

Reducing the risk of conflict recurrence: The relevance of natural resource management

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The past few decades have witnessed many tragic cases where armed conflict has reoccurred. Whether these conflicts ended by ceasefire, outright victory, or mediated negotiation, Afghanistan, Angola, Burundi, Cambodia, Chad, the Democratic Republic of the Congo, Indonesia, Liberia, Rwanda, Sierra Leone, Somalia, and Sri Lanka, among others, have all experienced renewed violence. Various quantitative studies now concur that “conflict begets conflict” (Walter 2004). Countries with a history of armed conflict are at a much higher risk of experiencing renewed conflict. The overall aim of this chapter is to survey risk factors of conflict recurrence—those related to natural resources as well as those not directly related to them. Hopefully, this analysis will contribute to a better understanding of why some post-conflict societies experience conflict relapse whereas others remain at peace.

In an effort to help design more effective interventions and to achieve lasting peace, a growing body of research is seeking to identify which risk factors—alone and together—matter most. It has been argued that if underlying characteristics of the society are not addressed in the post-conflict period, the risk of renewed conflict rises. The main risks discussed here are: (1) natural resource dependence; (2) environmental change; (3) poverty and low or declining economic growth; (4) intergroup inequalities; (5) youth bulges; and (6) crime. While some studies have focused on the nature of peace—especially how the original armed conflict

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ended—other studies have focused on the nature of the conflict itself: its length, human casualties, and physical destructiveness—in an effort to explain why some post-conflict countries relapse to conflict. This chapter concludes with a consideration of the role of institutions and the state in the transition from conflict to peace.

DOES CONFLICT BEGET CONFLICT?

The pillaging of natural resources, such as gems, timber, and oil, is a common characteristic of most conflict economies. High-value natural resources, such as oil and gas, have been associated with civil war onset. As witnessed in Angola and discussed by Philippe Le Billon and Eric Nicholls, access to revenues derived from natural resources generally prolongs conflicts (Le Billon and Nicholls 2007). The availability of high-value natural resources in countries with poorly developed government institutions can lead to rent-seeking,¹ and those who are excluded from the economic benefits may seek secession. While there is a large body of literature on the role of natural resources in causing armed conflict, little is known about the impact of natural resource management on reducing the risk of conflict recurrence.

In some of these recurring cases of conflict, as in Angola in the mid-1990s, the relapsed conflict was a repeat of the old dispute involving the same parties. In others, recurrence entailed an altogether new kind of conflict and different combatants. While the number of intrastate conflicts increased by four from 2005 to 2006, none of these were “new wars”; all occurred in countries with a previous history of armed conflict, as reported by the Uppsala Conflict Data Program/Peace Research Institute Oslo Armed Conflict Dataset (Harbom and Wallensteen 2009).

Numerous studies do, in fact, claim that conflict begets conflict.² A World Bank quantitative study written by Paul Collier and Anke Hoeffler has found that “shortly after a conflict, on average, countries face a 50% risk of renewed conflict during the next 5 years” (Collier and Hoeffler 2002, 17). This finding has been frequently cited by many international agencies and by several authoritative sources. It was also cited in former United Nations Secretary-General Kofi Annan’s March 2005 report that set out the priorities for UN reform: “Our record of success in mediating and implementing peace agreements is sadly blemished by some devastating failures...for instance in Angola in 1993 and in Rwanda in 1994. Roughly half of all countries that emerge from war lapse back into

¹ *Rent seeking* occurs when groups or individuals attempt to obtain access to economic benefits without contributing to overall economic production. For additional information on rent seeking, see Collier and Hoeffler (2012).

² See, for example, Collier et al. (2003); Collier, Hoeffler, and Söderbom (2006a); and Walter (2004).

violence within five years... [I]f we are going to prevent conflict we must ensure that peace agreements are implemented in a sustained and sustainable manner..." (UNGA 2005, 31). This finding has undoubtedly led peacebuilding actors to be more attentive to the risks of conflict recurrence and to the need for better post-conflict interventions. It also explains why natural resource management has gained new urgency as necessary not just for sustainable development, but also for sustainable peace. Even so, the 50 percent figure creates an illusion of greater empirical certainty regarding the rates of conflict recurrence than is warranted. Subsequent quantitative studies have in fact shown wide variation in the rate of conflict recurrence. Indeed, some of the same researchers have found, subsequently, a lower risk of conflict recurrence. In 2003, Collier and colleagues concluded that countries face a 44 percent chance of civil war recurrence within five years (Collier et al. 2003). By 2006, two additional World Bank studies found an even lower risk of armed conflict recurrence within four years—one citing a 21 percent risk and the other a 23 percent risk—with the chances of recurrence over ten years between 34 percent and 40 percent (Collier, Hoeffler, and Söderbom 2006a, 2006b). Other studies have found the rate of conflict recurrence to be lower still. Based on the same data, but a simpler method of quantification, Astri Suhrke found only a 26 percent rate of conflict recurrence within five years (Suhrke 2007).

Other empirical evidence suggests that as the peace endures, the risks of conflict recurrence are reduced. Collier, Hoeffler, and Måns Söderbom find that the risk of renewed conflict significantly changes over time. In the first four years, the risk is 23 percent but only 17 percent in the subsequent six years (Collier, Hoeffler, and Söderbom 2006a).

While we still have much to learn about civil war recurrence, it is clear that post-conflict countries do face a higher risk of further conflict than developing countries not affected by conflict. Whether the risk increases actually depends on many intervening variables. These variables include, but are not limited to, how post-conflict countries manage their natural resources, both renewable and minerals, so that war-torn societies successfully recover from conflict and move toward peace (see figure 1).

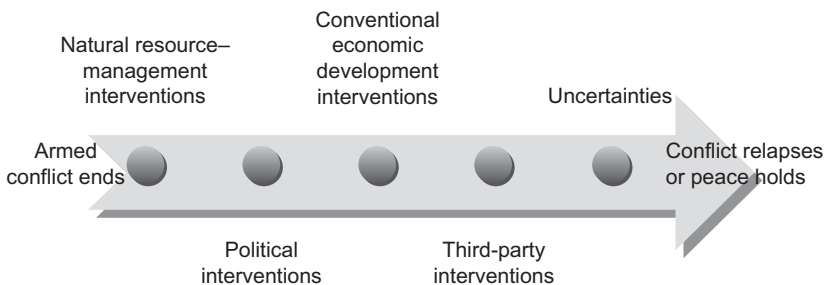


Figure 1. Flow diagram: From armed conflict to peace

WHAT ARE THE RISK FACTORS OF CONFLICT RECURRENCE?

There are various factors that explain recurrence: those related to natural resources (with two variants: root causes and post-conflict natural resource management) and those not related to natural resources (for example, political and security risks). Risk factors related to natural resources focus on whether the terms of peace have addressed the root causes or underlying reasons that led to the outbreak of armed conflict.³ It has been argued that if these underlying issues are ignored, the risk of renewed violence increases in the post-conflict period. For example, if interethnic discrimination and exclusion from accessing natural resources, or mass poverty, or poor governance leading to the plunder of national resources were factors in the outbreak of armed conflict, then the extent to which a peace accord addresses these issues will determine the risk of conflict recurrence. This approach acknowledges that some of these characteristics are reinforced by the negative legacies of armed conflict and can actually leave groups that are excluded from the peace process even worse off than before.

These explanations extend their focus beyond urgent security and political issues to the risks related to natural resources that may undermine peace. The main risks include natural resource dependence, environmental change, and natural resource scarcity. Since the industrial and service sectors of most post-conflict countries are in their preliminary stage, the economic dependence on forests, water resources, fisheries, and land is greater than in industrialized countries. In a well-managed post-conflict environment, natural resources can help to rebuild a country, as witnessed to some extent in Liberia (Altman, Nichols, and Woods 2012; Beevers 2012). In other cases, challenges to natural resource management, such as unresolved land tenure as experienced in Somalia (Sait 2013), can increase the risk of conflict recurrence.

Other socioeconomic risk factors that do not directly relate to natural resources include poverty and low incomes, intergroup inequalities, demographic factors, and crime, all of which can be root causes of conflict. Studies that seek to understand how these problems impact prospects for sustainable peace and economic recovery are premised on the idea that where conflict-affected populations have low incomes, real or perceived feelings of relative economic deprivation, or little confidence in their new governments to provide economic security and to allocate natural resources in an equitable manner, the risk of disaffected populations taking up arms increases.

But as discussed by Susan Woodward, addressing the root causes of conflict is not sufficient to improve the outcomes and effectiveness of peacemaking interventions (Woodward 2007). Three different explanations have been offered for this: (1) the economic, social, and political transformations wrought by the conflict itself; (2) the political arrangements that can reduce the uncertainty about

³ For an in-depth discussion on the issues surrounding the theory, practice, and consequences of reconstruction and peacebuilding after armed conflict, see Paris (2004).

power—in Woodward’s words, “who has it, who has a right to it, how access to it is regulated” (Woodward 2007, 164); and (3) the motivations for intervention by outside actors that have nothing to do with the root causes and will always take priority. In other words, armed conflicts often leave behind conditions that lead to conflict relapse—the so-called conflict trap (Collier et al. 2003). Under this trap, conflicts recur because of the failure to navigate the military, political, social, and economic complexities of war-to-peace transitions, their fragility, and their volatility. This variety of explanations of conflict recurrence focuses not on whether root causes have been resolved, but on how post-conflict conditions may themselves generate renewed conflict (Walter 2004). These studies have argued that the risk elements that initially caused the conflict may not have the same explanatory power to assess the risks of conflict recurrence (Woodward 2007). Michael W. Doyle and Nicholas Sambanis have argued that “the most important conceptual difference between the processes of war onset and duration or recurrence is that war duration or recurrence will be affected by conflict dynamics that are absent from the process of initial war onset” (Doyle and Sambanis 2006, 45).

