Plitvice Lakes National Park – Croatia and Una National Park – Bosnia and Herzegovina

Feasibility study on establishing transboundary cooperation
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## Contents

**Figures** .................................................................................................................. 5  
**List of Acronyms.** ................................................................................................. 6  
**Executive summary** .............................................................................................. 7  

**Background of the study** ......................................................................................... 8  
  - Project “Environment for People in the Dinaric Arc” ........................................ 8  
  - Why transboundary cooperation? ..................................................................... 9  
  - Purpose of the assessment .................................................................................. 9  
  - Methodology ....................................................................................................... 9  
  - Specific remarks for the Plitvice Lakes National Park and the Una National Park - report ....... 9  

**Regional context for transboundary cooperation** ...................................................... 10  
  - Local transboundary historical context ............................................................. 10  
  - Recent historical context of the area ................................................................. 10  
  - Border context .................................................................................................. 12  
  - Socioeconomic context ..................................................................................... 12  
  - Land use, urbanization and economic development trends .............................. 14  
  - Transport infrastructure .................................................................................... 16  
  - State of the environment and threats ................................................................. 16  
  - Plitvice Lakes National Park ............................................................................ 16  
  - Una National Park ............................................................................................. 19  
  - Tourism as the local economy sector depending on natural assets of the region .... 20  
  - Sustainable tourism development in the region - conclusions and points for consideration ....... 21  

**Nature and its protection in the region of the transboundary area** ........................... 23  
  - Legal and administrative framework for protected area designation and management .... 23  
  - Comparison of protected area networks in the two neighbouring countries ............ 26  
  - Brief overview of the natural values of the region .............................................. 27  
  - Protected areas in the transboundary area ......................................................... 29  
  - Strategic point for consideration - connectivity and continuity of protected area network ....... 29  

**Transboundary cooperation: priorities, challenges and opportunities** ...................... 35  
  - Priorities for conservation in the transboundary area ....................................... 35  
  - Habitats and ecosystems in benefit of a transboundary protected area .................... 35  
  - Stakeholders and existing relevant projects ....................................................... 38  
  - Opportunities and challenges for the transboundary cooperation in the transboundary area ................................................................. 41  
  - Recommendations ............................................................................................. 45  

**References** ............................................................................................................... 46
Figures:

Fig. 1.1.
The area (in green) eligible for application within Croatia-BiH IPA CBC............. 10

Fig. 1.2.
Satellite image: the lower stream from Kulen Vakuf to Lohovo (the larger settlements in this area include Kulen Vakuf (approx. population 1000) and Orašac with Ćukovi (population 2,800) (Source: Googlemaps). ......................... 10

Fig. 1.3.
The upper stream area from Donja Suvaja (in RH), i.e. Drvar (in BiH) to Kulen Vakuf, via Martin Brod where the tributary Unac drains into the Una River (the only larger settlement in this area is Martin Brod (population 500), excluding Drvar). (Source: Googlemaps). .............................................. 11

Fig.1.4.
Satellite image: Plitvice Lakes and Bihać (Source: Googlemaps). ..................... 11

Fig. 1.5.
Population trends within the national park (Source: Central Bureau of Statistics of the Republic of Croatia).......................................................... 13

Fig. 1.6.
Border crossings (Source: Googlemaps). .................................................. 16

Fig. 1.7.
Macro zones within Una National Park (Elektroprojekt, 2005) ...................... 34
List of acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>BiH</td>
<td>Bosnia and Herzegovina</td>
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<td>B&amp;B</td>
<td>Bed and Breakfast</td>
</tr>
<tr>
<td>CBD COP 9</td>
<td>9th Conference of the Parties to the Convention on Biological Diversity</td>
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<td>CBD PoWPA</td>
<td>Convention on Biological Diversity, Programme of Work on Protected Areas</td>
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<tr>
<td>EU IPA CBC</td>
<td>European Union, Instrument for Pre-accession Assistance, Cross-Border Cooperation</td>
</tr>
<tr>
<td>FBIH</td>
<td>Federation of Bosnia and Herzegovina</td>
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<tr>
<td>GEF</td>
<td>Global Environmental Fund</td>
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<td>GIS</td>
<td>Geographic Information System</td>
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<td>RH</td>
<td>Croatia</td>
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<td>ISCC</td>
<td>Interim Secretary of the Carpathian Convention</td>
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<td>IUCN SEE</td>
<td>International Union for Conservation of Nature Programme Office for South-Eastern Europe</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organisation</td>
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<td>NP</td>
<td>National Park</td>
</tr>
<tr>
<td>PA</td>
<td>Protected area</td>
</tr>
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<td>PHARE</td>
<td>Poland and Hungary: Assistance for Restructuring their Economies</td>
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<td>SME</td>
<td>Small Market Enterprises</td>
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<td>SNV</td>
<td>Netherlands Development Organisation</td>
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<td>TBPA</td>
<td>Transboundary protected area</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNESCO MAB</td>
<td>United Nations Educational, Scientific and Cultural Organization, Man and Biosphere Programme</td>
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<td>UNEP</td>
<td>United Nations Environment Program</td>
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<td>WWF MedPO</td>
<td>World Wide Fund for Nature Mediterranean Programme Office</td>
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This study explores the possibilities and challenges of the existing regional collaboration between Plitvice Lakes National Park in Croatia and Una National Park in Bosnia and Herzegovina, one of six pilot sites in the project “Environment for People in the Dinaric Arc”. The objective of the study is to survey the possibilities for transboundary conservation, i.e. establishment of transboundary protected areas and associated cooperation mechanisms.

Focusing on the area between Plitvice Lakes National Park and Una National Park, defined in part by the Una River and in part by the Lička Plješivica mountain ridge. These two natural barriers divide the area into three parts: 1) the area along the Una River in the territory of Bosnia and Herzegovina, which now mainly forms Una National Park, and further downstream, the largest settlement in the area, the City of Bihać; 2) the area along the Una river on the Croatian side, where the border is defined by the course of the Una River; and 3) the nearby area of Plitvice Lakes National Park in Croatia, on the other side of Lička Plješivica mountain, which delineates the border.

All three areas were severely affected during the conflicts in the 1990s and the hardship of post-war transition challenges. Today, the socioeconomic situation differs significantly among the three areas. The most recovered and fastest developing among the three is the area of Plitvice Lakes National Park, a consequence of the recent and rapid recovery of the pre-war tourism industry based on the natural attractions and fame of the national park.

Although the other two areas are also blessed with attractive natural scenery, they have actually never realized their potential for nature-based tourism. Before the war, their development was based on forestry, agriculture, and the food and wood processing industries, all of which collapsed during the war and post-war period and still show no signs of recovery. Facing such a situation, these areas are now willing to follow the example of their more successful neighbour, Plitvice Lakes National Park, by developing tourism based on the natural attractions of the Una River and the surrounding area. Currently, the vision of sustainable development based on the conservation and sustainable use of valuable natural assets through tourism, combined with preserved traditional agriculture and manufacturing practices, is already vivid in the minds and plans of the local population and their government, as they can see it happening in their neighbourhood, at the Plitvice Lakes.

Some concrete actions with tangible results are critically needed to make this vision a reality. The major enabling factors could be cross-border cooperation, exchanging know-how and experience, and cooperation between two complementary tourist destinations - the existing one, Plitvice Lakes National Park, and the developing one, the Una National Park. Development based on the area’s conserved and revitalized natural and cultural heritage is the best possible scenario for its biodiversity preservation.

Building on the already established practice of cross-border cooperation, there are no doubts that the conditions are in place for joint long-term projects that would provide opportunities for long-term and tangible impacts.
BACKGROUND OF THE STUDY

This study presents the analysis of a preliminary assessment of one of six project sites of the project “Environment for People in the Dinaric Arc”.

**Project “Environment for People in the Dinaric Arc”**

The project “Environment for People in the Dinaric Arc” began in 2009 and is funded by the Ministry for Foreign Affairs of Finland. The project is expected to last three years. It represents a joint development initiative by IUCN (International Union for Conservation of Nature) implemented by IUCN Regional Office for Pan-Europe and IUCN Programme Office for South-Eastern Europe, in partnership with World Wide Fund for Nature - Mediterranean Programme Office and SNV – Netherlands Development Organisation.

The project was developed to support the political commitments of the Dinaric Arc countries towards enhancing cooperation on protected area establishment and management within the framework of implementing CBD PoWPA. In this context, the most important step was the “Big Win” commitment for the Dinaric Arc, jointly signed by Albania, Bosnia and Herzegovina, Croatia, Montenegro, Serbia, and Slovenia in May 2008 during the 9th Conference of the Parties to the Convention on Biological Diversity (CBD COP 9) in Bonn. The commitment includes the general statement of all signatories to build an effective network of protected areas, based on the recognition of the natural and cultural wealth of the Dinaric Arc region. It also includes a list of specific national and regional priorities for each country. These priorities include the establishment of 13 new protected areas and the evaluation of the contribution the protected areas could make to the local and national economies. They also include strengthening regional collaboration by creating a series of transboundary natural resource management areas (i.e. transboundary protected areas), which shows a general awareness that protecting this natural and cultural wealth can only be achieved through the close cooperation of the Dinaric Arc countries.

The EU perspective is currently the main political driver, since EU accession is the principal objective for the countries of the region. Strong economic growth and progressing integration into the EU are set to bring the stability, security, and prosperity that the peoples of the region are hoping for. In this context, establishing transboundary collaboration on environmental and development issues is of interest to all the western Balkan countries.

The “Environment for People in the Dinaric Arc” project aims to transform this political commitment into a concrete action for the Dinaric Arc region. In short, the goal of the project is to improve the sustainable development of rural communities on the basis of conservation of biological diversity and traditional landscapes in transboundary regions by enhancing regional cooperation and strengthening environmental governance, including participation and empowerment of civil society and local communities (IUCN 2008).
Why transboundary cooperation?

The need for establishing transboundary collaboration is based on the idea that natural systems straddling political boundaries can be most effectively managed as functional units at the scale of the regional landscape and would, therefore, benefit from appropriate mechanisms for long-term transboundary co-operation. While the establishment of TBPAs for integrated conservation and development can enhance environmental protection, it can also reinforce political security and provide multiple benefits to local communities.

The existence of TBPAs and their buffer zones can help rebuild divided communities, promote freedom of movement and create new opportunities for sustainable development, including low-impact tourism. Such areas can also make an important contribution to regional biodiversity conservation programmes, especially in areas where they form a coherent ecological network. Neighbouring states, which often have different levels of technical expertise, knowledge, capacity, and financial resources, can benefit by combining their respective strengths through trans-boundary cooperation (IUCN, 2008).

Methodology

This analysis is based on a questionnaire completed by two local consultants, one for each side of the border at each project site. The questionnaire was developed by Mr. Zbigniew Niewiadomski, the UNEP Regional Consultant on Trans-boundary Protected Areas. The UNEP kindly made the questionnaire available to this project and allowed its author, Mr. Niewiadomski, to assist us. The initial questionnaire was slightly modified to focus on the specific needs of this project and the specifics of the pilot sites.

The questionnaire consists of 168 questions and regional consultants were given a three-month period to provide answers with the assistance of other regional experts, local administrations, Internet research, scientific articles and personal discussions.

Although the questionnaire provided sound insight into the traditional landscape, more thorough overview of the local law enforcement and social background is recommended for future assessments.

Specific remarks for the Plitvice Lakes National Park and the Una National Park - report

Plitvice Lakes National Park was proclaimed a national park in 1949 and a great deal of information and scientific data on the park are available. Considering that Una National Park was established only recently (in 2009) much less information is available. Therefore, the descriptions of the Una region are less detailed.
Local transboundary historical context

In 1991, Yugoslavia split up into several countries and the political events that followed brought a very heterogenic situation for the newly emerging states in the region.

