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Transboundary Conservation Governance

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Abstract

Building on *Working Across Boundaries: People, Nature, and Regions* (Lincoln Institute of Land Policy, 2009), Matthew McKinney has expanded and adapted the material on governing transboundary regions for the international conservation community. As part of this effort, he led an assessment of alternative approaches to finance transboundary conservation efforts and to illustrate the principles and methods of governance with case studies from around the world. The preliminary findings of this applied research were presented at 2014 World Parks Congress in Sydney, Australia.

About the Author

Matthew McKinney is Director, Center for Natural Resources & Environmental Policy at The University of Montana. He is an Adjunct Professor, School of Law and Chair of the university-wide graduate program on Natural Resource Conflict Resolution. During the past six years, he co-founded the *Practitioners' Network for Large Landscape Conservation,* the *Roundtable on the Crown of the Continent,* and the *Universities Consortium on Columbia River Governance*.

Matthew has focused on land and water policy and conflict resolution in the U.S. American West for over 25 years. More recently, he works to transfer lessons from the American West to the international community and to harvest lessons from other regions throughout the world to the American West—particularly on issues related to the governance of transboundary land and water, the role of faith-based communities in fostering environmental stewardship, and the value of community-based collaboration in building livable communities, vibrant economies, and healthy landscapes.

From 1993 to 2003, Matthew served as the founding director of the Montana Consensus Council, a small organization embedded in the Office of the Governor to mediate agreements on natural resources and other public policy issues. During the past 25 years, he has mediated over 50 public processes on issues related to water, federal public lands, fish and wildlife, land use, regional planning, large landscape conservation, and other public issues. He has worked with local communities, watershed groups, state and federal governments, elected officials, Native Americans and First Nations, foundations, and a number of international organizations.

Matthew received a Ph.D. in Natural Resources Policy and Conflict Resolution from The University of Michigan; has published numerous articles and policy reports; co-authored *The Western Confluence: A Guide to Governing Natural Resources* and *Working Across Boundaries: People, Nature, and Regions*; and teaches workshops, seminars, and courses on natural resources policy and conflict resolution. He frequently serves as a peer reviewer for the international journal *Water Policy* and several other journals focused on natural resource policy, conflict resolution, and the relationship of society and natural resources.

Matthew is a Senior Associate, Lincoln Institute of Land Policy; Senior Partner, Consensus Building Institute; Member, U.S. Institute for Environmental Conflict Resolution; and Member, Board of Advisors, Rocky Mountain Land Use Institute. He was a research fellow at the John F. Kennedy School of Government, Harvard University and is a member of the Association for Conflict Resolution, International Association for Public Participation, and the Transboundary Conservation Specialist Group (IUCN).

When he is not working on natural resource issues, he can be found hiking, biking, fly-fishing, floating rivers, skiing, golfing, and otherwise enjoying the outdoors.

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Transboundary Conservation Governance

Transboundary conservation governance (or transboundary governance) takes as many forms as there are applications. Depending on who holds the authority and responsibility for making key decisions, transboundary conservation areas (TBCAs) may be governed by governments, private parties such as landowners and non-governmental organizations (NGOs), local communities and/or indigenous peoples, and/or some combination of all these actors. In all of these situations, transboundary conservation reflects variations of shared governance. The need to involve multiple actors from two or more countries stems, in part, from the multi-dimensional nature of transboundary conservation. Rather than viewing transboundary conservation as a purely international affair, it instead encompasses governance and management at multiple spatial scales. While the definition of transboundary conservation applies only to efforts that span international borders, the process of transboundary conservation governance occurs in collaborations across a multitude of sub-national borders as well, both geographical and institutional. This, paradoxically, shows the need to define transboundary conservation at an international level, as there is no end to the scale at which boundary-spanning initiatives occur.

From an organizational perspective, there is an increasing realization that transboundary conservation governance ranges from formal to informal arrangements. At one end of the spectrum are very formal discussions and arrangements between government agencies where the terms of engagement are framed by diplomatic relations and international treaties. At the other end of the spectrum are more informal, home-grown initiatives that are catalyzed and convened by people that live, work, and play in particular regions. A plethora of informal to formal models exist in worldwide practice featuring alternative and innovative approaches to transboundary governance, enriching the global practice, and allowing for experience sharing and learning. Transboundary conservation initiatives require governance across multiple scales. More successful initiatives will attempt to govern at the scale of the problems confronted. Inevitably, this will require multiple levels of governance at multiple geographic and temporal scales.

There is no single model for transboundary conservation governance—each arrangement must be designed and administered to meet the unique needs and interests of the particular region. However, there is a set of common elements and best practices to inform transboundary governance. One of the key lessons emerging from the practice of transboundary conservation is that the most effective governance arrangements are collaborative, nested, and adaptive.

This section highlights best practices for effective transboundary conservation governance.

Explaining Governance

While we increasingly hear a lot about governance, it is often used to mean different things. Sometimes it is used to characterize corporate relationships among stakeholders, stockholders and boards of directors. It is often used in international circles as a way of characterizing relationships among sovereign nations, or among governments and NGOs who interact, but who

are on very different levels. Sometimes governance is used (albeit mistakenly) as a synonym for government. Government refers to legal and institutional arrangements and the formal organization with the legitimacy to 'force' the resolution of collective action dilemmas; governance refers to the style or method by which decisions are made and conflicts among actors are resolved. Politics is related, but different. It refers to the exercise of power within governance.

Governance is about representation, style of interaction, authority, and decision rules. It also refers to processes that support governance, such as fostering scientific and public learning; and building civic and political will.

> Graham et al. (2003) define governance as "the interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken, and how citizens or other stakeholders have their say."

The idea of transboundary conservation means that the territory of interest transcends the legal and geographic reach of established jurisdictions and institutions (McKinney and Johnson, 2009). The people affected by this spatial mismatch have interdependent interests, which means that none of them has sufficient power or authority to address the problems adequately on their own. This creates a gap in governance—no single entity has the power, authority and responsibility to address transboundary issues, so there is a need to create innovative ways to work across boundaries. Merely applying scientific or technical knowledge to address economic, social, or environmental concerns cannot bridge this gap, nor is bridging the gap simply about managing natural resources more effectively and efficiently. In other words it is essential to establish suitable governance models or structures to provide an enabling environment within which the natural, social and economic processes, related to the establishment and management of a transboundary conservation initiative, may evolve.

As explained in

Table 1, there is a clear distinction between what should be done about a particular transboundary situation and how people who care about such issues should determine what ought to happen (McKinney and Johnson, 2009; Borrini-Feyerabend et al., 2013). Governance is more about the process of deciding what to do, while management is more about implementing appropriate strategies derived at the governance level to address the substantive issues. While governance and management differ, they also complement each other substantially, such as, through the iterative processes of governance informing management and management influencing governance.

Table 1 Differences between governance and management

Governance	*is about process*	○ **Who decides** what the objectives are, what to do to pursue them, and with what means ○ **How to bring together the appropriate people** with the best available information to determine what ought to happen ○ **How** the decisions are taken ○ Who holds **power, authority, and responsibility** ○ Who is or should be held **accountable** ○ **Reconciling differences** between and among stakeholders ○ **Deciding** amongst choices that lead to **trade-offs**
Management	*is about substance*	○ **What is done** in pursuit of given objectives ○ **The means and actions** to achieve such objectives ○ Generate, implement, and assess **the effectiveness** of alternative policies, programmes, and plans

Source: Adapted from Borrini-Feyerabend et al. (2013)

Transboundary Governance: A Model of Shared Governance

Realizing that governance arrangements for protected areas are quite diverse all over the world, IUCN and Convention on Biological Diversity (CBD) (Dudley, 2008; UNEP/CBD COP 10, 2010) suggest that alternative approaches to governing protected areas can be grouped into four broad types (
Table 2) according to the key actors holding authority and responsibility for key decisions, such as establishing a transboundary protected area (TBPA), determining its management objectives, and so on.

Table 2 IUCN Governance types of protected areas

Governance type	Sub-types
Governance by government	❖ Federal or national ministry or agency in charge ❖ Sub-national ministry or agency in charge (e.g. at regional, provincial, municipal level) ❖ Government-delegated management (e.g. to an NGO)

Shared governance	❖ Transboundary governance (formal arrangements between one or more sovereign States or Territories) ❖ Collaborative governance (through various ways in which diverse actors and institutions work together) ❖ Joint governance (pluralist board or other multi-party governing body)
Private governance	Initiatives established and run by: ❖ individual landowners ❖ non-profit organizations (e.g. NGOs, universities) ❖ for-profit organizations (e.g. corporate owners, cooperatives)
Indigenous/local governance	❖ Indigenous peoples' conserved territories and areas – established and run by indigenous peoples ❖ Community conserved areas and territories – established and run by local communities

Source: Dudley (2008)

First, and most important, practice has shown that many transboundary conservation initiatives are governed through informal arrangements. Furthermore, these arrangements, being formal or informal, may be negotiated and developed by different actors that do not necessarily involve high-level government institutions, depending on who has the decision authority and in what degree. The most common situation is when relevant protected areas from two or more countries make either formal arrangements or make decisions in an informal way, the latter addressing specific management objectives. Therefore, this document suggests adjusting and reformulating the explanation of transboundary governance provided in
Table 2 to include formal and informal arrangements between multiple actors from two or more countries.

As mentioned earlier, transboundary governance almost always includes a variety of actors. For example, it can involve two governments from two countries that make decisions on the evolution of a specific TBCA. But, it can also involve an NGO in one country and government agency in another country, resulting in a situation where transboundary governance is shared by different sectors and players. Levels of authority therefore may be diverse and it depends on the specific transboundary circumstances, dynamics and/or objectives as to which level of authority will be involved. For instance, the authority to develop a transboundary wildlife corridor would usually involve relevant government ministries and local planning institutions from the involved countries. Decision-making over cooperation in monitoring of certain species or illegal hunting may involve protected area managers and staff, and local communities. Initiatives started at local levels usually, with time, seek high-level support in order to become more acknowledged. But, it is not a necessity. Levels of authority may interact. For example, actors at a local level may decide that specific legislation is needed to advance cooperation in a transboundary context. The passing of legislation is made at the governmental level, and for the local level benefits. Levels

of authority usually range from local level, though the district/provincial, the national ministerial, to a regional level (van der Linde et al., 2001).

Case Study 1 The European Green Belt Initiative

The European Green Belt (EGB) is a 12,500-kilometre (7.45 miles) long strip of land and coastal sea area. It stretches from the Barents Sea to the Adriatic and Black Seas and comprises more than 3,200 protected areas. As the Green Belt snakes from north to south, it passes through a variety of European landscapes ranging from alpine peaks, arctic tundra, boreal forests, mires, lush flood plains to coastal habitats and grasslands. It connects 24 countries and its potential as the backbone of a pan-European ecological network is widely greeted with enthusiasm. Major parts of the EGB's pristine landscapes were developed along the former 'Iron Curtain' due to the political separation between the former Eastern and Western Blocs. In the four different sections of the EGB, history has followed different paths, but the border zone is the key factor for having secured the remarkable natural values of the EGB.

Almost 150 governmental and non-governmental organizations, municipalities, protected areas, enterprises and scientific institutions have come together in the European Green Belt Initiative (EGBI), organized in four sections—Fennoscandian, Baltic, Central European and Balkan Green Belt—in order to reflect and highlight the regional diversity of the EGB.

