



Conclusion

Photos: Inset – Waterfall, Ger Bergkamp/IUCN – The World Conservation Union

Background – Refugees gathering firewood, UNHCR

Conclusion

Mark Halle, Richard Matthew and Jason Switzer

Conserving the Peace

If environment is an important security issue in the twenty-first century, then conservation of nature can be a force for peace.

Our goal through this book has been to test whether conservation could be a cost-effective tool for preventing, managing and resolving social tensions that lead to conflict. An affirmative answer would provide the conservation movement with a powerful argument in favour of preserving biodiversity, and guidance in targeting resource management interventions in support of communities in danger. It would present an economic opportunity as well—the costs of conflict to a country are substantial, as are the opportunity costs of investors taking their funds to safer shores.

Towards this end, we asked authors to think about the various ways in which the environment, conflict and security were connected in their regions, and then to consider the extent to which conservation practices might succeed as relatively low cost approaches to reducing the severity of these connections. We also invited specialists to submit related chapters on the links between resource mismanagement and disaster, the mixed effects of war on the environment and on the challenges of maintaining conservation programs during times of violent conflict. We felt that these chapters would add context to the case studies and be of practical utility to members of the conservation community.

Second, we hoped to make a contribution to the literature on environment and security by providing a series of case studies of several regions of the world, researched and written by individuals with extensive experience in, and knowledge of, these regions.

This is an important addition for several reasons, not least being the broad geographic scope of the examples presented. In March 2000, leading experts in the field of environment and security participated in a workshop organized by the Woodrow Wilson Center's Environmental Change and Security Project (ECSP) and the University of California at Irvine's Global Environmental Change and Human Security Research Office (GECHS-UCI).³⁶³ This workshop urged the further development of case studies on the links between environment and security, and that such development involve those individuals from countries where these linkages are often most evident, and who have extensive ground-truthed experience and knowledge. The contributors to this volume meet these criteria and hence, in a modest way, add to a vibrant and growing literature.

Third, through this work we wanted to create linkages between academic research that we believed was exciting and important, and the conservation community, which is ideally situated to take insights from academic literature and adapt and apply them to activities on the ground. During the

Conclusion

1990s, the debates over linking environment and security attracted significant attention from policy-makers and a range of international institutions around the world, but made very few inroads into the world of biodiversity conservation practice.

Amid all the fanfare, therefore, we felt that an opportunity was being missed to connect some of the insights of the academic work to that practitioner group that was perhaps best positioned to evaluate and use them. With this in mind we tried to design a modest research project that might attract attention among the global conservation community and deliver some innovative insights.

Finally, we hoped that, if this work sparked interest within the conservation community, some of its conclusions and suggestions would lay the groundwork for further debate and experimentation in the years ahead. As we pointed out in the introduction, we have only begun to identify and investigate the possible linkages among environmental change, conflict, security and conservation practices. There is a need to take the lessons emerging from this effort and turn them into useful tools, and we hope this book acts as a catalyst for doing so. Otherwise it risks joining many others like it, on dusty bookshelves and discard racks.

Based on the state of the research in this field,³⁶⁴ and on the work undertaken by the IISD/IUCN Task Force, we feel there are important connections, and hence real opportunities for conservation practices to be used as tools for conflict reduction and peace-building—and significant consequences if conservationists fail to integrate conflict analysis within their interventions.

While this subject has not received its final and authoritative treatment, the ideas presented here resonate with our own experiences in the field, and have a logic that is readily grasped. The materials are not comprehensive in their treatment of the broad sweep of environment and conflict links, nor do they purport to be the final word on the individual situations presented. They were conceived as advocacy papers, designed to convince their readers that conflict is highly relevant to the work of conservation, and creates threats and opportunities for practice. Discussion, experimentation and feedback from the conservation community are the logical—and necessary—next steps.

We believe that the publication of this book represents one of many nascent efforts to bring the lessons emerging from the study of environment and conflict to the hands of those whose activities can make a difference on the ground. In this light, we offer below an account of the general findings that emerge from the case studies, our thoughts about how these findings can contribute to the formulation of high-value conservation policies and

actions, and, finally, our thoughts on the ways in which this work can now be moved forward most effectively.

A Summary of Findings

The case studies and other materials we have gathered and reviewed here present several distinctive patterns through which environment and security are related. It is well known that conflict can emerge over how a resource is used or allocated, and over who benefits from those processes.³⁶⁵ This book also suggests that environmental stress or contention—a product of rising demand, unsustainable use and inequitable access to resources—can undermine livelihoods. As one like-minded study concluded recently, “whether deliberately or not, resources may be used by some in ways that undermine the livelihoods of others.”³⁶⁶

This loss of livelihood security can lead to or feed tensions within and between communities and increase vulnerability to disaster. Exploitation of weakly-governed, resource-rich spaces can fuel conflict as well. Conflict and disaster destroy lives, infrastructure, and trust, and chase away much-needed investment. For these reasons, addressing the role of environment in insecurity is critical for sustainable development.

