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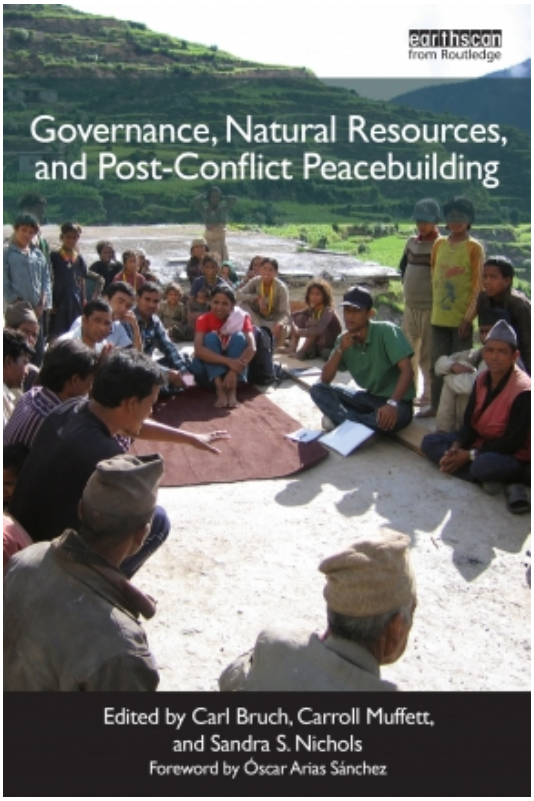

Mainstreaming Natural Resources into Post-Conflict Humanitarian and Development Action

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Mainstreaming natural resources into post-conflict humanitarian and development action

Judy Oglethorpe, Anita van Breda, Leah Kintner, Shubash Lohani, and Owen Williams

In many countries—and particularly developing countries—millions of rural people depend on natural resources for their well-being. Such resources include fuelwood, building materials, food sources, and medicines, with the poorest and most vulnerable people often most dependent.[1] In addition, ecosystem services such as clean water supplies are essential for human well-being and development. After a conflict ends, however, governments, humanitarian agencies, and development organizations have often failed to consider the long-term importance of ecosystem services and natural resources in the rush to rebuild (Jensen and Lonergan 2012a).

This chapter argues that integrating sound natural resource management (NRM) in post-conflict settings can play an important role in supporting the future well-being of the human population, and in turn builds a stronger peace process. The analysis and recommendations draw on the collective experience of the authors in the fields of armed conflict, humanitarian assistance, and natural resource management,[2] as well as on the literature. The chapter is structured around a set of six good practice principles that should be applied in order to integrate sound NRM. The principles cover (1) promoting sound governance, institution building, and capacity strengthening for sustainable NRM; (2) restoring livelihoods based on sound NRM; (3) planning within the capacity of the land and other natural resources; (4) maximizing opportunities for sound policy reform; (5) collaborating across sectors; and (6) funding.

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[1] On the importance of natural resources to livelihoods, food security, and well-being, see Lujala and Rustad (2012); Unruh and Williams (2013a); Troell and Weinthal (2014); and Young and Goldman (2015).

[2] On the importance of natural resources to disaster response, see WWF and American Red Cross (2010).

Each principle is outlined, along with actions that humanitarian assistance and development organizations can take in post-conflict assistance programs to integrate sound NRM practices and promote sustainable development in order to strengthen peacebuilding. The chapter draws on examples of practical post-conflict green recovery and reconstruction approaches from around the world including Mozambique, the Congo basin, Indonesia, Namibia, and Nepal; it also considers lessons from recovery responses to natural disasters. The chapter describes associated challenges in post-conflict settings, and the risks of neglecting them, before closing with a brief concluding section.

Governments, the international community, and nongovernmental organizations (NGOs) have different and sometimes overlapping or duplicative roles in post-conflict situations. Moreover, these roles are not always the same across different post-conflict settings due to widely differing circumstances; nor are they static over time in a single country during the transition from conflict to peace. In peacetime, governments are responsible for protecting, securing, and regulating the lives and actions of citizens while managing relations with other nations. In post-conflict settings, however, governments are often weak and may not be able to perform their normal functions. The international community and select NGOs may step in to assist with peacekeeping and post-conflict rebuilding efforts. NGOs tend to have greater flexibility than national governments, enabling them to mobilize quickly and adapt rapidly to changing post-conflict circumstances. International humanitarian assistance and development organizations may stay in-country for only a limited time, whereas national NGOs tend to maintain a long-term presence and commitment.

Many of the principles promoted in this chapter apply broadly to all humanitarian and development actors, although they may act on them in different ways. The case studies illustrate some specific roles and responsibilities of governments, NGOs, and the international community, as well as the need for collaboration and integration in the post-conflict period.

Climate change is significantly affecting and will continue to affect natural resources and other ecosystem services upon which people, communities, and countries depend—including water supplies, suitability of land for various purposes, and certain species whose distribution and abundance are likely to be affected by a changing climate. While conditions for human settlement and production systems may improve in some areas, they will worsen in others; and in many countries, the poor are the most vulnerable. Future natural resource–related conflicts (for example over water) are likely to be exacerbated by increasing climate variability and climate change. While it is beyond the scope of this chapter to provide detailed information on the implications of climate change,[3] we have included climate change aspects in some of the recommendations.

