



# Cultivating *peace*

Conflict and Collaboration in Natural  
Resource Management

edited by Daniel Buckles

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Conflict and Collaboration  
in Natural Resource Management

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INTERNATIONAL DEVELOPMENT RESEARCH CENTRE  
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## Introduction

# **CONFLICT AND COLLABORATION IN NATURAL RESOURCE MANAGEMENT**

**Daniel Buckles and Gerett Rusnak**

Why does conflict occur over the use of natural resources? How are external factors built into local conflicts? What governing mechanisms are conducive to equitable and sustainable natural resource management by communities? When do local strategies for conflict management need to be complemented or replaced by external or new mechanisms? How can research help identify opportunities for turning conflict into collaboration? Why is collaboration in natural resource management so difficult?

This book grapples with those questions. Case studies analyze specific natural resource conflicts in 10 countries and the interventions of people close to the conflicts (in some cases, the authors themselves). Four concept papers draw the case stories together around particular themes: culture, society, peace, and policy. The concept papers illustrate their main points with examples from the case studies, grounding concepts in concrete experience and raising broader questions for further study. Chevalier and Buckles (this volume) present differences in cultural perspectives on community-based natural resource management (CBNRM). Through the use of a conversational style, the authors attempt to bring the reader closer to oral forms of community-based politics, learning, and teaching. Ramírez (this volume) examines the theory and practice of stakeholder analysis and develops a series of propositions that shed light on how it can be used to identify opportunities for turning conflict into collaboration. Bush and Opp (this volume) challenge development practitioners, including the case-study authors, to answer fundamental questions regarding the causes of conflict before launching an intervention. They argue that answers to these questions would not only inform the intervention, but also allow parties to assess the “peace and conflict impacts” of attempts to introduce more collaborative modes of natural



resource management. Tyler (this volume) examines policy disincentives for CBNRM and outlines the policy changes needed to support local forms of governance over natural resources.

The cross-fertilization of case experience with conceptual insight creates a unique dialogue on lessons learned and strategic gaps in our understanding of the conditions that need to be met to move from conflict to collaboration. It shows that conflict management is a critical but constructive way of looking at natural resource problems, involving two basic steps: conflict analysis and planned multiparty intervention. Conflict analysis involves the study, conducted by those directly involved and those seeking to assist in this endeavour, of the various dimensions, levels, and consequences of conflict, with a view to understanding the causes. Multiparty interventions, when based on study of the conflict, involve the use of a variety of techniques, such as mediation and negotiation, leading to changes in the management of natural resources. Our hope is that the critical assessment of conflict management experience presented in this volume will inform the practice of all of us concerned with communities' equitable and sustainable natural resource management.

## **Conflict and natural resource management**

Conflict over natural resources such as land, water, and forests is ubiquitous (Anderson et al. 1996; Ayling and Kelly 1997; Ortiz 1999). People everywhere have competed for the natural resources they need or want to ensure or enhance their livelihoods. However, the dimensions, level, and intensity of conflict vary greatly. Conflicts over natural resources may have class dimensions, pitting those who own the resource against those who own nothing but whose work makes the resource productive (Chenier et al., this volume). Political dimensions may dominate where the state has a keen interest in a public good such as conservation (Fisher et al., this volume) or in maintaining the political alliances it needs to remain in power (Suliman, this volume). Differences in gender, age, and ethnicity may inform the use of natural resources, bringing to the fore cultural and social dimensions of conflict (Hirsch et al., this volume). Even the identification of natural resource problems may be contested in light of different information sources, world views, and values (Pérez Arrarte and Scarlato, this volume). Although each case study presented in this book does not explore all of these dimensions equally, the dialogue between them is multifaceted.

