

Preservation of natural values along the cross-border area of Satu Mare and Szabolcs-Szatmár-Bereg counties

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ABSTRACT: The present study aims at emphasizing the importance of cross-border cooperation in protecting the natural values along the Romanian-Hungarian border and the way in which these resources can be exploited for tourism. The analysed area comprises the two adjacent counties of Satu Mare and Szabolcs-Szatmár-Bereg, with focus on the rich natural heritage and the shared effort made in order to ensure its conservation. The anthropic activities (agriculture, development of settlements, infrastructure investment) have gradually led to habitat reduction, having a negative impact on biodiversity. The Natura 2000 network, initiated by the European Union, is a program launched with the objective to preserve natural habitat, plant species and wildlife in a unitary system. A number of ten Natura 2000 sites (Special Protection Areas for birds, Special Areas of Conservation and Sites of Community Importance) are located in the cross-border region of Satu Mare and Szabolcs-Szatmár-Bereg counties. In the present case, a study upon the natural values of the area cannot be limited by borderline. Moreover, a cross-border approach is being preferred in order to highlight the sites of special interest, the necessity to elaborate and implement joined strategies. Natural values can become a part of the touristic offer but only to a certain extent, according to which only those forms of tourism should be developed which have a less impact on the environment, namely the practice of sustainable tourism, with emphasis on ecotourism. This type becomes viable in the context of a stricter organization of the tourist flow, the existence of a process with informative and training role for visitors regarding the importance of preserving biodiversity. To conclude, the paper draws attention to the fact that recreational activities can be developed in special protection areas provided that the sustainable aspect is always kept in sight.

KEY WORDS: cross-border area, biodiversity, sustainable tourism, ecotourism

1. Introduction

Against the background of current concerns regarding the issue of sustainable development, natural values have become one of the most important legacies to be left for future generations. A way of ensuring that such resources are preserved for the descendants as well is to create an

entire network of protected areas, in order to conserve both species and habitats. The Natura 2000 Network “is probably the most ambitious supranational policy measure in the world that aims to preserve biodiversity through land use regulation” (Rosa and da Silva, 2005, p. 108). Moreover, this ecological network was created to maintain natural values on long-term prospects and guarantee the required resources for socio-economic development.

The accession of Hungary and Romania to the European Union meant for each country the embrace of EU policy concerning nature conservation, namely the two directives which lie at the core of the Natura 2000 network. The policy applies both to birds and habitat sites and is defined by the Birds Directive (a legislation adopted in 1979, designed to protect threatened and migratory bird species) and the Habitats Directive (adopted in 1992, to ensure the conservation of endangered species and rare habitat types). The former requires the establishment of Special Protection Areas for birds (SPA) and the latter demands that Special Areas of Conservation (SAC) are being designated in order to conserve other species of interest and habitats. Generally, the Member States submit the sites’ proposal after carefully assessing the habitat types and species present on their territory. Based on the proposed suggestions, the Commission adopts the Sites of Community Importance (SCI) list that is later analysed during scientific seminars. Once the list is adopted, each member state is to declare all these sites as SPAs and find management solutions to guarantee the conservation status of the sites as soon as possible.

The objective of this paper is to assess the prospects of sustainable tourism in the cross-border area of Satu Mare and Szabolcs-Szatmár-Bereg counties, which is characterized by a rich natural heritage. According to Mbaiwa and Stronza (2009), in developing countries this type of tourism should be given special attention due to its potential to create multiple benefits for society, economy and environment. Sustainable tourism aims at achieving three major objectives: creating new opportunities for the local communities, satisfying visitors’ demands while ensuring the protection of natural values, as well. There are various trends imposing recently on the tourist exploitation of natural values. The concepts of ecotourism, green tourism, rural tourism or responsible tourism define specific forms, as opposed to the traditional types of tourism. However, the tourist industry “is not yet close to sustainability” (Buckley, 2012, p. 528), despite the efforts made to achieve this goal.

An alternative form which attempts to have little impact on the environment is ecotourism. In this case, tourists are motivated by the desire to merely enjoy and admire nature or to observe wildlife. According to Nistoreanu (2006), ecotourism meets four major criteria: it occurs in natural areas that have remained unaltered; it involves conservative measures while encouraging the participation of local communities and ensuring their welfare.