Recent historical context of the area

This study focuses on the border territory between Croatia and BiH, covering the area of Plitvice Lakes National Park, Una National Park and the area in between. This vast territory can be divided into three distinct regions, each of which dispenses typical features. The Una River and Lička Plješivica mountain ridge form the two natural barriers dividing the area into three sectors: 1) the area along the Una River on the BiH side, now mainly forming the Una NP and further downstream the largest settlement in the area, the city of Bihać; 2) the area along the Una River on the Croatian side, in the part where the border is defined by the course of the Una River; and 3) the nearby area of the Croatian Plitvice Lakes NP, on the other side of Lička Plješivica mountain, in the part where the border is defined by Lička Plješivica mountain.

The unfortunate events from the territories’ recent history, such as occupation, ethnic conflicts and war, do not represent a major obstacle to cross-border collaboration today. Nevertheless, they have caused various changes on both sides, leading to a modification of the ethnic structure of the local population and destruction of the cultural and religious facilities in the region.
Fig. 1.3. The upper stream area from Donja Suvača (in RH), i.e. Drvar (in BiH) to Kulen Vakuf, via Martin Brod where the tributary Unac drains into the Una River (the only larger settlement in this area is Martin Brod (population 500), excluding Drvar). (Source: Googlemaps).

Fig. 1.4. Satellite image: Plitvice Lakes and Bihać (Source: Googlemaps).
Border context

The border roughly follows the course of the Una River, or the ridges of the nearby Lička Plješivica mountain, both river and mountain creating a natural obstacle. The border in its present shape mainly follows a much older historical border still evident in the series of fortified settlements along the way. The border was negotiated during the Treaty of Carlowitz 1699 which ended the hostilities between the Ottoman Empire and the Holy League (Austria, Poland, Venice and Russia) (1683–1699). The Ottoman side was defeated at the Battle of Zenta (1697) and accepted to negotiate a peace treaty, were Austria received all of Croatia and Slovenia. The Croatian territories were incorporated into the Military Frontier (“Vojna krajina” in Croatian, “Militärgrenze” in German) (Encyclopaedia Britannica 2011) of the Habsburg Monarchy, while the side in BiH was a part of the Ottoman Empire. As such, it was the border between the Christian and the Muslim world, a place of wars, but also, as has always been the case, a place for trading and communication.

After World War II it became the border between the former republics of Yugoslavia. Once the republics proclaimed their independence from Yugoslavia, Croatia in 1991, BiH in 1992 it became the state border between Croatia and BiH.

For the two areas along the Una River in BiH, the splitting of Yugoslavia in 1991 once again made the river banks a state border, thus disabling the free movement of people and goods. This continues to cause problems for the local population along the river. Very often, farmers living on one side of the river have a significant part of their cultivated land on the other side. They can only reach their land by crossing the border illegally in some convenient places, since the regular border crossings are relatively far. The Plitvice Lakes NP area is less affected by the border issues, since it is not situated directly on the border.

The border can be crossed only at an international check point on the road, while the remainder is guarded against illegal crossings by regular patrol teams from both countries. However, there are no particular physical artefacts pointing to the presence of a state border that would limit the movement of people and wildlife across the state border.

There is no visa regime and no legal obstacles that limit the movement of people between Croatia and Bosnia and Herzegovina. As for health and veterinary regulations, there are no special rules for the neighbouring border-crossings. However, general rules for the transport of domestic animals between the two countries are in place and are aligned with the relevant EU policies. Therefore, there are three different inspections present at the border (phytosanitary, veterinary and sanitary).

The State Border Police of the Ministry of Interior of the Republic of Croatia and Border Police of the Ministry of Security of Bosnia and Herzegovina are responsible for border area control and patrolling.

Socioeconomic context

Demography

The entire area has been experiencing continuous depopulation since the end of 19th century, and the war in the 1990s intensified this process.

For the Plitvice Lakes area (2001 census), the population of the settlements entirely or partially located within the national park boundaries was approximately 1,300, while in 1991 this figure was 2,238. This decline in population was largely a consequence of wartime events (Plitvice Lake NP Management Plan, 2007).
There are 21 settlements in the area surrounding the Plitvice Lakes, which are entirely or partially located in two municipalities - Plitvička Jezera and Saborsko. The settlements are scattered, consisting of several smaller mutually remote hamlets that are characteristic of mountain areas. The main settlements within the national park are Plitvička Jezera with the hamlets Mukinje, Jezerce, Plitvica, Poljanak, Rastovača, Babin Potok and a series of other villages and hamlets on the park periphery. Plitvički Ljeskovac and Bijela Rijeka are located at the very source area of the Plitvice Lakes. Agricultural areas are abandoned due to continuous depopulation and the fact that tourism infrastructure employs the majority of the local population. There are 1,300 inhabitants of the Plitvice Lakes Municipality, of whom 1,000 work permanently or temporarily (during the season) in the park (Plitvice Lakes NP management plan, 2007).

The communities around Plitvice Lakes NP have a higher standard of living than in the region adjacent to the BiH border (along the Una River on the Croatian side). In comparison, this region is poor, with high unemployment and the entire region is currently classified as an Area of Special State Concern, and lags behind the national average in economic, social, and demographic development.

Today on the BiH side of the Una region, there is a total population of approximately 4,300, including Martin Brod (pop. 500), Kulen Vakuf (pop. 1000), and Orašac (pop. 2,800). On the entire territory of some 350 km², this makes an average population density of 12 inhabitants/km². The unemployment rate in Bihać municipality is about 45%, while in the Una NP region it is about 65%.

The demographic structure of the area in general shows a high percentage of elderly people. The active younger population has left the area in pursuit of better economic prospects. Today’s population represents approximately 60% of the pre-war population in the area, with the departure of a significant portion of the labour active population, due to the lack of work opportunities in the region.

2. Data taken from the development strategies of the municipality of Bihać and cited by interviewed officials in 2009.
Land use, urbanization and economic development trends

In the area around Plitvice Lakes National Park, the local population is traditionally engaged in farming, agriculture, milling and forestry. Two villages with extensive agriculture and farming activities—Plitvički Ljeskovac and Bijela Rijeka—are located at the very source area of the Plitvice Lakes. Since the establishment of the national park, almost all commercial activities in the park territory have been banned (Plitvice Lakes NP Management Plan, 2007).

Currently, the local population benefits from the park mainly in terms of employment (the park ensures an income for 750 employees, reaching up to 1,000 employees during the high season, and around 3,000 family members).

Farming, fishery and traditional crafts, in addition to catering, tourism and recreational activities, are permitted pursuant to the Nature Protection Act (Article 11). This means that the local population is allowed to use the land in a traditional way, for example for mowing and cattle grazing.

Tourism infrastructure within Plitvice Lakes National Park is well developed. There is a hotel and a campsite owned by the park. Private houses also offer accommodation and have much greater capacity than the park itself.

There are no major agriculture activities on either side of the state border and agriculture is generally of low intensity. There is some cattle-farming in the area. Economic activities on the Croatian side consist mainly of tourism and jobs at the park. As a whole, Lika-Šenj County is underdeveloped compared to the rest of Croatia and the Municipality of Plitvička Jezera is categorised as an Area of Special State Concern, as it lags behind in economic, social, and demographic development.

There is a low intensity of hunting and fishing tourism in the area and all activities are carried out outside the national park. Fishing is forbidden within the park. As for medicinal herb or berry picking, there are no significant activities within the park.

For the region on both sides of the Una River, the situation concerning economic development is almost the same. The major sectors are: extensive agriculture, some animal husbandry (dairy cows on the BiH side, sheep on the HR side), some vegetables, orchards, fish farms (Martin Brod in BiH and Suvaja in HR) and forestry.

On both sides of the border, there are great expectations from tourism to create a market for local agricultural production focusing on premium price organically produced traditional products as well as souvenirs, and in general to serve as a significant multiplier for the local economy.

Currently, the only relatively developed types of tourism are fly-fishing opportunities on the Una River (Kulen Vakuf and Martin Brod which hosted the European championship in 2010), and rafting on the Una River (approx. 14,000 visitors per year).

On the BiH side, there are two hotels (Martin Brod and Bastasi – total capacity of 39 beds), three pensions (Kulen Vakuf – 52 beds in total), private accommodation (Martin Brod and Kulen Vakuf – total of 35 beds), eight restaurants that also offer some accommodation as an additional activity, four camps (three in Bihać and one in Kulen Vakuf), and five tourist agencies offering rafting, kayaking, canoeing, and fly-fishing on the Una River. The surrounding area, i.e. the cities of Bihać, Petrovac and Drvar, offer 500 hotel beds and some 750 beds in camps. The tourism infrastructure is more developed on the BiH side of the Una River, as opposed to the Croatian side of the river, where tourism infrastructure is virtually non-existent.
(Plitvice Lakes NP with its highly developed tourist infrastructure is further away).

Other sectors of the local economy are a gypsum mine near Kulen Vakuf, a water bottling plant in Kulen Vakuf, a fish-farm in Martin Brod, and wood processing facilities in Ćukovi.

The conflicts in the 1990s had a great impact on all three areas in focus. All were faced with hard post-war transition challenges. Today, the socioeconomic situation of the regions differs significantly.

Even before the war, the economic activities in the Plitvice Lakes area were very much focused on tourism in the national park. Due to the natural attractions and fame of Plitvice Lakes NP, the tourism industry recovered quickly and the area is now the most recovered and fastest developing among the three.

Before the war, other areas around the Una River based their development on forestry, agriculture and the food and wood processing industries, all of which collapsed during the war and post-war period and still show no signs of recovery. Therefore, the BiH side expects the new Una National Park to become a regional attraction. Similar to the Plitvice Lakes area, income from tourism is seen as the only economic perspective.
Transport infrastructure

The state road D1 Plitvička Jezera – Korenica – Udbina – Gračac (direction N-S) passes through Plitvice Lakes National Park. This was formerly the main route to the major tourism destination, the Dalmatian coast, before the motorway was built. Another state road D52 Plitvička Jezera – Vrhovine Otočac (direction E-W) also passes through the park with two road extensions – D504 Plitvička Jezera – Prijepolje – Ličko Petrovo Selo and D217 Rakovica – Ličko Petrovo Selo – state border crossing with BiH (Izačić).

Public traffic along these transport corridors is heavy, especially for transportation of gasoline for the area around Bihać in BiH, which originates primarily from the Rijeka terminal, but also from Karlovac (both in Croatia). The City of Bihać is the capital of the Una-Sana Canton and the Bihać municipality.

The areas in both Croatia and BiH are well connected by the road D217 (Rakovica – Ličko Petrovo Selo), where the international state border crossing point Izačić is situated. It holds international status and is not restricted to serving only the citizens of the two neighbouring countries.

The Una River region in BiH is a sparsely populated rural area, relatively isolated because of the underdeveloped transport infrastructure. The major barrier for movement is the inadequate number of border crossing check points in this area. The distance between the two existing border crossings (Užljebici and Strmica) is approximately 110 km.

There are several roads (Boričevac in RH – Kulen Vakuf in BiH; and Doljani in RH – Martin Brod in BiH) where the traffic is relatively low, despite the two official border crossings. Izačić on the north, near Plitvice Lakes, and Aržano on the south are the more often used alternatives. The famous Una railroad roughly follows the course of the Una River, and crosses the state border a number of times.

State of the environment and threats

The general condition of the environment is at a relatively satisfactory level, in the sense that the state of the environment has not been altered in any major way within the study area. The area has no wastewater collection and purification infrastructure (except for Plitvice Lakes NP). This is largely due to the sparse and relatively small total population. The collapse of pre-war industry such as the cellulose factory in Drvar, and the lag of new industries in the area, the absence of any major polluting sources is the main reason for the good environmental quality.