As Barbara F. Walter has suggested, recurrence of armed conflict may have less to do with the legacies of previous conflicts than with post-conflict incentives for individuals to restart armed rebellions (Walter 2004).

Focusing on security and political variables, Stephen J. Stedman, Donald Rothchild, and Elizabeth M. Cousens have examined the nature of peace—especially how the original war ended (Stedman, Rothchild, and Cousens 2003). Security variables include, among other considerations, the number of belligerent groups, whether the conflict was subnational or national, the relative size of the armies, whether the combatants are backed by neighboring countries, and whether third-party mediation has helped resolve security problems. Most often, studies focusing on the transition to peace ask whether conflicts that end through mediated peace negotiations are more stable than those that end with a clear military victory. For this chapter’s analysis, the key question is whether external peacebuilding interventions improve the prospects of conflict-torn countries. Political variables include the inclusiveness of the peace agreement, the role of peace spoilers, whether underlying political grievances, such as minority exclusion, have been addressed, and whether political processes are more responsive to civil society.

Although security and political variables address root causes of conflict and the nature of peace, other studies focus on the nature of the conflict itself—such as its length, human impacts, and physical destructiveness—in an effort to explain why some post-conflict countries relapse to armed conflicts. Do longer conflicts mean a more fragile peace? Are countries that have experienced armed conflict throughout their territories at greater risk than those where violence is isolated to a specific region?

Finally, most post-conflict societies experience some degree of state failure, which in turn can elevate the risk of renewed conflict. The following sections describe in more detail the various factors that are considered to be the central explanations of conflict recurrence. The first two relate directly to natural resources,

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and the latter four (poverty, intergroup inequalities, demographics, and crime) relate indirectly to natural resource management.

Natural resource dependence

Natural resource wealth has been identified as a major risk factor for conflict onset (Collier and Hoeffler 2004a; Fearon 2005; Humphreys 2005; Le Billon 2003; Ross 2004). There is, then, a *prima facie* argument that natural resource wealth also complicates any post-conflict recovery efforts. As discussed by Stedman, and by Le Billon, large resource rents can provide strong incentives for peace spoilers, as they do for corrupt governance (Stedman 1997; Le Billon 2003). This largely applies to high-value natural resources, such as minerals, onshore oil, and gas, and to a lesser extent water and land. As Le Billon and Nicholls point out, non-lootable resources, such as kimberlite diamonds, deep-shaft minerals, and offshore oil, are more difficult to exploit, steal, or extort by rebel forces compared to lootable resources, such as alluvial gems and minerals or timber (Le Billon and Nichols 2007). Therefore, peace spoilers pose a greater risk when lootable resources are involved.

Most important, dependence on natural resource production weakens state structures that redistribute wealth, and the state is thus less able to provide public goods. Weak states, in turn, are at higher risk of civil war (Fearon 2005). This is because states that rely on natural resources for revenue tend to be less democratic; such states need not be accountable to the public because natural resources provide large rents that preclude the need for taxation (Humphreys, Sachs, and Stiglitz 2007). Large resource rents offer the elite population many opportunities to sustain power by distributing their wealth among their supporters (Le Billon 2003). Over the long term, this undermines the government's legitimacy and capacity to foster broad-based economic recovery.⁴

But, by themselves, rent-seeking incentives provided by natural resources for governments and rebels alike are not sufficient to explain conflict recurrence. The composition of the domestic economy seems to play a role. Countries that have a large agricultural sector and relatively small industrial and service sector—irrespective of mineral deposits—are more prone to conflict (Humphreys 2005).⁵ Post-conflict countries such as Liberia and Sierra Leone, for example,

⁴ The government does not only lose income, it also faces armed excombatants and potential would-be rebels with little interest in supporting the new government (Cheng 2006). For example, in Liberia, excombatants controlled and benefited from former government-owned rubber plantations.

⁵ As Macartan Humphreys points out, "Natural-resource-dependent economies may have weak manufacturing sectors . . . and correspondingly low levels of internal trade. Insofar as internal trade is associated with greater levels of social cohesion and interregional interdependence, the weakness of the manufacturing sector and the fragmentation of an economy into independent enclaves of production may raise conflict risks" (Humphreys 2005, 513).

have not gone through a process of industrialization, and this has generated clusters of agricultural communities with weak commercial ties.

The United Nations Development Programme (UNDP) rightly states that in times of rising global demand for oil and other natural resources, exploration and extraction of natural resources is pushed into post-conflict countries despite the uncertainties and risks involved (UNDP 2008). This can affect the durability of peace. For example, if the large-scale mining industry were to engage in post-conflict Sierra Leone, it could create new jobs and address poverty in the mining areas. On the other hand, it could also exacerbate income disparities which could foster a renewed violence for post-conflict societies. The UNDP report concludes that “natural resource wealth can be a great asset for post-conflict recovery, but it does pose particular challenges for regulation and distribution” (UNDP 2008, 21).

Environmental change and natural resource scarcity

Renewable natural resources, such as water, arable land, or timber, are major sources for economic growth in a large number of post-conflict countries. Most post-conflict countries in sub-Saharan Africa depend on rain-fed agriculture, which constitutes a large percentage of their gross national income. When rainfall patterns change, economic performance changes too. Accordingly, since the fall of the Berlin Wall, an academic and policy debate has emerged regarding the significance of the contribution of environmental factors to conflict and the outbreak of violence. In this respect, Johan Galtung argues that “wars are often over resources” and that the “destruction of the environment may lead to more wars over resources” (Galtung 1982, 99). He suggests that the scarcity of natural resources, as a common source of conflict, has reached new dimensions through environmental degradation.

As early as the 1970s, others began to argue that a shrinking natural resource base eventually leads to violent conflict when renewable resources such as arable land become scarce.⁶ They claim that environmental degradation, scarcity of renewable resources, and population pressures are an increasingly important new source of armed conflict, especially in developing countries.⁷ This viewpoint continued into the 1980s. For example, the 1987 report of the World Commission for Environment and Development (also known as the Brundtland Commission) contained a passage correlating environmental degradation and conflict, and called

⁶ See, for example, Meadows et al. (1972), Ehrlich (1971), Ehrlich and Harriman (1971), and Ward and Dubos (1972).

⁷ Previous research was conducted, for instance, by the Environmental Change and Security Project at the Woodrow Wilson International Center for Scholars in Washington, D.C.; the Environment and Conflicts Project, which was jointly run by the Center for Security Studies and Conflict Research at the Swiss Federal Institute of Technology Zurich; and the Swiss Peace Foundation in Bern and the Global Environmental Change and Human Security Project, University of Victoria, Canada.

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for developing an expanded definition of security: “The whole notion of security as traditionally understood in terms of political and military threats to national sovereignty—must be expanded to include the growing impacts of environmental stress—locally, nationally, regionally, and globally” (WCED 1987, para. 86).

By “securitizing” environmental change, researchers and environmental activists alike hoped to attract more attention in the media and the policy world (Levy 1995). There have been several policy studies on the relationship between environmental change and conflict since the Brundtland Commission. As early as 1994, and at the behest of Vice President Al Gore, the Central Intelligence Agency launched the State Failure Task Force to better understand environment-human-security interactions. The subsequent report did not find a direct link between environmental change and state failure or conflict recurrence (Esty et al. 1998). A 1999 report commissioned by the North Atlantic Treaty Organization found that environmental stress could be a “structural source of conflict as well as a catalyst for conflict, or a trigger for conflict” (Lietzmann and Vest 1999, 11). But the report does not support the hypothesis of a strong relationship between environmental stress, scarcity, and conflict. It did note that the alliance “looks increasingly at threats from non-traditional sources” to “include an economic, and to a lesser extent, a social dimension to its conception of security” (Lietzmann and Vest 1999, 9). A report published by the German Advisory Council on Global Change and a report by the German Development Cooperation also incorporate environmental aspects into the concept of security (Carius, Tänzler, and Maas 2008; Schubert et al. 2008). The former argues that “climate change will overstretch the adaptive capacities of many societies. . . . The resulting violence and destabilisation threaten national and international security . . .” (Carius, Tänzler, and Maas 2008, 19).

