

---

# Transboundary Protected Areas, Connections and Conservation

*D. Scott Slocombe<sup>1</sup> and Ryan K. Danby<sup>2</sup>*

<sup>1</sup>Department of Geography and Environmental Studies  
Wilfrid Laurier University, Waterloo, ON N2L3C5  
sslocomb@wlu.ca

<sup>2</sup>Department of Biological Sciences  
University of Alberta, Edmonton, AB T6G2E9  
rdanby@ualberta.ca

## Abstract

*Transboundary parks and protected areas (TBPPAs) have been the focus of increasing attention in recent years. Typologies and inventories are ongoing, but there are many types from peace parks to national and provincial parks to shared conservation areas and heritage designations. Transboundary areas may span international, interprovincial, or regional boundaries, or simply include different types of protected areas. Conservation across boundaries and borders raises a series of challenges and opportunities, among them integrating goals and objectives, management activities, tourism planning and control, education and interpretation, while maintaining separate identity, responsibilities, and unique character. Transboundary management may improve conservation effectiveness, offer opportunities for more participation in management, and improve local benefits and support for conservation, among other political, social and ecological benefits. None of this is easy and a series of principles and best practices have been identified by IUCN The World Conservation Union and others. Fostering cooperation of different kinds is a particular priority and challenge, and illustrated from our experience in the St. Elias region of North America, and elsewhere.*

## Introduction

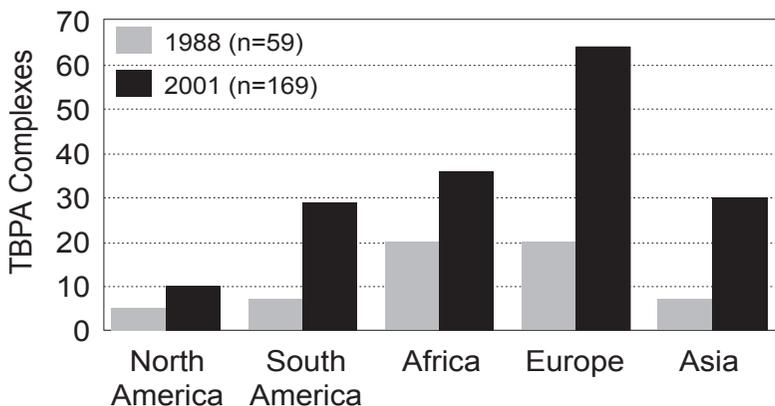
Transboundary protected areas (TBPAs), like other areas of transboundary environmental management and policy, have seen growing conceptual and practical interest in recent decades. Along with this has come increased recognition of the significance of, and interest in the experience with, transboundary protected areas. There are a growing number of published case studies but, until very recently, synthetic/academic treatments of TBPA as a

whole have been less common. We build on the review by Danby (1997) by surveying some of the experience gained over the last 10 years, to provide an overview of definitions, experience with, and lessons from cooperative management of transboundary protected areas.

Transboundary protected areas go back to the early twentieth century. Their origins can be categorized as intentional and simultaneous, intentional but temporally offset, or unintentional (Danby 1997). Waterton (1895) and Glacier (1910) National Parks, in Alberta, Canada and Montana, USA are commonly considered the first international transboundary parks, and were also jointly designated the first international peace park in 1932. European transboundary protected areas followed soon after, while elsewhere in the world most examples are from the 1970s and later. Some transboundary protected areas are very well known; others less so, but their numbers have grown steadily in recent decades (see Figure 1) and there are at least 188 spanning 112 countries at present (Zbiczy 2001). The inclusion of TBPA actions in the Programme of Work on Protected Areas of the 7<sup>th</sup> Conference of Parties to the Convention on Biological Diversity has also given additional impetus to their continued development.