At individual sites in all regions of the EGB different people and organizations are involved in activities to conserve biodiversity and to support local people in developing strategies to use natural resources sustainably. Besides conventional nature-conservation-oriented projects, the focus is on sustainable development to secure local livelihoods. Other focal themes in all four regions include environmental education, cultural heritage and societal integration. In the Fennoscandian Green Belt the most prominent work is done through transboundary park-to-park cooperation and collaboration by scientific organizations supported by government-level political decisions.

In addition to activities on the ground, it is also important to bring people together and allow for the exchange of experiences and ideas. This is an asset that adds value to the EGBI and ensures that it is successful in reaching its goals. Only if all regions and actors share a common understanding of what they are doing and why they are doing it, does the EGB have the potential to make a difference for the conservation of Europe's natural heritage. And only if the insights and ideas of all regions and actors are reflected does the EGB become a truly European project.

Common projects on the regional scale offer great opportunities to foster interaction and cooperation: the GreenNet project implemented from 2011–2014 aims to develop the peripheral rural areas at the Central EGB in a sustainable and integrated way. Regular meetings are allowing for continuous mutual exchange.

Considering the geographical span of the Initiative and the number of countries, institutions,

and individuals involved, it remains a major challenge to be truly collaborative. In the long-term, sustained leadership and empowerment is needed from the local through national to the regional levels. This explains why the question of governance has been an integral and challenging aspect of the work of the EGBI ever since it began.

Ground-breaking steps to establish a sustainable governance structure were taken in 2012 when the Coordination Group was established. Main tasks of the Coordination Group comprise the conceptual development of the EGBI, the organization of the Pan-European Green Belt Conferences, and communication about the EGB. The decisions about the regional representatives to the Coordination Group are made according to each region's own principles. The Terms of References of the Coordination Group specify that each region delegates one Regional Coordinator, one National Focal Point and one National NGO Partner per region. In addition, a representative of IUCN takes part in the meetings of the Coordination Group as an advisor.

At the level of the four regions different governance mechanisms prevail. In contrast to other regions, the Fennoscandian Green Belt has a government-level Memorandum of Understanding (MoU) signed by Norway, Finland and Russia in 2010. The MoU expresses joint determination to invigorate cooperation along the Fennoscandian Green Belt based on principles of sustainable development. National views and timely communication are secured by National Working Groups: Finland established a National Working Group with three Regional Working Committees covering the whole length of the border.

The EGBI actively connects nature conservation with care for local history and cultural values throughout Europe. For its continuation it is vital that a mechanism for independent long-term financing is established. Having a formalized structure with the Coordination Group and its participatory principle at its heart, will be an important step towards creating a solid setup for sustainable funding and ensuring continuous political commitment and support from all the countries involved for the conservation and further development of this unique European project.

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Defining Characteristics of Transboundary Conservation Governance

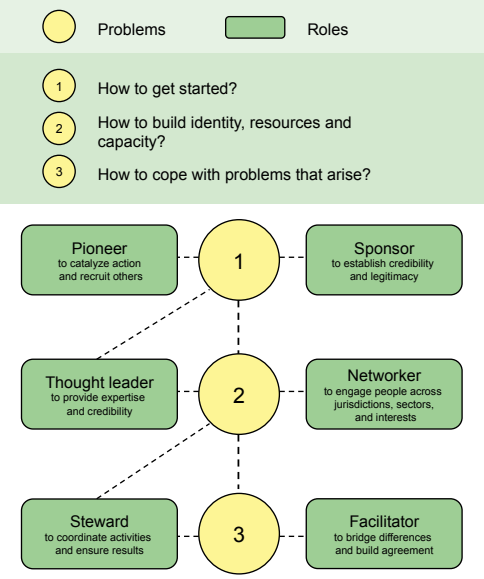
At its core, transboundary conservation is a governance challenge. It is a question of how people can integrate the diverse interests and concerns of multiple jurisdictions, government agencies, and public and private actors to address land, water, conservation and a myriad of other related issues across international boundaries.

Building on the distinction between governance and management, it is imperative to further clarify the defining characteristics and common elements of transboundary conservation

governance before examining alternative arrangements for transboundary governance. During a workshop convened by the IUCN World Commission on Protected Areas (WCPA) Transboundary Conservation Specialist Group in October 2013 at Thayatal National Park, Austria, participants from 15 countries agreed that transboundary conservation governance includes 10 defining characteristics or common elements:

1. LEADERSHIP
    - The willingness and ability to share power, mobilize people, synthesize ideas, and assemble resources
    - The ability to forge alliances with people holding diverse interests, viewpoints, and mandates; to invite people to develop and take ownership of a shared vision and values; and to bridge differences and nourish relationships
    - The need for different types of leaders to catalyse, enable, and sustain action (Figure 1).

Figure 1: Leadership roles for transboundary conservation



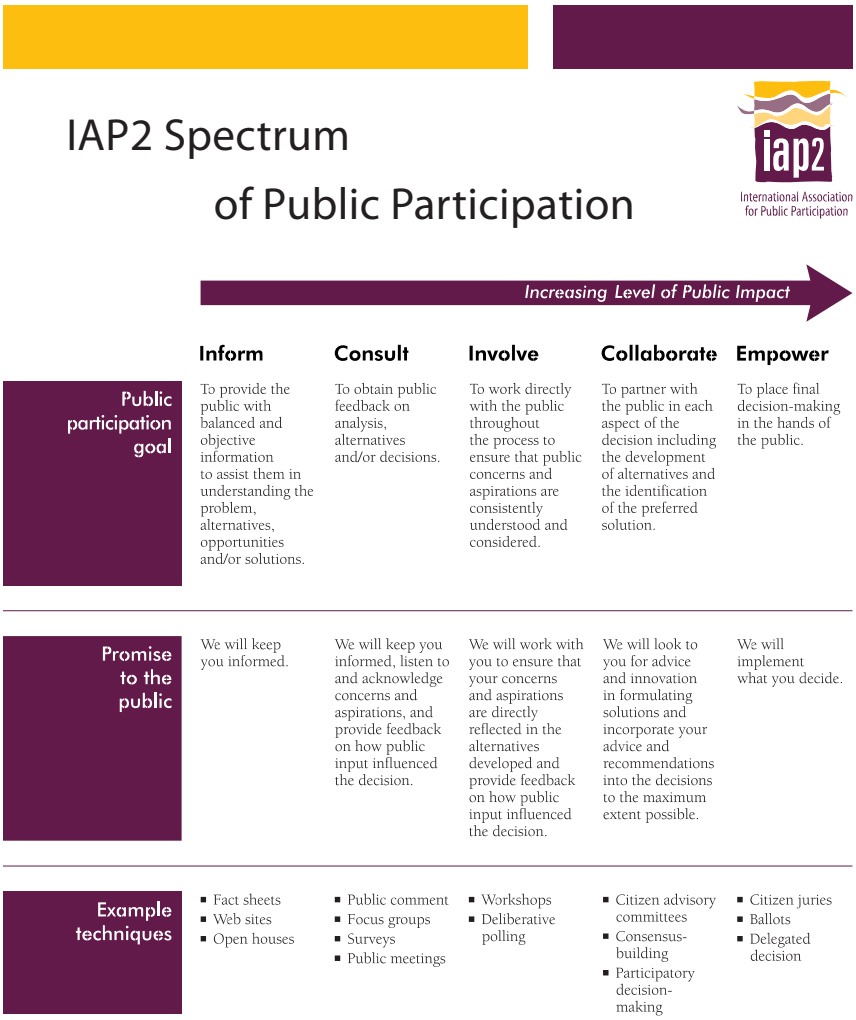
Source: McKinney and Johnson (2009)

2. REPRESENTATION
    - The people, organizations, and authorities needed to achieve the desired outcomes
    - Who participates and what is their role (catalyst, convener, decision-maker, advisor, etc.)
    - The balance of power within the area

3. PUBLIC PARTICIPATION
    - Strategies to involve government agencies, local communities, private landowners, NGOs, indigenous peoples, rightsholders, and other stakeholders (Figure 2)
    - Rightsholders are people with legal or customary rights to land, water and natural resources (IUCN, 2008)

- Stakeholders are people who possess direct or indirect interests about land, water and natural resources, but do not necessarily have legally or socially recognized entitlement to them (Borrini-Feyerabend et al., 2013), but will be impacted (either positively or negatively) by the initiative.

Figure 2: Spectrum of public participation



Source: International Association for Public Participation (2007)

4. FUNCTION AND SCOPE
   - The role and geographic area of interest
   - The relationship to other social and political entities within the region

5. AUTHORITY, LEGITIMACY AND ACCOUNTABILITY
   - The degree of legal authority
   - The alignment of civic and political will

- The level of formal and/or informal organization
    - Formal and informal recognition
    - Linking informal arrangements to formal decision-making systems

6. LEARNING
    - The process of facilitating scientific and public learning

7. DECISION-MAKING
    - The type of decision rules, roles and responsibilities of representatives
    - The degree to which decisions are binding versus advisory

8. CONFLICT RESOLUTION
    - Procedures to prevent, manage, and resolve conflicts

9. ADAPTIVE MANAGEMENT
    - Strategies to monitor and measure progress, support on-going learning, and adapt to change

10. FINANCING
    - The support from public, private, or NGO sources that allows for a sustainable means of funding the creation and on-going operations of a transboundary conservation project, as well as the securing of other income generating streams associated with the value of the natural resource base being managed under the transboundary conservation regime

Although there is no single model for transboundary conservation governance, all approaches share these defining characteristics and common elements. Consistent with the literature on natural resource governance, all of these elements are important to foster inclusive, informed, deliberative, transparent, credible, legitimate and sustainable governance arrangements to achieve the goals of transboundary conservation (e.g van der Linde et al., 2001; McKinney and Johnson, 2009).

Case Study 2 The Crown of the Continent

The Crown of the Continent (COTC) is a 72,000 km² (18 million acres) transboundary ecosystem that spans the USA (Montana) and Canada (British Columbia and Alberta). For nearly 100 years, beginning with the creation of Glacier and Waterton national parks, this area has served as a laboratory for transboundary conservation. Today, this special place reflects a number of innovative governance arrangements, both formal and informal, that are emerging in TBCAs throughout the world.

In the spirit of community-based collaboration, local Rotary Clubs (i.e. business leaders) in Alberta and Montana advocated the idea of a transboundary peace park and in 1932 the governments of Canada and the United States designated the Waterton-Glacier International Peace Park. UNESCO named Glacier National Park as a Biosphere Reserve in 1976, and

recognized Waterton Lakes with the same designation in 1979. The two parks were designated as a transboundary World Heritage Site in 1995.

More than 100 agencies and community-based organizations are working today to promote and sustain the cultural, community, and conservation values of this special place. Nine initiatives have been created during the past 20 years to facilitate transboundary conservation. While none of them has any formal authority to make and implement decisions, they each play a critical role in exchanging information and building relationships. Along with the community-based partnerships, they help build the civic and political will to address complex natural resource and related issues that cannot be effectively addressed by any single stakeholder group. Crown-wide initiatives consist of:

1994 COTC Ecosystem Education Consortium
1999 Transboundary Research and Education Program, University of Montana and University of Calgary
2001 Crown Managers Partnership
2002 COTC Resource Learning Center
2002 Heart of the Rockies
2007 COTC Geotourism Council
2007 Roundtable on the COTC
2009 University of Montana COTC Initiative
2009 COTC Conservation Initiative

The COTC includes two countries with more than 20 government agencies exercising some type of authority and management of the landscape. While each of these expert-driven institutions play an important role in managing the area's unique natural and cultural resources, most of the issues facing the COTC cross jurisdictional and cultural boundaries. The formal legal and institutional arrangements delineate ownership and management authority; however, they also create barriers between disparate cultures, values, interests, and goals. People who care about the COTC are increasingly looking to bridge these barriers.