A range of academic studies that do not have such explicit links with Western policy discussions has developed in parallel. Some are clearly polemical—for example, the often-quoted article by Robert D. Kaplan, “The Coming Anarchy,” argues that population growth, many unemployed youth, scarcity of natural resources, a high disease burden, and crime are “rapidly destroying the social fabric of our planet” (Kaplan 1994, 44). However, several analyses have involved careful statistical work or comparison of a range of case studies (Bächler and Spillmann 1997). In 1998, studies of Mexico, Palestine, and South Africa were carried out (Howard and Homer-Dixon 1996; Kelly and Homer-Dixon 1995; Percival and Homer-Dixon 1998), as well as an examination of Pakistan and Rwanda (Homer-Dixon and Blitt 1998). These case studies, led by Thomas Homer-Dixon, examined the link between environmental scarcity of renewable resources such as cropland, freshwater, forests, and fisheries on the one hand, and violence on the other hand. The key findings of these case studies indicate that resource scarcity can help to generate instability. An indirect causal relationship is identified, while “migration, ethnic tensions, economic disparities, and weak institutions in turn often appear to be the main causes of violence” (Homer-Dixon and Blitt 1998, 223). The core finding of Homer-Dixon and Jessica Blitt

was that civil wars in African countries, such as Rwanda and Somalia after the Cold War, constituted a new global threat: ecoviolence (Homer-Dixon and Blitt 1998).⁸ Along these lines, Wenche Hauge and Tanja Ellingsen found a significant impact from deforestation, soil degradation, and freshwater access on political violence (Hauge and Ellingsen 1998).

Other research points to the security implications of climate change (Faris 2007). In 2007, the United Nations Security Council dedicated its 5,663rd debate to the impact of climate change on security (Sindico 2007). Other political hearings and important policy statements include *National Security and the Threat of Climate Change* (also known as the Zinni Report) (CNA Corporation 2007); the testimonies of Adm. (ret.) Lee. F. Gunn (U.S. Navy) and Sharon Burke, vice president of the Center for a New American Security, before the U.S. Senate Foreign Relations Committee (U.S. Senate Committee on Foreign Relations 2009); the U.S. National Intelligence Assessment on the National Security Implications of Global Climate Change to 2030 (Fingar 2008); and the synthesis report from “Climate Change: Global Risks, Challenges and Decisions,” an international scientific congress held in Copenhagen, Denmark, in 2009 (Richardson et al. 2009).

The rationale behind such climate-induced recurrence risk is the following: most post-conflict countries are agrarian and therefore climate sensitive. An analysis of conflict hot spots in 2006 shows that most conflict zones are highly dependent on agricultural production, making them more vulnerable to climatic changes, such as an increase in droughts and floods (Webersik 2010). Floods destroy agricultural land, homes, and infrastructure, whereas droughts mainly disrupt rain-fed agriculture. This can lower economic income and put more stress on already fragile post-conflict societies, undermining their capacity to adapt to environmental change (Buhaug, Gleditsch, and Theisen 2008).

Several policy reports go beyond the risk of internal conflict and project future international security risks. The Zinni Report, signed by eleven retired U.S. generals and admirals, interprets climate change as a threat multiplier with implications for national security (CNA Corporation 2007).⁹ If warming of the globe continues, Marshall B. Burke and colleagues project an increase of roughly 54 percent in armed conflict (within and between states) in sub-Saharan Africa, with an additional 393,000 battle deaths by 2030 (Burke et al. 2009). In addition, more droughts, floods, and sea-level rise will lead to an unprecedented number of migrants, argues a report published by Christian Aid (Christian Aid 2007). This same report predicts that up to 1 billion people will be forced to move from 2010 to 2050.

⁸ Homer-Dixon and Blitt’s book is the product of a research program in the field of environmental security and conflict. In this book, researchers from the University of Toronto and the American Association for the Advancement of Science studied the links between environmental scarcity and violent conflict.

⁹ A follow-on report, in 2014, framed climate change as a “catalyst for conflict” (CNA Military Advisory Board 2014).

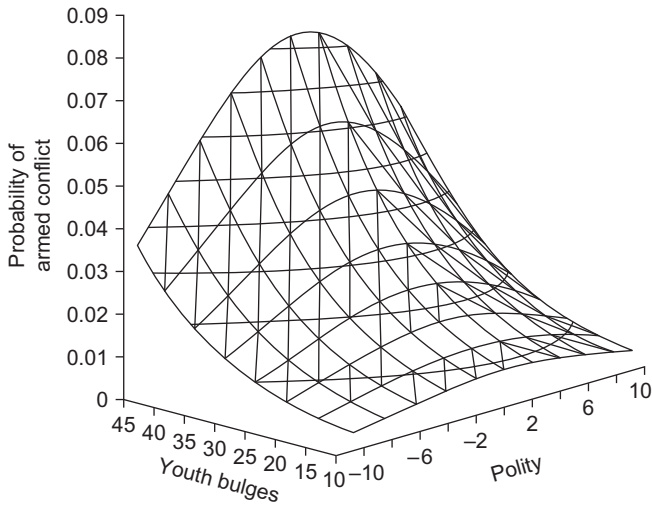


Figure 2. Association between armed conflict, youth bulges, and regime type

Note: Conflict propensity is highest in so-called anocracies, countries that are neither democratic nor autocratic: +10 on the polity scale indicates fully developed democracies, and -10 on the polity scale indicates consistent autocracies.

Source: Urdal (2004).

Other studies are more measured.¹⁰ Ragnhild Nordås and Nils P. Gleditsch of the Peace Research Institute Oslo argue that there are only a few studies that provide evidence that climate change will cause more poverty while lowering rebel recruitment costs (Nordås and Gleditsch 2007). In response to 2009 work by Burke and colleagues, Halvard Buhaug argues that climate variability is a poor predictor of armed conflict, highlighting instead ethnopolitical exclusion, poor economic performance, and the end of the Cold War as drivers of conflict (Buhaug 2010). Most of the reports that make the climate-conflict link are based on assertions rather than rigorous research, lacking empirical foundations (Barnett 2000). Certainly, environmental change will have negative impacts on peoples' livelihoods, but it is not clear to what extent it will heighten the risk of renewed violence. Accordingly, correlations between environmental change, such as temperature increases, and conflict do not necessarily imply causation (Lipschutz 1997). This rigid approach acknowledges environmental change as an important factor in shaping human interactions but is more careful than to equate environmental change with conflict. As Henrik Urdal observes, capturing arable land and livestock is a common cause of localized armed conflict, and there is little evidence that environmental change is sufficient to trigger armed conflict, or conflict relapse (Urdal 2005). Apart from environmental change, when resource-dependent populations grow, they put greater strains on natural resources. Although research shows that a larger youth bulge elevates the conflict risk (see figure 2),

¹⁰ See, for example, Webersik (2010).

more people do not necessarily mean more conflicts, as discussed later in this chapter. Regions with high population growth often need to develop economically in order to overcome natural resource scarcity (Boserup 1981). This is supported by research done in the African drylands, where a greening of the environment was accompanied by population growth (Tiffen, Mortimore, and Gichuki 1994). More often, conflict arises over the distribution of natural resources, and therefore natural resource management is the key factor in deciding if conflict recurs, rather than the degree of absolute availability or scarcity of natural resources per se (Galtung 1980). Most important, other factors, such as the historical framework, global linkages, and the role of outsiders, play a role in the success or failure of post-conflict societies.

Poverty and low incomes

Most post-conflict societies have weakened economies and low-growth figures. Research demonstrates that low per capita incomes elevate the risk of renewed violence (Collier and Hoeffler 2002; Fearon and Laitin 2003; Humphreys and Richards 2005; Nafziger and Auvinen 2000). Poverty or low incomes have a statistically significant impact on most forms of armed conflict, except terrorism (Sambanis 2004). In the context of poor economic performance, rebellions are more feasible and are thus more likely to occur, regardless of individual motives. This may explain the high rate of conflict relapse, especially in poor countries with low rebel recruitment costs (Collier, Hoeffler, and Söderbom 2006a). Wealthier states, on the other hand, are better able to protect assets, thus making violence less attractive for would-be rebels (Humphreys 2003). Similarly, because wealthier states have a functioning government and can collect more taxes, they are better equipped either to pacify or put an end to an armed rebellion (de Soysa 2002).

Accordingly, economic growth in post-conflict countries limits the risk of renewed conflict (Collier and Hoeffler 2002; Fearon and Laitin 2003; Miguel, Satyanath, and Sergenti 2004). Using a benchmark of a 40 percent risk of conflict recurrence, Collier, Hoeffler, and Söderbom find that doubling the initial mean income reduces conflict risk by 9 percent (Collier, Hoeffler, and Söderbom 2006a). In this connection, however, it is important to note that post-conflict countries show great variability in their growth rates. Some grow rapidly, whereas others languish. If a post-conflict country's growth rate remains stagnant over a ten-year period following armed conflict, the country's conflict risk stays high, at approximately 42 percent (Collier, Hoeffler, and Söderbom 2006a). But if its growth rate averages 10 percent over the same period, this reduces the risk of renewed conflict to approximately 27 percent. As a result, post-conflict countries with low incomes—such as Chad, Liberia, and Sri Lanka—are at far greater risk than Kosovo or Lebanon for renewed conflict.

Another study, by Collier, Hoeffler, and Dominic Rohner, demonstrates that the growth rate in the five years prior to conflict—including cases of conflict recurrence—averages negative 0.5 percent (Collier, Hoeffler, and Rohner 2006).