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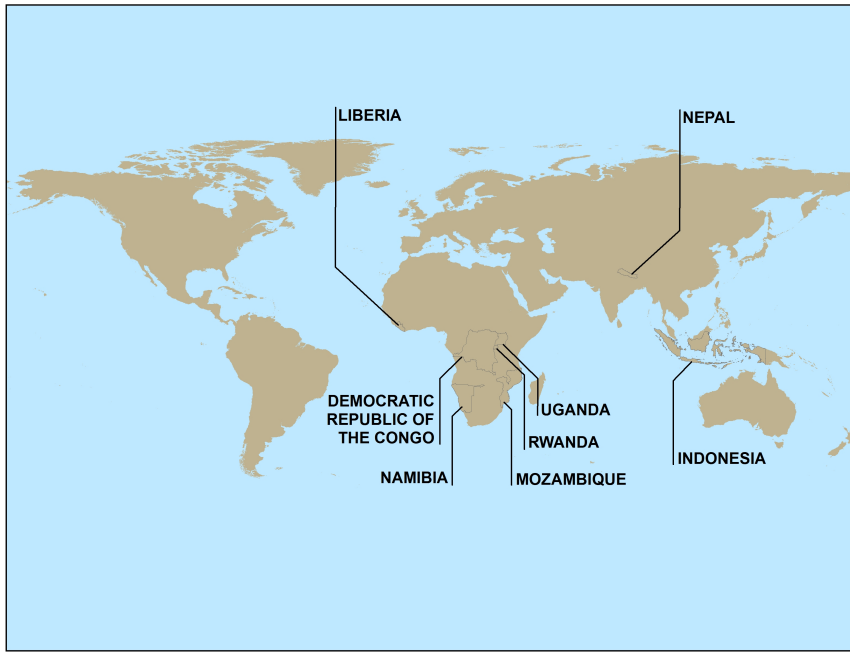
[3] For more information on climate change and post-conflict peacebuilding, see Matthew and Hammill (2012).



PRINCIPLES OF INCORPORATING NATURAL RESOURCE AND ENVIRONMENTAL MANAGEMENT IN POST-CONFLICT RECOVERY AND RECONSTRUCTION

The mainstreaming of sound NRM in post-conflict recovery and reconstruction efforts is critical to achieving long-term well-being and security. Natural resources and ecosystem services are essential components of human well-being and development, and many recent conflicts have been fueled by competition for natural resources (UNEP 2009). In the fragile post-conflict stage it is essential to improve the equitable sharing of these services and resources, such as timber, land, and water. The United Nations Environment Programme (UNEP) has outlined ways that natural resources should be included in peace mediation processes and subsequently harnessed in sustainable ways for economic development and peace-promoting strategies, hand in hand with ensuring accountability and transparency through an integrated approach that does not treat the environment and natural resources in isolation (UNEP 2009).

In this section we examine six principles for mainstreaming NRM that we have found crucial in post-conflict work in several developing countries, focusing on the role of natural resources in economic recovery and in promoting sustainable and secure livelihoods. For each principle, we describe practical actions that humanitarian assistance and development organizations can take to

mainstream the environment in recovery and reconstruction through a cross-cutting, multi-disciplinary approach, and discuss some of the major challenges that occur in many post-conflict situations.

Principle 1: Promote sound governance, institution building, and capacity strengthening for sustainable natural resource management

Systems governing land and other natural resources are often weakened by conflict, and may previously have been skewed in favor of elites (Unruh and Williams 2013b). Institutions responsible for natural resource management at various levels from local to national also are often weak at this time, especially if the conflict has been prolonged.

To promote sound NRM, it is critical to promote accountable, transparent systems that are inclusive, particularly with respect to local community needs. While this can be challenging to achieve in post-conflict situations, an emphasis on building capacity and self-reliance of local and national institutions ultimately makes long-term recovery and peacebuilding more sustainable. Participatory processes should be used to identify land and other natural resources that are needed for communities (Jensen and Lonergan 2012b). Mechanisms should be put in place to ensure legitimacy through dimensions of social equity and community participation. All humanitarian assistance and development organizations can work toward this by integrating considerations of natural resource management into their work on strengthening governance and institution building. NGOs may be able to provide greater flexibility than governments in response to changing needs, and may be able to access funding more quickly. They may also be able to advocate for greater accountability in government, though conditions for advocacy vary tremendously after conflict.

It is critical to maintain and strengthen human capacity during post-conflict recovery and reconstruction. Whenever possible, consideration should be paid to capacity building prior to the end of a conflict. Often it is too late to build capacity effectively once peace comes, particularly the capacity needed for the earliest stages of transition. This is especially true of capacity to manage timber, minerals, and other valuable natural resources; it is also true for land where large numbers of displaced persons seek to return. There are various ways to maintain and build capacity during conflict, including investing in the capacity of communities to manage their own natural resources, and training technical staff of government and NGOs. If prolonged conflict paralyzes programmatic work for technical staff, they can be occupied in gaining further skills in preparation for peacetime.

After conflict, three specific governance challenges often have a direct bearing on natural resources: control of resources during power transitions, the reintegration of large numbers of excombatants, and the proliferation of firearms.

Governance of natural resources during power transitions

Some of the worst conflict-related natural resource damage can occur during times of power transition, including the early post-conflict transition to peace.[4] At this time there is often a shift in governance structures. Governments may be weak, with little to no law enforcement presence in remote resource areas or along transport routes, and no strong, scientifically based permit allocation systems to limit or even monitor resource extraction. Rural communities that normally exert local control in peacetime may be absent from natural resource extraction areas, having been displaced during conflict. Where they are present, local populations may be preoccupied with restarting their lives, and community natural resource governance institutions are often severely weakened (Shambaugh, Oglethorpe, and Ham 2001). Experiences in Mozambique and Nepal offer contrasting examples.

In central Mozambique between 1977 and 1992, Sofala Province was severely affected by civil war, and rural populations fled to urban centers, the coast, the Beira corridor, or neighboring Zimbabwe (Hatton, Couto, and Oglethorpe 2001). Government presence was largely limited to the urban centers, with rural areas largely under the control of rebel forces. As peace came, the armed forces withdrew and new areas became accessible again. Transport routes were gradually reestablished as roads were demined and bridges repaired. As the area opened up, small-scale, opportunistic illegal loggers and hunters followed demining teams out from urban centers, leading to hunting and logging further afield as access improved. Before the war, these activities would have been controlled largely by a combination of government and community systems. However, the wildlife and forestry services were severely disrupted and lost much of their capacity during the war. Communities were still returning home, traditional local systems of resource and land regulation had not been reestablished, and traditional leaders were often powerless to resist or regulate armed hunters and loggers in their areas. Many areas were logged out of commercial timber, and residual wildlife populations that had survived the conflict were largely hunted out. The natural resource base that could have supported communities and national reconstruction was destroyed in a few short years. In this case, the lack of understanding of the risks, the inability of natural resource institutions to mobilize, and failure to integrate NRM into recovery plans, resulted in resource capture for short-term gain by elites at the expense of local and national reconstruction.

