

Environmental Peacebuilding: Conditions for Success

Since the beginning of this decade, the apocalyptic warnings of water wars and environmental refugees have been slowly giving way to a growing hope that the environment—more specifically, environmental cooperation—could promote stability and peace between parties in conflict. According to this theory, initiatives such as transboundary cooperation for environmental conservation (e.g., “peace parks”), international river basin management, regional marine agreements, and joint environmental monitoring programs could enhance cooperation between communities or countries.

Surprisingly, we know relatively little about the forms these initiatives may take, the constraints they may face, and the conditions under which they work best or could develop into broader forms of political cooperation. While a growing number of studies examine the relationship between environmental degradation and violent conflict, the equally important issue of how environmental cooperation could contribute to peacebuilding has rarely been subjected to systematic analysis. At this time, we do not have enough empirical evidence to substantiate the theory of environmental peacemaking.

This article seeks to systematize the study of environmental cooperation and to define its scope more clearly, by identifying the conditions under which environmental cooperation best facilitates conflict transformation and peacebuilding, and which forms of negotiation or stakeholder participation have been particularly successful.¹ I reviewed and evaluated past experi-

ences to pinpoint the lessons learned, as well as shortcomings, and I highlight areas for action and recommendations for development agencies. I analyzed not only the existing literature but also an exemplary selection of studies on water cooperation and cooperation in nature conservation in southern Africa, the Middle East, Latin America, and Central Asia (see table). This article addresses the following questions:

- How and why does cooperation in shared natural resources lend itself to the prevention of armed conflicts and to building peace?
- Which political and social factors favor the evolution of environmental cooperation into a wider social and political peace process?
- Which conditions facilitate or hinder this development?
- Is it possible to estimate the impacts of transboundary environmental cooperation on peacebuilding and conflict prevention?
- Which methodological approaches are suitable for designing conflict-sensitive environmental and natural resource conservation projects within the framework of development cooperation?

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Table: Case Studies Analyzed

PROJECT/PROGRAM	INSTITUTIONS	COUNTRIES
Transboundary Biosphere Reserve: Altai Mountains	German Federal Agency for Nature Conservation http://www.bfn.de/	China, Kazakhstan, Mongolia, Russia
Ai-Ais Richtersveld Transfrontier Park http://www.environment.gov.za/ProjProg/TFCAs/artp.htm	Ministries of the environment of Namibia and South Africa	Namibia, South Africa
Regional Park W ECOPAS (Ecosystème protégés en Afrique sahélienne) http://www.parks.it/world/NE/parc.w/Eindex.html	Benin, Burkina Faso, Niger, European Union (EU); and funded by the European Development Fund	Benin, Burkina Faso, Niger
Great Limpopo Transfrontier Park http://www.greatlimpopopark.com/	Treaty between Mozambique, South Africa, Zimbabwe	Mozambique, South Africa, Zimbabwe
International Gorilla Conservation Programme (IGCP) http://www.igcp.org/	Democratic Republic of the Congo, Rwanda, Uganda; and implemented by African Wildlife Foundation, Flora & Fauna International, World Wide Fund for Nature (East Africa) through IGCP	Democratic Republic of the Congo, Rwanda, Uganda
Sustainable Development of Mountain Regions of the Caucasus – Local Agenda 21 http://rec.caucasus.net/recc/index.php?f=15&su=150100130&t=index	The German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety; The Ministry for the Environment, Agriculture, and Forestry of the Principality of Liechtenstein	Armenia, Azerbaijan, Georgia, Russian Federation
Kgalagadi Transfrontier Park http://www.sanparks.org/parks/kgalagadi/	South African National Parks Board (SANParks), Department of Wildlife and National Parks of Botswana, USAID Regional Center for Southern Africa, Peace Park Foundation	Botswana, South Africa
Podyji and Thayatal National Parks http://www.nppodyji.cz/_E_PODYJ.HTM http://www.thayatal.com/thayatal/en/default.asp?id=30929	Ministry of Environment of the Czech Republic, Ministry of Environment of Austria	Austria, Czech Republic
Selous Conservation Programme (SCP) http://wildlife-programme.gtz.de/wildlife/scp.html	German Technical Cooperation (GTZ), Tanzanian Wildlife Division	Mozambique, Tanzania
Selous-Niassa Wildlife Corridor Research Project http://www.selous-niassa-corridor.org/	GTZ; funded by German government under its Tropical Ecology Support Programme	Mozambique, Tanzania
Trifinio Plan http://www.oas.org/dsd/publications/Unit/oea73b/ch01.htm	Organization of American States, Inter-American Institute of Cooperation for Agriculture	El Salvador, Guatemala, Honduras
Nile Basin Initiative www.nilebasin.org	World Bank, UN Development Programme (UNDP), Canadian International Development Agency (CIDA), and others	Egypt, Ethiopia, Kenya, Democratic Republic of the Congo, Rwanda, Somalia, Sudan, Tanzania, Uganda

