



Biodiversity, Societies, and States: cooperation lessons in transboundary protected areas

Marcela Stüker Kropf¹ 

Silvia Lilian Ferro² 

Rogério Ribeiro Oliveira³ 

Abstract

Border protected areas are important tools of nature conservation, and emblematic of the relations between society and nature. These areas enable cooperative processes and political, social, and cultural integration of the territory. Europe is pioneer in the creation, integrated management, and certification of border protected areas. Considering the possibility of using these instruments in Brazilian cases of shared management with countries on the frontier, six areas were visited and interviews were conducted with their managers. The research is qualitative, following the methodology of speeches content analysis. The areas indicate the enhancement of regional and local culture. Managers speech revealed practical elements of transboundary cooperation, such as objectives, benefits, and difficulties. The main recommendations for implementing better levels of cooperation are the sustained motivation and mutual understanding among those involved. The research highlight the social importance of the natural heritage, the present and future conservation of the cultural and ecological attributes.

Keywords: National States. Nature Conservation. Heritage. Borders.

Introduction

Shared natural heritage and spatial analysis at expanded scales have inspired the creation of new biodiversity management tools such as transboundary protected areas, where cooperation in managing protected areas adjacent to two or more countries is the key element to characterize

¹ Universidade Federal da Integração Latino-Americana, Instituto Latino-Americano de Ciências da Vida e da Natureza, Foz do Iguaçu, PR, Brasil. Pesquisadora associada so Laboratório de Biogeografia e Ecologia Histórica da PUC-RJ. marcela.kropf@unila.edu.br

² Universidade Federal da Integração Latino-Americana, Instituto Latino-americano de Economia, Sociedade e Política, Foz do Iguaçu, PR, Brasil. lilian.ferro@unila.edu.br

³ Pontifícia Universidade Católica do Rio de Janeiro (PUC-RJ), Departamento de Geografia, Rio de Janeiro, RJ, Brasil. rro@puc-rio.com.br

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them (IUCN, 1997; VASILJEVIĆ, 2012). Transboundary cooperation provides several benefits for the protection of a region's natural and cultural heritage (HAMILTON et al., 1996; DANBY 1997; KROPF; OLIVEIRA, 2013; SLOCOMBE; DANBY, 2006; VASILJEVIĆ, 2012). Transboundary management of States' natural heritage poses special challenges as a result of the various institutional frameworks and specific historical processes impacting on distinct levels of public policies for biodiversity conservation.

Each case of joint cooperation for protection and conservation of ecosystems under two or more national sovereignties provides a significant opportunity for acquiring knowledge and conducting comparative analysis in order to select possible adaptive learnings for other cases. Since it is a recent tool, it is important to study the practical reality of management as well as approaches focused on the parallel relationship between cultural and biological diversity.

This study focused on Eastern European border protected areas (Internationally Adjoining Protected Areas - IAPA), considering the ancient establishment of borders in the continent, its pioneering role in nature conservation in border regions – with the largest number of IAPA units in the world (UNEP, 2013) –, the existence of distinct strategies for environmental protection based on the creation of networks, its certification in cooperation for transboundary protected areas, and the existence of the European Union as a supranational organization encouraging cooperation. These characteristics allow us to examine cooperation between the areas in order to contribute to similar efforts in Brazil. The country has extensive borders (15,719 Km) with ten countries – nine South American countries and one French overseas territory (GOES FILHO, 2013) – that share large extensions of relatively preserved forests.

Therefore, this work looks at conservation of protected areas in borders from a comparative perspective that considers the practical reality of cooperative management in the European continent, from the viewpoint

