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HIGH-VALUE NATURAL RESOURCES:

A BLESSING OR A CURSE FOR PEACE?

by Päivi Lujala and Siri Aas Rustad*

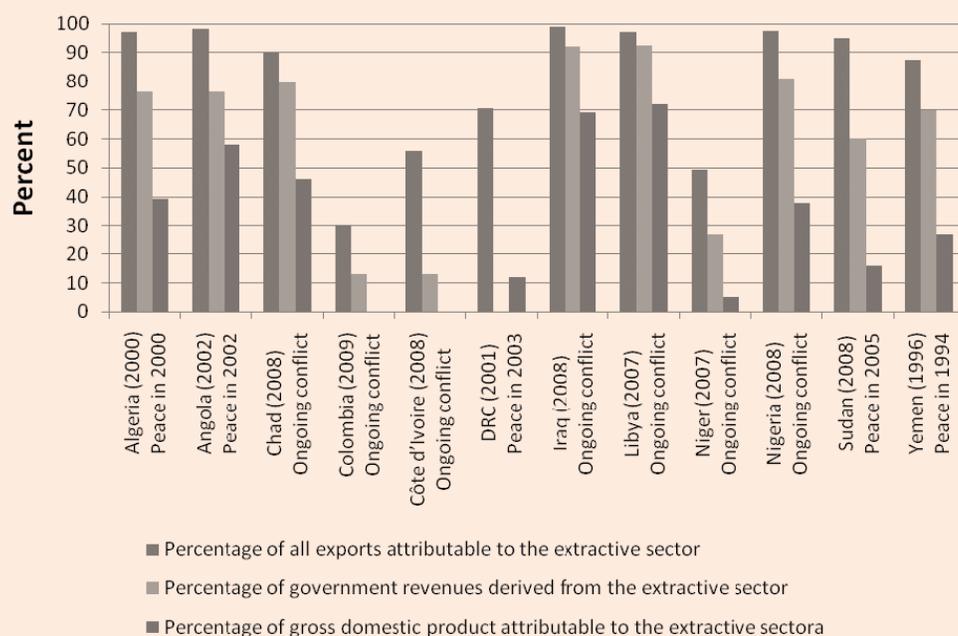
INTRODUCTION

High-value natural resources have the potential to promote and consolidate peace. Too often, however, they make the path to sustainable peace long and hazardous. Valuable resources can help to jump-start development, secure sustainable growth, raise living standards, and increase economic equality.¹ They are also an important source of foreign currency for cash-strapped governments, can reduce dependence on international aid, and can support compensation and post-conflict relief for war-affected populations.² But the promise of a brighter and more peaceful future is often spoiled by deep-rooted corruption and patronage, which confer benefits on small groups rather than on the population as a whole, and by shortsighted management of the resources and the revenues they generate.³ In addition, the mere presence of high-value resources can jeopardize peace if the resources become the focus of violent disputes or provide financing for groups that seek to ignite (or resume) armed conflict.

than sixty percent of government revenues and over ninety percent of all export revenues.⁵ See Figure 1. In Sierra Leone, following a brutal civil war that ended in 2002, when diamonds accounted for ninety-six percent of all exports.⁶ And in Chad, Iraq, Libya, and Nigeria—all of which were affected by armed conflict during the early years of the twenty-first century—oil and gas account for as much as seventy percent of gross domestic product and more than eighty percent of government revenues.⁷ In Niger, uranium and gold are important revenue sources,⁸ as are oil, cocoa, and coffee in Côte d'Ivoire,⁹ and diamonds and timber in the Central African Republic.¹⁰ In Burma, gas exports made up one-quarter of all exports, while forest products and gemstones were other important exports between 2008 and 2010.¹¹

When peace comes, the revenues from high-value natural resources—when managed well—can help finance reconstruction and other vital peace-related needs.¹³ When mismanaged, however, resource revenues can undermine both economic performance and the quality of governance, and thereby increase the risk of renewed violence.¹⁴

Figure 1. The Economic Role of the Extractive Sector in Selected Post-Conflict and Conflict-Affected Countries¹²



In many post-conflict countries, revenues from high-value natural resources—such as oil, natural gas, minerals, gemstones, and timber—are an integral (and even dominant) part of the national economy and state budget.⁴ In post-conflict Algeria, Angola, and Sudan, for example, oil and gas account for more

Recent high-profile reports by the U.N. Secretary-General, the World Bank, the U.N. Environment Programme, and the United Nations have highlighted the need to more effectively harness high-value natural resources for development and peace-building.¹⁵ If managed effectively, high-value natural resources constitute substantial assets that national and international actors can use to support core peace building objectives, including macroeconomic recovery, generation and support of livelihood, the reform of governance and political processes, and security improvement.¹⁶

The fact that so many resource-rich countries are unable to achieve long-term peace, however, raises some difficult questions about how high-value resources should be managed in post-conflict settings. For example,

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how can the environmental effects of resource extraction be minimized? How can illegal extraction be curtailed without damaging livelihoods? How can one ensure that revenues are used to advance long-term development objectives? The goal of our analysis here is to provide insight into these and similar questions — for the benefit of national and local governments, national and transnational civil society organizations, extractive industries, and the international community. To this end, policy makers, field researchers, practitioners, and scholars—all of whom have close knowledge of the issues at hand—have been asked to share their views on the challenges associated with the management of high-value resources in post-conflict and conflict-affected countries.