Five basic scenarios are suggested by the case studies, though several apply to particular cases:

1. unsustainable use of resources and ecological services contributing to scarcity, undermining livelihoods and contributing to insecurity and conflict;
2. inequitable access to resources and ecological services driving unsustainable use and loss of livelihoods, ultimately contributing to insecurity and conflict;
3. use of natural resources and ecological services to finance conflict;
4. incompatible resource and ecological service uses leading to conflict over irreconcilable value systems; and
5. unsustainable use of resources contributing to vulnerability to disasters by undermining ecological services (in particular through loss of natural buffer systems).

Each of the scenarios above can create reinforcing cycles that deepen social instability and resource mismanagement. Population displacement, for example, places pressure on other parts of the environment and risks recreating the problem that led to the migration in the first place. When public resources are diverted to address crises, less is left to deal with development and poverty alleviation. Conflict, instability and recurrent disaster

create an unsatisfactory environment for foreign investment, trapping a nation in a state of chronic emergency.

The alchemy transforming competing resource uses, poverty, ethnic rivalry and political power struggles into widespread violence remains mysterious. Key determinants are the idiosyncrasies of local context, which can only be learned through personal experience and from the local people themselves.³⁶⁷ The ecological sources of social tension are at work amidst other factors, such as identity, ideology and ambition. Further obscuring the lines of causality are the many pre-existing conditions working for and against peace, including the systems configuring property rights and commerce, historical internal and external relationships (e.g., colonialism), political systems, cultural norms, and family and community structures.³⁶⁸

As a consequence of this complexity, some argue that the environment's role in insecurity results primarily from political, economic and social factors, with "environmental conflict" thus a symptom of the deeper malaise of poor governance. To these we stress that the river runs both ways: many environmental trends operate independently of human institutions, and thus shape those institutions substantially.³⁶⁹ Better governance will solve many—but not all—environmental security problems.

A certain level of conflict is "normal," even characteristic of healthy societies. Conflict may be necessary in overthrowing outmoded institutions and social relationships that constrain adaptation to changing conditions.³⁷⁰ Perhaps in contributing to social instability and complex emergency, our mismanagement of natural resources is triggering crisis and thus forcing adaptation to the reality of a world with limits. Yet the human cost of the current path is unnecessary.

We have other options. Conservationists have sought for years to operationalize ecosystem management through an iterative process of information gathering leading to modification of activities leading to further monitoring and fine-tuning—a process known as "adaptive management." Adaptation, like conflict, need not be violent.

Particularly in today's security-obsessed world, all sectors of society need to understand how their activities can fuel instability and vulnerability, and how they can contribute towards human security.

Conservationists Can Enhance Human Security

Both because of their immersion in local communities and their rich knowledge of the local environment, conservationists—and here we include all those who manage and use natural resources to meet the needs of today with more than a passing view to the needs of tomorrow—are well-placed to make a positive contribution to peace and security.

Conservationists can help conflicting parties recognize and forge mutual security around shared management of resources. They are on the ground for many years at a time, often members of the communities whose lives they affect. They represent many sectors, from government and civil society through private sector and academia. And they often have access to leverage—international treaties and institutions, foreign powers, media campaigns—unavailable to local actors.

The conservation “community,” for its part, needs to be well-informed on the ways conflict can undermine the pursuit of sustainability and prosperity, and on the tools that can be applied to prevent and resolve conflict.

Towards Conserving the Peace

Our cases and the Task Force deliberations suggest to us several areas through which conservationists might contribute more directly to human security. These can be categorized as:

- *Precautionary measures*, taken in advance of crisis, and with the objectives of building robust communities with sustainable livelihoods, and of removing the incentives driving conflict.
- *Crisis measures*, taken during a conflict to try to protect the environment from severe damage, to bring together opposing groups and to build confidence.
- *Post-conflict measures*, taken after a conflict has ended but while the considerable challenge of rebuilding a robust, sustainable society remains.

Precautionary Measures

This book advocates a precautionary approach to war and disaster through environmental action. Prevention means tackling the underlying forces that create tensions and the triggering events that permit their eruption in violence.

Peace and Conflict Impact Assessment

Allocating between competing demands for natural resources creates winners and losers, and therefore the potential for conflict. The creation and maintenance of protected areas has frequently been cited as a source of social unrest.³⁷¹ But these interventions can also have unanticipated peacebuilding benefits which have hitherto been largely undocumented.³⁷²

Given the role of protected areas in the past in generating conflict, practitioners should at least seek to “do no harm” to the social fabric while striving to protect nature. To that end, the emerging practice of Peace and

Conclusion

Conflict Impact Assessment (PCIA) for development interventions should become a standard tool in the conservationist's kit.³⁷³ It should be stressed here that this is indeed an emerging practice.