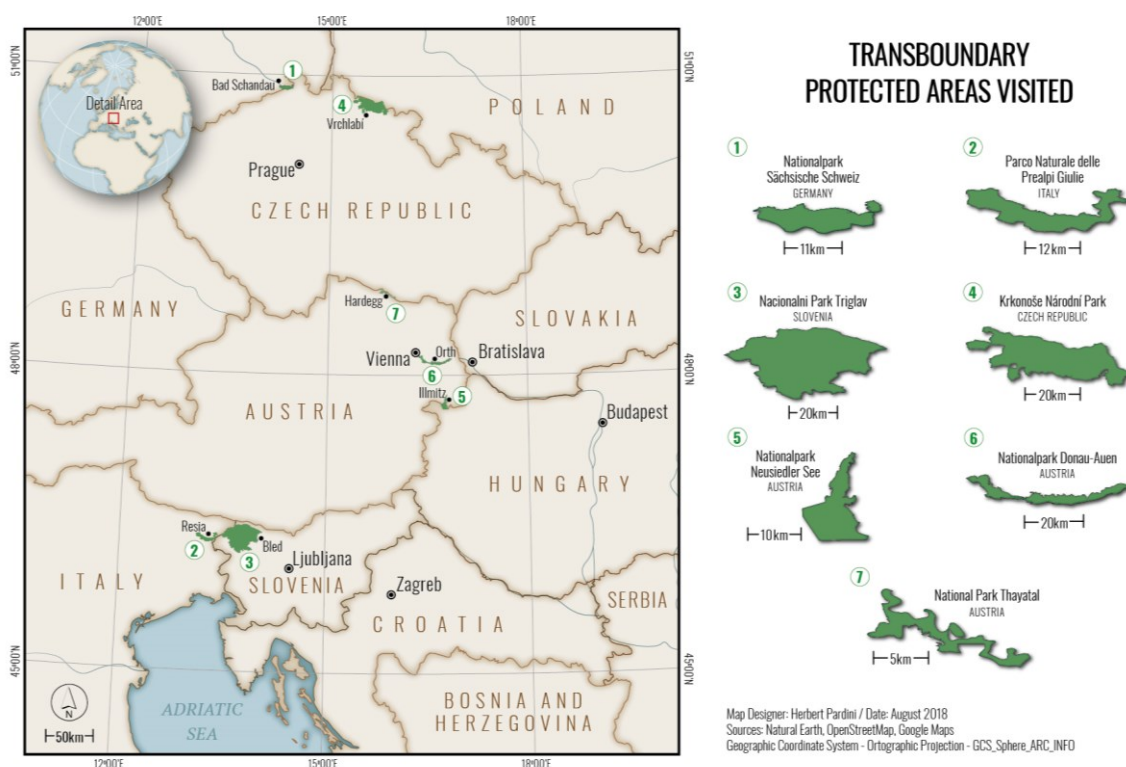
of its managers, which may provide lessons and learnings applicable in Brazil.

Methodology

Based on a literature review, relevant experiences of cooperation between transboundary protected areas were selected, specially areas with cooperation certified by a process called Following Nature Design, implemented by the EUROPARC Federation – an NGO focused on improving management of protected areas in Europe (EUROPARC, 2010). The program is conducted within a network of managers of certified areas called TransParcNet. There are nine certified transboundary complexes (EUROPARC, 2018), five of which were selected for this study after a visit to the institution's headquarters in Regensburg, Germany. Project Danube Parks was also included in the study because of its transnational reach of great relevance in Europe, even though it is not certified.

Seven protected areas and their respective visitor centers (Map 1) were visited from February to May, 2013: Saxon Switzerland National Park (Nationalpark Sächsische Schweiz) in Bad Schandau, Germany; Prealpi Giulie Natural Park (Parco Naturale delle Prealpi Giulie) in Resia, Italy; Triglav National Park (Nationalni Park Triglav) in Bled, Slovenia; Krkonoše National Park (Krkonoše Národní Park) in Vrchlabí, Czech Republic; Neusiedler See National Park (Nationalpark Neusiedler See) in Illmitz, Austria; Thayatal National Park (Nationalpark Thayatal) in Hardegg, Austria; and Donau-Auen National Park (Nationalpark Donau-Auen) in Orth, Austria.

Map 1 - Transboundary Protected Areas visited.



Source: Organized by the authors, 2018.

Interviews with managers of at least one of the protected areas in each border complex provided insight into their perceptions about different aspects of cooperation and situated the subject in their reality. The semi-structured interviews – totaling 14 hours – included open-ended and closed-ended questions, and were later transcribed and translated. Content analysis was conducted, which, according to Bardin (1997), is a set of techniques for analyzing communications to obtain, by systematic and objective procedures of description of message content, indicators (quantitative or otherwise) that allow the inference of knowledge regarding the conditions of production/reception (inferred variables) of these messages. QSR International’s NVivo 10 software (NVIVOQUALITATIVE, 2012) helped categorize content in order to determine distinct views on transboundary cooperation.