Parks and protected areas are the cornerstone of conservation strategies worldwide. The benefits of such areas are well recognized and include natural and cultural heritage preservation, tourism and recreation opportunities, education and interpretation opportunities, and spiritual and aesthetic development. These potential benefits also extend to transboundary protected areas. But there are also emergent benefits specific to TBPAs. Danby (1997) argued that peace and

**Figure 1. World-wide growth in transboundary protected areas, 1988-2001, based on data provided in Zbiczy, 2001. Numbers will invariably differ slightly depending on the definition used (cf. Zimmerer *et al.* 2004). Regardless, all authorities note the rapid growth in both numbers and total area over the last two decades. NB: Central America included in South America; Oceania included in Asia.**



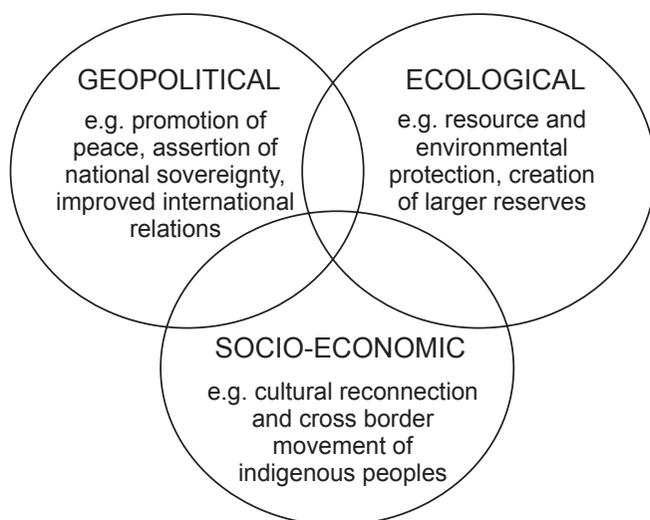
the enlargement of reserves were the two primary emergent benefits. Others include improved effectiveness of protected areas, improved dialogue between protected areas, promotion of cultural connections, and opportunities for mutual learning (see Figure 2).

### What are Transboundary Protected Areas?

The conventional definition of a transboundary protected area (TBPA) is typified by the definition adopted by the IUCN as “an area of land and/or sea that straddles one or more borders between states, sub-national units such as provinces and regions, autonomous areas and/or areas beyond the limit of national sovereignty or jurisdiction, whose constituent parts are especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed cooperatively through legal or other effective means” (Sandwith *et al.* 2001: 3). International designations such as *World Heritage Sites* and *Biosphere Reserves* may be superimposed.

A number of other terms are in use, including *transboundary conservation areas*, *parks for peace* or *peace parks*, and *transboundary migratory corridors* (Mittermeier *et al.* 2005). These terms reflect some of the emergent benefits associated with TBPA's but are also indicative of a broader definition of conservation that focuses on border areas in general, not just on adjoining protected areas. Thus, as the benefits of regional-scale conservation become more widely accepted (e.g. Sportza 1999), there has been a slight expansion of the conventional definition of a TBPA to include a wide range of protected area types, as well as proximal, but not necessarily adjoining, protected areas in regions of international conservation concern. IUCN has drafted the following

**Figure 2 – The multiple, overlapping benefits of transboundary protected area complexes.**

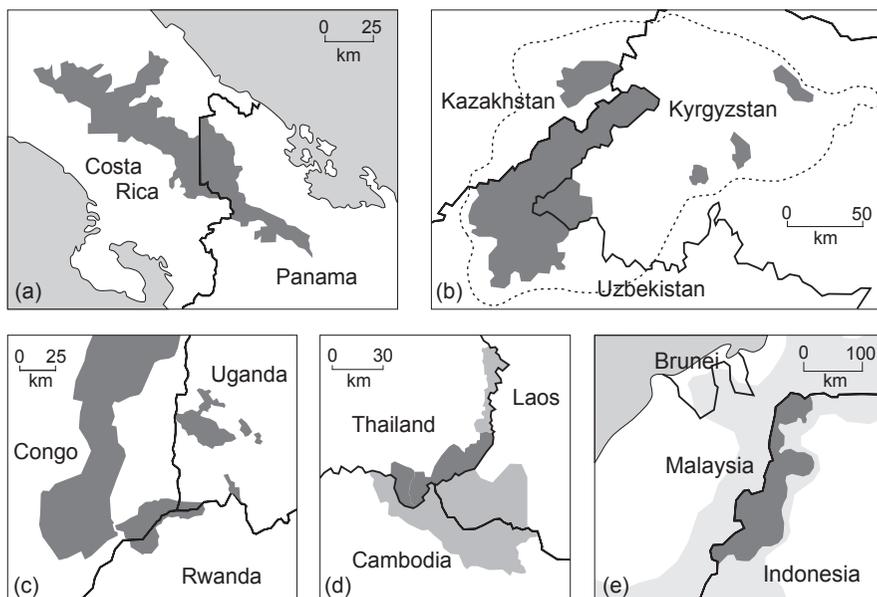


typology of categories to include such areas. Examples of each are illustrated in Figure 3.

