and water dependent ecosystems |  | ++ | + |  |
| Ensuring sufficient quantity of drinking water |  | ++ | + |  |
| Ensuring sufficient quantity of water for various economic activities | ++ | + | + |  |
| Protection of people and assets from negative effects of water | + | + | + |  |
| **National Education, Science and Technology Strategy (Draft, 2013)** | | | | |
| Promoting and strengthening life long learning education | + |  | + | ++ |
| Increasing overall quality of pre-school, primary, secondary and tertiary education |  |  | + | ++ |
| Establishing environment that will allow better cooperation between scientific and private sector | + |  | ++ | + |
| **National Energy Strategy 2009** | | | | |
| Establishing balance between safety of energy supply, competitiveness and environmental protection | + | + | ++ |  |
| Sustainable development of energy sector | + | ++ | + |  |
| Climate change mitigation through greater reliance on renewable energy sources | + | + | ++ |  |
| **The National Strategy and Action Plan for the Protection of Biological and Landscape Diversity (2008)** |  |  |  |  |
| Preserving and improving existing landscape and biological diversity | + | ++ | + |  |
| Integration of biodiversity concerns into all economic activities on the all the levels | + | + | + | + |
| Setting up information and systems for monitoring biodiversity rate |  | ++ | ++ | + |
| Strengthening education and raising awareness on biological diversity | + | ++ | ++ | ++ |
| **National Entrepreneurship Development Strategy (Draft, 2013-2020)** |  |  |  |  |
| Enhancing SMEs economic performance | ++ | + | + | + |
| Better access for SMEs to financial resources | ++ |  | ++ | + |
| Promotion of entrepreneurship | ++ |  | ++ | + |
| Strengthening entrepreneurial skills | + | + | + | + |
| Improving entrepreneurial environment | + |  | ++ | + |
| **National Industry Strategy (Draft, 2014-2020)** |  |  |  |  |
| Identification and reposition of strategic economic activities with the potential of generating added value | ++ | + | + | + |
| Enhancing industrial production | ++ | + |  |  |
| Increasing the number of newly employed work force | + | + | + | + |
| Strengthening export with particular focus of increasing export of high value added products | + | + | + |  |
| **National Smart Specialization Strategy (Draft, 2014-2020)** |  |  |  |  |
| Developing competitive clusters in priority sectors which, amongs all, include food processing industry and wood processing industry | ++ |  | + |  |
| Establishing highly technological industry network | + |  | ++ |  |
| Strengthening competitive advantage of the priority economic sectors with most potential for generating innovation and value added | ++ |  | + | + |
| **Operational Programme Environment 2013-2014** |  |  |  |  |
| Developing waste management infrastructure for establishing an integrated waste management system in Croatia | + | ++ | + |  |
| Protecting Croatia’s water resources through improved water supply and waste water integrated management systems | + | ++ | + |  |
| **Operational Programme Competitiveness and Cohesion (in the process of finalization, 2014-2020)** |  |  |  |  |
| Investing in infrastructure in the sectors of transport, energy, environment, ICT | ++ | ++ | + |  |
| Supporting development of entrepreneurship and research activities | ++ | + | + | + |
| **Operational Programme Human Resources (in the process of finalization, 2014-2020)** |  |  |  |  |
| Improving efficiency of the labor market, development of human capital, strengthening social inclusion | + |  | + | ++ |

### Integration of environmental considerations

In March 2007, the EU Heads of State and Government endorsed an integrated approach to climate and energy policy that aims to combat climate change and increase the EU’s energy security while strengthening its competitiveness. They set a series of demanding climate and energy targets to be met by 2020, known as the ‘20-20-20’ targets.

●●●

**‘20-20-20’ climate and energy targets**

• A reduction in **EU GHG emissions** of at least **20 %** below 1990 levels;

• **20 %** of **EU energy consumption** to come from renewable resources;

• **20 %** reduction in **primary energy use** compared with projected levels, to be achieved by improving energy efficiency.

●●●

With its *Roadmap for moving to a competitive low-carbon economy in 2050*, the European Commission has looked beyond these short-term objectives and set out a cost effective pathway for reducing domestic emissions by 80to 95 % by mid-century. The Roadmap identifies milestones and

provides guidance on how to move to a climate-friendly, low carbon economy in the most efficient way.

Adaptation involves adjusting our behaviour to limit harm and exploiting the beneficial opportunities arising from climate change. In the EU, the focus is on integrating (‘mainstreaming’) adaptation into all relevant policies and instruments and facilitating effective, consistent adaptation action at national, regional and local levels. For example, the legislative proposals for the EU regional policy (2014-2020) include ex-ante requirements linked with climate change aspects, which need to be met by the Member States if they use the EU Structural and Cohesion Funds. Many European countries, as well as some regions and cities, have adopted adaptation strategies.

The European Commission adopted a *White Paper on Adapting to Climate Change* in 2009, leading to an EU Adaptation Strategy in 2013. The *Adaptation Strategy* will:

* recognise how important impact assessment is for climate proofing
* identify the key priorities for action and how EU policies can encourage effective adaptation action highlight the issue of adapting infrastructure to climate change and include a separate document on this topic
* encourage creating green infrastructure and applying ecosystem-based approaches.

In 2011, the European Commission adopted a new *EU 2020 Biodiversity Strategy* with its 2020 headline target — ‘Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss.’ Target 2 of this Strategy is that ‘by 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15 % of degraded ecosystem’.

This target is broken down into accompanying actions, two of which seek to influence planning practices:

• set priorities to restore and promote the use of green infrastructure (Action 6); and

• ensure ‘no-net-loss’of biodiversity and ecosystem services (Action 7).

The main targets of the Strategy cover:

* full implementation of EU legislation on protecting biodiversity;
* better protection for ecosystems and more use of green infrastructure;
* more sustainable agriculture and forestry;
* better fish stock management;
* tighter controls on invasive alien species, including adopting new legislation to fill existing policy gaps;
* a more significant EU contribution to averting global biodiversity loss.

**As a legally required and specifically defined process, SEAs are an opportunity to systematically integrate climate change and biodiversity in a standardised approach into plans and programmes (PPs) across the EU.** This is an opportunity that cannot be missed if Europe is to achieve its environment and development objectives. The SEA also requires monitoring of the effects of implementing PP to identify unforeseen effects at an early stage.

Annex I(f)of the SEA Directive requires an environmental report to consider the following effects regarding Climate Change, Biodiversity as well as factors relevant to both climate change and biodiversity:

* the effects on ‘climatic factors’.
* the effects on ‘biodiversity’, ‘fauna’ and ‘flora’
* the ‘interrelationship’ between all listed factors.

A number of characteristics of climate change and biodiversity shape the way in which we need to look at them in the context of a SEA:

• long-term and cumulative nature of effects;

• complexity of the issues and cause-effect relationships;

• uncertainty.

