



University of Calgary

PRISM: University of Calgary's Digital Repository

University of Calgary Press

University of Calgary Press Open Access Books

2012

Parks, peace, and partnership: global initiatives in transboundary conservation

University of Calgary Press

"Parks, peace, and partnership: global initiatives in transboundary conservation". Michael S. Quinn, Len Broberg, and Wayne Freimund, Eds. Series: Energy, ecology, and the environment series, No. 4. University of Calgary Press, Calgary, Alberta, 2012.

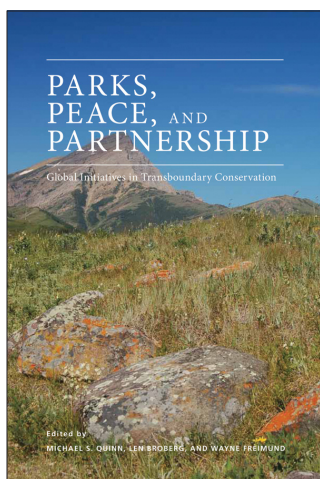
<http://hdl.handle.net/1880/49304>

book

<http://creativecommons.org/licenses/by-nc-nd/3.0/>

Attribution Non-Commercial No Derivatives 3.0 Unported

Downloaded from PRISM: <https://prism.ucalgary.ca>



PARKS, PEACE, AND PARTNERSHIP: GLOBAL INITIATIVES IN TRANSBOUNDARY CONSERVATION

Edited by Michael S. Quinn, Len Broberg,
and Wayne Freimund

ISBN 978-1-55238-643-9

THIS BOOK IS AN OPEN ACCESS E-BOOK. It is an electronic version of a book that can be purchased in physical form through any bookseller or on-line retailer, or from our distributors. Please support this open access publication by requesting that your university purchase a print copy of this book, or by purchasing a copy yourself. If you have any questions, please contact us at ucpress@ucalgary.ca

Cover Art: The artwork on the cover of this book is not open access and falls under traditional copyright provisions; it cannot be reproduced in any way without written permission of the artists and their agents. The cover can be displayed as a complete cover image for the purposes of publicizing this work, but the artwork cannot be extracted from the context of the cover of this specific work without breaching the artist's copyright.

COPYRIGHT NOTICE: This open-access work is published under a Creative Commons licence.

This means that you are free to copy, distribute, display or perform the work as long as you clearly attribute the work to its authors and publisher, that you do not use this work for any commercial gain in any form, and that you in no way alter, transform, or build on the work outside of its use in normal academic scholarship without our express permission. If you want to reuse or distribute the work, you must inform its new audience of the licence terms of this work. For more information, see details of the Creative Commons licence at: <http://creativecommons.org/licenses/by-nc-nd/3.0/>

UNDER THE CREATIVE COMMONS LICENCE YOU **MAY**:

- read and store this document free of charge;
- distribute it for personal use free of charge;
- print sections of the work for personal use;
- read or perform parts of the work in a context where no financial transactions take place.

UNDER THE CREATIVE COMMONS LICENCE YOU **MAY NOT**:

- gain financially from the work in any way;
- sell the work or seek monies in relation to the distribution of the work;
- use the work in any commercial activity of any kind;
- profit a third party indirectly via use or distribution of the work;
- distribute in or through a commercial body (with the exception of academic usage within educational institutions such as schools and universities);
- reproduce, distribute, or store the cover image outside of its function as a cover of this work;
- alter or build on the work outside of normal academic scholarship.

Transboundary Conservation Management, Research, and Learning: A South African and United States Perspective

Wayne Freimund and Robert Fincham

A CHALLENGE OF TRANSBOUNDARY CONSERVATION

The Waterton-Glacier International Peace Park is an icon of collaboration. Not only does one find ready cooperation between the formal conservation agencies in the contemporary peace park, but civic society has been a critical factor since its inception. It was Rotary International and its chapters in Alberta and Montana that resulted in the ceremonious joining of the two parks in 1932 (Mittermeier et al. 2005). Since then a range of other government and non-government agencies have added their support to this and other international transboundary conservation areas. In southern Africa, and just over sixty years later in 1997, Nelson Mandela endorsed the collaborative idiom of transboundary conservation at the

launch of the Peace Parks Foundation and the first transboundary conservation area in the region:

I know of no political movement, no philosophy, and no ideology which does not agree with the peace parks concept as we see it going into fruition today. It is a concept that can be embraced by all. In a world beset by conflict and division, peace is one of the cornerstones of the future. Peace parks are building blocks in this process, not only in our region, but potentially the entire world. (Peace Parks Foundation 2010)