The transboundary system of governance that is organically emerging reflects a nested system of governance. Starting at the smallest geographic scale, there are at least 20 community-based partnerships in the COTC, most of them initiated and convened by citizens. These community-based partnerships create the basic building blocks within the emerging nested system of governance. Consider, for example, the Blackfoot Challenge. This landowner-based group coordinates management of the Blackfoot River, its tributaries, and adjacent public and private lands. It is organized locally and known nationally as a model for preserving the rural character, ecological health and natural beauty of a watershed. It supports environmentally responsible resource stewardship through cooperation of private and public interests. Private landowners, federal and state land managers, local government officials, and corporate landowners compose the informal membership. All share a common vision of how the Challenge operates in the Blackfoot watershed and all believe that success is most likely to result from building trust by working together. It is a good example of how community-based partnerships often 'nest' alongside each other, and within a large spatial context—in this case, the ecosystem referred to as the COTC.

Scaling up further from the level of the COTC is the Yellowstone to Yukon Conservation Initiative (Y2Y), an effort to protect wildlife core areas and corridors across a 1,295 km² (500 square miles) landscape. Y2Y began as a network of biologists and conservationists who were concerned about the status of wildlife populations on a northward trend. Today, Y2Y continues its networking function, but programmatically focuses on protecting key connectivity areas for wildlife—areas that currently harbour endangered species such as the grizzly bear (*Ursus arctos*) while facing significant threats from habitat loss, invasive species, and, increasingly, climate change. While Y2Y focuses on wildlife corridors and connectivity, it works closely with private landowners, community leaders, and others to address a range of issues related to land use, community and economic prosperity, and wildlife management.

This COTC example illustrates a number of trends in transboundary conservation governance. It is collaborative, nested, and adaptive. It blends formal and informal arrangements. Citizens, private businesses, NGOs, and universities in the COTC increasingly support the formal governance arrangements by facilitating scientific and public learning, fostering civic and political will, and convening and coordinating events that connect people and build regional identity.

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Further reading: Bates (2010); Locke and McKinney (2013)
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Models of Transboundary Governance: From Informal to Formal Arrangements

The IUCN typology of governance arrangements for protected areas is useful because it clarifies who has authority and responsibility for making decisions. However, it is somewhat limited in terms of reflecting the other common elements of transboundary conservation governance. In addition to focusing on the issue of who has authority and responsibility for making decisions—which touches on the elements of representation and decision-making, and to some degree leadership—the other defining characteristics or common elements of transboundary conservation governance must also be addressed to create effective governance arrangements.

To supplement and complement the typology of governance arrangements offered by IUCN (Table 2), a critical review of transboundary conservation governance around the world suggests an extensive and often complex array of approaches—from informal to formal. Formal arrangements are framed by certain legal mechanisms/agreements that can be binding (e.g. bilateral treaty) or non-binding (e.g. MoU, Declaration). In contrast, informal approaches do not implicate ratification of official agreements but gather rather loosely linked autonomous participants.

Both formal and informal transboundary governance arrangements can be catalysed and coordinated by various actors, including, for example, government agencies, NGOs, local communities, indigenous peoples, protected area administrations. An example of an informal

arrangement that involves NGOs is the COTC Conservation Initiative shared by the USA and Canada that brings together most of the conservation NGOs in the region. Also, the Roundtable on the COTC serves as a 'network of networks', realizing that there are over 100 groups and organizations shaping the future of this transboundary region. The Roundtable serves as an on-going forum to connect people, build relationships and knowledge, and explore opportunities to work together.

In contrast to the informal COTC Initiative and the Roundtable on the COTC that serve as a platform for NGOs, the Danube River Network of Protected Areas in Europe is a more formal structure that gathers representatives of twelve protected areas of eight Danube countries. In 2007, the Declaration of Tulcea formally launched the initiative to 'expand the cooperation, coordination, consultation and strengthen links between the national administrations of protected areas of Danube riparian countries' (Declaration of Tulcea, 2004). Two years later, the Danube River Network of Protected Areas was officially launched through the new Declaration of Vienna. Similar networks involving protected area authorities are mentioned throughout this document.

Practice also provides examples of structures that gather different sectors as partners. A Transboundary Joint Secretariat (TJS) of Armenia, Azerbaijan and Georgia is hosted by the German Agency for International Cooperation (GIZ), and members and partners include AHT-Group AG from Germany, the Regional Environmental Centre for the Caucasus, the Ministry of Nature Protection of the Republic of Armenia, the Ministry of Ecology and Natural Resources of the Azerbaijan Republic, the Agency of Protected Areas of Georgia, and the Caucasus Nature Fund. It is a cooperative structure consisting of government agencies, an international organization, and a private company.

The informal approaches are not a substitute for formal arrangements to protect, conserve, and manage TBCAs. Instead, the informal approaches supplement, complement, and often make the more formal processes of governance work better. The informal arrangements help ensure a more effective implementation and enforcement of policies and plans, in part because there is a greater understanding of local culture and livelihoods, and a greater sense of ownership in the goals of transboundary conservation and the governance arrangement to achieve those goals. They normally require fewer resources than formal approaches to govern a TBCA and they certainly have the ability to minimize bureaucratic obstacles. Informality in transboundary governance can also be subject to certain weaknesses such as difficulty to sustain the effort, changes in personnel and resources that decrease the effectiveness, etc.

Table 3 provides some of the most common strengths and weakness of informal transboundary governance arrangements. The balance between them will depend on the specificities of local circumstances, the degree to which participants share a vision, the capacity (often embodied in one person or a small staff) to coordinate and convene activities among the independent players, and generally, the ability of actors to artfully frame and implement the process.

Table 3 Strengths and weaknesses of informal transboundary governance arrangements

INFORMAL TRANSBOUNDARY GOVERNANCE	
Strengths	Weaknesses
• Typically require less time, money, and other resources than formal arrangements • Well suited to responding to problems characterized by divergent sources, actors, and information • Minimizes administrative and bureaucratic hurdles • Can be built on existing relationships • Can be readily scaled to the issue and potential solutions at hand • Provides a central platform to integrate diverse needs and interests (in case of the establishment of new transboundary informal structures) • Requires trust • Provides flexibility to include representatives from all sectors—public, private, non-profit, university, etc.	• May be difficult to sustain due to lack of formal structure • Lack of specific, formal agreement on roles and responsibilities can lead to misunderstanding and friction through the loss of continuity and/or champions with institutional memory • In contentious situations, the necessary trust among participants may be difficult to forge or sustain • Highly susceptible to changes in power, politics, personnel, and resources • Can be challenging to distribute costs and benefits equitably among players in the network • May lead to an increase in transaction and coordination costs • Tools and resources (and perhaps even the spirit of cooperation) may disappear when the issue that spawned the informal cooperation goes away • Newly established transboundary institutions/structures often have high start-up and maintenance costs and may not be easily adaptable to changing circumstances

In formal relationships between two or more entities each accepts responsibility to contribute a specified, not necessarily equal, level of effort to achieve a common goal. The objectives of formal transboundary governance arrangements may initially be exchanging ideas and identifying common interests, but they often move in the direction of increasing formalization through sharing resources, working on common problems, and delivering specific types of services. Actors establish legitimate, more or less permanent forums to facilitate a transboundary process, the sustainability of which will depend on various elements, such as the strength of mutual trust, level of implementation of agreements, clarity on responsibilities and roles (see

Table 4 for suggested strengths and weaknesses of formal transboundary governance).

Table 4 Strengths and weaknesses of formal transboundary governance arrangements

FORMAL TRANSBOUNDARY GOVERNANCE	
Strengths	Weaknesses
• Create more or less permanent forums to facilitate transboundary thinking and action • Allow government agencies to work across boundaries either within existing government structures or by realigning functions • Enable high-level and broad-based support for implementation • Provide flexibility to include representatives from all sectors—public, private, non-profit, university, etc. • Clarify roles and responsibilities, thereby minimizing misunderstanding and friction among participants • May ensure implementation by creating the right incentives and/or binding agreements • Provide legitimacy for addressing transboundary issues • May be better able to address long-term transboundary concerns • Provide a central platform to integrate diverse needs and interests (in case of the establishment of new transboundary formal structures) • Requires trust and the building of social capital	• Authority may be limited to planning and visioning, not implementation • Effectiveness depends on good-faith efforts and continuity of participation among individuals in each agency; staff turnover can derail group efforts • Equitably distributing costs and benefits among participants can be challenging • Requires trust and the building of social capital • Individual partners may want their interests to predominate, making it difficult to equitably prioritize projects despite widespread agreement on a transboundary vision • May have agreement between partners on high-level vision and very different conceptualizations of what this means and how to get there • Newly established transboundary institutions/structures often have high start-up and maintenance costs and could not be easily adaptable to changing circumstances

While both informal and formal approaches in transboundary governance can be convened by existing structures and/or institutions, there are many examples from practice where new institutions are established. These institutions normally serve as a central platform that integrates and coordinates a variety of needs and interests whether having official authority or not. For example, the Alliance of the Indigenous Peoples of the Highlands in Borneo (FORMADAT) was established in 2004 and brings together the leaders and people of the Highlands region of Indonesia, Malaysia and Brunei. FORMADAT is an example of a newly formed transboundary organization that is entirely informal in nature, yet supported by a declaration signed by its members. It is a well-organized grassroots transboundary initiative, and its Indonesian and Malaysian members were observers to the trilateral governmental meeting held in Brunei in 2013.

The new institution can become a regulatory authority, which can function very well, but also be subject to weaknesses due to a normally implied high cost for maintaining the new structure. Sometimes, existing local and national governments may object to relinquishing any of their own authority or autonomy. Policy makers and citizens alike may be sceptical and averse to creating another layer of government. Proponents of this approach therefore must forge new political alliances, negotiate mutually beneficial arrangements among jurisdictions, and persuade naysayers. A good dose of timing and luck is also essential.

An example of a newly established formal structure for TBCA governance is the innovative governance model established under the EU structure, such as the European Grouping of Territorial Cooperation (EGTC) that is operational in Alpi Marrittime-Mercantour in Italy and France. The EGTC allows joint transboundary operations in Marrittime-Mercantour and is based on the framework of a joint Action Plan. Another example is the joint Austro-Hungarian National Park Commission, consisting of the two countries' governmental authorities and the Lake Neusiedl and Fertő-Hanság National Parks management bodies. The joint Commission acts as a steering committee for this TBPA.

Further on, in the Great Limpopo Transfrontier Park of Mozambique, South Africa, and Zimbabwe, government officials signed a MoU to work together in 2000. They started by creating international working groups for conservation, tourism, finances, and other key issues. The working groups reported to a supervisory technical committee, which in turn reported to a ministerial committee comprised of the three partner countries. The process of working together across boundaries became more formalized with the signing of a treaty establishing the Transfrontier Park in 2002. Based on the treaty, a joint management board began to coordinate the transboundary management of the park, and the working groups became permanent management committees. The joint management board is staffed by an operational coordinator, soon to become a permanent secretariat, appointed by the three countries.

Formal and informal transboundary governance is practised through a variety of models often named as partnerships, networks, commissions, groups, alliances, newly established institutions comprised of members from each participating country, or similar. The terminology addressing a particular model vary from region to region and it is acknowledged that a variety of terms may be used to reflect a similar meaning, e.g. a partnership can easily be called an alliance, a network can be addressed as a group, etc. This document does not provide a strict typology of transboundary governance arrangements in recognition of many innovative and alternative approaches that may overlap in some ways and often have subtle differences among them, and due to the fact that using specific terminology may be confusing and even misleading. In contrast, this document highlights the variety of experience in shared governance of TBCAs, including formal and informal arrangements, while suggesting that one approach is not necessarily better than another. Both formal and informal approaches (as Table 3 and

Table 4 show) have certain strengths and weaknesses.