The Conservation Paradigm: Local, Continental and Global Characteristics

The Ecosystem Approach is the set of principles and guidelines for integrating management models and other methodologies to deal with the complexity inherent in biodiversity conservation. Its implementation varies according to local, provincial, regional, national or global conditions, since an ecosystem's limits are determined by the unit of analysis. Smith and Maltby (2003) propose five main operational points of the approach: (1) Focus on functional relationships and processes within ecosystems; (2) Enhance benefit sharing; (3) Use adaptive management practices; (4) Carry out management actions on a scale appropriate for the issue being addressed, with decentralization to lowest level; (5) Ensuring intersector cooperation.

This approach helps to determine a regionally designed structure for managing protected areas, even when it goes beyond national boundaries, and it is a strong argument for a strategy for the conservation of ecosystems that cross borders – Transboundary Conservation. Protected area units are the focal points of this landscape integration process – also called Internationally Adjoining Protected Areas (IAPA) (MITTERMEIER et. al., 2005). Creating protected areas on borders, especially when they are adjacent to one another, helps to conserve ecosystems due to the expansion of the territory protected. However, joint work between countries is necessary for achieving integrated management based on protocols for common action, communication and cooperation between the parties.

There are different designations for broader protected areas. A Transboundary Conservation Area / Transboundary Conservation / Conservation Initiative (TCA) designates areas and geographical processes where cross-border cooperation takes place with the specific purpose of

achieving conservation objectives (VASILJEVIĆ, 2012). Transboundary Protected Area (TBPA) is the most accepted term for protected areas adjacent to international boundaries where there is some form of cooperation (SANDWICH *et al.*, 2001). Irving (2004) points out the use of this term for contiguous areas under effectively – officially – shared management. However, legal instruments for formalizing cooperation may vary and are sometimes restricted to joint memoranda issued by the two areas and not necessarily by the respective governments.

The most important factor in defining transboundary protected areas is legitimate cooperation, *i.e.* recognizing that cooperative processes occur between their managers or the general public, even without official agreements between countries (KROPF, OLIVEIRA, 2013). This definition is supported by the existence of distinct levels and forms of cooperation and formalization. There are cases of border protected areas with strong cooperation between managers in their daily work but which are not formalized at government level.

The International Union for Conservation of Nature (IUCN) stresses collaborative management – a process in which a number of stakeholders negotiate responsibility for managing an area (IUCN, 1997) – as a crucial requirement for the area to be conceptually considered as transboundary (VASILJEVIĆ, 2012). There are other definitions for TBPA, and it is important to mention the one adopted by the EUROPARC Federation, according to which a TBPA is an area composed of two or more protected areas located within the territory of two or more States, adjacent to the border, each remaining under the jurisdiction of the corresponding party.

This definition does not explain cooperation, but some studies (DANBY, 1997; SLOCOMBE; DANBY 2006; HAMILTON *et al.*, 1996; VASILJEVIĆ, 2012) show that not cooperating results in lower ability to solve crises or face threats in the areas, higher risk of not achieving conservation goals, lower ability for raising funds, higher expenditure, lower

readiness for possible changes resulting from the uncertainty of climate change, dissociation from ecological relations and its consequences, inefficiency and abuse of illegal activities and insecurity in border zones, increased unwillingness and higher difficulty to solve several conflicts that arise when conservation policies are different in each country.

While cooperation cannot be imposed, it can be suggested, encouraged and nurtured by international organizations and agencies. Institutions can work through education (ideas and values), providing leadership training, technologies, research and events, and broadening relationships (KROPF, 2014). Some organizations stand out: IUCN, with WCPA's group of transboundary conservation specialists; the EUROPARC Federation and its network – TransParcNet – with significant representation in Europe; Peace Parks Foundation in Africa; UNESCO, especially its Heritage Sites and Biosphere Reserves; and other international NGOs such as Conservation International, The Nature Conservancy, UNEP, InWent, WWF and ITTO. The Global Transboundary Conservation Network gathers experts on the subject and connects organizations worldwide (KROPF, 2014; WWF, 2018). These institutions contribute both to the implementation of transboundary cooperation projects and to the development of concepts and approaches. One of their major contributions is the establishment of guidelines and tools for evaluating and monitoring the initiatives (Box 1).