In spite of the success of Waterton-Glacier International Peace Park as a transboundary entity and the utterance of the revered Nelson Mandela, the imperatives for transboundary conservation remain contentious and in many parts of the world are invariably juxtaposed with tenuous financial support, rapid social and ecological change, and the broader expectations, competition and demands that emanate from local, national, and global role players. The contentious nature is epitomized in the comment from Wolmer (2003, 10), who maintains that transboundary natural resource management “is the latest in a line of top-down, market orientated [initiatives that have been] ... pushed on Africa since the 1980s by international bureaucracies ... and the private sector.” He quotes an interviewee from his research who maintains that “trans-frontier conservation [areas] are drawn by Cecil Rhodes clones – rather than seeing greater expanses of red on the map they want to see great wedges of green as their legacy to Africa!”

In contrast, others underscore the value of transboundary conservation areas since they make biodiversity conservation feasible across political entities. Mabunda (pers. comm.), reflecting on the thirteen transboundary complexes in southern Africa, highlighted their value in a systems management context in which the common goals of biodiversity and community development can emerge. Similarly, Tanner et al. (2007) stressed the positive impacts of the Waterton-Glacier International Peace Park in creating tourism and related opportunities in the surrounding communities. These and similar writings endorse the contested territory

of transboundary conservation and the importance of the contemporary challenges of fostering positive management, research, and education processes and outcomes from these entities.

It is within the above context and in celebrating seventy-five years of conservation in the Waterton-Glacier International Peace Park that it is opportune to reflect on the challenges that remain for international acceptance and effective political, social, and economic support of transboundary conservation. In like manner, the pedagogical contributions to address these challenges are of particular concern for this paper. The purpose of the paper is, therefore, to underline specific contestations we have understood conservation managers to face in the broader context of conservation management and the way in which our academic program of collaboration has addressed those issues. Against this backdrop, we set out the framework of collaboration between our two universities, the University of KwaZulu-Natal and the University of Montana, and the innovations and management outcomes they have produced.

THE MANAGEMENT PERSPECTIVE

From a conservation management perspective, the need to address the plethora of challenges from financial stringency and social and ecological change bears consideration. Transboundary conservation raises new concerns in an era when approaches to management are themselves facing a revolution (Pollard and Du Toit 2007). A great deal of thought has gone into notions of partnerships and co-management between public, private, and non-government organizations and the importance of management within the framework of organizational culture (Fincham and Hay 2006, 2007, 2008; Graham and Kruger 2002; Nyambe et al. 2007; Pollard 2004; Reutenbeek and Cartier 2001). Furthermore, managers recognize the importance of biodiversity conservation but must temper efforts in this direction with the realization that these areas are in themselves complex social and ecological systems from which partners have other expectations. So, the managerial challenge emerges as one that must meet defined park mandates and concurrently address the tensions that arise from perceived

direct and indirect values that society and partners place on these self-same entities.

Dealing with complex social and ecological systems requires managers to develop frameworks to assist them in understanding these systems. That is no easy task when the central focus must be on short-term, specific management planning. What emerges is for managers to confront the inescapable need to transform their organizations from management entities to learning organizations, ones in which a culture of learning predisposes them to successfully anticipate and adapt to the longer-term dynamics and processes of the systems in which they work and manage (Pollard and Du Toit 2007; Senge et al. 1999 2008).

THE ACADEMIC CHALLENGE

The academic challenge to work concertedly alongside managers to contribute to the execution of their mandates has been far from satisfactory. Often, the approach has been parochial with a failure to address conservation concerns at effective spatial, temporal, and political scales (Cumming et al. 2006; Reutenbeek and Cartier 2001). From a spatial perspective, transboundary conservation has thrown into relief the challenges of working across political boundaries and the need for a new form of political endowment for policy-making (Nyambe et al. 2007).

While such boundaries have existed at the intra- and inter-country level and the significance of their jurisdictions have been appreciated, the same cannot readily be said for jointly managed transboundary areas. Homogeneity is too readily assumed and the impact of differing social value systems and the resultant heterogeneity underestimated (Carruthers 2003; Carton et al. 2009). The concept of the sovereignty of governance systems has to be acknowledged to appreciate the effect of their contrasting approaches to management and hence of governance itself. It is only with this understanding in mind that collaborative management on the ground can emerge.