There are considerable benefits, not to mention cost-effectiveness, of considering climate change mitigation and adaptation, biodiversity, and other environmental issues together. For example, it provides the opportunity for win-wins when applying ecosystem-based approaches to climate mitigation and adaptation, and avoiding mitigation actions that have no adaptive capacity or that reduce the resilience of other factors. One of the roles of SEAs is to seek to manage these conflicts and potential synergies.

**EU biodiversity strategy to 2020**

|  |  |  |  |
| --- | --- | --- | --- |
| 2050 vision | By 2050, European Union biodiversity and the ecosystem services it provides — its natural capital — are protected, valued and appropriately restored for biodiversity's intrinsic value and for their essential contribution to human wellbeing and economic prosperity, and so that catastrophic changes caused by the loss of biodiversity are avoided. | | **++** |
| 2020 headline target | Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss. | | **++** |
|  | |  |  | |

The full implementation of the **Birds and Habitats Directives** (i.e. reaching favourable conservation status of all habitats and species of European importance and adequate populations of naturally occurring wild bird species) is critical to preventing further loss and restoring biodiversity in the EU.

One of the selected thematic objectives (Protecting the environment and promoting climate change adaptation and risk prevention) aims to integrate the targets of this strategy.

Furthermore, the objectives of the Programme is in line with the **EU Water Framework Directive** and the **7th EAP** (Proposal for a new EU Environment Action Programme to 2020), of which priorities are defined as follows:

|  |  |
| --- | --- |
| **The Commission proposes to focus action on nine priority objectives:** | |
| Three thematic priority objectives are intended to: | Protect nature and strengthen ecological resilience |
| Boost sustainable resource-efficient low-carbon growth, and |
| Effectively address environment-related threats to health. |
| The thematic priorities are supported by an enabling framework with four further priority objectives which will: | Promote better implementation of EU environment law, |
| Ensure that policies benefit from state of the art science, |
| Secure the necessary investments in support of environment and climate change policy, |
| Improve the way environmental concerns and requirements are reflected in other policies. |
| Two more priority objectives focus on: | Enhancing the sustainability of EU cities, and |
| Improving the EU's effectiveness in addressing regional and global challenges related to the environment and climate change. |

It is essential that the Programme supports the overall aim of the **EU Adaptation Strategy**, namely is to contribute to a more climate-resilient Europe. This means enhancing the preparedness and capacity to respond to the impacts of climate change at local, regional, national and EU levels, developing a coherent approach and improving coordination.

According to the *Guidance on integrating climate change and biodiversity into SEA:*

“Responses to climate change can be divided into two aspects:

* **Mitigation**

the term used to describe the process of reducing GHG emissions that contribute to climate change. It includes strategies to reduce GHG emissions and enhance GHG sinks.

* **Adaptation**

is a process, or set of initiatives and measures, to reduce the vulnerabilityof natural and human systems against actual or expected climate change effects. Adaptation can also be thought of as learning how to live with the consequences of climate change. The first consequences of climate change can already be seen in Europe and worldwide, and these impacts are predicted to intensify in the coming decades. Temperatures are rising, rainfall patterns are shifting, glaciers are melting, sea levels are getting higher and extreme weather resulting in hazards such as floods and droughts is becoming more common.

Some PPs will have as their objectives the promotion of climate change-responsive projects, including mitigation (such as renewable energy licensing regimes, or plans for carbon capture and storage); adaptation (such as flood management plans); or resource-management such as water (for which energy use, carbon reduction, and adaptation are important, for example, along with the complex interactions between climate change and its impact on supply/demand for water and ecosystem functions and biodiversity).”

|  |  |  |
| --- | --- | --- |
| Climate change mitigation | Climate change adaptation | Biodiversity |
| • energy demand in industry  • energy demand in housing and  construction  • GHG emissions in agriculture  • GHG emissions in waste  management  • travel patterns and GHG  emissions from transport  • GHG emissions from energy  production  • land use, land-use change,  forestry and biodiversity | • heat waves (including impact on  human health, damage to crops,  forest fires, etc.)  • droughts (including decreased  water availability and quality and  increased water demand)  • flood management and extreme  rainfall events  • storms and high wind (including  damage to infrastructure,  buildings, crops and forests)  • landslides  • sea level rise, extreme storms,  coastal erosion and saline  intrusion  • cold spells  • freeze-thaw damage | • **degradation of ecosystem services**  **• loss of habitats, fragmentation**  (including the extent or quality of  the habitat, protected areas,  including Natura 2000 sites,  habitat fragmentation or  isolation, as well as the impacts  on the processes which are  important for the creation and/or  maintenance of ecosystems)  • **loss of species diversity** (including  species protected under the  Habitats and Birds Directives)  • loss of genetic diversity |

***Examples of headline climate change and biodiversity issues to consider as part of SEAs***

**The relevance of the Programme**

**(Community and national legislation on the environment)**

**Community Level:**

* **New Air quality directive:**

The new [***Directive 2008/50/E****C*](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32008L0050:EN:NOT)of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe entered into force on 11 June 2008. This new Directive includes the following key elements:

* The merging of most of existing legislation into a single directive (except for the fourth daughter directive) with no change to existing air quality objectives\*
* New air quality objectives for PM2.5 (fine particles) including the limit value and exposure related objectives – exposure concentration obligation and exposure reduction target
* The possibility to discount natural sources of pollution when assessing compliance against limit values
* The possibility for [time extensions](http://ec.europa.eu/environment/air/quality/legislation/time_extensions.htm) of three years (PM10) or up to five years (NO2, benzene) for complying with limit values, based on conditions and the assessment by the European Commission.

*\* Framework Directive 96/62/EC, 1-3 daughter Directives 1999/30/EC, 2000/69/EC, 2002/3/EC, and Decision on Exchange of Information 97/101/EC.*

* [**Air Quality Framework Directive**](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31996L0062:EN:NOT)**:**

***Council Directive 96/62/EC*** is referred to ambient air quality assessment and management. It describes the basic principles as to how air quality should be assessed and managed in the Member States. It lists the pollutants for which air quality standards and objectives will be developed and specified in legislation.

**International Agreements:**

* The ***Convention on Long-Range Transboundary Air Pollution*** is intended to protect the human environment against [air pollution](http://en.wikipedia.org/wiki/Air_pollution) and to gradually reduce and prevent air pollution, including long-range transboundary air pollution.
* The ***Vienna Convention for the Protection of the Ozone Layer*** is a [Multilateral Environmental Agreement](http://en.wikipedia.org/wiki/Multilateral_Environmental_Agreement). It acts as a framework for the international efforts to protect the [ozone layer](http://en.wikipedia.org/wiki/Ozone_layer).