Box 1 – Key guidelines, tools and certification available for transboundary conservation.

Guidelines
1. Transboundary Protected Areas for Peace and Cooperation (SANDWITH <i>et al.</i> , 2001). 2. Beyond Boundaries: Transboundary Natural Resource Management (LINDE <i>et al.</i> , 2001). 3. Security in Planning and Management of TBCAs (BRAACK <i>et al.</i> , 2006). 4. Enhancing our Heritage Toolkit - Assessing management effectiveness of natural World 5. Heritage sites (HOCKINGS <i>et al.</i> , 2008). 5. International cooperation: Guidelines for International Cooperation under the Ramsar Convention on Wetlands - Ramsar Handbook 20 (RAMSAR CONVENTION SECRETARIAT, 2010). 6. Initiating effective transboundary conservation (ERG <i>et al.</i> , 2012 - WWF/WCPA). Some strategies were adapted from <i>Working Across Boundaries: People, Nature, and Regions</i> (McKINNEY; JOHNSON, 2009).
Tools
7. E-learning environment of the Programme of Work on Protected Areas (Module 3 – Available at: https://www.cbd.int/protected/e-learning/default.shtml). - <i>Rapid Assessment and Prioritization of Protected Area Management (RAPPAM) Methodology</i> (ERWIN, 2003). - <i>Review of Experience with Ecological Networks, Corridors and Buffers Zone</i> (BENNETT; MULONGOY, 2006). - <i>Evaluating Effectiveness: A framework for assessing management effectiveness of protected areas</i> (HOCKINGS <i>et al.</i> , 2006).
8. Diagnostic tool for transboundary planning conservation (ERG <i>et al.</i> , 2012 - WWF/WCPA).
Certification
9. Transboundary Parks - Following nature's design (EUROPARC Federation, 2003).

Source: Organized by the authors, 2018.

The Historical and Institutional Context

Transboundary cooperation has expanded in Europe over the last 30 years, but its conception is older. For millennia, political boundaries have been highly manipulated in territorial disputes through intra and intercontinental wars. Because of this history, the establishment of protected areas on borders within Europe is strongly related to historical and political rather than ecological or environmental aspects. The Twentieth Century was one of the most intense times for nations' territorial redefinition in the European continent. Between and after the two World Wars (1914-18; 1939-45), the boundaries of existing national and subnational political units were repeatedly modified.

However, border territorial conflicts in South America triggered frequent international wars in the Nineteenth Century (HALPERIN DONGHI, 2010) and in the early Twentieth Century, but their scale was smaller than that of European wars over the same century. The last decade saw the end of one of the last South American war conflicts: the Brasilia Treaty (1998) put an end to the Cenepa War between Peru and Ecuador (1995-1998). In the same decade, another stage of the long and old Balkan War was under way in Europe. From then on, territorial disputes between National States were settled through bilateral negotiations under regional supranational mediation at UNASUR while those still open were mediated by international organizations for security and justice.

In Europe, on the other hand, the fall of the Iron Curtain, symbolized by the demolition of the Berlin Wall (1989), resulted in the emergence of new national States and the return of other States to the European geographic, political and community scene (HOBSBAWM, 2014). Territorial and separatist conflicts intensified, resulting in the emergence of new States. Due to these historical processes and current territorial conflicts, it can be inferred that joint management of national parks continues to be an important institutional mechanism to help preserving peaceful relations between neighboring countries in that continent. The European managers interviewed confirm this view and stress that the existence of many small countries also contributes to that.