- a) *Two or more contiguous protected areas across a national boundary:* this is the classic model of a transboundary protected area. A well known example, La Amistad International Park shared by Costa Rica and Panama (Weed 1994) is illustrated in Figure 3a.
- b) *A cluster of protected areas and the intervening land:* Combines strict protection with sustainable management in buffer zones and other parts of the landscape. The example in Figure 3b is the West Tien Shan Biodiversity Conservation Project (MacKinnon *et al.* 2005) involving several protected areas and adjoining unprotected lands in Uzbekistan, Kazakhstan and the Krygyz Republic.
- c) *A cluster of separated protected areas without intervening land:* Some transboundary initiatives involve protected areas that are geographically separated but share common issues and are part of the same larger ecosystem. The Great Lakes Region of Africa involving Burundi, Democratic Republic of Congo, and Rwanda (Rainer *et al.* 2003) is the example used in Figure 3c.
- d) *A trans-border area including proposed protected areas:* some transboundary conservation initiatives have been initiated in the hope that formal protection on one side of the border will encourage establishment of an adjoining protected area on other side. For example, the Pha Taem Transborder Initiative includes existing protected areas in Thailand as well as proposals for several others in Laos and Cambodia (MacKinnon 1993, Figure 3d).
- e) *Protected area in one country aided by sympathetic land use over the border:* In instances where a protected area exists on one side of a border there may be no potential for establishing an adjoining (or even proximal) protected area on the other. Compatible land and resource management may occur on the unprotected side in these instances without formal protection. Sustainable forest management in an area of Malaysia adjacent to Kayan Mentarang National Park in Indonesia is an example of this type of TBPA (WWF 2005, Figure 3e).

Within this broader context, transboundary initiatives may cover a range of goals including ecosystem or species preservation, peace, or sustainable resource management in general. The goals of such areas may be as diverse as their constituent building blocks. Yet the common feature of all these definitions and typologies is that they focus on conservation across political borders, and are anchored in at least one, but usually more, protected areas. Although much attention is directed to international transboundary protected area complexes, park complexes crossing subnational boundaries such as the Australian Alps National Parks (see Crabb 2003), or more complex mixes of cooperative public and private land management such as the International Sonoran Desert Alliance

**Figure 3. Examples of the five draft types of transborder protected areas identified by IUCN. A single TBPA may belong to more than one category. (A) Two or more contiguous protected areas across a national boundary, (B) a cluster of protected areas and the intervening land (indicated by dashed line), (C) a cluster of separated protected areas without intervening land, (D) a transborder area including proposed protected areas (in lighter shading), (E) a protected area in one country aided by sympathetic land use over the border (indicated by lighter shading).**



or the Yellowstone to Yukon corridor initiative (see Chester 2006) are also significant.

Other interesting examples of unique TBPA initiatives include the Meso-American Biological Corridor and the Korean DMZ. The establishment of frontier protected areas (paired and unpaired) was used to help broker peace in Central America during the 1980s (see Weed 1994). These protected areas are now cornerstones in the Mesoamerican Biological Corridor, which has evolved from the original focus of connectivity through habitat corridors to a broader, more inclusive focus on fostering regional environmental sustainability (Miller *et al.* 2001).

The Korean DMZ is an example of the ongoing use of TBPA to promote peace. The 4 x 250 km DMZ was established by the Korean War armistice agreement of 1953. The DMZ is now highly ecologically significant, undisturbed and uninhabited, rich in biodiversity and rare species (Westing 1998). It is also historically significant, and a living war memorial with many thousands buried

within it. There are ongoing efforts to have North and South Korea formally recognize the area as a peace park, and there has been high profile involvement from the likes of Ted Turner and E.O. Wilson.