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PROJECT/PROGRAM	INSTITUTIONS	COUNTRIES
Nile Basin Discourse www.nilebasindiscourse.org	Funding from UK's Department for International Development (DFID); technical assistance and support from IUCN-The World Conservation Union and the Overseas Development Institute	Egypt, Ethiopia, Kenya, Democratic Republic of the Congo, Rwanda, Somalia, Sudan, Tanzania, Uganda
Regional Water Data Banks Project www.exact-me.org	Financial and technical assistance from the EU, France, The Netherlands, and USAID	Israel, Jordan, Palestinian Territories
Good Water Neighbors http://www.foeme.org/projects.php?ind=32	Friends of the Earth Middle East; with financial assistance from the EU, the U.S. government Wye River Program, the Richard and Rhoda Goldman Fund, and the British government's Global Opportunities Fund	Israel, Jordan, Palestinian Territories
OKACOM (Permanent Okavango River Basin Water Commission) http://www.okacom.org/index.htm	Governments of Angola, Botswana, Namibia; with support from Kalahari Conservation Society, Namibia Nature Foundation, ACADIR of Angola, Food & Agriculture Organization (FAO), Swedish International Development Cooperation Agency (SIDA), USAID, and UNDP	Angola, Botswana, Namibia
SADC Protocol on Shared Watercourse Systems http://www.sadc.int/english/documents/legal/protocols/shared_watercourse_revised.php	Southern African Development Cooperation (SADC)	Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe

Approaches to Environmental Peacebuilding

Most ecological peace initiatives fall into one of three partly overlapping categories (Carius & Dabelko, 2004; Conca, Carius, & Dabelko, 2005):

- Initiatives to prevent conflicts that are directly related to the environment;
- Efforts to initiate and sustain a dialogue on transboundary environmental cooperation between parties to a conflict; and
- Initiatives that seek a lasting peace by promoting conditions for sustainable development.

Preventing conflicts directly related to the environment

The most direct means of environmental peace-making are measures to prevent environmentally induced conflicts (UN Environment Programme [UNEP], 2004; Conca, Carius, & Dabelko, 2005). Environmental cooperation could play a role in preventing violence that

erupts due to the uncontrolled exploitation of natural resources, the destruction of ecosystems, or the devastation of livelihoods based on natural resources. Most of the research that establishes a link between environmental degradation and violent conflict focuses on two solutions: reducing the pressure on resources on which people are economically dependent; and strengthening the institutional capacities to respond to environmental challenges.

Environmental cooperation could also help assuage the anger of victims of environmental injustice, who are often already socially and economically disadvantaged. Latent environmental problems may combine with material insecurity and perceived marginalization to create an explosive situation, especially where ethnic identity determines access to political and economic opportunities. The most heavily polluted industrial regions in the post-Soviet Baltic States, for instance, have a largely ethnic Russian population, generating a volatile mix of burgeoning ethnic and national identity, mounting social discrimination, and environ-

mental mismanagement. Active environmental cooperation could help alleviate an important source of this festering discontent.

Using environmental cooperation as a platform for dialogue

A second approach to environmental peacebuilding seeks to address conflicts that have no specific environmental cause. These initiatives attempt to create peace by bringing conflicting parties together to reach cooperative solutions to common environmental challenges. Opponents may agree to establish a dialogue on shared environmental issues when other political and diplomatic approaches have failed. In many instances, hostile—if not openly warring—countries have found that environmental issues are one of the few topics on which they can sustain an ongoing dialogue.

In addition, common environmental challenges can also be used to replace distrust, suspicion, and divergent interests with a shared knowledge base and common goals, and thus could transform relationships marred by conflict. Fragmentary or unreliable information on technically complex issues can intensify mutual distrust between parties, but building a shared knowledge base can overcome this shortcoming (Turton et al., 2006)

One of the most complex, unresolved conflicts in the highly unstable Caucasus region is Armenia and Azerbaijan's dispute over Nagorny-Karabakh. In the fall of 2000, the government of Georgia convinced Armenia and Azerbaijan to set up a trilateral biosphere reserve in the southern Caucasus region. The organizers hope that this regional environmental cooperation will not only strengthen nature conservation and sustainable development, but also promote political stability. Although Armenia and Azerbaijan are not yet ready to cooperate directly with each other, the agreement calls for them to create national biosphere reserves, which will ultimately be integrated into a single conservation area. The first steps of this long-term project are gathering data, developing capacities for action, and enhancing environmental awareness in the region. Armenia

and Azerbaijan have asked UNEP to conduct an independent, international environmental assessment of Nagorny-Karabakh; the objective data could lay the foundation for future cooperation (UN Development Programme [UNDP], UNEP, & Organization for Security and Cooperation in Europe [OSCE], 2004).

A similar attempt has been made in Kashmir, over which India and Pakistan have been fighting since the end of British colonial rule. Some international environmentalists have proposed establishing a peace park in the Karakoram mountains lying between India and Pakistan in the western Himalayas, in the hopes that the joint management of this unique glacial region—in which more soldiers are estimated to have died from the cold and altitude than from enemy fire (see Haider, 2005)—could help defuse this deadly border conflict. Of course, a joint environmental program in a remote, barely inhabited region will not fundamentally alter the structural dynamics of the India-Pakistan conflict. Nevertheless, given the current truce and the recent thawing in relations between the two countries, cross-border activities of this kind may play an important role in conflict transformation.

Promoting sustainable development to achieve a durable peace

A third approach is based on the premise that long-term and comprehensive sustainability is a prerequisite for a lasting peace. The joint management of shared resources can be not only a way to keep both parties talking, but also the key to negotiating a resolution. For example, even if water scarcity is not the cause of the conflict between Israelis and Palestinians, a solution to their shared water problem is necessary for a peaceful resolution. During the Oslo Peace Accord negotiations, a special negotiating group was set up specifically to discuss water. (A similar group was established during the 2004 negotiations between India and Pakistan.) Irrespective of whether water is the cause of conflict or has merely aggravated an existing conflict, no lasting peace is possible in the Middle East without a sustainable and joint water policy (Wolf, 2001).

Tapping the Potential of Ecosystems: Why Use the Environment to Build Peace?