One reason is a very simple one: here in Europe the countries are relatively small. It is a simple and logical reason, a political reason. Everything has to be somehow cross-border and transnationally in Europe, that is one reason. I think in Austria we had a specific situation: the political reason. For many decades after Second World War, Europe was split in West Europe and East Europe. This border region, it was really the Iron Curtain, a no-go area, the area was not developed at all because this border region there always were defenses and the borders were closed. After the Iron Curtain very valuable habits still exist, and the Green Belt showed interest in the importance of these former Iron Curtain areas (Manager 1, Austrian).

Resources, strategies and actions related to transboundary protected areas may reflect views according to which borders should be increasingly less important in order to create a sense of European unity rather than conservation *per se*. According to Ferreira (2005), the foundational treaties that established European integration initially focused only on the economic aspect. By establishing European Community citizenship through the Maastricht Treaty (1992), reinforced by the Treaty of Amsterdam (1997), the European Union sought to create a common identity for the peoples of its Member States, granting rights and duties inherent to the status of citizens of the Community. This includes aspects of a geopolitics that presents conservation as foreign policy, with economic interests behind it. This feeling of unity is reflected in the Schengen Agreement (1985), which is not directly linked to the European Union but ends up influencing it.

One of the managers does not consider that the Schengen Agreement affects the administration of its protected area or the cooperation established. Interestingly, there is a norm establishing that visitors cannot cross the borders between those parks because the design of the management plan allocated the intangible zone in that region. Therefore, the law that governs the parks takes precedence over the Agreement.

The Schengen Agreement is just for you to cross the border, but inside the parks you can't... of course you could walk through the river; actually, it is forbidden not by the Schengen but by the national parks' management. Because both sides have agreed that visitors are allowed on the designated hiking routes. You are not allowed to leave the hiking route... but it does not affect our management (Manager 2, Austrian).

In the European experience, binational management of protected natural areas is partly a direct result of institutional mechanisms of supranational integration. In the South American context, there is also a relationship between institutional mechanisms and binational management agreements for natural protected areas, but that relationship is indirect and

the institutionality created by those mechanisms is distinct. The background of political debates about the need for South American regional political integration can be traced back to the struggles for independence in the early Nineteenth Century. In the Twentieth Century, it was demanded by movements and political leaders in countries of the region, but the debate was canceled in the second half of the century by political instability of military dictatorships, which did not favor regional integration mechanisms because they advocated paradigms for defending territorial integrity that were based on the hypothesis of conflict (PEIXOTO; LOZA, 2006).

From the end of the Nineteenth Century to the second half of the Twentieth Century, border territories and their cities gained geopolitical importance in order to strengthen national territorial sovereignty. In the 1960s and 1990s, the creation of protected natural areas in South American countries reached a peak of about 13% of the region's territory, not including coastal protected areas (GONZÁLEZ-CELIS, 2013). During democratic recovery governments, in turn, the importance of those cities was more related to cross-border commercial integration goals (PEIXOTO; LOZA, 2006).

Similarly to what happened in Europe, institutionalized mechanisms for transnational integration were created in South America in the 1990s. This is the case of the Southern Common Market (MERCOSUR) created by the Treaty of Asunción (1991), focused on customs integration and easier transit of goods and services. However, it did not include any concerns about joint management of the natural heritage of founding States Parties (Brazil, Argentina, Paraguay, and Uruguay) or conservation policies specific to common ecosystems. Chapter III of its Framework Agreement on the Environment (2001) speaks of 'Cooperation in environmental issues' between Member States. The focus is on 'harmonizing environmental legislation' and there is no explicit mention of cooperation in natural cross-border areas.

In the early Twenty-First Century, broader integration goals were encouraged by progressive governments in the region to favor political, social and cultural integration. The creation of UNASUR (Union of South American Nations) in 2007 included conservation concerns and interests to create mechanisms similar to the Schengen Agreement, but focused on the ‘defense of natural resources’ in the area of ‘regional security’ against the possibility of exploitation by other countries or regional blocks of the world (UNASUR, 2015).

Applicability and Recommendations

Virtually all managers agree that biodiversity conservation is the main goal when these areas are created, for several reasons: for their protection under the view that ‘nature has no borders’; for their ecological value; for enforcing its inhabitants’ right to exist; for safeguarding important resources of the region; or yet for ensuring an area size that favors the values mentioned above. Other goals include: Establishing Partnerships focused on cooperation to conserve and cooperate to create a common identity. Common Heritage and History; Income and Tourism also appeared as goals in managers’ speeches, although not as generally.

