Environmental Cooperation and Conflict Transformation

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This work is concerned with the tactic of using environmental cooperation as a conflict transformation instÂment. This is an optimistic approach which suggests that environmental cooperation is an independent variable that may positively influence politics due to it retaining strong peacebuilding potentials. This article shows how ideas about the relationship between environment, ecology and conflicts has evolved and changed over time and discusses seven theoretical and methodological problems of the approach. The problems and weaknesses of the idea to use environmental cooperation as a conflict transformation instÂment, discussed in the text, moderate the optimism originally connected with the approach. It seems that the transformative peacebuilding potential of environmental cooperation remains, at least, unclear.

Keywords: environmental cooperation, conflict transformation instÂments, environmental peacebuilding, cooperation

Introduction

As political issues, the environment and ecology have a short but rich history. Environmental issues entered the political agenda in the mid-1960s in a variety of ways. One of the newest approaches is based on the idea of using environmental cooperation as a tool for conflict transformation. This idea emerged in the 1990s in an attempt to find more effective instÂments to solve conflicts, and in the new millennium as part of the legacy of 9/11, it has gained attention from policymakers.[1] While the relationship between the environment and security has been researched for decades and is relatively well-analysed

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and described,[2] attitudes to the relationship between the environment and conflict have changed dynamically in recent years, and the current analysis and state of research are unsatisfactory.

This work is concerned with the evolution and difficulties of using environmental cooperation as a conflict transformation instÂment. The transformation of the idea into an institutionalised approach is observed and its weaknesses and problems are analysed. The motive for this research lies in the fact that despite growing interest in this concept among scholars as well as practitioners, there has been little relevant systematic and critical study of the literature on the use of environmental cooperation as a conflict transformation instÂment and no critical evaluation of the approach as such. The recent study by Maas, Carius and Wittich – the first project of its kind[3] – observes that there is no coherent school of thought within the literature on environmental cooperation as a conflict transformation instÂment, but rather several trends, which they concentrate on. Nevertheless, their study does not evaluate the literature or the approach *per se*.

This study revisits the academic literature. However, in the area of conflict resolution, which has a strong practical dimension, a substantial number of relevant publications have been produced outside academia—by international governmental organisations and agencies, non-governmental organisations, think-tanks and independent researchers. The scope of this present review, thus, goes beyond purely academic literature.

This article is divided into two parts: the first is stÂctured chronologically and shows how ideas about the relationship between the environment, ecology and conflicts have evolved and changed over time. The goal of this first part is not to replicate existing reviews, but to outline how the idea of environmental cooperation as a conflict transformation instÂment was born.[4] The second part is stÂctured thematically and discusses theoretical and methodological problems in the approach I term *environmental cooperation as a conflict transformation instÂment* along with the challenges facing contemporary research and applications using environmental cooperation in conflict transformation. This study does not, however, research the practice of environmental cooperation in conflict-affected areas; we still do not have enough empirical data for such an analysis.

Using Environmental Cooperation to Transform Conflicts: The Framework

Environmental issues have been present in security studies since the 1950s, and they have been part of the international political agenda since the 1960s. Scholars (re: Brown) were concerned about the relationship between environmental change and security already in the 1950s, though they did not use this exact terminology.[5] The key text which articulated the connection between security and the environment, was Ullman's work titled 'Redefining Security.'[6] According to Ullman, non-military threats, such as a lack of resources or environmental disasters, are more devastating than military threats because environmental issues cannot be faced via military alliances or deterrents. Ullman's reflections were elaborated in the 1990s by scholars who analysed environmental threats and security.

This section introduces the way that environmental issues have penetrated the area of conflict resolution. Environmental issues became part of conflict resolution and peace studies in the mid-1990s, emerging from discussions in security studies about environmental scarcity, environmentally induced conflicts and conflict resources.[7] Environmental issues began to influence not only research into the causes of conflicts, but also the approach to conflict resolution.

Scholars of conflict resolution have determined a relationship between the environment, ecology and natural resources on one side and conflicts on the other, within a multidimensional complex framework in which four broad streams can be identified. Authors in the first stream worked further on the concept of environmental scarcity, enriching this concept with ideas about demographic growth, climate change and water wars, and arguing that environmental degradation and a lack of natural resources reduce the adaptive capacity of societies and support the outbreak of violence.[8] A second stream of authors believe that natural resources might serve to prolong conflicts since they bring money to conflicting parties (this idea was connected with research into economically induced conflicts[9] and the role of so-called blood diamonds in interstate conflicts in Africa).[10]

Representatives of the third stream argue that uneven access to resources, denial of resource access and insufficient compensation to the local communities whose resources are used, are all sources of grievances which can easily transform into a source of violence.[11] Critics of these three streams "joined forces" to create a fourth stream to

question the dominant narrative.[12] That story may be summed up as follows:

> *high resource consumption → environmental degradation → deepening of resource scarcity → greater competition → a higher risk of the outbreak of violence.*

Environmental Cooperation and Conflict Transformation

The fourth stream argues that conflicts over resources may lead to the joint exploitation of resources and, consequently, the emergence of joint interests and joint resource management. Similarly, resource scarcity based on environmental degradation may be overcome by joint efforts to halt the degradation. Scholars in the fourth stream are inspired by the belief that environmental protection is vital and it is in the joint interest of all humankind that environmental issues are put above political borders and environmental protection is a non-political conflict-free issue. They hold that unilateralism produces no solutions and environmental issues have catalytic potential.[13] Recent studies have shown that there are at least four groups of reasons why governments and other actors are interested in trans-boundary environmental cooperation and management:[14]1. ecological advantages (protection of biodiversity), 2. economic advantages (environmental cooperation may directly or indirectly bring economic development, for example, by advancing eco-tourism), 3. political advantages (environmental cooperation is connected with institutionalisation, regionalisation, democratisation and integration) and 4. catalytic advantages (environmental cooperation may spill over into political dialogue). Finally, these critics have been fundamentally influenced by the research of Wolf and his colleagues, who tested more than 1800 cases and evidenced that there have been hardly any "water wars" in human history.[15] Wolf showed that the riparian states sharing water resources are more inclined to cooperation than to conflict.