**National Level:**

**Hungary**

* Certain rules of the air protection 21/2001 (II.14.) Decree,
* Regulation 12/1983 (V.12.) noise and vibration protection,
* Regulation of the national emission limit values 7/2003 (V. 26), Ministry of Environment, Ministry of Economy
* 17/2001 (VIII. 3) applies to level of air pollution, air pollution point sources and rules for stationary testing, verification and the evaluation.
* 14/2001 (V.9). Ministry of Environment, Ministry of Health, Ministry of Agriculture - joint regulation of air quality limit values​​, air pollution point sources in the stationary emission limit values ​​applicable in relation to the reduction of air pollution
* Noise pollution in 8/2002 (III.22.) the noise and vibration limit values Environmental Ministry
* Act CLXXXV/2012 applies to waste management -

**Croatia**

* **Air:**
* Air Protection Act (OG 130/11)
* Air Quality Protection and Improvement Plan of the Republic of Croatia for the period 2008 – 2011 (OG 61/08)
* Regulation on siting of national network stations for continuous air quality monitoring (OG 4/02)
* **Waste**:
* Act on Sustainable Waste Management (OG 178/04, 111/06, 60/08, 87/09, 94/13)
* Waste Management Strategy of the Republic of Croatia (OG 130/05)
* Waste Management Plan of the Republic of Croatia for 2007-2015 (OG  No. 85/07,126/10, 31/11)
* **Water:**
* The Water Act (OG 153/09, 63/11, 130/11, 56/13, 14/14)
* The Act on Water Management Financing (OG 153/09, 90/11, 56/13)
* The Water Management Strategy (OG 91/08)
* **Nature:**
* Nature Protection Act (OG 70/05, 80/2013)
* Strategy and Action Plan for the Protection of Biological and Landscape diversity of the Republic of Croatia (OG [143/08](http://www.zastita-prirode.hr/eng/content/view/full/1163))
* **Forests:**
* The Forest Act (OG 140/05, 82/06, 129/08, 80/10, 124/10, 25/12, 68/12, 148/13)
* Ordinance on Forest Preservation (OG [121/06](http://narodne-novine.nn.hr/clanci/sluzbeni/2006_11_121_2691.html) i [25/11](http://narodne-novine.nn.hr/clanci/sluzbeni/2011_02_25_529.html))
* Ordinance on Forest Management (OG 111/06, 141/08)

### Internal consistency of the Programme’s set of objectives

**The chapter will be elaborated in the final draft version.**

*Finalized specific objectives will be analysed based on sustainability criteria.*

*Current table shows the general, comprehensive effects concerning the whole Programme.*

SEA Directive Annex I:

*“the likely significant effects (1) on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors*

*These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects”*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sustainability factors | Type of activities which have likely significant effects on the environment | Secondary / cumulative / synergistic effects | Positive / Negative | Short- / Medium- / Long-term  Permanent / Temporary |
| Biodiversity | 2.1 2.2  (1.2) | cumulative | **+** | Long-term Permanent |
| Population, human health | nr |  |  |  |
| Fauna, flora | 2.1. 2.2 | cumulative | **+** | Long-term Permanent |
| Soil | 2.2 | cumulative | + | Long-term Permanentand short term temporary (due to pilot projects) |
| Water / waste | 2.3  3.1  (1.1- solid waste) | cumulative | **+** | + long-term (waste management) Permanent Medium- and long-term |
| Air | 2.1 2.2 2.3  3.1  (1.2) |  | **+and -** | Permanent  -medium-term Temporary (probably a minimum extent of increasing transport) |
| Climatic factors | 2.3  3.1   * 1. energy, technology) | cumulative | **+ and -** | +Long-term permanent  (due to Prior 2)  -temporary short term (due to small-scale infrastructural developments on 10 border crossing points) |
| Material assets | nr |  |  |  |
| Cultural heritage including architectural and archaeological heritage | 2.1 (esp.joint strategies and sustainable tourism related projects)  3.1 (P2P and joint actions) | synergistic | **+** | Permanent  Short- / Medium- / Long-term |
| Landscape | nr |  |  |  |
| The interrelationship between the above factors | all | synergistic and cumulative | **+** | Permanent Medium and Long term |

All in all, due to the **synergistic and also cumulative positive effects** of the interrelationship between the above factors a **more favourable state of the environment** could be developed by the Programme, especially for the future (medium and long term).

## Environmental impacts and consequences of the Programme’s implementation

### 3.1.Situation analysis*:* current state of the environment

The programme area is characterised by relatively favourable environmental conditions that is caused by the avoidance of large scale and heavily polluting socialist industry prior the 1990s on the Hungarian side and the dominance of less-polluting light industry on the Croatian side. Once operating heavily polluting facilities have dominantly been shut down during privatisation process in Hungary, recently established machinery and light industry (dominantly in Zala, but also in Somogy county) are not the main responsible for pollution.

Air quality is generally to be considered as satisfactory: Zala County has above-average air quality figures, while Baranya County, more precisely the Pécs area – in spite of the shutdown of heavy industry and modernisation of the local power plant – is still unfavourable compared to other parts of the programme area, but is on the level of other major Hungarian cities. Low air quality is caused by high concentration of dust resulted by heavy traffic and unfavourable land use in areas of the Mecsek hill. Another factor is the high concentration of ozone, especially in summertime period. On the Croatian side of the border, air quality can mainly be estimated as satisfactory. The relevant check points are in Osijek and Slavonski Brod (outside of the programme area, but presumably affecting it) and the latter shows lower quality due to air pollution from refinery in Bosanski Brod. This is, however, mainly felt in Brod-Posavina county, i.e. closer to the border with Bosnia and Herzegovina.

The programme area is characterized by three big water systems: the Danube on the East, the Drava-Mura that makes most of the border line, and the Balaton on the north of Somogy and Zala county. All three waters systems have numerous tributaries that are dominantly having a modified character, but some of them could retain their natural river basins. Efforts have recently been made in the framework of the ―Ancient Drava‖ complex programme on the Drava riverside of Hungarian Baranya to restore the former Drava river basin and supply more water to former tributary streams that have been dried out in the past decades. Water systems of the Balaton and Drava-Mura suffer from big volatility. During hot summers the Balaton lacks fresh water that heavily deteriorates its natural wildlife, while during high waters on the Danube the Balaton serves as accumulator of water reserves and helps protect the Danube riverside from flooding.

Counties of the programme area are among the above-average afforested counties, especially Somogy, Zala, Virovitica-Podravina and Koprivnica-Križevci. Forests may be an asset in tourism, basis of wood industry and raw material of biomass based energy production.

**Protected areas**

The Hungarian programme area has a slightly lower ratio of nationally protected areas (national parks) than the national average (7,06 % compared to 9,1%)1. The Danube-Drava National Park Directorate seated in Pécs manages majority of the protected areas in Baranya and Somogy counties. Total territory covered by the National Park amounts to 49 478 hectares, including most of the Drava riverside. The Balaton Uplands National Park Directorate – that manages about 56 997 hectares of protected areas around the Balaton lake, thus all in Zala county and some smaller areas in Somogy – controls the Balaton and Balaton Ramsar sites.