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This is far lower than the average growth of 2 percent in countries at peace. The authors conclude that growth significantly reduces the risk of renewed conflict; if growth rises by one percentage point, the risk of conflict falls by 0.6 percentage points, from 4.7 percent to 4.1 percent. One explanation may be that growth stimulates job creation, thereby reducing grievances and making armed conflict less attractive to would-be combatants. Also, there is a strong link between the legitimacy of post-conflict governments and economic performance and palpable peace dividends. In order for post-conflict governments to enjoy greater popular support, they must ensure that their country's economic recovery is strong, land tenure issues are resolved, and that they are able to deliver essential services to their people.

The capacity for post-conflict governments to generate economic growth, however, may be constrained by the degree of conflict-related destruction. Compelling evidence indicates that less destructive conflicts generate greater post-conflict economic growth. But countries that have experienced the longest and most destructive civil wars register growth rates in the negative double digits for up to six years after conflict ends, yet, their susceptibility to conflict recurrence is debatable (Kang and Meernik 2005).

Natural resources play an important role in economic growth in post-conflict societies. If properly managed, natural resource wealth can contribute to economic recovery and growth. Most important, natural resources form the basis for employment, revenues, and foreign export earnings in the developing world (Repetto 1992). Renewable resources, if looked after correctly, can create long-term economic benefits, argues Achim Steiner, the Executive Director of the UN Environment Programme (Steiner 2009). In terms of nonrenewables, such as minerals and oil, verified auctions can reveal the real value of natural resources, as was done in post-conflict Liberia. Collier provides an example from Britain, where the British Treasury first planned to sell the rights to the 3G mobile phone network for £2 billion but eventually realized £20 billion through a public auction (Collier 2009). In many post-conflict countries, however, overexploitation, corruption, lack of political will, and the involvement of foreign actors can jeopardize the conversion of natural resource wealth into economic wealth for the nation.

Intergroup inequalities

Most of the literature on inequalities and conflict aims to explain the onset of armed conflict, rather than conflict recurrence. Nevertheless, this literature sheds some light on the relationship between inequality and violent conflict. Much of the discussion on inequality relates to inequality among richer and poorer individuals or households—an issue known as *vertical inequality*. Substantial vertical inequality tends to be associated with high poverty levels, and according to Juha Auvinen and E. Wayne Nafziger, it helps to fuel the strong grievances that the poorer members of society harbor toward the wealthier (Auvinen and Nafziger 1999).

A 1989 survey of more than forty studies found mixed results: some studies showed that vertical inequality was positively correlated with violent conflict, a few found it was negatively correlated, and a number found no relationship (Lichbach 1989).¹¹ Other econometric studies of vertical inequality and the risk of violent conflict have found no significant relationship between vertical inequality and armed conflict.¹² Similarly, David Lake and Donald Rothchild conclude that grievance generally and vertical inequality in particular play little or no role in causing conflicts (Lake and Rothchild 2003). However, disaggregating types of conflict into disputes between identity groups and “class or revolutionary” wars, Marie Besançon (using country data for the period 1960–2001) finds that a measure of income concentration is negatively related to ethnic conflicts and positively related to revolutionary conflicts (Besançon 2005).

Others have examined the relationship between conflict risk and intergroup inequalities—or *horizontal inequality*—rather than inequalities among individuals. The main difference between horizontal inequality and vertical inequality is that horizontal inequality refers to situations involving a number of individuals with common and significant identity ties (for example, based on ethnicity, religion, gender, or location), while vertical inequality refers to situations involving individuals, regardless of their identity affiliations.¹³

Many case studies have documented the salience of socioeconomic horizontal inequalities in provoking violent conflicts (Cobham 2005; Langer 2005; Nkidumana 2005). Several quantitative cross-country and within-country studies have also found a significant association between the presence of severe socioeconomic horizontal inequalities and the emergence of violent conflict (Mancini 2005; Murshed and Gates 2005).

One study finds that inequalities among ethnic groups showed a consistently positive correlation with political instability across thirty-two sub-Saharan African countries in the 1960s, with the measure of inequality including both a group’s share of political power and its socioeconomic standing (Barlow and Snyder 1993). Gudrun Østby reaches similar conclusions for forty-three developing countries between 1986 and 2001 (Østby 2006). Horizontal inequality has also been calculated in terms of both social and economic variables. The results reveal a sizable correlation between social horizontal inequalities and the likelihood of conflict, where conflict is defined as resulting in twenty-five or more battle deaths.

¹¹ It should be noted that the survey includes some horizontal inequality measures among the majority of vertical inequality studies.

¹² This includes Collier and Hoeffler (2004b). For analysis of conflicts between 1960–1999 using both inequality data for income and land, see Fearon and Laitin (2003). For analysis of conflicts between 1963–1999 using income data, see Lazar and Dixon (2006). Each of these studies uses cross-country data, and to some degree, different data sources.

¹³ For vertical inequality studies, see among others Auvinen and Nafziger (1999), Collier (2004), and various references in Lichbach (1989). For horizontal inequality studies, see Stewart (2002), Cobham (2005), and Langer (2005).

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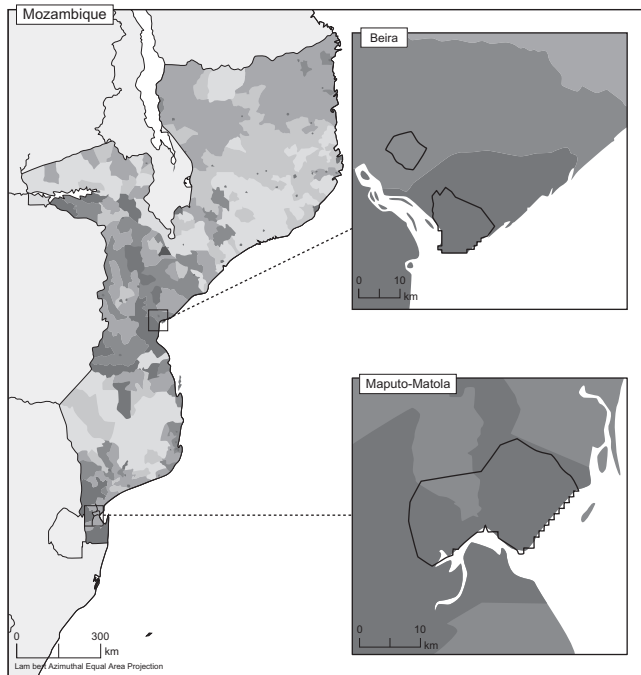
The impact of economic horizontal inequality is weaker both in magnitude and statistical significance. According to Østby, the health inequality variable is negatively associated with the probability of conflict incidence, yet not significantly associated with the likelihood of conflict onset.

Østby's findings, based on data from fifty-five developing countries from 1986 to 2003, show a significant rise in the probability of conflict across countries where severe social and economic horizontal inequalities exist (Østby 2006). Social horizontal inequalities are measured by average years of education, and economic inequalities are measured by average household assets. The effect of horizontal inequalities on conflict occurrence is high, with the probability of conflict tripling with respect to horizontal inequalities in assets. These assets can include arable land or access and control over other natural resources. Although Østby did not explicitly mention conflict recurrence, it can be assumed that the effect on conflict recurrence is similar.

Studying spatial horizontal inequality in Nepal, S. Mansoob Murshed and Scott Gates find that "horizontal inequalities . . . robustly explain the intensity of the Maoist insurgency" (although not the incidence), with a statistical link between district-level relative poverty and the incidence of violent deaths in that same district (Murshed and Gates 2005, 132).

Whether and when vertical inequalities lead to renewed conflict in post-conflict countries is less understood, as few rigorous studies have been undertaken. The case study evidence provides few general lessons. Tackling horizontal inequalities has been an important element in some peace agreements, without which such commitments would probably not have been made. For example, in the twenty-two-year North-South conflict in Sudan, in which political and economic marginalization was an important element, the peace agreement of 2005 incorporated power-sharing, federalism, and wealth-sharing elements (Cobham 2005; Wennmann 2012). In others, the effort to address such inequalities has had disastrous results. Most notably, the 1993 power-sharing accord between the dominant Tutsi minority and the majority Hutu in Rwanda was designed to correct for previous vertical inequalities yet has been implicated as helping precipitate the genocide that followed. In Mozambique, successful peacebuilding and steady economic recovery was based on giving opposition elites generous political and economic opportunities, yet regional and intergroup inequalities have not only persisted post-conflict, they have grown (Manning 2002; Stewart 2005) (see figure 3).

The risk of renewed conflict posed by horizontal inequalities may depend on how conflict itself transforms inequalities. For instance, when a part of the country successfully secedes along ethnic lines, finding the reason for this depends on whether previously excluded or marginalized groups of these regions benefited economically and politically from peace agreements and their implementation. Further, knowing whether prior injustices associated with real and perceived discrimination were satisfactorily addressed in the post-conflict period can help to understand the risk of renewed conflict (UNDP 2008). Also, the risk may even



Mozambique
Administrative Level 3: Posto Administrative

Measures of Inequality

Generalized Entropy, parameter = 1

The Generalized Entropy Index (GE) is a measure of inequality. A value of zero represents perfect equality and higher values denote increasing levels of inequality, within a mapped administrative unit. The parameter reflects the relative weight assigned to differences between welfare levels at different places in the distribution. Here, the parameter value 1 means that differences are equivalently treated at all points in the welfare distribution. GE(1) is also known as Theil's Index.

Each color corresponds to one-fifth of the population of the mapped country.