In a similar vein, social histories transcend boundaries. For example, contrasts in communal and private ownership of land will lead to differing

perspectives of the relevance of the private sector and other institutional structures. One needs to simply contemplate the conservancy movements in Namibia and South Africa to appreciate this point. In Namibia the conservancy movement is based on communal property rights where they form a critical component of livelihood strategies. However, in South Africa, conservancies come out of a need to provide security for commercial farmers who have often combined private properties to form part of game management areas, moving away from the less-lucrative practice of extensive cattle-ranching (Mwango 2009). On the other hand, both forms of conservancies are now being perceived as potential buffer zones around formerly protected conservation areas and new transboundary conservation areas (Mwango 2009). It follows that the intrinsic social values of these less formally protected areas will also assume similar, differing, and invariably new meanings.

Not only have we, as educators, struggled to come to terms with scale, the same can be said of broader temporal concerns. For example, a focus on the problems of contemporary planning systems pays little attention to the principle of future skills acquisition in our students. We often still perpetuate quick-fix solutions, developing policies for nearly everything in response to immediate management concerns. Such short-sighted planning, and by implication learning, comes out of a philosophy that has been so often focussed on event-based thinking, when our true mission should have been the preparation of graduates to have the conceptual skills to address the unknown dimensions of systems that we are still struggling to understand (Holling 2001; Resilience Alliance 2007).

In this chapter, we propose that the ability to address challenges at differing spatial and temporal scales requires a systems approach to understanding protected area management. There is considerable evidence to support the notion that social, economic, and biophysical sciences have developed enormously in the last 150 years. However, that development has been within discipline-specific situations (Georg 2005) and in relative isolation from other scientific disciplines. It amounts to a reductionist science, providing answers but not for the most pressing of our problems.

The notion of science as the sacred cow (Illich 1993) is no longer tenable as society requires science to perform in terms of human needs and

societal concerns (Nyambe et al. 2007). Reutenbeek and Cartier (2001) talk of the entry into the age of panarchy, where our task is to understand adaptive, interactive, and evolutionary characteristics of human and natural complex systems. They describe panarchy as the complex system in which nature interacts with its human elements. Importantly, panarchy (through its nested systems levels) allows for the understanding of different scales and their cycles and how knowledge and novelty are created and incorporated at these scales.

The task of incorporating complex systems thinking into research and teaching, and by extension management, is fraught with problems, not the least being that many contemporary situations remain a product of “policies and interventions that are based on non-systems thinking. Reforming these policies may yet prove to be our greatest challenge” (Nyambe et al. 2007, 8). Nevertheless, the excitement of complex systems thinking holds much that will help in our understanding of protected area management.

BRINGING THE MANAGEMENT, RESEARCH AND LEARNING IMPERATIVES TOGETHER

A process of iterative consultation between our partner universities and managers led to a focus on three issues that have been particularly problematic to managers: (1) managing demands; (2) managing relationships with constituencies; and (3) sensing and evaluating the external environment.

Managing Demands

In a dynamic society, such as exists in southern Africa, the public interest is fluid and difficult to discern. Agencies given missions at one specific point may find public support for those missions waning at a later time. They may find new interests being stated, and they may find that the social meanings attached to specific places change dramatically. Conservation agencies, developed in an era of relative political stability and with specific mandates such as the recovery of individual species, may find that this mission has broadened: from species recovery to population enhancement

in other places; from a species orientation to an ecosystem one; from protection of a single species to biodiversity conservation; from providing wildlife viewing opportunities to tourism development. In general, these changes have moved from narrow, biologically focussed definitions to broader issues of economic development and social justice.

Often society imposes mandates on conservation organizations without consideration of the fact these mandates may be at least partially conflicting: developing expectations that biodiversity will be protected and employment as a result of tourism will be generated, for example. Since it is impossible to maximize two related variables at the same time, tradeoffs must be made. But the tradeoffs, while subject to technical analysis, often reflect social values and priorities at the time. Biodiversity and economic opportunity cannot both be maximized at the same scale at the same time. Technical analyses can show the consequences of emphasizing one or the other but cannot suggest which one should be emphasized.

Responding to these changing public interests is particularly problematic for conservation agencies, primarily because of their strong, mission-oriented, often military-like organization and the professional passion with which they have traditionally pursued their goals. While this organizational structure and culture has distinct advantages when goals are widely shared, societal change has brought new and diversifying demands upon protected area organizations. And thus, management of these demands – identifying them, determining their compatibility, making resource allocations – has become a major organizational challenge. Unfortunately, typical protected area organizations are poorly equipped to conduct these activities, principally because protected area stewardship has been historically defined as primarily an applied biology problem.

Managing Relationships with Constituencies

Because demands arise from established and emerging norms of society, they can be conveniently linked to the constituencies defined by those norms. Consequently, managing demand must involve managing relationships with constituencies that are promoting accommodation of a particular value or use within the operations of a protected area. From a demand management perspective, it appears to be important that

protected area agencies acknowledge the heterogeneous nature of society (i.e., many constituencies each with different demands).