Ecological interdependence demands cooperative action

As a mechanism for peacebuilding and conflict resolution, the environment has useful—perhaps even unique—qualities. The solutions to environmental problems, which ignore political borders, require a long-term perspective; encourage participation by local and non-governmental organizations (NGOs); help build administrative, economic, and social capacities for action; and help forge common bonds that transcend economic polarization.

Addressing environmental problems frequently requires taking long-term preventive measures. Such measures must also be flexible enough to respond to unexpected, abrupt, and critical changes. Institutions devoted to environmental cooperation can provide decision-makers with a long-term framework for action in which future benefits are given greater priority over short-term interests. We can see a trend in this direction in water cooperation efforts: In recent years, the number of basin-sharing agreements and permanent river commissions has risen, providing riparian countries with platforms for sharing information, collecting data, and developing long-term perspectives on joint river basin management (Conca, Wu, & Neukirchen, 2003).

Environmental issues encourage people to cooperate at the societal level, as well as the international. Social interest groups can use this mutual ecological dependence to facilitate cooperation across territorial borders. This is often the first step toward dialogue, which can be difficult to initiate through official political channels. Over time, regular interaction between academia and civil society actors can help lay the foundation for mutual trust and implicit political cooperation. For example, despite the daily battles on the streets of the West Bank and Gaza, Palestinians and Israelis continue to manage their shared water resources through informal and technical dialogue.

As environmental cooperation develops, and societal and political stakeholders come together in systematic negotiations, such efforts can build trust, initiate cooperative action, and encourage the creation of a common regional identity, as well as establish mutually recognized rights and expectations (Adler, 1997; Adler & Barnett, 1998; Nagler, 1999).

Environmental policy at the national (as well as the regional and international) level is very closely related to the modernization of the state and society. Class action suits, access to environmental information and education, and public participation in infrastructure projects can play significant roles in strengthening civil society and democratizing and empowering societies, as evidenced by the democratization and economic transformation of Central and Eastern Europe, as well as the states of the former Soviet Union (Carius, Von Homeyer, & Bär, et al., 2000). Moreover, following the major environmental summits in Stockholm (1972), Rio de Janeiro (1992), and Johannesburg (2002), sustainability initiatives and strategies have led to more long-term and innovative approaches at the political and societal levels in several countries, including many developing countries and countries at risk of conflict.

Due to the intricate interdependencies of ecosystems, participating stakeholder groups can benefit from cooperative measures, even if at first their interests appear to be asymmetrical. For example, the environmental problems of international rivers often lead to conflicts of interest between upstream and downstream riparians (states bordering rivers), seriously complicating cooperation. Most international water agreements are therefore based on the premise that upstream and downstream states have fundamentally different interests in their shared resource.

These regional relationships are further complicated by many simultaneous, overlapping ecological interactions. For instance, upstream riparians can be “downstream” of other environmental aspects. Japan is situated downstream of wind currents from China’s heavily polluted industrial belt, but both countries



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share a regional sea. The United States is upstream of Mexico on the Colorado River, but it is “downstream” of pollution from the *maquiladora* plants along the U.S.-Mexico border. However, rather than forestalling cooperation, these complex mutual interdependencies open up additional opportunities to transform environmental problems into durable forms of environmental cooperation.

Focus on water peacemaking

Cooperative water management initiatives—as they are the most available and analyzed examples—may best demonstrate the potential of efforts to use environmental management to build peace. Water is an essential commodity, indispensable for the well-being of humanity, the environment, and the economy. Households, agriculture, industry, electricity generation, and ecosystems all require it in timely and adequate quantities and quality, so stakeholders must balance competing interests. The hydrologic cycle connects not only different sectors, but also different regions and countries, which share the impacts of water use and water pollution across national borders. Dependence on the same water resources can create communities out of diverse groups of users and stakeholders, transcending conflicting economic interests and fostering cooperative management, thereby generating advantages for all participants. Some researchers have identified cooperation over water resources as a highly promising approach to peacebuilding because riparian countries are willing to enter into lengthy and complex negotiations so as to benefit from mutual development of water resources (Delli Priscoli & Wolf, 2007; Dinar & Tusak Loehman, 1995).

Through history, humankind has found ways to deal with water scarcity and cooperated to manage shared water resources. Water has helped pave the way for greater trust and cooperation and also helped prevent conflicts in heavily disputed river basins. On balance, international water disputes are usually resolved in a cooperative manner, even between hostile states and even when other contentious issues erupt

into conflict. The bitterest enemies have entered into water treaties or are negotiating such agreements. The institutions they have established have often proved to be surprisingly stable, even when political relations are highly strained (e.g., the Mekong River Commission comprising Cambodia, Laos, Thailand, and Vietnam; “picnic table talks” between Israel and Jordan; and the Indus Commission between India and Pakistan).

In some cases (e.g., Israel-Palestine), water problems offer one of the few chances for cooperative dialogue in otherwise heated bilateral conflicts. In other political hotspots, water is a key component of regional development negotiations (see for example, the Southern African Development Community [SADC], the Baltic states, or the Trifinio region in Central America), which are indirect strategies of conflict prevention.

More research in this area is needed to better understand how water management can serve as a cornerstone for confidence-building and as a potential pathway to peace. If we can improve our understanding of the conditions under which water can lead to conflicts or promote cooperation, then mutually beneficial cooperation over water resources can be employed in a more focused manner to prevent conflict and promote sustainable peace between states and social groups.