A PCIA is "a means of systematically considering the positive and negative impacts of development projects on peace and conflict dynamics in conflict-prone regions."³⁷⁴ A PCIA could be applied at the level of individual projects, programs or regional strategies, in order to enhance project design, monitoring and evaluation.³⁷⁵

According to one of the PCIA's leading proponents, in relation to natural resource management interventions, issues that should be considered include:³⁷⁶

- context in which project is entering, including history of conflict in the region;
- impact on capacity of relevant individuals and institutions to manage or resolve conflict peacefully;
- impact on formal and informal political structures and processes within the state and among key actors;
- impact on human security, in terms of political, economic, physical and food security at the level of communities; and
- impact on social ties and relationships, including mutual acceptance, creation of spaces for dialogue and promotion of social equity.

The main criticisms of PCIA's are related to the difficulty of attributing positive or negative outcomes to a particular intervention or program; and to the problem of mainstreaming their practice amidst many other issues (e.g., gender, human rights, etc.) that development practitioners face.³⁷⁷ In spite of these growing pains, conservationists active in conflict-prone regions should weigh carefully the applicability of the PCIA to their efforts, and contribute to their refinement and field-testing.

Value and Restore Natural Systems that Buffer Communities from Disaster

Environmental degradation likely plays an important role in increasing the vulnerability of communities and nations to natural disasters, as was demonstrated by the experiences of Central American communities facing Hurricane Mitch in 1998. In the context of an increasingly variable climate, there are perhaps great human and economic dividends to be reaped by integrating the protective function of natural systems—particularly wetlands and mountain ecosystems—into flood and landslide prevention and into

land-use planning decisions. These benefits come from directly reducing the extremes (e.g., absorbing storm surges) and by providing emergency resources such as food and shelter in times of emergency (disaster or otherwise).

Given the perverse role of large-scale disasters in triggering conflict, such investments can have benefits far beyond preserving biodiversity and reducing immediate humanitarian costs. Moreover, reducing disaster presents a compelling new argument for conserving nature. But what is the comparative value of natural systems in preventing disaster relative to the other options, and how should the results be communicated to the disaster reduction and climate change adaptation communities in a way that affects practice?

Based on this assessment, there is a need for further research into the effectiveness of targeted protection of natural systems in reducing the vulnerability of communities to extreme natural events.

Protect and Supplement Resource Dispute Resolution Mechanisms

As the loss of the *adat* system for dispute resolution in much of Indonesia suggests, traditional non-violent mechanisms for conflict management over natural resources are an endangered species.³⁷⁸ Conservationists should do their part in helping to defend and reinforce these tools, and to document and share their practice internationally.

In extreme instances, the rising scarcity of particular resources can overwhelm non-violent tools for resolving disputes, and the social cohesion necessary for more sustainable development. In the case of the Rwanda genocide, long-standing rivalries over access to land and resources between the Hutu and the Tutsi appear to have been a large part of the explosive mix in that country. The rivalries became more difficult to manage as competition for ever-scarcer resources built up. Sorting out these rivalries and restoring trust will be the work of generations.

The overloading of traditional channels of communication in times of scarcity is equally true among developed countries, as the case of the turbot fishery indicates. There was no conflict between Spain and Canada when the fishery was abundant. Tensions began to emerge between fishing fleets, and between their countries, only after the lack of environmental management had allowed the depletion of the stocks. But environmental collaboration was the best way to manage the conflict, as the alternatives were untenable.

Where formal dispute resolution processes are non-existent or fail, the creation of independent mediation processes, exemplified by the Ombudsman Centre for Environment and Development, and by multilateral river basin commissions, may be vital to ensuring that contention over the environment does not lead to violence. Conservationists have many potential roles in such a situation. But what are the factors for successful mediation of a resource-

based conflict? And how can these skills become a part of the professional formation of conservation and development practitioners?

Mediation and Dispute Resolution

Conflict resolution processes have been widely studied, both at an academic level and in operation.³⁷⁹ The basic premise of such processes is that they are “alternatives” to traditional means for resolving conflict, i.e., by force of arms. Typically, they require one party, whose interests are not directly affected by the conflict, to act as convener or initiator of meetings between representatives of the parties. When issues are complex or when parties are difficult to identify or fairly represent, and stakes are high, these meetings may be assisted by a process expert—a third party (or mediator), whose role is to assist the parties in identifying and communicating their interests, and developing packaged agreements that meet most or all of the interests of both parties. Parties work together to develop options, devise criteria for evaluation of these options and construct multi-issue proposals for resolving the conflict. While parties may not be in accord with every aspect of a proposal, they have achieved “consensus” when no one strongly objects to the package as a whole.

Among the issues frequently cited as especially important in the design of conflict resolution processes are:

- neutrality of the convener;
- sufficient financing and time;
- identification and representation of key stakeholders;
- ripeness for resolution;
- implementation and monitoring of agreement;
- selection and qualifications of a “third party” process expert (mediator, arbitrator...);
- lack of experience with negotiation/consensus-building processes;
- stakeholders’ lack of institutional capacity and resources;
- opposition by powerful stakeholders; and
- lack of good faith and the presence of significant power imbalances between parties.