FROM POTENTIAL PROSPERITY TO CONFLICT: WHAT GOES WRONG?

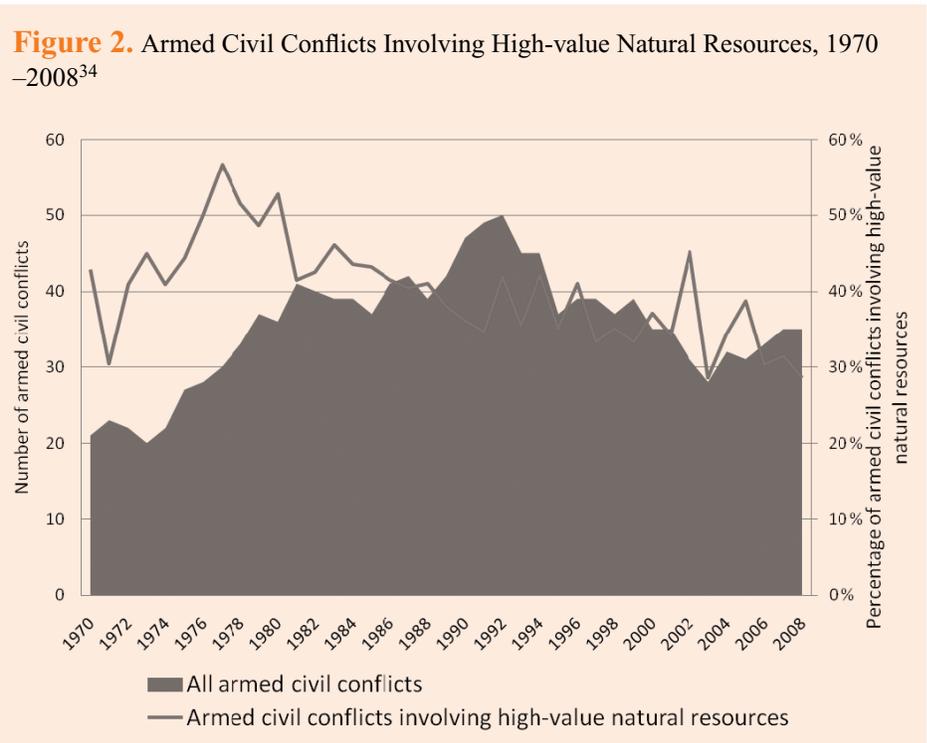
High-value natural resources have been associated with dozens of armed conflicts, millions of deaths, and the collapse of several peace processes; case study and statistical evidence confirms that such resources play a role in sparking and fueling armed civil conflict.¹⁷ According to data gathered by Siri Aas Rustad and Helga Malmin Binningsbø, between 1970 and 2008 the portion of armed civil conflicts that were in some way related to high-value natural resources ranged from twenty-nine to fifty-seven percent.¹⁸ See Figure 2.

Why is peace so difficult to achieve and sustain in the presence of these resources?¹⁹ High-value natural resources increase the risk of conflict in a number of ways. The risk of conflict can be directly increased when access to revenues motivates or finances belligerent movements, or when grievances are created (1) by unmet expectations or inequalities in the distribution of revenues, jobs, and other benefits, or (2) by the negative side effects of resource exploitation.²⁰ The risk of conflict can be indirectly increased when resource sectors undermine a nation's economic performance and the quality of its institutions.²¹ Thus, the three main avenues that lead from natural resources to armed conflict are resource capture, resource related grievances, and adverse effects on the economy and institutions.²²

Paul Collier, Anke Hoeffler, and Päivi Lujala suggest that the capture of resources for personal or regional enrichment is a possible motivation for rebel uprisings and violent secessionist movements.²³ Although resource capture can be one of the goals of armed rebellion, it is rarely, if ever, the sole motivation.²⁴ Even in Sierra Leone, where the Revolutionary United Front has been represented as the classic example of a predatory, greed-driven movement, the reality is far more complex.²⁵ More often, resource capture is a means of financing warfare and attracting

supporters.²⁶ For example, the Revolutionary Armed Forces of Colombia (Fuerzas Armadas Revolucionarias de Colombia, or "FARC") has for decades relied on kidnapping and the production and selling drugs to finance its insurgency.²⁷ As efforts to curtail FARC's access to income from these activities have met with some success, FARC has turned to gold mining to support its violent campaign against the government.²⁸

Grievances can motivate armed conflict, particularly when the parties to a resource related dispute are divided along ethnic, religious, or other lines.²⁹ Among the events that may spark violent uprisings are land appropriation, environmental degradation, population displacement, large inflows of migrants, and frustration over unfulfilled economic expectations.³⁰ Examples of grievance-based conflicts include Aceh, in Indonesia; Bougainville, in Papua New Guinea; Kurdistan, in Iraq; northern Niger; and southern Sudan.³¹ Grievances do not necessarily arise in the context of potential regional autonomy, as was the case in Aceh and South Sudan.³² They may also occur in response to the abuse of power by local elites, as was the case in Sierra Leone.³³