Monitoring the water quality of the Una River shows that it meets category II criteria, with significant deterioration downstream of the larger villages, especially downstream of the inflow of the Orašac tributary, which carries the wastewater from the Orašac and Ćukovi villages. The best water quality of the Una River is upstream of Martin Brod, while the
Unac River upstream of Martin Brod is already polluted by wastewater from Drvar.

Plitvice Lakes National Park

The majority of tourism infrastructure is in the vicinity of Kozjak Lake, including three hotels built about 50 years ago. The sewage system was constructed without considering the protection of the lakes. The park area and the municipalities of Rakovica and Plitvička Jezera are supplied with potable water from Kozjak Lake.

The large number of visitors may pose a problem to species living in the park, especially those inside the lake zone where tourists’ concentration is greatest. One example is the Eurasian otter (Lutra lutra). This mammal requires at least half of the water banks without the disturbance of visitors. Visits to forests and other areas also require certain restrictions and control.

One of the case studies of the EU Framework Programme 5 “Study of Anthropogenic Pollution after the War and Establishing of Measures for Protection of the Plitvice Lakes National Park and the Bihać Region at the Border Area of Croatia and Bosnia-Herzegovina” (European Commission 2005) was directed at investigating the human effects of the Plitvice Lakes National Park area. The conclusion has shown that the concentrations of trace elements and organic substances were mainly of natural origin. This allayed the park administration and local authorities concerns about the negative impact of tourism activities and heavy traffic. The only pollutants detected were detergent-derived chemicals, which are believed to have been caused by the defects in the sewerage system of the hotels situated above Kozjak Lake in recent decades. The entire system was later repaired and new measurements of the uppermost sediment layer need to be conducted in order to estimate if these measures have helped to reduce the detergent-derived chemicals level.

Forest management: There is forest cutting on private land within Plitvice Lakes National Park. However, this has not been a significant issue, since all forest cutting on private land is regulated.

Invasive alien species: Plitvice Lakes National Park has problems with chub and char, and the result has been the decline of trout stock to very low levels. The solution would be to eliminate chub from the rivers and streams. Bark beetle does not represent a significant problem, as only 102 of 29,685 hectares are threatened by it and its population is monitored.

Water management: Plitvice Lakes National Park has a significant issue with the potential overuse of spring water, especially during the tourist season, though an EU funded project starting soon is expected to resolve the issue of water consumption from Kozjak Lake. Water supply will be provided for Ličke Jasenice, though the issue of water supply to Korenica and some other villages still remains.

Wastewater management: Plitvice Lakes National Park has problems with septic tanks at the water source. A growing problem occurs especially at Plitvički Ljeskovac, a village at the source of Crna and Bijela Rijeka (Black and White Rivers). The few households standing at the water source are expected to be relocated. Although the settlements around the national park have sewage systems, discharging of wastewaters into the rivers is still a problem. Measurements have confirmed that the polluted water flows towards Bihać in BiH, though the
Water is purified along the way and is already purified by the time it reaches Bihać. The sewage network has been constructed up to the village Rastovača, where a clarifier thickener is located. Wastewater is currently emitted into a karst sinkhole, though project documentation has been developed to build a wastewater treatment plant at this location, and this issue is expected to be resolved in the near future. Nevertheless, the sewage network of municipalities Rakovica and Plitvička Jezera still needs to be designed.

Tourism: The lake zone open to visitors is a recreation and tourism infrastructure zone. It is the most attractive area of Plitvice Lakes National Park, where tour programmes and therefore the largest number of visitors concentrate. In order to preserve the ecological balance and avoid possible negative consequences on the sensitive ecosystem of the lakes and the natural process of tufa formation, and also to ensure quality tourist experiences in this part of the park, development of a study on the capacity of the lake system for visitors is planned for the near future. This will define the optimum number of visitors in this zone and serve as a basis for developing sustainable tourism services and amenities.

Transport: An important issue in Plitvice Lakes National Park is the previously mentioned road Rijeka-Bihać. This road is an “oil trail” and passes straight through the water source area of the national park, and is used for public traffic, especially the transportation of oil and fuel for the area around Bihać in Bosnia and Herzegovina. This problem has been partially resolved by escorting cisterns through Karlovac, while other cisterns and all trailer trucks still pass through the water source area of the national park.

Eutrophication: Increased amounts of dissolved organic matter impede tufa formation in the Plitvice Lakes. The lakes are exposed to the natural process of eutrophication (enrichment of water with nutrients) or “lake-aging,” which has accelerated as a result of human activity (agriculture, animal husbandry, tourism, wastewater). The eutrophication of Plitvice Lakes induces the growth of macrovegetation, which in turn decreases water circulation, adds to the accumulation of organic material, slows tufa formation and can even jeopardize the statics of the tufa formed barriers by its weight, threatening them with collapse.

Vegetation succession: Vegetation stages maintained by human intervention are very endangered in the park. The low level or absence of traditional land uses such as mowing and grazing of meadows leads to overgrowth by bushes and later by trees, and thus the grassland associated biodiversity in the park’s territory is being lost. Based on a rough estimate, 70% of the park’s biodiversity is tied to non-forest habitats, primarily to such grass-covered surfaces.

To ensure preservation of the park’s landscape diversity and its abundance of plant species, all existing forms of grasslands/meadows must be maintained to prevent the growth of tree-like and bush species. There are large grassland areas in the park, such as Homoljačko Field (1080 ha), Brezovačko Field (960 ha), Karleušine Plase (80 ha), and so forth. If the overgrowth process of grassy surfaces is not halted, the number of plant species will decline, and the appearance of the landscape will be altered. The colour and diversity of grassy surfaces will thus not come to their full beauty.

Habitat management: Subterranean habitats in the park are threatened by uncontrolled visits by tourists, illegal waste dumping, and the related seepage of waters which may be polluted. Such waters also
threaten subterranean aquatic fauna, while subterranean fauna in general (especially the endemic insect, *Machaerites udrzali*) are threatened by illegal collection.

**Land mines:** Land mines pose a threat, but only outside Plitvice Lakes National Park (all land mines have been cleared within the park boundaries). However, there still remain areas close to the border that are polluted by land mines (Plitvice NP Management Plan, 2007).

The war left no particular damage on the environment of the Plitvice Lakes NP region, as the area was secured by the Czech battalion of the UN Protection Forces (UNPROFOR), stationed at the Plitvice Lakes, during the temporary occupation.

**Una National Park:**

Actual threats within the park boundaries include:

- untreated communal wastewater—the settlements of Drvar, Martin Brod, Kulen Vakuf dispose their wastewater directly into the Una River or its tributary. As previously demonstrated, pollution from the towns of Udbina and Korenica, settlements on the Croatian side, appears at the spring of the Una River tributary Klokot, which supplies drinking water for the Bihać area;

- communal solid waste disposal in nature or on *ad hoc* formed dumpsites;

- devastation of the landscape by illegal building/development and poorly prepared physical plans;

- destruction of travertine barriers and valuable habitats by inadequately regulated tourist activities;

- overfishing of fish stocks as a consequence of non-existing fishing plan and appropriate enforcement.

Another threat to the region is a prospected dam (137 m) for a hydropower plant on the Unac river upstream of Martin Brod. This plan from the Ministry of Energy would contradict the vision and objectives of the declared national park Una. Until now the opposing views of the ministries of energy and physical planning and environment have not achieved a consensus.

The EU Framework Programme 5 (European Commission 2005) stated threats of invasive allochthonous species for the Una River system in the Bihać region. However, little data are available, as the entire area has yet not been properly surveyed.

The area of the former military base and Željava airport, situated at the state border between Croatia and BiH, is contaminated by PCBs (airport tunnels lying under Lička Plješivica mountain) and land mines. Land mine pollution is also a problem for some areas close to the state border and some areas within Una National Park, and these have been declared a priority area for mine clearing programmes. To summarize, the environment in the entire transboundary area has not faced any great threats and has not experienced ecological disaster of any kind.

4. Polychlorinated biphenyl.
Tourism as the local economy sector depending on natural assets of the region

Gustav Janeček was the initiator of the Society for the Arrangement and Embellishment of the Plitvice Lakes (Društvo za uređenje i poljepšanje Plitvičkih jezera), founded in 1893. The Society’s goals were to conduct research and development of the Plitvice Lakes and to develop tourism. Thanks to Janeček, the first tourism trails were marked, the first hotels and resorts built, and systematic tourist marketing started.

The first legal protection of the Plitvice Lakes was realized for a short period in 1928/29 under the Financial Code of the time. Due to administrative issues, this protection lasted only two years. Only after World War II were the Plitvice Lakes assigned permanent protection. Based on the 1948 Regulation on the management of national parks, in April 1949 the Parliament of the then National Republic of Croatia adopted an Act declaring the Plitvice Lakes a national park as an area of a special natural beauty. Since then, certain amendments have been made. Tourism development has always been intertwined with the intention of placing the area under special protection regime.

The story of the establishment of Una National Park is more recent. Symposia on physical planning, wastewater treatment technologies and protection of the Una, Sana and Korana Rivers were held in the mid-1980s. In 1991, the symposium “Value of the natural and cultural heritage of the Una River basin in Bihać” finally triggered the initiative for establishment of Una National Park. Eventually, in 2002 the process of establishing Una NP was initiated, first with the preparation of a feasibility study in 2005, followed by adoption of the Act on the Una NP (2008). The physical plan for Una NP has not yet been established, though its preparation was initiated in 2007.

Plitvice Lakes National Park is considered a great success story judging by the number of visitors to the park. Consequently, local communities have developed both through the provision of park-related jobs and through the provision of tourism-related services.

The possibility of development of sustainable tourism and visitor management was the main reason why nature protection authorities and protected area administrations considered the possibility of establishing transboundary cooperation. Yet, the existing tourism practices have to be assessed against the pressure posed on nature and the participation of local communities for Plitvice Lakes NP and Una NP alike.

The EU IPA CBC project proposal “Una – Spring of Life” is a positive example of transboundary cooperation on sustainable tourism. It builds on a successful implementation of the EU CARDS 2004 project “UnAvanTurizam”. “Una – Spring of Life” covers parts of two counties in Croatia (City of Zadar and Municipality of Gračac in Zadar County; Municipality of Donji Lapac in Lika-Senj County) and a part of a canton in Bosnia and Herzegovina (Municipality of Bihać in Una-Sana Canton). As part of this project proposal, building and

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Improvement of tourism infrastructure needed is planned for the development of the joint tourist offer “Una – Spring of Life”. A wooden railway is planned to be constructed along the tourist walkway to the Una Spring. Creation of foot and bicycle paths alongside the Una River and other similar activities have been outlined in the project proposal.

**Sustainable tourism development in the region - conclusions and points for consideration**

Previous cooperation with neighbouring areas is visible from the fact that before the war in the 1990s, Plitvice Lakes National Park filled accommodation capacities in a radius of 60 km from the park, including Bihać in BiH, Otočac, Korenica in Croatia, etc. Nowadays, Una-Sana Canton and the Municipality of Bihać have their information desk at Entrance 1 of the Plitvice Lakes National Park. It is expected that the Plitvice Lakes National Park will also set up an information desk at the entrance to Una National Park once the entrance is opened.

This cooperation can still be improved. The parks could start exchanging visitors through some form of unification of visitor services and accommodation standards. This would facilitate development of joint regional tourist packages and would increase the quality of tourist services. Plitvice Lakes National Park cooperates with approximately 500 domestic and foreign travel agencies and tour operators, and their share in recorded tourist days is 85% of the total number of recorded tourist days. The vast majority of visitors are international (foreign) visitors.