In the Croatian part of the programme area there are no national parks present, only the next level or protected areas – parks of nature - can be found. In the area on Croatian side there are two parks of nature, the swamp of Kopački rit, with an ornithological reserve, and Papuk, a mountain with a rich forests, swamps and meadows. Kopački rit has an area of 17,700 ha (with a protected bird reserve of 8,000 ha) and is located in Osijek-Baranja. Papuk has a bigger surface (33,600 ha) and spreads between two counties: Virovitica-Podravina and Požega-Slavonia. Both are managed by public institutions.

In addition to parks of nature, Koprivnica-Križevci County has a protected geography-botanic reserve Đurđevački pijesci (The Sands of ĐurĎevac) and there is a number of protected landscapes along the river Mura on Croatian side.

The Danube-Drava National Park Directorate has established intensive cooperation with several Croatian public institutions for management of protected natural areas, first of all with Kopački rit that are connected with a ―green corridor‖ of floodland forests. They regularly organise joint events, campaigns and further physical and awareness raising actions. Large territory of the Danube-Drava National Park is part of the Mura-Drava Biosphere Reserve that has been proclaimed by the UNESCO in 2012 as ―Europe‘s Amazon‖. The total reserve covers 631,461 ha, whose 395,861 ha is in Croatia and 235,600 in Hungary. The biosphere reserve is managed by the nationally designated bodies (Danube-Drava National Park Directorate in Hungary, Kopački rit, county level public institutes for protected area management in Croatia).

**Water quality and flood prevention**

Quality of surface waters in the programme area is generally favourable. Accordingly to data of ecological assessment of surface waters in 2009 Danube has ‘moderate‘ quality, while the Drava and the Balaton were having the ‘good‘ quality grade. This is mostly caused by the decrease of nitrogen and phosphor production of households, especially in the West Pannonian region (Zala County). This is mostly resulted by the high number of households connected to 3rd grade sewage treatment systems.

Drinking water supply has been managed almost in all settlements of the programme area. Quality of drinking water varies: the level of arsenic is above the health limit in the Barcs and Sellye district.

In terms of flooding only direct vicinities of the major riverflows threat to a lesser extent the lower sections of the Drava river, on a more major scale the Mohács and Béda-Karapancsa area. Favourable conditions are due to system of flood protection dikes and large surface of floodplain forests.

Flood prevention and defense is a well-organized sector in Croatia, which so far proved to be able of successful prevention and management of floods.

The key stakeholders are:

* the line ministry responsible for flood management (Ministry of Agriculture), in charge of the policy development and coordination with other countries
* Croatian Waters, in charge of planning, organization, financing and implementation of the prevention measures relating to water management and establishment of the National Centre for Flood Defense
* National Meteorological Institute, in charge of data provision
* National Protection and Rescue Directorate in charge of management and intervention of different catastrophic events, including floods

**Public utility infrastructure (water supply and sewage system)**

The Hungarian part of the border area is characterised by a high, almost 100% level of access to public water supply utilities. Although developments have also recently made on the sewage system connection figures, in the programme area it is still below the national average: the ―utility gap‖ has remained an issue to be solved. Water regulation activities have been taken place in several areas of the Hungarian side, mostly by means of EU assistance.

Share of waste water treated by 3rd grade sewage treatment system significantly varies on the programme area. Middle part of Somogy County and the Northern and Southern periphery of Baranya are not equipped with this technology

In Croatia, according to the data presented in the Implementation Plan for the Water Utility Directives (2010), in general rates well in relation to water supplies standards, but the levels of water treated by the appropriate sewage systems are not satisfactory. Out of the total of 295 settlements with the built sewerage system, 131 (44%) settlements also have a wastewater treatment plant (WWTP). In another words, only 27% of total population is encompassed with WWT utility (out of 43,6 % of population served with collection of wastewater, 61% have systems that include treatment)2.

Significant investment in the development of sewerage networks with appropriate waste plants is planned through EU Cohesion Fund.

An opportunity for the water management in the programme area is seen in the fact that Decision on Designation of Sensitive Areas designated the Danube river basin as sensitive area for which higher degree of treatment is envisaged. Overall, the coverage ratio (share of the population able to connect to the public water supply system) on the level of the Republic of Croatia is on the average 80-82%. The connection ratio (share of the population connected to the public water supply system) is somewhat lower and it is estimated at is on the average 74%.

In the 8 counties in the programme area vary in the percentages of the compliance with the requirements of Water Utility Directives estimated at the time of the plan preparation were as follows:

Bjelovar – Bilogora: 31% Požega – Slavonia: 72%

Varaždin: 75%

Medjimurje: 77%

Vukovar-Sirmium: 79%

Koprivnica – Križevci: 43%

Virovitica-Podravina: 60%

Osijek-Baranja: 72%

In general, bigger urban centres have higher rates of connectedness to both the water supply and waste water treatment than smaller towns and villages.

Croatia has negotiated a transition period for the full implementation of the Water Utility Directives until 2023, when the water supply and waste-water management system will have to be fully aligned with the EU standards.

**Solid waste management**

Four regional waste collection cooperations have been formed in the three Hungarian counties. ―ZALAISPA‖ covers whole Zala County, while other three cooperations operate on the territories of Baranya, Somogy and Tolna counties. These cooperations have adopted their plans of development, however their implementation have been delayed for years.

In the past years decrease in solid waste production is detected, however share of recycled waste is low (14.74% at average – highest in Zala, lowest figure detected in Baranya county). Share of waste used for energy production while burning is minimal. Development of the waste management systems shall contribute to a higher share of recycling and energy production in the future. In Croatia, the 4 north-western counties (Koprivnica-Križevci, Međimurje and Varaždin County plus Krapina\_zagorje, which does not belong to the programme area) have jointly established a regional waste management centre ―Piškornica‖, while other counties have not as yet established such centres. Differences between individual counties are huge. While Medjimurje County is the most advanced Croatian county in terms of waste separation (25.8% waste is collected separately), Vukovar-Sirmium is among the least advanced (only 3.1%) separately collected waste.

In general, waste management is underdeveloped in the eastern part of Croatian programme area and this represents a significant weakness of the environment-related public facilities. However, all of the Croatian counties have established their waste management strategies and a national strategy is being implemented, with a great opportunity of utilising EU funding for the establishment of the regional waste management centres. The locations have been designated for most of the counties and the Accession Treaty obliges Croatia to establish all of the centres by 2018.

**Energy potential**

The region has favourable conditions in terms of renewable energy resources. As the ***Regional Renewable Energy Strategy for South Transdanubia*** is being finalised around this time, the following potentials are to be mentioned:

* Waters of Drava and Mura are an asset for energy production, however it conflicts with nature protection.
* High number of sunny hours in South of Baranya County provides good opportunity for solar energy production.
* Biomass (including agri-waste) due to high level of forestation is apparent in Somogy and Zala.
* Geothermal energy has favourable conditions first of all in Zala, but thermal resources are available throughout the programme area.
* The three counties are generally weak in wind, but Northern part of Somogy and Baranya could reach the required intensity of wind needed for wind energy production.