With respect to economic growth and developmental outcomes, many resource-rich countries perform poorly in comparison to their less resource-rich counterparts.³⁵ This phenomenon, often referred to as the *resource curse* or the *paradox of plenty*,³⁶ is exemplified in countries such as Algeria, the Democratic Republic of the Congo, Iraq, and Nigeria.³⁷ The resource curse has a number of potential causes, including the following:

- A government that is able to finance its budget through natural resource revenues rather than public taxation can easily become detached from, and therefore less accountable to, the populace.³⁸

- Resource revenues often fuel patronage, corruption, and rent seeking, all of which may promote the interests of a small and predatory elite.³⁹ In Nigeria, for example, it is estimated that one percent of the population enjoys eighty percent of the oil revenues.⁴⁰
- When the group in power focuses on short-term gains (sometimes in an effort to meet popular demands), the results may include overspending, poor investment decisions, and ill-conceived economic policies.⁴¹
- In countries whose economies depend on a few valuable resources, the weakness of political and economic institutions may be compounded by exposure to price shocks, which occur when rapid shifts in raw material prices lead to abrupt fluctuations in resource revenues.⁴²

Political and economic underperformance is endemic in many resource-rich countries—which, according to empirical studies, renders them vulnerable to conflict.⁴³ Several studies have documented that armed civil conflict is more likely to occur in poor countries than in rich ones.⁴⁴ Research also shows that dysfunctional institutions and low state capacity are positively correlated with an increased likelihood of conflict.⁴⁵

Supporting the case study evidence, several statistical studies document strong and significant relationships between particular natural resources and conflict, but few have been able to disentangle the possible mechanisms behind the relationships.⁴⁶ James Fearon and David Laitin, for example, have found that oil increases the likelihood of conflict—a finding that has been confirmed by the work of Indra de Soysa and Eric Neumayer, Macartan Humphreys, and Päivi Lujala.⁴⁷ Lujala has also found that when oil and gas are located in the conflict area, conflicts tend to be longer and more severe.⁴⁸ Taken together, Lujala shows that (1) oil-producing countries are 1.5 to 2 times more likely to experience armed civil conflict than nonproducers, and that (2) when internal conflict occurs in a region that has oil reserves, it lasts twice as long as conflicts that occur in areas without oil reserves, and combatant deaths are twice as high.⁴⁹ Collier and Hoeffler's 2006 study of conflict types links oil to higher risk of secessionist conflict, and Lujala shows that secessionist conflicts in regions with oil reserves tend to be more severe than any other conflicts.⁵⁰

Diamonds and other gemstones have also been subject to statistical studies.⁵¹ Fearon and Lujala have shown that gemstones have effects similar to those of oil—namely, conflict is more likely and tends to last longer.⁵² The role of timber, opium, and other high-value crops is less clear.⁵³ There is some evidence

that opium cultivation makes conflicts last longer, but little systematic evidence links timber production to civil war.⁵⁴

RESOURCES FOR CONFLICT

Because natural resources have varying characteristics, they are not equally relevant to conflict—and those that are relevant may be so for different reasons.⁵⁵ High-value resources, for example, may be either renewable or nonrenewable, although most—such as oil, gas, rutile, coltan, cobalt, diamonds, and gold—are nonrenewable, and tend to be located in geographically limited areas.⁵⁶ What all high-value resources have in common, however, is the potential to yield substantial revenue.⁵⁷

Some high-value resources are limited to confined areas and depend on sophisticated and expensive extraction methods or require special types of transportation (e.g., pipelines).⁵⁸ Because such resources are difficult to loot and are generally securely controlled by the government during periods of both peace and war, they provide fewer opportunities for conflict financing.⁵⁹ Thus, the revenues from resources such as oil, natural gas, kimberlite diamonds, copper, and rutile are likely to accrue to the central government and those who control it.⁶⁰ Such resources may nevertheless play a role in conflict: rebel movements may seek to oust the government to gain control of them, and if the resources are located in more remote areas, they may play a role in secessionist uprisings.⁶¹ Rebels may also loot existing stockpiles of commodities or may attempt to bring extraction or transportation to a halt, in order to cut off the central government from its revenue source.⁶² Finally, the large revenues derived from high-value resources may increase the risk of conflict through adverse effects on political and economic institutions.⁶³

Some high-value resources are linked to conflict because of their financing potential.⁶⁴ However deep grievances may be, rebellion is unlikely to begin or to be sustained without financing opportunities.⁶⁵ Since the end of the Cold War, financing from the superpowers has declined and revenues from valuable natural resources have gained importance as a source of conflict financing.⁶⁶ The resources most suitable for wartime looting have extremely high value-to-weight ratio and can be easily extracted, concealed, smuggled, and sold.⁶⁷ Easy extraction is a particular advantage: a resource that can be extracted by individuals or small groups using simple tools (that is, through artisanal mining techniques) can be readily exploited by rebels who either undertake the mining themselves or use forced labor.⁶⁸ Among the commodities with high price-to-weight ratios that can be artisanally mined are alluvial gold, alluvial diamonds, and

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gemstones such as rubies and sapphires.⁶⁹ Rebels do not need to rely on extraction directly; they also engage in illegal taxation of trade and export routes.⁷⁰ In some cases, including Colombia and Nigeria, rebels have succeeded in obtaining ransoms from extractive firms by threatening to blow up oil pipelines or by kidnapping personnel working on installations.⁷¹