These challenges are not insurmountable. What is frequently lacking in emerging conflicts is someone whom the parties trust—or, at least, do not mistrust—who can act as a bridge to help them begin a dialogue and who can be seen as impartial to the interests at stake. As one recent study by

IUCN indicated, “whenever there is multiple uses of a natural resource, there is a potential for...conflict...[I]f several users are competing with each other and the conflict is great, their motivation to solve the problem will probably also be great.”³⁸⁰ Learning to seize these opportunities requires systematically learning from, and sharing experience with, the emerging field and practice of dispute resolution.

Socially-marginal groups often lack representation in decision-making processes that affect their access to vital natural resources. Here, conservationists can help in bridging communications between affected communities and decision-makers. In some cases—as with uranium mining in Kakadu—they can help open up such decision processes through the application of international pressures, as emerged through the threat of withdrawal of World Heritage status from the Kakadu National Park in Australia.

Some conflicts over natural resources may be irreconcilable in the near future, if what are really in conflict are incompatible value systems. “Values run deeper than interests,” notes John Forester, dispute resolution expert. “When we give up one interest... we often try to make up for that by gaining on another interest... But when we give up something we value, we often feel we give up part of ourselves... hardly compensated by gain somewhere else.”³⁸¹ Traditional communities, when confronted with large-scale industrial development such as dams or uranium mines, may simply see themselves as having nothing to gain and everything to lose. What are the best means for dealing with inevitable conflicts in such cases?

Identifying a conflict as being rooted in values does not necessarily equate with it being unresolvable. Appealing to shared “overarching values” may permit the foundations of an agreement to be laid.³⁸²

A convergence in tools is evolving from the fields of conflict resolution and natural resource management, particularly in efforts to integrate development and conservation objectives in order to deliver economic benefits to the local community for the preservation of biodiversity.³⁸³ Efforts to systematize and share knowledge between these two fields are nascent³⁸⁴ and should be encouraged.

Understand How Governance Failures and Trade in Natural Resources Create Conflict

While resource scarcity figures prominently in the cases we present here, the old motivations for conflict loom large. Greed is cited as a key driver of the rapid clearing of Indonesia’s forests, where illegal harvest far exceeds the legally-sanctioned cut. Contributing to rapid resource exploitation are global debt pressures and trade rules, as well as international development

assistance that props up predatory governments in the name of commercial stability and political interests.

Domestic politics are a key ingredient in understanding why subsidies continue to flow towards overseas fishing fleets active in North Africa, creating surplus capacity and undermining livelihoods in the region. And, as is suggested by the Canada-Spain conflict, a nation or group's self-image, when harnessed in the name of personal political ambitions, can create an explosive cocktail. Last, perverse synergies stemming from resource trade can escalate conflict, as exemplified by the link between illicit trade in natural resources and the importation of small arms.

The conservation community needs to better understand the links between aid, trade in natural resources and conflict, and identify areas where it can make a positive contribution towards peace. Examples where conservationists have developed tools with particular relevance to efforts to stem harmful resource trade include the Convention on International Trade in Endangered Species (CITES) and the Forest Stewardship Council (FSC). A systematic effort to identify the areas where conservationists could make a positive contribution to reining in perverse resource trade and aid would be a valuable contribution to human security.

Demonstrate the Link Between Biodiversity and National Security

At its heart, this book describes the relationship between natural resources and livelihoods, the sustained loss of which can sometimes lead to violence. In northern Pakistan, the interacting forces of polluted water and drought, unsustainable forestry and land scarcity, have combined with a rising population, refugees and political crises, to lock the region's inhabitants into a tailspin of insecurity.

In such an environment, the millions who are unemployed or unable to eke out a living have turned to drug trafficking, fundamentalism and blame-casting. "The Taliban," Matthew and Zaidi allege in this volume, "[were Pakistan-based] educators who ran conservative religious schools for Afghan refugees, [and]... in the mid-1990s would gain control over most of Afghanistan" with global implications.

Perhaps more than any other, this case demonstrates that the conservation community needs to do a better job of bridging the observations of rising tensions over natural resources in the field to policy decisions at the international level. If environment is indeed an emerging security concern, then those responsible for security need to listen to the resource experts. Yet the mutual distrust between these disparate spheres will require skillful diplomacy to overcome.

Crisis Measures

Conservation During Conflict

The world is indeed becoming a smaller space, and once-remote natural spaces are today under the pressures of industrial development, of refugees displaced by conflict, and of people searching for land to call their own. As a result, many conservationists are likely to find themselves operating in conflict-prone regions.

The practice of conservation during conflict poses many ethical and practical challenges. Practically, how do you know if a nation is disintegrating, and what can you do to prepare for it? Ethically, is conservation about protecting trees over people, preserving a fragile resource for the future, or helping to reduce a source of tensions? What constitutes an acceptable risk to personnel? Can and should armed groups—perhaps future political leaders—be engaged in the process of protecting nature during conflict? This volume offers no easy answers, for none exist, yet offers the beginnings of a framework for thinking these questions through. It proposes that conservationists and decision-makers begin by understanding the social context that creates conditions for conflict and preparing resources—human and financial—for the cessation of hostilities.