They were also asked to indicate, in order of importance, the goals, benefit areas and obstacles pointed out by Lim and Rosen (2012) in a survey conducted with members of a group of conservation specialists. Biodiversity Conservation remains at the top, but that view is not unanimous. Two managers mentioned Sustainable Development and a third one pointed at Cooperation as primary goals. These two goals also appeared in second place. There was no consensus regarding the other goals. However, Poverty Alleviation and Restitution of Land Tenure seem to make less sense for managers as goals when creating transboundary protected areas, probably because they are not as important in the European context as they would be

in Brazil.

Although the benefits were directly related to the goals, the answers were not as homogeneous regarding biodiversity, that is, managers consider biodiversity conservation as the main goal for creating a transboundary protected area, but People are the main beneficiaries. Benefits for People include: a) individual benefits that enable higher self-awareness and learning; b) benefits to one's relationship with peers, through exchange and friendship; and c) benefits for visitors, by conveying information. Research, Management, Economy seem to be equally benefited and, finally, the Political sphere would not benefit so much from cooperation.

According to managers, the greatest difficulties in managing a transboundary protected area are aspects that can make work more tiresome as a result of bureaucracy and differences in coordinating actions of the various political institutions. Distinct legal frameworks, conservation categories, resources as well as the language barrier, especially between Czech and German speakers, were also included. Compared to the difficulties pointed out by Lim and Rose (2012), Political indifference and Different legal resources were seen as the major obstacles. Differences in culture, levels of professional competence and stages of economic development of each country involved were considered less important.

Enthusiasm or motivation for transboundary cooperation varies from person to person and are not homogeneous among respondents. This shows awareness that, in everyday life, one must also deal with interpersonal differences that change over time. However, by and large, managers have positive views of their partners, and it is possible to see motivational contagion on both sides of the border and its importance for the maintenance of the transboundary initiative.

Managers' unanimous impressions about the certification process were that it came about as a consequence of pre-existing cooperation based on real needs to solve problems related to conservation of protected areas.

They stress that certification is more important because of the process triggered for establishing a self-assessment system than the certificate itself. Regarding this aspect, one of the managers mentioned that certification keeps cooperation at the institution, so that changes in management do not compromise the initiative. Therefore it remains independent of the distinct interests that may arise.

The managers of Triglav, Parco Prealpi Giulie and Krokonoše reported that the local population participates in management through the parks' official councils, which are mostly advisory bodies. It is not possible to ascertain whether there are no councils in other areas or managers did not mention them – for instance, while the manager of Krokonoše claims that all parks in the Czech Republic have councils, the manager of Bohemian – also a Czech park – did not mention it. For him, participation does not take place directly, but rather through occasional consultation such as that made during the certification process.

In the case of the Donau Auen Park, participation would only occur to the extent that people visit the area of the park and at sponsored events of cultural or scientific nature. Its manager considers it difficult to include the population in decisions related to a transnational project due to its inherent complexity. In another Austrian park – the Neusiedler See, which is a group of private reserves of national heritage (RPPN, in its Portuguese acronym), when compared to the Brazilian system, the population directly affects management since land owners join the area freely and spontaneously and, according to the manager, when a contract is established they know the limits and possibilities for land use.

The subject of Conflict was mentioned by the manager of Krokonoše, who raised interesting issues about the reality experienced in the park in its relations to the community and the solution found to minimize tensions linked to use of space. He highlighted the following subjects: Land dispute, Fear of expropriation by the State, and Lack of dialogue as the main causes

of conflict. On the other hand, Transparency in actions, Evocation of conflict, Managers' direct dialogue with the community, and Definition of rules seem to be the solutions found to establish an alliance to manage the area.

Managers have conflicting opinions about the importance of nature conservation in their countries. There are good laws and resources in place, but when economic issues come into play – such as a crisis or a development being implemented – the government favors them over conservation. Another point mentioned is conservation as a driver of tourism, which has its economic appeal. Lastly, changes in the political situation and top-down decisions by high government spheres over lower levels and the population were pointed out as obstacles to implementing conservation actions. Managers recommended aspects they considered essential to those interested in transboundary initiatives: elements of interaction between people, such as Motivation and Perception about neighbors, as well as a mutual understanding of goals and needs, in addition to the political context.