**National concepts of renewable energies** are guided by the EU 2020 targets: 20% reduction in greenhouse gas emissions, 20% of renewable energy share, 20% increase in energy efficiency.

The Hungarian National Energy Efficiency Action Plan foresees a saving of 57.4 PJ by 2016, among them the highest share on residential buildings. Energy efficiency is one of the pillars of the draft of the South Transdanubian Regional Energy Strategy, foreseeing a reduction in final energy consumption of 10% by 2020 and a 10% increase in the proportion of renewable energy in the mix.

**Croatian national Regional Development Strategy** recognises low level of sustainable energy production as a key weakness in all of Croatian regions. For both the North-West and Pannonian Croatia, the Strategy foresees a strategic need to widen the sustainable and clean energy production. In Pannonian Croatia, (which incorporates the eastern part of the programme territory), opportunities are also seen in thermal and hydro-energy sources.

**Road infrastructure**

The programme area is situated in the triangle of corridors V/b (E71; A4–M7), V/c (E73; A5–M6) and X (E70; A3). The programme area‘s western periphery is located at the batch of various transnational communication routes that creates excellent accessibility from Western Europe, however the area suffers from capacity problems especially in summer season. The eastern periphery has considerably improved its accessibility by the development of A5–M6 (E73, Corridor V/c) motorways, however section between Babarc (Mohács) and Osijek is still missing. The isolated situation of the middle part of the border area encumbers internal cohesion of the programme area.

County seats‘accessibility features vary: Zalaegerszeg and Kaposvár don‘t have the sufficient quality connection to motorways. The programme area‘s most isolated part is the Southern periphery of Somogy county (Internal Somogy) that is hard to access either from county seats or from dominant cities outside the area. This situation could be improved by the development of the A13–M60 (Zagreb–Bjelovar–Virovitica–Barcs–Pécs) speedway connection.

The border of Croatia and Hungary is an exceptionally non-permeable one: it has the lowest border crossing density among Hungarian borders. Average distance of border crosses is 62 km5, whereas the longest distance is between Barcs/Terezino Polje and Drávaszabolcs/Donji Miholjac (72 km). This makes the districts of Sellye and Szentlőrinc (also partly Szigetvár) and on the Croatian side the Slatina area heavily isolated from other side of the border. Since Mura and Drava form the state border on a long distance, opening of new border crosses turns to be a bridge construction issue. Establishment of a new border cross in the area of Sellye and Slatina has been investigated by various studies in past programmes, however no big improvement has been made since. As temporary solution the establishment of a ferry connection between Vejti and Podravska Moslavina has been recently investigated.

Analysis of border crossing data shows that the Letenye border crosses – due to the M7-A4 motorway connection between the national capitals – concentrate about 60% of total personal border crossing on road. In spite of the general decreasing tendencies the border crossing on corridor V/c at Udvar—Duboševica has improved its figures6, most likely due to recent motorway developments M6-A5 that are likely to rise further upon foreseen constructions towards the national borders. Accession of Croatia to the Schengen zone (at least three years after the accession to the EU) will make opening of new border crosses easier. This would be beneficial for border sections where bridge construction is not needed, especially in the Baranya triangle.

East-west transport has serious capacity problems: the connection between Pécs and Zala county is done through low capacity and quality side roads. Similarly on the Croatian side the Podravina main road (D2) has recently been developed with bypasses built around major centres (e.g. Osijek, Virovitica), but horizontal connection still remains ineffective due to long transit road sections on D2.

At the moment there is no scheduled coach service operating between Hungary and Croatia, all past routes have been closed down in the past years. However in pre-holiday weekends Pécs malls operate shopping related coach service from Osijek.

**Railways**

Railway infrastructure is characterized by poor quality substructure and lack of electrification even on key sections (Pécsbánya-Rendező–Magyarbóly, Szentlőrinc–Gyékényes, Nagykanizsa–Zalaszentiván, Koprivnica–Osijek). Poor infrastructure results low speed levels, inefficient timetables and minor demand for cross-border traffic. Since December 2012 direct trains between Budapest and Sarajevo have been ceased that resulted Osijek from Pécs remained inaccessible by railway, however border crossing figures have shown slight improvement in this area (see Table 10) till it was in operation. As the only cross-border connection, one daily service is operating between Budapest and Zagreb through Koprivnica–Gyékényes–Nagykanizsa (on line 30). This connection may be used from Pécs or Kaposvár with transfer in Gyékényes (albeit with very long waiting time), but unfeasible from Zalagerszeg.

**Aviation**

In terms of air transport, the border area‘s most developed airport is the Fly Balaton in near Hévíz that serves regular charter flights mainly from Germany, further lines are under way from Riga and Moscow. The Osijek Airport serves regular scheduled flights in summer season to Dubrovnik and Split. These two airports have the capacity to land typically used big size passenger aircrafts. Another internationally operating airport is Pécs-Pogány having only a 1500 m runway that provides landing only to small jets. The airport currently serves charter flights in summer season to Greece and Bulgaria. Further non-public airports having concrete runway are located in Varaždin and Taszár (near Kaposvár) that don‘t serve passenger flights.

**Inland navigation**

Water transport is relevant only on the eastern part of the programme area. The Mura border river is not navigable for normal passenger ships, only for small vessels for tourism and sport. The Drava is navigable from Barcs to Aljmaš, however only minimal navigation takes place at the moment, dominantly between Osijek and the firth. The Danube has more relevance in terms of navigation. On the Hungarian side Mohács has status of public port, recently equipped with modern infrastructure. In Croatia Vukovar is the most important port. For tourism purposes smaller ports are under construction (Batina, Aljmaš).

**Agriculture**

The agriculture plays more important role in the area than it does in the national economy of the two countries. This statement refers to both the sector‘s income generation potential and to the employment as well. The share of the agriculture is three times higher in the area than the European average. The main agricultural areas are the excellent quality lands and soils which could be found alongside the Danube and Drava rivers. The structure of the farms is different in the two countries. In Hungary lands of bigger territories are common and these are cultivated by large holdings. In Croatia the lands are smaller and are predominantly being cultivated by family-run agricultural businesses.

On both sides of the border production of arable crops is typical, like maize, wheat and other cereals, sunflower and rape. The number of livestock decreased in the past decades, there are typically poultry and pigs for slaughter, cattle for milk and bee families for honey.

Zala and Somogy are the two most afforested counties of Hungary, but in Baranya and on the Croatian areas there are extended forests as well.

On the Croatian part of the programme area particularly its eastern part (historical region of Slavonia) is traditionally strong in agriculture. Even now, agriculture is a very significant source of employment, on average reaching up to 10.4% of employed persons in Vukovar-Sirmium (national average being 2.1%)7. Within the Croatian programme area, it brings about on average 13.3% of gross value added, in comparison to the national average of 4.9%.8

However, agricultural sector is suffering from a number of structural difficulties: especially the small size of agricultural holdings, but also a large share of agricultural land that is not farmed.