Political and Social Conditions Necessary for Environmental Cooperation to Facilitate Peacebuilding

Environmental cooperation as an incentive

Mutual dependencies in global politics serve to strengthen peace. However, mutual dependencies that are primarily rooted in economic and financial ties can also lead to severe polarization, as the massive protests against economic globalization have demonstrated. Environmental cooperation is a serious option for building cross-border collaboration at a level removed from the narrow and frequently divisive sphere

of economic relations. Transboundary environmental cooperation could, in the long term, lead to a broader understanding of geographical relationships and communities, thereby replacing the traditional concept of a mutually exclusive, politically defined identity with one of an environmental community.

The exchange of information or environmental agreements alone will not result in peace. Yet such efforts can provide the initial impetus for broader cooperation between conflicting parties. The Trifinio Plan, for example, represents a framework for broad regional integration in Central America following two decades of civil wars in the region (López, 2004). This process began as a technical cooperation agreement in 1986 among Guatemala, El Salvador, Honduras, the Organization of American States (OAS), and the Inter-American Institute of Cooperation for Agriculture. The first joint activity was a study of three transboundary watersheds straddling the borders of the three participating countries, followed by a joint pilot project in the border region. The Trifinio Plan catalyzed further cooperation, enhancing existing cross-border economic ties, promoting intergovernmental dialogue, and building confidence among the countries. One of the plan's principal objectives is to remedy the underlying cause of many conflicts in the border region, namely the social and economic isolation of these countries.

In southern Africa, the end of armed conflict paved the way for environmental cooperation, which in turn encouraged the region's economic development. Several intergovernmental river basin agreements were concluded in the 1970s and 1980s, when numerous local wars were raging in the region (among them the anti-apartheid struggle in South Africa and the civil wars in Mozambique and Angola). Although the negotiations were protracted, the agreements nevertheless marked rare moments of peaceful cooperation. Today, water cooperation is one of the pillars of regional cooperation. In fact, the Protocol on Shared Watercourse Systems of 1995 was the first protocol signed under the auspices of SADC (Wolf et al., 2005).

Along the Nile River, all 10 riparian countries are currently participating in the Nile Basin Initiative, high-level governmental negotiations on the development of the basin, despite the shrill war rhetoric that characterizes public relations between the upstream and downstream riparians. The riparian countries have a common vision of achieving the sustainable socio-economic development of the region by equitably using the shared resources of the Nile basin.

We can only assume the conditions under which the joint management of water resources can contribute to peace, since we lack detailed case studies addressing this question, as well as established methods of evaluation. In the three regions discussed above (Central America, SADC, and the Nile River basin), water cooperation has had a positive impact on peacebuilding. The common aspects in these three cases provide some clues to the conducive conditions:

1. In all three regions, the most violent phase of the conflicts between the countries had ended, which allowed cooperation to take place at the highest political level. SADC and the Trifinio Plan provide overarching political frameworks, which benefit transboundary cooperation arrangements.
2. Cooperation was institutionalized in all three regions. In the Trifinio region, the institutional framework is provided by the Trilateral Committee; in SADC, the Protocol on Shared Watercourse Systems calls for a river basin commission; while the Nile Basin Initiative and transitional intergovernmental institutions (Nile Council of Ministers and Nile Technical Advisory Committee) facilitate cooperation among the Nile riparians.
3. In the Trifinio region, as well as the Nile basin, stakeholder participation has been institutionalized. Even in the SADC region, mechanisms for stakeholder participation are a typical component of river basin organizations. Participation promotes cooperation at the levels of both official politics and civil society, which in

turn lends legitimacy to the decisions. Water cooperation in all three cases will continue to explicitly drive the regions' economic development.

Transforming environmental cooperation into political cooperation

One of the obvious shortcomings of environmental peacemaking has been its inability to transform environmental cooperation into broader forms of political cooperation and initiate a social and political dialogue going beyond environmental aspects. In this case, there are fundamental differences between transboundary water and nature conservation projects. In transboundary water projects, the conflict element or peacebuilding impact is to some extent explicitly articulated, while transboundary cooperation in nature conservation tends to focus far more on preserving biodiversity and natural landscapes than on conflict prevention. Nevertheless, cooperation in nature conservation has at times been specifically employed as a mechanism for peacebuilding or for creating political stability in conflict or crisis regions.

“Peace parks” create ecological buffer zones between conflicting parties that transcend political borders. In 2001, there were 169 nature conservation areas in close proximity to border regions in 113 countries worldwide (Zbicz, 2001). Examples include the disputed border region of Cordillera del Condor between Peru and Ecuador, the proposed peace park in the demilitarized zone between North and South Korea, and a number of transboundary nature conservation areas in southern Africa (see map). These parks can help defuse political tensions and promote regional security, sustainable natural resource management, and economic development in their eco-regions, as well as the protection and preservation of cultural diversity. Over and above nature conservation, they facilitate a step-by-step reconciliation between conflicting parties on issues that are generally less politicized and therefore less contentious.

In practice, however, nature conservation cooperation hits a ceiling when environmental policy is confronted with foreign and security

policy considerations that it cannot explicitly address. At this point, its scope is clearly still limited. Cooperation in nature conservation could be part of a comprehensive regional strategy for building and consolidating peace that also includes promoting cultural, economic, and social development. Existing nature conservation conventions have so far not included any conflict prevention norms; moreover, in practice, nature conservation projects are by no means free of conflict. The opposing interests of different user groups can impede political reconciliation. Environmental and social interests may even clash when it comes to the utilization of natural spaces; for example, elephant corridors may conflict with land used by local human populations.

Environmental conservation projects in general, and peace parks in particular, may not be able to end existing border conflicts. However, they do promote communication and cooperation between conflicting parties—the first stage in a peace process—by providing an institutionalized platform for communication and mechanisms for collecting and processing data, which results in a phased rapprochement between formerly hostile states or social groups. In the long term, such projects can help improve the living conditions of local communities and promote social, economic, and political development as a corollary of environmental conservation efforts.