Development of joint tourism product packages would enable greater marketing strengths of the two national parks and attract more tour operators due to the economy of scale and more diverse and wider tourism product package available. Development of a joint booking system for tourism services (e.g. accommodation, transportation, guided excursions, cultural events) would increase the attractiveness of both national parks, since the visitor would be able to visit more than one site on a single trip. Organising joint training for tourist guides and interpreters facilitates experiences and interpretation skills exchange, provides for better knowledge of the region, its natural, historical and cultural heritage, and improves communication and understanding between partners. The joint promotion of tourism and recreational potential, and marketing of visitor services available on each side of the state border increase marketing strength of both national parks and increases incomes of the local tourism service providers and accommodation owners.

It is an opportunity, but also a challenge for Plitvice Lakes National Park, with its long tradition and advantage of experience and knowledge, to cooperate with the newly established Una National Park.

Plitvice Lakes National Park has a very well established park infrastructure and management. It is very well promoted nationally and internationally with an adapted brand, tourist offices and all the necessary tourism facilities. Una National Park, on the other hand, is struggling to establish the basic facilities required for a national park, and is still halfway from completing its management scheme, infrastructure and zoning.

Furthermore, different economic backgrounds place these two parks on completely different stands. Plitvice Lakes National Park generates most of its own income (95.8%) and so far has had a relatively independent position politically. Una NP is completely dependent on government support and foreign donors. Therefore, every decision becomes one of political importance and leaves the management in a dependent and weak position for negotiation.

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5. State budgetary revenues represents only 0.89% of the entire park budget.
agreement on cooperation with Plitvice Lakes National Park could therefore end up being quite unbalanced, with Plitvice Lakes National Park representing a generous donor of knowledge, and Una National Park left in a position of the poor inexperienced partner asking for support.

Generally, it may be difficult to satisfy the expectations for the development of the Una region from tourism alone. As illustrated in the socioeconomic overview of the region, there is no other important industry in the region. Tourism and agriculture are the only existing sources of income in the area. This gives tourism a quasi-monopoly and a difficult position of a “saviour” for the Una region, with the responsibility of attracting as many visitors as possible each year. Thus the view on economic development for the Una area is biased due to the nearby Plitvice Lakes area. To depict this better, here is a quotation from our consultant for BiH, “More or less follow the footprints of the nearby Plitvice area”.

The local population is predestined to cooperate, since tourism cannot be developed by an isolated individual. The Una region has to become a branded tourism destination, which can only be achieved through cooperation with all local stakeholders. It could be difficult to bring everyone on board, as it is likely that not all share the same vision of long-term sustainable rural development based on a combination of organic farming, traditional small scale production of premium price products, and eco-tourism.

Additionally, tourism in this region is almost entirely seasonal. During winter, tourism facilities are almost empty and the number of visitors drops significantly. Therefore, the major portion of revenues must be generated during the few summer months. This adds pressure on the amount of income to be gained during this period to suffice through the winter months.
Legal and administrative framework for protected area designation and management

The Dinaric Arc eco-region can be defined as the bio-geographic crossroad between the Alps, the plains of Central Europe, and the Adriatic Sea. The Dinaric Alpine mountain chain runs parallel to the east coast of the Adriatic Sea from Slovenia to Albania. Some outstanding biological values of this eco-region include:

- one of the richest subterranean fauna, large and well preserved forests with high floral species diversity and a high rate of endemism (10–20% of all plants are endemic);
- largest and most spectacular karst ecosystem in Europe, including an extensive cave system and subterranean network of lakes and rivers with specially adapted life forms;
- representation of healthy populations of large carnivores such as brown bear, lynx, wolf, as well as many birds of prey – a phenomenon now rare in Europe;
- intact freshwater ecosystems – the most water-rich area in Southern Europe and the Mediterranean basin.

Over the millennia, low intensity farming practices have created habitats that integrate forest, pasture and cropland, and provide a home for a unique set of species. These complex mosaics are still present throughout the Dinaric Arc. Despite the conservation importance of the Dinaric Arc, protection of the priority areas in a network of protected areas is far from complete, with particularly serious gaps found in the southern and eastern portions of the region.

The situation of protected areas, both in terms of quantity, protected surface, and management effectiveness, varies substantially among the different countries. As a general rule, Slovenia and Croatia have the most extensive network of protected areas and best management levels, while the network of protected areas is less complete in Serbia, Albania and Montenegro, and even less so in Bosnia and Herzegovina and Kosovo. Existing protected areas often lack management plans, and/or the financial and human resources for effective management. The break-up of the former Yugoslavia also contributed to a fracturing of the conservation planning for the region and laid the ground for the establishment of transboundary protected areas (IUCN, 2008).

Croatia and BiH are both currently aspiring towards membership in the EU. This will lead to better balancing of legislation on nature conservation between the two countries. However, it is important to note that Croatia is ahead of BiH in this process. For Croatia, EU accession could already become a reality in the next few years. On the other hand, BiH remains in a political standoff between its two major entities: the Federation of Bosnia and Herzegovina and the Republika Srpska. All this has put the country in a standstill with political stagnation. Due to the division, the institutional framework and the framework for nature conservation remain relatively complicated. Each unit has its own government and ministries, including the ministry of environment and physical planning, and they all operate at three different levels (municipality, canton and state), often without interaction and legal hierarchy.
Croatia

In Croatia, the Ministry of Culture is the main authority in charge of nature protection, pursuant to the Nature Protection Act adopted in October 2003 and amended in November 2008. The Directorate for Nature Protection of the Ministry represents an administrative unit dealing with nature protection at the state level, and it prescribes nature protection measures and conditions for sectoral cooperation, approves concessions for the economic use of natural resources, maintains a central register of protected areas, and is in charge of implementing international conventions. The Directorate for Nature Protection Inspection of the same Ministry is in charge of inspection and supervision, and the ranger service.

The State Institute for Nature Protection of Croatia is the central institution responsible for specialized nature protection activities in Croatia and represents an expert unit for nature protection in Croatia. It is responsible for collecting and processing data that constitutes the background for nature protection design and planning.

When the State Secretary for Nature Protection of Croatia signed the Big Win commitments for Dinaric Arc at the CBD COP 9 in Bonn, Germany in May 2008, the initiative was also handed down to the regional level. In 2008, the Ministry of Culture sent official letters to the Plitvice Lakes National Park and the State Institute for Nature Protection regarding cooperation on the implementation of CBD PoWPA, which includes the Big Win commitments, and particularly the commitment “Examining possibilities for transboundary cooperation between Plitvice Lakes National Park (Croatia) and Una National Park (Bosnia and Herzegovina)”. The Public Institution of Plitvice Lakes National Park is the management authority of the park. In accordance with the Nature Protection Act (Official Gazette 70/05, 139/08), these public institutions are founded by the Republic of Croatia by virtue of a regulation adopted by the Government of the Republic of Croatia (Article 72). The public institution’s bodies are the Governing Board, Director General and Conservation Manager. The Governing Board makes the key developmental decisions, while the Institution’s operations are organized and administered by the Director General, appointed by the Minister for a four-year mandate. The Conservation Manager oversees the Institution’s conservation operations (conservation service). The Plitvice Lakes National Park Management Plan was adopted in 2007. The Physical Plan of the Plitvice Lakes National Park dates from 1986 and will be replaced by a new one in the near future. Regional authorities responsible for the area where the park is situated are Lika-Senj County and Karlovac County. The local authority in Lika-Senj County is the Municipality of Plitvička jezera, while the local authority in Karlovac County is the Municipality of Saborsko.

The section “Implementing protection in protected areas” in the Nature Protection Act (Articles 69-81) stipulates the main responsibilities of the public institutions/management authorities of protected areas.

The Public Institution of Plitvice Lakes National Park is divided into two services and three sectors which are administered by the Office of the Director General.
The Institution's internal organizational units are:
- Office of the Director General;
- National Park Conservation, Promotion and User Service;
- Joint Operations Service;
- Hotels and Hospitality Sector;
- Maintenance and Utilities Sector;
- Retail Outlets Sector.

Within these departments, the park currently employs 730 persons, of which approximately 130 perform conservation related jobs. A small number of the park’s activities are financed from the State Budget, while the rest is financed by the park’s own revenues.9

Bosnia and Herzegovina

In Bosnia and Herzegovina, there is no state level ministry in charge of environmental issues. This represents a general obstacle to all processes of implementation of international conventions such as the CBD. The government and parliament of the Federation of Bosnia and Herzegovina is the highest authority in charge of the management, including sustainable development, and conservation of this area.

Una National Park was proclaimed by the Parliament of the Federation BiH and the Act on Una National Park was passed on 29 May 2008. By virtue of this decree, the Public Institution of Una NP was established and will operationally manage the area, in accordance with the Act on Una National Park and the Management Plan for Una NP.

The establishment of the institution was still underway at the time of the preparation of this assessment, and at the phase of appointing the Institution’s director. The 10-year management plan is yet to be adopted by the FBiH Government, while the Annual Program for the Public Institution will be approved by the FBiH Ministry of Environment and Tourism.

The Una-Sana Canton, and the settlements in the area, the largest being the City of Bihać, are very interested in the protection of the area and its expected associated benefits for the sustainable local and regional development, and as such they participate in the governance of the area as very important stakeholders.

9. The current organizational structure of Plitvice Lakes National Park can be found in the National Park Plitvice Lakes Management Plan (page 21, Figure 3)
Comparison of protected area networks in the two neighbouring countries

Both countries are parties to the Convention on Biological Diversity (CBD) and the UNESCO World Heritage Convention. Furthermore, both countries are involved in the integrated river basin management project for the Sava River. This project aimed at identifying wetlands in Posavina to be introduced in a network of protected areas.

As stated above, Croatia is currently in the accession phase to EU membership and BiH is on the European Commission list for potential candidates (European Commission, 2009). This process includes important efforts to align the national nature protection legislation with EU standards. After becoming a member of the European Community, both countries would have to identify, propose and establish a network of Special Protected Areas and propose Special Areas for Conservation that will form the NATURA 2000 network.

There are important differences in nature legislation between Croatia and BiH. In Croatia, protected areas represent 7.95% of the national territory, including the sea (or 11.37% of the continental part of Croatia and 0.22% of maritime part of Croatia; May 2010). On the other hand, protected areas in BiH represent only 0.9% of the national area (this was only 0.6% prior to the establishment of Una National Park in May 2008).

In 2009, the protected area network in BiH encompassed almost 50,567 ha and included three national parks: Kozara (3,375 hectares), Sutjeska (17,250 hectares) and Una (19,800 hectares); two nature parks: Blidinje and Hutovo Blato (one of the three Ramsar sites in BiH, alongside Barača and Livansko Polje); five strict nature reserves, three managed nature reserves, 29 special reserves (6 geological, 22 botanical and 1 ornithological), 16 nature landscape reserves, a larger number of natural monuments and seven memorial monuments. It has to be noted that the protected area categories listed above are occasionally overlapping, e.g. the Peručica Strict Nature Reserve is located within the border of Sutjeska National Park (Niewiadomski, 2009:45).

Bosnia and Herzegovina (BiH) completed drafting its National Environmental Action Plan (NEAP) in 2006 and identified sites relevant for the Emerald Network (November 2006). The country is further committed to developing the list and GIS database of natural habitat types and supports the process of preparation of the Red Lists of species (CBD, 2009).