The target area is relatively abundant with agricultural land; however, there is lack of rational land management caused by numerous factors (unresolved ownership status, problems of small private land, permanent loss of agricultural land due to urbanization, undefined management of state land, a considerable proportion of uncultivated and abandoned land, etc.). The common asset of the area is the high level of wine-growing and making which is frequently linked to tourism and catering industry and by doing so generated significant incomes in some areas in the recent years.

In the programme area, on the Hungarian side two wine regions with their four sub-regions are located (as part of the Pannon wine region the Pécs and Villány sub-regions, and in the Balaton wine region the Balatonboglár and the Zala sub-regions). On the Croatian part five wine-growing areas (Podunavlje, Slavonia, Prigorje–Bilogora, Moslavina, Zagorje–MeĎimurje) produce high quality wines and has a number of wine roads.

**Tourism**

In Hungary, the role of tourism in Zala and Somogy is outstanding as regards the number of guests. In these counties the number of tourists on an annual basis is around twice as much as the number of inhabitants. In Zala the number of guest nights9 per thousand people as of 2011 were three times, in Somogy 2,5 times higher than the national average. This is mostly due to the availability of waters: Lake Balaton and the spas and thermal waters play decisive role in the dynamism of touristic turnover. Lake Balaton‘s impact is especially strong on the tourism industry of Somogy, whereas in Zala the existence of popular spa-resorts (as Hévíz or Zalakaros) provides strong contribution to these high figures. In the area the number of domestic guests exceeds that of the foreign ones. The share of foreign guest nights is the highest in Zala county (45%) though it is still lower than the Hungarian national average (48%). The tourism activity does not concentrate in the border area; the exception is the Siklósi microregion, where the Harkány Spa generates significant tourism nights. All other Hungarian border microregions have inconsiderable touristic performance.

The Croatian areas in terms of both the number beds and the number of guests lag significantly behind the figures of the Hungarian counties located alongside the border. Croatian tourism is mainly based on the coastal areas, so the 8 counties along and next to the border with Hungary jointly bring only about 11% overnight stays in Croatia. Within the area, the most visited county is Osijek-Baranja, where in particularly Baranja region is recognised for its rural tourism and gastronomy. Medjimurje County also has a slightly higher number of visitors per year than other counties in the programme area, due to the well-developed rural, spa and wellness offer. The largest proportions of visitors of the area are domestic tourists.

The programme area has colourful touristic assets. The most important destination is the lake Balaton, but significant number of guests are attracted by the spas and thermal baths located in significant numbers in the programme area. Spas of international importance are at Hévíz, Zalakaros and Harkány, but several other settlements operate thermal baths (for example Szigetvár, Zalaegerszeg, Kaposvár, Siklós, Zalaszentgrót, Kehidakustány, Barcs, Nagyatád, Marcali, etc.). In Croatia, most significant spa resorts are Varaždinske Toplice in Varaždin County, Sv. Martin in Medjimurje and Daruvar in Bjelovar-Bilogora county.

Other main touristic destinations are in the centre of Baranya County: the Pécs – Mecsek Mountain – Siklós – Harkány area, where culture and gastronomy contributes to the touristic supply. In Somogy and Zala hunting tourism is also important.

In Croatia, the town of Osijek has significant architectural heritage. In Varaždin County, the Trakošćan Castle is one of the nationally known and recognised tourist attractions, predominantly attracting one-day excursions.

The favourable natural endowments of the area also form important touristic assets such as the protected areas of the Danube-Drava National Park, the Kopački rit and the Papuk mountain. Besides these the built environment is worth mentioning: Pécs is a UNESCO World Heritage site, its valuable ecclesiastic (cathedrals, churches, monasteries, mosque) and secular (castles and fortresses) buildings are attracting visitors.

Environmental issues related to thematic characteristics of the cross border area and to the proposed activities:

**Environmental protection and sustainable tourism**

The programme area has a **rich cultural and natural heritage**, and a high proportion of protected areas. These areas are major assets of natural and cultural attractions and should therefore also be considered as **potentials for generating economic growth** in the border area. Despite these cultural and natural assets, performance of tourism sector is rather low in the border area. There is a need primarily to maintain and protect what is considered as an asset of cultural and natural heritage but also to **develop sustainable tourism in the border region and the common utilization of cultural and natural heritage** with an integrated approach. The programme area, especially the border counties are rich in natural heritage (above 7% in Hungarian side and above 10% in Croatian side). However, the level of protection and **sustainable promotion and interpretation** of these assets needs to be improved.

Common assumption of key stakeholders of programming area is that joint protection and promotion of these natural assets has key importance. There are fairly good collaborations between organisations of natural protection which sets a good basis for further joint cooperations. Aim of investment priority is to **restore and protect natural asset** management and further **develop green infrastructure**.

There is a need to receive **improved knowledge on the status of soil and water bodies** as well as the **ecosystem conditions** to be used also for coordinated planning of protective investments. Joint monitoring systems, shared action plans and coordinated processes will be developed serving to accelerate reactions to emerging hazards especially floods and forest fires. It is a must to complete e**radication of the remained minefields** in the border region.

In the past years decrease in **solid waste production is detected, share of recycled waste is low** and share of waste used for energy production while burning is minimal. Development of the waste management systems shall contribute to a higher share of recycling and energy production in the future. Specific tasks of management of solid waste could be organised in CBC cooperation on the basis of a **cross border solid waste management strategy**. Possible ways of joint improvement of solid waste management where there is relevance of cross border cooperation are prevention of waste production and divertion: recycling or materially or energetically reusing waste. There is a need for the development of innovative ways of solid waste management across the border area also in the field of local initiatives of waste prevention and applying innovative technologies for recycling and energy production in the future. Information on the local applicability of new approaches and technologies with innovative character will also be gathered in other important sectors such as water management and soil preservation.

A **more favourable state of the environment can be realized** compared to the current state in each affected areas (waste, water, ecosystems, etc.) with the targeted activities of this Priority.

**Cooperation**

Thematic concentration offers the possibility for cooperation only for a limited number of institutions and development areas. However, cross border cooperation/regional development can only be effective in an area if a wide range of organisations work along agreed strategies.

Therefore, the expected results are that - regional institutional cooperation is extended or deepened in particular in areas where the need for cooperation has been explicitly expressed by local, regional stakeholders, such as

* energy efficiency, exploitation of renewable energy sources
* labour market regulations and incentives
* social inclusion and employment promotion for marginalised communities
* use of ICT technologies in provision of basic services like health or social services
* Support capacity building actions of organisations in charge of nature conservation and also the ones in charge of water management by developing good practices, exchange of staff, training and research
* Support joint programming, project preparation and demonstration actions of local governments, non-profit organisations, development and energy agencies in the field of renewable energy and energy efficiency
* Joint actions between civil society organisations (environmental, cultural, minority, etc)

This Priority will focus on important issues related to common development in frame of joint actions (aiming awareness rising) and preparation of future projects which means added value primarily in the long term. However, these activities could have a great indirect impact in the cross border area.