When it comes to conflict financing, many natural resources have another advantage: they are generic, which means that their origins cannot be traced as easily as those of manufactured products.⁷² Because generic illegal commodities can be readily integrated into legal trade channels, they are a particularly lucrative form of contraband, with trade prices that differ only marginally from those of their legal counterparts.⁷³ Another advantage of some high-value resources is their scarcity.⁷⁴ Some occur in only a small number of countries and have few substitutes, and are, therefore, of strategic importance.⁷⁵ Demand for such resources may sometimes override other considerations, such as the legality of the exploitation, the behavior of the government that has granted exploitation rights, and the role of the commodities in financing warfare.⁷⁶

Of course, resources other than high-value minerals may play a role in conflict or have adverse effects on economic and political institutions.⁷⁷ Most notable are coca and opium, which have been linked to conflicts in Latin America and Asia, respectively, and timber, which has been connected to a number of conflicts in Africa and Southeast Asia.⁷⁸ Fisheries have also been used to finance conflict; in Somalia, for example, some warring groups have sold false fishing licenses for offshore tuna reserves.⁷⁹

CONCLUSION

When conflict ends, many of the original causes often remain unresolved—whether they relate to resources or not—and may even have been aggravated by the grievances and economic and political havoc associated with the conflict itself.⁸⁰ Post-conflict countries thus face daunting challenges when it comes to building peace, reducing poverty, and managing natural resources—particularly when poor resource management may be undermining both peacebuilding and poverty reduction.⁸¹ It is clear that many resource-rich post-conflict countries are unable to sustain peace.⁸² This observation has been confirmed by empirical studies: for example, Rustad and Binningsbø's analysis of 285 episodes of armed civil conflict shows that when natural resources play a role, the period of post-conflict peace is forty percent shorter than when they do not.⁸³

The difficulty of sustaining peace when high-value natural resources are involved has two key implications: (1) the conflicts involving such resources are generally harder to resolve; and (2) thus far, the measures that have been used to manage natural resources and their associated revenues are generally unsatisfactory.⁸⁴ Thus, improved management of high-value natural resources and the associated revenues is fundamental to peace building. 

This article is an edited version of the first chapter of a volume entitled *High-Value Natural Resources and Post-Conflict Peacebuilding*, which addresses a full range of challenges associated with high-value resources in post-conflict settings. This volume reflects the perspectives of forty-one contributors and considers the experiences of eighteen countries with analyses of additional countries.

The volume's chapters are grouped into five sections that examine specific challenges and opportunities within each stage of the resource chain:

1. The ways in which host governments, extractive industries, and the international community can strengthen the management of extraction to promote peace.
2. The instruments used to track commodities and revenues.
3. The pros and cons of various options for revenue distribution, including whether producing regions should receive preferential treatment in revenue distribution, as well as measures for stemming corruption.
4. The role of revenue allocation and institution building, including several in-depth case studies on various approaches.
5. The importance of taking local livelihoods and economies into account in the design and implementation of approaches to managing high-value natural resources.

Taken together, the chapters in the volume offer a consistent message: proper management of high-value natural resources is crucial in the aftermath of armed conflict. Effective management of these key assets can support a range of peacebuilding objectives—from livelihood and macroeconomic recovery, to good governance and inclusive political processes, to improved security. The volume also demonstrates that there is no single, universally applicable approach to natural resource management in post-conflict settings.

Endnotes: High-value Natural Resources: A Blessing or a Curse for Peace?

¹ See generally Shahid Yusuf, World Bank, *Economics through the Critical Look at Thirty Years of the World Development Report* (2008) (discussing the successes and failures of the World Bank and global development).

² See generally U.N. Env't Programme, *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*, (Feb. 2009), http://www.unep.org/pdf/pcdmb_policy_01.pdf.

³ See Philippe Le Billon, *The Political Ecology of War: Natural Resources and Armed Conflict*, 20 Pol. GEOGRAPHY 561, 566-67, 578 (2001) (asserting that although many patronage systems are corrupt, the phenomenon of patronage is distinct from that of corruption).