All these beliefs, ideas and research results have helped create the approach of environmental cooperation as an instÂment for conflict transformation. The building blocks of the approach are the assumptions that:

1. environmental issues ignore political boundaries and have the potential to inject a degree of objective and depoliticised discourse into the negotiations,
2. conflict and cooperation are not opposite poles on one spectÂm, but may coexist,
3. environmental cooperation has the potential to be an independ-

ent variable positively influencing regional as well as world politics because it helps participants to internalise norms, form regional identities and interests, operationalise routine international communication and put aside the acceptability of using violence,

4. environmental cooperation has the potential to strengthen tÂst between conflicting communities; it can help teach peacebuilding habits, which may spill over into political dialogue and build a bridge between these communities.

The approach began to consolidate and spread early in the new millennium when in the fallout of 9/11, academics and policymakers started to look for new conflict resolution instÂments. At the time, several studies had presented the peacebuilding potential of environmental cooperation in conflict-affected areas and the idea had gained attention within international organisations such as UN Environment Programme (UNEP), NATO and the Organisation for Security and Cooperation in Europe (OSCE).[16] UNEP and NATO labelled it 'environmental peacebuilding'[17] and OSCE called it 'environmental confidence building.'[18]

Despite the rising popularity of the idea of using environmental cooperation as a tool for transforming conflicts in dispute-ridden areas, there are still not many studies which systematically research the peacebuilding potential of environmental cooperation, the forms it has taken in conflict-affected areas or its problems, weaknesses and negative effects.[19] Among existing academic and policy analyses, the prevailing literature either demonstrates that environmental cooperation exists in conflict-affected areas[20] or they are future-oriented and recommend the use of environmental cooperation as a transformative tool in particular conflicts.[21] These studies also suggest which model of environmental cooperation should apply to specific cases—critics working in this vein have, for example, recommended establishing a trans-boundary peace park at sites in Kashmir and the Korean Demilitarised Zone.

Theoretical Shortcomings, Methodological Weaknesses, Research Challenges

The following sections surveys three of the most pronounced theoretical and methodological problems affecting the use of environmental cooperation as an instÂment for conflict transformation:

1. a lack of clarity about what is meant by "environmental cooperation,"
2. overlooked variables and a vague account of causality and mechanisms,
3. the broadening of the approach.

And, this work introduces four additional research challenges:

4. the great variety of forms and shapes of environmental cooperation, including different concepts of environmental peacebuilding,
5. different beliefs about the stage of a conflict when environmental cooperation should be used,
6. an absence of clear opinion about the type of conflict in which environmental cooperation is appropriate,
7. the lack of knowledge about the agents engaged in environmental cooperation in conflict- affected areas.

Theoretical Shortcomings: The Uncertain Definition of Environmental Cooperation

Though a number of scholars and institutions encourage us to use environmental cooperation as a bridge between conflicting communities, there is still significant uncertainty about what is meant by "environmental cooperation." Some have not thought through the term and assume that everyone must already know what "it" means or that the phrase is understandable on its own. The ambiguity surrounding environmental cooperation affects both its parts and the question of what is meant exactly by "environmental" and "cooperation" may be posed.

The term "environmental" is generally used in connection with issues about the environment and ecology. For those engaged in conflict resolution, environmental cooperation usually refers to cooperation in conservation and ecosystem protection where a key concern is the protection of natural resources. But this is still very general. As some scholars have shown, the ways that the term is defined – and in particular, attributes given to individual resources such as (non)renewability, (im)mobility, (il)legality, (non)tradability and (non)lootability – influence the results of analyses of the relationship among resources, environmental cooperation and conflicts.[22]

By analysing academic and policy documents about environmental cooperation as a conflict transformation instÂment, it is clear that ideas about the peacebuilding potential of environmental cooperation, in conflict-affected areas, are mainly based on a definition of natural resources as non-tradeable, non-lootable and immobile. Natural resources which fulfil these criteria show, for example, a high level of biodiversity of fauna and flora; natural, protective, historic, aesthetic, educational and research value in the landscape; protective, anti-erosive, hygienic and aesthetic functions in the vegetation zones of soil and water resources; regulatory functions in the vegetation, water and soil vis-à-vis the local area, the regional climate and pest incidence; and regulatory functions in the vegetation, water and soil for the bio-chemical cycles of the landscape. There is uncertainty about resources such as oil, diamonds, columbite-tantalite (coltan), water and tropical timber. Some authors do not understand these resources as part of an ecosystem and argue that though their looting may lead to financial problems, they do not represent environmental factors on their own, and thus, are not natural resources.[23] Others do consider them (or at least some of them, specifically water and tropical timber) to be natural resources.[24]

A second difficulty with proposing environmental cooperation as a conflict transformation tool lies in the issue of what "cooperation" implies since it is defined differently by political scientists, sociologists and economists (etc). Even when considering *only* political science and international relations interpretations and disregard other, valid, concepts of cooperation,[25] there is still evident ambiguity—cooperation is differently defined by those analysing governance, the problem of free riders, collective action and the tragedy of the commons.[26]

Part of the problem with the term cooperation relates to the issue of cooperating agents and at what level cooperation occurs. The quality of cooperation is influenced by whether it happens on a micro-level or a macro-level as well as by whether it is intergovernmental cooperation or cooperation of civil society groups or private actors or some form of hybrid cooperation. Environmental cooperation has been used as a conflict transformation instÂment on a micro-level[27] and between states.[28] Existing academic publications refer to various models of cooperation among states, but in cases where the participants in environmental cooperation are non-state actors or hybrid organisations (such as the International Union for the Conservation

of Nature), models of state cooperation can hardly be used. It is clear that the inclusion of non-state actors in environmental cooperation in conflict-affected areas demands a more interdisciplinary perspective.

Overlooked Variables and Vague Causality

One important weakness in the *environmental cooperation as a conflict transformation instÂment* approach is the overlooking of variables, notably political and economic factors along with vague thinking about causality. First, I illustrate the problem of variables, and then I highlight the problem of causality. Environmental cooperation is seldom (if ever) an independent variable. This means that other factors, specifically interceding variables, need to be identified and understood.

Scholars dealing with the peacebuilding potential of environmental cooperation do not usually pay much attention to questions such as what the cooperation is about, who the conflicting communities are (i.e. what their political systems or economic orientations are) or what stage the conflict is at and what it concerns. Contemporary studies of environmental cooperation in conflict-affected areas do not even consider technological developments or the influence of new technologies such as global positioning systems. If scholars research these issues, they usually note that there are many variables and these should be analysed.[29] Based on several studies, it is clear that factors such as a society's political system, value orientation, religion, economic orientation, strength and density of institutions and level of development can influence the effects of using environmental cooperation as a conflict transformation tool since they affect environmental behaviour or may absorb the upheaval from rapid environmental changes.[30] Thus, a more complex model of analysis which takes into account multi-causality, is needed.