In contrast, local people in the Chitwan area of Nepal were able to mobilize community institutions and pressure government when peace returned to reduce poaching of resources on which their livelihoods depended (Acharya 2006). Nepal struggled with armed insurgency between 1996 and 2006, during which time illegal hunting of wildlife increased dramatically. The poaching peaked in

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[4] See, for example, Christian Webersik and Marc Levy, "Reducing the risk of conflict recurrence: The relevance of natural resource management," in this book.

2002, when the insurgency was at its most violent. Chitwan National Park alone lost about thirty-seven Greater One-horned Rhinos in one year. The rhino poaching continued after the peace accord in November 2006. At that point, the government's priority was on maintaining peace and holding an election—not on conservation. With dwindling rhino numbers, the ailing tourism industry around the park did not rebound, and thousands of local people were out of business. Communities in the buffer zone of Chitwan National Park, which had been receiving fifty percent of park revenues, soon realized that their livelihoods were also at risk. Understanding that their future livelihoods depended on a healthy rhino population in the park and surrounding area, the people organized themselves to protect the rhinos, patrolling local forests and pushing the central government for immediate action to control poaching. Taking a collaborative approach, the Nepalese government, conservationists, and the local population are promoting NRM that improves both the lives of people and the future of rhinos that share the land.

In some cases institutions may have to be built from scratch (for example, the communal conservancy committees in Namibia and the watershed forum in Indonesia, discussed below). In other cases it may be possible to work with existing community systems governing land and other natural resources—depending on how effective and equitable they were before the conflict, how intact they are once the conflict ends, and the degree of political change that may determine their continued viability or indeed impose new systems. For example, in Nepal, the strong movement of community forest user groups (CFUGs) was established before the Maoist insurgency, supported by national policy that promotes community management and restoration of forests for the benefit of local people as well as for conservation. This movement continued to operate in many parts of the country during the Maoist insurgency, albeit with difficulty at times. CFUGs were often the only vehicle for service delivery during the Maoist insurgency in many areas when government had to withdraw, and several expanded their range of activities. Even after the restoration of peace, the government was unable to immediately provide many basic services to remote areas in the country and local natural resource management institutions continued to provide a range of services to many remote communities, until government could again take them over. With the coming of peacetime these institutions have continued to provide a sound base for community forest management, local benefit sharing, and poverty reduction.[5]

These experiences illustrate the fact that strengthening existing systems is often easier and much quicker than establishing new community institutions and systems—as long as they are equitable. It also reduces the risk of creating parallel structures which may become a source of conflict.

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[5] For a detailed discussion of CFUGs and post-conflict peacebuilding in Nepal, see Sanio and Chapagain (2012).

Reintegrating demobilized soldiers

As noted, peripheral parties may take advantage of power vacuums during transitions to exploit natural resources. One particular challenge relates to demobilized soldiers. Many countries have struggled to demobilize, disarm, and reintegrate thousands (and sometimes hundreds of thousands) of seasoned fighters, especially when there are employment opportunities for men who may have been fighting for many years, but lack the skills and knowledge for nonmartial livelihoods. If demobilized soldiers cannot find employment, they may turn to mining, charcoal making, hunting, or other exploitation of natural resources—licit, illicit, or illegal—to make a living. When this happens, excombatants often have no knowledge or interest in sustainably using natural resources. This dynamic can deplete the natural resource base that supported local communities for generations, affecting local livelihoods, disrupting local natural resource governance systems, and resulting in conflict with local people which may lead to further civil unrest.

In southern Mozambique, demobilized soldiers made charcoal along transport routes, and local communities who had previously managed these forest resources were not able to prevent it. This caused severe destruction in the Liquati Forest, in Maputo Province, an area that local communities had conserved for generations through traditional management systems, including protection of a sacred area (Hatton, Couto, and Oglethorpe 2001). Conflicts built up between former soldiers and the local communities. As community members saw their forest being destroyed, they too started to extract timber in order to gain some personal benefit before it was all gone. Traditional fishing practices similarly broke down in nearby coastal lakes of southern Mozambique after the civil war, when semi-commercial fishing by demobilized soldiers and others resulted in conflict with returning local residents. Traditional management systems were not practiced by the newcomers, and fish stocks were reported to decline.

Efforts to reintegrate demobilized soldiers into society can be key to avoiding destruction of the resource base for future peace and development (Boyer and Stork 2015). It is critical that reintegration efforts are sound and do not lead to further conflict: if excombatants are being reintegrated via natural resource projects, it should be done in consultation with relevant environmental agencies and professionals to ensure they are sustainable and do not cause conflict with local communities (who may still be displaced). Finding suitable livelihoods for such a large number of men and women can be challenging, especially livelihoods that align with their skills and interests. In Mozambique, a number of excombatants were recruited as game guards in protected areas. They were well suited to this work with many of the requisite skills including tracking, ability to handle firearms, knowledge of the bush, and ability to live and work in remote areas (Hatton, Couto, and Oglethorpe 2001). Under effective management they

performed well, helping to rehabilitate some of Mozambique's protected areas in the post-conflict era, while being gainfully employed.[6]

Tackling proliferation of firearms

A major threat to both security and natural resources is the proliferation of firearms during and after conflict. Environmental programs in many countries actively collaborate with peacekeeping forces, police, and the army to confiscate firearms. In the Democratic Republic of the Congo (DRC), for example, internally displaced persons hid deep in the forest, surviving on the bush meat trade using military arms. Environment and development organizations, including government and NGO partners in the USAID-funded Central Africa Regional Program for the Environment (CARPE), helped these people return safely to their places of origin and resume their former livelihood activities, reducing pressure on wildlife and contributing to increased security (de Merode et al. 2007). Conserving wildlife ensures animal protein for local communities through subsistence (not commercial) hunting, and alternative livelihoods including farming and sustainable fishing in established settlements help to promote development.