Conflicts over natural resources can take place at a variety of levels, from within the household to local, regional, societal, and global scales. Furthermore, conflict may cut across these levels through multiple points of contact. Conflicts occurring mainly in local contexts may extend to national and global levels because of their special legal relevance (Talaue-McManus et al., this volume; Weitzner and Fonseca Borrás, this volume) or as a result of efforts by local actors to influence broader decision-making processes (Chenier et al., this volume; Oveido, this volume). All the cases presented in this volume pertain to conflicts that involve fairly localized, site-specific interactions among stakeholders. Most, however, stretch beyond local interactions to engage actors and processes at other levels as well.

The intensity of conflict may also vary enormously — from confusion and frustration among members of a community over poorly communicated development policies (Kant and Cooke, this volume) to violent clashes between groups over resource ownership rights and responsibilities (Chenier et al., this volume; Suliman, this volume). With

reduced government power in many regions, natural resource management decisions are increasingly influenced by the resource users, who include small-scale farmers and indigenous peoples as well as ranchers, large-scale landowners, and private corporations in industries such as forestry, mining, hydropower, and agribusiness. Resources may be used by some in ways that undermine the livelihoods of others. Power differences between groups can be enormous and the stakes a matter of survival. The resulting conflicts often lead to chaotic and wasteful deployment of human capacities and the depletion of the very natural resources on which livelihoods, economies, and societies are based. They may also lead to bloodshed. Several of the cases presented here address the extremely difficult question of the limits of collaborative approaches to natural resource management and the role of violence in redressing entrenched economic and political interests.

## Why does conflict occur?

The use of natural resources is susceptible to conflict for a number of reasons. First, natural resources are embedded in an environment or interconnected space where actions by one individual or group may generate effects far off-site. For example, the use of water for irrigation in the upper reaches of the Calico River, Nicaragua, pitted upstream landowners and communities against downstream communities in need of water for domestic use and consumption (Vernooy and Ashby, this volume). Linked biophysical or ecological processes in a specific environment disperse cumulative, long-range impacts such as erosion, pollution, or loss of plant and animal habitats. The nature of the problem may not be apparent because ecological relationships are often poorly understood.

Implicit conflicts are those in which communities are affected by a process of environmental degradation they do not recognize [or] although they might be aware of the degradation, they are unable to associate it with the activity of specific social agents. The environmental conflict is thus made explicit when communities establish an immediate logical connection between environmental degradation and the activities of certain social agents.

(Ascerlad 1992, p. 35)

Research and communication can help establish this connection and may, consequently, become proximate causes of conflict, as well as catalysts for social learning about how to manage the resources and conflicts. Scientists showed that the proliferation of fish pens and fish cages for aquaculture in the Caquiputan Channel of Bolinao, Philippines, reduced water flow and the amount of dissolved oxygen in the water to levels that were lethal to fish (Talaue-McManus et al., this volume). Navigation was also impaired. This information helped to diffuse the growing conflict among resource users and provided guidance for the development of a plan for optimal resource use.

Second, natural resources are also embedded in a shared social space where complex and unequal relations are established among a wide range of social actors — agro-export producers, small-scale farmers, ethnic minorities, government agencies, etc. As in other fields with political dimensions, those actors with the greatest access to power are also best able to control and influence natural resource decisions in their favour (Peet and Watts 1996). For example, absentee Jellaba landlords (merchants, government officials, and retired generals) in northern Sudan made use of their direct connections to the State Agricultural Bank to channel international credit for mechanized farming into their operations in the Nuba Mountains in southern Kordofan (Suliman, this volume). The ruling

government also helped divert attention and consolidate the Jellaba hold on the best lands in the area by inflaming historical tensions between Arab Baggara and the Nuba people.