Knowing these certified transboundary protected areas and interviewing their managers helps to broaden our understanding of cooperation and ascribes meaning to concepts that are sometimes abstract, such as cooperation and heritage. This may be useful for studies on binational cooperative management of local transboundary protected areas, such as the Iguazú and Iguaçu National Parks, which were created in 1934 and 1939 respectively and are located on the Argentina-Brazil border. Together they are home to the largest remnant of semideciduous seasonal forest, crossed by the Iguazu River, which marks the border between the two countries. Because of its high biological variability, coupled with the scenic beauty of the Iguazu Falls, the parks were declared World Natural Heritage Sites in 1984 (Iguazú) and 1986 (Iguaçu).

Kropf and Eleuterio (2017) found that the managers of these parks see natural heritage only as an ecological entity, which, according to

Zanirato and Ribeiro (2006), is less characterized by providing an identity to those who live there than by the attributes that provide scenic beauty and the possibility of new experiences. It should be emphasized that the choice of the concept of 'natural heritage' over 'natural resource' is epistemological. The latter implies mercantilization and subservience of nature to production of goods and services. The idea of conservation is more coherent with the concept of 'heritage', since it is shared between generations (FERRO, 2011).

Such definition of cultural or natural heritage is complex because it is a representation of the dichotomy of the society-nature relationship. After all, what is a natural site when we know that nature itself is a social construction? According to Zanirato and Ribeiro (2006), it includes material and immaterial, tangible and intangible assets that comprise the cultural heritage, expressions or significant testimony of human culture, which are essential for the formation of a people's cultural identity. For that is even truer when it comes to natural heritage since safeguarding material resources and traditional knowledge about the uses of these resources is essential to guarantee a life of dignity for the human population.

Pelegri (2006) also stresses that the concept of heritage is presented in a fragmented way, but he points to a view of interrelated cultural and environmental heritage. That is to say, regardless of its respective categories, all heritage is configured and engendered through its relations with culture and the environment, including social dimensions of meanings in that environmental heritage that derive from the historical process, with a dynamic perspective and connotation that fosters awareness about the common use of the environment and especially collective responsibility for space.

Final Considerations

The strategy of establishing protected areas on European borders is

related to three factors: (1) the histories of the wars between countries; (2) the existence of few forest remnants in those places, which used to be human voids; and (3) the threat of extinction of many species. The common history of European countries is connected by conflicts resulting from territorial disputes between and within States. Transnational cooperative management of transboundary protected areas seems to help create a common goal, with cooperation and peace promotion being important links in this relationship. In the geopolitical aspect, protected areas for conservation of natural heritage under cooperative management can contribute to consolidate peaceful relations between European and South American national states, since they structurally involve management of territories beyond natural heritage and the possibility of better coexistence between diverse cultural, linguistic and ethnic backgrounds.

Cooperation between areas focuses on biodiversity conservation as result of sharing the same habitat. However, the greatest benefits seem to be in exchanging experiences among managers, removing them from isolation and creating an intercultural learning network. Managers perceive the socio-economic dimension of partnerships as significant but not as much as the benefits of intercultural partnership. The driving forces for overcoming difficulties are awareness of the importance of joint work and a sense of unity. One important aspect was the need for a legal definition and a proper political context to maintain cooperative initiatives.

Certification as it is conducted by the EUROPARC Federation, formalizing pre-existing links, helps to consolidate a cooperative identity that is the driving force to maintain relations over time.

The value placed on regional and local culture contributes to maintain the identity of each area, resulting in a truly socio-biodiverse landscape. In a situation of growing multiculturalism, the outdated idea of a culturally and ethnically homogenous society fits only in conservative and xenophobic politics. Regardless of the difficulties and challenges described here, the

experience of shared management in transboundary conservation areas reaffirms the importance of landscape and its management under a broad policy such as the European Union's, which seeks to remove many of its barriers and borders.

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