Principle 2: Restore livelihoods based on sound natural resource and environmental management

Natural resources provide critical support to rural communities through provision of food, water, medicines, and materials for shelter and livelihoods. Dependence on natural resources can be especially strong immediately after conflict when normal infrastructure, markets, agriculture, and employment may still be disrupted, with poor and subsistence households often among the most vulnerable. At this time, communities begin the process of rebuilding their lives. Addressing environmental considerations in the post-conflict period enables communities to reset their relationship with their environment, while improving the sustainability of development and reducing the risk of future conflict due to scarcity and inequity. This idea is also used frequently in the realm of disaster risk reduction as a progressive approach that helps to prevent future calamity by improving baseline living conditions and reducing community vulnerabilities.

If conflict has damaged the environmental assets of communities, or if they were degraded before the conflict, restoration of the resource base may be necessary (Jensen and Lonergan 2012a). As plans are made for the future, it is important to take into account the effects of climate change. Whether or not it played a role in the conflict, climate change affects land and other resources essential to community well-being in many parts of the world. People often are particularly

[6] For a detailed examination of experiences reintegrating excombatants as park rangers in Mozambique's Gorongosa National Park, see Pritchard (2015).

vulnerable after conflict, when their resilience and adaptive capacity is low. Undertaking a vulnerability assessment that examines current vulnerability to climate variability as well as vulnerability to future projected changes, and incorporating climate adaptation into community development plans, can help build resilience and facilitate adaptation as climate change advances (Matthew and Hammill 2012; Jensen and Lonergan 2012b).

Experiences in the remote Quirimbas Archipelago of northern Mozambique, home to agricultural and fishing communities, illustrates the importance of restoring livelihoods based on sound NRM. In the early 1990s, as the country emerged from fifteen years of civil war, sustainable fishery management and prevention of crop damage by elephants was critical to ensuring food security. But marine fisheries in the area were threatened by illegal fishing and overfishing by industrial fishing fleets from outside the area, exacerbated by poor management. As fish stocks declined, conflict between local communities and illegal fishers in the area increased and in some cases communities were forced to move out.[7]

After the civil war, communities sought assistance to improve their food security and reduce conflict through improved management and conservation of resources. In 2002, the World Wide Fund for Nature (WWF) partnered with communities to promote conservation and restoration of fish breeding grounds in the Quirimbas National Park (QNP) (Harari 2005). Measures included setting aside no-take zones controlled by local communities, where fishing was banned and fish could breed and grow. Fishing areas were zoned for different users. After only two years, local fishermen noted an increase in fishing yields outside the no-take zones. When neighboring communities saw this success, they also established no-take zones, and the practice spread along the coast.

Inland in the same area, elephants were destroying crops and seriously affecting food security for farmers. WWF worked with local communities to introduce a combination of land use planning to consolidate farms for easier protection from elephants, use of new elephant-deterrent methods, and introduction of new conservation agriculture techniques to increase soil fertility and moisture retention—all of which are helping to improve food security for farming communities (WWF 2008).

Ecotourism provides another context for restoring livelihoods after conflict, building a mutually beneficial relationship between wildlife and people that both preserves natural resources and promotes the economic viability of local residents. Throughout the 1960s, civil war in the DRC (formerly Zaire) contributed to a dramatic decline in the mountain gorilla population around the Virunga mountains. This volcanic mountain range in the region joining the DRC, Rwanda, and Uganda is one of only two areas where mountain gorillas survive in the wild. Before the 1960s, gorillas had experienced loss of part of their habitat due to forest conversion for agricultural purposes. Trophy hunting, particularly for skulls and hands,

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[7] More detail on the fishing conflict is outlined under the principle on collaboration, below.

and the capture of live young further harmed wild gorilla populations during the 1970s. In response to these pressures, the Mountain Gorilla Project was established in 1979 in Rwanda as a joint effort of international NGOs including WWF, the African Wildlife Foundation, Fauna and Flora International, and People's Trust for Endangered Species (McNeilage 1996). This program focused on three goals: improving park security, raising awareness of the importance of conserving mountain gorillas and their habitat, and promoting ecotourism as a means for both sustaining the conservation program and providing economic resources and incentives to the surrounding impoverished local communities.

Conflict persisted in both the DRC and Rwanda in following decades, with the Rwandan genocide bringing all ecotourism activities to a halt in the area for several years. However, despite over a dozen gorilla deaths directly attributable to war activities in the region during that time, the overall gorilla population of the Virungas increased in the 1980s and 1990s. Recognition of gorillas as a resource for promoting economic benefits through ecotourism resulted in conservation of the species by local communities during conflict, even though benefits stopped flowing for several years (Kalpers et al. 2003). As a result, ecotourism resurged in Rwanda after the cessation of conflict, and local communities once again benefited economically from this valuable resource.

Likewise, neighboring Uganda has been particularly successful in rebuilding sustainable communities through the promotion of ecotourism. Bwindi Impenetrable National Park, north of Virunga, is the only other place in the world where mountain gorillas survive in the wild. The Uganda Wildlife Authority, which receives the majority of its funding through tourist activities inside the park, actively seeks the support and participation of adjacent communities. It works in collaboration with NGOs that support community development and health activities. Local people benefit through job creation; promotion of local cultural assets, community health, and education facilities; and renewal of regional infrastructure (Ringer 2002).[8]

Principle 3: Plan within the carrying capacity of the land and resource base

The post-conflict period is a critical time that determines whether a country will develop along a sound path for lasting peace, or whether inequitable, unsustainable use of land and other natural resources will contribute to further destabilization and conflict. Environmentally sustainable reconstruction through the promotion of equitable community development is a key component of

[8] For a detailed analysis of ecotourism and mountain gorillas in the Virungas, see Maekawa et al. (2015). For an additional perspective on management of mountain gorillas in the region, see Johannes Refisch and Johann Jenson, "Transboundary collaboration in the Greater Virunga Landscape: From gorilla conservation to conflict-sensitive transboundary landscape management," in this book.

post-conflict economic planning (WWF and American Red Cross 2010). Equitable management of natural resource stocks and access to ecosystem services can create a solid foundation for increased human security while decreasing the opportunity for natural resource scarcity to be a factor in future conflicts. This requires a good understanding of the resource base and the needs of different parties, and multi-disciplinary planning processes that integrate natural resources in economic planning at various levels (Jensen and Lonergan 2012b).