- ⁴ Int'l Monetary Fund ("I.M.F."), *Algeria*, Country Rep. No. 05/51 (Feb. 2005); *Angola*, Country Rep. No. 07/355 (Oct. 2007); *Sudan*, Country Rep. No. 11/86 (Apr. 2011); *Sierra Leone*, Country Rep. No. 09/12 (Jan. 2009); *Chad*, Country Rep. No. 10/196 (June 2010); *Iraq*, Country Rep. No. 11/75 (Mar. 2011); *Socialist People's Libyan Arab Jamahiriya*, Country Rep. No. 08/301 (Sept. 2008); *Nigeria*, Country Rep. No. 11/57 (Feb. 2011); *Niger*, Country Rep. No. 09/70 (Feb. 2009); *Côte d'Ivoire*, Country Rep. No. 10/228 (July 2010); *Central African Republic*, Country Rep. No. 10/332 (Oct. 2010); Sean Turnell, *Finding Dollars and Sense: Burma's Economy in 2010*, in FINDING DOLLARS, SENSE, AND LEGITIMACY IN BURMA (Susan Levenstein ed., 2010).
- ⁵ I.M.F., *Algeria*, Country Rep. No. 05/51 (Feb. 2005); *Angola*, Country Rep. No. 07/355 (Oct. 2007); *Sudan*, Country Rep. No. 11/86 (Apr. 2011).
- ⁶ I.M.F., *Sierra Leone: Selected Issues and Stat. Appendix*, IMF Country Rep. No. 09/12 at 55 (Jan. 2009), <http://www.imf.org/external/pubs/ft/scr/2009/cr0912.pdf>.
- ⁷ I.M.F., *Chad: 2010 Art. IV Consultation: Staff Rep; Staff Supp.; Pub. Info. Notice on the Exec. Bd. Discussion; and Statement by the Exec. Dir. For Chad*, IMF Country Rep. No. 10/196 at 5, 7 (June 2010), <http://www.imf.org/external/pubs/ft/scr/2010/cr10196.pdf>; I.M.F., *Iraq: Second Rev. under the Stand-By Arrangement, Requests for Waiver of Applicability, Extension of the Arrangement, and Rephasing of Access – Staff Rep; Press Release on the Exec. Bd. Discussion; and Statement by the Exec. Dir. for Iraq*, IMF Country Rep. No. 11/75 at 4-5 (Mar. 2011), <http://www.imf.org/external/pubs/ft/scr/2011/cr1175.pdf>; I.M.F., *Socialist People's Libyan Arab Jamahiriya: Stat. Appendix*, IMF Country Rep. No. 08/301 at 4-5 (Sept. 2008), <http://www.imf.org/external/pubs/ft/scr/2008/cr08301.pdf>.
- ⁸ I.M.F., *Niger: Selected Issues and Stat. Appendix*, IMF Country Rep. No. 09/70 at 100 (Feb. 2009), <http://www.imf.org/external/pubs/ft/scr/2009/cr0970.pdf>.
- ⁹ I.M.F., *Côte d'Ivoire: Second Rev. under the Three-Year Arrangement under the Extended Credit Facility, Request for Waivers of Nonobservance of Performance Criteria, and Financing Assurances Rev. – Staff Rep.; Staff Statement; Press Release on the Exec. Bd. Discussion; and Statement by the Exec. Dir. for Côte d'Ivoire*, IMF Country Rep. No. 10/228 at 9 (July 2010), <http://www.imf.org/external/pubs/ft/scr/2010/cr10228.pdf>.
- ¹⁰ I.M.F., *Central African Republic: Sixth Rev. under the Arrangement under the Extended Credit Facility and Fin. Assurances Rev. – Staff Rep; Debt. Sustainability Analysis; Staff Supp.; Press Release on the Exec. Bd. Discussion; and Statement by the Exec. Dir. For Central African Republic*, IMF Country Rep. No. 10/332 at 5 (Oct. 2010), <http://www.imf.org/external/pubs/ft/scr/2010/cr10332.pdf>.
- ¹¹ See Sean Turnell, *Finding Dollars and Sense: Burma's Economy in 2010*, in FINDING DOLLARS, SENSE, AND LEGITIMACY IN BURMA, 29 (Susan Levenstein ed., 2010);.
- ¹² For end dates of conflicts see generally Nils Petter Gleditsch et al., *Armed Conflict 1946-2001: A New Dataset*, 39 J. OF PEACE RES. 61 (2002); Lotta Harbom & Peter Wallensteen, *Armed Conflicts, 1946-2009*, 47 J. OF PEACE RES. 501 (2010). For all other data see I.M.F., *Republic of Yemen*, Country Rep. No. 01/61 (Apr. 2001); *Algeria*, Country Rep. No. 05/51 (Feb. 2005); *Angola*, Country Rep. No. 07/355 (Oct. 2007); *Socialist People's Libyan Arab Jamahiriya*, Country Rep. No. 08/301 (Sept. 2008); *Niger*, Country Rep. No. 09/70 (Feb. 2009); *Chad*, Country Rep. No. 10/196 (June 2010); *Colombia*, Country Rep. No. 10/156 (May 2010); *Côte d'Ivoire*, Country Rep. No. 10/228 (July 2010); *Democratic Republic of the Congo*, Country Rep. No. 10/11 (Jan. 2010); *Iraq*, Country Rep. No. 11/75 (Mar. 2011); *Nigeria*, Country Rep. No. 11/57 (Feb. 2011); *Sudan*, Country Rep. No. 11/86 (Apr. 2011). Numbers in parentheses indicate the year for which the data were obtained. Where there are two columns instead of three, the data for the third column were unavailable. For post-conflict countries, data were obtained for the year following the end of hostilities or for the first year for which they were available. (In some cases, conflict reignited after the period included in the figure.) For conflict-affected countries, the data are for the latest year for which they were available. Country data reflect various resource sectors, as follows: Algeria, oil and gas; Angola, oil, gas, and diamonds; Chad, Colombia, Libya, Nigeria, Sudan, and Yemen, oil and gas; Côte d'Ivoire, oil, gas, and coffee; the Democratic Republic of the Congo (DRC), mining; Iraq, oil and gas. For Niger, export share data are based on uranium and gold, government revenues data are based on uranium, and gross domestic product data are based on mining.