2. Study area

The present study concentrates on the two joined counties of Satu Mare and Szabolcs-Szatmár-Bereg with focus on ten protected sites, included in the Natura 2000 network (4 Special Areas of Conservation, 3 Special Protection Areas for birds and 3 Sites of Community Importance), which are located in the proximity of the borderline.

A great extent of the area is included into the Pannonian biogeographic region while the north-eastern part of Satu Mare county is a component of the Continental biogeographic region. The landscape is dominated by alluvial plains and low hills, bordered by the Oaş Mountains in the

eastern part. One of the resources which define the area is the richness in underground water. The former extensive forests were gradually replaced by steppe and grassland. Nowadays, habitats characterized by rich biodiversity mainly appear on sites which are unsuitable for agricultural use, especially on sandy, wetland or in hilly areas. The major threats to biodiversity are represented by the intensification of agriculture, drainage, river pollution, eutrophication and forest clearance (Liamine, 2002).

The study highlights the possibilities of tourism development in a region acknowledged to have an important role in preserving natural values. Each site requires the implementation of a management plan, taking into account its specificity, in order to ensure the desired long-term sustainability.

3. Materials and methods

The present study has been developed in two stages. The former is based on the study of bibliographic material, maps and sources of secondary data combined with direct field observations. During the latter stage an inventory of the protected sites has been conducted, which provided further information regarding their current status, namely the main features of the anthropic pressure in the area as well as the necessary conservation measures. Furthermore, the study formulates some problems to be taken into account when elaborating plans meant for the protection of the area. It also identifies the tools of sustainability and the opportunities for responsible tourism development.

4. Results and discussion

The Natura 2000 network is a proof that environment related policies can successfully be linked to other domains such as: agriculture, forestry, tourism and that nature conservation, as a component of territorial planning, is compatible with other economic activities (Smaranda, 2008). Its main objective is to conserve biodiversity in the context of the world's growing interest in sustainable development.

4.1. The Natura 2000 sites along the cross-border area of Satu Mare and Szabolcs-Szatmár-Bereg counties

Along the Romanian-Hungarian borderline, a number of ten protected sites have been declared as part of this network not only to ensure the protection of biodiversity but also to generate income for the inhabitants. The two adjacent counties represent peripheral regions, less developed in comparison to the neighbouring counties. As further investigations were unfolded, it has become clear that the study area requires additional sources to generate economic benefits for the community. Tourism has found enough authentic values in this region to ensure its responsible development.

In spite of anthropic intervention, which caused the natural wood vegetation to be replaced by the steppe landscape (known in Hungary as Puszta), significant habitats have preserved some of their former unique features. It is the case of sandy grasslands and wetlands (peat bogs, swamps), freshwater aquatic habitats and isolated forested areas which conserve rare plant

species (*Gladiolus imbricatus*, orchids, *Iris aphylla hungarica*) and wildlife (otter - *Lutra lutra*, invertebrate, fish – *Rutilus pigus*, *Misgurnus fossilis*, *Aspius aspius*). Several protected bird species from these areas: the white and the black stork (*Ciconia ciconia*, *Ciconia nigra*), the corncrake (*Crex crex*), the black kite (*Milvus migrans*), the Western marsh-harrier (*Circus aeruginosus*) have also contributed to the sites' designation as part of the Natura 2000 ecological network (table 1).

Table 1. The Natura 2000 sites along the cross-border area of Satu Mare and Szabolcs-Szatmár-Bereg counties

No.	SITE NAME	SITE CODE	AREA (ha)
Special Areas of Conservation			
1.	Csaholc-Garbolc	HUHN20054	4 054,4
2.	Ömböly and Fény Forests	HUHN20035	1 433,3
3.	Rozsály-Csengersima	HUHN20055	984,6
4.	Terem Forest	HUHN20058	912,4
Special Protection Areas for Birds			
5.	Szatmár-Bereg	HUHN1001	52 847,7
6.	The Lower Meadow of Tur River	ROSPA0068	20 241,1
7.	Nirul Plain - Ierul Valley	ROSPA0016	23,1
Sites of Community Importance			
8.	Tur River	ROSCI0214	20 521,4
9.	Careiul Plain	ROSCI0020	14,3
10.	Ierul Plain	ROSCI0021	7 661,7