**Education and economic development**

Programming area is characterized by low innovation activity and low R&D expenditure which contributes to low level of competitiveness of the economic sector and poor economic activity. Innovative cooperation between universities, research institutions and SMEs are rather weak, further hindering economic catch-up process. SMEs and their networks as well as HE educations are expected to build up new and improved capacities that enable them to cooperate effectively across the border. Concepts or strategies to develop know how and innovation transfer institutions and services and some pilot actions are also expected to be implemented resulting in the joint development of new product or services.

These priorities also could have indirect impact on the environment related to the following fields: increasing the quality of services, synergistic development based on partnership and technological innovation.

## 3.2.Analysis of Alternatives

Operative Programmes are special in terms of alternatives, because there are no different potential variations to examine – it is resulted in a planning process. Therefore without real alternatives state of the environment in the Programme area is to be analysed only **’with and without’** implementation of the Programme.

The two version is compared against environmental factors:

|  |  |  |
| --- | --- | --- |
|  | With implementation of the Programme | Without implementation of the Programme |
| Earth | Joint research, data collection and monitoring projects aiming to support soil protection could be implemented. | Increasing soil erosion and contamination - environmental risks could have negative effects. |
| Water | Modern water management system, strategic planning and monitoring could be improved. Improved capacity (good practices, exchange of staff, training and research). | Results of cooperation related to water management and monitoring will be realized later, as a consequence there will be more risk and damage. |
| Air and climate change | Improved utilization of renewable energy resources, contribution to a more resource efficient economy and a more climate-resilient, low-carbon economy.  Joint programming, project preparation and demonstration actions could be implemented. | GHG emissions is likely to increase without improving infrastructure. Awareness raising actions and project preparation will be missed related to the relevant fields. |
| Biodiversity | Favourable conservation status and joint development of cooperation in the cross border area. Joint research, data collection and monitoring projects could be implemented. | Further loss of biodiversity. More resources are needed to reach the same level separately without cooperation. |
| Ecosystems | Ecosystems will have a greater chance of maintaining over a long period of time, espically in relation to Natura2000 sites and other protected areas. | Restoring of ecosystems will require more efforts. |
| Flora and fauna | Improving the conservation status of species and habitats | Loss of species and habitats. |
| Cultural heritage | Improved state and access to cultural heritage, increasing mutual connections in the cross-border area. Increased level of knowledge and understanding of habits. Increased valorisation of cultural heritage. | Cross border connections remain the same level and integration cannot be maximalized. |
| Infrastructure | Improved accessibility which could stimulate tourism and economy. Isolation of border areas could be reduced. Small scale infrastructural developments will be implemented on 10 border crossing points. | Mobility cannot be improved or only at national level separately. In this case cross border integration remains a great absence. |
| Land use | Not relevant | Not relevant |
| Landscape and green areas | Healthy environment and natural assets can be preserved, as a result there are several environmental benefits of green spaces. | More effort will be required at national level for nature protection (in order to contribute to protect Natura 2000 sites) |
| Human health and Quality of life | The improving quality of life intensifying common identity, increasing local activity, spending locally serving the community and strengthen the economy.  Joint strategies of sustainable tourism will be prepared and services and products will be developed. | Without environmental developments, and public infrastructures the quality of life cannot be improved, as a consequence cohesion cannot be enhanced and migration will be higher, job mobility will be missing and territorial imbalances will grow. |

## Impact Assessment

**Major findings of impacts**

**This draft Programme is considered to be special regarding the intended impacts, because basically it only strives to generate positive environmental impacts.** It might be experienced especially regarding long-term effects.

Based on current phase of defining the types of activities, it can be stated that only a few targeted objectives could lead to such effects which might cause a minimal extent of negative environmental impacts.

As a result of small scale infrastructure on 10 border crossing points (addition actions in Prior 1), the volume of traffic might be increasing which probably will contribute to air pollution. The same impact might occur related to increasing tourism and to economic development. These indirect impacts could be avoided if sustainability is integrated in a more sufficient way during programming phase and requirements are appropriate for implementation.

From the point of view of environmental sustainability, the positive relation of current activities regarding nature protection is directly justified by harmonized management system and joint activities (preparation and implementation), so the projects to be supported will serve essential improvement of common environmental systems.

Negative consequence of infrastructural development could be the increase of traffic, resulting in the emission of a higher amount of greenhouse gases in a minimal extent, affecting the environmental quality of rural settlements. Positive effects to be mentioned are the development of the road surface that decreases the noise load, improving the population’s quality of life; and the decrease of the isolation of border area settlements that could lead to the migration of population.

In the framework of small scale infrastructure development (on 10 border crossing points), the preservation of the landscape’s natural quality must be considered, if relevant. Due to the increased traffic, also the development of tourism can have a negative effect on natural environment. The increasing tourism in relatively undisturbed natural areas as well as the implementation of several events, however, could have a negative effect on both environmental factors and certain elements of built environments.

R+D results and innovative solution (strengthening joint research-development- innovation) can form a proper basis for the development of environmental friendly products. This might result in positive effects on environmental factors on both sides of the border.

In terms of effectiveness it is important to **make the results to be sustainable and to monitor the environmental effects.**

**Overview of environmental and sustainability effects analysing the direct and indirect impacts:**

|  | **Intended effects / direct impacts** | **Not intended effects/indirect impacts** |
| --- | --- | --- |
| **Environmental effects** | * Adequate contribution to the protection of Natura 2000 sites * Endangerment of ecosystems is reduced * The community is involved and their awareness and knowledge is raised in several field (e.g. nature protection, energy efficiency, solid waste prevention) * Preserved natural state of affected areas * Sustainable use of natural and landscape assets is ensured * Increased level of reusing, recycling and energetic usage of solid waste * Technological innovation and effective management of waste and water management | (+)   * Contribution to climate change adaption and to risk reduction * Vulnerability of water resources is reduced * Air pollution is reduced considerably long term * Developing a healthy environment   (-) Minimal extent:   * Potential damage of natural assets due to investments * Increased air pollution - short term (due to increased traffic and increased number of tourists) * Short term increase of air and noise pollution (due to infrastructural developments and events) |
| **Economic effects** | * New technologies, innovative solutions * Enhanced research and innovation capacities * Improvement the competitiveness of the region * Increased potential of the region to generate economic value-added by sustainable use of its natural and cultural heritage | (+)   * Stimulating the economy * Higher mobility * Lawer rate of unemployment * Increased turnovers at the tourism service providers * Establishment of waste recycling industry   (-) |
| **Social effects** | * Conservation of historical and cultural heritage * Better prepared workforce * Job mobility * Healthier life conditions provided * Social inclusion * Networks created for the involvement of disadvantaged groups * Improved specific skills and harmonized qualifications | (+)   * Social cohesion - integration of deprived groups (against ethnic exclusion) * Wider equal opportunity is provided * New jobs * Improved quality of life * Lower migration   (-) |
| **Territorial effects** | * Sustainable and effective management of waste and water * Better infrastructure * Cross border integrity, cooperation and mobility * Sustainable development of the area * Preservation and utilization of cultural and natural assets * Improving accessibility of settlements in the cross border area | (+)   * Higher mobility * Catch-up of less developed settlements * Synergistic development based on partnership * Territorial differences are reduced * Reduced number of lagging small villages and peripheral areas   (-) |