0.00–0.19	Lightest gray
0.19–0.22	Light gray
0.22–0.28	Medium-light gray
0.28–0.38	Medium gray
0.38–1.30	Dark gray
no data	Black
Greater Urban Extent	Thick black line

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Source: Center for International Earth Science Information Network (CIESIN),
Columbia University. Small area estimates of poverty and inequality, maps and
further documentation available at: <http://www.ciesin.columbia.edu/povmap>



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Figure 3. Spatial distribution of inequality in Mozambique

depend on how the dynamics of intergroup relations are affected by the conditions of post-conflict peacebuilding and development. All of these issues may matter to natural resource management and economic recovery, but there are few reliable analyses to demonstrate how they matter, how much they matter, or under what circumstances.

Demographic factors

Several studies point to the risk of instability and violent conflict in developing countries whose populations feature a large number of youth, especially young

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men. Indeed, historically, demographic youth bulges have been strongly correlated with conflict and violence (Goldstone 2001). More than a decade ago, Kaplan's controversial prognosis of "the coming anarchy" described young West African men as "loose molecules in a very unstable social fluid, a fluid that was clearly on the verge of igniting" (Kaplan 2000, 5).¹⁴ The conditions he predicted seemed to have materialized, in the 1990s, in the graphic and horrifying media images of Liberian and Sierra Leonean children and teens as the shock troops of armed violence that captured world attention. Indeed, concerns about the destabilizing effects of youth bulges have prompted a new emphasis among international donors to target aid to youth in fragile and conflict-torn countries (Sommers 2006).

The critical question remains whether only the presence of youth bulges heightens the risk of conflict. The fact is that many countries in the developing world have large youth bulges. Poverty, famine, and disease have decimated populations even in the absence of armed conflict. The youth bulge is particularly acute in sub-Saharan Africa; fifteen out of twenty countries with the greatest youth bulges were in Africa as of 2000 (Urdal 2004). Even so, not all of these countries have experienced civil war, including Botswana and Ghana.

According to studies of civil war onset, if unemployment, low schooling rates, and political alienation persist in the post-conflict period, there may be an added potential for youth violence and also a higher risk of conflict recurrence (Collier and Hoeffler 2002; Esty et al. 1998). Looking at the period 1950–2000, large cohorts of fifteen- to twenty-four-year-olds (defined relative to the total adult population in an environment of poor economic opportunity) appeared to increase the propensity toward conflict (Urdal 2006). According to Urdal, countries with more than 35 percent of youth as a percentage of the total population are associated with a 150 percent higher risk of conflict compared to a country with an average age structure of developed countries (see figure 2). As post-conflict economies often struggle with low economic growth and high unemployment, these societies are especially vulnerable to conflict recurrence if job creation fails.

So why are youth bulges associated with violence and armed conflict? It is clear from most studies on youth violence that youth bulges alone are not what matter. Instead, it is the perceived and real socioeconomic and political barriers that young people are confronted with that increase the risk of violence (Humphreys and Weinstein 2004). Young people (including women, but even more so men) are discouraged and disillusioned by the absence of social recognition and the lack of educational and employment opportunities. As argued in UNDP's 2008 report *Post-Conflict Economic Recovery: Enabling Local Ingenuity*, "[t]his leaves them alienated and, in many cases, susceptible to recruitment, whether by rebels or government armies, if only to secure a livelihood" (UNDP 2008, 21).

¹⁴ See also Samuel P. Huntington's study arguing that the risk of conflict is high when the number of fifteen- to twenty-four-year-olds as a percentage of the total population reaches a critical threshold of 20 percent (Huntington 1996).

The unemployment rate for young people in developing countries is up to three times higher than for adults (UNDP 2006). As a result, youth in developing countries often feel marginalized and excluded from political and economic life. And participating in armed conflict presents an opportunity for economic enrichment and social recognition. Indeed, rebel leaders often lure the young into fighting by offering them better economic and political opportunities in the wake of victory. The opportunity costs for joining a would-be rebel organization are lower in countries where alternative opportunities—approximated by the level of gross domestic product per capita—are less attractive (Collier and Hoeffler 2002).

Economic opportunities, including access to and control of natural resources, such as land and water in subsistence-dominated societies, may be further constrained under autocratic regimes that have closed recruitment processes, which worsen unemployment and frustration (Goldstone 2001). At the same time, migration—which could otherwise act as a safety valve—is restricted by potential host countries. For instance, some 62 percent of young people in Bosnia and Herzegovina would choose to migrate if they had the opportunity, even more than a decade after the end of the Balkan wars (UNDP 2000). Research suggests that opening regional labor markets in developed countries would be a good way to address the youth crisis in Africa and elsewhere (Peters, Richards, and Vlassenroot 2003). But this seems unlikely since, currently, most young people manage to migrate to cities of their own country, and not beyond its borders. On arrival, they find little opportunities for their talents and energy, driving them toward crime and political unrest (UNDP 2000).

Crime

Rates of violent crime have tended to spike in post-conflict situations. According to Collier and Hoeffler, post-conflict homicide rates are 30 percent higher than those in non-conflict areas (Collier and Hoeffler 2004b). A cross-country sample of risk assessments indicates that post-conflict countries tend to experience high levels of risk in the first two years following widespread armed conflict, but that they converge back to the same levels as non-conflict developing countries by the third year of an enduring peace (Chen, Loayza, and Reynal-Querol 2007). This risk index—the International Country Risk Guide, produced by the PRS Group—also includes measures of economic and financial risk, although political risk includes several measures of insecurity and is weighted twice as strongly as economic and financial indicators.¹⁵ El Salvador and Guatemala, for example, experienced record-high levels of criminal violence after their conflicts ended. Their homicide rates in 2005 were at 54.7 per 100,000 and 48.5 per 100,000, respectively, among the highest in the world (Richani 2007). In El Salvador, the

¹⁵ See www.prgroup.com/about-us/our-two-methodologies/icrg.

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post-conflict period saw the upsurge of *maras*—gangs of excombatants, especially youth—engaging in crime and other illegal activities (Moser 2004). Yet, there are exceptions. In post-conflict Lebanon, for example, the recorded crime rate was 2.2 per 100,000 in 2004, lower than before the civil war (Richani 2007). However, it should be noted that due to insufficient state capacity and underreporting of crime, accurate statistics are difficult to establish.

Why does crime tend to spike after armed conflict? Beyond the continuity of violence even after ceasefires or any formal end to conflict, excombatants may resort to economic crime after army or rebel movements have been downsized and the security sector reformed. This is partly because of their need for income but also because of their socialization into violence. Furthermore, unemployment, rootlessness, and a lack of trust among migrants are often key contributors to crime.

Crime can also reflect the sustained activities of armed groups and banditry. Two types of criminal activities can be observed in post-conflict countries: (1) violent crime, such as robbery, rape, and murder; and (2) economic and financial crime, such as cross-border corruption and drug trafficking. The connection to natural resources is obvious, especially natural resources that are obstructable, or in other words, lootable. Lootable resources include alluvial gems and minerals, timber, agricultural goods, and on-shore oil.¹⁶ Illegal lootable resources, including all types of drugs, are at great risk of being subject to exploitation, theft, or extortion by would-be rebel forces (Le Billon and Nicholls 2007).

Although there is no evidence that violent crime leads directly to conflict relapse, it certainly weakens the society's capacity to build trust and achieve reconciliation. Organized crime constitutes a more serious problem for peacebuilding as it undermines already weak state institutions and challenges state authority. Achim Wennmann argues that "parallel economies contribute to the undermining of post-conflict peace building by diverting resources away from reconstruction and state-building and by empowering actors with little interest in peace" (Wennmann 2005, 479). Criminal activities tend to involve acts of violence, which increases the likelihood of conflict recurrence. "Conflict entrepreneurs" who benefit from the lack of regulation and law enforcement, and who are not co-opted by the post-conflict regime, will typically opt for violence rather than support political stability (Eide 1997). As a result, powerful individuals involved in organized crime, such as kidnapping or drug trafficking and illicit trade in minerals, gems, and timber, may have vested interests in a country relapsing into conflict (Cornell 2007). In many conflicts, kidnapping, extortion, or the capturing of valuable natural resources take place without political motivation, but instead mainly for their profitability (Malone and Nitzschke 2005).

¹⁶ Regarding bananas and fish in Somalia, for example, see Webersik and Crawford (2014), Crawford and Brown (2008), and Webersik (2005).

THE NATURE OF CONFLICT AND PEACE

How the original conflict was fought and the terms of peace also play a role in whether a country remains peaceful. Conflict duration and conflict recurrence appear to be related (Walter 1999). If the conflict was highly destructive and lasted for many years, it is less likely to recur. The explanation is twofold: conflicts that last longer provide more information about the military strength and capability of the parties to the conflict. Uncertainty about the true balance of power is reduced, thus making peace agreements more viable (Smith and Stam 2004). Furthermore, longer-lasting conflicts are usually more destructive than shorter ones and thus reduce military capability, exhaust supplies, lower the morale of combatants, fatigue soldiers, and diminish popular support. But this finding is tempered by the fact that civil wars that result in high casualty rates make conflict recurrence more likely (Mason et al. 2005; Fortna 2003).