At the same time as demands on protected areas have diversified, there has been a corresponding public desire to open decision-making processes and to make those decisions transparent and accessible. This demand represents a critique of progressive-era approaches that may be briefly characterized as scientifically based and expert-driven. Such approaches marginalize public input and exclude social values and meanings. While no one argues that decisions should be informed by the best science available, other forms of knowledge, such as experiential and traditional knowledge, may also inform decisions. Since a lot of planning is in reality about managing trade-offs among competing values and public preferences, choices need to be informed directly through engaging the public in decision-making processes.

But interacting with protected area constituencies involves more than holding a few meetings now and then. Public engagement is a process of developing and maintaining relationships with various constituencies. Useful and constructive public input should be strategic and involves long-term interaction, where both members of the public and protected area agencies learn from each other – about process, preferences, modes of behaviour, and expectations. Such a functional, healthy relationship based on mutual respect, trust, and legitimacy forms the basis for constructing and implementing the public interest. However, the definition of protection as a purely biological construct has limited the ability of agencies to interact, understand, and respond to the public. Such interactions require social science and facilitation skills, which are traditionally outside the normal domain of biological training.

Managing relationships involves a host of questions: How are values within protected areas to be determined? Who are the constituencies for values within a protected area? How should one interact with them? What functions would such interactions serve? Who benefits from engaging constituencies? Does engagement of constituencies involve a loss of political power for protected area organizations? How do agencies, working with their constituencies, broaden support for conservation? What information and skills/expertise do constituencies hold that is useful for protected area

organizations? How would the stewards of a protected area know if their interactions were successful?

Managing Learning

In the changing environment that characterizes the context for conservation organizations, learning becomes an important step to not only the survival of the organization but its capacity to meet new challenges and mandates. Being an organization that learns is a new objective for many bureaucracies because routine problem-solving does not normally require much learning, just carrying out repetitive tasks. A focus on learning for protected area organizations represents a realization that the organization's mandate is anything but routine. This is a particularly dynamic challenge for conservation agencies because of the tradition of a narrow, biologically oriented mission using a hierarchical top-down, command and control structure and decision-making process.

Learning may be defined as the detection and correction of error. It requires ability to sense the external environment (in a number of different domains), to understand the changes occurring, to evaluate them, and then to act appropriately upon them. But learning also has a strategic dimension: anticipating alternative futures and building robust strategies to deal with them.

The organization, its culture, leadership, structures, and processes directly influence its ability to learn and act upon new insights. For example, personnel evaluation processes could be an incentive or a deterrent to learning and using new knowledge in decision-making. While protected area organizations have often incorporated new biological knowledge into management plans, they typically have had more difficulty in sensing and responding to changes in the social and political environment. One example is the U.S. Forest Service moving from fire suppression to fire management once it was understood that fire was a natural process in western U.S. situations; similar realizations have characterized fire management within South Africa's parks (Pollard and du Toit, 2007; Mabunda pers. comm.). In the past, this occurred because systems modelling progressed further in the biophysical domain than it had in the social domain.

Of the three dimensions of capacity-building, learning is fundamental. Without learning, organizations are unable to effectively anticipate and respond to the changing demands expressed by development of new constituencies and emerging alliances with varying preferences. We note here that the notion of response does not necessarily include forsaking the mission of the protected area organization. Public agencies normally lack the legal ability to do so, which is typically held by a legislative entity such as parliament or legislature. In addition, the response to changing demands, such as needs for resource commodities, may be fulfilled elsewhere. The protected area organization may work with constituencies to find places, outside the protected area where such demands can be met.

DEVELOPING AND SUSTAINING A PRODUCTIVE TRANSBOUNDARY RESEARCH AND LEARNING PROGRAM

Origins of Cooperation

The universities of Montana and KwaZulu-Natal (then the University of Natal) began exploring their potential for collaboration in 1998. They were brought together by a South African NGO called the Wilderness Action Group (WAG). WAG had been cooperating with the United States Department of Agriculture (USDA) Forest Service for several years on a training program for wilderness field managers in southern Africa. WAG officials were interested in credentialing their courses. The University of Montana was well known in wilderness education and was a logical resource.

At that time, WAG saw no viable university partner within South Africa but was interested in seeing capacity for protected area education and research develop within the region. Their exploration within South Africa uncovered the Centre for Environment, Agriculture and Development or CEAD (then the Centre for Environment and Development), an innovative group within the University of KwaZulu-Natal interested in

multidisciplinary and interdisciplinary approaches to land management issues. Given the notable role the KwaZulu-Natal region has played in the southern African wilderness movement, this form of capacity-building was immediately interesting to CEAD.