**Transboundary impacts**

It is necessary to examine the cross-border effect of such developments at those cross-border areas where Plans or Programs define main or minor roads crossing the border, or such roads which once crossed the border. Several dimensions are to be examined on the project level:

a) Environmental effect of realization

Direct and indirect environmental effects of realization have to be reviewed. For the interest of cross-border effects, these examinations and project evaluation based on these, should not be related solely on domestic territories, but on the other side of the border as well, at the catchment area or the related land area or even further than that. In this case it is important to carry-out transborder social conciliations.

b) Environmental effects of sustainability

Cross-border effects derive mainly from existing or renovated bicycle paths. In the case the project evaluation was profound, the existing bicycle paths serve actual demands, thus result in an increase of traffic in the border area. Based on domestic and international observations carried-out in national parks on bicycle tourism, such an increase of traffic – if based mainly on bicycle traffic and not connected to the increase of related motorized traffic – does not cause substantive negative effect on the environment. Since a considerable motorization is generated at the starting- and ending points of bicycle tourism, it is necessary to survey what kind of indirect environmental burdens occur in the following areas:

* required territory for parking lots,
* infrastructure, energy and allocation of waste for serving accompanying personnel,
* air and noise pollution deriving from transportation.

During developments, the above mentioned aspects and their manners of treatment are to be examined. In the case of cross-border developments, examinations should also be carried-out with the involvement of the social partners from across the border. Further on, in certain cases, the standpoint of the trans-border supervisory authority might be necessary (in the case of NATURA 2000 or protected areas).

In case of Hungary-Croatia CBC Programme

Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, known as the Environmental Impact Assessment (EIA) Directive, includes special provisions for cases in which a project implemented in one Member State is likely to have significant effects on the environment of another Member State (Article 7). Similarly, the 1991 UNECE Convention on Environmental Impact Assessment in a Transboundary Context, known as the Espoo Convention, introduces specific rules for conducting an EIA of activities located on the territory of one contracting party, defined as the Party of origin, and likely to cause significant adverse transboundary impact in another contracting party, defined as the affected Party (Article 2).

The Espoo Convention requires that the Party of origin notifies affected Parties about projects listed in Appendix I and likely to cause a significant adverse transboundary impact (Article 3(2)). The notification triggers the transboundary EIA procedure. The Espoo Convention's primary aim is to 'prevent, reduce and control significant adverse transboundary environmental impact from proposed activities' (Article 2(1), but in fact the Party of origin is obliged to notify affected Parties (in accordance with Article 3 of the Espoo Convention) even if there is only a low likelihood of such impact. This means that notification is always necessary, unless significant adverse transboundary impact can be excluded with certainty. This interpretation is based on the precautionary and prevention principles.

*So far, there is* ***only one additional pre-defined action,*** *which implementation could be fully relevant for the border region:*

* Small scale development of infrastructure on 10 border crossing points probably cannot influence border crossing transport in a large extent.

However, it has to be based on feasibility study for improving cross border transport.

**Sum up of the aspects related to the Programme’senvironmental assessment**

**The chapter will be elaborated in the final draft version.**

*The environmentally acceptable version can be determined only after integration of the received opinions.*

## 

## Conclusions, recommendations

### Effectiveness from environmental point of view

**The chapter will be elaborated in the final draft version.**

Assessment of the effectiveness of measures from environmental point of view and proposals for measures to be taken

### Environmental considerations how can the Programme influence other plans and programmes

**The chapter will be elaborated in the final draft version.**

Proposals for environmental considerations - how can the Programme influence other plans and programmes – can only be drafted after elaboration of the final Programme Document.

It is unlikely to influence plans at county level (perhaps at local level).

## The SEA monitoring and follow-up measures

**The chapter will be finalized in the final draft version.**

*This section will summarize the measures decided upon for monitoring significant environmental impact.*

Basic principles of monitoring system to follow-up environmental effects

The monitoring system should be set up all the following criteria to meet:

* **Specific**: monitoring will be to serve specifically induced by the measurement of the interventions included in current OP for short-and long-term environmental effects;
* **Proportional**: the operating costs of the monitoring system should be in proportion to the usefulness of information obtained from it;
* **Legally right**: monitoring system must comply the criteria set out in legislation;
* **Coherent**: monitoring system investigating these environmental effects must be established in accordance with the monitoring system of OP implementation;
* **Easy to understand**: the monitoring system must be unambiguous both for system operators as well as for the beneficiaries, and the measured indicators must be clearly defined;
* **Exact in terms of spatial structure**: the Programme and projects to be implemented in the context of their environmental impact is always restricted to a geographically definable affected area. The monitoring system should be able to take these spatial relationships and manage the environmental affected areas.

Actors of the monitoring system

Monitoring indicators

A common European system of environmental indicators is developed by the European Environment Agency. As a logical framework: the drivers (driving force) - such as individual policies, and plans, programs, also action plans – means what specific activities are imposed (eg: any project activity, engineering, agriculture, road construction, etc.), from which the environmental pressures (pressure) come from. The pressures may affect a specific environmental status (state), and if they are modified, then the environmental effects (impacts) are formed. For the adverse environmental changes / impacts the society tries to give answers, they are called responses (response).

The environmental indicators are the following:

• Driving force indicators

• Pressure Indicators

• State indicator

• Impact indicators

• Response indicators

By developing indicators should be taken into account the groups of indicators which can be measured in an exact way, and those of which exact interpretation of the effects is not available.

Most environmental issues are of a transboundary nature and many have a global scope. They can only be addressed effectively through international cooperation. However, only a realistic driving force and pressure indicators might be defined for current Programme, and also the assessment the state of environment and the evaluation of potential effects are needed to be estimated. Monitoring of driving force concerns that the activities envisaged are fulfilled. These ‘Performance indicators’ can be followed.

Results and data of the monitoring system can be utilized in various ways.

## Non-technical Summary

**The chapter will be elaborated in the final draft version.**

In the non-technical summary, an overview about the methodology and process of the strategic environmental assessment will be presented and also the SEA’s main findings and recommendations will be highlighted. We summarize then how environmental considerations, the opinions expressed and results of evaluating potential transboundary effects will be taken into account and will be integrated into the Programme.