Practice shows a tendency towards the formalization of informal arrangements so as to secure political buy-in and the sustainability of the process, although this is not always the case. An example from practice is the Grenadines Network of Marine Protected Areas (MPA) (GNMPAs) in the south-eastern Caribbean. It is a network of MPAs that are co-managed by community and government, established through facilitation of The Sustainable Grenadines Inc. NGO. Initially, the GNMPAs had no formal structure in place, while the years of dedicated work by the NGO and its partners, including local communities and government agencies, resulted in the signing of a formal agreement between the MPAs.

It is often a very fine line between the models that reflect formal and informal arrangements and they sometimes overlap or start as an entirely informal initiative and end as a highly formal structured TBCA. The efficiency and sustainability of a particular model, being informal or formal, will depend on a variety of elements specific for each particular area. In sum, all transboundary conservation efforts are assemblages of cooperating interests and groups, and all have established some type of working arrangement—some more artfully framed than others. The differences appear in aspects such as the range of issues and concerns that bring them together, the size and complexity of the geographical area they are focused on, the strength of the structural relationships they have established in which to function, the type of 'official' establishment within recognized public or private organizations, and their method of assuring (or not) a continuing presence.

Box 1 A framework for transboundary cooperation in North America

Canada, Mexico and the USA share a continent with vast, interconnected wilderness and protected areas. In order to ensure protection of these places and the ecosystem services they provide, seven North American agencies signed, in 2009, the first ever international agreement dedicated to conserving wilderness. The MoU on Cooperation for Wilderness Conservation brings together the Parks Canada Agency of the Government of Canada, the U.S. Fish and Wildlife Service, National Park Service and Bureau of Land Management of the Department of Interior, the U.S. Forest Service and Office of Environmental Markets of the Department of Agriculture and Mexico's National Commission for Natural Protected Areas (CONANP) of the Secretariat of Environment and Natural Resources, in a framework for cooperation.

A North American Inter-Governmental Committee on Cooperation for Wilderness & Protected Areas Conservation (NAWPA) was created to direct the activities under the MoU. NAWPA is committed to working across boundaries to address common ecological, economic, and social challenges. It aims to strengthen the conservation of ecosystems and species by cooperating on strategies for research, monitoring, protection and restoration, while facilitating opportunities for public outreach, education, visitor experience and enjoyment.

Since 2009, cooperation has yielded valuable lessons for addressing transboundary issues at a continental scale. In particular, the Climate Change Working Group has focused efforts in explaining to policy makers and the public how protected areas are essential for climate change adaptation; i.e. in delivering natural solutions for landscapes, waterscapes and communities in Canada, Mexico and the USA.

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Web: http://nawpacommittee.org/wp-content/uploads/2012/08/NAWPA-CCWG-Brochure.pdf

Lessons Learned and Advice to Practitioners

Several lessons emerge from this critical review of transboundary conservation governance that may inform and invigorate the efforts of practitioners. Before highlighting these lessons, it is important to emphasize three over-arching trends in transboundary conservation governance—all of which should be considered 'best practice.'

First, transboundary conservation governance is increasingly ***collaborative***, meaning the leaders seek to engage diverse role players and stakeholders—including communities, rightsholders, private sector groups, experts, and governments from the involved countries—to jointly learn and generate options, possibly even in the face of conflict, changing conditions, and conflicting sources of information. In addition to being inclusive of all interests, participants engage directly in decision-making and are not merely 'consulted' by government agencies.

Second, transboundary conservation governance is increasingly ***nested***, meaning that it includes distinct but linked systems at two or more levels of social organization. The theory behind this practice is that autonomous, self-organized governance systems may be more effective in learning from experimentation than a single central authority. Under appropriate circumstances, individual systems can be linked—or nested—to form dynamic 'networks of networks' capable of addressing transboundary issues that could not be addressed by any single actor or organization.

The third and final trend in transboundary conservation governance is that it is increasingly ***adaptive***. It is based on the premise that uncertainty is given—that social, economic, and environmental variables change, landscapes evolve, and unanticipated impacts occur. Rather than wait until more complete information is available, adaptive governance means that we should learn by doing and create an expectation of learning as we go.

Given these trends, along with the best practices presented throughout this document, six key take-away points for transboundary conservation practitioners and projects are emphasized:

a) *Address common elements of good governance*. Although there is no single model for transboundary conservation governance, there is a set of common elements that should be addressed in the design and operation of any governance arrangement (i.e. leadership, representation, public participation, function and scope, authority, legitimacy and accountability, learning, decision-making, conflict resolution, adaptive management, and financing).

b) *Let function dictate structure.* The decision whether a transboundary conservation initiative should take a very formal or informal form; and whether it should be led by government, private parties, local communities and/or indigenous peoples, should be driven largely by the intended functions of the initiative.

c) *Promote flexibility and adaptability.* One of the key lessons emerging from the practice of transboundary conservation is that the most effective governance arrangements are collaborative, nested, and adaptive. While the goals of transboundary conservation may remain constant, the ability to achieve those goals cannot be set in stone given that social, political, economic, and environmental contexts are constantly changing.

d) *Design mechanisms for accountability.* Because all shared governance relies on building trust and social capital, institutional arrangements should promote and support an open, transparent, inclusive, informed process. Similarly, conflict resolution mechanisms are needed to make sure that participants have a means to effectively resolve differences.

e) *Govern at the scale of the problem.* As emphasized throughout this document, TBCAs are complex socio-ecological systems filled with myriad problems. These problems occur at and span many different scales. Governance functions best when it matches the scale of the issue it attempts to resolve. In transboundary conservation,

some issues will be better resolved at a very localized scale while others will span large regions. Effective transboundary governance will encourage decision-making at the appropriate scale.

f) *Cooperate or go it alone.* Across the continuum of transboundary conservation governance, stakeholders regularly confront the dilemma of when to cooperate and when not to. This document emphasize that the calculus of this decision varies by stakeholder and by issue. A general rule of thumb is to weigh the increased transaction costs of cooperation and collaboration against the benefits gained through cooperation and collaboration. This likely varies by problem type. A similar process can help determine the appropriate level of cooperation.

Planning and Designing the Transboundary Conservation Process

Practical experience, supported by research into many transboundary conservation initiatives throughout the world, suggests that there is no single model for initiating and implementing transboundary conservation. Despite similarities and numerous common points, the most effective approaches to transboundary conservation are home-grown, tailored to suit the issue at hand, and adapted to the unique needs and interests of each region.

Four stages of transboundary conservation process are essential for initiating and establishing a TBCA. These stages are: diagnose, design, take action, and evaluate, and they are comparable to the well-known conservation planning cycle designed by the Conservation Measures Partnership. Each of these stages contains a number of important elements that are helpful in moving forward with the initiative.

This document presents guidelines on diagnosing and designing transboundary conservation efforts. A set of principles, techniques, strategies and concepts help people diagnose the enabling environment for transboundary conservation by identifying the key reasons to act in a transboundary way, determining if there is a constituency for change, estimating the scope of the issue and the capacity to work across boundaries.

After carefully diagnosing the situation, it is then time to start designing an appropriate process or forum to begin working towards establishment and development. These materials are referred to as ‘tools’ not because of their technical complexity—most of the ideas are just organized common sense—but because of their emphasis on utility and their application to transboundary conservation throughout the world. These ideas and tools are presented as a work in progress.

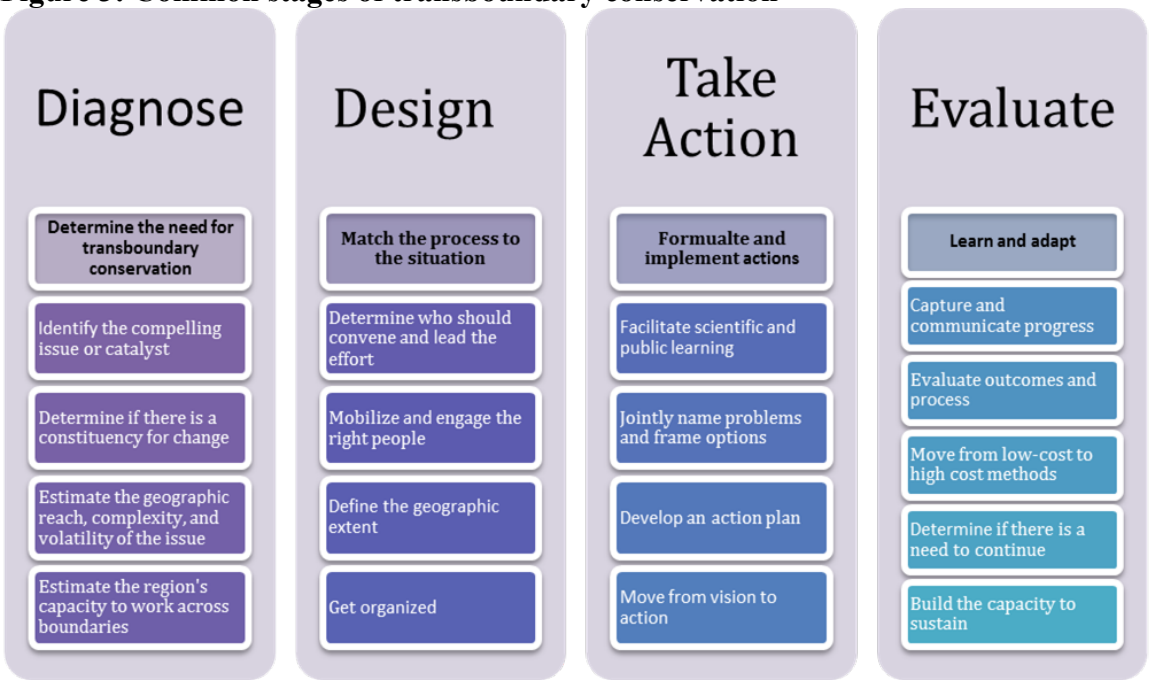
Assessing the Enabling Environment

Four common stages of transboundary conservation integrate a number of elements that are important for initiating and then establishing a TBCA, the first two of which reflect a planning phase, the third reflects actual management, and the fourth one reflects evaluation of the results. These four stages are presented in Figure 3. The decision to undertake this approach was done on purpose to demonstrate the complexity of the transboundary conservation process and allow for

the elements that are comprised in the two relevant stages of the process to be reflected in an array of important topics that emerge in the establishment, management, and monitoring and evaluation (M&E) of transboundary processes.

Stages presented in Figure 3**:** Common stages of transboundary conservation largely correspond to the well-established cycle of conservation planning and practice—the Open Standards project management cycle, designed by the Conservation Measures Partnership[1] (
). As in the Open Standards, common stages of transboundary conservation process include planning, action taking (doing), evaluating and adapting as critical phases in the process.

Figure 3: Common stages of transboundary conservation



Source: Center for Natural Resources & Environmental Policy, The University of Montana

Before initiating a transboundary conservation process, interested people and organizations should first diagnose the situation. Assessing whether the benefit for transboundary conservation and for key people involved will outweigh the cost of working across borders, will determine the need to work in a transboundary way. Four diagnostic steps or questions determine whether particular countries and relevant stakeholders need to engage in transboundary conservation, and if the key partners are ready to act (Figure 3).