Working with Sub-state Armed Groups³⁸⁵

Over 85 per cent of conflicts in the last decade were fought inside national borders.³⁸⁶ As McNeely persuasively argues in this volume, the environmental impacts of such conflicts on biodiversity “can be direct—such as hunting and habitat destruction by armies—or indirect, for example through the activities of refugees.” For this reason, conservationists should seek safe and effective means for working with sub-state armed groups in an effort to protect the natural environment during conflict situations.

The experience of human rights organizations in developing tools for ensuring and enhancing respect for human rights in conflict situations may provide conservationists with some important lessons for continuing their own operations during such times. For example, a study by the International Council on Human Rights Policy (ICHRP) notes, “armed groups that are not under government control are a key feature of these conflicts and are responsible for many, sometimes extreme abuses of human rights.” Examining the successful and unsuccessful activities of national and international human rights organizations on the ground in conflict zones, the study seeks to answer the question: “how can armed groups be influenced to reduce or stop the abuses they commit?”

Conclusion

Many of the report's conclusions have direct relevance for conservation-related activities. In an effort to provide some insight on the nature of sub-state armed groups, the ICHRP states that the behaviour of these groups is influenced by the governments they oppose, and vice versa. Moreover, armed groups take many forms, ranging from small cells to armies controlling large territories, with a few of them controlling more resources than entire states.

The ability of civil society organizations to act effectively depends on the degree to which both states and armed groups tolerate NGO actions. ICHRP concludes that several contextual factors critically influence the willingness and capacity of armed groups to respect international norms, as well as the capacity of civil society to apply leverage on them. These include:

- aims and Ideology;
- nature, style and accountability of leadership;
- openness to dissent and reform;
- degree of military discipline;
- presence and nature of foreign sponsors; and
- constituencies supporting the armed group.

In terms of those factors affecting the capacity of civil society organizations to promote particular norms, ICHRP notes that international organizations are often better placed to draw international attention, and face fewer physical risks, since they have greater ability to leave a country. Direct assistance poses particular risks for the organization, since it may invite reprisals from the state or rival groups. The Council urges organizations to take into consideration:

- nature of civil society in the country;
- safety from attack or intimidation;
- role of "insiders" close to armed group leadership; and
- coordination with other relevant actors.

Actions that an organization can seek in order to change the behaviour of an armed group include:

- punishment through national courts or international mechanisms;
- international sanctions;
- monitoring, reporting and denunciation;

- use of media;
- engaging with armed group's constituency;
- direct dialogue;
- assistance with internal reform; and
- development of codes of conduct and quasi-legal mechanisms for dispute resolution.

The parallels between promotion of human rights and of protection of critical natural systems and species in times of conflict indicate a need for dialogue and lesson-sharing between the human rights and conservation communities.

Post-Conflict

Forge Collaboration Around Shared Environmental Concerns

The growing success of international Peace Parks at helping to foster cooperation between states in Africa and Latin America most notably suggests that mutual environmental actions can deepen ties and strengthen mechanisms for peaceful co-existence.³⁸⁷

In this sense, a shared vital resource might provide an impetus for building bridges between parties who might otherwise not sit at the same table. The Israeli and Palestinian water authorities, for example, agreed as late as spring 2001 to work together to protect water resources in the region in spite of the ongoing conflict, asking protesters and soldiers to avoid damaging sensitive infrastructure.³⁸⁸ Likewise, the Mekong River Basin Commission has given the states of southeast Asia a space for dialogue and fostered a spirit of “good neighbourliness” and regional identity between them in spite of political tensions.³⁸⁹ As Kader Asmal, Chair of the World Commission on Dams, remarked: “While some see in our scarcity a harbinger of troubled waters to come... Our Commission... sees water as an instrument, a catalyst for peace.”³⁹⁰

The conservation community can be instrumental in identifying and brokering dialogue around these shared resources and spaces, helping forge slender ties between those groups within opposing camps that recognize the need to preserve something for the future. One commentator suggests that cross-border and regional cooperation on environmental matters be built in stages, from exchanges of technical information to joint monitoring systems to non-violent means of regional conflict resolution.³⁹¹ The key, according to Daniel Buckles of the International Development Research Centre, “is to learn to manage conflict so that it achieves change instead of leading to violence.”³⁹²

But where to begin? One avenue for future research lies in documenting the experiences of collaborative action to conserve or restore environmental resources, where such efforts have built social cohesion, reinforced mechanisms for collaboration and dissipated social pressures.

Harness the Opportunity for Change

The post-conflict space presents an exceptional challenge, where not only must a society be rebuilt and trust restored, but also a fragile peace buttressed so that it does not collapse amid resurgent hostility. This is a delicate task, one that the world faces in numerous locations, from Rwanda and Sierra Leone to the Balkans, and—most prominently—Afghanistan.

Pointing out the irony that market forces may be more destructive to nature than military forces, McNeely in this volume notes that in the post-war reconstruction phase, the pressure to kick-start development and earn foreign exchange can lead to rapid pillaging of natural resources at sub-optimal prices. Clearly, there is a need to recover from the past while preparing more robustly for the future.