Civil wars end in three main ways: (1) outright military victory by one party to the conflict (as in Angola in 2002, or as in Sri Lanka in 2009); (2) the conclusion of a negotiated peace settlement; or (3) attrition (the winding down of major armed conflict in the absence of either a peace agreement or outright victory). Other possibilities include ceasefire agreements or conflicts ending without an observable victory or peace settlement. This is particularly true for low-intensity conflicts, where it is difficult to decide which side “won.” Conflicts in Africa and Asia are especially likely to end without a decisive victory or negotiated peace agreement (Kreutz 2006) (see table 1).

Several studies over the last decade have found that military victories produce a more robust, if less just, peace. One study demonstrates that only 15 percent of armed conflicts ending in victory recur, whereas 50 percent of negotiated settlements break down within five years (Licklider 1995). Another study finds recurrence in even fewer cases: 9 percent for a victory and 44 percent for a negotiated settlement (Mack 2007). Still another study finds that the likelihood of recurrence falls by 70–90 percent if one side is victorious (Fortna 2004). However, this relationship is less clear for cases of the post-Cold War era. Large standard errors make the result insignificant for the post-1989 era. Roy Licklider has found that when armed conflict results from struggles between competing identity groups, 21 percent of the conflicts that end in military victory are

Table 1. Outcomes of armed conflict by region, 1946–2005

<i>Region</i>	<i>Victory</i>	<i>Peace agreement</i>	<i>Ceasefire</i>	<i>Other</i>	<i>Total terminated</i>	<i>Ongoing</i>
Africa	38	23	12	44	117	7
Americas	29	7	1	6	43	2
Asia	25	16	17	64	122	15
Europe	10	7	9	12	38	2
Middle East	18	4	8	22	52	5
All regions	120	57	47	148	372	31

Source: Kreutz (2006).

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followed by renewed violence, compared with 67 percent of conflicts that end at the negotiating table (Licklider 1995).

Why are military victories less vulnerable to conflict recurrence? One explanation is that victory resolves uncertainty about authority and legitimacy on the part of the losing party (Hartzell 1999). Victories discredit the losing side's organizational and institutional structures, making it more difficult for them to take up arms. By controlling the monopoly of physical force, the victors can repel any opposition uprising. Doyle and Sambanis have concluded that if conflict does recur in such cases, it tends to be short and likely to lead to a decisive victory and longer-lasting peace (Doyle and Sambanis 2006).

Negotiated settlements are often considered an effective means of ending violence and bloodshed. Moreover, such settlements, typically accompanied by disarmament and demobilization arrangements and by political power-sharing mechanisms, can provide the institutional rudiments that allow transitional governments to resolve ongoing disputes more peaceably.

So, why have negotiated settlements been associated with increased risk of conflict relapse? Some speculate that the defeat of an enemy force undermines both the incentive and the capacity for relaunching military operations. Negotiated agreements, in contrast, may serve as tactical steps in preparation for renewed offensives, where actors have not suffered the loss of legitimacy brought about by defeat. Negotiated settlements often create balance-of-power struggles, without any one party being stronger, which can undermine the effectiveness of new governments (Licklider 1995). Alternatively, negotiated settlements may create opposition groups with vested interests that do not surrender power if their future is uncertain.

The patterns of conflict termination have clearly shifted since the end of the Cold War, with implications for the risk of conflict recurrence and the prospects for sustainable peacebuilding (see table 2). From 1945 to 1992, most civil wars

Table 2. Outcomes of armed conflict, 1946–2005

	<i>Victory</i>	<i>Peace agreement</i>	<i>Ceasefire</i>	<i>Other</i>	<i>Total terminated</i>	<i>Ongoing</i>
1946–1950	17	3	0	9	29	41
1951–1955	6	4	1	4	15	27
1956–1960	8	5	1	9	23	36
1961–1965	11	4	4	6	25	47
1966–1970	11	3	3	10	27	47
1971–1975	11	4	4	7	26	51
1976–1980	11	1	1	4	17	52
1981–1985	9	1	1	10	21	59
1986–1990	12	4	4	22	42	79
1991–1995	14	14	12	30	70	96
1996–2000	6	7	10	21	44	75
2001–2005	4	7	6	16	33	66
All episodes	120	57	47	148	372	

Source: Kreutz (2006).

ended when one warring party achieved victory. Since the end of the Cold War, however, far more conflicts end by negotiated agreements, ceasefires, and other types of conflict termination than by outright military victory (Hartzell 1999). Indeed, nearly one-half of the conflicts that ended since the Cold War concluded at the negotiating table,¹⁷ whereas between 1945 and 1992, only one-quarter of recorded civil wars ended in negotiated settlements (Licklider 1995). This trend may be due to the increasing number of international peacekeeping operations.

At the same time, the salutary role played by international peacekeepers can reduce the risk of conflict recurrence. Multinational peace operations can, for example, provide incentives for conflict parties to cooperate by raising the cost of defection. International peacekeeping interventions have made war-torn countries more stable. Virginia Page Fortna finds that the risk of renewed conflict drops by 32 percent when UN peacekeepers intervene (Fortna 2004). This percentage rises to almost 70 percent in the post-Cold War era, owing to the overall increase in peacekeeping operations. Doyle and Sambanis find that UN peacekeeping missions are most effective for preventing renewed conflict in the first few years (Doyle and Sambanis 2006). The involvement of a third party prevents post-conflict security dilemmas by providing credible guarantees of stability and disarmament (Bellamy and Williams 2005). But peacemaking fails when potential spoilers are not properly anticipated or managed (Stedman, Rothchild, and Cousens 2003).

Often, the case for external intervention rests on two premises, as Jeremy Weinstein explains: (1) failed states cannot emerge from conflict on their own; and (2) intervention is needed to reverse these countries' political and economic decline (Weinstein 2005). Weinstein's investigation questions these premises with a view toward understanding the internal processes of change that lead to successful state building, the conditions under which these internal mechanisms are likely to work, and the lessons to be drawn. He looks at the experiences of Eritrea, Somalia, and Uganda, where varying degrees of autonomous recovery have occurred, and concludes that under some circumstances it may make sense to allow internal mechanisms to operate without interference in order to achieve a locally grown, more representative, and, ultimately, more durable recovery from conflict. He thus argues that the international community should develop a new strategy for ending civil conflicts and rebuilding states that "supports competent, legitimate military actors to help them win and then constrains these victors to prevent authoritarian decay from taking root" (Weinstein 2005, 5). In

¹⁷ Walter argues in this respect that "[t]he biggest challenge facing civil war opponents at the negotiating table . . . is not how to resolve issues such as land reform, majority rule, or any of the underlying grievances that started the war. These are difficult issues, but they are not the most difficult. The greatest challenge is to design a treaty that convinces the combatants to shed their partisan armies and surrender conquered territory even though such steps will increase their vulnerability and limit their ability to enforce the treaty's other terms" (Walter 1999, 129).

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addition, overambitious democratization goals—often set by international actors—can aggravate unresolved disputes or generate fresh tensions while failing to ensure robust institutions of conflict mediation (Paris 2004).

THE ROLE OF GOVERNANCE AND INSTITUTIONS

Although outcomes differ from one country to another, UNDP's 2008 report argues that post-conflict societies are all at risk to experience some degree of state failure (UNDP 2008). A failed state, or one with malfunctioning institutions, increases the risk of conflict relapse due to the fact that it is unable to provide essential public goods, such as education, health, employment, and, most importantly, security. Natural resources are exploited and plundered in the absence of a functioning government that could protect national assets, such as fisheries or forests, or implement an accepted land tenure system (Webersik 2008).

In some relatively contained conflicts in well-established states—such as the United Kingdom, Indonesia, and Sri Lanka—the state's basic functioning was hardly affected by conflict (UNDP 2008). At the other extreme are countries where conflict brings about the collapse of the state, and no functioning replacement emerges; contemporary Somalia is an example. Somalia is also a good illustration of where the malfunctioning government has led to an overexploitation of natural resources (for example, where the unchecked and unregulated trade in charcoal has led to serious negative environmental consequences) (Webersik and Crawford 2014). In other cases, for example, as seen in contemporary Afghanistan and Iraq, the state may continue to exist when the conflict ends, or a new regime may emerge, but without firm control over the entire territory. In Afghanistan, this has led to a flourishing trade in illegal natural resources, mainly in the production and trade of opium poppy but also in illegal timber.¹⁸

Post-conflict political outcomes differ according to whether the challenge to state authority is mainly subnational or national. Subnational challenges vary substantially in the extent of the territory they affect. The Indonesian province of Aceh, where a separatist rebellion was brought to an end by the 2005 post-tsunami peace accords, constitutes less than 3 percent of the country's land mass and less than 2 percent of its population, whereas the northern and eastern provinces of Sri Lanka, claimed by Tamil separatists, constitute more than 14 percent of the population. When conflict over territory arises in one part of the country, the remaining territory may be unaffected by violence. Sri Lanka and Uganda, for example, have enjoyed effective policies and economic growth despite protracted conflict.