Defining a Niche and an Audience

This assembly of actors, consisting of two universities, an NGO and members of the USDA Forest Service, began a discussion on what each group could bring to, and gain from, formal collaborative activity. Into 1999 and 2000, a framework for activity was formalized in a memorandum of understanding between the two universities. We agreed that, while the wilderness niche provided clear entry to the professional ranks, we needed a broader conceptual rubric, given the diversity of needs relative to our interests and strengths. The concept of protected areas provided that rubric. We initially saw three primary audiences within our scope of activity: field rangers, mid-level land managers, and executive managers involved with land management policy and decision-making. Field rangers remained the target audience for short course trainings that were provided by WAG, certified by the University of KwaZulu-Natal, and reviewed and advised by the University of Montana. These courses are designed around the basics of wilderness management and planning. They occur within a wilderness setting and include numerous practical exercises.

While the training of rangers was quite successful, it was also apparent that the mid-level management community would need to be engaged to increase the chance of field rangers having a fertile professional environment in which ideas that emerged via field training could be implemented. This audience was particularly interesting to the University of KwaZulu-Natal, which was in the process of retooling its education programs to better accommodate the opportunities for education that were emerging after the democratic government was established in 1994.

The result of the retooling was the development of a Master of Science degree in Protected Area Management (PAM), the first of its kind in Africa. This degree program targeted the professional audience and provided conceptual, historic, and practical material on protected area management. Campus residential requirements were minimized and students

were able to complete their field research in the protected areas they managed. This mitigated the challenges of being away from work and family for managers, while quickly pushing the results of the students' education into the field. Since its inception in 2001, the PAM program has migrated to a completely distanced-based, named degree program (Masters in Environment and Development – Protected Area Management), which has made it far more accessible to the management community in the African region.

Recognizing that the mid-level manager could face the same difficulty of convincing their superiors that new ideas should be used, we identified the need for an executive training opportunity that would function at the policy level. In 2006, this seminar became a reality with the first annual African Leadership Seminar (ALS) in People and Conservation taking place in South Africa and Mozambique (Fincham and Hay 2006). In the first two years of ALS, conservation leaders from nine southern African countries, the United States, and Wales have studied important issues such as HIV/AIDS, co-management, transboundary management, leadership, and concessions policy (Fincham and Hay 2006, 2007).

Reflecting on our foundation from a systems perspective, infusing higher education into the protected area management arena of southern Africa could only be successful if the infusion points occurred at places within the broader system that provided leverage (Meadows 1999). Training professionals horizontally across the organization (e.g., only field rangers) is likely to exert forces for change within organizations that may result in counter forces of resistance. For example, a majority of the land in the South African National Parks system is under land claim by residents who have been displaced from those lands over time.

Reconciling those claims is leading to many joint management arrangements, increased concessions within protected areas, and increased demands on protected areas to produce revenue. These kinds of changes in the protected area management system pose significant threats to people who are highly invested in the previous centralized system of protected area governance. By providing training on these issues at various levels and sectors of organizations, change can begin from many sources and new paradigms may seem less threatening.

The Emergence of a Common Vision

Our preliminary work in education and training provided a good platform for our faculty and agency partners to explore our common expertise, interests, and strengths. Protected area management, however, includes a very broad range of topics and disciplines. Soon students in Montana and Pietermaritzburg were enthusiastically approaching professors to study everything from wild dog behaviour and guinea fowl habits within exotic plantations to transboundary governance systems. While the need for a research program was apparent, especially to build so-called African scholarship for the above-mentioned training and education programs, it was also evident that we would need some restrictive parameters to our work. What could a small group of committed colleagues contribute to such a broad topic beyond an education and training program? What would the leverage point be for this collaborative program? To answer this question, we needed to be self-critical about our specific academic strengths relative to the demands. We began with a set of principles to help us develop a focussing framework. We concluded that our work should be:

- relevant to contemporary problems and issues;
- applicable to systems in both the United States and southern Africa;
- play to the strengths of the committed faculty; and
- provide the greatest leverage and complement to the existing state of knowledge.

Given the rapid pace of social change described above, we concluded that a focus on the social context of protected area management would best fit the criteria above. While a deep body of ecological research exists in both the United States and South Africa, the social issues of protected area management are becoming paramount in both countries. Additionally, systems of governance and basic tensions between conservation and social utility are common to both areas. We also recognized that the social

science strengths within the U.S. faculty provided a sound complement to the essentially biological backgrounds of the South African partners.