Early information on the state of the environment immediately after conflict can be obtained by incorporating environment and natural resources into post-conflict assessments.[9] This information can provide a basis for assessing needs and environmental impacts of early recovery efforts, and serious adverse impacts can be mitigated or avoided. There are many tools that can assist with gaining knowledge of environmental impacts, such as the Rapid Environmental Assessment created by CARE International and the Benfield Hazards Research Center (Kelly 2005; Blondel 2004; Williams 2006; Atkinson 2008).

The findings of these assessments can be integrated into implementation plans. When negative environmental consequences are identified, they need to be considered from the point of view of the community and their potential effects on recovery, reconstruction, and peacebuilding. More detailed information on the state of ecosystem services and the natural resource base will be needed for longer term multi-disciplinary national level reconstruction and development planning, and more specialized and in-depth surveys may be necessary if pre-conflict information is outdated. Again, climate change should be taken into account, recognizing that past climatic, hydrologic, species distribution, and other data may not reflect current conditions. Vulnerability assessments should be undertaken at different levels and the results incorporated into reconstruction and development plans.

At the local level, integrated and participatory spatial planning can help ensure that reconstruction efforts optimize development of livelihood and food security opportunities and minimize negative environmental impacts. The process should be flexible, consider the full range of needs and uses of the community and the full range of environmental aspects, and should involve actors from all appropriate sectors and levels including the poorest, most vulnerable, minority groups, and women. Mechanisms should be clearly established to address displacement and resolution of tenure disputes.

In 2008 in Banda Aceh, Indonesia, WWF and the American Red Cross instigated the Krueng Sabee Watershed Forum (*krueng* means "river" in Bahasa) with the aim of assisting communities to sustainably manage and protect the ecological functions of the Krueng Sabee watershed in order to ensure adequate quantity and quality of drinking water for tsunami projects as well as development of livelihoods (Navaratne, Tomasek, and Rand 2010). The river provides

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[9] On post-conflict environmental assessments, see Jensen (2012) and Conca and Wallace (2012).

water for 20,000 Acehnese who use it for washing, drinking, irrigation, transportation, and livelihoods, including ecotourism as well as the cultivation of crops such as coffee, durian, and nutmeg. In 2009 the watershed forum was instrumental in raising awareness of the threats of illegal artisanal gold mining to the community water supply and thus the health of downstream communities. With support of the watershed forum, the local government issued a moratorium on gold mining so that the communities could collaboratively and collectively manage natural resources within the watershed, reducing risk of future conflict over natural resource use. Although the watershed forum was initially organized in the aftermath of a natural disaster—the 2004 Indian Ocean tsunami—to ensure adequate quantity and quality of drinking water, the community institution is now positioned to play a key role in peacebuilding by reducing future potential conflict.[10]

Challenges for multi-disciplinary planning include incomplete information and poor communication across sectors, an urgent dependency on natural resources in the short term that may compromise planning processes, the risk that natural resources may be used to reignite conflict, and introduction of inappropriate technologies that may lead to overexploitation of natural resources.

Information and communication challenges

The post-conflict period is often a time of confusion and poor communication within and between government ministries, as well as across sectors. Information on traditional settlements, natural resources, and land use and tenure may not be readily available. Records may be lost or destroyed, and local experts in environment, natural resources, and livelihoods may have died or fled. Development and environmental organizations can play an important role by providing supporting expertise and information for planning, and making sure the information is available to those who need it. NGOs can also help facilitate multidisciplinary collaboration in planning processes (see also principle 5).

Short-term spike in natural resource use

Integrated planning approaches have to consider short-term as well as longer-term needs, and balance them without significantly eroding the natural resource base. Rural communities are often particularly dependent on resources until they reestablish livelihoods. At the national level, immediately after prolonged conflict there is an urgent need to kick-start the economy. State coffers are often empty and high expectations must be met in order to maintain peace. This may include promises made to end the conflict by new parties coming to power. Industry and

[10] For a review of natural resources and peacebuilding in post-tsunami Aceh, see Renner (2015).

commercial agriculture are often paralyzed at this stage,[11] and natural resource exploitation is often seen as a quick and easy way to gain revenue while requiring relatively little time and investment. Legal logging, hunting, and agricultural concessions are sometimes granted to private companies, which are able to mobilize faster than government or local communities. But those willing to risk working in insecure post-conflict situations are often less reputable, and may take shortcuts by using unsustainable practices to generate a quick profit. It is important for development planners to have a good understanding of the issues these complex issues so that they can make informed recommendations.

Risk of natural resources being used to refuel conflict

A major challenge can occur in post-conflict settings when unscrupulous leaders and elites look to natural resources for personal gain, or to maintain power. For example, when Liberia's first period of civil war ended in the mid-1990s, then- president Charles Taylor used the domestic timber industry to finance arms trafficking. Termed "conflict timber", Taylor used logging concessions to ensure the loyalty of factions outside of his burgeoning regime. In some cases, the linkage between conflict and natural resource exploitation was so direct that illegal weapons were witnessed being shipped into the country in exchange for forest resources shipped back out on the very same transport vehicles. Militia members controlled all logging activities, while Liberian citizens received none of the profits produced from their local forest resources. Further exploitation of the local population occurred through many abuses committed by militia members within and around the logging areas. This resulted in a return to violent conflict, which subsequently spilled over into other areas of West Africa, particularly in Sierra Leone, where national tensions were aggravated by the resounding effects of violence and political instability in Liberia.[12]

Unsustainable exploitation due to inappropriate technology

Provision of technologies for rebuilding community livelihoods can have a major impact on natural resources. Accordingly, they should be assessed before deployment to ensure they will not have unintended negative social or environmental consequences. For example, following the December 2004 tsunami that affected many coastal areas of Asia, donors and aid agencies quickly acted to restore key fisheries and rebuild local livelihoods. However, due to lack of coordination and

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[11] For an analysis of Japan's unsustainable and temporary use of domestic coal to jumpstart its economy after World War II, see Nakayama (2012).