For the Republic of Croatia, the Registry of protected natural values at the Ministry of Culture of the Republic of Croatia (as of 14 May 2010) lists a total of 461 high nature value areas in Croatia, protected in nine categories. The largest portion of the territory is protected in the nature park or national park categories. There are two strict reserves, eight national parks and eleven nature parks already protected. Several areas are in the process of designation in other categories. As of May 2010, 12 areas in Croatia were under preventive protection, two of which as regional parks, one special reserve, five protected landscapes, two nature monuments and two park forests. Certain areas in Croatia enjoy international legal protection. The Plitvice Lakes National Park is listed on the UNESCO World Natural Heritage List. The Ramsar List of Wetlands of International Importance lists the Kopački Rit and Lonjsko Polje Nature Parks, the Crna Mlaka fishponds special ornithological reserve and lower course of the Neretva River as internationally important wetland areas. Velebit Mountain forms a part of the UNESCO World Network of Biosphere Reserves under the Man and Biosphere Programme. In 2007, Papuk Nature Park became a member of the UNESCO Global Network of National Geoparks as a European Geopark (State Institute for Nature Protection, 2007b).
The proposal of the Croatian National Ecological Network (CRO-NEN) was completed in 2005, thereby forming the basis for the Ordinance on the National Ecological Network adopted by the Croatian Government pursuant to the Nature Protection Act in September 2009. The designation of the National Ecological Network was the first step towards preparation for the NATURA 2000 proposal as part of Croatia’s accession process to the European Union. The National Ecological Network is defined under the Nature Protection Act (Official Gazette 70/05 and 139/08) pursuant to the EU Habitats Directive and NATURA 2000 habitats types (State Institute for Nature Protection, 2007b). The EU PHARE NATURA 2000 project has further assisted Croatia in preparing its NATURA 2000 proposal, and a new IPA project has started and will assist in preparation of the marine part of NATURA 2000 proposal.

**Brief overview of the natural values of the region**

The Dinaric Alps have a variety of Mediterranean, continental and alpine species and habitats. The main reason for the placement of both areas, Plitvice Lakes National Park and Una National Park, under protection is the specific geological and hydrological karst phenomenon. The basic feature in the Plitvice Lakes NP is a chain of lakes connected by waterfalls, created by the biodynamic process of tufa development. Placed within the forested karst landscape, the sixteen larger and smaller lakes are interconnected by cascades and waterfalls. In the continuous process of tufa deposition, certain plants (algae and mosses play a significant role) cause the barriers between the lakes to grow and form new waterfalls and cascades.

Furthermore, Plitvice Lakes National Park includes a virgin forest, Čorkova Uvala, and the largest peat surface in Croatia in the Matica Valley (Ljeskovačke Bare). So far, 114 speleological sites have been identified in the park. This number also includes sites in peripheral areas, to approximately 500 m outside of the official boundaries.

According to the habitat map, and in compliance with level III of the National Habitat Classification, there are 43 different habitat types within the boundaries of Plitvice Lakes National Park, and of these, 21 belong to the categories of endangered and rare. The most common among the endangered and rare categories in the national park are beech forest with giant dead nettle trees and the Dinaric beech/fir forest.

The interplay between geographical position, horizontal and vertical stratification and geological and pedological particularities creates a rich and diverse flora in the park, with many rare, endemic and endangered species. To date 1,448 plant taxa have been recorded, including some 50 orchid species, many of which are endemic. For some species, such as the Siberian rayflower (*Ligularia sibirica*), this is the only known locality in Croatia. A rare and interesting plant is a species of hawksbeard (*Crepis conyzifolia*) that forms the special grassland association *Crepido conyzifolii-Molinietum altissimae* (Šegulja, 1992). There are only two known locations of this association in Croatia recorded in the literature.

The park fauna is also rich and diverse. There are records of four large carnivores in the park: brown bear, lynx, wolf and wild cat. Additionally, Plitvice Lakes National Park is the only national park in Croatia where the Italian crested newt (*Triturus carnifex*), Alpine salamander (*Salamandra atra*), Harvest mouse (*Micromys minutus*), Striped field mouse (*Apodemus agrarius*) and Whiskered bat (*Myotis alcathoe*) can be found. The record of the Whiskered bat is the first and the only one in Croatia so far.
Una National Park has equally unique phenomena of karst bio-, hydro- and geomorphology. As in the case of Plitvice Lakes NP, this is a sensitive biodynamic system of plants, algae and mosses forming various travertine shapes and barriers creating “micro” lakes, caves, islands, and waterfalls along the course.

The landscape is very attractive due to a number of scenic valleys (Martin Brod, Kulis Vakuf, Klisa, Lohovo) and deep canyon sections with steep sides and cliffs. The Unac River, the main tributary to the Una River, is hydrogeomorphologically unique, since it submerges several times along its course, and ultimately springs from the Black Spring upstream of Martin Brod.

There is important diversity of the watercourse, from a karst spring, faster and slower sections of the river stream and flooded meadows, and terrestrial diversity of the habitats in a landscape of cliffs, virgin forests, anthropogenic grasslands meadows and/or pastures. The area is the meeting place of three different climatic zones: Mediterranean, continental and alpine, which results in relatively high humidity. All these features, i.e. karst, geomorphologic characteristics, geological history, mosaic of habitats, and the biogeographic position makes this a zone of an exceptional diversity of flora and fauna with many endemic species. Many of these species are found within the cliff fissures, but also in the anthropogenic grasslands. Wetlands associated with river streams are especially endangered and therefore valuable habitat. There is a great diversity of invertebrate fauna (comparable to Plitvice Lakes NP), with 215 species confirmed and up to 250 (including unconfirmed species) of vertebrate fauna species including rich ornithofauna as a consequence of the great habitat diversity, 15 freshwater fish species including local endemics, 12 amphibian species, 15 reptile species and 70 mammal species.

The area is sparsely populated, with poorly accessible subareas of preserved wilderness, where all of Europe’s top predators are found. Furthermore, the area is one of significant biodiversity, in terms of the total number of species, number of endangered species and the number of endemic and relict species.

For both Plitvice Lakes National Park and Una National Park, water is the central element. Even though water surfaces make up only 0.74% of the territory of the Plitvice Lakes National Park, water represents its most important value. It is present in each and every postcard of the Plitvice Lakes National Park and in its name. The same is true for Una National Park. The park was named after the river that flows through it. This makes the river its central element and the focus of protection.
Protected areas in the transboundary area

Plitvice Lakes National Park on the Croatian side and Una National Park on the Bosnia and Herzegovina side are not the only officially designated protected zones within the cross-border area.

On the Croatian side there are also the following smaller protected areas:
- Javornik - Tisov vrh peak (special reserve);
- Velika Plješivica - Drenovača (special reserve);
- Bijeli River tributary - Kamensko (protected landscape);
- Una spring (nature monument).

Plitvice Lakes National Park

The park is located in two counties, with 91% of the park located in Lika-Senj County, and 7% in Karlovac County.

The Plitvice Lakes have been under protection since 1949. Therefore, Plitvice Lakes National Park has over 60 years of experience and, in several aspects, it represents the older and more experienced “brother” in this transboundary relationship. Today, the total surface of the Plitvice Lakes is over 29,685.15 hectares, after a spatial extension in 1997 to also include the drainage basin. Plitvice Lakes National Park was registered on the UNESCO World Heritage List in 1979, and is also a member of the Natural Parks Federation and the European Parks of Nature.

Una National Park

Una National Park was recently established, and has been officially in existence since 29 May 2008. However, some general establishment procedures are yet to be finalized. Una National Park expands over 19,800 hectares in Bosnia and Herzegovina, while the physical plan for the area, currently under preparation, proposes extension of the area to a total of 34,700 hectares, which is a requirement for an effective management of the area.

Strategic point for consideration - connectivity and continuity of protected area network

There is currently no jointly elaborated and adopted planning document or strategy for cooperation between the two national parks. The cooperation between Plitvice Lakes National Park and Una National Park is not formalised and there is no common funding or communication strategy.

For the elaboration of a mid-term plan of transboundary cooperation, the upcoming EU IPA CBC project “Una – Spring of Life” could present a unique opportunity. The project proposal includes the preparation of the “Strategy for development of tourism in cross-border region of the upper course of the Una River”. It could also include other sectors beside tourism. The momentum and established structures from the earlier successful joint EU CARDS 2004 project “UnAvanTurizam” can be built upon. Further, the project partners have gained experience in another EU CARDS 2004 project, “Promoting conservation of border river ecosystems and sustainable use of resources in border area of Croatia and Bosnia and Herzegovina”. In the course of that project, activities led to the proposal of an Action Plan for conservation of the upper course of the Una River.

Administration

Plitvice Lakes National Park currently has much greater capacities in all sectors compared to Una National Park, owing to the fact that Una National Park was only recently established. Both partners stated their willingness to allocate staff time, facilities and equipment for developing transboundary cooperation.
Needs for mutual assistance in operational and/or technical capacity building were identified, though not specifically in relation to the transboundary cooperation initiative. There is not much experience in either of the two countries with the following issues:

- development of a carrying capacity study (visitor management);
- economic evaluation of protected areas and benefit sharing mechanisms (including tourism, incentives, and other economic opportunities);
- sustainable financial management of protected areas (including private sector fundraising);
- transboundary protected area management.

The needs of Una National Park have been defined in the EU IPA CBC project proposal, including the component of capacity building, in particular “Strengthened human capacities in tourism services in cross-border region and increased awareness of conditions for living and working in or near protected natural values”.

Due to the specific situation of Plitvice Lakes National Park, it is expected that it will provide its expertise, know-how and capacity to assist Una NP in its development. The Action Plans on specific priorities within the Plitvice Lakes NP Management Plan, adopted prior to the establishment of Una NP in 2008, do not list enlargement or support to the Una region in the actions planned for the period 2008–2017. However, the revision of the Plitvice Lakes NP Management Plan in 2012 could present an opportunity to include cooperation with Una NP.

For the time being, there are gaps between expectations on one side and concrete, funded and planned actions on the other.

**Funding and coordination**

A common governing structure and regional funds for transboundary cooperation are, at the moment, neither an issue nor an area of interest on either side. Because a spatial connection between the two areas is not sought after, there is no interest in the establishment of a common governing structure for the area. Therefore, funds directed at visible, concrete outcomes are more welcome than a permanently installed regional trust fund with a bureaucratic system that wastes resources without visible benefits for the general community. Further, neither in Bosnia and Herzegovina nor in Croatia is there much experience with this kind of a fund. Croatia's interest in such a fund is at an even lower level, because they expect that its contribution would not meet the expected advantages.

Furthermore, there is currently no legal or contractual basis allowing the establishment of a common ‘governing body’ that would have a mutually approved mandate to coordinate transboundary cooperation. First and foremost, national and regional authorities need to provide an enabling environment for transboundary cooperation, which would mainly include political will and legislative support.

It could be estimated that more formal and regular coordination (as ad hoc coordination and cooperation already exist) will be achieved once the initiative related to the area’s protection and sustainable development becomes stronger. An additional contributing factor to the enhancement of coordination could be seen in the fact that both countries are aspiring to EU accession, and these two areas might become parts of the same NATURA 2000 site. There is also apparent willingness to cooperate demonstrated by both sides.

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11. A bilateral BiH-RH committee for management of common river basins exists.
A common governing structure could be established on BiH side, affiliated to the future Public Enterprise of Una NP. On the Croatian side, an affiliation of the regional and local authorities could be established, and include the counties, regional development agencies, local municipalities and county protected area management institutes. It is, however, difficult to find support for this initiative, since there is no existing trust fund of this kind in Croatia.

The current economic crisis and budgetary restraints will slow the dynamics of cooperation development. However, the protection and sustainable development based on the unique natural value and attractiveness of the Una area is perceived to be a major opportunity for development, both in this rural area and the broader region. It can, therefore, count on long-term support and commitment from all levels of authority.