Illustrative cases

Water cooperation in Central Asia

Most of the transboundary water protection projects in the five Central Asian republics (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan) were motivated by conflict prevention and peace considerations. The exact number of projects is not known, but it is likely to exceed 500. Projects cover the spectrum, ranging from collecting data to jointly monitoring trends in environmental quality, to working on bilateral and multilateral transboundary environmental agreements. These diverse initiatives are supported by additional

projects targeted at strengthening human rights, promoting democratic structures in society, combating corruption, reducing poverty, and promoting economic development. So far there has been no systematic study of the impact of these initiatives and projects on crises and peace processes (Carius, Feil, & Tänzler, 2003).

Water cooperation in the Middle East

The “Good Water Neighbors” project of Friends of the Earth Middle East (FoEME), initiated in 2001, is an example of successful bottom-up transboundary environmental cooperation in a conflict zone.² Since 2001, 17 municipalities have joined the initiative to conduct joint water and waste management projects among neighboring communities in Israel, Jordan, and the Palestinian territories and to help raise awareness on environmental issues across borders. In January 2007, leaders from Mu’az Bin Jabal (Jordan), the Jordan Valley Regional Council (Israel), and Beit Shean Valley Regional Council (Israel) signed agreements to plan a transboundary peace park that will include a bird sanctuary, eco-lodges, and a visitor’s center. Such cooperative efforts are facilitated by FoEME’s local experts and the negotiations are formalized in bilateral agreements. However, this bottom-up program needs financial and political support by international organizations and governments to initiate and facilitate a policy dialogue to attain the top-level attention it deserves.

Cooperation in nature conservation in the southern Caucasus

A pilot project jointly funded by the governments of Germany and Liechtenstein seeks to transfer the experiences of mountain partnerships under the Alpine Convention to the southern Caucasus region by establishing a cross-border alliance of mountain villages in Azerbaijan, Armenia, Georgia, and the Russian Federation. Sustainable development projects—focusing on resource conservation and sustainable energy generation—will be implemented in close cooperation with eight village communities. Over the long term, the moun-

tain partnerships seek to improve living conditions and combat the causes of migration by creating alternative development and income opportunities for marginalized groups. These efforts may also help combat the rising recruitment by terrorist organizations from the northern Caucasus (BMU, 2004).

The project will analyze the local situation, create a database on the status and development of the Caucasus mountain region, organize the first training modules on sustainable development, and initiate close cooperation with local administrative units, and later, with the national governments. The project did not pursue participation by the four countries’ federal governments so as not to jeopardize cooperation at the local level due to the continuing conflict between Armenia and Azerbaijan. The actual dimensions of the regional conflict have not been explicitly articulated, and the project does not plan to assess its impacts on conflict and peacebuilding, even though the conflict was part of the project’s rationale. It is ironic that sometimes environmental peacemaking efforts are only successful if they are not explicitly called “peacemaking” projects.

Cooperation in nature conservation in southern Africa

The peace parks in southern Africa have proved largely successful, compared to similar ventures elsewhere, because they go beyond nature conservation and are embedded in the region’s economic and political integration (i.e., SADC). These Transfrontier Conservation Areas (TFCAs) are jointly managed by most of the participating governments in accordance with multilateral agreements established by the Peace Park Foundation (PPF).³ The 10 TFCAs, which are funded and coordinated by PPF, facilitate the integrated management of large protected areas and chief migratory species, as well as compliance with the relevant international treaty obligations (e.g., the Convention on Biological Diversity and the Ramsar Convention on Wetlands). In the future, transboundary nature conservation areas will also play important roles in creating



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alternative sources of income, helping to reduce poverty in these largely rural and infra-structurally weak regions (Samimi & Nüsser, 2006). Offering alternative incomes to local populations is key to bridging the conflicting economic interests of local inhabitants and nature conservation efforts.

Case conclusions

These cases demonstrate the fundamental complexities that arise when transboundary environmental projects are linked with conflict resolution and peace objectives. The conflict dimension provides political legitimacy for the initiatives at the program level or within the framework of sector or country strategies. However, the projects can play only a limited role in peacebuilding if the results do not reach the agendas of governments and international or regional institutions. Moreover, the peacebuilding impact of transboundary environmental projects can be assessed only if methods of estimating impacts were included in project design and during implementation.

Cooperative mechanisms in the fields of water and nature conservation can successfully build stable cooperative structures if they are part of a wider political and economic process of integration, and if norms are established and implemented through bilateral and multilateral agreements. The PPF in southern Africa, and its institutionalization within the SADC framework, have demonstrated the importance of creating an enabling environment. Efforts to build water cooperation in the Middle East emphasize the importance of external facilitators and bottom-up approaches.

The efforts of the Environment and Security Initiative (ENVSEC) demonstrate that environmental institutions alone cannot push the transition from environmental cooperation to wider political cooperation. Jointly established by the OSCE, UNEP, and UNDP in 2002, ENVSEC pools the resources and mandates of these organizations to propose solutions for impending environmental conflicts and identifies opportunities for environ-

mental cooperation. ENVSEC integrates political and social stakeholders outside the narrow environmental policy field, including the security and foreign policy community, which is a key requirement if transboundary environmental projects are to make the transition out of the environmental niche. However, the impact of the initiative has to date remained limited due to lack of follow up (Lafontaine, 2006).