[12] On timber, conflict, and peacebuilding in Liberia, see Altman, Nichols, and Woods (2012).

understanding of the pre-tsunami fisheries conditions, aid agencies oversupplied fisheries inputs such as boats and gear in some areas, while other regions remained undersupplied (ReliefWeb 2006). In areas where boats and gear were oversupplied, fish catches were quickly lower than pre-tsunami levels, leaving communities at risk of future food insecurity due to overexploitation. There were other reports from India that new boats, motors, and nets were given to groups of former crew members, creating an oversupply that fisheries could not sustain and generating increased competition from altered community ownership patterns (Vivekanandan 2005). There are also anecdotal reports that so many boats were distributed in some communities of Banda Aceh, Indonesia, that every fisher became a boat captain and crews had to be imported from outside the community, fundamentally changing the fishing industry and social relationships, leading to both resource overexploitation and social conflict (Adhuri, Kanagaratnam, and Dey 2006).

Principle 4: Maximize opportunities for policy reform based on environmental sustainability

The post-conflict period is a window of opportunity in which governments can revise outdated or otherwise problematic policies. This is an important time to promote sound approaches for sustainable livelihoods and lasting stability. Yet environmental and natural resource policies are often low on the political agenda. In the rapid formulation of new post-conflict policies governing economic development, agriculture, transport, and industry, governments may overlook the need for sustainable use of natural resources and the need to protect the rights of rural communities to access, use, and own land and other natural resources. In this context, NGOs working on development, natural resources, and human rights can assist governments in keeping these issues on the agenda and providing data and experience that can inform the policy process. In policy reform affecting natural resource and land policy, it is important to promote communication across sectors (such as development, agriculture, and natural resources) as well as across institutional sectors (government, private sector, and civil society); and NGOs may be well placed to facilitate this communication.

Policies governing land and other natural resources

Following conflict, many countries have revised policies governing the management of land and other natural resources. Often there is an opportunity to promote more equitable approaches that can help foster peace and development by ensuring that rural communities have adequate access to land and other resources for livelihoods and food security, although advocacy may be necessary to counteract efforts by elites to grab land and other natural resources.

In Nepal, a new constitution is being drafted following the election of a new constituent assembly. This has provided an opening for the inclusion of new

and progressive provisions that incorporate NRM and benefit sharing mechanisms (Pandit and Shrestha 2009).

In the DRC, where vast logging concessions were given out before and during the war, a new forest code was developed which gives local communities the right to manage their forests according to customary rights (Debroux et al. 2007). Noncompliant logging concessions were cancelled, a moratorium placed on new concessions, and a review completed of remaining concessions with assistance of an independent observer.

In Mozambique, the post-conflict land policy and legislation recognized the rights of communities to form associations that could register land and retain access to certain resources, although implementation of this has been slow and communities have not necessarily secured all the benefits to which they are entitled (Salmão and Matose 2007).

In Namibia, a long period of conflict preceded national independence in 1990. Before independence, only white farmers had been able to own land and legally use the wildlife on that land (Boudreaux 2010). Wildlife populations in many parts of the country declined dramatically during twenty years of strife. The coming of independence, along with the abolition of apartheid and cessation of conflict, offered the government a chance to rapidly create greater equity in rights over wildlife between the white land owners and local communities in communal areas. A new policy was formulated enabling local communities to establish communal conservancies with registered members and defined boundaries, and gain legal ownership and use rights over wildlife, as well as rights to benefit from tourism.

The Namibia Association of Community Based Natural Resource Management Support Organizations is a collaboration of development and conservation NGOs and the University of Namibia, which in turn coordinates with the Ministry of Environment and Tourism.[13] These partners work with local communities to facilitate the formation of communal conservancies and develop local management capacity, promoting economic and development benefits through wildlife and tourism. In 1996, the government adopted—with extensive inputs from NGOs—an innovative policy and legislation that enabled communal conservancies.[14] Under the 1996 framework, the government works with conservancies on game harvesting quotas, with the government providing final approval of quotas to ensure sustainable use of the wildlife resources. Communal conservancy members undertake resource monitoring, and conservancy committees manage the day-to-day running of the conservancies. Development and conservation NGOs provide capacity building, facilitation, and technical assistance, and the University of Namibia provides research support. Donors provide funding; the program has been fortunate to

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[13] For more information on NACSO, see www.nacso.org.na.

[14] For the text of the Nature Conservation Amendment Act, 1996 (Act No. 5 of 1996), see www.nacso.org.na/dwnlds/Nature_Conservation_Amendment_Act.pdf.

receive long-term USAID support for over seventeen years—a significant factor in program success.

Conservancy members benefit directly from their natural environment, while also having an immediate and compelling incentive to protect wildlife from poachers and advocate for sustainable land use. Wildlife numbers have risen steadily in several conservancy areas, and household incomes have increased due to sound land use in some marginal lands, including desert areas too dry for agriculture (USAID 2006; WWF 2008). Conservancies have contributed to stability and helped to resolve conflicts. In Caprivi, for example, the formation of conservancies brought rival tribal authorities together around the same table for the first time in decades with a common agenda of acquiring wildlife benefits for their people.[15]

Other policies

Governments often also revise other policies in the post-conflict period. These policies include national development policies and sectoral policies such as those governing transport, agriculture, industry, water, energy, and mining. During the revision process, there is often little communication across ministries, and teams formulating new policies may be inexperienced and politically driven, with little knowledge of conditions at the local level. There is usually little consultation before policies are passed, as they are often formulated quickly to help restart the economy. These policies often have major direct and indirect impacts on the use of land and natural resources: for example, opening a new road or reopening an old road may improve access to markets for charcoal, fish, minerals, bushmeat, and commercial agricultural produce. Agricultural policies that favor private companies and wealthy farmers may result in the granting of large concessions; if assessment and consultation are inadequate; there is a risk of conflicts with traditional tenure and access rights and marginalizing or even displacing local communities—and conflicts over landgrabbing (Unruh and Williams 2013b).

Development, human rights, and natural resource NGOs can work together to provide up-to-date information and advice to governments on policy reform. They can also help to ensure adequate consultation and participation at different levels, drawing attention to land and natural resource issues that could potentially result in a return to conflict. In this way, NGOs can support government to seek sustainable and peaceful solutions through sound policy development.[16]

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[15] Personal communication, Chris Weaver, WWF, November 2009.

[16] On NGOs in the Liberia forestry reform process—including in the first notice-and-comment rule-making process the country had experienced—see Altman, Nichols, and Woods (2012).