Merging a Research Agenda with the Management Community: The Treehouse Program

To ensure the relevance of our research program, the South African partners organized a meeting of several key management organizations in South Africa. They included South African National Parks, the Department of Environmental Affairs and Tourism, KwaZulu-Natal Wildlife, and the Council for Scientific and Industrial Research (CSIR). It was out of these meetings that the Treehouse Program emerged. A central tenant of the program was to build capacity within conservation organizations. The three-pronged focus on managing demands, relationships, and learning, set out in the academic challenges section of this chapter, epitomized the ideas that emerged from the partner discussions.

That focus, however, did not emerge overnight but through intense discussions and deliberations at a further series of meetings among academicians and agency staff held in Kruger National Park during the period 2001–2005. Essentially, the fundamental question addressed was: “what could be done to enhance the capacity of protected area organizations to respond to changing demands, the need for sensing and responding to the external environment, and managing relationships with its growing and diversifying constituencies?” The result was a series of decisions to further examine these three components, both conceptually and empirically. A framework was developed and given the name “Treehouse” after the place in Kruger National Park where particularly significant decisions were made.

The framework is illustrated in Figure 1. It is designed to display the dimensions of the capacity-building challenge, to be used as a heuristic device for understanding how different components relate to each other, and as a model for identifying information needs and research directions. Our objective is to enhance the performance of the protected area organization in meeting its stewardship mandate in an era of change, complexity, and uncertainty.

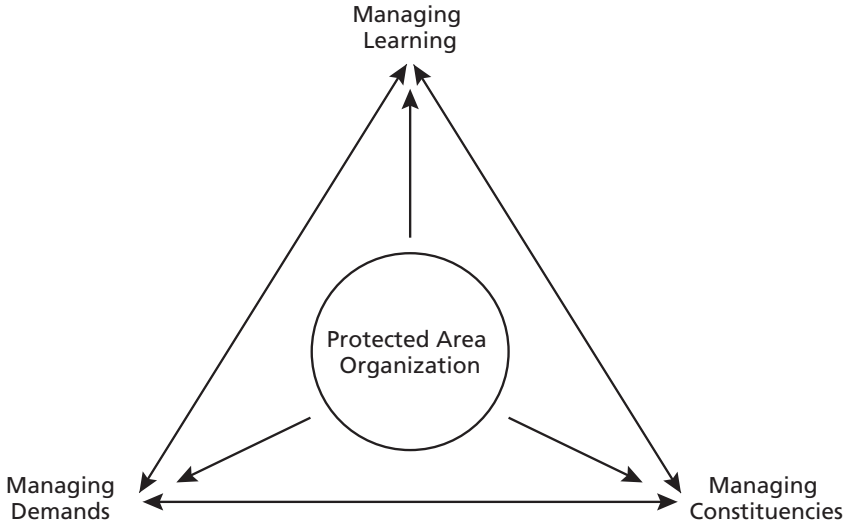


FIG. 1. GRAPHICAL REPRESENTATION OF THE TREEHOUSE FRAMEWORK. PROTECTED AREA ORGANIZATIONS NEED TO BUILD CAPACITY IN MANAGING LEARNING, DEMANDS, AND CONSTITUENCIES. IN ADDITION, MANAGING THE RELATIONSHIPS AMONG THESE IS ALSO CRITICAL.

At the centre of the framework is the organization, usually a publicly defined and mandated agency that is assigned the responsibility to sustain certain cultural and natural heritage values. This organization may be a national- or federal-level one, a state or provincial organization, or even a more locally defined one. In some cases, an NGO may hold the stewardship mandate. In order to carry out the stewardship mandate, organizations must implement a complex set of management actions, involving habitat management, area closures, visitor management, law enforcement, liaison with constituencies, distribution of news releases, restoration and species introductions, and so on. Each of these actions is in support of a mission generally defined as protecting biodiversity, which is a value itself defined by the larger social and political system embedding the protected area organization.

Such actions are not without conflict and contention in this broader system. With diversifying societies, there are evolving definitions of biodiversity protection and strategies to accomplish it. The results are impacts to public interests and demands, some predictable, some unknown, and some unanticipated. These consequences often generate further impacts conflicting with the mandate at best and political opposition and hostility at worst. Thus, the organization must constantly sense its external environment, including the new demands and expectations of society, now and into the future. The constituencies that make these demands have different amounts of political savvy and power; many hold political veto power over agency implementation.