Institutional Requirements and Constraints: Water Peacemaking

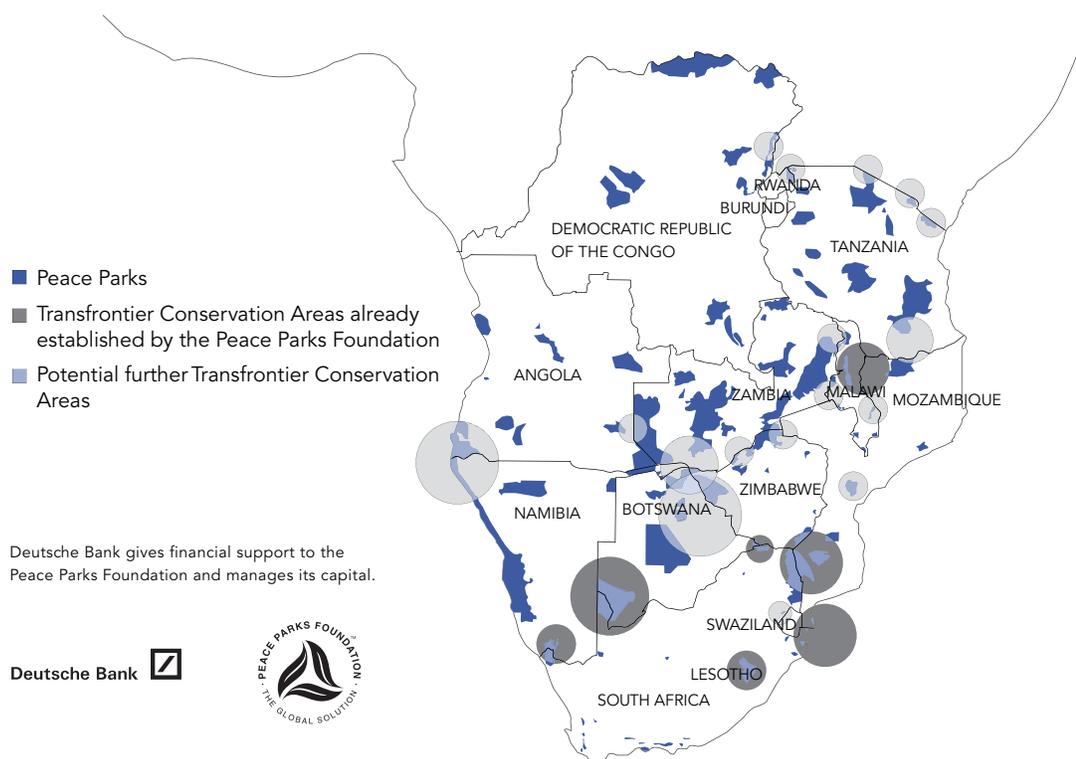
Institutions for promoting water cooperation

Capable institutions, which can balance conflicting interests and regulate water scarcity, are key to achieving lasting cooperative management of transboundary water resources. Several requirements have been formulated for such institutions, which offer some indications of the institutional conditions conducive to promoting cooperation on a broader level (Wolf et al., 2005):

- Cooperative institutions require backing by treaties detailing rights and obligations of riparian countries, other informal agreements, or cooperative arrangements;
- The institutions must possess sufficient human, technical, and financial resources to develop comprehensive water use plans and enforce their implementation;
- The institutions must integrate subsectors of water management (agriculture, fisheries, water supply, regional development, tourism, transport, and environmental protection); and
- The activities of newly created institutions should not conflict with traditional water use practices.

Cooperative water management can anticipate conflicts and resolve simmering disputes, if all interest groups are involved in the decision-making process and receive enough resources (information, trained staff, and financial support) to enable them to participate as equal

Transfrontier Conservation Areas in Southern Africa



Source: Southern African College of Tourism (2002), courtesy Adelphi/Weltformat.

partners. Cooperative water management can reduce the potential for conflict by:

- Providing a forum for joint negotiations and ensuring that existing—and potentially conflicting—interests are taken into account during the decision-making process;
- Accommodating different perspectives and interests, thereby widening the base of available options and facilitating win-win solutions;
- Building mutual trust through cooperation and joint fact-finding, and de-escalating user conflicts by sharing knowledge about the resource; and
- Reaching decisions that have a high probability of being accepted by all interest groups, even when no consensus is achieved.

At the local level, traditional community-based mechanisms for water and/or conflict management can prove very useful, as they are

rooted in local conditions and are already accepted by their communities. Examples include the *chaffa* committee, a traditional water management institution of the Boran people in the Horn of Africa, or the Arvari Parliament in the Indian state of Rajasthan, an informal decision-making and dispute resolution body based on traditional practices in the Arvari watershed.

At the international level, river basin commissions that include representatives from all the riparian countries can cooperate successfully to manage their shared water resources (Kramer, 2004). The climate for negotiation within the Permanent Okavango River Basin Water Commission (OKACOM), founded in 1994 by Angola, Namibia, and Botswana, is perceived to be constructive by the countries involved (Pinherio, Gabaake, & Heyns, 2003). The country commissioners have shown they believe that active cooperation offers greater advantages than confrontation or merely sharing the water (Wolf et al., 1999). Yet problems

remain: OKACOM has had trouble generating adequate financial resources and developing a political agenda. Due to these difficulties, OKACOM recently encouraged NGOs and civil society to assume a more active role, acknowledging that the national governments are not able to implement effective management strategies for the river basin on their own (Conca, Carius, & Dabelko, 2005).