Thinking further about causality, it is not clear how instÂmental environmental cooperation *is* exactly in transforming conflicts. Nor is it apparent how the spill-over of positive experiences from environmental cooperation into political dialogue works precisely (especially considering the multi-causality mentioned above); how environmental cooperation at a local level can influence political dialogue at the highest level or how environmental cooperation is instÂmentalised for political reasons. We do not even know anything about the relationship between the intensity of violence and the emergence of environmental

cooperation. There are, therefore, several key, open questions: Can environmental cooperation ease animosity and violence? Or is the easing of violence a prerequisite for environmental cooperation?

These problems are well demonstrated by Payne and Lafontaine who researched the cases of the Global Environmental Facility (GEF) and Environment and Security Initiative (ENVSEC) respectively.[31] Payne questioned GEF's ability to support environmental projects effectively in conflict-affected areas. He showed that the implementation of environmental projects at these sites is not only challenged by political barriers but is very expensive and usually complicated by questions of authority and sovereignty and the limits on the activities of non-state actors. According to Payne, GEF may be useful for both conflict prevention and conflict transformation but its direct contribution is limited and unclear. Lafontaine analysed ENVSEC – a joint initiative of OSCE, UN Development Programme (UNDP), UNEP, NATO and the UN Economic Commission for Europe and Regional Environmental Centre for Central and Eastern Europe – which was established in 2002 as a joint platform for environmental and security cooperation by Western organisations with post-Soviet countries.[32] He concluded that environmental institutions are unable to provide a spill-over effect; in other words, they cannot ensure that the positive experience from environmental cooperation will spill over into political dialogue. The peacebuilding potential of initiatives such as ENVSEC is limited to say the least.

The Problematic Widening of the Approach

A third problem with the approach of using environmental cooperation for conflict transformation is its widening to cover issues which relate to conflict resolution and environmental cooperation, but whose inclusion is questionable. As mentioned, environmental cooperation is promoted as a conflict transformation instÂment by very different groups of actors in very different areas. These actors bring new issues and practices to the debate, diluting our knowledge of environmental cooperation in conflict-affected areas. The most acute problem is probably the coupling of the peacebuilding potential of such environmental cooperation with the debate about protecting the environment against the effects of military conflicts. That issue is not new, having emerged in the 1970s in relation to the environmental ef-

fects of the Vietnam War and militarisation of the Korean Peninsula.[33] Today's debate concerns the impact of interstate conflicts, civil wars and fragile states on ecosystems, biodiversity and conservation system. The growing attention to environmental protection in conflict zones is connected with the finding that 81% of wars (defined in accordance with the PRIO dataset) under way between 1950 and 2000 happened in areas with a high level of biodiversity.[34] The place which has gained widespread attention in recent decades – and which, to a significant extent, has generated this debate – is the Great Lake region in Africa, an area on the borders of Rwanda, Uganda and the Democratic Republic of Congo where mountain gorilla and hippopotamus populations lived historically. Several conflicts which passed through the region (the Rwandan genocide, the First and Second Congo Wars) annihilated these gorilla and hippopotamus populations. Western researchers and conservationists launched an initiative to establish a nature park in the area in order to protect animals against guerrilla violence and hunting by refugees.[35] Initiatives aiming to protect the environment in conflict zones have also emerged in other countries such as Afghanistan[36] and Sudan[37] in fragile regions.

Based on the environmental degradation in conflict zones, the concept of "biodiversity hotspots" has also emerged. These are areas featuring an exceptional concentration of endemic species and experiencing an exceptional loss of habitat (as a consequence of military conflict among other reasons). Based on this development, conservationists have urged that environmental protection efforts concentrate on conflict zones and fragile states rather than on stable, peaceful and developed areas where the risk of losing the habitat is significantly lower.[38]

What the widening of the debate means in practice can be seen from the transformation visible within UNEP since 2008. Plans to use environmental cooperation as a conflict transformation instÂment have been institutionalised within a programme called 'Environmental Cooperation for Peacebuilding.' The programme aims to 'assist countries, regional organisations and the UN system to assess and transform potential sources of conflict over natural resources into an opportunity for cooperation and a platform for peacebuilding.'[39] This initiative has a set of goals which is wider than merely supporting environmental cooperation as a conflict transformation instÂment: it engages in environmental protection in fragile states and advocates for the greening

of peace operations, the development of environmental law and the inclusion of environmental protection into Disarmament, Demobilisation and Reintegration (DDR) programmes; all of this comes under the heading 'Environmental Cooperation for Peacebuilding.'

Research Challenges: The Many Faces of Environmental Cooperation and Peacebuilding

The first research challenge identified here is the lack of clarity about the forms and shapes which environmental cooperation can take. The literature on environmental cooperation between conflicting communities deploys phrases such as "environmental governance," "integrated management of resources" (formal, informal and customary management are mentioned) and "environmental peacebuilding."[40] Some authors do not distinguish between forms of environmental cooperation though do recognise various degrees of cooperation intensity.[41] Ideas about forms of environmental cooperation vary mainly based on the natural resources which scholars are analyse. For example, Böge and Luzi refer specifically to 'integrated water resource management' and 'customary water management' respectively.[42] This thinking about the forms of environmental cooperation is connected with the problem outlined above—that is, the ambiguous definition of "cooperation." Further complications then stem from other terminological confusion (such as uncertainty about the use and understanding of terms like "management," "governance" and "conflict"[43]) along with the broadening of the debate to include new issues like development and human security.[44]

The task of this work is not to research the issue of the forms of environmental cooperation in any detail, but rather to show how diverse the field is and the way that existing terms and concepts overlap. As noted, scholars working with environmental cooperation as a conflict transformation instÂment, use terms such as environmental governance, integrated resource management and environmental peacebuilding—this work now turns to exploring these.

Environmental governance has been defined generally as 'a social function centred on efforts to steer societies or human groups away from collectively undesirable outcomes and toward socially desirable outcomes.'[45] It has been described as 'the use of institutionalised power to shape environmental processes and outcomes.'[46] The role of en-

vironmental governance is 'to regulate use and consequently set the framework for interactions between resource users.'[47] It is applied at a global as well as a local level.[48] The Montreal and Kyoto Protocols are considered to be forms of environmental governance.