Different funding sources could be available for supporting common activities to be undertaken in the course of the planned transboundary cooperation. Some of these are:

- EU IPA, with the following components:
  - Transition Assistance and Institution Building,
  - Cross-Border Cooperation (with EU Member States and other countries eligible for IPA),
  - Regional Development (transport, environment and economic development),
  - Human Resources Development (strengthening human capital and combating exclusion),
  - Rural Development;
- EU Structural Funds and Cohesion Fund;
- State Budget (Ministry of Culture, Ministry of Tourism, Ministry of Regional Development, Forestry and Water Management in Croatia);
- Environmental Protection and Energy Efficiency Fund (Croatia);
- Other projects (national, funded by the Ministry of Culture and the Government Office for Cooperation with NGOs (for Croatia), and international, such as GEF, UN bodies, World Bank, etc.);
- Private donations and sponsorships.

The state budgets of Croatia and Bosnia and Herzegovina contain budget items for monitoring and co-financing EU projects. Co-financing of non-EU projects is also supported by the State Budget. Budgets of regional authorities (counties) and local authorities (municipalities and towns) in Croatia also contain line items for monitoring and co-financing EU projects. Co-financing of non-EU projects is also supported by regional and local budgets, and the budgets of the management authority of a particular protected area.

The private sector in Croatia would potentially be interested in co-financing transboundary cooperation, as most of the private businesses in the Plitvice Lakes National Park region rely on the park for their activities (tourism: travel agencies, accommodation, restaurants, etc.) and would benefit from transboundary cooperation. Private businesses in Bosnia and Herzegovina would also be willing to follow the common initiative, especially if some sources of financing were made available (e.g. grants for pilot projects and/or loans with lower interest rates), as envisaged by the Act on Una NP12. Plitvice Lakes National Park could allocate funds for transboundary cooperation as long as activities are planned in advance in accordance with the annual budget.

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12. Article 11: support for activities in line with Una NP objectives including organic agriculture; traditional craftsmanship; ecological, nature-based and biodiversity friendly rural tourism; revitalization of cultivated rural landscapes.
The willingness of regional (counties in Croatia; cantons in BiH) and local (municipalities and towns of both countries) authorities to co-finance common activities related to protection and sustainable development within the area was already demonstrated with their joint applications for EU pre-accession funds and two EU CARDS 2004 projects which have already been successfully implemented (“UnAvanTurizam” and “Promoting conservation of border river ecosystems and sustainable use of resources in border area of Croatia and Bosnia and Herzegovina”). The EU IPA CBC project proposal “Una – Spring of Life” was submitted for approval in October 2009. There are also ongoing discussions regarding other joint project proposals, all of which present a diverse set of examples of common transboundary fundraising initiatives in the region.

Communication

The above mentioned projects are the best demonstration that direct personal contacts have been established between the partners on each side of the state border. There is communication at the State level and also an exchange at the local level between Plitvice Lakes National Park and the Una-Sana Canton and the Municipality of Bihać. The fact that the cooperating partners completely understand each other’s language and the local dialect is understood on both sides of the state border greatly facilitates cooperation. Scientific and technical terminologies used in the two countries are similar and compatible, apart from some minor differences.

There are several regional cultural and social events that bring together stakeholders from different parts of the region and could be used to communicate and promote transboundary cooperation:
- EKOBIS Fair in Bihać;
- Gacka Days in Otočac;
- Autumn in Lika in Gospić;
- Una Regatta on the Una River

Other cultural and social events include sport events and competitions (fishing, cycling, rafting, etc.), celebrations of important dates, volunteer camps, workshops which are part of existing projects currently taking place in the area, special events dedicated to nature and/or environmental protection (e.g. UN Biodiversity Day on 22 May; Una River Day on 17 May, etc.).

There are possibilities for the establishment of a common visitor information centre or facility in the future.

The projects carried out to date and the planned future projects all contribute to facilitating active communication and information exchange through their activities (visibility events, workshops, volunteer camps, etc.).

A problem that remains to be solved is the lack of official border crossings in the area surrounding Una National Park. Their establishment has been emphasized by partners from both sides of the border as the highest priority for further regional development.

To conclude, there is two-way communication between the areas, though at the moment there is no intention to coordinate a joint communication strategy.

Legal foundations

In Croatia, the management authority of Plitvice Lakes National Park would be the main driving force for the establishment of transboundary cooperation. Depending on the category of protection, official recognition would be granted by the Ministry of Culture or regional authorities (counties), which are both responsible for the nature protection system in Croatia.

The decision-makers in Bosnia and Herzegovina are the Government and the Parliament of the Federation of Bosnia and Herzegovina, Federal
Ministry of Environment and Tourism and the Public Enterprise of Una NP, as well as other interested stakeholders, especially at the local level.

In Croatia’s Nature Protection Act (Official Gazette 70/05, 139/08), Articles 21–25 define the procedure for the designation of a protected area in Croatia. A decree issued by the FBiH Parliament would be sufficient to designate a protected area in Bosnia and Herzegovina. In accordance with Art. 11. of the Nature Protection Act (Official Gazette 70/05, 139/08), protected area administration is responsible for land management issues in Croatia. In fact, the only management authority in the Plitvice Lakes National Park is the Public Institution of Plitvice Lakes National Park, since all economic use of natural resources in national parks is prohibited.

Cooperation between the two protected areas exists, though it only represents ad hoc cooperation without a jointly formalized strategy. Therefore, there is currently no governing structure or any form of joint management for a transboundary protected area.
Plans for extension of protected area networks in both neighbouring countries

In Croatia, the Lika-Senj County Physical Plan proposes the proclamation of two nature parks in the vicinity of Plitvice Lakes National Park: Lička Plješivica mountain and the Una River. Also, Zadar County plans to proclaim the area around the upper course of the Una River, located right across the border from Una National Park as protected. This would resolve the need to include the other river bank into the protected area system. These areas would be managed as a regional park.

In Bosnia and Herzegovina, there is an ongoing initiative within the process of preparation of the physical plan for the area to extend the area currently under protection to include the parts of the Unac River basin north of Drvar upstream to the spring of the Bastašica tributary. The total area would cover 34,770 ha.
Priorities for conservation in the transboundary area

The establishment of a transboundary protected area through a spatial connection of existing protected areas is currently a very idealistic idea. The transboundary cooperation of the two countries is expressed more as an interest at the political level and cooperation in individual initiatives, rather than a direct spatial connection (see the analysis below).

For this reason, the necessary preconditions of forming a spatial unit for protection are only discussed in part in this study.

Habitats and ecosystems benefiting from a transboundary protected area

This section addresses the issues of a direct spatial connection between the two parks, which would include a large area where four smaller areas are currently under protection on the Croatian side (Javornik-Tisov vrh (special reserve), Velika Plješivica-Drenovača (special reserve), Bijeli Stream-Kamensko (protected landscape), Una Spring (nature monument)). Otherwise, the area is under no special protection status as the two national parks are not adjoining.

As described earlier, the area is defined partly by the Una River and partly by Lička Plješivica Mountain, dividing it up in the above mentioned three parts. Plitvice Lakes National Park, on the slopes of Lička Plješivica Mountain, is situated near the state border with Bosnia and Herzegovina, but does not directly touch upon the border, coming no closer than 3 kilometres to the border. The Una River actually represents the border and divides the area into the riverbank on the Bosnia and Herzegovina side, mainly forming the Una NP, and the riverbank on the Croatian side. In BiH, most of this area is forested (ca. 65%), while agricultural land (ca. 30%) is mostly in the form of pastures and meadows. The rest includes construction land (0.9%), roads (0.2%), water courses (0.9%), and rocky surfaces (3.1%). The area is virtually unpopulated, and the arable land in the vicinity of the river course is almost completely privately owned, while the forested area and riparian areas (15 m from the water stream and all areas that have been flooded for the last 100 years, with 10 m wide buffer zone) is mainly state owned.

As stated above, the spatial connection of the two parks is currently wishful thinking. Nevertheless, it is useful to have an overview of the shared ecosystems and habitats divided by the border, which would greatly benefit from the establishment of such a spatial connection.

It is important to note that data about the area are scarce (apart from Una NP, Plitvice Lakes NP and the special reserves Javornik-Tisov vrh and Velika Plješivica-Drenovača in Croatia). At the moment, proper inventory in the area is lacking. Moreover, there is no political interest to conduct such an inventory at this time, as a spatial connection of the two protected areas has not been incorporated into the agenda of either of the national parks.

Lička Plješivica Mountain was planned for protection as a nature park in the National Physical Planning Strategy of Croatia from 1999. However, following
the extension of Plitvice Lakes NP in 1997, the project has not been further elaborated.

A smaller project is in the pipeline, as stated in the chapter above, to enlarge Una National Park on the Croatian side (see Fig.1.7) which would include just a part of the Croatian Una riverbank. The area is currently part of the National Ecological Network and prospective EU NATURA 2000 network in Croatia. If the plans to declare it a regional park are realized, further zoning with stricter zones will be established. Still, it will not achieve the status of a national park, but will instead be managed at the county level. Quoting our consultant from the region, to put the other riverbank under protection is “a necessity for effective protection and sustainable development of the area, as all fauna species inhabiting the Una River depend on the quality of the river as a natural habitat; this can be secured only by coordinated action from its both river banks.”

In Croatia, the following areas of the Croatian Ecological Network are close to the border or at the border:

- Lička Plješivica Mountain: valuable with flora and fauna species, such as Brown bear (*Ursus arctos*), Eurasian lynx (*Lynx lynx*) and Gray wolf (*Canis lupus*) and habitats such as Dinaric beech-fir forest, endangered at the European and national level.

- A series of areas overlap with Lička Plješivica mountain, such as:
  - Plješivica-Javornih-Tisov vrh: Dinaric beech-fir forest (special reserve);
  - Gola Plješivica: species – high mountain flora; habitats – alpine and subalpine stands on calcareous substrates, ruderal vegetation of *Sesleria tenuifolia* and *Carex acuta*;
  - Velika Plješivica – Drenovača: Dinaric beech-fir forest (special reserve);
  - Mala Plješivica: high mountain flora;
  - Manita draga;
  - Kozja draga;
  - Ozeblin s Vukasovicom, Prkosom, Rud liscem: habitats – alpine and subalpine swards on calcareous substrates;
  - Borovac: Scots pine forest with hellebore on dolomite;
  - Lapačko Polje: species – Corn crake (*Crex crex*), Meadow squill (*Chouardia litardierei*), Marsh fritillary (*Euphydryas aurinia*); habitats – boreal alluvial meadows, alkaline fens, Molinia meadows (*Molinion caeruleae*);
  - Mihaljevac pine forest – threatened fungi of forest habitats;
  - various caves:
    - Kukuruzovićeva Cave: species – *Niphargus croaticus*, *Troglocaris anophthalmus*, *Marifugia cavatica*,
    - Upper Kukićeva Cave, Lower Baraćeva Cave and Dumenčića Cave: endemic taxa, karst caves and sinkholes;
  - further south in the Una canyon – Kanjonska dolina and calcareous rocky slopes with chasmophytic vegetation.

No transboundary wildlife migration corridors in the border area have been researched yet. Bordering areas sharing the same habitats and ecosystems
would greatly benefit if they are to be protected on both sides of the border, as this would reduce the risk of habitat loss. Transboundary cooperation would allow coordinated ecosystem-based management for plant and animal species where populations occur on both sides of the state border and for migratory wildlife species that cross the state border, especially large carnivores and their prey, such as brown bear Urus arctos, wolf Canis lupus, European lynx Lynx lynx, red deer Cervus elaphus, roe deer Capreolus capreolus, and wild boar Sus scrofa. The same applies for birds of prey.

Coordinated protection and restoration of natural linkages across the border (ecological corridors) would allow wildlife species to migrate across the state border, thus providing an extended habitat range, in particular for large mammals.