### **Broad Challenges and Approaches**

There has been a number of surveys and analyses of transboundary protected areas in the last decade (e.g. Hamilton *et al.* 1996, Zbicz 1999, Sandwith *et al.* 2001, Goodale *et al.* 2003, Mittermeier *et al.* 2005; Ali 2007). Individually and collectively, these treatments illustrate the extraordinary political, social and ecological diversity associated with transboundary protected areas worldwide. Still, a survey of this literature also suggests that there are similarities in the challenges they face and that there are broader lessons that can be learned from experience.

Common challenges include gaining local acceptance; cross-border cooperation and communication; integrating goals and objectives, management activities, tourism planning and control, and education and interpretation; while simultaneously maintaining separate identity, responsibilities, and unique character. All of which adds up to it being a particular challenge to achieve substantive cooperation. Indeed, although more than 80% of all international TBPA's involve some form of transboundary cooperation, most of it occurs at very low levels (Zbicz, 2003). There are also needs to develop more attention and priority on sub-national transboundary protected area complexes, in contrast to international complexes which tend to get much of the attention.

In response to these challenges, the IUCN World Commission on Protected Areas' Best Practice Guidelines (Sandwith, *et al.* 2001) emphasize the need to: identify and promote common values, involve and benefit local people, obtain and maintain support of decision-makers, promote coordinated and co-operative activities, achieve coordinated planning and protected area development, develop cooperative agreements, work toward funding sustainability, monitor and assess progress, and deal with tension or armed conflict.

Somewhat similarly, the EUROPARC Federation (2003) certification guidelines stress several areas for cross-border activity: nature and landscape conservation, education and communication, recreation and sustainable tourism, research and monitoring, and mutual understanding and promotion of peace. Criteria for assessing progress include: development of a common vision for the future of the transboundary area; the creation of official cooperation agreements and joint work plans; organization of cooperation between staff of the protected areas, including regular communications, joint decision-making, joint field work, and the sharing of data and experience; development of joint projects; and secure funding arrangements for transboundary work. Designation of TBPA's as Biosphere Reserves has helped achieve success on many of these in Europe (Fall and Thiry 2003).

## **Building Cooperation**

A central challenge for TBPAs is building cooperation and collaboration (Zbicz 1999). This subject is worth elaborating slightly, and was a key focus of our long-term studies of the St. Elias mountain parks (Danby and Slocombe 2005, Danby and Slocombe 2002, Slocombe & Danby 2005; and cf. Sandwith *et al* 2001; Zbicz 2001). These are large “wilderness” parks, in the northwest of North America where Alaska, Yukon and British Columbia meet. They are international, and physically, biologically and socio-economically complex, including strong First Nation, Territory/State and NGO interests. There are multiple protected area designations, which have seen extensive change in management approach over the thirty year history of the main national parks and protected areas. There are both substantial differences and commonalities between the different parks’ and jurisdictions’ experience. We identified several levels of cooperation that occur, ranging from simple and informal communication to formal and complex international agreements. Independent of our work, Zbicz (2003) identified similar categories in a group of other TBPAs, indicating that these levels are not unique to the St. Elias Region but are emergent worldwide. The five different levels of managerial cooperation we identified are:

### **1. Communication**

General communication and information sharing between agencies responsible for managing a shared resource is the most common type of management cooperation. Communication varies from simple telephone conversations between peers in different agencies to more formal meetings involving several different agencies. This is also the level at which other, non-managerial, stakeholders are most often involved (e.g. ENGOs).

### **2. Coordination and Collaboration**

This comprises a wide variety of relationships including activity coordination, joint programs, collaborative research and monitoring, infrastructure and resource sharing.

Examples of interpark coordination and collaboration include joint enforcement, search and rescue, and transborder river recreation management. It is often driven by efficiency and operational needs and usually directed by Memorandum of Understandings (MOUs) rather than legislated agreements.

### **3. Cooperative Management**

This usually entails a more formal agreement between two or more resource management agencies. These agreements are often initiated because of a common management issue or shared resource, or due to instances of negative environmental impacts across jurisdictional boundaries. The key difference is that decision making is shared.

#### **4. Joint Management**

The most formal and complex level, placing heavy reliance on one or more formal agreements to maintain a specific arrangement. These agreements are usually very detailed, often have independent budgets, and are typically mandated through legislation (e.g. park management boards).