Resource management is understood as a process which includes physical and socio-economic approaches whose aim is to harmonise the supply and quality of natural resources with the demands of different users and the environment.[49] It is also explained as a process of collective understanding and action by which human communities and other social actors together manage natural resources and ecosystems, drawing from everyone´s unique strengths, vantage points and capacities.[50] Resource management includes, for example, international and trans-boundary environmental regimes, trans-boundary nature peace parks, joint river commissions and the organisation of river basins. Resource management can be formal or informal; it may be based on customary law or cooperation between traditional authorities.[51]

Environmental peacebuilding has emerged as the most recent term in this context. Its users presume that international relations are not only relations among states, but relations among societies as well. They also believe that environmental cooperation has a catalytic function which can open effective peacebuilding channels and opportunities for dialogue, transform uncertainties and help overcome political tensions by building tÂst and creating cooperative connections through societies; this can make it possible to overcome stereotypes and help create shared norms.[52] Environmental peacebuilding integrates resource management with the good governance of natural resources to enable conflict prevention, conflict resolution and post-conflict reconstÂction.[53]

What we find here are also different concepts of "environmental peacebuilding" itself. According to the first concept, the environment serves as one possible link between the conflicting parties in order to foster peace in an area of conflict. The alternative version presents the far more widely discussed idea that environmental conflicts can be resolved through the common management of natural resources. Distinction can be drawn by recalling that environmental conflict resolution is based on conflict theory, which holds that life in a society is characterised by conflict rather than consensus. Against this, the concept of environmental peacebuilding advances the liberal view that engaging in cooperation is the norm.

A comparison of these approaches is shown in this table:

Environmental conflict resolution	Environmental peacebuilding
Cause of conflict	
Scarcity or abundance of natural resources	Non-environmental
Idea	
Resolving environmental conflicts through the common management of natural resources	Resolving conflicts between adversaries through cooperation on environmental issues
Means	
Creating agreements on cooperative use and management of resources; changing existing laws on the use of resources and land.	Creating long-lasting bonds between communities; fostering tÂst and confidence through ongoing cooperation in common projects; developing shared knowledge about common environmental threats and possible solutions.

Table1: Comparison of environmental conflict resolution (left) with environmental peacebuilding (right).

As seen via examples, the forms of environmental cooperation overlap. In many cases, they do not refer to technical instÂments, but to political issues which need to be contextualised within a particular setting.[54] Another problem stems from the fact that there are so many individual and case-specific types of environmental cooperation (e.g. peace parks, river commissions, organisations of river basins and platforms of NGOs and environmental experts) and they have been used in such very different conflict situations that we cannot draw general conclusions or glean information about the lessons learned.

The Conflict Stage When Environmental Cooperation is Used

The second research challenge lies in the uncertainty about the conflict stage when scholars and practitioners intend to apply this approach. Specifically, it is unclear whether environmental cooperation should be used when the conflict manifests and at an early stage of escalation in order to prevent violence from breaking out, or deployed later in the escalation to improve relationships damaged by violence. Alternatively, it could serve as a means of post-conflict reconstÂction and, at the same time, a way of preventing a return to the violence.

Environmental issues first emerged on the conflict resolution agenda in connection with post-conflict reconstÂction. An important role in the debate was played by UNEP, which concluded in the first half of the 1990s from the lessons learned in Bosnia and Liberia that environmental degradation caused by military conflicts is a serious barrier to reconstÂction and sustainable peacebuilding in post-conflict areas. This conclusion was reached by scholars and practitioners alike. The World Bank's pilot programme 'Global Environmental Facility' was established on the back of this wave. The goal of the GEF was to connect post-conflict reconstÂction and sustainable development programmes with environmental issues. The concept was employed, for example, in the Israeli-Palestinian peace negotiations in the first half of the 1990s as well as in the peace negotiations between Ecuador and PeÂ in 1998, the peace accord between Israel and Jordan in 1994 and the peace negotiations between North and South CypÂs. The experience with GEF led to the idea that environmental cooperation and resource management could be used to prevent conflicts.[55] This idea was also influenced by experiences with conflict diamonds in West Africa and illegal coltan mining in the DRC, where funds from the (usually illegal) trade in resources were used to finance military actions. Experts argued that in order to end the violence, it was necessary to cut off the financial resources of rebel movements and thus, in other words, stem the flow of diamonds (coltan). (This was later the goal of the so-called Kimberley Process.) To build a sustainable post-conflict barrier stopping the violence from returning, it was also necessary to reform the management and governance of natural resources.[56]

The debate over using environmental cooperation as a tool for conflict prevention and post-conflict reconstÂction also occurred among the scholars of water wars—i.e. violent conflicts over water.[57] Water wars first emerged as a research issue in discussions about environmental scarcity, but it was only later, in connection with the resolution of water-induced conflicts, that attention was paid to water not as a cause of conflict but as a joint interest and catalytic agent.[58] The next step came with the UN's 2009 'Greening the Blue Helmets' programme, which sought to include environmental issues on the peacekeeping and peacebuilding operation agenda.[59] At the same time, several reports appeared that argued in favour of including environmental protection and conservation within post-conflict programmes of demilitarisation, demobilisation and reintegration (DDR).[60] A unique initiative of the

last decade which is gaining more and more attention and popularity is the use of trans-boundary nature peace parks and reserves. Peace parks had been established in the past, but they were used as tools for post-conflict confidence-building and reconciliation between former adversaries (as in the cases of PeÂ and Ecuador, or Israel and Jordan, both referenced above) or for the protection of endangered species in areas of military conflict (see, for example, the details of the ViÂnga peace park on the borders between the DRC, Rwanda and Uganda[61]). Recent plans for peace parks see them as instÂments which should support cooperation and open the door to improvements in the relations between conflicting parties. Westing, for example, suggested establishing a peace park between North Korea and South Korea in the Demilitarised Zone;[62] conservationists and mountain-lovers have also recommended establishing a peace park on the Siachen Glacier in Kashmir, which is disputed territory between India and Pakistan.[63] Meanwhile the International Union for Conservation of Nature (IUCN) has supported the opening of trans-boundary peace parks in disputed border areas in Africa,[64] and researchers and conservationists have proposed creating a marine peace park in disputed territories in the South China Sea.[65]

As shown, there are at least three projections of how environmental cooperation can be used as a tool for conflict transformation: these shift from the point of conflict prevention to post-conflict reconstÂction—that is, from applying environmental cooperation to prevent conflicts to its employment in post-conflict reconstÂction and to directly improve relations between parties in a violent conflict. Because each stage of a conflict requires a different approach, we cannot draw any conclusions about environmental cooperation as a general tool for conflict transformation.