[1] *See* www.conservationmeasures.org

Figure 4: The five-step project management cycle as presented in the Conservation Measures Partnership's Open Standards

Source: The Conservation Measures Partnership (2013)

Diagnostic step 1: Identify the compelling reason to act

Transboundary conservation is challenging and many people are reluctant at first to think and act across international boundaries. Transboundary conservation promises to add more work, more responsibilities, and more demands on already thin resources and staff time. As a matter of principle, transboundary conservation is compelling when people realize that they are more likely to achieve their interests by thinking and acting interdependently than by acting independently. Research and practical experience suggest that nearly all transboundary efforts originate in response to one of two driving forces: a pressure or a promising opportunity (van der Linde et al., 2001; Baldus and Hahn, 2007; van der Molen and Ietswaart, 2012). Motivation for change is an essential prerequisite. Without such motivation for change, whether it originates in responding to certain modes of pressure, or in realizing mutual opportunities, there is no valid reason for change.

No matter how compelling a pressure or opportunity may be, such a catalyst alone is not enough to initiate a transboundary conservation effort. In fact, identifying a compelling purpose or interest is just the first step.

Diagnostic step 2: Determine if there is a constituency for change

This step responds to the question of whether there is a critical mass of people aware of a common crisis, threat, or opportunity, and ready to work together in response. This raises several additional questions: Who is interested in or affected by the issue? What jurisdictions and

decision makers are needed to implement any outcome? What are the decisions that need to be made? Who might undermine the process or outcome if not included?

Diagnostic step 3: Estimate the scope of the issue

Delineating the precise boundaries of a TBCA is not part of this initial phase in the transboundary conservation process, but rather the estimation of the geographic reach, as to be able, among other issues, to understand the range of stakeholders' interest and activity. Boundaries in certain TBCAs can be fluid as the nature of the problem and people's interests change. However, during this diagnostic step, the idea is to develop a preliminary sense of the territory and to clarify the complexity and volatility of the issue. How many jurisdictions might be involved? What is the history of relationships among potential participants? Do they have a track record of working together or not getting along? What do we know (or not know) about the scientific and technical aspects of the issue? These and similar questions can help diagnose the scale of the issue and the need for collaboration.

Diagnostic step 4: Estimate the region's capacity to work across boundaries

The focus of this analysis is not on determining whether the key partners currently have the capacity to achieve its ultimate goals, but on whether they have sufficient resources to start the process and build the necessary capacities over time. Just as no single person or group is likely to have the power or authority to address a transboundary issue, no one person or group will likely have all the necessary resources. The best way to assemble these resources is to identify what assets various partners are willing to share and bring to the effort, and what, if any, resources are missing. Often, transboundary initiatives are started without securing all the necessary resources at the beginning to respond to other important elements such as high motivation and excitement of relevant people.

Box 2 Prioritization of Transboundary Protected Areas in South Asia: The Indian initiative

Lying at the centre of South Asia, India shares borders with Bangladesh, Bhutan, China, Myanmar, Nepal, Pakistan and Sri Lanka. Of the 683 protected areas in India, 26 are located in international border regions. In order to prioritize TBPAs, these protected areas were categorized by the Wildlife Institute of India on the basis of five criteria related to ecosystem resilience (size, connectivity), ecosystem services, number of species of conservation concern, entities of cultural and aesthetic significance and economic potential; and 24 indicators having varying degrees of thresholds. Scores were assigned on the basis of expert opinion and literature survey. Based on the sum of scores from 24 indicators, TBPAs were then prioritized.

Subsequently, the proposal was considered by the National Board of Wildlife. A Task Force was constituted under the Chairmanship of the Secretary, Ministry of Environment and Forests, and members from State Forest Departments, civil society organizations, the Ministries of External Affairs, Home Affairs and Defence. After several rounds of discussions and based on strategic political and governance considerations relevant in the South Asian context, the Task Force identified the following protected area complexes as potential TBPAs: Buxa Tiger Reserve (India) - Phipsoo Wildlife Sanctuary (Bhutan); Manas Tiger Reserve (India) - Royal Manas National Park (Bhutan); Valmiki Tiger Reserve (India) - Chitwan National Park (Nepal); Dudhwa National Park (India) - Shuklaphanta Wildlife Sanctuary (Nepal) - Sunderban Tiger Reserve (India) - Sunderban Wildlife Sanctuary (Bangladesh). While the formal declaration of TBPAs is under process, coordination meetings between the respective protected area complexes for the conservation of species of global interest such as tiger and protection strategies for controlling poaching and transborder illegal trade of wildlife parts and products are in place. This case study demonstrates the role of the scientific institutions, vertical and horizontal coordination, effective governance system, combined with political will and communication required for effectively identifying the compelling reason to act and establishing TBPAs.

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The Asiatic wild ass (*Equus kiang*) is an endangered species inhabiting the steppe areas the Tibetan Plateau. The kiang is the symbol of the trans-Himalayan steppe of the Tibetan Plateau. Its movement at the border region of India and China in Ladakh often causes conflict among local inhabitants of the region due to crop raiding. This provides an opportunity to initiate dialogue for conflict resolution and establish TBCAs in the region.

Methods to Assess Transboundary Conservation Feasibility

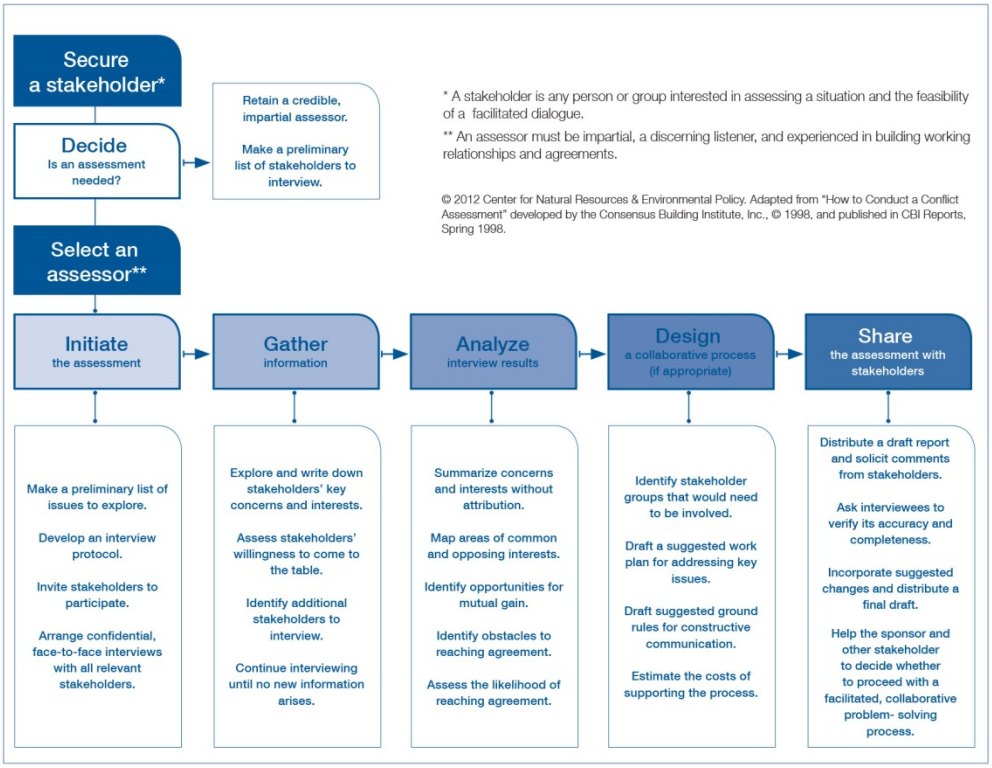
Stakeholder analysis

One way to assess the feasibility of initiating transboundary conservation is to complete a stakeholder analysis, a practical tool that allows a proponent (the person or organization interested in catalysing and/or leading a transboundary conservation initiative) and other stakeholders to begin developing a common understanding of the substantive issues, the diversity of viewpoints and interests, and alternatives to transboundary conservation. It helps people understand the history and dynamics of a particular issue or situation and clarifies the incentives of the various parties to engage in transboundary collaboration. A stakeholder analysis can also be a vehicle to help people understand the costs and benefits of acting independently rather than cooperatively. Moreover, people learn about each other's interests and values through an impartial assessment process, and this helps build understanding, trust, and working relationships.

There are many different approaches to conducting a stakeholder analysis. Methods such as focus groups, semi-structured interviews, social network analysis and others (for a systematized presentation of methods and their key characteristics *see* Reed et al., 2009) serve to identify and categorize stakeholders and to investigate relationships between them. This document briefly presents details of one possible approach to conducting a stakeholder analysis with the steps outlined in

Figure 5. The information gathered during the assessment allows stakeholders, including the proponent, to determine if the minimum conditions exist for transboundary cooperation and to begin designing an appropriate transboundary platform. In short, a stakeholder assessment can provide answers to the diagnostic tests presented above.

Figure 5: Stakeholder analysis



To initiate a stakeholder analysis, a proponent retains a credible impartial assessor. This person should be viewed by all stakeholders as nonpartisan and should have some understanding of the issues at stake and the institutional context of the issue. Assessors should be effective interviewers and discerning listeners, since interviewing is the primary method of gathering information during the assessment.

Working together, the proponent and assessor make a preliminary list of stakeholders to interview, develop an interview protocol, and invite stakeholders to participate. The assessor typically reviews appropriate documents to learn more about the issues and parties, and then conducts interviews, either one-on-one or in small groups of people with similar interests. Based on years of practical experience, the framing of interview questions is very important. Most people do not intuitively think transboundary, and the idea itself may be an unfamiliar frame of reference. Asking, 'What transboundary issues does your community face?' is rarely a good communication starter. A more effective question might be, 'What is most important to you and your community?' Answers will vary as the question is asked across different sectors of the region, but common themes will emerge. It is important to capture both the shared themes and different perspectives.

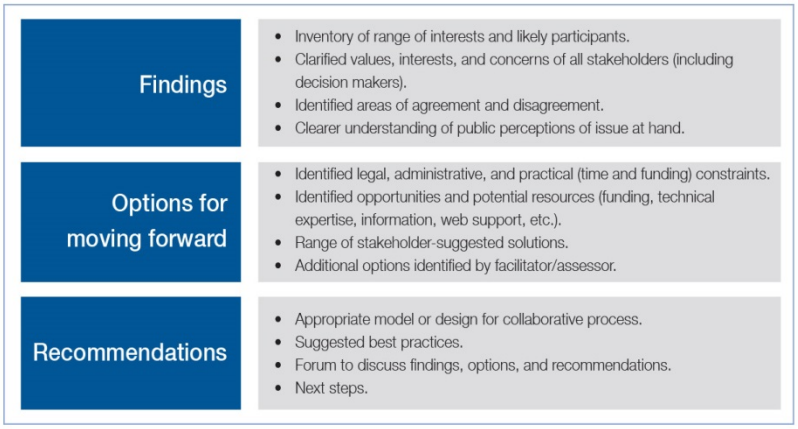
With a list of the most important issues in hand, participants can then analyze whether these issues are truly transboundary in nature and thus may require some type of regional response. An appropriate line of questioning might go something like this:

- Do one or more of these issues cut across multiple jurisdictions, sectors, or disciplines?
- Does any single entity have the power or authority to address this issue?
- Is there an issue that can be addressed best (or only) through transboundary cooperation?

The answers to these questions begin to clarify whether there is a compelling reason to think and act regionally.