Source: <http://natura2000.eea.europa.eu/Natura2000/SitesSearchResults.aspx>

Nevertheless, a series of problems have been identified for the Natura 2000 sites located in the study area. The first set of issues is connected to the agricultural use of the land: intensive agriculture and use of chemical fertilizers, invasive plant species which affect natural vegetation or mowing; if carried on too soon, this activity can destroy nests. Pollution represents another cause for concern, regardless of its nature (water, air or soil pollution). Insufficient information among the local community is also a factor which generates issues. For instance, inhabitants have little knowledge concerning the advantages and the obligations which derive from the Natura 2000 status of a certain site. In some cases, the administration of these sites has been defective, lacking a uniformly implemented system of monitoring species and habitats or an updated situation of the landowners in the sites' perimeter. Other aspects that continue to raise problems in the investigated area are: deforestation, poaching, habitat fragmentation as a result of infrastructure development, drainage, practice of certain activities (off-road, motocross or with other terrain vehicles) which are incompatible with the sites' objectives.

4.2. The tools of sustainability in tourism

During the last decade, new forms of tourism have arisen as a result of tourists' growing needs and demands. Tourism in protected areas is a sector which continues to gain an increased number of followers, the recreational activities are being referred to by making use of several descriptors. For instance, terms such as: adventure, environmentally friendly, green, scientific,

soft, trekking, sustainable indicate new types of nature-based tourism. Among these, sustainable tourism highlights the importance of focusing on environmental aspects. Therefore, several approaches and tools have been developed to manage the environmental impacts in tourist destinations (Mowforth and Munt, 2009):

- ❑ the designation of a protected area: in this case, SPAs, SACs and SCIs are sites under legislated protection where the development of sustainable tourism is encouraged;
- ❑ visitor management techniques: restricted entries, vehicle restrictions, channelled visitor flows, practice of differential prices (higher fees in periods with high potential impacts), existence of facilities on durable sites;
- ❑ environmental impact assessment (EIA): a comprehensive evaluation of all factors which have potential impacts on the environment. According to the results and only if the analysis proves that tourism development can be sustainably developed, further actions should be planned;
- ❑ carrying capacity: the concept generally refers to a certain threshold beyond which economic, environmental, social and psychological systems are threatened and sustainability is unlikely to be achieved (Mbaiwa and Stronza, 2009);
- ❑ consultation and participation of local community: one of the principles of sustainability states that it is essential for host communities to take part in the process. This objective is reached through a series of techniques: meetings, public attitude surveys, stated preferences surveys. When interpreting the results difficulties might occur because the answers are sometimes ambiguous;
- ❑ codes of conduct: this aspect refers to another tactic which appeals to modifying visitors and hosts behaviour by teaching them about the wilderness ethic. Tourism development in protected areas aims at informing the people involved of the necessity for conserving natural values.

Regarding some tools mentioned above, additional information is required. The tourism development planning should take into account that there is a limit, a certain number of visitors that, if exceeded, will cause irreversible changes in the environment. Therefore, studies have been conducted in order to calculate the physical carrying capacity. An example of such calculation is given by Mowforth and Munt (2009). Physical carrying capacity (PCC) is estimated according to the following aspects:

- ❑ one person needs a space of about 1 square metre to move freely in a specified time;
- ❑ the trail has a length of 1 100 metres;
- ❑ 1 hour is the average time for a visitor to complete the trail;
- ❑ the trail is opened to the public for 7 hours per day and generally 360 days per year.

$$\begin{aligned}
 \text{PCC} &= \text{length} \times \text{visitors/metre} \times \text{daily duration (hours/day)} \\
 &= 1\,100 \times 1 \times 7 \\
 &= 7\,700 \text{ visits/day} \\
 &= 7\,700 \times 360 \\
 &= 2\,772\,000 \text{ visits/year}
 \end{aligned}$$

The preservation of natural values has become one of the goals of the Romanian-Hungarian cross-border cooperation. Two projects on cross-border action for nature protection were finalized at the end of 2010, respectively 2012, 85 % of the projects budget (namely 74 280 € and 496 018 €) being financed by the European Regional Development Fund. The campaign aimed at raising public awareness regarding the benefits the Natura 2000 network can offer, the implications in the economic growth and the increase of tourist attractiveness of the borderline area. Thus, the

participation of local community represented an important part of the project because most inhabitants had little knowledge of these natural values. The success of the campaign lay in the organization of public consultations and ecological contests between schools from Satu Mare and Szabolcs-Szatmár-Bereg counties. In this respect, different types of informative and promotional materials were created (maps, banners, leaflets, questionnaires), as well as a website available in both Romanian and Hungarian languages.