The Type of Conflict Where Environmental Cooperation is Used

Since the end of the 1980s, it has been clear that violent conflicts are predominantly of an interstate character. And, the latest research shows that violence often recurs with only a few countries tÂly in a "post-conflict" state. The rate of the onset of violence in countries with a history of conflict has been increasing since the 1960s and every civil war that began since 2003 occurred in a country where there had previously been a civil war.[66] In these recurring conflicts, causes usu-

ally accumulate. Scholars of environmental cooperation as a conflict transformation instÂment do not usually take these facts into consideration. In other words, most studies fail to distinguish between types of conflict. Many publications about the peacebuilding potential of environmental cooperation in conflict-affected areas concentrate on particular interstate or domestic conflicts, but do not deal with the cause of conflict—i.e. the issue of whether the cause, as an intervening variable, has any influence on the use and success of environmental cooperation as a conflict transformation instÂment.[67] For now, we do not know if there are any similarities or differences in environmental cooperation as a conflict transformation instÂment in interstate or intrastate disputes, or in religious, ethnic or environmentally-induced conflicts. It is also unclear if the cause of the conflict has any impact on the effects of using environmental cooperation as a conflict transformation instÂment.

The Agents of Environmental Cooperation in Conflict-Affected Areas

The last research challenge which this study is concerned with is the lack of knowledge about the agents engaged in environmental cooperation in conflict-affected areas. In real life, the actors engaged in environmental cooperation are very different and include development agencies, UN agencies and UN programmes, international and regional economic and development organisations, hybrid bodies, professional non-governmental organisations, non-governmental movements of environmental activists, foundations and individuals such as committed scholars and nature lovers.

Projects supporting trans-boundary environmental protection have been developed by IUCN and UNEP since the 1980s with the support of governmental and non-governmental organisations and environmental experts. Since the 1990s, these projects have concentrated on conflict-affected areas. In 1993, Westing prepared a UNEP publication in cooperation with IUCN called *Trans-frontier Reserves for Peace and Nature: A Contribution to Global Security*, which argued in favour of trans-boundary environmental protection in areas of conflicts. Between 1998 and 2000, IUCN drafted its 'State-of-the-art Review of Environment, Security and Development Cooperation' for OECD.[68] Since the beginning of the new millennium, terms such as "environ-

mental confidence building" and "environmental peacebuilding" have appeared in the documents of OSCE, NATO and UNEP.[69] NGOs (such as International Tropical Timber Organization, World Wildlife Fund, McArthur Foundation, Hans Seidl Stiftung, Heinrich Böll Stiftung and Friends of the Earth Middle East) have organised a number of environmental projects in conflict-affected areas with the goal of building local peace. During the annual IUCN conference in 2008, a cooperative framework for establishing trans-boundary peace parks was created under the name of the Global Trans-boundary Conservation Network.[70]

IUCN consequently established the World Commission for Environmental Law while UNEP set up the Expert Advisory Group on Conflict and Peacebuilding.[71] The penetration of the idea of environmental cooperation as a conflict transformation instÂment into the agenda of international organisations has significantly helped individual scholars such as Carius, Conca, Dabelko, Halle, Matthew and Westing, who have all collaborated with international organisations, prepared various reports and projects for international agencies and worked as advisors, managers and researchers in international environmental and development projects.[72]

As seen from this short introduction to the entities who are engaged in environmental cooperation and believe in its peacebuilding potential, there are a large number and variety of actors, which confuses and complicates all of the issues involved. We know only a little about how particular actors work, what influence they may have, what their motivations are and what the effects of their engagement are from a mid- or long-range perspective. Moreover, some studies have shown that some actors (for example, IUCN) understand areas of protection to include not only places with a high level of biodiversity, but those rich in social interaction and social reproduction, and support for environmental cooperation and conservation is only one of many goals.[73]

Conclusion: Lessons Learned, Key Questions and Next Steps

The approach I term *environmental cooperation as a conflict transformation instÂment* developed as a critical reaction to pessimistic visions of the relationship between the environment and conflict. Environmental cooperation, which has been embedded as a new method for

addressing and transforming conflicts in the post-9/11 period, is an optimistic approach based on the belief that environmental cooperation is an independent variable that positively influences politics due to its strong peacebuilding potential. For more than a decade, these ideas have been spreading among conflict resolution scholars and environmentalists as well as those working in conflict-affected areas, but despite the enthusiasm for this approach, it remains underdeveloped conceptually.

The seven problems and weaknesses associated with environmental cooperation's use as a conflict transformation instÂment, as discussed above, temper the optimism originally connected with the approach. It seems that the transformative peacebuilding potential of environmental cooperation is unclear and that scholars and others cite events postulated in the future as empirical evidence. A number of studies demonstrate that environmental cooperation may exist between conflicting communities, but it is not clear how all this fits together—i.e. how the peacebuilding potential of environmental cooperation works, how this can be systematically verified, how particular agents of environmental cooperation work in conflict-affected areas, if there exists a relationship between the forms and shapes and intensity of environmental cooperation and its peacebuilding potential and if there are any negative effects of environmental cooperation in conflict-affected areas. In other words, existing studies in the field come up against fairly elementary problems in terms of theory constÂction, the methodology used and empirical testing.

My pessimism about the use of environmental cooperation as a conflict transformation instÂment is compounded by the fact that the peace parks and other environmental cooperation projects in conflict-affected areas are in many places rather theoretical. In many of the model cases often mentioned (for example, the Korean Peninsula, the Israeli-Palestinian cooperation over water and the Indo-Pakistani cooperation about the Siachen Glacier and in the Sir Creek wetlands), there is no clear and unequivocal evidence of the transformative peacebuilding impact of environmental cooperation.

Given the problems shown above, I would conclude that the approach of using environmental cooperation to transform conflicts may be a normative ideal and, as such, universally applicable. But it is clear that its application and success greatly depend on the specific case; generalisation is not possible – at least for the near future – and

proposing a single model of environmental cooperation as a conflict transformation instÂment would be too simplistic. In order to think further about this approach and move forward with its use, we need to see major improvements in the theory's constÂction and methodology as well as systematic data collection providing valid and reliable data and the analysis of empirical evidence.