But in many cases, regional or separatist conflicts result in stalemate, evidenced by the fact that separatist conflicts last, on average, twice as long as other internal conflicts (Stewart and Brown 2009). Moreover, the frequent splintering

¹⁸ See Sandra S. Nichols and Mishkat Al Moumin, "The Role of Environmental Law in Post-Conflict Peacebuilding," in this book.

of separatist movements complicates the attainment of a complete ceasefire. Witness the Philippines, where the two main separatist groups, the Moro Islamic Liberation Front and the Moro National Liberation Front, have vacillated in their stance toward peace, while smaller splinter groups such as Abu Sayyaf have rejected all moves toward peace (Noble 1981; Turner 2003). In these situations, conflict recurrence is more likely.

Finally, even where conflict ends in some form of partition—whether through formal secession and the formation of a new state, as in Timor Leste, or through de facto partition, as in Kosovo—revenge attacks may undermine the authority of the partitioned entity. As Walter explains, the division of territory is likely to lead to new conflicts because “partition serves to signal to other ethnic groups that the government is conciliatory and will likely acquiesce to their own demands for greater self-rule” (Walter 2004, 374). As for conflicts that engulf almost the entire country or where the state has essentially dissolved, a comprehensive victory by a well-organized force, such as in Uganda in 1986, can reestablish state authority and capacity relatively quickly. Thus, in turn, the risk of conflict recurrence is reduced.

Even if states are able to provide public goods, some may be unwilling to implement inclusive and remedial policies, particularly to address the causes of armed conflict (UNDP 2008). Strong post-conflict states may seek to preserve the privileges of particular groups and therefore resist the adoption of sound and inclusive policies, as experienced in Eritrea. Such states may be captured by interest groups—especially in countries with abundant nonrenewable resources—and act violently to divert recovery resources to those who control it. Leaders and parties who see their power and interests threatened by peace emerging from negotiations often resort to violence to undermine the peacemaking (so-called peace spoilers) (Stedman 1997). This also involves natural resources, largely lootable ones, such as timber, minerals, and gems. Angola and Sierra Leone in the 1990s are examples. In Somalia, charcoal, bananas, and fisheries have played an important role in financing militias, thereby obstructing durable peacebuilding efforts (Webersik and Crawford 2014). In these cases, “good” recovery policies were unlikely to bring about the desired outcomes (Englebert 2006; Reno 2000).

The two particularly difficult cases involving post-conflict recovery are those where the state is capable but unwilling and those where the state is incapable. In the first, the government does little to address conflict risks and promote economic recovery and indeed may pursue deliberately exclusionary policies. Côte d’Ivoire has moved increasingly in this direction since the end of the Houphouët-Boigny regime (Langer 2005). In relation to natural resource management, economically, natural resources are often regarded as a “free gift of nature” (Repetto 1992). Consequently, governments give out logging or other exploitation licenses in the post-conflict period without considering the environmental and social costs of, for instance, deforestation or the economic exclusion of parts of the population, such as forest-dependent communities. In the second case, where government capacity is weak, the deployment of international peacekeeping

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troops can support the government's capacity to ensure security, disarmament, and demobilization.

The capacity and authority of the post-conflict regime will ultimately determine if peace prevails. International intervention should be constructive in cases where regimes are moving from authoritarian to democratic rule. Transitions are dangerous: countries in political transition—anocracies—are at highest risk of civil war recurrence when they are neither democratic enough to allow broad-based participation and representation, nor authoritarian enough to suppress opposition groups that are potential peace spoilers (Collier, Hoeffler, and Söderbom 2006a). Autocratic regimes are associated with a lower risk of conflict recurrence as they may have more power to contain violence (see figure 2). Benchmarking the risk of conflict recurrence at 40 percent, ten years after the cessation of conflict, Collier, Hoeffler, and Söderbom find that the risk drops to 24.6 percent if the polity is highly autocratic (Collier, Hoeffler, and Söderbom 2006a). This finding stresses the importance of economic recovery and comprehensive security guarantees in favor of political solutions.

CONCLUSION

In sum, risk factors that are believed to be important for conflict onset must be addressed in post-conflict societies to avoid conflict recurrence. These are (1) natural resource dependence; (2) environmental change and natural resource scarcity; (3) poverty and low or declining economic growth; (4) intergroup inequalities; (5) youth bulges; and (6) crime.

The nature of the armed conflict and the subsequent peace is important, too. Very destructive and long-lasting conflicts are less likely to recur. Outright victories have a pacifying effect, as seems to be the case in Angola and Sri Lanka. It is important to note that conflicts transform societies and with them the availability of, access to, and control over natural resources. This transformation creates new conflict risks, making the transition from conflict to peace volatile and thus more difficult. Transitions from conflict to peace are dangerous, particularly when societies move from an autocracy to a democracy.

Institutions matter, too, especially in terms of authority and legitimacy over its territory to allocate and distribute a country's natural wealth, even more so in an era of increasing global demand for raw materials and minerals. As much as natural resources—given other intervening social, economic, and institutional circumstances—can increase the risk of conflict recurrence, they can also help a country to recover and to achieve lasting peace and stability.

The risk factors that are closely related to natural resource management are natural resource dependence and, to a lesser extent, environmental change and natural resource scarcity. Natural resource availability is not a sufficient factor to trigger conflict recurrence. Only when groups within the society are excluded politically or economically from access and allocation of natural resources does resource dependence become a risk. Accordingly, the impact of natural resource

management on economic growth is another important variable that influences whether a country lapses back into conflict. Other factors, not directly related to natural resource management, include horizontal inequalities, crime, and the nature of conflict and peace. Yet, natural resources are often at the root of horizontal inequalities (land), crime (opium poppy), and peace agreements (oil in Sudan).

And just as with the broader transition from conflict to peace, transitions in the control and management of natural resources can exacerbate risks of conflict. These risks emerge when societies move from ambiguous property rights to clear property rights; communal property rights to private property rights; plundered resource rents to invested resource rents; or squandered ecosystem services to managed ecosystem services.

Consequently, this chapter offers a number of natural resource policy recommendations to local stakeholders, policy makers, and the international community to make the transition from conflict to peace possible, and to ultimately avoid conflict recurrence. The recommendations include the following:

- To break the resource curse, verified public auctions should be held to reveal the real value of natural resources.
- Resource-sharing arrangements in negotiated settlements need to be monitored and enforced by third parties to ensure durable peace (Le Billon and Nicholls 2007).
- In order to avoid reemergence of rebel groups, dilute lootability of natural resources for rebellion financing.
- Clarify and secure rights of land tenure and resource access.
- Protect against livelihood shocks through drought insurance, precision agriculture, and price protection.
- Introduce adaptive management. This involves the use of policy targets to improve information about what works and what does not. Refine goals in response to new information, and if the goals are lacking, acknowledge the gaps and try to revise the goals accordingly.

Many of these recommendations are echoed, and explored in greater detail, in other chapters of this book. Together, they reflect a growing recognition that the drivers of conflict recurrence, like the origins of conflict, are complex, subtle, and often tightly interwoven. Natural resources are an inextricable part of that fabric. Whether and how they are managed in the post-conflict period contributes not only to the risk of conflict recurrence but to the long-term prospects for peace.

REFERENCES

- Altman, S. L., S. S. Nichols, and J. T. Woods. 2012. Leveraging high-value natural resources to restore the rule of law: The role of the Liberia Forest Initiative in Liberia's transition to stability. In *High-value natural resources and post-conflict peacebuilding*, ed. P. Lujala and S. A. Rustad. London: Earthscan.

64 Governance, natural resources, and post-conflict peacebuilding

- Auvinen, J., and E. W. Nafziger. 1999. The sources of humanitarian emergencies. *Journal of Conflict Resolution* 43 (3): 267–290.
- Bächler, G., and K. Spillmann. 1997. *Environmental degradation as a cause of war*. [Kriegsursache Umwelterstörung]. Regional- und Länderstudien von Projektmitarbeitern. Zurich, Switzerland: Rüegger.
- Barlow, R., and W. Snyder. 1993. Taxation in Niger: Problems and proposals. *World Development* 21 (7): 1,179–1,189.
- Barnett, J. 2000. Destabilizing the environment-conflict thesis. *Review of International Studies* 26 (2): 271–288.
- Beevers, M. D. 2012. Forest resources and peacebuilding: Preliminary lessons from Liberia and Sierra Leone. In *High-value natural resources and post-conflict peacebuilding*, ed. P. Lujala and S. A. Rustad. London: Earthscan.
- Bellamy, A. J., and P. B. Williams. 2005. Who's keeping the peace? Regionalization and contemporary peace operations. *International Security* 29 (4): 157–195.
- Besançon, M. 2005. Relative resources: Inequality in ethnic wars, revolutions, and genocides. *Journal of Peace Research* 42 (4): 393–415.
- Boserup, E. 1981. *Population and technology*. Oxford, UK: Blackwell.
- Buhaug, H. 2010. Climate not to blame for African civil wars. *Proceedings of the National Academy of Sciences (PNAS)* 107 (38): 16,477–16,482.
- Buhaug, H., N. P. Gleditsch, and O. M. Theisen. 2008. Climate change, the environment, and armed conflict. Paper presented at annual meeting of the American Political Science Association, Boston, MA.
- Burke, M. B., E. Miguel, S. Satyanath, J. A. Dykema, and D. B. Lobell. 2009. Warming increases the risk of civil war in Africa. *Proceedings of the National Academy of Sciences (PNAS)* 106 (49): 20,670–20,674.
- Carius, A., D. Tänzler, and A. Maas. 2008. *Climate change and security: Challenges for German development cooperation*. Eschborn, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH. www.preventionweb.net/files/8023_enclimatesecurity1.pdf.
- Chen, S., N. Loayza, and M. Reynal-Querol. 2007. *Post-conflict transition: The aftermath of civil war*. Washington, D.C.: World Bank.
- Cheng, C. 2006. The rise of extralegal groups during post-conflict transitions: Illegal rubber tapping in Liberia. Paper presented at the annual meeting of the American Political Science Association, Philadelphia, PA, August 31.
- Christian Aid. 2007. *Human tide: The real migration crisis*. London.
- CNA (Center for Naval Analyses) Corporation. 2007. *National security and the threat of climate change*. Alexandria, VA. www.cna.org/sites/default/files/National%20Security%20and%20the%20Threat%20of%20Climate%20Change%20-%20Print.pdf.
- CNA (Center for Naval Analyses) Military Advisory Board. 2014. *National security and the accelerating risks of climate change*. Alexandria, VA: CNA Corporation. www.cna.org/sites/default/files/news/FlipBooks/MAB2014_web/flipviewerxpress.html.
- Cobham, A. 2005. Causes of conflict in Sudan: Testing the black book. *European Journal of Development Research* 17 (3): 462–480.
- Collier, P. 2004. *Development and conflict*. Oxford, UK: Centre for the Study of African Economies, Oxford University. www.un.org/esa/documents/Development.and.Conflict2.pdf.
- . 2009. Post-conflict recovery: How should strategies be distinctive? *Journal of African Economics* 18 (April) (Supp. 1): 99–131.