Once the interviews are complete, the assessor prepares a report that synthesizes the findings and conclusions along with one or more options on how the stakeholders might proceed. The information gathered during the assessment allows stakeholders, including the proponents, to tailor a process to match the situation. By engaging the right people and documenting their concerns and interests, an assessment is an important first step toward a credible, legitimate framing of the issues. For a menu of possible outcomes of a stakeholder assessment, *see* Figure 6.

Figure 6: Possible outcomes of a stakeholder assessment



The described process of a stakeholder analysis can be used as a good base for developing other ways of conducting the analysis, appropriate to the participating countries' cultural and social environments. A stakeholder analysis does not always lead to full-blown transboundary conservation. In some cases, the assessment will conclude that the relevant countries and partners are not ready. People may disagree over the urgency and nature of the problems; decision makers may have other priorities. Citizens may be apathetic, or may not yet see the value in working with or learning from their neighbors throughout the region. In such cases, the situation may instead be ripe for simply raising awareness and beginning to build understanding of issues and interests.

Diagnostic tool for transboundary conservation planners

Adding to the stakeholder analysis, the IUCN WCPA Transboundary Conservation Specialist Group developed a *Diagnostic tool for transboundary conservation planners: Suggested questions to determine feasibility for transboundary conservation* as a complementary method to

assess the feasibility to initiate transboundary conservation (Vasilijević, 2012b). This practical framework provides a set of questions and issues to consider in assessing the feasibility for transboundary conservation. While there are many publications available that offer descriptive guidance to developing transboundary conservation, this particular tool is specific and innovative in that it provides: a) a qualitative assessment based on quantitative methodology, and b) rapid self-assessment possibility. It is designed in such a way to assist protected area authorities, governments, NGOs, local communities, and other interested parties in examining their readiness to initiate a transboundary conservation project, while not neglecting the reason(s) for transboundary conservation, and the accompanying opportunities and potential risks. Taking this into consideration, the questions examine the following elements leading to conclusions about the feasibility for transboundary conservation:

1. **the need** for transboundary conservation
2. **readiness** of stakeholders to initiate transboundary conservation
3. **opportunities** that could speed up the process and/or be generated by transboundary conservation
4. **risks** that could slow the process.

Ninety-one questions were designed in such a way to assess the issues that reflect the feasibility for transboundary conservation. They have partly been adapted from the United Nations Environment Program (UNEP) *Assessing the feasibility of establishing Transboundary Protected Area—Gap and opportunities analysis*[2]. The UNEP's framework is qualitative and best used by third parties not directly involved in the particular transboundary conservation initiative that is being assessed (e.g. facilitator or consultant). One of the key advantages of the WCPA's diagnostic tool is that it is based on quantitative methodology, meaning that the majority of questions are evaluated by scoring. Therefore, the questionnaire can be easily completed by transboundary conservation stakeholders and initiators, providing them a self-assessment opportunity.

For example, if a protected area manager or a responsible ministry or any other interested party wishes to examine the potential for transboundary conservation, by using this questionnaire they can do it on their own. The process is relatively fast, and one does not necessarily have to be a transboundary expert to reach conclusions about feasibility for transboundary conservation and interpret the results.

Some transboundary conservation developers may however wish to hire a consultant or someone neutral to advise them on the feasibility for transboundary conservation. For this particular possibility, the questionnaire contains also several 'informative' questions that are not scored. Their purpose is to fill in the consultant's potential knowledge gap related to the region. As the diagnostic process of the transboundary conservation initiative has to be participatory and include consultations with all interested parties that might be involved in or affected by the envisaged process, the more participatory the diagnostic process, the more likely you will arrive at a well-grounded conclusion about when and how to proceed about transboundary

[2] Unpublished and undated document, available from the author.

conservation. Thus, it is strongly suggested that this questionnaire be supplemented by a stakeholder analysis, which should form an integral part of this tool.

The questions presented in the diagnostic tool are standardized and not tailored to any particular area. It has been developed to be as simple and as user-friendly as possible to enable a self-assessment procedure and to avoid lengthy feasibility processes.

While the diagnostic tool is presented in Erg et al. (2012), an improved electronic edition is available at the website administered by WCPA Transboundary Conservation Specialist Group[3]. This e-edition also includes an automated report generation function according to the following format:

1. Compelling reason for transboundary conservation
   Objective: To determine the need for transboundary conservation.

2. Stakeholders
   Objective: To identify and start to involve stakeholders, including the identification of interaction between them and their interests.

3. Geographic reach, regional stability and complexity
   Objective: To determine the scale and complexity of the issue, and the regional situation that might impact transboundary cooperation.

4. Capacity
   Objective: To estimate the readiness of key stakeholders by evaluating their technical capacity, resources, and knowledge/skills.

The diagnostic tool for transboundary conservation planners is a dynamic tool that needs to be further tested in various geographical regions and ecosystems, and adjusted and improved accordingly.

Designing the Right Process

Rather than assuming that a compelling catalyst (a person or an issue) exists and the issues and people's interests are known quantities, it is always best to ask the people themselves: citizens, community leaders, protected area authorities and staff, business people, government officials and elected officials. This can be done through informal surveys, or through a more systematic stakeholder assessment, or through a diagnostic tool for transboundary conservation planners. Whichever way, it is crucial before moving forward to clarify the catalyst, identify a constituency for change, estimate the geographic scope of the issue, and inventory the region's capacity for transboundary conservation. A clear and accurate diagnosis of the situation allows participants to determine whether transboundary conservation is an appropriate response to the problem/s or opportunity/ies at hand.

[3] http://www.tbpa.net/page.php?ndx=22

If the diagnostic assessments conclude that people feel compelled to work across boundaries—if a constituency for change exists and people are ready to start working—then the time is ripe to decide how that work will proceed. Practical experience suggests that it is well worth taking the time up front to design a thoughtful, efficient process for the establishment and development of a transboundary conservation initiative. A well-designed process is far more likely to draw people into the effort, help them stay focused on the region and issues at hand, and achieve desired outcomes, recognizing also that such processes, no matter how well designed, need to allow for adaption and evolution as they are implemented.

As presented in Figure 3, there are four important steps to be undertaken in the design phase of a transboundary conservation process:

1. **Determine who should convene and lead the effort**
   Once people agree that they have a compelling reason to work together, the next ingredient they tend to look for is leadership. Who is going to bring everyone together, organize the work, facilitate dialogue, and be the voice for change? The most effective leader must be able to work across boundaries with a diverse range of interests.

2. **Mobilize and engage the right people**
   To be effective, transboundary conservation initiatives must engage the right people and build a constituency for change. While such a constituency may be already organized in some transboundary areas, it is not unusual for a nascent transboundary conservation initiative to help build such a constituency, either from some small beginning cluster of interested people or from scratch. At this stage, being as inclusive as possible ensures that the initiative will be broadly supported by people with ownership in both the process and its outcomes, but allow for growth as additional relevant stakeholders are identified and/or indicate an interest to become involved.

3. **Define the geographic extent**
   Most transboundary conservation initiatives begin with at least an initial delineation of their geographic locality and extent, and the mapping of such is based on the opinions and insights of those with a vision for their establishment. As such this initial delineation may reflect the constituent parts of the area, be these adjacent protected areas or contiguous ecosystems or habitats, as well as some of the key features that reflect the vision. However, it is possible that with further iterations involving more stakeholders, the delineation may change quite significantly and the detail and accuracy of the related features may also improve.

4. **Get organized**
   Given that transboundary conservation brings together people and groups from multiple jurisdictions, sectors and disciplines, it is critical to be clear about how the different parties will work together. The more diverse and complex the communication is, the more it helps to clarify operating protocols, including an explicit strategy for internal and external communications. It is also essential to be

intentional about assembling the necessary resources (i.e. people, skills, information and funds) to move forward. While step 2 refers to engaging the right people, this step is more about making sure the right organizational structure is in place.

Box 3 Big Bend-Maderas del Carmen binational landscape protection

Establishing TBCAs can be a long-term endeavour, within which public policy tools and private efforts are implemented gradually over a prolonged time period. The process's inherent complexity, uncertainty and duration are a result of the multinational and multi-sectoral nature of the process. Conservation efforts in the Big Bend-Maderas del Carmen region of Mexico and the US began in 1933. By 1935, meetings were being held between Mexican and United States government agencies, but soon afterwards the initial momentum dissolved. Communications were exchanged mainly through diplomatic channels during 1944, 1953 and 1967, but with no tangible advances.

In the US, two federal protected areas were established in 1944 and 1978 and two state protected areas in 1948 and 1988. By 1994 the first two Mexican federal protected areas were established, with two more following in 2009. A dual unilateral legal protection regime was finally in place for developing a bilateral management framework in the future.

Civil society has played, and continues to play a crucial role in shaping this binational land conservation landscape, including efforts of: Conservadores de Ecosistemas del Puerto del Pino, CEMEX, the Texas Bighorn Society, The Nature Conservancy and private landowners.

In 2010, the Mexican and US Presidents reaffirmed their willingness to designate Big Bend–Rio Bravo as a natural area of binational interest. Over 80 years have gone by since the inception of the bi-national conservation vision. Over 15,000 km² (over 3,700 acres) are currently under governmental protection and over 2,000 km² (about 495 acres) under private conservation management regimes. This experience suggests that if initial efforts are not successful, bi-national conservation initiatives can become extended processes through piecemeal advances. Also, conservation agencies should maintain leadership/communication with the support of the agencies in charge of foreign relations and not the other way around. A permanent adaptive approach is also required.

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Defining the Geographic Extent of the Transboundary Conservation Initiative

In the process of identifying the geographic reach of transboundary conservation initiatives the distinction between delineation and mapping is important as the former allows for the identification of the distinct geographic entity that is being put forward, such as a line on a map; while the latter provides for the detail within and related to the delineated area. Perhaps the most important guideline related to this aspect of transboundary conservation is the need for this process to be consultative, flexible, adaptive and iterative; and to recognize that the delineation

and mapping processes need to inform each other, and be agreed to by the participating countries and stakeholders.

The rationale behind the need to invest time and resources into the delineation and mapping of transboundary conservation initiatives is based on the need to, amongst others:

- Communicate
  In order for transboundary conservation initiatives to find traction with stakeholders and decision-makers it is essential that they are presented with a clear indication of what the initiatives entail from a spatial perspective, such as what portions of each participating country are being proposed as constituent parts of the TBCA. The ability to visualize this and to be able to understand the implications in terms of how the TBCA will relate to other features within and adjacent to it is made possible with a good map.

- Identify and consult stakeholders
  Once the target area has been clearly identified it becomes easier to objectively identify and select the stakeholders who are directly related to the area and who will be influential in its establishment and management.

- Plan for establishment and management
  The process of planning for the establishment and management of a TBCA is more meaningful and purpose driven with clear spatial data. When the Greater Limpopo Transfrontier Park was first conceptualized it was put forward as a TBCA, which included vast tracts of communal and private land between disjunct protected areas. Through a series of iterations with decision-makers the area was significantly reduced to a TBPA including only those protected areas that are immediately adjacent to each other (although one of the protected areas had to be included through the establishment of a linking corridor). Once this delineation process was completed it was possible for the planning processes to proceed with clarity and definition.

- Formalize agreements
  It is possible for transboundary conservation agreements to be concluded in the absence of distinct spatial descriptions, but these would be precursors to subsequent agreements that have a geographic focus and identity. As the geographic areas are more clearly delineated, the resultant maps will need to be included as crucial parts of the agreements at all levels of implementation, ranging from the political to the on-the-ground management.

- Analyse, monitor and evaluate
  A clear understanding of the geographic extent of a transboundary conservation initiative provides a sound foundation from which a variety of analyses may be launched, as well as providing a frame of reference for the development and implementation of a M&E framework.