“Times of crisis are also times for rapid change in attitudes, institutions, and, sometimes, in the alacrity and openness of decision-making,” notes Art Hanson, IISD’s Senior Scientist, echoing the results of the Biodiversity Support Program study included in this volume. “It is not enough simply to call for a return to the status quo, or to defer action on sustainable development and environment priorities until better times return. To do so guarantees that the better times will never fully return and that a country’s ecological debt will expand, with fewer options to derive full economic and social value from natural resources.”³⁹³

The mobilization of international attention and the rapid turnover of people and institutions at this time represent a window of opportunity to drive quantum leaps in the national policy framework to support more-sustainable development. Hanson recommends that government officials:

- integrate sustainable development into crisis response at the earliest stage possible;
- rethink environmental governance to take advantage of advances in understanding of effective public regulation, e.g., market-based approaches that respect incentives facing key actors;
- face external drivers that prevent or can promote change, e.g., international trade rules, government corruption, etc.;
- seek internal and external concessions, e.g., by reducing domestic subsidies;

- build capacity for more sustainable development within key sectors by investing strategically in monitoring, enforcement and private sector environmental management; and
- fund the changes through increased efficiency and direct revenue collection, e.g., park fees, elimination of subsidies, etc.

Recommendations of the IISD/IUCN Task Force

In formulating its recommendations to conservation practitioners, the IISD/IUCN Task Force on Environment and Security drew upon the extensive knowledge of its members, the case studies and the interventions of participants at its presentations to the 2000 World Conservation Congress. In sum, the Task Force urges conservation action on three fronts:

1. **Plan for surprises.** Decisions are often made without adequate knowledge of downstream effects—too narrow a range of factors are used for decision-making and, as a result, trade-offs are misframed or mishandled. Even where better options are available, they may not even be taken into consideration.
 - Take into account natural resources critical to local livelihoods in the design of conservation and resource exploitation activities. Dialogue with affected communities and participatory decision-making are vital.
 - Implement contingency planning for conflict and disaster within development and conservation project design.
2. **Use environmental management to promote human security.** In many cases of conflict, environment may be the area most amenable to resolution. Common environmental interests can bring disputants together in dialogue and innovative problem solving.
 - Preserve and protect natural buffer systems that protect communities from disaster.
 - Identify scope for international or inter-ethnic cooperation on environmental conservation in otherwise conflicted situations.
 - Assist refugees and internally-displaced people in resettlement and livelihood generation, while seeking to minimize environmental consequences that impact host communities' livelihoods.
 - Identify and preserve traditional tools for resource-based conflict management and resolution.

3. **Bring new stakeholders into the environmental domain.** Many of the institutions playing a vital role in the processes that exacerbate environmental sources of insecurity, or who are responsible for security of the state and its individuals, operate without awareness of the environment-security link.
 - Work with the private sector to identify win-win opportunities for ensuring that resource extraction and industrial development contribute to environmental security.
 - Foster dialogue between traditional security actors, the trade policy and development assistance communities, based around enhancement of human security.

Mohamed Sahnoun, chair of the Task Force and member of the World Commission on Environment and Development, urged the strengthening of international mechanisms of accountability, to bring decision-makers to account for their actions in wartime, in particular for human rights violations and for destruction of the environment. “We need to create a global culture of peace,” he stressed, if we are to achieve sustainable development.

Where to Go From Here

We began a journey in early 2000 to investigate the relationship between the environment and insecurity. We came to it with preconceptions about where it would lead, and have been led down several surprising and, we think very, exciting new paths.

Some will feel that we have not demonstrated the link between environmental degradation and conflict. We are acutely conscious of the dangers inherent in over-selling the link between natural resources and insecurity. We feel it would be foolish to disregard these links, however, in particular at the local level, where people depend on natural resources for their livelihoods. As the cases illustrated, moreover, there is an important role for conservationists to play in conflict prevention and peace-building, as well as in reducing community vulnerability to disaster. Therein lie promising avenues to make conservation more relevant to current policy agendas as well as to people on the ground.

We have learned that the security perspective is potentially a useful *analytical tool* for conservation—allowing conservationists to identify those environmental investments with the greatest social “added value”; and a powerful *rhetorical tool*, buttressing the argument that appropriate attention to environment is a question of survival, and not merely of ethics. Framing environment as a question of human security will strengthen the case for sustainable development.

Last, we feel cooperation over shared environmental aims is an aspiration that *can bring otherwise-divergent groups together*. Through the environmental security argument, actors that have hitherto remained outside of the sustainable development movement can be drawn in, and people who are otherwise opposed might find some common ground.

So where do we go from here? The IISD/IUCN Initiative on Environment and Security will carry forward on several fronts in the coming years. First, we will seek to build our knowledge base on the links between natural resource management and vulnerability to disaster. Second, we will seek to unpack the linkages between trade in natural resources, and conflict, and see how best to contribute from a conservation perspective to nascent efforts to tackle these links in support of peace-building. Last, we will seek to further our preliminary effort here at developing tools for practitioners, drawing from the best insights of academia to inform natural resource management decisions not only in the conservation community but with development professionals and private sector field managers in the resource extractive sectors.