Windows of opportunity

Post-conflict situations are characterized by their dynamic nature. What seems like an impossible situation one day may fundamentally change to offer promising opportunities the next. In this time of rapid change, it is important to watch for these chances and capitalize on them. Windows of opportunity open suddenly, and can close just as quickly; it is important not to be left behind. To capitalize on the window of opportunity, it is necessary to monitor the situation through a range of different contacts and partners, often thinking outside the box and sometimes taking staff out of their comfort zone to make the most of these opportunities for policy reform and other activities when they arise.

During its Armed Conflict and Environment Project, the Biodiversity Support Program learned a useful lesson on windows of opportunity in the DRC (Shambaugh, Oglethorpe, and Ham 2001). It was clear that promoting collaboration between conservation organizations and the relief and development sectors, and between NGOs and government, was an important strategy for sustainable development in the post-conflict period. Efforts were made to organize a national workshop to examine and promote such collaboration in the DRC to focus on environmental aspects of preparing for peace. A date was set in February 2001, although there was growing concern about how open the discussions could be, given the stage of the conflict. Events took a sudden turn when in January 2001, President Laurent Kabila was assassinated. The workshop was postponed indefinitely. By June of that year, though, there was a much more positive attitude toward peace, led by the new president, Joseph Kabila. Illegal exploitation of natural resources in the DRC had just been highlighted in a United Nations report which received much attention in the country (UNSC 2001). So the workshop was hastily reorganized, with tremendous enthusiasm and support for the event from the highest levels. It was attended by over 150 people across various sectors, including four government ministers and a high-ranking officer from the military. Doves were released in a ceremony, as a symbol of peace. Holding the workshop at that time was much more effective in helping to prepare for the transition to peace than it would have been if it had been conducted four months earlier. Some of the resolutions from the workshop have since been implemented, such as adopting new forest legislation that includes greater community participation.

Principle 5: Collaborate across sectors to promote sound natural resource management

In post-conflict situations, collaboration between sectors—including humanitarian, development, and environmental—is extremely important as it can draw on a wide variety of technical skills and inputs to promote effective recovery and reconstruction, reducing the risk of further conflict. Nontraditional partnerships can aid sound development and promote the peacebuilding process. This is particularly important in situations where many different organizations are

involved in post-conflict recovery and reconstruction, elevating the need for coordination and sequencing.

Collaborating among peacebuilding, humanitarian, development, and environmental organizations

Notwithstanding the value of conserving the natural resource base and avoiding loss of community access to land and resources, few humanitarian and development organizations have sufficient environmental expertise to carry out environmental work on their own. Partnerships with environmental institutions (both governmental and nongovernmental) can provide information and guidance on energy needs, pollution, water resources, community resource governance systems and institutions, and other environmental issues. Similarly, conservation organizations typically do not have strong expertise on issues such as resettlement, human rights, equity, and peacebuilding. In particular, peacebuilding organizations can help ensure that natural resource–related interventions are planned in a conflict-sensitive way with a do-no-harm lens, especially in situations where conflict has been fuelled by competition over natural resources.

Pooling collective expertise can help ensure an adequate natural resource base for future development and lasting peace. Working together can be challenging, and the different sectors need to find common ground and learn to speak the same language. It helps greatly to form cross-sectoral relationships before conflict, rather than starting from scratch during or immediately after conflict. It is equally important to work at different levels for maximum effectiveness: from field to national, regional, and international levels. Clear roles and responsibilities need to be established, designating lead agencies in each sector.[17] Lines of communication between sectors and levels should be well established and mechanisms for consultation of all stakeholders should be in place. Additionally, mechanisms for accountability should be in place to guide use of resources, and transparency is very important in reporting and managing these diversified frameworks (WWF and American Red Cross 2010).

For example, CARE (a development and humanitarian NGO), WWF (a conservation NGO), and local partners implemented the USAID-funded Strengthened Actions for Governance in Utilization of Natural Resources (SAGUN) project in Nepal that supported the formation and strengthening of CFUGs and CFCCs that started in 2002 and ran for several years during and after the conflict (Oglethorpe and Crandall 2010). The complementary skills of the partners helped in post-conflict peacebuilding through the creation of stronger and more transparent community-based organizations. At the same time, improving agriculture and the natural resource base through forest restoration and sound NRM secured livelihoods and prevented further conflict over natural resources

[17] For a review of the UN Humanitarian Cluster approach, with lead agencies within each cluster, see IASC (2014).

that might have otherwise fueled political conflict. Interdisciplinary partnerships such as this can be particularly important in the complexity of post-conflict situations.

Working with the military

It is important for those involved in reconstruction to actively demonstrate neutrality during and immediately after conflict. Particularly for NGOs, collaboration with military personnel and resources requires a careful assessment of the complex dynamics in a particular situation.[18]

Communities' natural resources can be devastated during conflict by legitimate and illegitimate armed forces that use wildlife for food, or exploit timber, ivory, and minerals for financing their efforts or for personal gain. Training for military leaders during peacetime to promote awareness about sustainable development can reduce this problem during times of instability, including the post-conflict period (Westing 2000). In some circumstances, working with the military can yield valuable results for post-conflict resource management; armed forces can protect community resources, fostering political and economic stability. In the example, discussed above, of restoring the fisheries in the Quirimbas Archipelago of Mozambique through establishing no-take zones, the communities only had small fishing boats and were powerless to control or confront larger commercial fishing boats from Mozambican ports. In addition, foreign fishing vessels were venturing inside Mozambican waters. India, France, and South Africa donated patrol boats to the Mozambique Navy and the U.S. Embassy provided equipment and training (USAID 2007). The Navy undertook patrols and assisted local communities in managing their fisheries resources, preventing illegal fishing, reducing conflict over fisheries resources, and increasing local food security. This example illustrates how collaboration with the military can help rebuild livelihoods and restore ecological integrity; it also shows that it is sometimes necessary to take action at different levels (in this case local, national, and international levels).