The latter project was focused on the sustainable development and conservation of natural values in Upper Tisza, the area along the Tur River and Szatmár-Bereg, sites under protection due to their decisive role in the lives of the communities. As a result, a patronizing organization was created to function as an umbrella for other institutions involved in environment protection and to facilitate their cooperation.

As long as such financial instruments are available, cross-border cooperation in the field of tourism and environment should be encouraged. This process needs to take into account the involvement of several stakeholders as their joined efforts and interests will lead to more effective actions and initiatives. In the present case, both counties share similar objectives and face the same problems regarding the preservation of the environment.

4.3. Opportunities for responsible tourism development

As soon as tourism industry has adopted the concept of sustainability, a new trend emerged, namely the sustainable tourism. This form promotes the idea of satisfying visitors' needs and, at the same time, showing concern for the protection of the environment. Natural conditions present a durable value of utmost importance for tourism. Thus, the future generations should be able to benefit from these resources and the evolution of tourism must not lead to environment degradation (Năstase et al., 2011). The analysis of the phenomenon indicates that responsible tourism development tends to follow several directions. For the study area five types have been identified but there is a certain overlap between them: adventure, recreation, study, scientific and ecotourism.

Adventure tourism is practised by individual tourists in search of exciting experiences. It can only be developed in natural settings and combines physical activities with enjoying nature. Certain sports: walking, cycling, horse riding, fishing, canoeing are recreational outdoor activities which enable a close man-nature contact.

Recreation tourism attracts a large number of participants and aims at satisfying the recreational needs of a population that is involved in strenuous activities (Cocean and Dezsi, 2009). The need to escape daily stress and routine drives people closer to nature and countryside. In the present case, recreation tourism is characterized by the following: tourists generally prefer sites located at short distance from their residence, cars remain the most important means of transport and the time frame is relatively short, recreational trips usually take place during week-ends or public holidays, summer represents the peak season.

Study tourism is another form of responsible tourism. As raising public awareness regarding the preservation of natural values has become an issue of current concern, this type of tourism starts to grow. Its main objective is to inform people and draw attention to the fact that the environment is vulnerable. The activities connected to this type of tourism usually take the form of organized study trips for pupils and students.

Scientific tourism is practised by a reduced number of people whose motivation lies within the need for research. Usually this form of tourism is done individually or in small groups in order to study endangered species or particular types of habitats.

Ecotourism presents similarities to the already mentioned forms of responsible tourism. In brief, it implies travelling to places rich in biodiversity, having minimal impact on the environment and resulting in benefits for the local community. Tourists seek to observe species in their natural surroundings (bird-watching) without causing any disturbance. In the analysed area, ecotourism finds three prospects of development: flora, fauna and cultural heritage. The last aspect is sustained by the presence of several attractions: small, medieval churches of high density in the border region, authentic values preserved in Oaşului Land, as well as a rich traditional heritage, result of the cohabitation between different ethnic groups: Romanians, Hungarians and Germans.

5. Conclusions

The preservation of natural values along the Romanian-Hungarian borderline has become an imperative because tourism development in the region cannot be conceived if these resources are threatened. The role of sustainability in tourism continues to increase, the desired outcome is to avoid further damage to natural values and preserve this legacy for future generations. As the number of nature-based tourists grows, ensuring protection and promoting an environmentally oriented behaviour among people are objectives that need to be reached.

In practice, such initiatives take several forms, some of which have already been developed in a cross-border context, gaining financial support through the European Regional Development Fund. Further attempts to develop tourism in these protected sites should be designed in such a manner that they fit the principles of sustainable development.

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