- ¹³ See generally U.N. Env't Programme, *supra* note 2.
- ¹⁴ Paul Collier & Anke Hoeffler, *Greed and Grievance in Civil War*, 56 OXFORD ECON. PAPERS 563, 588 (2004).
- ¹⁵ U.N. Secretary-General, *Report of the Secretary-General on Peacebuilding in the Immediate Aftermath of Conflict*, U.N. Doc. A/63/881-S/2009/304 (June 11, 2009), <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N09/367/70/PDF/N0936770.pdf?OpenElement>; see also World Bank, *World Development Report 2011* (2011), http://wdr2011.worldbank.org/sites/default/files/pdfs/WDR2011_Full_Text.pdf.
- ¹⁶ The conceptual framework adopted in this book draws substantially from the *Report of the Secretary-General on Peacebuilding in the Immediate Aftermath of Conflict* (U.N. Secretary-General 2009), but the activities have been regrouped and supplemented by activities articulated in *Guiding principles for stabilization and reconstruction, Humanitarian Charter and Minimum Standards in Disaster Response* (Sphere 2011), *Civilian capacity in the aftermath of conflict and From Conflict to Peacebuilding: The Role of Natural Resources and the Environment*. See U.N. Secretary-General, *Report of the Secretary-General on peacebuilding in the immediate aftermath of conflict*, 29, U.N. Doc. A/63/881-S/2009/304 (June 11, 2009); U.S. Inst. of Peace and U.S. Army Peacekeeping & Stability Operations Inst., *Guiding principles for stabilization and reconstruction* 146 (2009), www.usip.org/publications/guiding-principles-stabilization-and-reconstruction; Sphere, *Humanitarian Charter and Minimum Standards in Disaster Response*, Sphere Project, <http://www.sphereproject.org/content/view/720/200/lang> (last visited Oct. 31, 2011); U.N., *Civilian Capacity in the Aftermath of Conflict: Independent Report of the Senior Advisory Group* (Mar. 2011), www.civcapreview.org/LinkClick.aspx?fileticket=K5tZZE99vzs%3d&tabid=3188&language=en-US; see also U.N. Env't Programme, *supra* note 2.
- ¹⁷ For the purposes of this article, the term "armed civil conflict" refers to both internal and internationalized internal conflicts included in the Uppsala Conflict Data Program/ Peace Research Institute Oslo (UCDP/PRIO) Armed Conflict Dataset. According to the UCDP/PRIO data set, from 1989 to 2008 there were only eight armed conflicts between independent countries. During the same period, more than 120 internal conflicts occurred, although some of these were internationalized in the sense that other countries provided military support for the government or for the rebels. The preponderance of internal conflicts is reflected in the larger volume, which focuses on resource management in the wake of such conflicts. See Gleditsch et al., *supra* note 12, at 615; see also Lotta Harbom & Peter Wallensteen, *Armed Conflicts, 1946-2008*, 46 J. OF PEACE RES. 577 (2009); Lotta Harbom & Peter Wallensteen, *Armed Conflicts, 1946-2009*, 47 J. OF PEACE RES. 501 (2010).
- ¹⁸ See generally Siri Aas Rustad & H. M. Binningsbø, *Rapid recurrence: Natural resources, armed conflict and peace* (Center for the Study of Civil War. Oslo: Peace Research Institute Oslo, Working Paper, 2010).
- ¹⁹ See Paul Collier & Anke Hoeffler, *High-Value Natural Resources, Development, and Conflict: Channels of Causation in HIGH-VALUE NATURAL RESOURCES AND POST-CONFLICT PEACEBUILDING* (Päivi Lujala and Siri Aas Rustad eds., 2011).
- ²⁰ See Collier & Hoeffler, *supra* note 14, at 588; Macartan Humphreys, *Natural Resources, Conflict, and Conflict Resolution: Uncovering the Mechanisms*, 49 J. OF CONFLICT RESOLUTION 508, 511 (2005).
- ²¹ Humphreys, *supra* note 20, at 512.
- ²² Collier & Hoeffler, *supra* note 14, at 588; Humphreys, *supra* note 20, at 511-12.
- ²³ The numerous examples of secessionist movements in resource-rich areas include Aceh, Indonesia; Biafra, Nigeria; Bougainville, Papua New Guinea; Cabinda, Angola; Kurdistan, Iraq; and southern Sudan. Collier & Hoeffler, *supra* note 14, at 588; Paul Collier & Anke Hoeffler, *The Political Economy of Secession, in NEGOTIATING SELF-DETERMINATION* 37, 47-48 (Hurst Hammun et al. eds., 2006); Päivi Lujala, *The spoils of nature: Armed civil conflict and rebel access to natural resources*, 47 J. OF PEACE RES. 4-5 (2010).
- ²⁴ See PAUL COLLIER ET AL., *BREAKING THE CONFLICT TRAP: CIVIL WAR AND DEVELOPMENT POLICY* 63 (2003).
- ²⁵ For further discussion of the conflict in Sierra Leone, see, e.g., Roy Maconachie, "The Diamond Area Community Development Fund: Micropolitics and Community-led Development in Post-war Sierra Leone," in *See also COLLIER ET AL.*, *supra* note 24.
- ²⁶ See Collier & Hoeffler, *supra* note 14, at 588.