Using the framework illustrated in Figure 1, a group of scientists, managers, and students developed a research agenda that would enable us to synthesize the findings of varied research projects as insights that connect the factors at the corners of the framework triangle. By focussing on the system's processes that would link the management of demands, constituencies, and learning, students were able to provide depth on specific issues while helping us better see the leverage points within protected area management systems. The range of dissertations and theses that were completed within this program includes the following topics:

- Changing missions of conservation organizations;
- The relationship between international law and community engagement on transboundary conservation;
- Effective public/private partnerships in conservation;
- Barriers to implementation of successful land claims on protected areas;
- How private property rights are negotiated in voluntary conservancies;
- Protected areas and community displacement;
- Protected areas and private enterprise;
- Strategies to cope with HIV/AIDS in the conservation sector;

- The role of social capital in conservation systems;
- Understanding the legitimacy of extractive resource use in protected areas;
- Managing for high quality natural experiences that build deep meaning and require pristine conditions; and
- Understanding and managing social relationships in protected area systems.

LESSONS LEARNED

Of our ten years of collaboration, the final five have been focussed on the Treehouse Research Program. Our experience attests to the value of a multinational approach that uses a systems framework for distilling knowledge from research and informing education and training with that knowledge. Multinational systems, examined in concert, illustrate the complexities of each system. It is through the comparative perspectives available when viewing similar phenomena through the lens of differing cultures that underlying processes, rather than events, associated with protected area management become readily apparent.

By comparing cultures, system properties like time lags between cause and effect become useful tools for building understanding. For example, while we have seen the process of governance devolution occur in both the United States and South Africa over the past decade, the pace of change in the South African system has been more rapid. Given South Africa's accelerated pace of devolution, we are able to see the associated time effects (e.g., impatience in civil society, and reconciliation of land tenure) more apparently than in the United States, and perhaps prepare better here as the beneficiaries of that knowledge. Likewise, the long-term success of the Waterton Glacier International Peace Park provides a model for new peace parks to see how the system can evolve in the longer term.

The complexities associated with international peace parks as a form of protected area management illustrate quite well the need to structure continuous feedback and learning systems into the management philosophy

for the area. In peace parks, your management space will necessarily be shaped by the social history of the area. That history may be to celebrate peace, as is the case at Waterton-Glacier, but it may also be to promote the goal of peace as it is in many other parts of the world. That history will dictate that managers do not make decisions in a way that will dishonour the work that was required for the peace park to be developed. In the present, the combination of differing political systems adds an additional layer of complexity to the management system. This complexity can be better confronted if the players involved view themselves as learning organizations. In our case, we embarked on a program to improve capacity for making good management decisions for protected areas. The use of a simple framework assisted us in learning how to do that.

Our process, perhaps similar to the management of a transboundary park, required us to learn how to sustain collaboration over an extended period of time. This required developing a common vision, building interpersonal and inter-institutional trust and recognizing that our potential was largely unknown. As is often the case, our success or failure depended on communication. Fortunately, today's technology reduces communication obstacles associated with global scale geography. What this has meant is that ties, instituted formerly within the Treehouse program, are likely to continue long after the formal program of research is terminated. Ideas travel digitally and so continue to stimulate new and creative offshoots from the original program of work.

CONCLUSION

Transboundary management occurs in a system in which the parts on each side of the boundary move at differing paces, are subject to differing social and political forces, and have differing levels of certainty about existing and future conditions. Thus, these types of protected areas are extremely well-suited for study with a systems approach. A systems approach requires agencies to view themselves as learning organizations who cannot anticipate the range of events that will occur in the mid- to long-term futures.

Our academic experience demonstrates that this type of approach will assist managers developing knowledge about existing issues in a way that will help them in seeing the broader scale at which these issues play out. It is at this broader temporal and spatial scale that events can be situated and responded to. In the post-9/11 management era, for example, border security realized a heightened importance. Waterton-Glacier absorbed this change to the system quite readily, however, due to its longer-term set of formal and informal managerial relationships (Tanner et al. 2007). A system with less-developed relationships may have had much greater difficulty absorbing such a shock.

The experience described in this chapter has guided us to the conclusion that, when we began collaboration, our internal capacities as organizations did not match up to our ambitions. Over time, the collaboration has assisted us in building our own capacity as learning organizations, improved our ability to develop sustainable partnerships, and contributed to the education of current and future protected area managers. By taking an approach that sought to build learning rather than knowledge alone, we have developed a group of scholars in the United States and southern Africa who will continue to create knowledge in a way that will connect their specific issues to protected area management worldwide. The peace park ideal has the same potential. Each peace park developed in the past seventy-five years has a lesson to teach all of us. We suggest that we use a systems approach and work together as scientists and managers to understand and assemble those lessons.