Whether environmental issues do become the defining security issue of the twenty-first century, there can be no doubt that peace and sustainability have a close inter-relationship, and a relationship within which conservationists—the experts in natural resource management—have a vital role to play. In that spirit, we hope this book acts as a modest yet useful milestone on the road towards a more sustainable and secure future for all.

Environment and Security Brief 14

Cooperative Efforts in the Nile Basin

By Simon A. Mason

Swiss Federal Institute of Technology, Zurich.

Project on Environment and Cooperation in the Nile Basin
(ECONILE) <http://www.fsk.ethz.ch>

The growing demand for water in the Nile Basin is confronted with finite freshwater. Large areas of the Nile Basin are arid or semi-arid, and water is unevenly distributed both in the space and time. Shared by 10 countries (Burundi, D.R. of Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania and Uganda) the basin is home to more than 250 million people with an average annual population growth rate of about three per cent. Irrigated agriculture—in other words, food—is the main water consumer. According to the FAO, large parts of the populations of the Nile countries are undernourished (1995–97 estimates: Sudan 20 per cent, Uganda 30 per cent, Rwanda 35 per cent, Tanzania 40 per cent, Kenya 40 per cent, Ethiopia 45 per cent, D.R. Congo 45 per cent, Burundi 60 per cent, Eritrea 60 per cent). Besides water scarcity, high erosion rates and reservoir sedimentation are major environmental issues. Nevertheless, both from the point of view of water and land there is still great potential to further develop agriculture and industry in the Nile Basin. Thus resource distribution and management is a primary challenge. Downstream countries see the possibility of inappropriate development upstream impeding the river's flow, while upstream countries worry that downstream countries could try to block upstream development. As yet there is no basin-wide water agreement that is accepted by all the Nile countries. Furthermore, on the national level, political instability and internal conflicts in some of the countries mean that sustainable resource management is difficult. The lack of an adequate livelihood basis in its own turn is often also conducive to this political instability.

Since international cooperation can enhance the development of shared resources in the Nile Basin it can help prevent crises internationally (mainly of diplomatic nature) and internally (poverty and conflicts related therewith). Recent steps towards cooperation over natural resources are the Ethiopian-Sudanese agreement of 1991, the Egyptian-Ethiopian framework of cooperation of 1993 and, on a basin-wide level, the Nile Basin Initiative (NBI), launched in 1999. The NBI is special because Ethiopia—source of 86 per cent of the main Nile flow

—is an active member of a basin-wide framework for the first time. Even if it is still of a transitional nature, the NBI enables dialogue. Joint “win-win” projects are foreseen (NBI web site: <http://www.nilebasin.org>).

At the Nile 2002 Conference in Addis Ababa in June 2000, representatives from both downstream and upstream countries were talking about a new “Spirit of Cooperation.” Some of the main factors influencing this process are: 1) political interests of the regimes in power; 2) increasing pressure of environmental and socio-economic issues that can only be addressed cooperatively; 3) co-ordinated third-party assistance and financing. The World Bank, for example, urges basin countries to cooperate before financing international river development projects. In sum, economic strength downstream and the potential control over water resources upstream means that there is a balance of power in the Nile Basin that is conducive to cooperation.

Whether the term “environmental security” or “sustainable development” is used, the Nile Basin demonstrates what lies at the core of these concepts: humanity’s dependency on natural resources. Efforts—such as the cooperative ones in the Nile Basin—are needed to influence political and socio-economic factors so as to translate this dependency into peace, rather than war.

Endnotes

362. See D. Petrasek, *Ends and Means: Human Rights Approaches to Armed Groups* (International Council on Human Rights Policy, 2000). Executive Summary available at: <http://www/international-council.org>
363. As reported in the Environmental Change and Security Project's Annual Report. Number 6, Spring 2000:99.
364. G. Dabelko, S. Lonergan and R. Matthew, *State of the art review on environment, security and development cooperation* (IUCN/OECD, 1999).
365. J-Y Pirot, P.J. Menell, P-J, and D. Elder, (Eds.), *Ecosystem Management – Lessons from Around the World* (Gland: IUCN, 2000), pp. 50–52.
366. D. Buckles (ed.), *Cultivating peace: Conflict and collaboration in natural resource management* (Ottawa: IDRC/World Bank, 1999).
367. S. Tyler, "Policy Implications of Natural Resource Conflict Management," in D. Buckles (1999), p. 269.
368. Referred to elsewhere as ideational factors. See T.F. Homer-Dixon (1999).
369. *Ibid.*
370. T. Kuhn, *The Structure of Scientific Revolution*.
371. Y. Katerere R. Hill, in this volume. See also P. Scott, *From conflict to collaboration: People and forests at Mount Elgon, Uganda* (IUCN, 1998), pp. 98–99.
372. K. Bush and R. Opp, "Peace and Conflict Impact Assessment" in D. Buckles (1999), p. 185.
373. For guidance on this, see in particular the Peace and Conflict Impact Assessment Network's web site, with a wealth of documents and guidelines. <http://www.bellanet.org/pcia/index.cfm>
374. K. Bush and R. Opp, "Peace and Conflict Impact Assessment" in D. Buckles (1999), p. 186.
375. C. Gaigals and M. Leonhardt, *Conflict-sensitive approaches to development*. (Saferworld/International Alert/International Development Research Centre, 2001).
376. K. Bush and R. Opp, "Peace and Conflict Impact Assessment" in D. Buckles (1999), p. 186.
377. M. Leonhardt, *Towards a unified methodology: Reframing PCIA* (Berghof Research Centre for Constructive Conflict Management, 2001). <http://www.berghof-center.org/handbook/leonhardt/index.htm>
378. See also P. Scott, (1998) p. 98–99.
379. See for example, the work of the Harvard Program on Negotiation, the Carter Centre for Peace, and the Keystone Institute.