There are a variety of methods that may be used to delineate and map a TBCA and these vary from being highly technical to more low-tech methods. The selection of method/s to be used will depend on the resources and capacity availability to the objectives of the mapping exercise.

Box 4 Maloti-Drakensberg: Defining the geographic extent of a transboundary initiative

The Maloti-Drakensberg Transfrontier Project is a transboundary conservation initiative between the Kingdom of Lesotho and the Republic of South Africa aimed at conserving the rich natural and cultural heritage of the Maloti-Drakensberg Mountains that are shared by these two countries. It is also aimed at stimulating sustainable development that is relevant to the opportunities inherent in these natural and cultural resources. A MoU was signed in 2001 and a five-year implementation phase, funded by the World Bank, began in 2003.

When the Maloti-Drakensberg Transfrontier Project moved from initiation to implementation, its geographic extent was significantly influenced by political dynamics. There was a perception in Lesotho that the project was an attempt by South Africa to secure more land, and therefore while Lesotho was a willing participant in the project, the extent of the land they were willing to delineate as part of the target area was simply a line on a map that reflected this perception, that is, it was drawn a standard distance from the international boundary with an extension to include some of their protected areas. In South Africa the line on the map was more reflective of the mountain bioregion that was the focus of the transboundary collaboration. As the first five-year implementation phase progressed and systematic conservation planning techniques were applied, a very different picture emerged with a much greater portion of both countries being included as part of the delineated project area. What this process revealed was that while the initial delineation excluded much of the bioregion, it did serve to secure political buy-in and as a point of departure for the project. Thereafter, as the role players were party to the subsequent conservation planning processes and their outcomes, there was acceptance for the greatly enlarged area.

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The International Centre for Integrated Mountain Development (ICIMOD) has been playing an important regional facilitating role to identify and delineate critical transboundary landscapes across the Hindu Kush Himalayan region. The approaches applied in some of the identified landscapes are process-led with intensive consultations among the experts supported by policy makers at the highest level including conservation and development agencies and local communities (Zomer and Oli, 2011). The systematic conservation planning approach based on protected area coverage and gaps (Chettri et al., 2008b), species distribution patterns and habitat contiguity (Chettri et al., 2007a; Rana, 2008), cultural and socio-economic relevance (Zomer and Oli, 2011; Chettri et al., 2012) and commonalities on climate change and adaptation challenges (Zomer et al., 2013) are the guiding principles in delineating the transboundary landscapes. To

cite an example, the countries sharing the Kailash Sacred Landscape, namely China, India and Nepal delineated the country specific maps with set criteria following ecological, socio-cultural and environmental considerations and then developed a transboundary landscape map based on discussions and agreements between the three countries.

There is no single model for initiating and implementing transboundary conservation. While most initiatives face common challenges and opportunities, the most effective approaches to transboundary conservation are home-grown, tailored to suit the issue at hand, and adapted to the unique needs and interests of each region.

The principles, techniques, strategies and concepts presented in this section should help people diagnose the enabling environment for transboundary conservation, and to then initiate and design an appropriate process or forum to begin working towards establishment and development.

Assessing and Securing Financial Sustainability

In addition to building civic and political will, mobilizing and engaging key actors, and gathering the best available scientific information, funding is essential for transboundary conservation. Financial resources are required for both 'backbone support'—planning, managing, and supporting the activities of a transboundary conservation initiative through facilitative leadership, data collection and reporting, technology and communication support, and handling the necessary logistical and administrative functions—and on-the-ground work.

According to a recent survey, *Transboundary Conservation Financing,* by the IUCN WCPA Transboundary Conservation Specialist Group, 53 initiatives (including cases from Asia, Africa, Europe, North America, and South America) have secured funding to implement their transboundary conservation initiatives (IUCN WCPA Transboundary Conservation Specialist Group, 2014).

According to the survey, the three most common sources of funding are:

1. Governments: local, provincial, or national
2. NGOs: local, national, and international
3. Regional partnership and institutions.

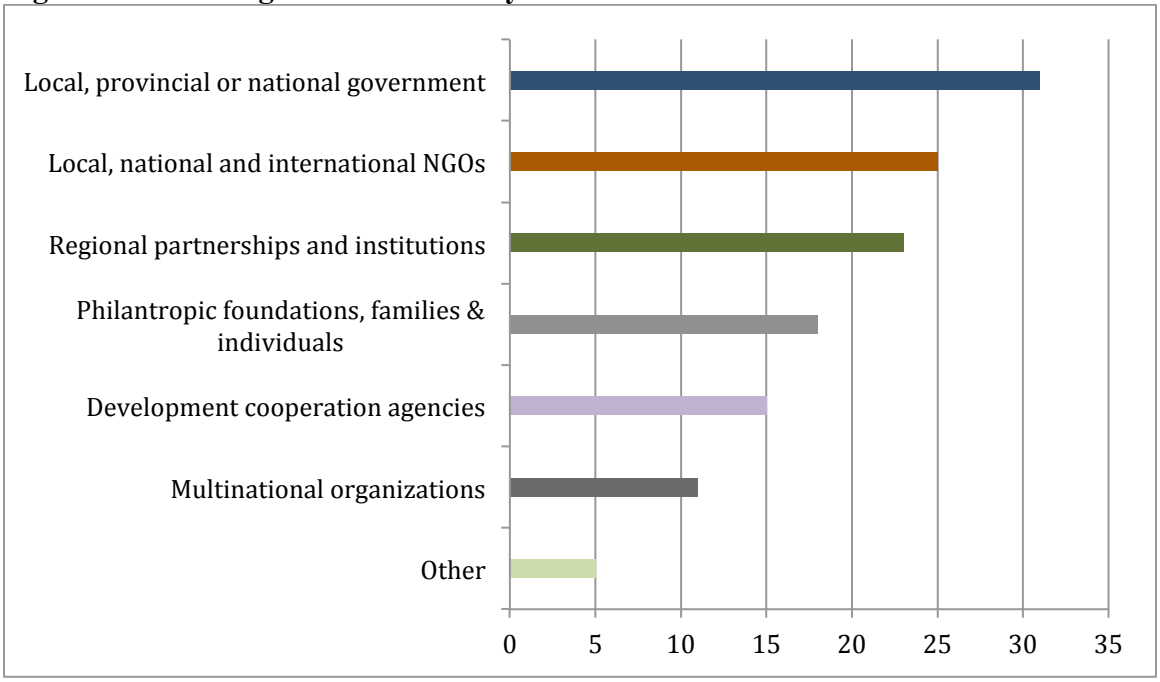
The next most common sources of funding include philanthropic foundations, families, and individuals; and development cooperation agencies. The least common sources of funding are multinational organizations (e.g. United Nations Development Programme and Global Environment Facility Agencies) and 'other creative funding approaches' (e.g. private sector tourism, user fees, ecosystem service revenues, carbon sequestration and Reduced Emissions from Deforestation and Forest Degradation (REDD) revenues, and trust funds) (

Figure 7).

The same survey identified the ten most common obstacles or barriers to funding including (not listed in any order of priority):

- Lack of government support, often because of tension among economic and environmental interests as well as concerns about conflict and security at the borders
- Lack of trust among governments and other stakeholders, thereby limiting opportunities to pool limited resources
- Lack of local capacity and civil society experience, and thus an absence of any social and political infrastructure to raise external funds
- Lack of public awareness about the value and need for transboundary conservation, and thus a lack of civic and political will
- Lack of a basic understanding about the cultural, ecological, and other values associated with transboundary areas, thus making it hard to frame a compelling message
- Incoherent and uncoordinated (often conflicting) funding strategies; people and organizations within the same region competing for the same limited resources
- Funding tends to be dedicated to particular issues, problems, or disciplines, which limits the need to invest in multi-objective, multi-disciplinary solutions
- Incompatible legal and policy arrangements across adjacent jurisdictions, making it difficult to achieve common goals and aspirations
- Lack of capacity to fully understand and package transboundary conservation initiatives according to their full socio-economic value based on the role they play in delivering ecosystem goods and services that are strategically important for society
- The development of a ‘donor-dependency’ amongst transboundary conservation practitioners which impacts on the ability to undertake work on a sustainable basis.

Figure 7: Financing of transboundary conservation initiatives



When asked about the most promising 'new' strategies or sources of revenue to support transboundary conservation initiatives, the respondents to the IUCN WCPA survey overwhelmingly identified 'public capital' (including government conservation programmes, local ballot initiatives; local taxes, fees, and incentives, and local improvement districts) and 'philanthropic capital' (including individual donors; foundations; businesses and corporations; institutional and nongovernmental collaborations; conservation buyers; voluntary surcharges; and voluntary private transfer fees. Forty percent of the respondents identified 'private capital' as a promising new strategy, including payments for ecosystem services; tradable land use rights; conservation development; agriculture, timber, and other income from conservation land; fees for services; and social impact conservation investors.

One particular question referred to the estimation of the annual budget needed to further and sustainably manage the transboundary programme. The responses to this question varied greatly from not knowing what would be the needed amount, through very moderate 4,000 Euros, to 1,5 million Euros.

The results of this survey, including the responses to a question on 'what resources to enhance funding for transboundary conservation, suggest a number of presented in

Table 5.

Table 5 Recommendations to improve funding for transboundary conservation initiatives

RECOMMENDATIONS	Explanation
➢ **Create training opportunities**	For example a 'Transboundary Conservation Finance training'—including opportunities for peer exchange and networking; using case studies to highlight innovative tools, programmes, and partnerships; and focusing on real-world problem solving and action planning, including how to build community-based collaborative capacity
➢ **Aggregate and disseminate resources**	For example case studies, an information clearinghouse, 'Ask the Expert' webinars
➢ **Build and support a 'Transboundary Conservation Finance Network'**	To exchange information, build capacity, and inspire each other
➢ **Foster new and innovative ideas**	Work with funders, whomever they may be, to take some calculated risks, and invest in some pilot projects

This survey demonstrates that there are a plethora of transboundary conservation practitioners around the world who are wrestling with the same issue of sustainable funding and who are finding solutions. As proposed, it is essential that one or more communication networks are established to transfer and share lessons, build capacity, and encourage all practitioners. Such a network/s can also be used for practitioners to post their particular funding challenges and to receive focused input and advice from colleagues around the world.

From a best practice perspective there are a number of steps that are recommended here, recognizing that conservation remains a discipline that is poorly resourced in both developed and developing economies (Emerton et al., 2006). The work by Emerton et al. (2006), which focuses on financing issues for protected areas, remains a sound resource from which transboundary conservation practitioners may draw valuable insight into this issue of sustainable financing, while the steps provided here may be seen as a generic approach or checklist that may be applied as a point of departure.

- Undertake a **review of all costs** associated with the implementation of the joint management plan with a view to ensure that it is as efficient as possible.

- Using the categories and examples of ecosystem goods and services as provided by the Millennium Ecosystem Assessment (Millennium Ecosystem Assessment, 2005) carefully **assess the full potential** of the TBCA to produce and deliver ecosystem goods and services; and then using mapping software such as InVEST (Tallis and

Polasky, 2009) and other decision support tools (TEEB, 2000; Goldman and Tallis, 2009; Tallis et al., 2010; Vogl and Tallis, 2014) **identify the beneficiaries** and their linkages to the area.

- Using the comprehensive picture of the full socio-economic value of the area, **identify strategies** relevant to each of the beneficiaries that may be used **to secure long-term investments** required to manage the TBCA in a way that will guarantee production and delivery of the associated ecosystem goods and services.