REFERENCES

- Carruthers, J. 2003. "Past and future landscape ideology." In *Social History and African Environment*, ed. W. Beinart and J. McGregor, 255–66. Athens, OH: James Currey and Ohio University Press.
- Carton, B., J. Laband, and J. Sithole, eds. 2009. *Zulu Identities: Being Zulu, Past and Present*. Scottsville: University of KwaZulu-Natal Press.
- Cumming, G. S., D.H.M. Cumming, and C. L. Redman. 2006. "Scale mismatches in social-ecological systems: Causes, consequences, and solutions." *Ecology and Society* 11: 20.
- Fincham, R., and D. Hay. 2006. "Report on the first African Leadership Seminar, People and Conservation, August 12–19, 2006." Centre for Environment, Agriculture and Development, University of KwaZulu-Natal.
- . 2007. "Report on the second African Leadership Seminar, People and Conservation, June 30–July 7, 2007." Centre for Environment, Agriculture and Development, University of KwaZulu-Natal.
- . 2008. "Report on the third African Leadership Seminar on People and Conservation, June 21–28, 2008." Centre for Environment, Agriculture and Development, University of KwaZulu-Natal.
- Georg, S. 2005. "Research collaboration – the challenges of transgressing boundaries." In *Sustainable Development and the University: New Strategies for Teaching, Research and Practice*, ed. R. Fincham, S. Georg, and E. Holm-Nielsen, 34–52. Howick: Brevitas.
- Graham, A. C., and L. E. Kruger. 2002. *Research in Adaptive Management: Working Relations and the Research Process*. Portland, OR: United States Department of Agriculture, Forest Service.
- Holling, C. S. 2001. "Understanding the complexity of economic, ecological, and social systems." *Ecosystems* 4: 390–405.
- Illich, I. 1993. *Limits to Medicine: Medical Nemesis: The Appropriation of Health*. New York: Penguin.
- Meadows, D. H. 1999. *Leverage Points: Places to Intervene in a System*. Hartland, VT: The Sustainability Institute.
- Mittermeier, R. A., C. F. Kormos, C. G. Mittermeier, P. R. Gil, T. Sandwith, and C. Besancon. 2005. *Transboundary Conservation: A New Vision for Protected Areas*. Mexico: CEMEX.
- Mwango, N. 2009. "The history of conservancies." Working Paper. Centre for Environment, Agriculture and Development, University of KwaZulu-Natal.

- Nyambe, N., C. Breen, and R. Fincham. 2007. "Organisational culture as a function of adaptability and responsiveness in public service agencies." In *Governance as a Trialogue: Government-Society-Science in Transition*, ed. A. R. Turton, H. J. Hattingh, G. A. Maree, D. J. Roux, M. Claassen, and W. F. Strydom, 197–214. Berlin: Springer.
- Peace Parks Foundation. 2010. "Words from Dr Nelson Mandela." Accessed 13 December 2010. <http://www.peaceparks.org>.
- Pollard, D. 2004. "We did that!: the lost instinct of collaboration." Accessed 30 September 2007. <http://blogs.salon.comm/0002007/2004/10/06.html>.
- Pollard, S., and D. Du Toit. 2007. "Planning and managing protected areas for global change." Gland, Switzerland: IUCN.
- Resilience Alliance. 2007. "Assessing and managing resilience in social-ecological systems: a practitioner's handbook, version 1." Accessed 30 September 2007. http://www.resalliance.org/index.php/resilience_assessment.
- Reutenbeek, J., and C. Cartier. 2001. "The invisible wand: Adaptive and co-management as an emergent strategy in complex bio-economic systems." Centre for International Forest Research Occasional Paper No. 34, 2001.
- Senge, P., A. Kleiner, C. Roberts, R. Ross, G. Roth, and B. Smith. 1999. *The Dance of Change: The Challenge of Sustaining Momentum in Learning Organizations*. London: Nicholas Brealey Publishing.
- Senge, P., B. Smith, N. Kruaschwitz, J. Laur, and S. Schley. 2008. *The Necessary Revolution: How Individuals and Organizations are Working Together to Create a Sustainable World*. London: Nicholas Brealey.
- Tanner, R., W. A. Freimund, , B. Hayden, and B. Dolan. 2007. "The Waterton-Glacier International Peace Park: Conservation and Border Security." In *Peace Parks: Conservation and ConflictResolution*, ed. S. H. Ali, 183–204. Cambridge, MA: MIT Press.
- Wolmer, W. 2003. "Transboundary conservation: The politics of ecological integrity in the Great Limpopo Transfrontier Park." Institute of Development Studies Research Paper No. 4.