#### **5. International Agreements**

Generally these are initiated outside of the region, but directed by formal agreements that the states are signatories to and, therefore, to which management agencies must adhere (e.g. World Heritage Convention, International Migratory Bird Convention).

Beyond this typology, there are a number of core issues and dimensions to fostering greater cooperation. Key steps include building cooperation to get beyond issue-driven cooperation, e.g. on enforcement, search and rescue, and education and interpretation. Overcoming staffing differences, especially by developing some equivalent, lead, staff positions can be a big step forward, and can help TBPA's to build on commonalities (of experience, and of often common biophysical, cultural and historical contexts), within the inevitable context of time and resource constraints. It is also important to recognize the range of possible frameworks of cooperation: from simple, informal MOUs to broad formal alliances and binational conventions and legislation. Start slowly, evaluate where cooperation already occurs and where greater efforts are best focused (don't assume everywhere), do try to involve the managers of unprotected lands, and seek to foster information integration across boundaries as a critical foundation for success.

#### **Conclusions**

As the number and extent of protected areas continues to increase worldwide, experience with TBPA's is also increasing. Despite challenges, this is clearly a positive endeavour with benefits extending beyond those associated with the constituent parts. However, just because two or more areas constitute a TBPA doesn't automatically mean that their management should be merged and fully integrated. It is necessary to evaluate where cooperation is best focused. This is important given that there will always be limited resources and decisions must be made about where best to invest these (time, money, expertise). An important step in the assessment of any transboundary initiative is to take stock of shared features and processes (e.g. transboundary wildlife movements, transboundary rivers, common species) and common issues (e.g. increasing tourism pressure, invasive species). This helps identify where cooperation would be most beneficial to all parties, but also where it would be most effective. In addition, it is important to take stock of institutional arrangements such as conflicting and complementary protected area mandates and similar or complementary management strategies and frameworks.

It is also often effective to take small steps toward cooperation, and practical steps, to start. These may address cooperation within, as well as beyond, park boundaries, and projects to address regional, as well as protected areas, concerns. Formalization can aid commitment and recognition at higher institutional levels, up to and including international protected area designations. While formalization of cooperative efforts of various kinds can be contentious, ultimately (although certainly not always initially) there are good reasons to consider it necessary if cooperation is going to move beyond simple levels (e.g. regular communication). The reasons are many, but include regularly changing staff (and therefore a frequent “start-over” period) and the increasing time demands of management (which mean things that don’t *have* to get done are made nonpriorities). Essentially, formalization shows commitment to transboundary cooperation, illustrates that it is a high priority, and thus encourages broad, active support of TBPA initiatives.

## References

- Ali, S.H., ed. Forthcoming, 2007. *Peace Parks: Conservation and Conflict Resolution*. MIT Press, Cambridge, MA.
- Chester, C.C. 2006. *Conservation Across Borders: Biodiversity in an Interdependent World*. Island Press, Washington, DC.
- Crabb, P. 2003. *Managing the Australian Alps: A History of Cooperative Management of the Australian Alps National Parks*. Australian Alps Liaison Committee and Centre for Resource and Environmental Studies, Australian National University, Canberra, ACT.
- Danby, R.K. 1997. International transborder protected areas: experience, benefits, and opportunities. *Environments* 25(1): 3-14.
- Danby, R.K. and D.S. Slocombe. 2002. Protected areas and intergovernmental cooperation in the St. Elias region. *Natural Resources Journal* 42(2): 247-82.
- Danby, R.K. and D.S. Slocombe. 2005. Regional ecology, ecosystem geography and transboundary protected areas in the St. Elias Mountains. *Ecological Applications* 15(2): 405-422.
- EUROPARC Federation. 2003. *Transboundary Parks - Following Nature’s Design: A Tool for Improving Transboundary Cooperation in Europe*. Grafenau, Germany.
- Fall, J. and E. Thiry. 2003. *Five Transboundary Biosphere Reserves in Europe*. Biosphere Reserves Technical Note SC-2003/WS/29. UNESCO, Paris.
- Goodale, U.M., A.G. Lanfer, M.J. Stern, C. Margoluis, and M. Fladeland, eds. 2003. *Transboundary Protected Areas: The Viability of Regional Conservation Strategies*. Haworth Press, New York.
- Hamilton, L.S., J.C. Mackay, G.L. Worboys, R.A. Jones, G.B. Manson, eds. 1996. *Transborder Protected Area Cooperation*. IUCN, Gland & Australian Alps Liaison Committee, Canberra, ACT.
- MacKinnon, J.R. 1993. An Indochina tri-state reserve: the practical challenges, pp. 77-85 in A.H. Westing, ed. *Transfrontier Reserves for Peace and Nature -*