- Over and above, and inclusive of the latter, compile a **long-term business plan** from which it is possible to see the **costs of jointly and efficiently managing** the TBCA, together with the **potential income generating opportunities**, from which it is possible to determine the magnitude of the profit or loss that will be made or incurred.

- In the event of a loss, or a shortfall in operational budget, it will then be possible to look to **alternative funding sources** such as those put forward by the respondents to the survey discussed here, and/or those discussed by Emerton et al. (2006).

Another valuable emerging resource is the Conservation Finance Network, which provides conservation finance tools and training to people working to protect, restore, and steward natural areas (www.conservationfinancenetwork.org). The goal is to help people accelerate the pace of land and resource conservation through the use of innovative funding and financing strategies.

It is important to note that in outlining these recommendations we are not promoting the privatization of nature. From a comprehensive review of the income generation opportunities there may well be some that hold the potential for direct financial agreements in the shape of 'payments for ecosystem services'. However, what is being put forward here is the notion that TBCAs will inevitably hold great value and contributions to the broader socio-economic landscape within which they are located. It is this value that needs to be identified and optimally capitalized on, using as many of the potential ecosystem trading models that are relevant to the specific circumstances that are presented by the producer-consumer relationships that are identified. In addition to the relevant references already provided, the recent publication by Kettunen and ten Brink (2013), *'Social and Economic Benefits of Protected Areas: An Assessment Guide'*, is a necessary addition to the transboundary conservation practitioners' tool box.

It is also essential that in the undertaking of a full inventory of the opportunities present in a TBCA, practitioners need to look at both the present and the future state of the area. Prevailing circumstances may foreclose on options that are theoretically obvious such as a water catchment delivering watershed services. However, if the integrity of the water catchment has been compromised in any way, it will not be possible to realize the theoretical benefits until such time as the catchment has been restored. In other words it is necessary to consider both the present and desired state of the TBCA, and to put strategies in place that will work towards ensuring that it reaches its optimum potential to produce and deliver the promised watershed services (*see* Table 9 for summary of arguments on ecosystem services).

It may be necessary to secure government funding to support restoration work before more long-term agreements may be entered into on the basis of the well managed natural resources functioning optimally, but it has been shown that such investment generally realize the theoretical benefits (de Groot et al., 2013). Direct evidence of the application of this theory and the delivery of tangible benefits to both consumers and producers of ecosystem services within the context of protected areas and transboundary initiatives remains to be seen. However, the converse is significantly evident in a myriad of examples around the globe, for example where natural land cover has been degraded or transformed and its lost ability to deliver ecosystem services has resulted in the increased severity of flood events, increased vulnerability of coastal communities to sea surges, increased vulnerability of poor communities to drought, and so on. To further strengthen the theory though, de Groot et al. (2013) have shown that the restoration of most habitat types will result in a positive return on investment.

Finally, it is acknowledged that in order to apply the recommended steps, it is assumed that interim financial support has been secured through the various mechanisms available and the mandates given to the TBCA proponents by their respective principals. However, the statistics provided by Emerton et al. (2006) clearly show that unless every effort is made to work towards financial sustainability, it is likely that budget shortfalls will begin to emerge in increasing measure with the result that credibility, ecosystem functionality, key biodiversity features, etc. will be lost.

Box 5 The WAP: A transfrontier complex to consolidate

Formed by the W. Arly and Pendjari (WAP) national parks with partial wildlife reserves and neighbouring synergetic areas, the WAP complex spans more than 31,000 km² between Burkina Faso, Benin and Niger in the West African savannah. The WAP region hosts over 60 per cent of West Africa's elephants (*Loxodonta africana*), some of the last viable populations of big carnivores and the last West African giraffes (*Giraffa camelopardalis*). Its place in conservation has endured since the 1950s. The success of its conservation owes in part to the vast area it covers and the availability of important funding.

Several conservation projects have been developed since the 1970s primarily in each country. The first transfrontier conservation project financed by the European Union focused on the existing national parks adjacent to the WAP in Niger, Burkina and Benin, east of the complex. A Global Environment Facility/United Nations Development Project (5 million Euros) followed and ensured the collaboration in the total WAP area. Currently, the Support Programme to the Park Agreement project, financed by the EU, the West African Economic and Monetary Union (WAEMU), and the three countries for 23.5 million Euros reinforces the regional dynamic at the interface between conservation and development in the peripheral areas.

With these dynamics, the engagement of WAEMU, a regional integration organization brings more consistent regional funding through the Fund of Assistance to Regional Integration and the Regional Fund for Agricultural Development, which complements the national initiatives such as the Foundation of West African Savannahs of Benin. After more than 30 years of interactive dialogue, transfrontier cooperation for conservation is moving forward. However, in the absence of strong governmental support, it remains dependent on foreign support.

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References

Baldus, R.D. and Hahn, R. (2007). *The Selous Niassa Wildlife Corridor in Tanzania: Biodiversity Conservation from the Grassroots. Practical Experience and Lessons from Integrating Local Communities into Transboundary Natural Resource Management.* FAO CIC Technical Series.

Bates, S. (ed.). (2010). *Remarkable Beyond Borders: People and Landscapes in the Crown of the Continent*. Center for Natural Resources & Environmental Policy, Sonoran Institute and Lincoln Institute of Land Policy.

Borrini-Feyerabend, G., Dudley, N., Jaeger, T, Lassen, B., Pathak Broome, N., Phillips, A. and Sandwith, T. (2013). *Governance of Protected Areas: From Understanding to Action.* Best Practice Protected Area Guidelines Series No. 20. Gland, Switzerland: IUCN.

Chettri, N., Thapa, R. and Shakya, B. (2007a). Participatory Conservation Planning in Kangchenjunga Transboundary Biodiversity Conservation Landscape. *Tropical Ecology* 48 (2): 1–14.

Chettri, N., Shakya, B., Thapa, R. and Sharma, E. (2008b). Status of Protected Area System in the Hindu Kush Himalaya: An Analysis of PA Coverage. *International Journal of Biodiversity Science and Management* 4 (3): 164–178.

Chettri N., Zomer R., Sharma E, Oli K.P. (2012). Kailash Sacred Landscape Conservation Initiative: Towards an 'Ecosystem Approach' in Transboundary Biodiversity Conservation in the Hindu Kish Himalayas. In: Higgins-Zogib, L., Dubley, N. and Aziz, T. (eds.). *The High Ground: Biocultural Diversity and Conservation of Sacred Natural Sites in the Eastern Himalayas*. WWF Bhutan.

de Groot, R.S., Blignaut, J., Ploeg, S, van der Aronson, J., Elmqvist, T. and Farley, J. (2013). Benefits of Investing in Ecosystem Restoration. *Conservation Biology* 27 (6): 1286–1293.

Dudley, N. (ed.). (2008). *Guidelines for Applying Protected Area Management Categories*. Gland, Switzerland: IUCN. WITH Stolton, S., Shadie, P. and Dudley, N. (2013). IUCN WCPA Best Practice Guidance on Recognising Protected Areas and Assigning Management Categories and Governance Types. *Best Practice Protected Area Guidelines Series No. 21.* Gland, Switzerland: IUCN.

Emerton, L., Bishop, J. and Thomas, L. (2006). *Sustainable Financing of Protected Areas: A Global Review of Challenges and Options.* Gland, Switzerland and Cambridge, UK: IUCN.

Erg, B., Vasilijević, M. and McKinney, M. (eds.). (2012). *Initiating Effective Transboundary Conservation: A Practitioner's Guideline Based on the Experience from the Dinaric Arc.* Gland, Switzerland and Belgrade, Serbia: IUCN Programme Office for South-Eastern Europe.

Graham, J., Amos, B. and Plumptre, T. (2003) *Governance Principles for Protected Areas in the 21st Century, A Discussion Paper.* Ottawa: Institute on Governance in collaboration with Parks Canada and Canadian International Development Agency.

International Association for Public Participation (2007). *Foundations of Public Participation.*

<http://c.ymcdn.com/sites/www.iap2.org/resource/resmgr/files/iap-006_brochure_a3_internat.pdf>. Accessed on 2 April 2014.

IUCN (2008). *Resolution 4.056 on Rights-based Approaches to Conservation.* Adopted at the 4th IUCN World Conservation Congress, Barcelona, Spain.

IUCN WCPA Transboundary Conservation Specialist Group (2014). *Transboundary Conservation Financing*. Available by authors..

Kettunen, M. and ten Brink, P. (eds.). (2013). *Social and Economic Benefits of Protected Areas: An Assessment Guide.* Adbingdon: Routledge.

Locke, H. and McKinney, M. (2013). The Flathead River Basin. In: Norman, E.S., Cohen, A., Bakker, K. (eds.). *Water Without Borders: Canada, the United States, and Shared Waters.* Toronto, Buffalo, London: University of Toronto Press.

McKinney, M. and Johnson, S. (2009). *Working Across Boundaries: People, Nature, and Regions*. Lincoln Institute of Land Policy and Center for Natural Resources and Environmental Policy, The University of Montana.

Rana, L.N. (2008). *Biodiversity Status in the Potential Conservation Corridors of the Kangchenjunga Landscape: A Distribution Model of Flagship and Indicator Species. Biodiversity Conservation in the Kanchenjunga Landscape.* Kathmandu, Nepal: ICIMOD.

Reed, M.S., Graves, A., Dandy, N., Posthumus, H., Hubacek, K., Morris, J., Prell, C., Quinn, C.H. and Stringer, L.C. (2009). Who's In and Why? A Typology of Stakeholder Analysis Methods for Natural Resource Management. *Journal of Environmental Management* 90 (5): 1933–1949.

The Conservation Measures Partnership (2013). *Open Standards for the Practice of Conservation. Version 3.0/April 2013.* <http://www.conservationmeasures.org>. Accessed on 1 June 2014.

UNEP/CBD COP 10 (2010). *COP 10 Decision X.31 Protected Areas*. Tenth meeting of the Conference of the Parties to the Convention on Biological Diversity, Nagoya, Japan, 18–29 October 2010. <https://www.cbd.int/decision/cop/default.shtml?id=12297>. Accessed on 14 March 2014.

van der Linde, H., Oglethorpe, J., Sandwith, T., Snelson, D. and Tessema, Y. (with contributions from Anada Tiéga and Thomas Price). (2001). *Beyond Boundaries: Transboundary Natural Resource Management in Sub-Saharan Africa*. Washington, D.C., U.S.A.: Biodiversity Support Program.

van der Molen, J. and Ietswaart, H. (2012). *Crossing Borders. Creating and Managing Cross-border Regional Alliances. Practical Handbook to the Crossing Borders Theory.* Crossing Borders Academy. <http://www.crossingbordersacademy.org>. Accessed on 14 February 2014.

Vasilijević, M. (2012b). Diagnostic Tool for Transboundary Conservation Planners: Suggested Questions to Determine Feasibility for Transboundary Conservation. In: Erg, B., Vasilijević, M. and McKinney, M. (eds.). *Initiating Effective Transboundary Conservation: A Practitioner's Guideline Based on the Experience from the Dinaric Arc.* Gland, Switzerland and Belgrade, Serbia: IUCN Programme Office for South-Eastern Europe.

Zomer, R. and Oli, K.P. (eds.). (2011). *Kailash Sacred Landscape Conservation Initiative—Feasibility Assessment Report*. Kathmandu: ICIMOD.

Zomer, R.J., Trabucco, A., Metzger, M. and Oli, K. P. (2013). *Environmental Stratification of Kailash Sacred Landscape and Projected Climate Change Impacts on Ecosystems and Productivity*. ICIMOD Working Paper 2013/1. Kathmandu: ICIMOD.