- ²⁷ Stephanie Hanson, *FARC, ELN: Colombia's Left-Wing Guerrillas*, COUNCIL ON FOREIGN RELATIONS (Aug. 19, 2009), <http://www.cfr.org/colombia/farc-eln-colombias-left-wing-guerrillas/p9272#p4>.
- ²⁸ *Guerrilla Miners: The FARC Turn to Gold*, ECONOMIST at 36 (Jan. 29, 2011); Simon Romero, *In Colombia, New Gold Rush Fuels Old Conflict*, NEW YORK TIMES (Mar. 3, 2011), <http://www.nytimes.com/2011/03/04/world/americas/04colombia.html?pagewanted=all>.
- ²⁹ See COLLIER ET AL., *supra* note 24, at 60.
- ³⁰ See U.N. Env't Programme, *supra* note 2, at 6.
- ³¹ See COLLIER & HOFFLER, *The Political Economy of Secession*, *supra* note 23, at 47-48; Michael Ross, *How Do Natural Resources Influence Civil War? Evidence From Thirteen Cases*, 50 INT'L ORG. 35 (2004); Päivi Lujala, *The Spoils of Nature: Armed Civil Conflict and Rebel Access to Natural Resources*, 47 J. OF PEACE RES. 4-5 (2010).
- ³² See COLLIER ET AL., *supra* note 24, at 127.
- ³³ See COLLIER ET AL., *supra* note 24, at 127.
- ³⁴ See Gleditsch et al., *supra* note 12, at 615 (The Uppsala Conflict Data Program/Peace Research Institute Oslo Armed Conflict Dataset defines *conflict* as an armed contestation between the government in a country and a rebel organization in which more than twenty-five battle-related deaths occur. The figure includes all armed civil conflicts active from 1970 to 2008); Harbom & Wallensteen, *Armed Conflicts, 1946-2008*, *supra* note 17, at 577.; Lotta Harbom & Peter Wallensteen, *Armed Conflict, 1989-2006*, 44 J. OF PEACE RES. 623 (2007). Resource data: Rustad & Binningsbø, *supra* note 18.
- ³⁵ RICHARD M. AUTY, *SUSTAINING DEVELOPMENT IN MINERAL ECONOMIES: THE RESOURCE CURSE* THESIS 1 (1993).
- ³⁶ *Id.* (coining the term "resource curse," which refers not only to poor economic development, but also to other negative political and social outcomes that have been associated with abundant natural resources, including detachment from the electorate and increased risk of armed conflict); TERRY L. KARL, *THE PARADOX OF PLENTY: OIL BOOMS AND PETRO-STATES* 242 (1997) (coining the term "paradox of plenty," which refers to the destabilization of states endowed with natural resources).
- ³⁷ KARL, *supra* note 36, at 32; Nadira Lalji, *The Resource Curse Revised*, 29 HARV. INT'L REV. 34 (2007); Michael L. Ross, *Blood Barrels*, 87 FOREIGN AFF. 2, 8 (2008).
- ³⁸ See Humphreys, *supra* note 20, at 512.
- ³⁹ KALU N. KALU, *STATE POWER, AUTARCHY, AND POLITICAL CONQUEST IN NIGERIAN FEDERALISM* 124-26 (2008).
- ⁴⁰ KALU, *supra* note 39, at 125.
- ⁴¹ See U.S. Inst. of Peace and U.S. Army Peacekeeping & Stability Operations Inst., *Guiding principles for stabilization and reconstruction* 146 (2009), www.usip.org/publications/guiding-principles-stabilization-and-reconstruction.
- ⁴² See COLLIER ET AL., *supra* note 24, at 180; *see also* World Bank, *supra* note 15, at 19.
- ⁴³ See Humphreys, *supra* note 20, at 534; Havard Hegre & Nicholas Sambanis, *Sensitivity Analysis of Empirical Results on Civil War Onset*, 50 J. OF CONFLICT RESOLUTION 508, 531 (2006).
- ⁴⁴ See, e.g., Collier & Hoeffler, *supra* note 14, at 588; James D. Fearon & David D. Laitin, *Ethnicity, Insurgency, and Civil War*, 97 AM. POL. SCI. REV. 75 (2003); Hegre & Sambanis, *supra* note 43, at 531.
- ⁴⁵ See, e.g., Fearon & Laitin, *supra* note 44.
- ⁴⁶ See Ross, *supra* note 31, at 35.
- ⁴⁷ Fearon & Laitin, *supra* note 44, at 87; Indra De Soysa & Eric Neumayer, *Resource Wealth and the Risk of Civil War Onset: Results from a New Dataset of Natural Resource Rents, 1970-1999*, 42 CONFLICT MGMT. AND PEACE SCIENCE 201, 216 (2007); Humphreys, *supra* note 20, at 525; Päivi Lujala, *The spoils of nature: Armed civil conflict and rebel access to natural resources*, 47 J. OF PEACE RES. 15, 16 (2010).
- ⁴⁸ Lujala, *supra* note 47, at 16.
- ⁴⁹ *Id.*
- ⁵⁰ See COLLIER & HOFFLER, *The Political Economy of Secession*, *supra* note 23, at 37.
- ⁵¹ See James D. Fearon, *Why Do Some Civil Wars Last so Much Longer than Others?*, 41 J. OF PEACE RES. 275, 284 (2004).
- ⁵² *Id.* at 277.
- ⁵³ Michael Ross, *What Do We Know about Natural Resources and Civil War*, 41 J. OF PEACE RES. 337, 338 (2004).