Forms of participation

Broad-based stakeholder participation is an important prerequisite for transferring the positive impacts of water cooperation to wider society. One of the keys to the Trifinio Plan's success was the platform it provided for high-level political dialogue *and* for cooperation at the local level. It also facilitated the participation of local stakeholder groups (López, 2004). Getting all interest groups to cooperate, however, is not possible in all river basins; in some cases, it is not even advisable. When a conflict is advanced and the interests are very disparate, the conflicting parties may be unable to reach a consensus or may not be interested in cooperating with each other. In such cases, joint education and training projects or a joint study of the issues can help build consensus and trust as first steps towards cooperative decision-making.

Some highly controversial cases, such as the Nile basin, have achieved success by departing from the broad-based participation rule in favor of an “elite” model. In this model, high-ranking representatives of the negotiating parties build consensus before a broader group tackles the problem. However, successfully implementing decisions made during these high-level negotiations requires effectively broadening participation in the implementation process (Kramer, 2004).

In the Nile basin, the Nile Basin Civil Society Stakeholder Initiative and the Nile Basin Discourse were established by civil society groups as fora for dialogue among stakeholders in the 10 member countries of the high-level Nile Basin Initiative.⁴ These fora allow stakeholders—beyond traditional networks of state representatives—to provide input into develop-

ment projects along the river basin (Kameri-Mbote, 2007). Lessons learned from the German Technical Cooperation Agency's (GTZ) project promoting stakeholder participation in the Limpopo River basin may also help us understand how best to promote the participatory approach in the Nile basin (Mushauri & Plumm, 2005).

Lastly, using a neutral third party, such as in mediation or arbitration, to manage conflict has proved an effective strategy; for example, the World Bank successfully mediated the distribution of the Indus waters between Pakistan and India. Groups made up of village elders, women, or water experts have successfully initiated cooperation in instances where the conflicting parties could not find any common ground. For example, the Wajir Peace Group, a women's group in Kenya, has helped reduce the number of violent clashes between shepherds fighting over access to water (Kramer, 2004).

Measuring Impacts of Environmental Peacebuilding

There are six reasons why our knowledge about the role and impacts of environmental cooperation as a mechanism for conflict transformation and peacebuilding is so scant:

1. The complex nature of cooperative transboundary environmental projects necessitates persuading conflicting parties to negotiate without explicitly articulating—and thereby politicizing—the peacebuilding dimension. This characteristic also leads such projects to set “soft” or very general objectives, at best. Both of these aspects complicate any evaluation of their potential peacebuilding impacts.
2. Weak governance and the lack of administrative capacity often lead non-governmental stakeholders to take an active role in natural resource management in regions in conflict or crisis. This role further complicates evaluation, which is usually based on specific criteria for state action.

3. Successful transboundary environmental projects presuppose that parties will come to an agreement on relatively complex interests. Thus, the hypothetical and oft-postulated “win-win” situations frequently either do not exist at all or are very difficult to achieve. They are, moreover, subject to conflicting national and sector interests, as well as sovereignty claims. Benefit-sharing agreements often fail in practice because the economic benefits for individual countries are not apparent or otherwise difficult to market politically.
4. The initiatives often do not include evaluation of peacebuilding impacts in their plans. The lack or deliberate avoidance of such evaluations is usually politically motivated. Neither the implementing organizations, nor the supporting governments, nor the conflicting parties themselves are interested in highlighting the relevance of such projects in peace processes. In addition, these groups often do not have a mandate for conflict management or a formal role in developing such processes.
5. Resource degradation and user conflicts are not the sole or primary causes of violent conflicts, making it difficult to analyze the extent to which environmental components contribute to the genesis of a conflict. Similarly, a comprehensive analysis of a conflict would require complex methods of impact assessment, which are either not available or have not yet been tested.
6. Cooperative environmental projects tend to be initiated when conflicts are not intense. Consequently, the impact of individual projects on preventing violent conflicts is difficult to assess, a problem common to all preventive actions. The genocides in Sudan and Rwanda have clearly demonstrated that the international community intervenes at best belatedly in violent conflicts.

The international donor community has adopted two new approaches to highlight these constraints: conducting peace and conflict

impact assessments (PCIA) of projects and programs in the fields of sustainable development and environmental conservation; and mainstreaming conflict-sensitive criteria in the planning of development projects and programs.

Experiences with PCIA in the environment sector so far have been inadequate, not transparent enough, and not subjected to systematic analysis. PCIA also vary greatly according to what is being assessed; they are either geared toward conflict regions and countries, or toward completed projects. The Swiss Agency for Development and Cooperation (SDC) commissioned some PCIA studies in conflict regions that also examined sustainable development and resource conservation as sources of conflict. However, these unpublished studies have not been systematically analyzed, nor do they provide any significant insights into resource conservation and environmental degradation as sources of conflict.

USAID, GTZ, the Swedish International Development Cooperation Agency, and the Food and Agriculture Organization have made similar attempts to assess impacts and mainstream conflict-sensitive criteria, including toolkits, awareness programs, and training. Also, although OECD/DAC and ENVSEC have drawn attention to environmentally relevant violent conflicts, no projects explicitly integrate impact assessment methodologies in their conflict analyses.

In the “Cross-Sectoral Strategy for Crisis Prevention, Conflict Transformation, and Peacebuilding in German Development Cooperation,” the German Ministry for Economic Cooperation and Development (BMZ; 2005) established binding guidelines and recommendations for planning, implementing, and steering Germany’s official development assistance. This cross-sectoral strategy will be mainstreamed into the planning and conceptualization of individual programs and measures. To operationalize the concept, bilateral cooperation projects will be classified according to whether they are in conflict-affected, post-conflict, or conflict-prone countries, to ensure that future projects are designed in a

conflict-sensitive manner to avoid unintended negative impacts. However, this innovative mechanism has yet to be tested in practice.