380. J-Y Pirot, P.J. Menell, P-J, and D. Elder, (2000), pp. 50–51.
381. J. Forester, “Dealing with deep value differences,” in L. Susskind, S. McKernan, S. and J. Thomas-Larmer (eds.), *The Consensus Building Handbook*. (Sage Publishing, 1999), p. 463.
382. L. Susskind and P. Field, *Dealing with an angry public: The mutual gains approach to resolving disputes* (Simon & Shuster, 1996).
383. See, for example, G. Borrini-Feyerabend (ed.), *Beyond fences: Seeking social sustainability in conservation* (Gland: IUCN, 1997); G. Borrini-Feyerabend *et al.*, *Co-management of natural resources – Organizing, negotiating and learning-by-doing* (GTZ and IUCN, Kasperek Verlag, 2000). On the mixed effectiveness of integrating conservation and development goals, see for example R. Hughes, F. Flintan, *Integrating conservation and development experience: A review and bibliography of the ICDP literature* (London: IIED, 2001).
384. See D. Buckles (1999).
385. See D. Petrusek, *Ends and means: Human rights approaches to armed groups*. International Council on Human Rights Policy, 2000. Executive Summary available at: <http://www/international-council.org>
386. World Bank, *World Development Report* (Washington, D.C.: World Bank, 2000), p. 50.
387. T. Sandwith, C. Shine, *et al.* (eds.) *Transboundary protected areas for peace and co-operation* (WCPA-IUCN/Cardiff University, 2001). http://wcpa.iucn.org/pubs/pdfs/Transboundary_guide.pdf
388. See “Environment a Weapon in Israeli-Palestinian Conflict” in Environmental News Service. <http://ens-news.com/ens/feb2001/2001L-02-05-02.html>. The Israeli-Palestinian Joint Water Committee statement is entitled “Joint Declaration for Keeping the Water Infrastructure out of the Cycle of Violence.”
389. A. Makim, “Resources for Security and Stability? The Politics of Regional Cooperation on the Mekong, 1957–2001,” in *Journal of Environment & Development*, 11(1) (March 2002), pp. 5–52.
390. K. Asmal, “Preface”. in *World Commission on Dams, Dams and Development: A New Framework for Decision-Making* (Earthscan, 2000), p. ii.
391. A. Westing, “Environmental Approaches to the Avoidance of Violent Regional Conflicts” in K. Spillmann and G. Baechler, G. (eds.) *Environmental crisis: Regional conflicts and ways of cooperation*. Occasional Paper No. 14, Environment and Conflicts Project, Swiss Peace Foundation/ETH (September 1995).
392. D. Buckles (1999).
393. A. J. Hanson, “Environment and Sustainable Development: A Checklist for Nations Recovering from Crisis,” Mimeo (1999). Available at www.iisd.org/natres/security

Conserving the Peace is a collection of case studies illustrating the relationships among security, the environment and human well-being. Collectively, the studies make the case that conservation activities can motivate peace-building, thereby creating a stable future for all.

From the Preface of Conserving the Peace...

"We present this book to the world at a time when international relations are being convulsed by a war on terrorism. Issues of conflict and security are once again at the top of the policy agenda, if indeed they ever left. While the vast consequences of this latest conflict figure prominently in such discussions, the underlying forces of poverty, inequity and unmet expectations as causes are being widely acknowledged as well. These forces drive, and are at least in part driven by, environmental change and degradation in many parts of the world. Indeed, recent events underscore how important these relationships are to preventing instability and conflict."

– *Mohammed Sahnoun, Chair, IISD/IUCN Task Force on Environment and Security*

"... a persuasive argument that preemptive contributions to the sustainable and equitable management of natural resources are more effective for biodiversity and society than post-war humanitarian and environmental interventions."

– *Arthur H. Westing, Environmental Security Consultant and former Director of the UNEP project on Peace, Security and the Environment*

"Conserving the Peace offers a clearer understanding of why the environment is closely linked to social stability and economic security, and what options emerge for influencing this equation in the real world and on the ground."

– *Achim Steiner, Director General, IUCN - The World Conservation Union*