Working with international advocacy organizations

It can be extremely difficult to tackle equity issues in conflict-affected countries, especially in times of transitioning power bases and weak governance. In such cases, international advocacy groups often play an important role. For example, international advocacy groups worked with Liberian organizations to raise international concern that eventually resulted in UN sanctions ending the illegal timber

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[18] For an analysis of considerations in civil-military coordination, see Melanne A. Civic, "An enabling framework for civilian-military coordination and cooperation in peacebuilding and natural resource management: Challenges and incremental progress," in this book.

trade that financed conflict in Liberia. International advocacy organizations are also well placed to undertake national resource accounting through export records and to expose illicit capture of natural resources—this is a particular area of expertise for Global Witness. International organizations are also central to informing and mobilizing consumer preferences internationally, for example to avoid buying conflict diamonds, advocating for certification systems, and monitoring implementation of those systems.

Transboundary collaboration

International collaboration can help to promote better management of natural resources damaged during conflict. For example, collaboration over wildlife management may enable wildlife populations devastated by conflict to repopulate through in-migration from neighboring countries, rebuilding a base for subsistence hunting as well as economic activities such as wildlife tourism, sport hunting, and live sale of animals. Innovative and mutually constructive approaches, such as the creation of transboundary peace parks, are valuable for both environmental protection and regional peacebuilding (Westrik 2015; Walters 2015). International treaties can also help promote better management of shared resources. Central African countries established the Central Africa Forests Commission (COMIFAC) treaty to set up an overall legal framework to govern and consolidate cooperation in conservation and sustainable management of forests. This remarkable treaty was developed by countries which had until recently been involved in each others' conflicts.[19]

Principle 6: Plan for post-conflict natural resource management funding

When conflict looms, many donors cut single-sector funding to NRM projects. Immediately after the conflict concludes, funding rightly focuses on humanitarian assistance and on emergency reconstruction. However, sound NRM is critical in the early stages of peace to support social, economic, and political stability. Relatively small amounts of funding at the right times can make a profound difference in mainstreaming considerations of sound NRM into development—and yet it is often surprisingly difficult to raise funds for sound NRM at this stage. Bilateral and multilateral funding may be tied to political conditions and often takes time to start flowing again after conflict. Disbursement may also be delayed by donor funding calendars.

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[19] On peacebuilding and transboundary cooperation around natural resources among Central American countries, see Matthew Wilburn King, Marco Antonio González Pastora, Mauricio Castro Salazar, and Carlos Manuel Rodriguez, "Environmental governance and peacebuilding in post-conflict Central America: Lessons from the Central American Commission for Environment and Development," in this book.

Sometimes funding for integrating sound NRM into post-conflict programming can be obtained under other bilateral budget categories, such as governance or reconstruction. Foundations may be an easier source of funding for NRM at this time. Organizations with their own unrestricted funding may be able to allocate funds to natural resource activities. The amount that is needed is often small compared with overall humanitarian assistance and development budgets, but a small amount of funding can make a big difference. Development and humanitarian assistance organizations should include a budget line for NRM, using whatever source possible. Funds should ideally be available at short notice, to take advantage of windows of opportunity as they open.

A few rapid disbursing funding programs have been established over the past decade to provide funds in emergency situations such as post-conflict settings. One example is the Rapid Response Facility (RRF), an innovative partnership between Fauna & Flora International, the United Nations Foundation, and the UNESCO World Heritage Committee.[20] It helps grantees both respond to urgent threats and rebuild after crisis by providing emergency small grants funding to natural World Heritage sites facing threats to their globally important biodiversity. This includes protection of wildlife populations with high tourism potential, such as funding for conservation of mountain gorillas in Virunga National Park in the DRC. Similar action to protect mountain gorillas in neighboring Rwanda in the 1990s enabled communities to benefit from wildlife tourism after the conflict ended there, making a strong contribution to local incomes.

CONCLUSIONS

The trajectory of post-conflict peace, security, and development is often affected by how governments, the private sector, NGOs, and local communities manage and conserve natural resources. As the case studies in this chapter illustrate, the post-conflict period presents both opportunities for and threats to natural resource management. To secure peace, it is critical that international aid agencies, governments, and NGOs recognize and support the role that natural resources play in providing communities with essential goods and services. Including environmental parameters in the earliest stages of post conflict assessments provides a more complete analysis of the local context and potential for community well-being.

It is critical to prepare for peace—especially in drawn-out conflicts—so that peacebuilding can be more effective when a window of opportunity opens. Preparing for peace includes recognizing potential power vacuum scenarios and planning capacity building for communities and government agencies to minimize the risk that natural resources will be overexploited for short-term gain at the cost of long-term development and stability. Information about natural resources

[20] For more information on the RFF, see www.rapid-response.org/.

should be documented and made easily available for planning purposes. Cross-sectoral contacts and partnerships between organizations should be established and maintained before and during conflict. It takes time to build trust, and existing partnerships often provide a stronger base for collaboration than new ones forged from necessity at the onset of peace.

A core characteristic of post-conflict situations is the dynamic nature of events and interactions. Demobilized soldiers need to reintegrate, community and government leaders need training, proliferation of firearms needs to be tackled, and new or improved governance institutions and policies are invariably required. Development, humanitarian, human rights, and environmental institutions can cooperate after conflict to advance multiple agendas to address these needs. But establishing trust and understanding of each other's language and culture in advance of—or even during—conflict will facilitate greater success with collaborating after conflict. Working with the military can be uncomfortable for some NGOs, and it requires careful consideration of the dynamics of the situation. There are, however, examples of positive community-NGO-military collaborations to call upon as references for future application, as illustrated in the example from Mozambique.

Many donors cut or restrict funding to natural resource management projects and activities if the risk of conflict emerges. Ironically, this is precisely when funding is critical and relatively small amounts of funding at the right time can ensure sound NRM practices and contribute to social, economic, and political stability.

New or existing community-based organizations and institutions are often best placed to manage natural resources and provide social, economic, and community stability. Examples from Nepal, Namibia, and Indonesia illustrate how community organizations that manage natural resources—far from being single-issue actors—can address broad mandates and provide services, resolve conflict, and promote sustainable development during the transition from crisis to recovery.

Although there are many examples of why the management of natural resources is important to post-conflict situations, NRM practitioners working in post-conflict situations may have little experience, feel isolated, and have few opportunities to learn from others or other situations. Sharing lessons before as well as after conflict is necessary to create future well-being for both the human population and the natural resources upon which they depend.

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