Third, natural resources are subject to increasing scarcity due to rapid environmental change, increasing demand, and their unequal distribution (Homer-Dixon and Blitt 1998). Environmental change may involve land and water degradation, overexploitation of wildlife and aquatic resources, extensive land clearing or drainage, or climate change. Increasing demands have multiple social and economic dimensions, including population growth, changing consumption patterns, trade liberalization, rural enterprise development, and changes in technology and land use. Natural resource scarcity may also result from the unequal distribution of resources among individuals and social groups or ambiguities in the definition of rights to common property resources. As noted by Homer-Dixon and Blitt (1998, p. 8), the effects of environmental scarcity such as “constrained agricultural output, constrained economic production, migration, social segmentation, and disrupted institutions ... can, either singly or in combination, produce or exacerbate conflict among groups.”

Intercommunity and interethnic conflict in the Nam Ngum watershed in the Lao People's Democratic Republic has resulted from diverse pressures causing greater natural resource scarcity (Hirsch et al., this volume). In some parts of the watershed, forced migration into areas already settled by other ethnic groups increased pressures on the forested land used in shifting cultivation systems. In other areas, the disruption of government institutions by reforms of the traditional economy led to redrawing of administrative boundaries of some villages and the creation of a “no man's land” where tenure rights are vaguely defined. Hydropower development greatly reduced the resource base of villages affected by flooding, leading to deforestation of areas critical to the conservation of upstream water resources.

Fourth, natural resources are used by people in ways that are defined symbolically. Land, forests, and waterways are not just material resources people compete over, but are also part of a particular way of life (farmer, rancher, fisher, logger), an ethnic identity, and a set of gender and age roles. These symbolic dimensions of natural resources lend themselves to ideologic, social, and political struggles that have enormous practical significance for the management of natural resources and the process of conflict management (Chevalier and Buckles 1995). Ideologic, social, and political practices are contested in most settings, making it difficult to bring to bear on natural resource problems the diverse knowledge and perspectives of resource users. The viewpoint of local Chortis in Copán, Honduras, was suppressed by landowning elites anxious to deny their indigenous heritage (Chenier et al., this volume). Local perspectives were also initially ignored by Chortis political representatives preoccupied with the national struggle for legitimacy.

Because of these dimensions of natural resource management, specific natural resource conflicts usually have multiple causes — some proximate, others underlying or contributing. A pluralistic approach that recognizes the multiple perspectives of stakeholders and the simultaneous effects of diverse causes in natural resource conflicts is needed to understand the initial situation and identify strategies for promoting change.

## **From conflict to collaboration**

Conflicts over natural resources have many negative impacts. However, people who study conflict also recognize its value as a catalyst for positive social change. Conflict is an intense experience in communication and interaction with transformative potential. For

marginal groups seeking to redress injustices or extreme inequities in resource distribution, conflict is an inherent feature of their struggle for change. Although confrontation can lead to violence, avoiding and shunning conflict can be equally dangerous, as unresolved problems may flare up with renewed vigour. Misunderstandings or confusion regarding rights to natural resources and management responsibilities can escalate into more intense conflicts as the number of people involved and the problems multiply. As Lederach (1992) noted, problems become entanglements that turn into fights.

Conflicts are only fully resolved when the underlying sources of tension between parties are removed, a state of affairs that may be antithetical to social life (Chevalier and Buckles, this volume). For those who view conflict as a normal and potentially positive feature of human societies, conflict should not be altogether eliminated through “resolution” but rather “managed” so that it does not lead to violence but can achieve change. Brown (1983, p. 9, quoted in Driscoll 1994, p. 8) goes so far as to suggest that “conflict management can require intervention to reduce conflict if there is too much, or intervention to promote conflict if there is too little.”

The field of conflict management draws many of its principles from North American experiences with alternative dispute resolution (ADR). In contrast to litigation and other confrontational modes of conflict resolution, ADR refers to a variety of collaborative approaches including conciliation, negotiation, and mediation (Pendzich et al. 1994; Moore 1996). Conciliation consists of an attempt by a neutral third party to communicate separately with disputing parties to reduce tensions and reach agreement on a process for addressing a dispute. Negotiation is a voluntary process in which parties meet “face to face” to reach a mutually acceptable resolution of the issues in a conflict. Mediation involves the assistance of a neutral third party, a mediator, who helps the parties in conflict jointly reach agreement in a negotiation process but has no power to direct the parties or enforce a solution to the dispute. Through ADR, multiparty “win-win” options are sought by focusing on the problem (not the person) and by creating awareness of interdependence among stakeholders.