It is doubtful that the available methods of impact assessment are suitable for assessing impacts on the peace process in a situation or region in crisis, for these reasons:

- The direct impacts of peace-promoting activities and conflict management are difficult to measure;
- The relevant impacts tend to occur after a time lag;
- Peacebuilding processes do not proceed linearly; short-term successes are followed by frequent setbacks. However, measures that are not successful at managing conflict and building peace may play a valuable long-term and indirect role in a peace process;
- The interests of participating stakeholder and target groups tend to shift during the course of individual development projects; and
- Available evaluation methods focus largely on assessing compliance with project objectives (i.e., the short-term, direct impacts of projects), not more broad-based impacts within the societal, regional, or supra-regional context (Fischer, 2006).

Conclusions and Recommendations

This article outlines the scope and constraints of the premise that environmental cooperation contributes to conflict prevention and peacebuilding. I find limited scope to draw general conclusions with high levels of confidence. While a project's potential for peacebuilding may lend it legitimacy, on its own, it is not a sufficient justification for transboundary environmental projects. Analyses of cooperative water management initiatives far outnumber those of nature conservation projects. Different models for specific types of cooperation have been developed and applied in different conflict situations.

Conflict prevention and peacebuilding impacts cannot be directly inferred from the

projects and programs discussed in this article. Southern Africa's experience with transboundary cooperation in nature conservation shows that the institutionalization of norms and rules through bilateral and multilateral arrangements is a key prerequisite if such projects are to overcome the problems inherent in such ventures. Political integration and peace processes can subsequently be set in motion with backing at a higher political level. The examples of transboundary water cooperation in southern Africa (SADC) and in Central America (Trifinio Plan) highlight the importance of an enabling political framework and stable multilateral institutions. Water cooperation evolves into broader forms of political cooperation if it is integrated into an economic and political institutional context.

Methods for assessing the impacts of transboundary environmental projects on conflict transformation and peacebuilding have not been sufficiently tested. Given their methodological limitations, it is unlikely that assessments will provide any significant insights. However, this does not mean that environmental cooperation in water and nature conservation does not justify the effort and expense involved, or has no impact on conflict prevention and peace processes. To move forward, we need systematic assessments and a constructive dialogue with policymakers to make environmental peacemaking projects more effective.

The first step should be conducting a systematic analysis of previous case studies and actual cooperation projects in water and nature conservation. The absence of a comparative research project analogous to existing studies on environmental conflict is a major limitation. We must fill this obvious gap and make the findings available to policymakers.

To do this, we must overcome the compartmentalization of policymaking and academia into divisions and disciplines (e.g., environmental policy, foreign policy, development policy, trade policy, etc.). Currently, there are no interdisciplinary studies in this area (Carius & Dabelko, 2004). Environmental peacebuilding cannot be meaningfully tackled by environmentalists or peace and conflict scholars in iso-

lation. Similarly, political decision-makers must overcome a department-centric focus and move toward integration.

Martina Fischer (2006) has proposed an ongoing evaluation centered on process-orientation, participation, and participant learning, which takes into account the overall societal context of peacebuilding. This form of participatory and action-oriented research results not only in an objective acquisition of knowledge about social contexts, but at the same time helps improve social conditions by linking project implementation with parallel research.

The conflict classification mechanism, which was introduced in BMZ's cross-sectoral strategy, is an important tool. Experts and research institutes should participate in operationalizing and testing the still-to-be-defined criteria for project and program evaluation. Experts could potentially participate in fact-finding missions, program planning, progress monitoring and reviews, and initial evaluations. These practices would help integrate environmental and resource aspects in conflict analysis and bridge the gap between practitioners and researchers in this area.

Development agencies possess wide and varied experiences in environmental protection and natural resource conservation projects. Indeed, forms of conflict management and mediation play roles in sectoral projects for rural development and sustainable natural resource management. However, even within the implementing organizations, this knowledge is often not transparent and accessible, and holds untapped potential for conflict prevention and peacebuilding. Initiatives that could recognize this potential include holding joint seminars for senior management; including peace and conflict experts in the development of country and regional strategies for conflict regions; and involving environmental experts in formulating sectoral strategies in conflict prevention and peacebuilding programs. To test the thesis of environmental peacemaking, prominent examples such as FoEME's Good Water Neighbors project would need substantial political and financial

backing, as well as thorough research, to identify lessons learned and to feed into policy planning and implementation.

Notes

1. This article is adapted from a longer report prepared for the German Ministry for Economic Cooperation and Development (BMZ), available online at http://www.ecc-platform.org/images/adelphi_report_environmental_peacemaking.pdf

2. For more information on FoEME's "Good Water Neighbors" project, see <http://www.foeme.org/projects.php?ind=32>

3. Ai-Ais/Richtersveld Transfrontier Park (Namibia/South Africa), Kgalagadi Transfrontier Park (Botswana/South Africa), Great Limpopo Transfrontier Park (Mozambique/South Africa/Zimbabwe), Limpopo-Shashe TFCA (Botswana/South Africa/Zimbabwe), Lubombo Transfrontier Conservation and Resource Area (Mozambique/South Africa/Swaziland), Maloti-Drakensberg Transfrontier Conservation and Development Area (Lesotho/South Africa), Iona-Skeleton Coast TFCA (Angola/Namibia), Kavango-Zambezi TFCA (Angola/Botswana/Namibia/Zambia/Zimbabwe), Malawi-Zambia TFCA (Malawi/Zambia), Chimanimani TFCA (Mozambique/Zimbabwe).

4. See www.nilebasindiscourse.org for more information.

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