- ⁵⁴ *Id.* at 338; Fearon, *supra* note 51, at 284; Siri Aas Rustad et al., *Foliage and Fighting: Forest Resources and the Onset, Duration and Location of Civil War*, 27 POL. GEOGRAPHY 761, 761 (2008).
- ⁵⁵ Ross, *supra* note 53, at 338.
- ⁵⁶ See Le Billon, *supra* note 3, at 564.
- ⁵⁷ See Ross, *supra* note 31, at 35.
- ⁵⁸ *Id.* at 52.
- ⁵⁹ Päivi Lujala, *Deadly Combat Over Natural Resources: Gems, Petroleum, Drugs, and the Severity of Armed Civil Conflict*, 53 J. OF CONFLICT RESOLUTION 50, 54 (2009) (An extreme case is offshore oil and gas drilling, in which the product can be exported by pipelines or ships without ever being present on land in the producing country.)
- ⁶⁰ *Id.* at 68.
- ⁶¹ See Le Billon, *supra* note 3, at 574.
- ⁶² See Lujala, *supra* note 59, at 55.
- ⁶³ See Le Billon, *supra* note 3, at 562.
- ⁶⁴ *Id.* Resources that are used to finance conflict are sometimes referred to as "conflict resources." Although specific definitions of the term vary, one widely used definition is that of Global Witness: "Conflict resources are natural resources whose systematic exploitation and trade in a context of conflict contribute to, benefit from or result in the commission of serious violations of human rights, violations of international humanitarian law or violations amounting to crimes under international law." Because this definition applies only to conflicts in which there are specific violations of international law, it has a somewhat narrower scope than others. *See also* Conflict, GLOBAL WITNESS, <http://www.globalwitness.org/campaigns/conflict> (last visited Oct. 27, 2011).
- ⁶⁵ See Ross, *supra* note 31, at 41.
- ⁶⁶ See Le Billon, *supra* note 3, at 562. There are other financing sources, including payments from nationals living abroad and voluntary and nonvoluntary support from civilians.
- ⁶⁷ See Ross, *supra* note 31, at 350.
- ⁶⁸ *Id.* at 344.
- ⁶⁹ *Id.* at 346 n.13. (Alluvial deposits are found in sand, clay, and gravel discharged by rivers. Existing or ancient riverbeds can be mined using simple tools such as shovels, buckets, and pans.)
- ⁷⁰ World Bank, *World Development Report 2011* at 81 (2011), http://wdr2011.worldbank.org/sites/default/files/pdfs/WDR2011_Full_Text.pdf; COLLIER ET AL., *supra* note 24, at 76.
- ⁷¹ See COLLIER ET AL., *supra* note 24, at 77.
- ⁷² See Ross, *supra* note 31, at 351 (discussing the "Kimberly Process").
- ⁷³ See Ross, *supra* note 31, at 64.
- ⁷⁴ See Le Billon, *supra* note 3, at 565.
- ⁷⁵ See generally U.N. Env't Programme, *supra* note 2.
- ⁷⁶ *Id.*
- ⁷⁷ See COLLIER ET AL., *supra* note 24, at 179; Lujala, *supra* note 59, at 57.
- ⁷⁸ See Fearon & Laitin, *supra* note 44, at 87.
- ⁷⁹ U.N. Security Council, *Report of the Secretary-General on the Protection of Somali Natural Resources and Waters*, 11-12, U.N. Doc. S/2011/661 (Oct. 25, 2011).
- ⁸⁰ World Bank, *World Development Report 2011* at 64 (2011) <http://wdr2011.worldbank.org/sites/> (It is important to note that, in some cases, high-value resources have nothing to do with triggering or financing the conflict—but as the conflict winds down, they become important issues to be addressed in the peacebuilding process.)
- ⁸¹ See generally U.N. Env't Programme, *supra* note 2.
- ⁸² See Collier & Hoeffler, *supra* note 14, at 588.
- ⁸³ See Rustad & Binningsbø *supra* note 18, at 16 (The term "conflict episode" refers to how a conflict is reported in the UCDP/PRIO Armed Conflict Dataset: a peace period is defined as the absence of conflict for more than two calendar years, and begins the first day that hostilities end, e.g., after military victory by one side.). See Gleditsch et al., *supra* note 12, at 615; Harbom & Wallensteen, *Armed Conflict, 1989-2006*, *supra* note 34; Harbom & Wallensteen, *Armed Conflicts, 1946-2008*, *supra* note 17, at 577. The Rustad and Binningsbø 2010 study considers oil, gas, diamonds, minerals, forest resources, land, and agricultural products (including crops used to produce drugs), and all internal conflicts from the UCDP/PRIO Armed Conflict Dataset from 1946 through 2006.
- ⁸⁴ U.N. Secretary-General, *Report of the Secretary-General on Peacebuilding in the Immediate Aftermath of Conflict*, 29, U.N. Doc. A/63/881-S/2009/304 (June 11, 2009).