Although these approaches to conflict management are appealing, do the principles really work in conflicts involving natural resources? Techniques of ADR depend on both cultural and legal conditions, such as a willingness to publicly acknowledge a conflict, and administrative and financial support for negotiated solutions (Bingham 1986; Shaftoe 1993; Pendzich et al. 1994). They also depend on the voluntary participation of all relevant stakeholders. These conditions are not present in many contexts in both the North and the South. Enlightened self-interest among stakeholders may not be apparent or sufficiently urgent in situations involving the interests of national elites or others with coercive measures at their disposal. ADR may even be counterproductive if the process only manages to get certain groups together to mediate their differences when the causes of conflict and obstacles to resolution are beyond their control. Meanwhile, conflict management training based on ADR principles is promoted around the world, giving rise to a new class of development consultant — the mediator. ADR emphasis on the role of mediators in resolving problems can lead to dependence on “experts” and the neglect of processes that lead to enhanced local capacity to manage recurring conflicts. Given this trend, there is an urgent need to critically assess the approaches with a view to determining the conditions under which they lead to more stable, transparent, and inclusive decisions.

It is also critical to recognize that although negotiation, mediation, and conciliation are being promoted as “alternatives” in Western societies, they are not completely new. Castro and Ettenger (1996, p. 1) argue that “all legal orders,” whether based on customary

or state institutions, “rely, to varying extents, on the same basic procedural modes to handle disputes ... avoidance, coercion, negotiation, mediation, arbitration, and adjudication.” In addition, people in diverse societies use other “mechanisms to handle disputes at a local level, including peer pressure, gossip, ostracism, violence, public humiliation, witchcraft, and spiritual healing” (Castro and Ettenger 1996, p. 7).

These local mechanisms of conflict management are not always equitable and effective, especially in conflicts involving multiple dimensions and increasing intensity. Some may hinder equitable and sustainable development and can be legitimately challenged. Nevertheless, Western traditions of conflict management need to be balanced with the systematic study of local practices, insights, and resources used to manage conflict (Chevalier and Buckles, this volume). Cultural, symbolic, and psychological factors that emerge from this analysis can be used to strengthen the integrity of local strategies and redress inequities in local forms of conflict management. Moreover, attention to local strategies is important because the diversity they embody is needed to keep methodological debates open to alternative voices and experiences. In an homogenizing world, diverse local insights and methods are critical sources of innovation.

Multistakeholder analysis of problem areas and conflicts is a key step in catalyzing recognition of the need for change. The cases presented in this volume show that natural resource management decisions are made through complex interactions between actors and the natural resource base at various levels, from the farm and watershed to national institutions and beyond. Problems and conflicts that arise as a result of these decisions are never entirely caused by one individual or group. Understanding and real solutions usually cannot emerge if all stakeholders do not see their own role in creating and perpetuating the conflict.

Multistakeholder analysis is a general analytical framework for examining the differences in interests and power relations among stakeholders, with a view to identifying who is affected by and who can influence current patterns of natural resource management (Ramírez, this volume). Problem analysis from the points of view of all stakeholders can help separate the multiple causes of conflict and bring a wealth of knowledge to bear on the identification and development of solutions. Particular attention is paid to gender-based and class-based differences in problem identification and priority setting because in many societies these differences are systematically suppressed or ignored.