Though it is necessary to combat all these theoretical and methodological problems, I perceive some of these issues as far more important than others. Key points are the impact of particular agents and of the type of conflict, the intensity of violence and other separate variables (notably political and economic factors) and the nature and functioning of any spill-over between environmental cooperation and political dialogue if this exists. Knowing more about all of these points may help to convert the normative ideal of environmental cooperation as a conflict transformation instÂment into a working system.

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Notes

1 Chester A. Crocker (2011), 'Thoughts on the Conflict Management Field after 20 Years,' *International* Negotiations, 16, p. 5.

2 See, for example, Guenter Baechler and Kurt R. Spillmann, (eds.) (1995), 'Environmental Crisis: Regional Conflicts and Ways of Cooperation,' *CSS Environment and Conflict Project Series* 14(1), Center for Security Studies, Zurich, Switzerland; Nils Petter Gleditsch (1998), 'Armed Conflict and The Environment: A Critique of the Literature,' *Journal of Conflict Resolution* 35 (3), pp. 381–400; and OECD (2000), 'State-of-the-Art Review of Environment, Security and Development Cooperation,' working paper, FebÂary, prepared on behalf of the OECD DAC.

3 Achim Maas, Alexander Carius, and Anja Wittich (2013), 'From Conflict to

Cooperation? Environmental Cooperation as a Tool for Peacebuilding,' in R. Floyd and R. A. Matthews (eds.), *Environmental Security: Approaches and Issues*, New York: Routledge, pp. 102–120.

4 Carius, Maas and Wittich (2013); Gleditsch (1998); OECD (2000).

5 Harrison Brown (1954),'The Challenge of Man´s Future,' *Engineering and Science* FebÂary, pp. 16–36.

6 Richard H. Ullman (1983), 'Redefining Security,' *International Security*, 8(1), pp. 129–153.

7 See, for example, Thomas F. Homer-Dixon (1991),'On the Threshold: Environmental Changes as Causes of Acute Conflict,' *International Security* 16 (2), pp. 76–116; Thomas F. Homer-Dixon (1994), 'Environmental Scarcities and Violent Conflict,' *International Security* 19(1), pp. 5–40; Peter Gleick (1991), 'Environment and Security: The Clear Connections,' *Bulletin of the Atomic Scientist*s 47(3), pp. 16–21; Peter Gleick (1994), 'Water, War, and Peace in the Middle East,' *Environment* 36(3), pp. 6–24.

8 For example, Baechler and Spillmann (1995); Homer-Dixon (1991, 1994).

9 Paul Collier and Anke Hoeffler (1998), 'On the Economic Causes of War,' *Oxford Economic Papers* 50(4), pp. 563–573.

10 See, for example, Ruben de Koning (2008), 'Resource-Conflict Links in Sierra Leone and the Democratic Republic of the Congo,' *SIPRI Insights on Peace and Security* 2, pp. 1–18.

11 Paul Collier and Anke Hoeffler (2004), 'Greed and Grievance in Civil War,' *Oxford Economic Papers* 56(4), pp. 563–595.

12 Baechler and Spillmann (1995); Lothar Brock (1991), 'Peace through Parks: The Environment on the Peace Research Agenda,' *Journal of Peace Research* 24(7), pp. 407–423; Ken Conca and Geoffrey D. Dabelko, (eds.) (2002), *Environmental Peacemaking*, Washington, DC: Woodrow Wilson International Center for Scholars; Geoffrey D. Dabelko (2006), 'From Threat to Opportunity: Exploiting Environmental Pathways to Peace,' paper prepared for the Environment, Peace and the Dialogue Among Civilizations and Cultures conference, 09-10 May, Tehran, Iran; Daniel Deudney (1997), 'The Limits of Environmental Security,' in S. Kamieniecki, G. A. Gonzalez and R. O. Vos (eds.), *Flashpoints in Environmental Policymaking: Controversies in Achieving Sustainability*, Albany: State University of New York Press, pp. 281–310; Richard A. Matthew and Ted Gaulin (2001), 'Conflict or Cooperation? The Social and Political Impacts of Resource Scarcity on Small Island States,' *Global Environmental Politics* 1(2), pp. 48–70; Siri Aas Rustad, Paivi Lujala and Philippe Le Billon (2012), 'Building or Spoiling Peace? Lessons from the Management of High-value Natural Resources,' in P. Lujala and S. A. Rustad (eds.), *High-Value Natural Resources and Peacebuilding*, London: Earthscan, pp. 572–621.

13 Brock (1991); Dabelko (2006); Peter Haas (1990), 'Introduction: Epistemic Communities and International Policy Coordination,' *International Organisation* 46(1), pp. 1–35; CW. Sadoff and David Grey (2002), 'Beyond the River: Benefits of Cooperation on International Rivers,' *Water Policy* 4 (2002), pp. 389–403.

14 David Phillips et al. (2006), 'Transboundary Water Cooperation as a Tool

for Conflict Prevention and Benefit Sharing,' *Global Development Studies* 4, Ministry for Foreign Affairs, Stockholm, Sweden; Sadoff and Grey (2002).

15 Aaron T. Wolf (1997), 'International Water Conflict Resolution: Lessons from Comparative Analysis,' *Water Resource Development* 13(3), pp. 333–365.

16 See, for example, Conca and Dabelko (2002); Richard Matthew, Jason Switzer and Mark Halle, (2002), 'Introduction,' in R. Matthew, M. Halle and J. Switzer (eds.), *Conserving the Peace: Resources, Livelihoods and Security*, Winnipeg: International Institute for Sustainable Development and IUCN, pp. 1–28.

17 ENVSEC (n.d.), '*ENVSEC in the South Caucasus: An Overview of Projects*,' OSCE and ENVSEC Initiative, available at: <http://www.envsec.org/publications/envseccaucasus2012.pdf> (accessed 13 December 2014); UNEP (2009), *From Conflict to Peacebuilding – the Role of Natural Resources and the Environment*, Nairobi: United Nation Environmental Programme.

18 OSCE (2012), 'OSCE Guide on Non-Military Confidence-Building Measures,' available at: <http://www.osce.org/cpc/91082> (accessed 10 December 2014).