- A Contribution to Global Security*. United Nations Environment Program, Nairobi.
- MacKinnon, K, P. Brylski, and A. Kiss. 2005. West Tien Shan: At the Crossroads of Central Asia, pp. 285-89 in R.A. Mittermeier, C.F. Kormos, C.G. Mittermeier, P.R. Gil, T. Sandwith, and C. Besancon, eds. *Transboundary Conservation: A New Vision for Protected Areas*. CEMEX/Agrupacion Sierra Madre/Conservation International, Mexico City.
- Miller, K., E. Chang, and N. Johnson. 2001. *Defining Common Ground for the Mesoamerican Biological Corridor*. World Resources Institute, Washington.
- Mittermeier, R.A., C.F. Kormos, C.G. Mittermeier, P.R. Gil, T. Sandwith, and C. Besancon, (Eds.) 2005. *Transboundary Conservation: A New Vision for Protected Areas*. CEMEX/ASM/Conservation International, Mexico City.
- Rainer, H., S. Asuma, M. Gray, J. Kalper, A. Kayitare, E. Rutagarama, M. Sivha, and A. Lanjouw. 2003. Regional conservation in the Virunga-Bwindi Region: the impact of transfrontier collaboration through the Experiences of the International Gorilla Conservation Programme. *Journal of Sustainable Forestry* 17 (1/2): 189-204.
- Sandwith, T.S., C. Shine, L. Hamilton, and D. Sheppard. 2001. *Transboundary Protected Areas for Peace and Co-operation*. IUCN WCPA Best Practice Protected Areas Guidelines 7, Cambridge, UK.
- Slocombe, D.S. and R.K. Danby. 2005. The Alaska-Yukon-British Columbia borderlands: the world's largest transboundary protected area complex, pp. 118-26 in R.A. Mittermeier, C.F. Kormos, C.G. Mittermeier, P.R. Gil, T. Sandwith, and C. Besancon, eds. *Transboundary Conservation: A New Vision for Protected Areas*. CEMEX/Agrupacion Sierra Madre/Conservation International, Mexico City.
- Sportza, L. M. 1999. Regional approaches to planning for protected areas and conservation. *Environments* 27(3): 1-14.
- Weed, T. J. 1994. Central America's "peace parks" and regional conflict resolution. *International Environmental Affairs* 6(2): 175-190.
- Westing, A. H. 1998. A transfrontier reserve for peace and nature on the Korean peninsula. *International Environmental Affairs* 10(1): 8-17.
- World Wildlife Fund (WWF). 2005. *Heart of Borneo: Three Countries, One Conservation Vision*. WWF, Washington.
- Zbicz, D.C. 1999. Transboundary co-operation between internationally adjoining protected areas. pp. 199-204 in D.S. Harmon, ed. *On the Frontiers of Conservation: Proc's of the 10th Conference on Research and Resource Management in Parks and on Public Lands*. George Wright Society, MI.
- Zbicz, D.C. 2001. Global list of complexes of internationally adjoining protected areas (2001). pp. 55-75 In *Parks for Peace: Transboundary Protected Areas for Peace and Cooperation*. Trevor Sandwith, Claire Shine, Larry Hamilton, and David Shepard, eds. IUCN-The World Conservation Union, Gland, Switzerland.
- Zbicz, D.C. 2003. Imposing transboundary conservation: cooperation between in-

ternationally adjoining protected areas. *Journal of Sustainable Forestry* 17 (1/2): 19-34.

Zimmerer, K.S., R.E. Galt and M.V. Buck. 2004. Globalization and multi-spatial trends in the coverage of protected-area conservation (1980–2000). *Ambio* 33(8) 520-529.