Various research methods can be adapted as part of this analytical approach, including participatory rural appraisal, participatory action research, gender analysis, and the analysis of differences in class interests and power relations. As Ramírez (this volume) points out, stakeholder analysis can be undertaken by external researchers, or it may be used by the stakeholders themselves as a participatory process in support of conflict management. When stakeholders come to recognize for themselves the common interests and strategic differences that connect them to each other, new opportunities can emerge for turning conflict into collaboration.

## **The limits to collaboration**

Perhaps the most intractable yet critical challenge in the pursuit of collaboration in natural resource management is to engage the most powerful stakeholders in analysis of the causes and alternatives to conflict. Although in many settings marginalized groups must be empowered to undertake problem analysis and formulate strategies for negotiation, change

will only come about if the powerful are moved to act on the causes of marginalization, inequity, and mismanagement. The conditions, and related pressures, needed to accomplish this movement are not well understood and rarely studied. In short, how do you get the lion to sit at the table with the lamb (Thomas et al. 1996)?

Research by Scott (1987, 1990) suggests that sources of power are nearly always available to marginal stakeholders, if only as an undercurrent or "hidden transcript." In response to a very articulate proposition, dead silence can, at times, make an equally forceful point. The challenge is to enhance the capacity of marginal groups to use their power effectively to engage the overtly powerful in meaningful negotiation. It is this challenge that tests the limits of collaborative approaches to natural resource management and shows why real collaboration is so difficult.

Several of the case studies in this volume note that a show of strength through confrontation may be needed to get the attention of key stakeholders who can redress power imbalances. In the Galapagos Islands, Ecuador (Oveido, this volume), and in Cahuita, Costa Rica (Weitzner and Fonseca Borrás, this volume), the threat of violence by local stakeholders drew in remote government and international stakeholders with the power to change the distribution of natural resource rights and responsibilities.

Violent confrontation may prove to be unproductive, however, and "is prone to generating consequences that are unanticipated, unintended, and uncontrollable" (Bush and Opp, this volume, p. 189). It usually leads to suffering when used against an opponent that uses similarly blunt tools. In a case involving bloody armed conflict in the Sudan (Suliman, this volume) change is coming about very gradually as people's perceptions of the causes and effects of conflict over natural resources change. The fragile peace that is emerging between the Nuba and the Arab Baggara is sustained by recognition that both sides are losing everything important to them (people, cattle, trade). Attention is shifting to external political and economic causes of their violent confrontations.

Contrary to the confrontational scenario, local alliances with advocacy groups, international bodies, and academics offer some scope for dealing with power imbalances more imaginatively and more productively. Widespread screening of two films on threats to an environmentally sensitive wetland in Uruguay posed by the practices of commercial rice growers was critical in swaying public opinion (Pérez Arrarte and Scarlato, this volume). The momentum created by this campaign was then used by research nongovernmental organizations (NGOs) and local governments to change patterns of public and private investment in development and conservation.

The opinions of academics can also influence key stakeholders, such as legislators and senior government officials, when based on solid experience, detailed information, and lucid analysis (Williamson 1999). In the Nusa Tenggara of eastern Indonesia, an informal network of individuals from NGOs, research institutions, government agencies, and local communities is facilitating an ongoing regional process of community consultation, research, mediation, and negotiation that engages multiple stakeholders in the management of conflicts over forest resources (Fisher et al., this volume). Through this process, the unintended impacts of national policies at the community level were brought to the attention of senior government officials, opening the way to government recognition of the need for flexible policies and the value of bringing previously excluded groups into the decision-making process. Research played a catalytic role by helping to make implicit conflicts explicit and by providing credible and detailed information needed to understand the dimensions and various levels of the conflicts and opportunities for change.