19 Exceptions are Thomas Bernauer et al. (2012), 'Water-Related Intrastate Conflict and Cooperation (WARICC): A New Event Dataset,' *International Interactions* 38(4), pp. 529-545; Samuel Luzi (2007), 'International River Basins: Management and Conflict Perspective,' *CSS Environment and Conflict Transformation Series* 63, Center for Security Studies, Zurich, Switzerland, pp. 1–8.

20 Conca and Dabelko (2002); Matthew, Halle and Switzer (2002).

21 For example Salim H. Ali (2005), 'Siachen…Ecological Peace between India and Pakistan,' *Sanctuary Asia* 25(1), pp. 76–77; Salim H. Ali (ed.) (2007), *Peace Parks: Conservation and Conflict Resolution*, Cambridge and London: MIT Press;
Arthur H. Westing (2010), 'The Korean Demilitarized Zone (DMZ) as a Bridge between the Two Koreas,' in participant papers from ICD conferences, available at: <http://www.culturaldiplomacy.org/academy/index.php?Participants-Papers-A-World-Without-Walls> (accessed 12 December 2014); Arthur H. Westing (2001), 'A Korean DMZ Park for Peace and Nature: Towards a Code of Conduct,' in K. Chae-Han (ed.) *The Korean DMZ Reverting beyond Division*, Seoul: Sowha, pp. 157–191.

22 Philipe Le Billon (2009), 'Natural Resource Types and Conflict Termination Initiatives,' *Colombia Internacional* 70(4), pp. 9–34; Paivi Lujala (2003), 'Classification of Natural Resources,' paper prepared for presentation at the ECPR Joint Session of Workshops, Edinburgh; Rustad, Lujala and Le Billon (2012); Jennifer Wallace and Ken Conca (2012), 'Peace through Sustainable Forest Management in Asia: The USAID Forest Conflict Initiative,' in P. Lujala and S. A. Rustad (eds.), *High-Value Natural Resources and Peacebuilding*,, London: Earthscan, pp. 503–528.

23 Gleditsch (1998); Stephan Libiszewski (1991), 'What is Environmental Cooperation?' *ENCOP Occasional Paper* 1, Center for Security Studies, Zurich, Switzerland.

24 See, for example, Brendan Bromwich (2014), *Relationships and Resources.*

Environmental Governance for Peacebuilding and Resident Livelihoods in Sudan, Nairobi: UNEP.

25 Robert Axelrod (1984), *The Evolution of Cooperation,* New York: Basic Books; R. Axelrod and Robert O. Keohane (1985), 'Achieving Cooperation under Anarchy: Strategies and Institutions,' *World Politics* 38(1), pp. 226–254; Robert O. Keohane (1984), *After Hegemony: Cooperation and Discord in the World Political Economy*, Princeton: Princeton University Press; and Kenneth A. Oye (1985), 'Explaining Cooperation under Anarchy. Hypotheses and Strategies,' *World Politics* 38(1), pp. 1–24.

26 See, for example, Garrett Hardin (1968), 'The Tragedy of Commons,' *Science* 162, pp. 1243–1248 and Oran Young (2009), 'Governance for Sustainable Development in a Word of Rising Interdependencies,' in M. A. Delmas and O. R. Young (eds.), *Governance for the Environment. New Perspectives*, Cambridge: Cambridge University Press, pp. 12–40.

27 See Matthew, Halle and Switzer (2002), who analyse the environmental cooperation between conflicting communities in Pakistan, Indonesia, Rwanda and Nicaragua.

28 See Conca and Dabelko (2002).

29 See.for example, Alexander Carius (2007), 'Environmental Peacebuilding. Environmental Cooperation as an InstÂment of Crisis Prevention and Peacebuilding: Conditions for Success and Constraints,' a study commissioned by the German Federal Ministry for Economic Cooperation and Development (DMZ), Adelphi Consult GmbH, Berlin, Germany: West and Brockington.

30 Gleditsch (1998); Robert Inglehart (1997), *Modernization and Postmodernization. Cultural, Economic and Political Change in 42 Societies*, Princeton: Princeton University Press; Naho MiÂmachi and J. A. Allan (2007), 'Revisiting Transboundary Water Governance: Power, Conflict, Cooperation and the Political Economy,' paper presented at the International Conference of Adaptive and Integrated Water Management, 12-15 November, Basel, Switzerland; Wolf et al (2005).

31 Rodger A. Payne (1998), 'The Limits and Promise of Environmental Conflict Prevention: the Case of the GEF,' *Journal of Peace Research* 35(3), pp. 363–380 and Alain Lafontaine (2006), *Mid-term Assessment of the Partnership Developed through the Environment and Security Initiative*, Canada: CIDA.

32 Lafontaine (2006).

33 See Gleditsch (1998); Robert Jarrett (2003), 'The Environment: Collateral Victim and Tool of War,' *BioScience* 53(9), pp. 880–882.

34 Thor Hanson et al. (2008), 'Warfare in Biodiversity Hotspots,' *Conservation Biology* 23(3), pp. 578–587.

35 Ibid. See also Martin et al. (2011).

36 Richard Milburn (2012), 'Mainstreaming the Environment into Postwar Recovery: the Case for "Ecological Development,"' *International Affaires* 88(5), pp. 1083-1100.

37 UNEP (2013).

38 Hanson et al. (2008), p. 586.

39 UNEP (n.d.b.) 'Environment and Peacebuilding. United Nations Environ-

mental Programme,' available at: <http://www.unep.org/disastersandconflicts/Introduction/EnvironmentalCooperationforPeacebuilding/EnvironmentandPeacebuilding/tabid/54579/Default.aspx> (accessed 10 December 2014).

40 Volker Böge (2006), *Water Governance in Southern Africa – Cooperation and Conflict Prevention in Transboundary Basins*, Bonn: International Center for Conversion; Bromwich (2014); Conca and Dabelko (2002); Maria Carmen Lemos and AaÂn Agrawal (2009), 'Environmental Governance and Political Science,' in M. A. Delmas and O. R. Young (eds.), *Governance for the Environment. New Perspectives*, Cambridge: Cambridge University Press; Luzi (2007), pp. 69–97.

41 See, for example, Bernauer et al. (2012); Dorothy C. Zbicz (1999), 'Transboundary Cooperation between International adjoining Protected Areas.' in D. Harmon (ed.), *On the Frontiers of Conservation*, Hancock, Michigan: George Wright Society, pp. 199–204; Dorothy C. Zbicz and Mark Green (1997), 'Status of the World's Transfrontier Protected Areas,' *Transboundary Protected Areas as a Vehicle for International Cooperation*, proceedings of the Parks for Peace Conference, 16-18 September, Somerset West, South Africa.