To sum up the situation, a spatial connection with Croatia (other riverbank on the Croatian side) is essential for the effective protection of the river habitat in Una National Park. In the case of Plitvice Lakes National Park, in spite of its already large surface (in 1997, the park was further enlarged to include the entire catchment area), a wide range of habitats would greatly benefit if protection is maintained on both sides of the border and protection measures and scientific research are jointly undertaken. The greatest advantages would be for the large mammals and migratory wildlife species that cross the state border regularly. In order to achieve this, ecological corridors must be more precisely analysed.

Common database

As stated above, no common or updated databases or maps of habitats and species distribution of the whole transboundary region are currently available (information can be found in Feasibility study for Una NP (in FBiH) (European Commission, 2005); Action Plan for protection of the upper course of the Una River (Zelena Akcija, 2009).

In Croatia, Plitvice Lakes NP has a GIS database for nature protection, though work remains to be done to enter all the available data into this database. At the state level, there are different databases: NATURA 2000, Protected Area Management System in the Republic of Croatia, Habitat Map, Map of Wetland Habitat of the Republic of Croatia, Emerald Network, Red List of Plants and Animals of the Republic of Croatia. These databases are continuously being updated.

The GIS database of the National Park Plitvice Lakes was developed by the Ministry of Culture as part of the Nature Protection Information System. The central database is located at the State Institute for Nature Protection and the methodologies for data collection and management were developed as part of the KEC project (2002–2007), which Plitvice Lakes National Park was part of. Due to the wartime destruction, part of the data was lost. Since 1996, long-term data and recent research results at the national park have been collected. With the assistance of institutions and scientists working within the park, a substantial amount of data was collected. The publication “Contribution to the Bibliography of Plitvice Lakes National Park 1988–2000” was released in 2001.

Further, monitoring of the biochemical quality of river water is conducted, both in Croatia (at Suvaja) and Federation BiH (at four monitoring points from the entrance of Una into the FBiH territory to Bihać; upstream of Martin Brod; Martin Brod downstream of the confluence of the Unac into Una; Kulen Vakuf, Ripač). This monitoring serves to prevent water polluted with untreated municipal wastewater to be used for recreation purposes such as swimming, rafting, and fishing.

There are no official legal provisions for data exchange between the partners on each side of the state border, though generally speaking, no information relevant to transboundary cooperation between the two parks is of restricted use.

It would be very useful to develop a set of harmonised databases for the entire potential transboundary area, and an official accord for free data exchange between the two institutions.


Stakeholders and existing relevant projects

Existing and future cooperation between the two regions is outlined below.

In Bosnia and Herzegovina, the most interested stakeholders at local and cantonal level are:

- Municipality of Bihać;
- Una-Šana Canton Tourist Board;
- NGOs with long history of involvement in issues of protection and sustainable use of the Una and its surrounding area (e.g. Unski smaragdi, EKUS, others, including various sport fishing associations);
- small and medium enterprises active in tourism sector; farmer associations; authorities within individual settlements (e.g. Kulen Vakuf self-government bodies have demonstrated respectable activity in the past).

In Croatia, the key partners for transboundary cooperation are:

- management authorities of the protected area, i.e. Public Institution of Plitvice Lakes National Park, and regional authorities;
- Ministry of Culture;
- State Institute for Nature Protection;
- Lika-Senj County (and other counties, such as Zadar County, etc.);
- local authorities – municipalities and towns (local self-government);
- tourist boards (regional and local);
- Chamber of Commerce (county level);
- NGOs, sport clubs, associations, etc.;
- SMEs, such as tourist agencies, local craftsmen, accommodation providers (B&B), restaurants, etc.;
- local schools.

Examples of past and current common transboundary initiatives undertaken

The first cross-border project was the EU Framework Programme 5 “Study of Anthropogenic Pollution after the War and Establishing of Measures for Protection of Plitvice Lakes National Park and Bihać Region at the Border Area of Croatia and Bosnia-Herzegovina” (European Commission 2005). The project lasted from 2003 to 2005. Partners of the project were:

- Universitat Autònoma de Barcelona, Spain – Project Coordinator;
- Institute für Geowissenschaftliche Gemeinschaftsaufgaben, Hannover, Germany;
- Ruđer Bošković Institute, Zagreb, Croatia;
- Geological Institute, Zagreb, Croatia;
- Geological Institute of Bosnia and Herzegovina, Sarajevo, BiH;
- Biotechnical Faculty of the University of Bihać, Bihać, BiH.

The main objective of the project was the assessment of anthropogenic pollution after the war events and its consequences to the karst ecosystem in the border zone between Croatia and Bosnia and Herzegovina. The project promoted scientific and technical cooperation between these countries and European Union Member States. Project activities were focused on the hydrogeologically connected areas of Plitvice Lakes National Park (Croatia) and the Una River system in the Bihać region (Bosnia and Herzegovina). The project targeted end users: local authorities, enterprises, national parks and non-governmental organizations in the area. The Final Report of the project is available online for download.

The following two projects dealt with cross-border cooperation and the Una River, but not with Plitvice Lakes National Park.
“UnAvanTurizam” project lasted from June 2007 to June 2009, with funding in the amount of EUR 135,822 (80% EU CARDS, 20% the Municipality of Gračac). Partners of the project were:

- Municipality of Gračac, Croatia - Project Coordinator;
- City of Bihać, BiH;
- Una-Sana Canton Tourist Board, BiH;
- Una Fishing Society, BiH;
- UNA NGO, Srb, Croatia;
- Pastrva sport fishing society, Gračac, Croatia.

The overall objective of the project was to support sustainable development of the area lining the Una River through transboundary cooperation of tourism-oriented organisations from Croatia and BiH. The specific objective was to develop recreational tourism (ecotourism) in the bordering area of the Municipality of Gračac, Croatia. Activities of the project were: establishing partner cooperation and the development of small tourism infrastructure, education of locals in offering tourism services, education of project partners, and cooperation on the development of a joint tourist offer. An example of an activity within the project UnAvanTurizam in 2008 was the organization of a volunteer camp in the Una River Valley with the local UNA NGO from Srb, Croatia. The main goal was to raise the environmental awareness of the local population and to reinforce networking through the promotion of sustainable development and environmental protection. Volunteers repaired and built walking paths, signs, and installed wooden benches and tables.

The EU CARDS 2004 project “Promoting conservation of border river ecosystems and sustainable use of resources in border area of Croatia and Bosnia and Herzegovina” (2007–2009) was coordinated by Green Action environmental NGO (Zelena Akcija, 2009) from Croatia. As part of the project, a proposal of an Action Plan for the conservation of the upper course of the Una River was developed. This was a two-year project aimed at increasing awareness, knowledge and cross-border cooperation in environmental protection. Conservation of river ecosystem biodiversity was taken as the core for sustainable development and sustainable use of natural resources. A series of workshops were organized on different bordering rivers and the workshop organized on the Una River hosted more than 20 participants from the Public Institution for Management of Protected Areas in Sisak-Moslavina County, regional municipalities, Sisak-Moslavina County, Croatian Waters, development agencies, Faculty of Science of the University of Zagreb, municipal services, Croatian Forests, local population and NGOs from both Croatia and BiH. Participants worked on a vision for the Una River basin and discussed existing problems and possible solutions.

The IPA proposal “Una – Spring of Life” was submitted to the EU in October 2009. This is a joint application by Zadar County, Croatia and the Municipality of Bihać, Bosnia and Herzegovina to the IPA Cross-Border Programme Croatia-Bosnia and Herzegovina 2007–2013. Other project partners are:

- Municipality of Gračac;
- Public Institution for Management of Protected Areas in Zadar County;
- Zadar County Development Agency – ZADRA;
- Zadar County Tourist Board;
- Una Association from Croatia;
- PLOD - Centre for Promotion of Local Development Bihać;
- Una-Sana Tourist Board from BiH.

The overall objective of the project proposal is to contribute to the creation of a common economic space in Croatia and Bosnia and Herzegovina through the development of joint tourist offers. A specific objective is to jointly develop and promote the Una Spring in Croatia and Una Waterfalls.
and the old town of Ostrovica in Martin Brod in BiH as parts of the same environmentally-integrated joint tourist product. This is to be achieved through cross-border collaboration and pooling of experience between all stakeholders in the cross-border region of the upper course of the Una River.

Informal relationships between the involved local actors are good and have existed for many years. There have been various discussions on transboundary cooperation, which has resulted in joint projects. There are smaller direct initiatives, such as creating a broader tourism offer in the Plitvice Lakes area by also advertising the Una area and Bihać as interesting nearby destinations.

Still, there is great potential for enhancing this cooperation. There are ongoing discussions between the local partners on joint project applications.

Not all key stakeholders from Croatia have been involved in preparation of the transboundary cooperation, though they should be involved in the future. In Bosnia and Herzegovina, however, stakeholder involvement so far, including their interest for cooperation and implementation of the common development vision, was the main criterion to describe them as key stakeholders.

A signed Memorandum of Understanding for transboundary cooperation exists in the field of commerce. There are official agreements on transboundary cooperation between the chambers of commerce of the two countries. Memoranda of Understanding have been signed between the Una-Sana Canton Chamber of Commerce in BiH and Chambers of Commerce of Karlovac (1998), Lika-Senj (1999), Zadar (1999) and Sisak-Moslavina (2001) Counties in Croatia. The Memoranda on Environmental Protection between Una-Sana Canton Chamber of Commerce in BiH and the Chambers of Commerce of Karlovac (1998), Lika-Senj (1999), and Sisak-Moslavina (2001) Counties in Croatia were signed at the same time.

There is also an approved Global Environment Facility project concerning the protection of forested mountainous areas in Bosnia and Herzegovina, with a total budget of USD 3.4 million, of which 1.7 million was allocated to the Federation of Bosnia and Herzegovina. A part of the allocation to the Federation of Bosnia and Herzegovina was allocated to Una National Park for preparation of a management plan and development of basic infrastructure.

There are many regional social events that gather stakeholders from different parts of the region, such as the EKOBIS fair in Bihać in BiH, organized by the Una-Sana Canton Chamber of Commerce, with the participation of the Lika-Senj County Chamber of Commerce. This presents a good opportunity for elaboration and/or promotion of the common vision for the area.

Another event is Gacka Days in Otočac, Croatia. This event is organised by the Lika-Senj County Chamber of Commerce in Croatia, with the participation of the Una-Sana Canton in BiH. In 2009, for
example, a fishing competition, cycling competition and scientific and expert meeting on native species of karst were organized.

Una-Sana Canton also participates in the event Autumn in Lika, held in Gospić, Croatia, which is an exhibition of agriculture, food and decorative products.

The Una Regatta is a traditional international tourism, sport and cultural event that is a central event of tourist promotion of the potential of the Una River. The regatta lasts four days, with many other cultural and sporting events organized besides rafting.

Exceptional though informal cooperation and communication has been established between Plitvice Lakes NP and the Municipality of Bihać. The tourist boards of Una-Sana Canton and the Municipality of Bihać have set up an information desk at Entrance 1 to Plitvice Lakes National Park. For example, a trip to the Bihać area is offered as an excursion in the camp on the Korana River, next to Plitvice Lakes NP. This is of mutual interest, as it expands the tourist offer for Plitvice Lakes, while also serving as a great marketing opportunity for Bihać which is only 40 km from Plitvice Lakes NP, which sees up to 1 million visitors per year.

All these transboundary projects are primarily foreign funded. This is also cited in the country report of the CBD (2009) “Bosnia and Herzegovina has finished National Environmental Action Plan (NEAP) three years ago, which was an important contribution to the creation of adequate framework for the CBD implementation process. However, the implementation process itself would not be possible without significant financial support provided by foreign agencies, such as UNDP/UNEP/GEF/World Bank/Council of Europe and many others”. This substantial foreign support brings with it the difficulties that arise when the project is shaped by an international agenda and not concretely adjusted to the real local needs or interests.

