

# Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding

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A widely held perception is that the sustainable management of natural resources and the environment are distinct from – and sometimes even conflict with – peacebuilding goals. This perception is misinformed and outdated. Indeed, natural resources and the environment hold tremendous peacebuilding potential and underpin many peacebuilding priorities. From economic recovery and government revenues to sustainable livelihoods and the restoration of basic services, the way natural resources are managed and governed can either fundamentally support or undermine peacebuilding objectives.

Unlocking the potential of natural resources to contribute to peacebuilding starts by assessing how they contributed to conflict, how they were directly and indirectly impacted by conflict, how risks can be mitigated, and how effective laws and institutions for resource governance can be built to support sustainable use. Assessment must be followed by remediating environmental hotspots that threaten human health, managing and restoring natural resources that support livelihoods, and conducting reconstruction in ways that do not create additional environmental damage or unsustainable resource use.

Prioritizing the management and restoration of natural resources and the environment is often a difficult political prospect, given other competing priorities in peacebuilding. The transformation of a conflict-affected country into a peaceful, stable, and more prosperous one is a complex task, often susceptible to contradictory pressures and the ever-present risk of relapsing into violence.

Experience has shown that environmental assessments do have an impact in shaping post-conflict priorities and catalyzing an agenda for improved resource governance, risk reduction, and peacebuilding. But there is no single approach for conducting assessments, implementing remediation and restoration projects, or minimizing the impacts of reconstruction. Approaches must be selected, timed, and designed to meet the needs of a specific context and the capacity of both government institutions and civil society. Importantly, the process for selecting the right approach is as important as the approach itself. Each activity should be designed to address technical needs while, in parallel, building national ownership and capacity across government, civil society, and the media.

## POST-CONFLICT ENVIRONMENTAL ASSESSMENT

Needs assessments provide an important basis for donor financing, and they influence the direction of reconstruction following a conflict. At the outset of the peacebuilding process, a rapid assessment of natural resources and the environment should be undertaken to identify the key impacts, risks, opportunities, and governance needs that must be integrated into the peacebuilding process. Rapid assessments can then be followed by comprehensive assessments, sector-specific assessments, or region-specific assessments. Eight key lessons concerning approaches for effective post-conflict

### Key Components

1. Post-conflict environmental assessment to identify resource-related impacts, risks, opportunities, and needs
2. Remediation of environmental hot spots to protect human health and support emergency employment
3. Restoration of damaged or degraded resources to support livelihoods and reduce disaster vulnerability
4. Reconstruction that minimizes adverse environmental and social impacts to prevent new grievances and tensions

*This policy brief is the first in a series of peacebuilding and natural resources policy briefs; it summarizes findings from Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding, edited by David Jensen and Steve Lonergan (London: Earthscan 2012). David Jensen heads the Environmental Cooperation for Peacebuilding programme of the UN Environment Programme (UNEP). Steve Lonergan is a Professor Emeritus of Geography at the University of Victoria and former director of the UNEP Division of Early Warning and Assessment. This policy brief was produced by David Jensen (UNEP), Peter Whitten, and Ilona Coyle, Carl Bruch, Mohammad Aslami, and Gwen Brown, of the Environmental Law Institute.*

assessments and how best to integrate natural resource considerations into reconstruction plans and peacebuilding strategies are outlined below.

**Assessments must consider both direct and indirect pathways of environmental damage.** The principal types of direct impact are toxic hazards from the bombardment of industrial sites and urban infrastructure; risks from landmines, unexploded ordnance, and munitions including depleted uranium; environmental damage from human displacement; the use of extractive industry rents to fund conflict; the loss of water supply, sanitation, and waste disposal infrastructure; and scorched-earth tactics that directly affect livelihood resources. The main indirect impacts caused by violent conflict are environmental damage from unsustainable survival strategies that populations undertake during crises, and disruptions to state and local institutions combined with a breakdown in rule of law. For example, UNEP's post-conflict assessment for Afghanistan generally followed this approach.



Collecting a soil sample in South Beirut, October 2006. Photo credit: UNEP.

**Assessments should identify conflict risks and peacebuilding opportunities linked to natural resources.** It is important to take into account the role that natural resources played in the conflict, play in the national political economy, and may play in the future peacebuilding process. Doing so requires (1) determining the extent to which the mismanagement of natural resources triggered, sustained, or financed conflict; (2) identifying key actors that shape resource governance and control resource rents; (3) analyzing existing and potential sources of conflict linked to natural resources; (4) determining overall economic and livelihood dependence on natural resources and potential vulnerability to the “resource curse”; (5) identifying how the environment and natural resources can support peacebuilding and national development priorities through job creation, revenues, livelihoods, and reconciliation opportunities; and (6) evaluating national and local capacities to govern natural resources to mitigate conflict risks and capitalize on peacebuilding opportunities.

**It is important to assess economic linkages to natural resources.** Post-conflict economies typically include several distinct but intertwined segments: the remains of the formal

economy, the international aid economy, the informal economy, and the criminal economy. Each has a different relationship to natural resources, and it is essential to understand not only how they are embedded in transnational commodity chains but also how private-sector interests can exploit weak governance to accelerate extraction and minimize payments for resource concessions. Furthermore, as resource sectors are developed, it is critical to minimize the “resource curse” – overdependence on a narrow range of resources resulting in vulnerability to price shocks, inflation, contraction of domestic manufacturing, corruption, and unaccountable government institutions.

**Assess vulnerability to natural hazards and climate change.** It is critical to determine how changes in precipitation patterns, rises in sea levels, and increases in the frequency and intensity of extreme weather might undermine livelihoods, reduce the productivity of key economic sectors, disrupt human health, and alter settlement and migration patterns. Assessments should also identify measures that can enable fragile societies to build resilience to climate and disaster stresses and shocks.

**Consider negative interactions between peacebuilding priorities.** Little is known about the ways in which peacebuilding priorities interact, particularly when they rely on or compete for the same natural resources. Assessments should begin to identify where potential interactions between priorities or unintended environmental harm could occur—in particular, the impact of road building and infrastructure on land grabbing and property speculation, the potential for displacement caused by the development of extractive industries, or rising competition for water between economic sectors or livelihoods groups.

**Adopt strategies to address the dynamic nature of post-conflict situations.** To account for the dynamic nature that characterizes post-conflict situations, monitoring of key resource trends and pressures should be conducted on a regular basis. Although standard post-conflict environmental assessments are useful for understanding impacts, risks, and opportunities, they provide only a snapshot of conditions at a given moment. Many dynamic forces can affect the resource base during post-conflict recovery: the resurgence of economic development; the return of displaced persons; population growth; the development of resource concessions; increasing resource scarcity; and increasing resource consumption resulting from reconstruction.

**Tailor efforts to build national ownership and stakeholder consultation to each post-conflict situation.** Assessments should include representatives from government, academia, and civil society, as well as international specialists. Consultations with key stakeholders, the private sector, and civil society are important at each step of the assessment process. Scenario-based approaches that incorporate alternative projections of changes to natural resources and their potential impacts are a useful tool, both from the technical side and as a platform for stakeholder involvement.

***Design the assessment methodology, structure, and timeline to inform country programs and peacebuilding plans.***

Assessments can adopt a combination of qualitative (interviews, focus groups, community consultations, household surveys, scenario analysis) and quantitative (field samples, Geographic Information Systems, remote sensing) approaches. The most successful assessments are tailored to a particular post-conflict context and to specific political, policy, and programming processes. In particular, assessments that are structured to inform an ongoing programming process such as a post-conflict needs assessment or a UN Development Assistance Framework have a greater impact than stand-alone assessments that lack a programming dimension. One of the key needs is to issue a report that can be immediately operationalized. It is often better to conduct a rapid and strategic assessment in order to identify the main issues that can begin to inform policy priorities, rather than a comprehensive one that misses the opportunity to influence early decision making and donor priorities.



Sampling at a petrochemical plant, Pancevo, Serbia. Photo credit: UNEP.

## REMEDICATION OF ENVIRONMENTAL HOT SPOTS

Many conflicts create a legacy of chemical contamination, hazardous waste, landmines, and unexploded ordnance. While the cost of remediating environmental hot spots may be high, it is outweighed by the benefits of protecting human health and maintaining the quality of critical resources such as land and water. Six key lessons have been identified regarding effective remediation of environmental hot spots.

***Consider environmental hot spot remediation as a humanitarian priority and opportunity for emergency employment.*** Protecting human health and preventing the degradation of crucial resources such as drinking water and fertile land are humanitarian priorities. Remediation of environmental hot spots should be included in emergency humanitarian appeals in order to rapidly mobilize international funding. Because clean-up costs often increase over time due to the migration of contaminants into the soil and groundwater, early action is warranted on both public health and cost-

saving grounds. In addition, remediation solutions can use locally appropriate technology and generate emergency employment opportunities. For example, the humanitarian appeal for Serbia included the clean up of environmental hotspots as well as prioritized local employment and technology.

***Conduct public awareness campaigns.*** When environmental assessments identify acute environmental risks from contaminated sites, public awareness campaigns can alert residents to risks, inform them of safe practices, and reduce the spread of misinformation and panic. Awareness raising should be conducted before, during, and after remediation efforts.

***Address the full lifecycle of hazardous waste when remediating.*** When designing remediation plans, the full lifecycle of hazardous waste must be considered including collection, storage, transport, treatment, and final disposal. Remediation plans that end after the collection and storage of hazardous waste (rather than final disposal) should be avoided because storage facilities in post-conflict situations rarely meet international best practices, and poor storage can create secondary contamination sites. To the extent possible, neighboring countries with internationally accredited treatment and disposal facilities should be used. Where there are no regional facilities, international ones should be sought. Hazardous waste that crosses international borders should comply with the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and related regional agreements.

***Use a transparent decision-making framework to prioritize contaminated and mined sites.*** Because post-conflict remediation needs may exceed available financing, it is often necessary to assign priority to particular sites. To support this process, a transparent decision-making framework should be developed that will allow stakeholders to rank sites on the basis of priority. The rankings should be informed by the post-conflict context and by technical findings based on the source-pathway-receptor approach, which identifies and determines the significance of the risks posed to possible receptors (humans and wildlife) through specific pathways (air, soil, food, and water). The rankings can be modified to the post-conflict context by prioritizing sites that may be looted, are accessible in the existing security context, and could contribute to rebuilding public confidence in government. Where practicable and affordable, remediation should comply with both domestic and international standards.

***Incorporate land tenure considerations when planning the remediation of contaminated or mined land.*** Remediation processes linked to overall land management programs—including registration, titling, and dispute resolution— help to prevent land grabbing and ensure that decontaminated land is returned to those who previously held rights to it. This was a key

lesson from experiences in Afghanistan, Cambodia, Lebanon, and elsewhere.



Somalia, April 2006. Photo credit: UNEP.

**Use remediation programs as an entry point for building environmental awareness.** In a post-conflict situation, site-specific remediation is often only one small step in a longer and larger process that encompasses both environmental restoration and improved governance of natural resources. In many cases, the remediation of environmental hot spots can be a starting point for increasing environmental awareness and building public support for environmental management.

## RESTORATION OF DAMAGED OR DEGRADED RESOURCES

Violent conflict and the coping strategies of local populations can cause extensive damage and degradation to natural resources and the environment. Because resources such as arable land, water, wetlands, and forests are essential to livelihoods, basic services, and economic development, restoration of the natural resource base can support a range of peacebuilding priorities. Moreover, restoration can build confidence both in the government and in the benefits of peace. Six key lessons have emerged regarding successful resource restoration programs in post-conflict countries.

**Successful restoration programs typically require five to ten years of sustained external support.** International aid should be provided in a way that builds local capacity, provides incentives for local ownership, demonstrates improved livelihoods, and facilitates eventual independence and sustainability. Although the tangible benefits of restoration may not materialize for several years, it is important to incorporate metrics from the outset that will make it possible to assess progress on an annual basis.

**Restoration programs in post-conflict countries must address a range of technical, institutional, and political challenges and trade-offs.** In addition to meeting formidable technical challenges, restoration efforts face problems of poor security, political change, corruption, lack of institutional capacity, competing forms of land use, transboundary management issues, and the need to ensure community ownership of the project. As a result, post-conflict resource restoration is

gradually evolving from a technical and isolated endeavor to a more integrated and comprehensive approach that empowers local communities, builds institutional capacity for long-term management, and links restoration to income generation and sustainable livelihoods. The livelihoods framework is particularly useful for understanding how the political and institutional context shapes livelihood strategies, incentives for sustainable resource use, as well as resilience to shocks and stresses. When restoring natural resources, the key challenge is doing so in a way that either continues to support local resource-dependent livelihoods, or that provides alternative measures which reduce dependence on the resource base and provides time for recovery.

**Land tenure insecurity is often a critical barrier to restoration and sustainable resource management.** Land tenure disputes are among the most common problems facing restoration projects, and tenure insecurity prevents long-term investment in restoration and sustainable resource management. In many countries, uncertainty in tenure results in unsustainable and often destructive short-term land use practices, which must be addressed during the restoration design process. This is a severe problem in Haiti, for example, and has been a major barrier to restoration.

**Determine the degree of restoration to be achieved from the outset.** Although restoring an ecosystem or natural resource to its pre-conflict condition may be technically possible, numerous political, social, and economic barriers often constrain the options—lack of institutional capacity, time, resources, or political will; established land use patterns and practices; and the absence of viable livelihood alternatives. In some cases, the cost of restoration may be too high, and limited funds could be better spent on more immediate needs. In such cases, stakeholders must then decide what level of restoration is possible. Scenario-based analysis of alternative conditions and land use options can be a useful tool. Throughout the design of restoration programs, careful consideration should be given to potential threats from climate change. Efforts to restore the Mesopotamians Marshes in Iraq incorporated many of these approaches.

**Community ownership of restoration programs must be built from the outset.** The restoration of degraded natural resources can be critical to revitalizing livelihoods. Restoration efforts have been successful when programs were led and owned by the affected communities with the support of local authorities. Communities must help identify the challenges they face, find solutions, choose methodologies, and organize project activities. Affected communities must be involved at every stage of the project, from needs assessment to project design, implementation, monitoring, and evaluation. Generally, strengthening existing local structures—instead of creating new, ad hoc structures—results in greater community acceptance and sustainability. To ensure community ownership, external financing can be provided incrementally, based on the achievement of agreed restoration milestones.

**Linking bottom-up with top-down approaches is essential for coordinated restoration.** In most post-conflict countries,

there are thousands of rural development projects that contain elements of environmental restoration, but there is little coordination among them or between local actors and the national government. If such projects are linked to an overarching national program, restoration is more likely to be coherent and successful. At the same time, national policies and legislation need to provide the enabling conditions that support decentralized community-based natural resource management and restoration activities. This is a key lesson coming out of Afghanistan.

## RECONSTRUCTION THAT MINIMIZES ADVERSE ENVIRONMENTAL AND SOCIAL IMPACTS



Photo credit: UN Photo by Marco Dormino.

In many post-conflict countries, restoring basic services and associated investments in water, waste, and energy infrastructure may be a principal means of providing visible peace dividends. Such investments not only help rebuild public confidence in government but also create jobs and encourage the return of displaced persons. Meeting reconstruction needs typically involves a flurry of rebuilding and a massive injection of foreign capital: post-conflict countries receive as much as twenty times more aid per capita for reconstruction than is awarded in regular development assistance. However, poorly planned projects can create new grievances from environmental and social impacts as well as establish patterns of resource use that are unsustainable over the long term. Four key lessons have been identified to address these challenges.

**Infrastructure projects must meet immediate needs while also supporting longer-term sustainability, conflict prevention, and peacebuilding.** Infrastructure projects provide both direct benefits from the restoration of basic services and immediate opportunities for employment. However, infrastructure investments also risk intensifying the inequalities that may have been one of the original causes of the conflict. Approaches that focus on simply rebuilding the services that existed before the conflict, or targeting areas where there is a significant willingness to pay, tend to neglect the poorest and most vulnerable groups. It is essential to develop infrastructure projects in a conflict-sensitive way that considers how the benefits of infrastructure will be shared,

how infrastructure can contribute to peacebuilding, and how potential impacts on communities will be mitigated. Where possible, infrastructure investments should be strategic—that is, balanced across different types of communities and among urban and rural environments throughout a country as well as linked to an overall economic recovery and sustainable land use plan.

**Environmental impact assessments have multiple benefits in post-conflict countries.** Environmental impact assessments (EIAs), environmental permits, and other environmental planning tools create opportunities to identify potential harmful impacts from major investments and infrastructure and to put social and environmental safeguards in place. The planning and approval phases are perhaps the only time in the life span of a large investment when the government has significant leverage. Getting the process right is one of the principal ways that a government can influence the design, technology, scope, and financial models of large-scale developments to ensure that the country receives long-term social and economic benefits and suffers minimal environmental or social damage. At the same time, EIAs can also be used to build confidence and promote transparency in the wider political process of peace consolidation and as an entry point for public participation in decision making.

**Building EIA capacity in post-conflict countries is a long-term investment.** EIAs can be streamlined and effectively applied in post-conflict countries without causing approval delays. This typically requires a clearly defined process, well-trained staff, internal compliance mechanisms, and flexibility regarding the amount of information needed for a review. Still, it can take ten years or longer to develop a functional EIA system that is fully integrated into the fabric of governance and applied as a decision-making tool. In the interim, alternative tools are needed, such as strategic environmental assessments complemented by sector-specific EIA processes tailored to high-priority extractive industries and major infrastructure.

**Strategic environmental assessments can serve as alternatives to EIAs.** Despite the potential benefits of EIAs, a number of factors—weak governance, inadequate legal frameworks, insufficient technical skills, and limited baseline data—may prevent national authorities from undertaking them. One alternative is to conduct strategic environmental assessments (SEAs) at the sector or program level. SEAs can help to identify the areas of greatest environmental impact so practitioners can focus on a broad set of preventive and mitigation measures. The design of an SEA should take into account the existing post-conflict institutional capacity and legal framework and have the ability to adjust as capacities increase or laws change. A tailor-made SEA process may be well suited to multi-donor trust funds, post-conflict needs assessments, and development assistance frameworks; the UN used modified SEAs in Afghanistan, Iraq, and Sudan.

## CROSS-CUTTING ISSUES

Five cross-cutting lessons apply to assessment, remediation, restoration, and reconstruction efforts.

**Shared natural resources provide opportunities to promote dialogue, cooperation, and confidence.** Environmental assessment, remediation, restoration, and reconstruction projects offer important platforms to promote dialogue, encourage cooperation, and build confidence among divided groups, as well as between the public and different levels of government. Peacebuilding programs should use environmental projects and shared natural resources as bridges for political inclusion, relationship building, and reconciliation. Key lessons in using water as a platform for cooperation are emerging in Darfur, as well as joint reforestation efforts between Haiti and the Dominican Republic.

**Understanding gender dimensions of resource access, use, benefits sharing, rights, and ownership is critical.** Post-conflict interventions must assess and address the differential impacts of conflict on men and women with respect to environmental risks, challenges, and opportunities linked to resource access and use, benefit sharing, rights, and ownership. In particular, practitioners should be aware of the gender dynamics surrounding these issues in order to: capitalize on opportunities to enhance women's participation in decision making about natural resources and empower women through targeted capacity building and investments; to avoid entrenching social inequality; and to improve the protection of women from gender-based violence that is linked to natural resource use.

**Capacity building should extend to government, civil society, and the media.** Despite the fact that the environment and natural resources underpin human health and livelihoods, environmental and natural resource ministries in post-conflict countries usually lack financial resources, authority, and staff. International partners can provide support without undermining a ministry's authority by lending staff, training and mentoring government officials, providing equipment, and offering technical and financial assistance. Capacity-

building efforts should include government staff in every step, from design to financing, implementation, monitoring, and evaluation. Targeted capacity building should also be conducted for the media and civil society to enable them to support decision-making processes and monitor government policy and private-sector practices. Positive examples of this can be seen in UNEP's Afghanistan and Sudan programmes.

**Additional investments are needed to monitor and evaluate the peacebuilding impacts of natural resource interventions.** Accountability both upward (to the agency and its funders) and downward (to intended beneficiaries) is essential for projects involving natural resources and the environment. In this regard, nationally owned benchmarks and indicators should be established. They should be evaluated through the collection of qualitative and quantitative data, with the understanding that the utility of impact evaluations may be limited in post-conflict situations because so many factors are in flux, making it difficult to attribute changes to any single intervention. Joint evaluations are the best means of getting a full picture of peacebuilding dynamics, although they can be perceived as costly and complex. Because so much is still unknown about conflict, conflict prevention, and peacebuilding, future evaluations should focus on gathering evidence and learning from it, and on testing theories of change and assumptions about peace and conflict.

**It is essential for all actors to adopt conflict-sensitive approaches to project design, implementation, and evaluation.** Conflict sensitivity requires understanding not only the context in which an intervention will be undertaken but also the potential interactions between the intervention and that context. In particular, a systematic conflict analysis and monitoring process should consider how a policy, program, or project may affect resource availability and access; transboundary dynamics and pressures; and benefit sharing, public participation, transparency, and access to information about the resource.

## Post-Conflict Peacebuilding and Natural Resource Management

The Environmental Law Institute, the United Nations Environment Programme, the University of Tokyo, and McGill University have coordinated a four-year global research initiative to analyze experiences in post-conflict peacebuilding and natural resource management; identify lessons; and raise awareness of those lessons among practitioners and scholars. This initiative has generated six edited books (published by Earthscan) that include 150 case studies and other analyses from 60 conflict-affected countries and territories, written by 225 scholars, practitioners, and decision makers from around the world. A seventh overarching book (published by Cambridge University Press) synthesizes the findings across resources, peacebuilding activities, and countries. Contact: Carl Bruch, Environmental Law Institute, 202.939.3870, bruch@eli.org