42 Böge (2006); Luzi (2007).

43 Luzi (2007).

44 For more information, see the works listed above and, for example, Dennis Tänzler, Geoffrey. D. Dabelko and Alexander Carius (2004), *Environmental Cooperation and Conflict Prevention at the World Summit on Sustainable Development,* Berlin: Adelphi Research.

45 Young (2009), p.6.

46 Lemos and Agrawal (2009), p. 71.

47 Bromwich (2014), p. 12.

48 See, for example, Magali A. Delmas and Oran R. Young (eds.) (2009), *Governance for the Environment. New Perspectives*, Cambridge: Cambridge University Press.

49 Luzi (2007).

50 Grazia Borrini-Feyerabend et al. (2007), *Co-management of Natural Resources. Organising, Negotiating and Learning-by-Doing*, Heidelberg: Kasparek Verlag.

51 Böge (2006), p. 31.

52 Conca and Dabelko (2002); UNEP (n.d.b), 'Environment and Peacebuilding. United Nations Environmental Programme,' available at: <http://www.unep.org/disastersandconflicts/Introduction/EnvironmentalCooperationforPeacebuilding/EnvironmentandPeacebuilding/tabid/54579/Default.aspx> (accessed 10 December 2014).

53 Ken Conca (2002), 'The Case for Environmental Peacemaking,' in K. Conca and G. D. Dabelko(eds.), *Environmental Peacemaking*, Washington, DC: Woodrow Wilson International Center for Scholars, p. 9.

54 Böge (2006), p.9; for more information, see Benjamin Pohl et al, (2014), *The Rise of Hydro-diplomacy. Strengthening Foreign policy for Transboundary Waters*, Berlin: Adelphi, p. 14.

55 For more information, see 'What is GEF' (n.d.), available at: <https://www.

thegef.org/gef/whatisgef> (accessed 12 December 2014); Payne (1998).

56 See the examples provided by de Koning (2008) and Rustad, Lujala and Le Billon (2012).

57 See Gleick (1991, 1994); Wolf (1997).

58 Böge (2006); Luzi (2007); Aaron T. Wolf et al. (2005), *Managing Water Conflict and Cooperation. State of the World 2005: Redefining Global Security,* Washington, DC: Worldwatch Institute; Anika Kramer (2008), *Regional Water Cooperation and Peacebuilding in the Middle East*, BÂssels: Adelphi Research, Initiative for Peacebuilding.

59 UN Peacekeeping (n.d.), 'Conflict and Resources,' available at: <http://www.un.org/en/peacekeeping/issues/environment/resources.shtml> (accessed 12 December 2014); UNEP (2012), *Greening the Blue Helmets. Environment, Natural Resources and UN Peacekeeping Operations*. Nairobi: United Nation Environmental Programme.

60 UNEP (2013), *Governance for Peace over Natural Resources: A Review of Transition in Environmental Governance across Africa as a Resource for Peacebuilding and Environmental Management in Sudan*, Nairobi: United Nation Environmental Programme.

61 José Kalpers and Annette Lanjouw (1997), 'Potential for the Creation of a Peace Park in ViÂnga Volcano Region,' *PARKS* 7(3), pp. 25–35; Adrina Martin et al. (2011), 'Understanding the Co-existence of Conflict and Cooperation: Transboundary Ecosystem Management in the ViÂnga Massif,' *Journal of Peace Research* 48(5), pp. 621–635.

62 Westing (2001, 2010).

63 Ali (2005); Salim H. Ali (2004), 'The K-2-Siachen Peace Park. Moving from Concept to Reality,' paper presented at the International Environmental Security Conference, 11 May, the Hague, Netherlands.

64 Thomas C. Dillon and Eric D. Wikramanayake (1997), 'Parks, Peace and Progress: a FoÂm for Transboundary Conservation in Indochina,' *PARKS* 7 (3), pp. 36–51; John Hanks (1997), 'Protected Areas during and after Conflict: The Objectives and Activities of the Peace Parks Foundation,' *PARKS* 7(3), pp. 11–24; Kalpers and Lanjouw (1997); Zbicz and Green (1997).

65 John W. Mcmanus, Kwang-Tsao Shao, and Szu-Yin Lin (2010), 'Toward Establishing a Spratley Islands International Marine Peace Park: Ecological Importance and Supportive Collaboration Activities with an Emphasis on the Role of Taiwan,' *Ocean Development and International Law* 41, pp. 270–280.

66 World Bank (2011), *Conflict, Security and Development*. Washington, DC: World Bank, pp. 3 and 58.

67 See Ali (2007); Conca and Dabelko (2002); UNEP (2012). UNEP has also published technical reports in its 'Environment, Conflict and Peacebuilding Assessment' series dealing with particular countries and territories: see UNEP (2003), *Desk Study on the Environment in the Occupied Palestinian Territories*, Nairobi: United Nations Environmental Programme; UNEP (2010), *Sierra Leone. Environment, Conflict and Peacebuilding Assessment. Technical Report*, Geneva: United Nation Environmental Programme. For more examples, see Matthew, Halle and Switzer (2002).

68 Mark Halle (1998), 'Environment and Security – A Role for IUCN,' *Policy Matters, Newsletter of the IUCN Commission on Environmental, Economic and Social Policy* 3(1), pp. 5–7; OECD (2000).

69 OSCE (2012); ENVSEC (n.d.) ; UNEP (2013); UNEP (2009), *From Conflict to Peacebuilding – the Role of Natural Resources and the Environment*, Nairobi: United Nation Environmental Programme.

70 Global Transboundary Conservation Network (n.d.), 'About,' available at: <http://www.tbpa.net/page.php?ndx=13> (accessed 15 December 2014).

71 UNEP (2009), p. 6.

72 UNEP (n.d. a), 'Expert Advisory Group on Conflict and Peacebuilding,' available at: <http://www.unep.org/disastersandconflicts/Introduction/EnvironmentalCooperationforPeacebuilding/OtherECPActivities/ExpertAdvisoryGrouponConflictPeacebuilding/tabid/54649/Default.aspx> (accessed 14 December 2014).

73 See, for example, Paige West and Dan Brockington (2006), 'An Anthropological Perspective on Some Unexpected Consequences of Protected Areas,' *Conservation Biology* 20(3), pp. 609–616.