Alliances with broader social movements that articulate demands for democratization and environmental accountability can also enhance the voices of the marginal in ways that engage people in dialogue and generate popular discussion. Coalition-building between local groups and progressive social movements is critical to redefining the terms of debate over access to and use of natural resources and to creating or enhancing spaces and mechanisms for negotiating the diverse interests that separate farmers from ranchers, loggers from indigenous peoples, men from women, local officials from national policymakers, and primary producers from financiers. To sustain and inform popular discussion, more research attention needs to be paid to how external factors (structural adjustment, trade agreements, domestic policies, etc.) are built into local conflicts. Drawing out the historical and structural relationships between communities and the broader processes affecting society opens up the possibility of identifying fundamental problems and formulating alternative social discourse.

Constructing an environment in which conflicts over natural resources can be dealt with productively will also require new structures and processes for governing natural resources management decisions (Agarwal 1997; Kothari et al. 1998). Given the multiple dimensions of natural resource management, negotiating for change can be wasted effort if policy, administrative, and financial factors at higher levels block or contradict the decisions made locally (Tyler, this volume). Changes to national policies and legal frameworks are needed to accommodate the development of relations between formal and informal institutions at various levels. As noted by Ashby (Eberlee 1999, p. 4), "The critical problem is not so much capacity at the micro level, but the incapacity of governments to provide effective public sector counterparts to community-based organizations."

Experiences from Indonesia (Fisher et al., this volume), India (Kant and Cooke, this volume), the Philippines (Talaue-McManus et al., this volume), and Costa Rica (Weitzner and Fonseca Borrás, this volume) suggest that governing structures and processes that bring previously excluded groups into decision-making offer new opportunities for improving natural resource management decisions and finding better ways to avoid, resolve, or manage conflict. The joint forest management (JFM) policy in India calls for the involvement of a wide range of stakeholders, including women, in resource management decisions. In some settings, the policy has resulted in new local mechanisms for reaching agreement on procedures, power sharing, and dispute resolution (Kant and Cooke, this volume). The policy is incomplete and inflexible, however, often leading to contradictions between formal and informal decision-making processes. For example, in some villages the regulation banning the sale of fuelwood under JFM undermines the livelihood strategy of poor caste groups who depend on this resource. Although the decision-making process of village leaders could accommodate these needs based on customary law and locally accepted behaviour, the local JFM committees lack the power to adapt the norms of the policy to local circumstances.

In Cahuita, Costa Rica, a local committee set up to handle a specific dispute over services to visitors to Cahuita National Park evolved over a few years into a management committee involving local people and government officials concerned with the management of the natural resources of the park (Weitzner and Fonseca Borrás, this volume). An executive decree outlining the mandate of the committee helped create an environment conducive to local participation in natural resource management decisions. Although the decree fell short of full devolution of administrative authority to the committee, local actors effectively exploited the legitimacy it provided. Conflict was resolved effectively, and resource management decisions were made to the satisfaction of government officials.

These successes are opening the way to the development of a comanagement regime with profound implications for the way parks are managed in Costa Rica. The experience suggests that although consensus is not always possible, governance that is more inclusive, transparent, and efficient can help groups in conflict accommodate some differences, find some common ground, and improve key decisions affecting their livelihoods.

Although the development of transparent and participatory structures for governing natural resources is an essential step, several other challenges arise. New and multiple roles for local and external stakeholders will need to be negotiated and implemented. As the familiar workings of existing institutional arrangements are replaced and the status of stakeholders is transformed, the development of social relations of trust will become even more critical (Seligman 1997). Farming women and men will need to be sincerely recognized and listened to as site experts. Local governments and organizations will need to develop new communication and training systems to enhance community capacity to generate information and knowledge relevant to stakeholders. Government officials will need to act as facilitators and implementors of decisions emerging from local systems of governance rather than as decision-makers per se (Tyler, this volume). The extent of “readiness to learn” and — because challenging and learning new roles is a risky undertaking — the “margin for learning” (Bernard and Armstrong 1997) will be critical factors affecting who participates in collaborative natural resource management and how. Our hope is that this volume points to relevant new research needed to support this process and enhance the capacity of communities to manage and transform the conflicts that affect their lives.

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