Projects and action orientated transboundary partnership concerning environment issues exist and are actively sought out by local partners. This constitutes a sound base with experience in project preparation and implementation that further transboundary initiatives can built on.

Opportunities and challenges for transboundary cooperation in the transboundary area

Opportunities

Plitvice Lakes National Park has successfully re-established its tourist offers and the ever increasing number of visitors brings economic development to local communities.

The two areas on both sides of the Una River are in a difficult socioeconomic situation. They believe that Plitvice Lakes NP is a great success story and that development of the tourism sector, based primarily on the natural attraction of the Una River and the adjacent area, is a vision for the future. Their cooperation is based on the intention of common development of sustainable tourism and visitor management for the entire area.

The environment in the region is still of relatively high quality because it has not been altered in a major way. This is also a consequence of the economic lag of the area and no new industry appearing. Apart from economic interest for this cooperation, there is a wide range of common conservation interests that could also bring advantages, such as the transfer of expertise and know-how and experience exchange (i.e. through implementing joint projects). Joint research would enhance knowledge of migration corridors and the condition of endangered and endemic fauna species.
Transboundary cooperation would reduce the risk of biodiversity loss. It would also provide for coordinated ecosystem-based management and better protection of plant and animal species on both sides of the state border, especially for migratory wildlife species that cross the state border (such as large carnivores and birds of prey).

Coordinated protection and restoration of natural linkages across the border (ecological corridors) would improve migration possibilities, especially for large mammals, thus providing an extended habitat range. Implementing common measures regarding invasive alien species would allow better control and, if needed, eradication of pest or invasive species that threaten habitats on both sides of the border.

The prospective for both areas to be included into the NATURA 2000 network would likely enhance a more formal and regular cooperation between the two sides.

Nowadays, most initiatives to proclaim new protected areas on the Croatian side originate from regional authorities (counties) and local self-government (cities and municipalities), i.e. the Lika-Senj Physical Plan which has proposed the proclamation of two nature parks in Croatia in the vicinity of Plitvice Lakes National Park. These are Lička Plješivica mountain and the Una River. If these two parks are designated, they would likely become regional parks (financed by the regional government), and not nature parks (financed by the central government). Also, Zadar County intends to proclaim the area around the upper course of the Una River, located right across the border from the Una National Park, as a regional park.

A range of diverse transboundary activities has been developed in the region, to quote, “In some aspects, there is an excellent co-operation with neighbouring countries realized through the exchange of experiences, case-studies and national strategies, but without any kind of joint actions undertaken in this regard.” (CBD 2009).

When it comes to the transboundary initiative, cooperating partners from the two countries do not meet on a regular basis. Nevertheless, they do meet at the regional level, both formally and informally, where they normally discuss very specific issues, such as joint preparation of project proposals or preparation of social events.

The national Chambers of Commerce meet and coordinate their activities, for example participation in different social and cultural events in both countries. Such meetings are used to consult, plan and evaluate common transboundary activities and activities that could influence the border areas, though there is still room to enhance the level of cooperation.

Individuals that are expected to become leaders and coordinators of the transboundary cooperation have sufficient capacities to undertake the necessary initiative. A good example is the significant effort by FBiH to make necessary steps for formal establishment of Una NP.

Plitvice Lakes National Park has sufficient operational, technical and communication capacities at its disposal to lead and coordinate transboundary cooperation; however, support from other authorities and institutions would surely benefit all.

Language would not be an issue, as partners on both sides of the border understand the language of the neighbouring country.

Demonstrated by the signing of several contracts defining cooperation on common projects it could be said that on both the BiH and Croatian sides, the involvement in developing the transboundary cooperation is supported and welcomed at municipality and
county/canton level. Also, since the signing of the Joint Statement of the Big Win for Dinaric Arc by the Ministry of Culture of the Republic of Croatia and the Ministry of Environment and Tourism of the Federation of Bosnia and Herzegovina, there is a foundation to build upon.

It could be said that the stakeholders are aware of the benefits that the transboundary cooperation brings and this has been demonstrated by the past and current transboundary cooperation initiatives. In-depth analysis of each potential partner can be carried out, if needed.

Local municipalities have also demonstrated their support through their willingness to co-finance common activities related to protection and sustainable development within the area. They perceive it as a major development opportunity for this rural area and for the broader region. Therefore, it is possible to count on long-term support and commitment from all levels.

Local private businesses also share that belief and therefore they would also be willing to follow the common initiative.

Cooperation between the park and local stakeholders is good. Inhabitants on the Croatian side are employed in the park, in the tourism sector or work in agriculture. In general, it could be said that the interests of the local communities and the park are not opposing. All local stakeholders benefit from the park and cooperation among them is good. This good position within the community enhances its leading role as a partner in or initiator of transboundary cooperation, which could facilitate obtaining general acceptance.

So far, Una National Park has no experience in interaction with the local community. Nevertheless, if the national park establishment process evolves as envisaged, it could reach the same level as in Plitvice Lakes, as it also represents an exclusive employer in the region.

Throughout history, there has always been communication between the two sides of the border. Good informal communication was established between the two sides after the end of the war in the 1990s. There are no common elements in the cultural heritage of this region, as the border between Croatia and BiH has over a long time been the border region between the western force of the Austria-Hungarian Empire and the eastern forces of the Ottoman Empire. But this could also be seen as an advantage. In fact, it is the cultural diversity that makes the area interesting and tourism promotion in the past was based on this diversity. There are no specific land claims for the area and the borders are not fortified or specially marked by elements restricting people or wildlife to cross the border. There is no visa regime or other legal obstacles that would hinder crossing the Croatia – Bosnia and Herzegovina border.

War events have shaped the region. On the BiH side, the war affected the relations between ethnic groups. But today, the general intention is to overcome these hostilities and reach out for new cooperation.

Challenges

No joint statement of cooperation at the local level exists so far. The two entities, Plitvice Lakes National Park and Una National Park, have not yet signed an official agreement of cooperation that would facilitate the implementation of the “Big Win” joint statement. Such an official agreement may help receiving financial support for furthering TB cooperation.

Regarding infrastructure, management and visibility, Plitvice Lakes National Park is well ahead of Una National Park. Plitvice Lakes is already a brand, whereas Una has to establish itself first
as a national park and then as a tourist destination.

Una National Park completely depends on state support or foreign projects, whereas Plitvice Lakes National Park has the advantage of carrying out its own tourism based activities. Consequently, the two parks function on totally different levels. The establishment of a cooperation agreement with Plitvice Lakes National Park would, in this sense, not be on an equal scale.

Additionally, Plitvice Lakes NP is large enough and other national projects for extension of the protected area network are ongoing in its vicinity, i.e. Lika-Senj Physical Plan proposes the proclamation of two nature parks near Plitvice Lakes, Lička Plješivica mountain and the Una River; also, Zadar County intends to proclaim the area around the upper course of the Una River as a regional park.

At the moment, there are no common nature inventories or databases. No common databases and maps of habitats and species distribution are available for the entire transboundary region. Knowledge is deficient on both sides of the Una River (information can be found in Feasibility study for Una NP (in FBiH), European Commission, 2005; Action Plan for protection of the upper course of the Una River, Zelena Akcija, 2009). Regarding scientific data, the difference between the two areas is also evident. Apart from scientific data, there is an obvious difference in issuing promotional and information materials (guides, leaflets, internet site, maps, etc.). Officially, there are still no legal provisions for data exchange between partners on each side of the state border.

The spatial design of Plitvice Lakes NP integrated the whole catchment area during its last extension in 1997. Transboundary cooperation was put on the agenda only in 2008. Moreover, as described above, Lička Plješivica mountain separates the Plitvice Lakes NP area and forms the border with Bosnia and Herzegovina. Consequently, the national park’s spatial design is not meant to require the conservation of adjacent areas across state borders.

The socioeconomic situation of the region is rather worrying. Economic activities of the Croatian side consist mainly of tourism and employment within the park. For the Una area, there are great expectations on both sides of the border. There are high expectations from the transboundary cooperation and protected areas authorities as job and income providers that will bring benefit and direct economic improvement for the region. These expectations could put the sustainable part of the project at risk, as sustainable rural development can only be achieved when all stakeholders are convinced to act in a sustainable way. That is why local involvement becomes crucial; however, this requires time and patience.

Joint transboundary projects have been funded mainly from abroad. Substantial financial support is needed not only on the BiH side, as the region itself cannot generate all necessary funds. Although the financial capacity of the area allows for project co-financing, further financial implementation would exceed the local capacity. Furthermore, in Croatia, managing externally funded projects, especially the EU funded ones, has largely been perceived as very demanding with regard to administration and finance management.

The most serious challenge of the region is its demographic situation. The emigration from rural areas leads to a significant lack of local capacities and regional offers. Transboundary cooperation can create opportunities, though it may take time to sufficiently raise the profile of the area, even more so if development is to be achieved in a sustainable way.

Another important influence on transboundary cooperation is the
different political situation in both countries and their law enforcement. The future goal of both countries is accession to the EU. However, achieving this goal in the near future is only feasible in case of Croatia. BiH accession to the EU is a long-term process. In this sense, the institutional situation in BiH will remain complex. Law enforcement and achieving the goals of international conventions will also remain difficult. This is affected by the lack of a responsible institution, such as a Ministry of Environment, at the national level.

Apart from Plitvice Lakes NP, the issue of wastewater management has not been regulated. The planned hydropower plant on the Unac River, a tributary of the Una, is still an unresolved issue. This project could currently represent the only serious obstacle to sustainable development of the region.

Recommendations

A more detailed agreement at the local level is needed for transboundary cooperation between Plitvice Lakes NP and Una NP, including a perspective for a “governing body coordinating transboundary cooperation” based on equal terms between the two national parks. Generally, it would be important to take into consideration the unique position of the two partners, and to support Una NP in its negotiations with Plitvice Lakes NP.

Establishment and subsequent capacity building of a management authority of Una National Park is of the utmost importance.

A common database and free data exchange between the cooperating partners would be valuable in the future in order to reach common decisions on priorities for cooperation on conservation issues. Joint projects could be developed based on these data and coordinated protection across the state border would become easier.

It will be important to underline that development and tourism management should be handled in a sustainable way.

The issue of wastewater management should be resolved on both sides of the border. Water is an important key factor for the entire area, and to keep it as clean as possible should be one of the foremost priorities.

The involvement of the local population is crucial for the transboundary initiative. This implies taking into consideration the socioeconomic situation of the region including unemployment (estimated at 65% in the BiH part of the area), depopulation and abandonment of traditional agriculture. Further, it is important to invest in the establishment of informal contacts among the people on both sides of the border and to improve understanding on sensitive war issues.

What is critically needed in the Una region are concrete actions with tangible results that can help to make the vision of cross-border cooperation a reality. In this sense, the sharing of know-how and experience, cooperation between two tourism destinations, Plitvice Lakes NP and Una National Park, would provide numerous advantages. Development based on conservation and revitalization of the natural and cultural heritage of the area is the best conceivable scenario, not only for biodiversity but also for the local population.

In summary, it can be said that there is already an established practice of informal cross-border cooperation between institutions on both sides. Partners are ready for common projects and sufficiently experienced. The interest is a bit less accentuated in the Plitvice Lakes area. There is still room to enhance the level of cooperation and a need to involve all stakeholders. No intention of a direct spatial connection between the two national parks has been expressed. Cooperation is usually mentioned in the context of tourism development.
and visitor management, technical assistance, research, cooperation in protection of natural heritage, funding and fundraising.

REFERENCES:


