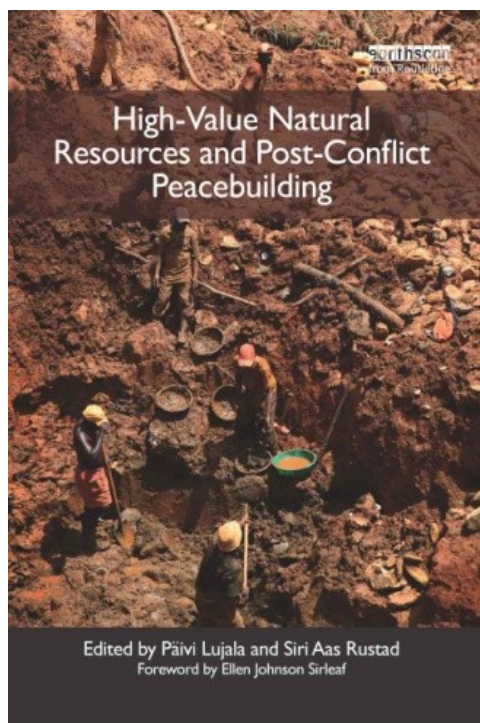


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Building or spoiling peace? Lessons from the management of high-value natural resources
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Building or spoiling peace? Lessons from the management of high-value natural resources

Siri Aas Rustad, Päivi Lujala, and Philippe Le Billon

In June 2010, a team of officials from the U.S. Department of Defense, the U.S. Geological Survey, and the U.S. Agency for International Development announced that Afghanistan has considerable reserves of iron, cobalt, gold, copper, and lithium, with an estimated value of US\$900 billion, buried in its soil (*BBC News* 2010). Remarkably, this news was greeted as yet another challenge in the country's painful transition to peace, rather than as an opportunity to diversify the economy, create jobs, bring in foreign currency, and ensure long-term development. Experts have stated, in resounding concert, that the mineral wealth may not be good for Afghanistan and may lead to more conflict in the future.¹

In Afghanistan and other post-conflict and conflict-affected countries, high-value natural resources present both challenges and opportunities. Although such resources can contribute to renewed conflict, they can also—if properly managed—help to consolidate peace. But what constitutes proper management? Each chapter in this volume sets out, in its own way, to answer that question. The purpose of this concluding chapter is to distill the lessons of the volume as a whole, as well as other literature, in order to point the way forward for future efforts.

Although attempts have been made to improve the management of high-value resources in post-conflict situations, they have met with limited success. As is clear from many of the case studies in this volume, it is extraordinarily difficult to design and implement successful interventions. The point, however, is not that the challenges cannot or should not be addressed, but that program officers, decision makers, and the public need to be realistic about the complexity of the challenges and the commitment that will be required.

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¹ See, for example, McNeil (2010) and Collier (2010a).

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The management of high-value natural resources in post-conflict situations depends, among other things, on the context, including the causes and trajectory of the conflict; the characteristics of the natural resources in question and their role in conflict; the quality of domestic institutions; regional dynamics and international markets; and current and previous approaches to the management of natural resources and the associated revenues. Thus, no one set of policies or programs can ensure success. Instead of attempting to provide a single recipe for the management of high-value natural resources, this chapter highlights a range of policy options and management tools. Some overlap; some work only in combination with other approaches; most are complementary.

This chapter consists of six sections that cover the following topics: (1) assessing the resource base and local resource economies; (2) managing resource extraction and revenue generation; (3) allocating and distributing natural resource revenues; (4) enhancing institutional quality; (5) addressing cross-cutting issues (context, external actors, public engagement, and peace spoilers); and (6) coordinating and sequencing interventions. A brief conclusion highlights central issues in the management of high-value natural resources.

ASSESSING THE RESOURCE BASE AND LOCAL RESOURCE ECONOMIES

In order to engage in realistic peace negotiations, develop judicious and comprehensive recovery policies, and ensure genuine peace dividends for a war-torn populace, two things are required: (1) reliable estimates of the resource base and (2) a thorough understanding of the role of resources in local livelihoods. A number of factors—including the death or flight of staff, illegal or undocumented exploitation, and a lapse in surveys—may make such information hard to come by. Nevertheless, knowledge of the resource base—and of the ways in which local livelihoods depend on it—is essential. People may have high hopes of revenues from resource exploitation, and are likely to be disappointed and aggrieved if their expectations do not materialize. Moreover, those whose incomes depend on the resource economy may be put at risk if their needs are not accounted for in the peace process.

The resource base

An accurate understanding of the extent of the resource base should guide policy decisions and inform public opinion. In the case of peace agreements and revenue-sharing agreements, for example, a common understanding of the scope and value of resources can help all parties to see clearly what is at stake. One option is to use experts to provide impartial information on the resource base. In 2004, for example, to facilitate the Agreement on Wealth Sharing between Sudan and Southern Sudan, experts on oil reserves and oil field development were called

in to develop a common understanding, among participants in the negotiations, of the extent of the oil reserves (Wennmann 2012*²).

An accurate assessment of the resource base may also render a central government more willing to grant autonomy, a larger share of resource revenues, or both to a region whose resources are relatively small in comparison to those of the nation as a whole, or whose resources are already seriously depleted. During the 2005 peace negotiations between Aceh and the Indonesian government, for example, the depletion of Aceh's reserves made wealth sharing between the government of Indonesia and Aceh less relevant—which probably contributed to the Indonesian government's willingness to grant Aceh better terms, with respect to revenue sharing from oil and gas exploitation in Aceh (Wennmann 2012*).

In some cases, realistic assessments of resource reserves may help a region seeking autonomy realize that resource extraction alone is not a viable basis for the entire regional economy. As Annegret Mähler has observed, even the central government may have inaccurate perceptions of resource reserves and of what can be achieved with them, and may therefore fail to develop other sectors of the economy (Mähler 2012*). The government budget of Southern Sudan (now South Sudan), for example, has been financed almost entirely by oil revenues; unless the country is able to develop the nonoil sectors of its economy, a decline in oil revenues would jeopardize its economic viability as an independent state (Wennmann 2010).

Publicizing information on the size of the resource base also helps to create more realistic expectations. Unrealized expectations may provoke accusations of corruption or failure to adhere to promises made during peace negotiations; even if such accusations are unjust, they can fuel historic grievances and may destabilize the entire peace process. Finally, reliable estimates of reserves are a prerequisite for negotiations with (often) better-informed extraction companies.

Local resource economies

The success of any peacebuilding effort will be measured, in part, against the past and current benefits derived from the local resource economy. In many countries, resource exploitation for the purpose of livelihood support, such as the artisanal mining of minerals, has existed before conflict or develops as a coping strategy during conflict.³ By serving as the basis for livelihoods, natural resources in the post-conflict period offer employment opportunities; reduce poverty; and provide access to hard currency and construction material (e.g., from forests). In the Democratic Republic of the Congo (DRC), for example, the

² Citations marked with an asterisk refer to chapters within this volume.

³ Coping economies, which are also known as *survival economies*, develop when families or population groups survive by engaging in activities such as subsistence agriculture, artisanal mining, and petty trade.

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livelihoods of about 15 percent of the population are estimated to depend on artisanal mining (World Bank 2008). Similarly, in the Central African Republic, the artisanal diamond sector provides work for between 50,000 and 80,000 people, and almost 15 percent of the population depends on the sector for survival (Spittaels and Hilgert 2009).

Nevertheless, because exploitation of high-value natural resources for livelihood support is often perceived as a source of financing for conflict, livelihood needs are likely to be forgotten in the rush to curtail rebels' or peace spoilers' access to resources.⁴ In separate articles in this volume, Adam Pain and David M. Catiarius Jr. and Alison Russell argue, for example, that opium poppy cultivation has been wrongly viewed as providing revenue solely for Afghanistan's conflict economy, and that most counternarcotics efforts in Afghanistan appear to have failed because they ignored farmers' motivations and needs and how the cultivation has contributed to their livelihoods (Pain 2012*; Catiarius and Russell 2012*).

Failing to understand the role of resources in the conflict economy may also cause the peace potential of informal (and even illegal) resource extraction to be overlooked. In a chapter focused on Nepal's community forest user groups (CFUGs), Tina Sanio and Binod Chapagain offer a successful example of the peace potential embedded in the local resource economy. CFUGs have facilitated the transition to peace by supporting both livelihoods and civil rights—most particularly by helping to reintegrate internally displaced persons, assisting with the reconstruction of homes, negotiating property rights disputes, and supporting small-scale enterprises (Sanio and Chapagain 2012*). CFUGs were able to accomplish what they did because their sustainable, communal management of forest resources gave them a solid economic and social base from which to operate.

Where exploitation and trade to support livelihoods are the backbone of the local economy, attempts to regulate unofficial or illegal exploitation may severely disturb that economy, causing local populations to view such interference as destructive. It is thus critical, as early in the post-conflict period as possible, to determine how to protect local livelihood opportunities while maximizing fiscal revenues and broad development benefits in the medium and long term. In the case of mineral resources, one possible approach is to set up a mineral rights cadastre—a public registry that grants and administers mineral rights for all types of mining concessions and oversees mining activities from the reconnaissance and exploration phases through extraction (Girones, Pugachevsky, and Walser 2009).⁵ In a post-conflict setting, a cadastre can be a source of valuable information about the size of the resource reserves and the expected revenues from both industrial and artisanal exploitation.

⁴ Peace spoilers are those who have something to lose, either politically or economically, from peace—and who therefore act to undermine it. (Peace spoilers are discussed in later sections of the chapter.)

⁵ Some countries that have mineral rights cadastres have also introduced special licenses for artisanal mining.

MANAGING RESOURCE EXTRACTION AND REVENUE GENERATION

Managing resource extraction is challenging even under ordinary circumstances but is particularly so in post-conflict situations. First, regulatory institutions are generally ill prepared to face the massive “resource rush” that often occurs in the wake of conflict. Competent management staff are typically in short supply, governance structures are in flux, and the presence of multiple sources of authority—including transitional administrations, donor projects, and the remnants of past management regimes—may blur the definitions of legality and good practice. Second, because of the vast economic stakes, high-value resource sectors are particularly vulnerable to mismanagement: a single poorly negotiated contract for a major mining venture, for example, can undermine state revenues for decades. At the same time, unofficial or illegal production and smuggling—by civilians, government officials, soldiers, and excombatants—may deprive the state of substantial revenues.⁶ Third, warring factions—even those that are technically at peace—have an interest in controlling resource revenues, in order to retain maximum influence over the transition process, preserve the option of rearming in case of a conflict relapse, or cash in as their prospects of maintaining power dwindle. Resource sectors are thus likely to become the focus of politicized, high-stakes contests during the post-conflict transition.

This section discusses three broad lessons related to the management of resource extraction and revenue generation: First, the efforts of the United Nations to restrict peace spoilers’ access to revenues have been increasingly effective. Second, the legacy of “odious contracts” signed by previous governments, belligerents, or transitional governments can be addressed through contractual review and renegotiation.⁷ Third, commodity-tracking systems can effectively curtail peace spoilers’ access to resources and increase state revenues from extractive industries.

United Nations initiatives to regulate access to resources

Since the late 1990s, the UN Security Council (UNSC) has used sanctions, expert panels, and peacekeeping forces to address the role of high-value resources during and after conflict. The increase in the number and diversity of interventions has

⁶ There are a number of reasons that the end of hostilities is likely to bring about a resource rush, including the following: (1) opportunities may suddenly open up for both foreign investors and local entrepreneurs; (2) domestic authorities and international donors may view resource exploitation as a means of rapidly increasing foreign direct investment and tax revenues, and thereby reducing dependence on foreign aid; and (3) war-affected populations are seeking reconstruction materials and employment to rebuild their lives.

⁷ The term *odious contracts* refers to contracts that grant extractive companies unduly high profit margins, generous tax exemptions, or other benefits.

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strengthened the influence of the UNSC and UN missions over resource sectors, although the ultimate impacts remain in dispute.

Economic sanctions were rarely deployed until the end of the Cold War; since the mid-1990s, however, seven sanction regimes have included high-value natural resources (Minter and Schmidt 1988). Sanctions have become increasingly effective, for two reasons: more careful targeting and greater diligence on the part of importing companies and countries. The investigative and “naming and shaming” efforts of UN expert panels and nongovernmental organizations (NGOs), such as Global Witness, have also enhanced the effectiveness of sanctions. Expert panels, which were originally created to investigate sanction busting, focused on high-value resource issues for eight conflicts between 1999 and 2007.⁸ In some cases, the panels’ work has included assessments of resource management—for example, determining compliance with international certification regimes or domestic requirements for resource exploitation, and evaluating the transparency of contracts or revenues.

Although UN peacekeeping forces have rarely been explicitly mandated to regulate access to resources, in 2003, peacekeeping forces from the UN Mission in Liberia were mandated “to assist the transitional government in restoring proper administration of natural resources” (UNSC 2003, 4). And in 2004, the UN Assistance Mission in Sierra Leone (UNAMSIL) was mandated to “support the Sierra Leone armed forces . . . in patrolling the border and diamond mining areas, including through joint planning and joint operations where appropriate” (UNSC 2004, 2). Finally, in 2008, UN peacekeepers in the DRC were directed to prevent “the provision of support to illegal armed groups, including support derived from illicit economic activities”—such as resource extraction and trade (UNSC 2008, 4). Apart from these three mandates, however, UN peacekeepers have played a limited role in the management of high-value resources for various reasons, including the following: given the limited resources and expertise of UN missions, other priorities are more pressing; actions that might involve confrontation with criminal elements increase risks for peacekeepers and civilians alike; political stakeholders are sometimes involved in both the peace process and in questionable or illegal activities—a circumstance that may have to be taken into consideration; and both UN member states and their subnational governments (which may be benefiting economically from the status quo) may be reluctant to have the UNSC meddling in economic affairs.⁹

By deterring peace spoilers’ access to conflict commodities, peacekeeping missions could strengthen legitimate, peace-enhancing resource extraction and trade, and curtail peace spoilers’ access to resource revenues. In practical terms, this might mean that multidimensional peacekeeping missions would be deployed

⁸ Expert panels have addressed natural resources in conflicts in Afghanistan (where they also addressed the international activities of al Qaeda), Angola, Côte d’Ivoire, the DRC, Liberia, Sierra Leone, Somalia, and Sudan.

⁹ See Le Billon (2012a*), and Taylor and Davis (2012).

in resource production areas (to recover those that are under rebel control), as well as in the vicinity of key transportation hubs or border crossings.¹⁰ However, mandates allowing UN troops to conduct military operations should be carefully considered. Between 2008 and 2010, for example, UN peacekeepers and the Congolese army conducted joint military operations against rebel troops who were controlling mines in the DRC. Although the operations succeeded in reducing the number of mines under rebel control, they were also associated with human rights abuses, population displacement, and extortion by government troops (Global Witness 2010). Nor did the operations succeed in demilitarizing the resource areas (Vircoulon 2011).

Peacekeeping forces can also be used to prevent the escalation of resource-related conflicts, and thereby short-circuit cycles of violence. In January 2002, in Sierra Leone, UNAMSIL peacekeepers had not yet been given an explicit mandate to intervene in resource sectors; nevertheless, as part of their general mandate to maintain peace, they stopped clashes between local youths and demobilized soldiers over access to diamond mines (USAID 2006). This experience shows that a peacekeeping force may intervene in resource-related issues even if it lacks an explicit mandate to do so, if conflicts over resources escalate to the point of physical violence that threatens peace.

By assisting domestic authorities and international agencies overseeing resource sectors, UN mission staff can help to address broader linkages between conflict, resources, and resource revenues. Such assistance might include monitoring activities such as illegal mining, logistical and managerial support, capacity building, and the good offices of UN representatives.¹¹ In 2010, for example, the Joint Mission Analysis Cell of the UN Organization Stabilization Mission in the DRC, in collaboration with the DRC Ministry of Mines, established five mineral-trading centers in Nord Kivu and Sud Kivu. Because these centers will accept only traceable and certified minerals for trade, they are strengthening both legal trade and the commercialization of minerals.¹²

Review of resource contracts

Before, during, and in the immediate aftermath of conflict, hard-pressed, incompetent, or corrupt government officials may sign contracts that are not in the best interests of the post-transition government or the populace. Sometimes governments under duress may even award concessions to firms providing security services. In 1995,

¹⁰ In recent decades, an increasing number of UN peacekeeping missions have been categorized as “multidimensional,” which means that they are “composed of a range of components, including military, civilian police, political affairs, rule of law, human rights, humanitarian, reconstruction, public information and gender” (UN DPKO 2003, 5).

¹¹ For a discussion of good offices, see Conflict Research Consortium (1998).

¹² Personal correspondence from A. Stork, advisor, UN Development Programme, 2011.

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for example, the military junta that had seized control of Sierra Leone in 1992 granted business associates of Executive Outcomes, a South African mercenary force, a twenty-five-year mining lease in return for security services (Davies 2000).

Even post-transition governments (occasionally with the assistance of foreign donors) may grant new contracts with very favorable terms, simply to attract major investments. This was the case, for example, with rutile mining in Sierra Leone, which had been the country's main source of export earnings before the war (IMF 2004). According to an internal government review, the agreements that the government of Sierra Leone signed with a foreign titanium extraction firm in 2001 could lead to the loss of about US\$8 million per year in tax revenues between 2004 and 2016 (Lambrechts 2009).

In addition to depriving the state of significant revenues poor contracts may also undermine the state's legitimacy in the eyes of the population, if the contracts create the impression that the state is corrupt or incapable of looking after the interests of the country as a whole. Poor contract terms may also foster corruption, give extractive firms too much power in the country's internal affairs, and enable extractive firms to engage in unsustainable resource use. Better contracts may also stipulate improved conditions for workers; establish stricter environmental and social safeguards; and include provisions for local development projects, such as the construction of schools, wells, and roads—all of which provide tangible peace dividends for local populations. For example, the renegotiated contract for Firestone's rubber plantation concession, in Liberia, included better housing for workers (Le Billon 2012b*).

Many post-conflict governments have reviewed, reassessed, and renegotiated resource contracts that were signed during hostilities or during the transitional period. The most complex set of reassessments—which addressed both mining and logging contracts, and involved parliamentarian and interministerial commissions as well as a number of donors and NGOs—took place in the DRC in 2004 and 2007. Although the 2004 Transitional Parliament Commission, which was chaired by opposition leader Christophe Lutundula, made specific recommendations, President Joseph Kabila, who controlled the final renegotiation, took limited (and controversial) action, including the imposition of windfall taxes and the reallocation of some concessions to Chinese companies (Vircoulon 2009).¹³

In Liberia, a review of timber-harvesting contracts (undertaken partly in response to international pressure) revealed that none of the firms under contract could demonstrate the legality of their operations; as a result, Ellen Johnson

¹³ The commission's recommendations included, among other things: the renegotiation or cancellation of sixteen contracts (which amounted to about half of all the DRC's logging concessions); the imposition of a moratorium on new logging concessions; judicial investigation of twenty-eight Congolese or international companies; and the prosecution of seventeen people for fraud.

Sirleaf, the newly elected president, cancelled all timber concessions (Altman, Nichols, and Woods 2012*). Johnson Sirleaf was also able to renegotiate—and significantly improve—a mining contract that had been signed by Mittal Steel and the transition government (Le Billon 2012b*).

Unfortunately, contract reviews and reappraisals have proved to be slow and contentious processes, as in the case of the DRC. In Liberia, which may be considered a model case, timber sector reform, including the revocation of timber concessions, has been deemed successful; nevertheless, the broader reforms that followed contract reappraisals effectively stalled large-scale timber harvesting for three years, frustrating timber companies and those who were eager to see more revenues flowing to Liberia's strained budget (Beevers 2012*).

Governments that do little (e.g., by failing to follow up on recommendations from contract review commissions), as well as those that undertake substantial measures (e.g., by instituting sweeping reforms that temporarily waylay investments), are both open to criticism. Yet another criticism that has been raised regarding the implementation of contract reviews is the risk of opening new opportunities for corruption or assigning privileged status to particular companies. In the DRC, for example, there was a suspicion, among Western donors and companies, that contracts were being renegotiated in order to facilitate the reallocation of copper and cobalt projects to Chinese companies (Marysse and Geenen 2009).

The meager outcomes of contract reviews can be partly explained by limited expertise and capacity. Other constraints on contract review include inadequate funding, asymmetric information, political fragility, and outright corruption. Finally, the policy recommendations of domestic authorities and international donors may clash with the objectives of ruling elites. Ultimately, as is illustrated by the outcomes in DRC and the Liberia, the successful review of concession contracts depends on political will. In the DRC, recommendations from the concession review foundered because of the president's lack of commitment; in Liberia, in contrast, the president was the driving force in the review process.

To encourage contractual reassessments donors should provide contract review committees with technical assistance and budgetary support. In Liberia, for example, the key to the success of the review was the support of a secretariat that included both Liberian and international technical and legal experts (Altman, Nichols, and Woods 2012*). Donors should also support domestic NGOs. In addition to advancing reform, NGOs often play a direct role in monitoring contract negotiation processes; once contracts have been granted, they may also monitor company operations.

In yet another strategy for supporting contract review, donors could make up for potential revenue losses during review and reform periods. Although budget assistance to the central government and other forms of aid partly address this problem, donors have so far failed to provide funding that is specifically intended to replace revenue losses that may be attributable to reform.

Commodity-tracking systems

Commodity-tracking systems, which trace the path of commodities from production to consumption, reduce the market value of noncertified commodities by making them more difficult to sell. More generally, such systems formalize exploitation and trade, and thereby curtail illegal resource exploitation and direct more revenues to state coffers. The diamond certification scheme created in Sierra Leone in September 2000, for example, targeted illegal production by rebels and soldiers, and also informed official investigations of a prominent government official who was ultimately tried and convicted for engaging in illegal mining.¹⁴

The Kimberley Process Certification Scheme (KPCS), which was created to prevent rebel groups from profiting from diamond mining and trade, is the best known and most fully developed tracking system to date (Grant 2012*). One of the keys to the success of the Kimberley Process (KP) was that it brought together representatives of governments, civil society, and the diamond industry as equal partners (Wright 2012*; Bone 2012*).¹⁵ The industry's presence, for example, was crucial to the development of a scheme that diamond producers and traders would both endorse and comply with.

Despite the KPCS's success, the value of the system has been subject to debate. The early stages of implementation (before the KPCS was officially established, in 2003) helped rein in the sale of conflict diamonds in both Sierra Leone and Angola. By 2010, less than 1 percent of world's total diamond production consisted of conflict diamonds,¹⁶ and some experts estimate that the proportion of illicit rough diamonds being traded had decreased from 25 to 10 percent.¹⁷ Finally, with the increase in officially registered mining sites and diamond exports, many diamond-exporting countries have experienced an increase in governmental revenues (Mitchell 2012*).

Nevertheless, Philippe Le Billon and Harrison Mitchell are circumspect about the KP's impact (Le Billon 2008b; Mitchell 2012*). As Mitchell points out, although the KPCS has increased state revenues—and thereby indirectly contributed to peacebuilding—its value as a means of preventing or ending conflict is harder to prove. Moreover, especially in countries where certification capacity is low and corruption is high, the scheme has had less than resounding success in preventing illicit mining and accurately documenting the origin of rough diamonds. For example, tax authorities in the Central African Republic

¹⁴ The official, who was minister of transport and communications at the time of his arrest, was sentenced to two years of imprisonment (*BBC News* 2001).

¹⁵ As of 2011, the KP had forty-nine members representing seventy-five countries (KP n.d.).

¹⁶ The conflict diamonds that are still being mined and traded come from Côte d'Ivoire, where the Forces Nouvelles rebel group taxes the rough diamond trade (UNSC 2011).

¹⁷ Personal communication, Ian Smillie, chairman of the board of directors, Diamond Development Initiative International, 2010. The figures are rough estimates.

(CAR)—a member state of the KP—estimate that between 25 and 70 percent of CAR diamonds are exported illegally (Jensen, Halle, and Lehtonen 2009); and in the DRC, a considerable proportion of diamonds that were actually mined in the conflict-affected eastern DRC are certified as having originated from Kinshasa, the capital (PAC 2009).

Another commodity-tracking scheme is the Forest Law Enforcement Governance and Trade (FLEGT) initiative of the European Union (EU), which encourages timber-producing countries that export to EU markets to adopt a voluntary timber-licensing system (Brack 2012*). In exchange, the EU funds capacity building and institutional development in the forest sector. FLEGT was not specifically designed for peacebuilding, but given its potential to improve forest governance, it may lend itself to peacebuilding purposes in places such as Liberia and the CAR. As of August 2011, six countries (Cameroon, the CAR, Ghana, Indonesia, Liberia, and the Republic of the Congo) had concluded negotiations with the EU, and the DRC, Gabon, Malaysia, and Vietnam had begun negotiations. Among the fifteen other countries that have expressed interest in the FLEGT initiative are Bolivia, Burma, Colombia, Côte d'Ivoire, and Sierra Leone (FLEGT VPAs n.d.).

In 2010, the Organisation for Economic Co-operation and Development (OECD) created the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. The guidance is intended for firms that are involved in mineral exploitation and trade, and is designed to assist such firms to protect human rights and avoid contributing to conflict (OECD 2010). The guidance, which applies to all phases of the supply chain that occur in conflict-affected or high-risk areas,¹⁸ specifies a number of actions that firms should undertake to achieve compliance with the OECD due diligence standards, including the following:

- Suspending or ceasing trade operations with dubious suppliers.
- Taking steps to increase leverage over suppliers to bring them into conformance with the standards.
- Developing relationships with local governing authorities, who may be involved in implementing the standards.
- Publicly reporting the findings of due diligence investigations and the measures that have been taken to ensure compliance with the guidelines.

Although the OECD guidance was not developed for any geographic region in particular, they were first endorsed, in 2010, by the International Conference on the Great Lakes Region (ICGLR 2010), an intergovernmental organization that promotes sustainable peace and development in the Great Lakes Region of Africa.

¹⁸ The phases of the supply chain include extraction, transport, handling, processing, trading, manufacturing, and selling.

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An example of commodity tracking imposed by an economically powerful country is the Dodd-Frank Wall Street Reform and Consumer Protection Act, which is intended to curtail the use of conflict minerals, such as coltan, from the DRC. Signed by President Barack Obama in July 2010, the act requires U.S. companies that purchase certain minerals from the DRC or bordering countries to engage in due diligence and to provide details on the chain of custody to both the public and the U.S. Securities and Exchange Commission (Kersch 2010). Finally, the Tin Supply Chain Initiative (iTSCi) of the International Tin Research Institute, an industry-based scheme, is designed to track the supply chain for tin in the DRC, from the mining site to the export point (Pistilli 2010; ITRI 2011).

All these initiatives—FLEGT, the OECD Due Diligence Guidance, the Dodd-Frank Act, and iTSCi—are emerging and promising means of extending the chain-of-custody approach to timber, and to tin and other minerals that may finance conflict. It is too early to identify lessons from these initiatives, but they do merit careful evaluation and monitoring to assess and improve their effectiveness.

ALLOCATING AND DISTRIBUTING RESOURCE REVENUES

Because most high-value resources are nonrenewable, they are irretrievably lost once exploited; thus, the distribution and allocation of the resulting revenues is of paramount importance. In fact, revenue allocation—specifically, ensuring that revenues are expended in such a way as to support medium- and long-term development—is potentially the most decisive factor in determining whether the future will bring sustainable peace (Collier and Hoeffler 2012*). Unfortunately, the expenditure side of resource management is often overlooked.

Revenue distribution—that is, revenue sharing between the central government and subnational entities (producing regions in particular) is a source of tension in many resource-rich countries. Grievances related to distribution may stem from a number of sources: for example, producing regions may believe that they are not receiving their fair share of resource-related revenues or being adequately compensated for the side effects of resource extraction, such as environmental degradation. Sometimes, such grievances rise to the level of violent conflict—as occurred in Bougainville, Papua New Guinea, in 1988—and need to be addressed as part of peace negotiations.

This section considers four lessons related to revenue allocation and distribution. First, the principal objective of revenue allocation is to foster peace and development; this objective cannot be accomplished in the absence of transparency and accountability. Second, natural resource funds are a valuable means of regulating allocation and mitigating the shocks associated with volatile commodity prices. Third, revenue-sharing arrangements must balance the rights and needs of producing and nonproducing regions. Finally, the grievances caused by resource extraction must be addressed.

Revenue allocation

Nigeria is an illustrative example of inefficient revenue allocation. By the early 2000s, despite nearly forty years of oil exploitation, Nigeria's per capita income was about the same as it had been in the 1960s. During the same period, the percentage of Nigerians living in absolute poverty increased from 36 to 70 percent (Sala-i-Martin and Subramanian 2003).¹⁹

Since the discovery of oil in the 1950s, Nigeria's resource wealth has been managed under chaotic political conditions. Oil revenues have fuelled widespread corruption, both in the oil-producing Niger Delta and in the central government, and efforts to stabilize the country through political and economic reforms have been unsuccessful. The Niger Delta suffers from chronic unrest, and past attempts to pacify and develop the region have failed dramatically (Mähler 2012*). In short, Nigeria—and the Niger Delta in particular—has little to show for the nearly 29 billion barrels of oil pumped from its reserves between 1960 and 2009.²⁰

From a peacebuilding perspective, an optimal allocation arrangement harmonizes the political objective of reconciliation and the economic objective of broad development. In practice, this often means balancing revenue allocation between producing regions and the country as a whole, while simultaneously (1) fostering productive long-term investments such as education, infrastructure, and economic diversification, and (2) responding to immediate needs such as health care, sanitation, and nutrition. If revenues are used to increase military power or to repress the population, rather than to benefit society as a whole, even large revenues will fail to strengthen development.

The vast literature on the "resource curse," including the chapters in this volume, suggests that transparency and accountability in revenue flows and expenditures are the keys to successful revenue allocation.²¹ Transparency and accountability go hand in hand: without credible data tracking revenue flows from extractive industries to the state, from state agencies to subnational entities or development projects, and through to the final expenditure of revenues, the government cannot be held accountable for expenditures. The primary safeguard

¹⁹ In Sala-i-Martin and Subramanian (2003), the meaning of *absolute poverty* is based on the World Bank's definition of the poverty line, under which an individual who subsists on less than one U.S. dollar a day (in 1985 dollars, adjusted for purchasing power parity) is considered to be in a state of absolute poverty.

²⁰ Calculated on the basis of statistics from EIA (2010).

²¹ The term *resource curse*, which was first coined by Richard M. Auty (1993), refers to the fact that when it comes to economic development many resource-rich countries do not perform as well as their resource-poor counterparts. More broadly, the term *resource curse* is used to refer to other negative outcomes, both political and social, that have been associated with abundant natural resources, including the government's detachment from the electorate and an increased risk of armed conflict (Collier and Hoeffler 2012*; Lujala and Rustad 2012*). The resource curse is also known as the *paradox of plenty* (Karl 1997).

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against both corruption and inefficiency is to ensure that revenues accruing to the state cannot be concealed, and that money the state claims to have used for development (e.g., to build health clinics and pay teachers' salaries) has in fact been used for that purpose.

The Extractive Industries Transparency Initiative (EITI), perhaps the best-known initiative of its kind, is designed to monitor the transparency of revenue flows from oil, gas, and mining. In Liberia, for example, the EITI has successfully increased public awareness of revenue flows and encouraged broad participation, on the part of both civil society and the public (Rich and Warner 2012*). The EITI is based on voluntary participation—the hope being that if enough countries implement the EITI standards, they will become a widely applied set of transnational rules.²² By August 2011, eleven countries (Azerbaijan, the CAR, Ghana, Kyrgyzstan, Liberia, Mongolia, Niger, Nigeria, Norway, Timor-Leste, and Yemen) had fully implemented the EITI standards, and twenty-four were in the process of doing so (EITI n.d.a.).

Several initiatives seek to extend EITI-like transparency requirements to the realm of governmental expenditures and to make exploration and exploitation contracts, as well as the prices agreed to by companies and governments, available to the public. The Natural Resource Charter, for example, includes transparency as one of its twelve core principles (Natural Resource Charter n.d.). Similarly, the EU's FLEGT initiative, discussed earlier in this chapter, is designed to increase the transparency of forest management by publishing information on audits and the allocation of rights, among other things (Brack 2012*).

Natural resource funds

One way to improve revenue allocation in post-conflict countries is to set up one or more types of natural resource funds. Savings and stabilization funds are relatively common in resource-rich countries; the largest are found in oil-rich countries such as Kuwait, Norway, Russia, Saudi Arabia, and the United Arab Emirates. Savings funds smooth revenue distribution across generations by creating a revenue base for the future, when the natural resources are used up. The principal aims of stabilization funds are (1) to absorb excess revenues that might overheat or otherwise disturb the economy and (2) to create a protective buffer against bust periods.²³ Stabilization funds work by setting revenues aside when they exceed forecasts or the government's absorption capacity, and releasing reserve funds when revenues decrease.

²² Another transparency initiative, the Publish What You Pay campaign, seeks to establish legal instruments (notably stock exchange rules) to achieve mandatory transparency. See PWYP (n.d.).

²³ An economy overheats when it grows at an unsustainably rapid rate, causing high inflation and creating excess production capacity, which will eventually hinder economic growth and may cause an economic downturn.

In addition to using savings and stabilization funds to save for future generations and cope with revenue fluctuations, most countries draw on their funds to finance current government expenditures. Withdrawals for this purpose often have annual ceilings, and fund regulations may specify the purposes for which fund disbursements can be used. Ideally, such regulations would be designed to move expenditure decisions beyond the realm of everyday politics and to ensure that revenues are used to address long-term development objectives.

Pure savings funds (such as Chad's Future Generations Fund), which are specifically intended to be released only in the future, may not be feasible or appropriate when current needs are overwhelming, as is often the case in post-conflict countries.²⁴ Stabilization funds, in contrast, may be more appropriate in post-conflict settings because they are designed to mitigate the revenue volatility associated with changes in commodity prices, which can wreak havoc in fragile economies.

Among the technical decisions that must be addressed in the design of savings and stabilization funds are the following: (1) the share of natural resource revenues to be directed to the fund; (2) how the funds will be invested; and (3) how the inflows and disbursements will be regulated. The laws and regulations governing the administration of the funds should be designed to protect against government misuse. One example of regulatory guidelines are the Santiago Principles, which were developed for the twenty-six members of the International Monetary Fund that have sovereign wealth funds.²⁵ They provide guidance on best practices (including governance and accountability arrangements) for savings and stabilization funds. Notably, the principles identify transparency as a cornerstone of fund structure, objectives, funding, and withdrawals.

Revenue sharing

Revenue sharing is often a prerequisite for a peace agreement and is frequently proposed as a solution for secessionist conflicts (Ross, Lujala, and Rustad 2012*). Tensions over resources tend to be particularly acute in low-income states characterized by substantial inequality between groups with distinct identities, as was the case in Aceh, Bougainville, and Southern Sudan (Stewart 2000).²⁶

In their chapter on the decentralization of resource revenues, Michael L. Ross, Päivi Lujala, and Siri Aas Rustad list three avenues for revenue sharing (Ross, Lujala, and Rustad 2012*). First, local governments may be granted the right to levy taxes directly on extractive industries—as, for example, in Canada and

²⁴ President Idriss Déby dissolved the Future Generations Fund in 2006, after the World Bank loosened its control over the expenditure of oil revenues (Gould and Winters 2012*).

²⁵ See IWG (2008).

²⁶ Such tensions are likely to be exacerbated where a particular minority group makes up the majority of the population in a resource-rich region.

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Russia, where provinces are permitted to levy some types of taxes themselves, or in Sudan, where the peace agreement of 2005 gave states the right to levy property taxes, royalties, and excise taxes (Haysom and Kane 2009).

Second, revenue collection from resource exploitation may be centralized, and subnational entities in a producing region may then receive a set percentage of the revenues originating from that region. This approach is used in Nigeria, where the oil-producing regions receive 13 percent of the revenues that are generated in their region; in Angola, where Cabinda Province receives 10 percent; and in Indonesia, where Aceh receives 70 percent. In the third revenue distribution option, producing regions receive indirect transfers from the central government, through the national budget, with preferential treatment for producing regions.

The first two approaches are decentralized, in that they give subnational entities more power over revenue flows; the third is a more centralized approach. In a completely centralized system, revenues are allocated strictly on the basis of population and needs. In Iraq, for example, after allocating 17 percent of oil and gas revenues to the Kurdistan Regional Government, the central government distributes the remainder according to the population of each governorate, regardless of whether it produces oil and gas.

Acknowledging that it may be impossible to achieve peace without some decentralization of revenue sharing, Ross, Lujala, and Rustad point out that the first two approaches can pose severe challenges in post-conflict countries, which often suffer from corruption and institutional weakness, rendering them unable to levy taxes and handle highly volatile revenue flows (Ross, Lujala, and Rustad 2012). In Chad, for example, most of the 4.5 percent development fund for the Doba region wound up being used for a few high-profile projects, and many of the associated subcontracts were granted to firms with connections to political elites (Gould and Winters 2012*). Similarly, the oil-rich Niger Delta is riddled with corruption and patronage, and the resulting inequalities have led to deep grievances among Delta inhabitants, many of whom feel that they have been deprived of the resource benefits to which they are entitled. Tensions about revenue distribution have led to a vicious cycle of violence and criminal activity, including oil theft (Mähler 2012*).

Three factors are central to the success of revenue-sharing arrangements.²⁷ First, all parties must have a clear and realistic understanding of what is being shared: for example, does sharing apply to revenues from all natural resources, or only to those from specific natural resources? Will revenues be calculated only on the basis of production, or will those from sources such as exploration rights and signing bonuses be included as well? Does revenue sharing apply only to current exploitation, or to reserves that have not yet been exploited or even discovered?

Second, management and ownership rights (e.g., how decisions will be made about granting exploration and exploitation rights, and by whom) need to be

²⁷ For a more general discussion of natural resource and peace agreements, see Mason, Sguaitamatti, and Gröbli (2012).

addressed. When such issues arise during peace negotiations, however, it may be best to leave them for subsequent discussions. In Sudan, for example, the decision to discuss only revenue sharing during the peace negotiations, and to defer the discussion of management and ownership to a later stage, prevented the early collapse of negotiations (Wennmann 2012*).

Third, issues that are left open in revenue-sharing agreements, or that are negotiated separately from such agreements, need to be considered from a political perspective to ensure that they do not create new tensions. In Iraq, constitutional provisions addressing revenue distribution and the ownership and management of oil resources appear to have been left deliberately vague, in the interests of fostering a sense of collective ownership. Unfortunately, the vague language has provoked fierce disputes about who owns the oil fields, who has the authority to grant exploration and extraction rights, and how revenues will be shared (Al Moumin 2012*).

Ross, Lujala, and Rustad suggest that distributing revenues through the national budget may be the avenue most suited to post-conflict situations. Under this approach, local governments need not create local taxation institutions and are assured stable revenue flows that are not subject to short-term swings in commodity prices or extraction activity. Notwithstanding the potential benefits of distributing benefits through the national budget, stakeholders from the producing region (who may include former rebels) are unlikely to support this distribution method because it confirms the central government's ownership of and authority over the reserves, as well as its control over revenue distribution. It may therefore be difficult to strike a peace deal on the basis of this arrangement.

Revenue distribution typically involves sharing between a central government and a producing region; under this arrangement, the entire region—including nonproducing areas—receives a designated share of revenues. In an approach coming into increasing use in Africa, revenues are distributed more locally, to producing areas and communities. One example of this model is Sierra Leone's Diamond Area Community Development Fund, which was launched in 2001 as part of a post-conflict reform of the diamond sector. The fund receives 0.75 percent of the total value of diamond exports, then disburses the revenues to diamondiferous regions. Payments are earmarked for small-scale development projects such as education, health services, and community infrastructure (Maconachie 2012*). The CAR has a similar model, in which revenues from timber taxes are distributed to community funds that finance employment-generating projects (Jensen, Halle, and Lehtonen 2009).²⁸

Under similar arrangements, local councils in Cameroon receive a share of the fees and taxes collected from logging companies operating in the vicinity. The DRC and Gabon have also decided to establish similar benefit-sharing systems

²⁸ Both Sierra Leone and the CAR have experienced challenges, however, in implementing these funds. In the CAR, when revenue shortfalls resulted in unpaid salaries, for example, the government raided the funds (Jensen, Halle, and Lehtonen 2009).

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for forestry, but the arrangements have yet to be implemented (Waugh 2010; Morrison et al. 2009). In Liberia, the government has created a trust fund to share benefits from some types of timber concessions with communities that are affected by logging (Waugh 2010, 2011). This approach is based on similar arrangements already in effect in the mining sector: the County Social Development Fund, for example, which was established by the mining firm ArcelorMittal and the government of Liberia, distributes revenues to the three counties where the company operates.

An alternative to the schemes discussed so far involves distributing revenues directly to the population. Because direct payments bypass governmental bureaucracy, they are less subject to corruption; they also provide a tangible peace dividend and can help alleviate tensions arising from historic grievances over resource distribution. Finally, by guaranteeing that everyone will get an equal share of resource revenues without having to compete for it, direct distribution can provide an incentive to keep the peace (Sandbu 2012*).

Compensation for harm related to resource extraction

Although few peace processes or peace agreements take the social and environmental damage associated with extraction into account, failing to compensate the victims of such damage can reignite tensions or fuel new conflict. Nor are the consequences of resource extraction the only source of compensation demands; in many countries, those who have suffered from wartime destruction—including the depletion of natural resources and the loss of livelihoods, shelter, and infrastructure—may demand redress. In Iraq, to compensate ethnic and religious groups that had suffered systematically under Saddam Hussein's regime, the 2005 Iraqi constitution awarded such groups a larger share of oil and gas revenues on a transitional basis, for an unspecified amount of time (Al Moumin 2012*).

In the Niger Delta, the environmental situation is critical, largely as a consequence of oil spills from pipelines and extraction sites. Although most of the spills have been caused by poor extraction practices and badly maintained pipelines, some have resulted from sabotage on the part of militias or from illegal tapping (illegally tapped oil is sold in both local markets and on the international black market) (Asuni 2009). Although Nigerian law holds oil companies liable for environmental damage (DPR 2002), the companies have argued that most of the spills are caused by sabotage and illegal tapping (Amnesty International 2009). If a landowner is lucky enough to be awarded compensation by an oil company, the compensation is typically small in relation to the damage—the equivalent of one year's loss of crop, even though the land has been ruined for years to come (FRN 2008).

The environmental harm that has sparked years of unrest in the Niger Delta is not unique. As Luke A. Patey shows, similar events may be unfolding in South Sudan, as it recovers from over two decades of war (Patey 2012*). Since the late 1990s, the rapid development of Sudan's oil sector has led to widespread soil contamination, hazardous-waste dumping, and the release of tainted water.

As Patey points out, unless the environmental damage is dealt with, there is a danger of persistent, localized conflicts, similar to those in the Niger Delta; such an outcome would be extremely harmful to the region's long-term development.

Governments and private firms share responsibility for developing a framework to address the damage caused by resource extraction. In Sierra Leone, one model under consideration recognizes that extractive industries will cause environmental damage, and therefore would require them to finance environmental cleanup through a remediation bond, which would be paid before extraction begins.²⁹

IMPROVING INSTITUTIONAL QUALITY

Institutional quality is key to the sound governance of natural resources; in fact, research suggests that institutional quality is decisive in the transformation of natural riches into economic development. A study by Halvor Mehlum, Karl Moene, and Ragnar Torvik, for example, shows that in countries with higher institutional quality, the adverse effect of natural resources on economic growth is weaker; moreover, in countries with the healthiest institutions, the adverse effect does not occur at all (Mehlum, Moene, and Torvik 2006).³⁰ In post-conflict situations, the ability to establish commodity-tracking systems, assess and renegotiate contracts, agree on revenue-sharing formulas, and efficiently and effectively invest resource revenues depends, to a large extent, on the quality and capacity of governance. Thus, many of the approaches described in this chapter depend on a post-conflict institutional framework that is at least partly functional. And because robust local and national institutions are crucial to the management of resources and revenues, institutional reform should be a peacebuilding priority.

Approaches to institutional reform

Although wholesale institutional reform is often unrealistic (and potentially destabilizing), various incremental strategies can be used to strengthen institutions in post-conflict settings. A strategic approach to institutional reform that focuses on a few select institutions—for example, those that are crucial for specific resource management tasks or responsible for particular resources—may be more effective than attempting to build capacity in all institutions at once. Liberia's post-conflict forest sector reform, for example, which was undertaken as one of the conditions for the lifting of UN sanctions, focused specifically on improving institutional capacity and financial management in the Forestry Development Authority (FDA),

²⁹ Personal communication, Oli Brown, environmental affairs officer, UN Integrated Peacebuilding Mission in Sierra Leone, July 2011.

³⁰ To assess institutional quality, Mehlum, Moene, and Torvik use an index, developed by Political Risk Services, that includes measures for rule of law, bureaucratic quality, government corruption, risk of expropriation, and government repudiation of contracts. For more details on the data on institutional quality, see Knack and Keefer (1995).

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the public authority that manages the nation's forests. Evaluations conducted as part of the reform process uncovered clear evidence of corruption and large-scale financial mismanagement; it was also determined that the FDA was overstuffed, and that many FDA employees lacked the required qualifications. Through training, restructuring, resizing, and the implementation of new financial management systems, which were put in place under the auspices of the Governance and Economic Management Assistance Program (GEMAP),³¹ the FDA has improved efficiency and constrained fraud and corruption (Altman, Nichols, and Woods 2012*).

Within a post-conflict country, some institutions may function more effectively than others; even if those institutions are not related to natural resources, they can sometimes be used to create a foundation for further reform. Another option is to build goodwill and experience by beginning reform in resource sectors where there is less tension. Michael D. Beevers argues, for example, that Sierra Leone may have missed a peacebuilding opportunity by failing to undertake forest reform, which would have created a platform for local communities and the state to discuss resource management. While forestry was not a source of conflict financing in Sierra Leone, as it had been in Liberia, forests and forest products are an important part of rural livelihoods, and could have provided opportunities to debate issues that were associated with less tension than, for example, diamond mining (Beevers 2012*).

Yet another approach is to build experience in awarding concessions and managing resource projects by bidding out smaller concessions and licenses. In Liberia, for example, the first timber contracts put out to bid were for three-year licenses covering less than 5,000 hectares. The next step was to award larger and longer-term contracts (Altman, Nichols, and Woods 2012*).

In some cases, it may make sense to decentralize some aspects of natural resource governance to the state, provincial, or district level. If resources have strategic importance or are the foundation of a country's assets and economy, such an approach may not be feasible nationwide; nevertheless, it may still be possible to grant subnational entities responsibility for governing specific sites or types of resources. For example, the central government may give local governments management rights over diamond deposits that can be mined through artisanal methods, while retaining authority over larger and more valuable sites, such as kimberlite deposits.³² Such an arrangement could, for example, give subnational governments both authority and responsibility for executive, legislative,

³¹ GEMAP, a joint effort of the government of Liberia and the international community, is designed to promote good governance through accountability and transparency. Among the key Liberian institutions targeted for GEMAP reform are the Ministry of Finance, the Central Bank, and the National Port Authority. The FDA was the first governmental agency to graduate from GEMAP. For further information, see www.gemap-liberia.org.

³² Kimberlite mining, industrial-scale mining that requires extensive infrastructure and investment, is used to extract diamonds from naturally occurring underground structures known as kimberlite pipes.

and judicial decisions regarding specific aspects of resource management. Particularly where a resource is the principal source of livelihoods in an area, local management entities may be better able to respond to constraints on resource use and to manage the long-term impacts of resource use than higher-level officials living outside the area (Ratner 2012). Decentralized authority can also increase cooperation (e.g., between various levels of government and between subnational governments and communities) and strengthen both the legitimacy of, and compliance with, the rules governing resource exploitation. The forest user groups that manage and collect revenues from state-owned forests in Nepal offer an example of successful decentralized resource management (Sanio and Chapagain 2012*).

One option is to partially postpone extraction—for example, by developing extraction capacity in the most peaceful regions first, to build capacity and avoid reviving and fuelling past conflicts. In a variant of this approach, larger projects may be postponed until institutional and economic capacity are sufficient to cope with the revenues. Naturally, postponing or suspending extraction is often impossible—and, in the case of resources that can be exploited artisanally, may be both difficult and undesirable. First, it is harder to control the many participants in small-scale (and often unofficial) mining operations than to control the few companies that are engaged in large-scale mining. Second, banning small-scale mining is likely to have severe adverse effects on local livelihoods. For example, in September 2010, when President Kabila banned artisanal mining in three provinces in eastern DRC (Sud Kivu, Nord Kivu, and Maniema) to curtail illegal mining and trade in the region, the ban severely disturbed local livelihoods and the local economy, affecting as many as 50,000 people, according to one local estimate (Seay 2010).³³

When it comes to institution building, scholars and development agencies alike tend to place the greatest emphasis on political institutions; Indra de Soysa argues, however, that economic reform is also central to institution building (de Soysa 2012*). Economic freedom—which de Soysa defines as encouraging individual liberties and free-market transaction—seems to promote peace, partly by providing entrepreneurial opportunities. Where economic opportunity is available only to the few or to members of specific groups (typically, those with ties to the state), violent rent seeking is more likely to occur.³⁴ In light of de

³³ Personal communication, Hassan Partow, DRC program manager, Post-Conflict and Disaster Management Branch, Department of Environmental Policy Implementation, UN Environment Programme, 2011. The ban was lifted on March 10, 2011.

³⁴ *Rent seeking* refers to attempts to capture economic benefits without contributing to overall economic production. In the case of high-value natural resources, where revenues are extraordinarily high in relation to the costs of extraction, rent seekers may attempt to capture rents through various means, including corrupt practices and patronage. In addition to the fact that rent seeking does not contribute to overall economic activity, it can directly undermine economic outcomes—by, for example, weakening economic institutions or diverting revenues from activities that are crucial for economic growth, such as education.

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Soysa's perspective, it is important for both donors and domestic authorities to acknowledge the value of economic reform as a means of strengthening institutions and promoting peace.

Approval and support from domestic authorities are important to the success of externally supported reform. In post-conflict situations, however, it may be difficult to determine who the legitimate domestic authorities are. This raises two questions: First, should sovereignty over natural resources be suspended during the early phases of post-conflict transition (for example, through a trusteeship, in which a foreign authority takes charge)? Second, will externally designed institutions achieve legitimacy and be effective in the long term? These questions are particularly pressing in post-conflict settings, where foreign actors have major stakes in resource sectors and could thus be perceived as establishing self-serving institutions, as was the case with the Coalition Provisional Authority in Iraq.³⁵ Because many high-value resource projects have life spans of several decades, external influences on institutions and on the legislation that governs resource contracts can have long-term effects.

Another important issue concerns the role of transitional authorities in reforming resource sectors and allocating resource contracts—a role that should depend on the nature, legitimacy, and capacity of the authority. For example, if the interim administration is a national unity government made up of the members of former armed groups, resource management reforms and exploitation contracts should be postponed until a democratically elected government is in place; otherwise, there is a risk that decisions will be guided by short-term interests (such as the desire to amass campaign funds). But if there is strong sense among the domestic population and the international community that a democratically elected administration may not be able to deliver, within a reasonable time, the types of reforms that will consolidate a just, equitable, and prosperous peace, then an alternative interim administration should step in at an early phase to set the stage for resource reforms. A case for an interim administration can be made, for example, by the UNSC, when it determines the scope of a UN mission's mandate to address natural resource governance failures; by donors, who (in collaboration with domestic leaders) often shape post-conflict institutional configurations; or even by broad social movements, if they have enough power to overcome the influence of established elites. Overall, the qualifications, intent, and incentives of all interim administrations need careful attention, notably on the part of domestic and international NGOs, who are often in a good position to gauge the long-term interests of the country as a whole.

Democracy can help to improve the quality and capacity of governance, but it would be wrong to assume that a general election will automatically improve resource management. Although elections provide political systems with crucial

³⁵ Allegations related to the countries' oil interests in the region called into question the U.S. and UK governments' motives for invading Iraq; both governments denied the allegations (Le Billon and El Khatib 2004).

elements of accountability and legitimacy, they do not guarantee long-term development, sustainable peace, or the emergence of robust institutions.³⁶ In fact, the first effect of democratization may be a fire sale on resources—first, to generate a visible peace dividend that will attract the notice of the populace; and second, to raise campaign funds for political parties (as occurred in Cambodia, before the July 1998 elections) (Le Billon 2000). Furthermore, although democracy tends to reduce corruption over the long term, the post-conflict transition to democracy may temporarily exacerbate more diffuse and competitive forms of corruption and thereby undermine the prospects for peace. In Cambodia in the mid-1990s, for example, botched elections left the government with two prime ministers and a plethora of provincial vice-governors vying for control of the resources in their provinces (Le Billon 2003, 2008a; Sung 2004).

Domestic institution building can be further supported by a number of external means: (1) international pressure, which may include the use of sanctions to be lifted only when regulations and management authorities meet minimal standards; (2) measures that relieve international pressure;³⁷ (3) the implementation of programs that grant privileged access to large export markets in return for compliance with set standards, such as the EU's FLEGT initiative; and (4) the passage of home-country legislation, of which the Dodd-Frank Act, passed in 2010 in the United States, is an example.

In some cases, to advance peace, it may be necessary to compromise—by, for example, integrating rebel factions into transitional governing institutions—but the costs of slowing down institution building need to be carefully considered, as does the risk of jeopardizing the long-term goals of justice and development. Awarding authority over resource management to potential peace spoilers for the sake of appeasement, for example, has a poor record of success.³⁸

Laws and regulations

When it comes to managing natural resources and their revenues, the establishment of sound institutions goes hand in hand with legal reform. Domestic laws addressing high-value resources define the objectives, standards, procedures, and institutions that govern the management of the resource base, revenue flows, and expenditures. Such laws may incorporate international voluntary standards: Liberia, for example, passed the Liberia Extractive Industries Transparency Initiative Act

³⁶ In fact, according to Paul Collier and Anke Hoeffler, between 1970 and 2001, in developing countries, the combination of high natural resource rents and open, democratic systems reduced growth (Collier and Hoeffler 2009).

³⁷ For example, by cancelling all or part of the national debt, donors can ameliorate external pressures that may be driving domestic authorities to focus on projects such as industrial mining, which offer the potential for high fiscal returns but create little direct employment and may undermine livelihood opportunities.

³⁸ Sierra Leone's experience with this strategy is discussed later in the chapter, in the section on peace spoilers.

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to implement the core requirements of the EITI. Liberia also added its own set of requirements concerning the publication of extractive companies' licenses and operating contracts, and included the forestry sector on the list of sectors covered by the requirements (Rich and Warner 2012*).

To prevent narrow interest groups from capturing revenues and to reduce the risk of renewed conflict, laws governing resources should safeguard transparency, accountability, representation, and equity. They should also be designed to ensure that natural resource revenues are geared toward activities and investments that will foster sustainable, long-term development while preventing major social and environmental impacts. In practical terms, this may mean that the laws will require specific allocations of expenditures to various sectors, such as infrastructure, health, and education, or the use of environmental impact assessments (EIAs).

Chad offers an example of how difficult it is to establish institutions and implement and enforce laws regarding natural resources and revenues—even when laws are in place, and there is substantial external pressure to abide by them. A landlocked country, Chad was unable to benefit from its oil without a pipeline that would connect its oil fields to the coast. Because international investment in the 1,070-kilometer Chad-Cameroon pipeline could not proceed without World Bank approval, the Bank was able to impose stringent conditions—reflected in the Petroleum Revenue Management Law (PRML)—on Chad's government (Gould and Winters 2012*³⁹).

The PRML, passed in 1999, was designed to reduce poverty; secure equitable distribution of revenues (among social groups, regions, and generations); and smooth volatile revenue flows. Among other provisions, the law allocated 10 percent of oil revenues to the Future Generations Fund; over 70 percent of oil revenues to priority sectors, including health, education, rural development, and the environment; and 4.5 percent of oil revenues to the development of Doba, the oil-producing region. The law also established both national and international committees to oversee revenue distribution and expenditures (Gould and Winters 2012*).

To ensure that the Chadian government complied with the PRML, oil revenues flowed directly into an escrow account that the World Bank had the power to freeze. Despite the unusually stringent conditions and careful oversight, the program did not achieve its objectives: the national and international oversight bodies were unable to hold the government accountable for expenditures. Instead, large portions of the oil revenues were spent on the military and channeled into patronage networks, which contributed to a renewal of Chad's internal conflict. The collapse of the program created through the PRML underscores the difficulty and complexity of managing high-value resources in conflict-affected countries, even when the international community—in this case, the World Bank—has

³⁹ Loi No. 001/PR/99 Portant Gestion des Revenus Pétroliers (Petroleum Revenue Management Law).

substantial leverage over government policies.⁴⁰ Chad's recent history also highlights the crucial role of the political elite, which must be committed to fair and effective revenue allocation (Gould and Winters 2012*).

Introducing or consolidating resource management legislation and establishing the necessary administrative and oversight bodies to implement it should be priorities for post-conflict state building. Liberia's forest sector legislation and accompanying regulations, which are probably the most progressive in Africa, exemplify best practices with respect to both legislation and institution building. The reform process, which was designed to achieve transparency at every phase of production and trade, yielded the National Forestry Reform Law of 2006 and a set of regulations to guide the management of the timber sector. The regulations address, among other topics, environmental impact assessment, contracts, preharvesting standards, logging, export permits, invoicing, and monitoring of payments (Altman, Nichols, and Woods 2012*).

Legislation governing resource management must be as specific as possible. In Iraq, for example, vague and potentially conflicting constitutional provisions have led to conflict within the central government and between different levels of government, exacerbating post-conflict instability (Al Moumin 2012*). The laws should clearly state, for example, what entities are in charge of granting exploration and exploitation rights, and how revenues are to be shared (Haysom and Kane 2009). In the case of resources such as oil and gas fields, it is important to specify whether legislation refers only to fields that are currently producing, to all known reserves, or to all current and future reserves. The 2001 Indonesian Law on Special Autonomy for the Province Nangroe Aceh Darussalam (Aceh), for example, failed to specify the basis on which oil and gas revenues were to be shared between the province and the central government, and lacked a baseline assessment of the resource reserves. As a result, the Free Aceh Movement rejected the legitimacy of the law—which was replaced, in 2003, by a purely military strategy on the part of the central government (Wennmann 2012*). Similarly, in Iraq, it is unclear whether only those oil fields that are currently producing, or future fields as well, are subject to the provisions of the 2005 constitution (Al Moumin 2012*).

Corruption and inefficiency

In post-conflict and conflict-affected countries, resource sector reforms often occur in the context of a corrupt or inefficient regulatory environment. Decentralizing some or all aspects of resource management, revenue collection, and expenditures is one means of circumventing corruption or inefficiency at the national level, but the local level is not necessarily without problems: in Nigeria, for example, corruption is in some cases even higher at the subnational level than at the

⁴⁰ Because of the mismanagement of the oil funds, the World Bank formally withdrew its support of the project in September 2008.

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national level. In 2008, the governor of Bayelsa, one of the most oil-rich states in the Niger Delta, began to explicitly address corruption in the state apparatus; among other initiatives, he invited external accountants and other advisers to audit the state finances. In the first year, the audit led to a reduction of more than 20 percent in the procurement budget and revealed that as many as 15 percent of state workers were fictive, allowing substantial reductions in salary costs. The governor is also promoting transparency in revenue flows from the state to local government authorities. In principle, these funds are to be spent for the benefit of local communities, but they are often eaten away by corruption (*Economist* 2009).

Sierra Leone's Diamond Area Community Development Fund, which distributes diamond revenues to local authorities to fund community development projects, offers another example of an effort to tackle revenue mismanagement. In 2006, the Ministry of Mineral Resources stopped disbursements to local governments because of widespread mismanagement of the funds at the local level. The disbursements were resumed in 2009, after more stringent conditions for proposals, contract bids, and monitoring had been put in place. In addition to improving the management of the funds, the new procedures are intended to increase transparency, public participation, and accountability (Maconachie 2012*).

Transparency is the single most important means of curtailing corruption and should be required throughout the natural resource chain, from the signing of contracts for exploration to the point of export. Public auctions of contracts, an effective way to increase transparency, should probably be used more often at both the local and national levels. By compelling companies to compete openly on the basis of price and contract conditions, public auctions limit the ability of extractive firms to hide the true value of extraction rights and subcontracts. In Nigeria, for example, the cost of some public procurement projects decreased by 40 percent after they were opened up for public bidding (Collier 2007).

ADDRESSING CROSS-CUTTING ISSUES

So far, the chapter has considered policy approaches to specific issues associated with the management of high-value resources in post-conflict situations. This section takes a broader view, examining issues that need to be taken into consideration in all settings, regardless of the policy approach (or combination of approaches) being used. The four subsections that follow address context, the role of external actors, public engagement and multi-stakeholder initiatives, and peace spoilers.

Context

Post-conflict natural resource management does not happen in a vacuum; it occurs in a specific context shaped by political, cultural, and historical factors at the local, subnational, national, and regional levels. Efforts to manage high-value

natural resources and achieve a durable peace must therefore take account of context—in particular, the types of resources and their particular characteristics; pre-conflict resource management strategies; and domestic and international conditions affecting exploitation.

The specific characteristics of resources, such as their mode of exploitation and livelihood impacts, present different challenges and opportunities for peace-building. For example, if the central government can readily access revenues, as in the case of offshore oil, then the main challenges are to maximize and allocate revenues. If, in contrast, the government cannot easily gather revenues, as with alluvial diamonds,⁴¹ the main challenges are to improve livelihoods, curtail peace spoilers' access to revenues, and formalize exploitation. In the case of alluvial diamonds, for example, governments may have to choose between awarding contracts to international companies that will engage in mechanized extraction, in the hope of raising more taxes and curtailing peace spoilers' potential access to revenues, or leaving the sector largely open to artisanal mining, in the hope of providing employment for local populations.

Some resources, such as timber and narcotics, present specific challenges. Because timber is required for reconstruction, it raises issues related to environmental protection and local livelihoods (Le Billon 2000; Le Billon and Waizenegger 2007). And because forests are often the last refuge for rebel groups, forest management must include military considerations. When it comes to narcotics, legalizing production is rarely an official option for governments, and even less so for intervening countries. Nevertheless, some governments tolerate cultivation to secure a conflict settlement, gain the support of local allies, reduce violence, and sustain local livelihoods—not to mention the benefit of narcotics revenues. In Afghanistan, foreign military forces have faced similar dilemmas and have had to make choices (e.g., eradicating poppy fields, and thereby undermining local livelihoods) that affected their relations with local populations (Le Billon 2009; Catarious and Russell 2012*; Pain 2012*).

Prewar resource management is another important contextual consideration. On the one hand, elements of the pre-conflict resource management framework may be sound enough to build on; it is not always necessary to start from scratch. On the other hand, pre-conflict conditions, such as patronage systems and discriminatory customary rules, may have adverse effects that need to be addressed.⁴² In Sierra Leone, the Diamond Area Community Development Fund was established to address unequal development in diamond-mining areas and to increase local participation in decisions about community development, but these efforts have so far faced substantial challenges that have undermined their effectiveness.

⁴¹ Alluvial deposits are found in sand, clay, and gravel discharged by rivers. Existing or ancient riverbeds can often be mined using simple tools such as shovels, buckets, and pans.

⁴² Customary rules are those that govern traditional social structures and behaviors.

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One of the main sources of the DACDF's problems was the failure to take account of the power relations and patronage systems that predated the civil war, and that continue to shape local decision making (Maconachie 2012*). In Chad, the new revenue flows from oil exploitation have reinforced existing patronage systems and enabled the political elite to further concentrate its power and undermine the consolidation of political institutions (Gould and Winters 2012*). Thus, in many cases, instead of ignoring existing informal power relationships, it may be more useful to take advantage of them, and to find ways to motivate political and economic elites to support reform. It is therefore important to determine what incentives elites may have to participate in and help implement post-conflict resource management strategies.

In the case of large-scale production, extractive concessions and contracts need to reflect the operating context. Post-conflict states often suffer from low capacity and lack of legitimacy, and war-torn communities may be vulnerable and ill equipped to cope with the additional stresses associated with extractive projects. Companies, meanwhile, may face hostility from local communities, continued insecurity, limited infrastructure, and incompetent and unreliable governmental institutions. To build the trust and knowledge that are required for extractive activities to contribute to peace, a full understanding of context is essential. As Volker Boege and Daniel Franks note, referring to mining in particular, "Every mine that is reopened or developed in a fragile post-conflict setting becomes a part of that setting"—and thus has the potential to contribute to both peacebuilding and conflict relapse (Boege and Franks 2012*, 87).

External actors

As advisers on policy reform and sources of investment and advocacy, external actors are often central to post-conflict resource management. This section focuses on the roles of international agencies and donor governments, extractive companies, and NGOs. Although these different types of external actors are discussed separately, they often work together, and should perhaps do so more frequently (Nichols, Muffett, and Bruch 2012). Among the examples of successful collaboration is the Liberia Forest Initiative, which was established by the U.S. government and included U.S. and Liberian governmental agencies, international development agencies, and Liberian and international NGOs (Altman, Nichols, and Woods 2012*).⁴³

⁴³ In another example, the U.S. Agency for International Development (USAID) has provided financial support to the Responsible Asia Forestry and Trade program, which brings together NGOs, governments, and the private sector for the purpose of improving forest management, resolving conflicts among stakeholders, and increasing the trade in legally sourced timber (Wallace and Conca 2012*). In the DRC, PACT, an international NGO, uses a public-private approach that brings together extractive companies, local communities, and the government (Hayes and Perks 2012*).

International agencies and donor governments

Since the early 1990s, international agencies and donor governments have become increasingly involved in post-conflict natural resource management. For example, the UNSC has issued resolutions with major implications for resource sectors, imposing sanctions and external supervision regimes. UN peacekeeping missions have occasionally administered transitional resource management authorities, as in Timor-Leste and Kosovo. Specialized UN agencies—including the UN Food and Agriculture Organization, the UN Development Programme, and the UN Environment Programme—have been active in institutional reforms and capacity building in many post-conflict countries, including Afghanistan, Cambodia, the DRC, Sudan, and Sierra Leone. Both the World Bank and the International Finance Corporation (IFC), the private sector arm of the World Bank Group, have provided extensive support for resource management reform—assisting, for example with the drafting of the mining code in the DRC. The World Bank Group, including IFC, is also involved in lending and in the coordination of foreign assistance.

Many donor agencies have been directly engaged in fostering reform; USAID, for example, has created programs to promote awareness of conflict commodities, such as timber,⁴⁴ and the United Kingdom (UK) Department for International Development actively promotes the EITI. The International Monetary Fund was among the early champions of transparency of revenue flows—most notably in Cambodia, with respect to logging, and in Angola, with respect to the oil sector. Regional organizations, such as the EU, have sought to better regulate access to markets; the most prominent example of such efforts is the EU's FLEGT initiative, for timber (Brack 2012*). The EU also participates in the KP, which regulates the diamond trade (Wright 2012*).

Foreign assistance, and the conditions that donors impose on domestic authorities in return for such aid (often referred to as “donor conditionality”), are important and time-sensitive instruments of governance in post-conflict settings.⁴⁵ In the immediate post-conflict period, when countries are most dependent on aid, donors can exert a great deal of influence over the pace and nature of reform, in some cases providing direct support for, or supervision of, domestic authorities. For example, donors might pressure local authorities to conduct contract reviews; undertake initiatives designed to increase transparency, accountability, and public participation in resource development; and establish safeguards for the collection and expenditure of revenues. In resource-rich countries, however, the leverage provided by aid dependence may eventually be undermined by increasing resource revenues; it is therefore important for donors to take advantage of the early window of opportunity and to lay the foundation for a successful withdrawal.

⁴⁴ See, for example, Wallace and Conca (2012*).

⁴⁵ See Boyce (2002).

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In many instances, donors will urge post-conflict domestic authorities to seek a rapid increase in public revenues. But once revenues begin to flow, domestic authorities may be tempted to bypass long-term reform and capacity-building initiatives, in the hope that fast-rising resource revenues will solve the country's problems. This is a serious error, as the combination of weak institutions and a resource boom has been shown to aggravate the resource curse.⁴⁶ To avoid such an outcome, donor conditionality should be sensitive to, and focused on, resource sectors. In addition, donors should provide the central government with the capacity to carry out reform. Although bilateral agencies have large budgets, little of that money is directed toward strengthening government: in Sierra Leone, for example, less than 10 percent of the US\$13 million spent by U.S. and UK aid agencies on diamond reform was used to directly improve government capacity (Le Billon and Levin 2009).

One factor that can complicate the donor-recipient relationship is the effort, on the part of donor nations, to further the interests of their own extractive firms. This raises two common issues: first, competition among donors that have distinct commercial interests (e.g., to participate in a major multilateral reconstruction contract); and second, collusion among donors that have shared vested interests (e.g., a desire to see the oil sector opened to foreign companies). These issues have gained particular importance and prominence as a result of two factors: (1) the increasing competition between resource companies from the West and those from the "BRIC" countries (China in particular, but also Brazil, Russia, and India) and (2) the official Chinese policy of noninterference in domestic affairs.

On the one hand, increased competition can have positive implications: host governments should be able to benefit from the fact that various countries are vying for access to their resources, and contracts with Chinese firms do appear to offer a number of potential advantages. On the other hand, despite its name, the noninterference policy has political impact: under the noninterference policy, Chinese extractive firms are willing to accept poor governance standards in host countries, and may have less incentive to engage in socially and environmentally responsible practices. Chinese assistance tends to reduce the leverage of donor countries and international agencies—which can, in turn, undermine the potentially positive effects of Western resource companies. The requirements associated with being publicly traded on a stock exchange, having official commitments to corporate social responsibility, or simply being a well-known commercial brand tend to make Western firms sensitive to reputational risks; such firms may also be subject to specific legislation (such as the U.S. Foreign Corrupt Practices Act); thus, such firms are generally more supportive of social and environmental standards.⁴⁷

⁴⁶ See Ross (2001) and Mehlum, Moene, and Torvik (2006).

⁴⁷ According to Scott Pegg (forthcoming), however, the differences between Western and Chinese companies, when it comes to corporate social responsibility, are not necessarily that large; nor do they matter that much.

Because Chinese labor costs are so low, resource and infrastructure projects import Chinese workers and make little use of local labor, which can create resentment among the local population. On the positive side, in the view of host-country governments, Chinese companies “get things done”; in addition, they often provide infrastructure deals that, under the right conditions, can reduce the risk of corruption and waste in state expenditures, thereby maximizing the public benefits of resource exploitation. In Afghanistan, for example, the contract for China’s copper concession called for the construction of major infrastructure, including the first national railway; a coal plant that would not only supply the project, but would also provide energy for portions of Kabul; groundwater systems; and schools, homes, and hospitals for local workers (Landay 2009). Moreover, the fast pace of Chinese infrastructure construction and resource exploitation can rapidly create tangible peace dividends that can consolidate the transition to peace. Finally, mid-level Chinese managers and technicians sometimes provide (cheap) hands-on training for local workers.

Limited exploitation opportunities can indirectly weaken financial, diplomatic, and even military support from Western donors, who are less inclined to provide assistance to post-conflict countries that are benefiting from a resource boom but that are not offering major trade opportunities. Thus, Western companies, possibly in association with major donor agencies, may need to compete by offering to build infrastructure in return for access to resources. At the same time, BRIC governments and firms—especially Chinese ones—need to more broadly support good governance through international agreements, bilateral relations, and corporate social responsibility initiatives.

Extractive industries

When hostilities end, post-conflict countries begin to seek revenues, and donors begin to promote foreign investment. As resource sectors open up, foreign extractive companies often become active players in post-conflict economies.⁴⁸ Given the high demand for certain commodities in international markets, foreign direct investment in high-value resource sectors often precedes investment in other sectors. But post-conflict states are typically weak, which puts them at a disadvantage when negotiating with extractive companies. The resulting agreements may prevent the host country from obtaining a fair share of revenues, from gaining access to the best extractive technology, or from including social and environmental safeguards.

Measures are needed to ensure that extraction projects are transparent and conflict sensitive, consult and involve local communities, and are operated responsibly. Voluntary standards that take into account the social and environmental context of resource exploitation can assist extractive firms—and the commercial

⁴⁸ For a more detailed view of the peacebuilding potential of private sector operations in conflict-affected countries, see Klein and Joras (2012).

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banks and international financial institutions that finance them—to play a more constructive role in post-conflict settings. The principal standards are IFC’s Performance Standards on Social and Environmental Sustainability, the Equator Principles, and the Voluntary Principles on Security and Human Rights.⁴⁹ EIAs are another approach used by donors and post-conflict governments to mitigate or prevent the environmental (and often social) impacts of large projects, including those that extract and process high-value natural resources (Brown et al. 2012; Kelly 2012). EIAs are designed to inform development decisions by identifying the likely impacts of a proposed project, as well as the likely impacts of alternatives. Where impacts cannot be avoided, EIAs usually identify potential mitigation measures.

Two factors have triggered considerable movement, within extractive industries, to develop and apply best practices and to promote efforts such as the EITI: (1) requirements originating with financing institutions or home-country legislation and (2) the desire to secure long-term profitability by establishing a reputation as a “reputable” company. The International Council on Mining and Metals, for example, an umbrella association of eighteen large mining companies, promotes sustainable development,⁵⁰ and the Tin Supply Chain Initiative of the International Tin Research Institute tracks the tin supply chain in the DRC.⁵¹

Unfortunately, multinational petroleum companies operating in countries with weak institutions may be an exception to the general trend toward greater corporate responsibility; Angola is a case in point. According to Arne Wiig and Ivar Kolstad, oil corporations perpetuate Angola’s patronage system by helping to finance it, meanwhile reaping benefits from the dysfunctionality of the country’s institutions. Wiig and Kolstad argue that although the oil companies have both an opportunity and a moral responsibility to improve governance in the country, they have so far been reluctant to do so (Wiig and Kolstad 2012*).

In Angola and many other post-conflict countries, weak institutional capacity may require private companies to step into the breach. For example, where local populations have been excluded from formal contract negotiations, firms bear the burden of seeking a “social license to operate” from local communities or risk long-term challenges to their operations (Boege and Franks 2012*); company-community relations may thus become central to preventing and alleviating local grievances.

Although extractive firms have primary responsibility for company-community relations, governments are also responsible for providing firms with an opportunity

⁴⁹ For more information on voluntary standards, see Shankleman (2012*). See also www.ifc.org/ifcext/sustainability.nsf/Content/PerformanceStandards; www.equator-principles.com/documents/Equator_Principles.pdf; and www.voluntaryprinciples.org.

⁵⁰ For more information on the International Council on Mining and Metals, see www.icmm.org.

⁵¹ Precept 12 of the Natural Resource Charter also reflects the trend toward greater corporate responsibility; see Natural Resource Charter (n.d.).

to act responsibly and develop good relations with local communities. For example, companies should be granted sufficient time to assess the context they will be operating in and to undertake the necessary consultations before they begin the physical development of a resource extraction project. In many instances, however, the amount of time that a company requests to conduct a participatory social impact assessment is considerably longer than that the government actually allows.⁵² Donors should also include capacity building and financial support in their support for mining sector reform. The quality and effectiveness of EIAs are often hampered by the lack of in-country capacity to conduct and review them (Brown et al. 2012; Bouma 2012; Kelly 2012). Thus, donors often separate technical assistance and reform, and fail to see the connections between mining and the environment—and to acknowledge the potentially negative effects of extractive industries.

Dialogue, understanding, and efforts to resolve local concerns are key elements of successful company-community relations. It is also important for companies to take responsibility for past wrongs and damages, particularly when operating in an area where extraction played a role in past conflict. Where extractive firms neglect to engage positively with communities, tensions may arise—as in Sierra Leone, where the failure of a large-scale mining project to deliver the promised amenities led to violent unrest (Kawamoto 2012*), and in Guatemala, where the environmental consequences of a gold and silver mine strained relations between the state, the mining firm, and local communities (Boege and Franks 2012*).

Nongovernmental organizations

International NGOs often cooperate closely with domestic NGOs. Broadly speaking, NGOs serve as checks and balances on the power of both the government and private firms. With respect to natural resources, such organizations generally focus on advocacy and monitoring—that is, efforts to protect local communities from the negative impacts of extractive activities on the environment, local livelihoods, and human rights. A few domestic and international NGOs have taken on a more operational role that includes advocacy campaigns, policy reforms, and partnering with extractive firms to help companies gain a social license to operate and strengthen local development.

International and domestic NGOs have greatly increased their effectiveness by working together. International NGOs, for example, back up domestic NGOs when they call domestic authorities to account, while domestic NGOs provide international NGOs with much-needed information and legitimacy. *Civilian Capacity in the Aftermath of Conflict*, a report by the Senior Advisory Group to

⁵² Personal communication, Diana Klein, project manager, Peacebuilding Issues Programme, International Alert, 2010.

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the UN Secretary-General, sets forth recommendations for how the UN can mobilize support from civil society, in the country and internationally, to support post-conflict peacebuilding in the areas of coordination, finance, and capacity building (UNSG 2011). The ability of domestic NGOs to advance democratic governance has both benefited from, and contributed to, the development of a governance model that is much more sensitive to local demands for accountability and participatory decision making; in fact, many governance and foreign assistance projects now rely on domestic NGOs to advance democratic governance. The EITI, for example, requires EITI-compliant countries to meet the following criterion: “Civil society is actively engaged as a participant in the design, monitoring and evaluation of this process and contributes towards public debate” (EITI n.d.b).

Public engagement and multi-stakeholder initiatives

Public engagement is critical to building support for extractive projects and establishing the legitimacy of more general resource sector reform. Although resource sector interventions often identify transparency and inclusion as goals, the record is mixed when it comes to implementation. Failing to engage the public in resource-related decisions can lead to significant problems, however, especially where communities depend on resources for their livelihoods. Engaging the public in post-conflict decision making, in contrast, appears to improve the long-term legitimacy of institutions and the sustained implementation of laws and regulations governing natural resources (Bruch et al. 2012). Stakeholder consultation is important not only to develop a better understanding of stakeholders’ concerns and needs, but also to build trust and a sense of ownership (Carius and Maas 2012).

Effective public engagement means consulting with local stakeholders during the earliest phases of project development (e.g., in the course of conducting social and environmental impact assessments); it also requires continuing dialogue about the negative side effects of extraction projects; benefit-sharing arrangements; and the expenditure of the new revenues accruing to local communities. Various foreign aid agencies, industry associations, and international financing institutions, including the World Bank, have developed environmental and social standards for large-scale projects. Under these standards, extractive firms must, for example, compensate local communities for loss of land, ensure that homes and livelihoods are at least as good as they were before extraction started, and spend at least one year conducting preparatory work before beginning extraction (Shankleman 2012*).

One approach that has been proposed to foster both constructive engagement among stakeholders and improved regulatory capacity (legislation, implementation, and monitoring) is known as a *resource compact* (Le Billon 2008c). A compact is a forum that has two purposes: (1) to build consensus through participatory decision making and (2) to inform the public by establishing a public platform

for discussion of the extractive sector. An example of such an initiative at the international level is the UN Global Compact, which fosters corporate social responsibility in the context of post-conflict recovery by promoting practices that improve security, economic development, and local relations while seeking to prevent corruption, grievances, and human rights abuses (UNGC and PRI 2010). Principles for Responsible Investment (PRI), a partner in the UN Global Compact, outlines environmental, social, and corporate governance commitments for the over nine hundred PRI signatories; among the commitments agreed to by the signatories are accountability, transparency, and engagement (PRI n.d.). At the national level, the multi-stakeholders groups that were established as part of the EITI are designed to ensure that civil society organizations and companies are openly involved in the design and validation of the EITI process.

Public forums, which bring together citizens, government officials, and extractive firms, lie at the heart of the resource compact model. The forums have two purposes: (1) to identify and articulate the principles and objectives that are guiding the extractive sector in general and (2) to serve as a platform for the discussion of specific issues related to particular industries or companies. Ideally, the forums would foster accountability by keeping the general population informed about the resource sector, including the potential value of reserves, forecasted revenue streams, and the social and environmental impacts of alternative modes of exploitation. This is similar to the EITI, where community meetings have been held to present reports and to foster transparency (Rich and Warner 2012*). The resource compact would be supported by a secretariat that would be responsible for acquiring, analyzing, and disseminating information.

Another function of the forums would be to improve participation in the development of resource sector policy by providing a national-level platform for stakeholders and for local communities affected by extraction. Such a platform could also help fill the regulatory vacuum that is characteristic of the post-conflict transition period. The 2008 report of the Technical Committee on the Niger Delta urged the immediate establishment of a multi-stakeholder compact for the purpose of tackling a number of critical issues, including environmental concerns, power supply, and the situation of youth (Mähler 2012*). As of July 2011, however, the compact had yet to be established, and the issues addressed in the report remained unresolved, largely because of lack of political will.

Peace spoilers

Stakeholders who have an interest in seeing a peace agreement fail—whether in the short or long term—are called *peace spoilers* (Stedman 1997). Spoilers seek to derail the peace process because they have something to lose from peace, either politically or economically. When high-value resources are involved, the stakes are high, and the temptation to spoil the peace may be intensified; peace processes must therefore ensure that, over the long term, peace is more beneficial than war for most groups, if not all.

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A number of different circumstances can foster peace spoiling. Excombatants, for example, may return to illegal exploitation and violence because reintegration programs are inadequate or because of unrealistic expectations regarding the size of peace dividends and the speed at which they can be delivered. Certain groups may wish to spoil the peace out of resentment at having been excluded from the peace process. Others may refuse to participate in the peace process at all, either because they stand to benefit either politically or economically from continued hostilities, or because they view peace as a threat to the revenue opportunities afforded by lootable resources.

Factionalism is a common problem: during or immediately after peace negotiations, splinter groups may persist in seeking more beneficial arrangements for their members or constituencies. The “copycat effect” can also undermine peace agreements: since peace agreements tend to grant benefits to different factions, other groups (some of which come into being specifically for this purpose) may attempt to obtain the same benefits. In Liberia, for example, between 1990 and 1995, twelve peace agreements failed. Abuja II, the thirteenth agreement, signed in 1996, was somewhat more successful, but the conflict did not end until 2003, with the signing of the Comprehensive Peace Agreement (Dupuy and Detzel, forthcoming). Among the various reasons that contributed to the failure of successive peace agreements were two in particular: (1) the copycat effect and (2) a pattern in which groups would sign an agreement (under severe international pressure), then continue business as usual under new names (or by means of splinter groups)—and thereby avoid officially breaking the agreement (Reno 1999).

Gaining a commitment to peace from potential peace spoilers sometimes requires political concessions; for example, rebel groups might be allocated key ministerial posts, other political positions, or authority over certain segments of the natural resource sector.⁵³ Often, the goal of political appointments is to encourage rebel groups to transform themselves from violent movements into political movements, and to provide rebel groups with other outlets to promote their cause. In Sierra Leone, as part of the 1999 Lomé Peace Agreement, the peace was “bought” by appointing Foday Sankoh, the leader of the Revolutionary United Front (RUF), as the head of the Commission for the Management of Strategic Resources, National Reconstruction and Development, and giving him the status of vice president (Kawamoto 2012*; Binningsbø and Dupuy 2009). In Angola, the 1994 Lusaka Protocol provided the National Union for the Total Independence of Angola (União Nacional para a Independência Total de Angola, or UNITA) with ministerial appointments, including the ministry responsible for mining.

Anna Jarstad and Desiree Nilsson have found, however, that such arrangements have a poor record in sustaining peace: first, they entail limited concessions

⁵³ Other power-sharing options that may be implemented in the wake of conflict include granting party status to former rebel groups; requiring proportional representation for various ethnic groups in parliament and other institutions; and establishing or enlarging the autonomy of subnational entities.

on the part of rebels; second, they can be exploited for the enrichment of rebel groups and private individuals; and third, they are as easily broken as they are established, without either side incurring significant costs (Jarstad and Nilsson 2008). Rebels may also use such appointments as an opportunity to regroup and rearm. In Sierra Leone, Sankoh cancelled all diamond-mining licenses in 2000, but let the RUF continue mining in secrecy (Binningsbø and Dupuy 2009)—an arrangement that benefited both Sankoh and the RUF and enabled the rebels to resume fighting one year after the Lomé Agreement.

Despite its poor track record, granting economic and political concessions to rebel groups may sometimes be the only way to achieve peace, even if only temporarily. In the case of economic concessions, it is important to avoid diverting revenues away from investments that could help alleviate poverty, build health care and education systems, and spur economic growth. In the case of political concessions, it is important to prevent former rebels from mismanaging the posts they are allotted. In Sierra Leone, for example, in an effort to check Sankoh's actions as head of the Commission for the Management of Strategic Resources, National Reconstruction and Development, President Kabbah ensured that the Ministry of Mineral Resources maintained political power and governmental authority over mineral resources (Binningsbø and Dupuy 2009).⁵⁴ Checks and balances must also be established for revenue-sharing initiatives, to curb corruption and to create incentives for potential peace spoilers to refrain from conflict; without adequate safeguards, the revenues may disappear before they reach regional authorities or inhabitants, as has been the case in Nigeria (Mähler 2012*). Checks and balances can be strengthened by initiatives that raise the costs of war for potential peace spoilers; in Angola, the DRC, and Sierra Leone, for example, sanctions and commodity-tracking systems have served such purposes.

When revenue-sharing provisions are integrated into peace agreements, it is important that such arrangements not be viewed as rewards for belligerents, which would create incentives for other groups to exert pressure for the same benefits. Although copycat demands are of concern primarily within countries seeking to end conflict, there is an international dimension as well: copycats may turn up in a neighboring country or even on another continent. If violent efforts to obtain greater autonomy (or to secede entirely) are perceived as a successful means of obtaining a higher share of revenues through peace agreements backed by the international community, groups in other countries may try the same approach.

COORDINATING AND SEQUENCING INTERVENTIONS

Because high-value natural resource management engages so many actors, often with differing agendas, priorities, and definitions of best practice, coordination is essential to avoiding unintended outcomes. As noted earlier, in September

⁵⁴ Apparently, Sankoh assumed that his powers were more extensive than they actually were—which led to his decision, in the spring of 2000, to cancel all diamond mining licenses.

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2010, President Kabila banned artisanal mining in eastern DRC; this took the Ministry of Mines by surprise, and disrupted a minerals traceability pilot project that was being conducted by the International Tin Research Institute (Economist Intelligence Unit 2010). Coordination is required not only among domestic authorities, NGOs, peacekeeping missions, and foreign aid agencies, but must also include domestic and international private sector entities. (The sheer number of actors involved in high-value resource management may explain, in part, why there has been so little coordination in the past.)

When coordination fails, the best-intentioned projects may undermine each other. For example, sanctions and drastic regulations can help prevent peace spoilers from gaining access to resource revenues, but they can also undermine economic recovery and local livelihoods. Similarly, foreign direct investment may help boost the economy, but its positive effects may be blunted in the absence of effective management institutions, support from local communities, and fairly negotiated contracts.

In addition to coordinating the activities of various actors, it is also necessary to properly time and sequence management strategies so that they support and build on each other. For example, resource sector management can draw on general governmental capacity building. Alternatively, as in Liberia, resource sector reform may provide a model for the reform of other sectors and non-resource-related governmental institutions (Altman, Nichols, and Woods 2012*).

Robust institutions are the backbone of resource management and peacebuilding. Institution building is difficult under any circumstances, but in post-conflict countries it can seem like an impossible task. Some scholars have observed that there are inherent difficulties involved in implementing peacebuilding tasks: specifically, what must be done in the short term, to create peace, may become a hindrance, in the long term, to economic development and institution building (Jarstad 2008; Sisk 2010). When it comes to implementing institution-building initiatives, the failure to take a long-term view may be accompanied by the notion that institution building cannot, or should not, be undertaken in the short term, but should instead be addressed once peace is more firmly established. It is important to realize, however, that institution building is a long-term goal because it requires a great deal of time, not because it can be postponed to meet the more immediate goal of consolidating peace. Postponing institution building in the short term risks destabilizing a country when donor fatigue sets in, and political elites and rent-seeking groups attempt to regain power over the resource sector.

Perhaps even more worrisome, failure to take immediate action on long-term goals risks missing the window of opportunity that opens immediately after the end of conflict, when the regime is weak and outside leverage is greatest. This is a particular concern in resource-rich countries, in which governments may be able to rely on resource revenues relatively quickly, once conflict ends, and where the goal of consolidating power, in order to acquire control over natural resources and the associated revenues, is often high on the agenda. In sum, the existence of long-term objectives does not justify inaction in the short term; unless immediate action is taken on long-term goals, they may never be achieved.

Paul Collier has argued that, ideally, institution building should precede resource exploitation (Collier 2010b). Unfortunately, donor nations and international agencies often fail to perceive the need to consolidate institutions until contracts have already been signed. Even when preventive interventions take place, they may be too slow in relation to the rapid pace of resource project development, as was the case in Chad: the pipeline and the oil fields were developed ahead of schedule, but institutional capacity building was delayed (Gould and Winters 2012*; Pegg 2009).

Table 1 lists various approaches to post-conflict natural resource management and links them to the two principal stages of the peace process (immediate aftermath and peace consolidation).⁵⁵ As noted earlier in the chapter, there is no one recipe for resource management: approaches must be selected and timed to meet the needs of a specific context. Depending on context, some approaches may not be appropriate at all, or may be used in peacebuilding phases other than those suggested in the table.

Ideally, many of the assessments listed in the table would be undertaken before conflict ends. In most cases, a strong regulatory framework should be set up as early as possible, when transparency, participation by civil society, and donor leverage are at their height, and the political field is open. The speed and extent of reforms will vary, however, depending on whether an interim authority or an elected government is in place. The final validation and implementation of reforms should be left to a democratically elected government. It is also important to avoid an abrupt or safeguard-free changeover from a transitional to an elected government: capacity building must continue during the changeover, and a certain level of supervision (on the part of civil society and international agencies) and accountability (through formal mechanisms, such as GEMAP) must be maintained.

Finally, given the limited resources of domestic authorities and peacekeeping missions, it is important to consider whether and how improving high-value natural resource management can support and reinforce other peacebuilding priorities, such as strengthening security; reviving local economies; reintegrating former combatants; and ensuring access to water, food, and basic services. In many cases, synergies can be found to link apparently unrelated objectives. Identifying and taking advantage of such synergies, however, requires information sharing and cooperation, which are not always easy to achieve in an environment where some actors engage in zero-sum competition for reconstruction funding, and cling to narrow, mandate-specific perspectives. Nevertheless, there is a great deal of potential to mobilize extraction firms and local communities to create synergies on the ground. A thriving and supportive local community is often the best guarantee of successful business ventures, and progressive extraction firms can provide, or at least advocate for, improved socioeconomic development.

⁵⁵ According to the UN Secretary-General, the immediate aftermath of conflict includes the first two years after a peace agreement or military victory (UNSG 2009); the subsequent post-conflict period is referred to as *peace consolidation*.

Table 1. Approaches to managing high-value natural resources in post-conflict situations

| | <i>Immediate aftermath</i> | <i>Peace consolidation</i> |
|--------------------------------|--|--|
| Extraction | <p>Assess the natural resource base and identify extraction sites.</p> <p>Assess the contribution of high-value natural resources to the conflict economy.</p> <p>Deploy peacekeepers to sensitive extraction sites.</p> <p>Impose and monitor sanctions on conflict resources.</p> <p>Impose a moratorium on new extraction contracts.</p> <p>Review natural resource concessions and contracts.</p> <p>Cancel noncompliant contracts.</p> <p>Assess overlapping demands on and claims to land (e.g., on the part of industrial and artisanal mining and agricultural interests).</p> <p>Assess how and to what extent local livelihoods depend on resource exploitation.</p> <p>Support local livelihoods by granting access to extraction areas and providing security.</p> <p>Assess and understand the local land tenure system.</p> <p>Freeze stolen assets.</p> | <p>Renegotiate unfair contracts.</p> <p>Sign new contracts once appropriate processes for negotiation, award, and follow-up are in place.</p> <p>Include and enforce environmental and social standards and safeguards for extractive industries.</p> <p>Formalize small-scale, including artisanal, resource extraction.</p> <p>If extraction is a source of instability, assist in the development of alternative livelihoods.</p> <p>Establish systems (e.g., cadastres) to register claims to land and other resources.^a</p> <p>Establish secure regional trading centers.^b</p> <p>Repatriate stolen revenues.</p> |
| Commodity and revenue tracking | <p>Identify and assess existing commodity-trading networks.</p> <p>Place monitors at trading and export hubs.</p> <p>Implement existing commodity- and revenue-tracking systems, such as the Kimberley Process Certification Scheme.</p> <p>Relocate revenue management from the ministry in charge of resource management to the ministry in charge of finance.</p> | <p>Fulfill revenue- and commodity-tracking requirements.</p> <p>Establish new commodity-tracking systems.</p> <p>Monitor the commodity chain, including production sites, to assess compliance with standards on the part of extractive firms.</p> <p>Introduce transparent revenue-tracking systems.</p> |

Table 1. Approaches to managing high-value natural resources in post-conflict situations (continued)

| | <i>Immediate aftermath</i> | <i>Peace consolidation</i> |
|-------------------------------------|--|---|
| Revenue distribution and allocation | <p>Determine whether revenue distribution contributed to the conflict.</p> <p>Assess local communities' immediate needs (e.g., food, water, sanitation, energy, and reconstruction of homes).</p> <p>Identify constraints to long-term development (e.g., low general educational attainment, poor health services).</p> | <p>Establish transparent revenue sharing and revenue allocation.</p> <p>Set up development and stabilization funds.^c</p> <p>Consider benefit-sharing schemes for local communities.^d</p> |
| Institution building | <p>Determine how to best distribute and expend natural resource revenues to meet both short- and long-term needs, and address the causes of conflict.</p> <p>Review institutions, laws, and regulations governing the management of high-value natural resources and their revenues.</p> <p>Begin restructuring, reforming, and building capacity in governmental institutions.</p> <p>Establish appropriate accounting procedures, including the auditing of resource revenues, in all government agencies and at all levels of government that deal with the resource sector.^e</p> <p>Begin developing or amending the legal framework for resource management.</p> <p>Identify incentives and power relationships, including patronage networks, that influence resource and revenue management.</p> <p>Establish schemes to reduce incentives and curtail opportunities for corruption.</p> <p>Institute anticorruption mechanisms.</p> <p>Build up incentives for elites to support and follow up resource strategies.</p> <p>Consider investigating past and ongoing corrupt practices.</p> <p>Use external expertise for technical and managerial support and supervision.</p> | <p>Continue support for institutional reform.</p> <p>Consolidate checks and balances through transparency and accountability mechanisms.</p> <p>Consolidate and monitor accounting procedures.</p> <p>Enforce laws, regulations, and policies governing the resource sector.</p> <p>Provide training to civil society groups, members of legislative bodies, and journalists to help build awareness of natural resource legislation and reinforce accountability in resource and revenue management.</p> |

Table 1. Approaches to managing high-value natural resources in post-conflict situations (continued)

| | <i>Immediate aftermath</i> | <i>Peace consolidation</i> |
|---------------------------|--|---|
| Stakeholder participation | <p>Identify and analyze the interests of stakeholders.</p> <p>Through effective participation (including public meetings and broad dissemination of information), build trust and foster dialogue between local communities, extractive companies, local authorities, and the central government.</p> <p>Include civil society groups in all assessments and policy discussions (e.g., assessments of the causes of past conflicts, and of the environmental impacts of extraction).</p> <p>Conduct community meetings to present options for local resource development.</p> <p>Assess local grievances and concerns related to extraction, benefit sharing, and resource distribution.</p> <p>Encourage extractive firms to obtain the free, prior, and informed consent of local communities before undertaking extraction.</p> | <p>Create awareness of potential sources of new conflicts over resources.</p> <p>Create a compact with multiple stakeholders to serve as a platform for oversight and the dissemination of information.</p> <p>Engage civil society in drafting plans for local and national natural resource management.</p> |

Note: Approaches are not listed in any particular order; context will determine when a given approach is implemented. Indentation of entries indicates a potential sequence for related approaches or activities.

- a. A cadastre is a public registry that grants and administers rights to land and other resources.
- b. Five such centers were established in Nord Kivu and Sud Kivu, in the Democratic Republic of the Congo, to strengthen the legal and commercial trade of minerals.
- c. Development funds channel revenues from natural resource extraction to development projects. Stabilization funds create a protective buffer against bust periods by setting revenues aside when they exceed forecasts or the government's absorption capacity, and releasing reserve funds when revenues decrease.
- d. For the purposes of this table, *benefit sharing* refers to an approach to sharing revenues that targets producing communities rather than larger regions.
- e. Such procedures should be put in place throughout the natural resource extraction chain, from granting exploration rights to awarding concessions and contracts, sharing benefits and revenues, tracking commodities and revenues, and spending revenues.

CONCLUSION

Since the establishment of the UN Peacebuilding Commission in 2005, the UN, the UN Secretary-General, and the World Bank have begun to formulate a conceptual and operational framework for post-conflict peacebuilding. They have noted the importance of natural resources to peacebuilding, and have called on the international community to more effectively address natural resources in the aftermath of conflict (UNSG 2009, 2010; World Bank 2011; UNEP 2009; UN 2011). This book responds to that call, and is intended to catalyze further research and best practice in the realm of peacebuilding and natural resources.

High-value natural resources offer a considerable advantage for countries emerging from armed conflict. If extracted and managed in a careful way, such resources can yield both an economic boost and an incentive for keeping the peace. Resource revenues offer a potential means of alleviating poverty, compensating victims, creating jobs, and rebuilding the country and the economy. Moreover, addressing the management of high-value natural resources can directly and indirectly reinforce other peacebuilding objectives—by, for example, improving livelihoods; fostering democratization; strengthening civil society; and supporting disarmament, demobilization, and reintegration. Natural resource revenues can also help to reduce dependence on international assistance, particularly over the long term. However, as the chapters in this volume show, the opportunities associated with high-value resources are accompanied by considerable challenges. In fact, when it comes to sustaining peace and long-term development, resource-rich countries tend to fare worse than others.

There is no single way to manage high-value resources in post-conflict countries, and many of the approaches that have been used have not yielded the desired results. This does not necessarily mean that the approaches were ill conceived; planning, implementation, and follow-up may have been inadequate, or there may have been unforeseen complications. Sometimes well-intentioned approaches may have unintended consequences. In the worst case, they may create new grievances that reignite conflict or cause new, low-level conflicts. Such results can sometimes be avoided through careful planning; in other cases, additional action may be needed to mitigate the consequences.

The variety of approaches to resource governance considered in this and other chapters in this book does not imply that all approaches are equally important or appropriate to every setting. The goal of this book is to provide a basis for developing an effective, context-appropriate set of strategies and policies. These strategies and policies should, among other things, address the role that natural resources played in the conflict; curtail attempts to spoil the peace; and take account of how resources were managed before the conflict. Other key aspects of natural resource management include transparency, accountability, participatory decision making, and revenue distribution and allocation, all of which are fundamental to securing equitable development and a sustainable peace.

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Many aspects of resource management are not specific to post-conflict settings, but they are of grave importance in such settings: in countries that have high-value natural resources, sound resource management is crucial to peacebuilding. Depending on the context, some or all of the approaches to resource management covered in this book may be relevant to efforts to address resource-related causes of conflict. Even where resources were not related to conflict, they can offer conflict-weary populations tangible peace dividends in the form of improved security and living standards, livelihood opportunities, and compensation for conflict-related damages. They can also help get the economy back on track and help rebuild pre-conflict institutions in ways that are not just different, but better. This, then, is the essence of the post-conflict challenge: to design the best possible interventions and support programs in settings where the policy framework is weak and state capacity is low. The goal of this chapter, and this book, is to provide sound guidance for such efforts.

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