- Collier, P., V. L. Elliott, H. Hegre, A. Hoeffler, M. Reynal-Querol, and N. Sambanis. 2003. *Breaking the conflict trap: Civil war and development policy*. Washington, D.C.: World Bank; Oxford, UK: Oxford University Press.
- Collier, P., and A. Hoeffler. 2002. On the incidence of civil war in Africa. *Journal of Conflict Resolution* 46 (1): 13–28.
- . 2004a. Greed and grievance in civil war. *Oxford Economic Papers* 56 (4): 663–695.
- . 2004b. Murder by numbers: Socio-economic determinants of homicide and civil war. Centre for the Study of African Economies, Working Paper Series, No. 2004–10. Oxford, UK: Oxford University.
- . 2012. High-value natural resources, development, and conflict: Channels of causation. In *High-value natural resources and post-conflict peacebuilding*, ed. P. Lujala and S. A. Rustad. London: Earthscan.
- Collier, P., A. Hoeffler, and D. Rohner. 2006. Beyond greed and grievance: Feasibility and civil war. Centre for the Study of African Economies, Working Paper Series, No. 2006–10. Oxford, UK: Oxford University.
- Collier, P., A. Hoeffler, and M. Söderbom. 2006a. Post-conflict risks. Oxford, UK: Centre for the Study of African Economies, Oxford University.
- . 2006b. Aid, policies, and risk in post-conflict societies. Oxford, UK: Centre for the Study of African Economies, Oxford University.
- Cornell, S. E. 2007. Narcotics and armed conflict: Interaction and implications. *Studies in Conflict and Terrorism* 30 (3): 207–227.
- Crawford, A., and O. Brown. 2008. *Growing unrest: The links between farmed and fished resources and the risk of conflict*. Winnipeg, Canada: International Institute for Sustainable Development.
- de Soysa, I. 2002. Paradise is a bazaar? Greed, creed, and governance in civil war. *Journal of Peace Research* 39 (4): 395–416.
- Doyle, M. W., and N. Sambanis. 2006. *Making war and building peace: United Nations peace operations*. Princeton, NJ: Princeton University Press.
- Eide, E. B. 1997. ‘Conflict entrepreneurship’: On the art of waging civil war. In *Humanitarian force*, ed. A. McDermott. Oslo, Norway: International Peace Research Institute.
- Ehrlich, P. R. 1971. *The population bomb*. Cutchogue, NY: Buccaneer Books.
- Ehrlich, P. R., and R. L. Harriman. 1971. *How to be a survivor*. London: Ballantine Books.
- Englebert, P. 2006. Why Congo persists: Sovereignty, globalization, and the violent reproduction of a weak state. In *Globalization, violent conflict, and self-determination*, ed. V. Fitzgerald, F. Stewart, and R. Venugopal. Basingstoke, UK: Palgrave Macmillan.
- Esty, D. C., J. A. Goldstone, T. R. Gurr, B. Harff, M. Levy, G. D. Dabelko, P. T. Surko, and A. N. Unger. 1998. *State Failure Task Force report: Phase II findings*. McLean, VA: Science Applications International Corporation.
- Faris, S. 2007. The real roots of Darfur. *Atlantic Monthly*, April.
- Fearon, J. D. 2005. Primary commodity exports and civil war. *Journal of Conflict Resolution* 49 (4): 483–507.
- Fearon, J. D., and D. D. Laitin. 2003. Ethnicity, insurgency, and civil war. *American Political Science Review* 97 (1): 75–90.
- Fingar, T. 2008. National intelligence assessment on the national security implications of global climate change to 2030. Statement for the record of Dr. Thomas Fingar,

66 Governance, natural resources, and post-conflict peacebuilding

- deputy director of National Intelligence for Analysis and chairman of the National Intelligence Council, before the House Permanent Select Committee on Intelligence and House Select Committee on Energy Independence and Global Warming. June 25. www.climateneeds.umd.edu/reports/National%20Intelligence%20Council-National%20Intelligence%20Assessment.pdf.
- Fortna, V. P. 2003. Forever hold your peace? International peacekeeping in civil wars. Paper presented at the annual meeting of the International Studies Association, Portland, OR.
- . 2004. Does peacekeeping keep peace? International intervention and the duration of peace after civil war. *International Studies Quarterly* 48 (2): 269–292.
- Galtung, J. 1980. *The true worlds: A transnational perspective: Preferred worlds for the 1990s*. New York: Free Press.
- . 1982. *Environment, development, and military activity: Towards alternative security doctrines*. Oslo: Norwegian University Press.
- Goldstone, J. A. 2001. Demography, environment, and security. In *Environmental conflict*, ed. P. F. Diehl and N. P. Gleditsch. Boulder, CO: Westview Press.
- Harbom, L., and P. Wallensteen. 2009. Armed conflict, 1946–2008. *Journal of Peace Research* 46 (4): 577–587.
- Hartzell, C. 1999. Explaining the stability of negotiated settlements to intrastate wars. *Journal of Conflict Resolution* 43 (1): 3–22.
- Hauge, W., and T. Ellingsen. 1998. The causal pathway to conflict: Beyond environmental scarcity. *Journal of Peace Research* 35 (3): 299–317.
- Homer-Dixon, T., and J. Blitt. 1998. *Ecoviolence: Links among environment, population, and security*. Oxford, UK: Rowman & Littlefield.
- Howard, P., and T. Homer-Dixon. 1996. Environmental scarcity and violent conflict: The case of Chiapas, Mexico. Project on Environment, Population and Security Occasional Paper. Washington, D.C.: American Association for the Advancement of Science / University of Toronto.
- Humphreys, M. 2003. *Economics and violent conflict*. Cambridge, MA: Harvard University Press.
- . 2005. Natural resources, conflict, and conflict resolution: Uncovering the mechanisms. *Journal of Conflict Resolution* 49 (4): 508–537.
- Humphreys, M., and P. Richards. 2005. Prospects and opportunities for achieving the MDGs in post-conflict countries: A case study of Sierra Leone and Liberia. Center on Globalization and Sustainable Development Working Paper No. 27. New York: Earth Institute, Columbia University.
- Humphreys, M., J. Sachs, and J. E. Stiglitz. 2007. *Escaping the resource curse*. New York: Columbia University Press.
- Humphreys, M., and J. Weinstein. 2004. What the fighters say: A survey of ex-combatants in Sierra Leone, June–August 2003. Center on Globalization and Sustainable Development Working Paper No. 20. New York: Earth Institute, Columbia University.
- Huntington, S. P. 1996. *The clash of civilizations and the remaking of world order*. New York: Simon & Schuster.
- Kang, S., and J. Meernik. 2005. Civil war destruction and the prospects for economic growth. *Journal of Politics* 67 (1): 88–109.
- Kaplan, R. D. 1994. The coming anarchy. *Atlantic Monthly* 273 (2): 44–76.
- . 2000. *The coming anarchy: Shattering the dreams of the post Cold War*. New York: Random House.

- Kelly, K., and T. Homer-Dixon. 1995. Environmental scarcity and violent conflict: The case of Gaza. Project on Environment, Population and Security Occasional Paper. Washington, D.C.: American Association for the Advancement of Science / University of Toronto.
- Kreutz, J. 2006. How armed conflicts end: The UCDP conflict termination dataset, 1946–2005; Draft. Uppsala, Sweden: Uppsala Conflict Data Program.
- Lake, D., and D. Rothchild. 2003. Political decentralization and civil war settlements. In *Governance in a global economy: Political authority in transition*, ed. M. Kahler. Princeton, NJ: Princeton University Press.
- Langer, A. 2005. Horizontal inequalities and violent group mobilization in Côte d'Ivoire. *Oxford Development Studies* 33 (1): 25–45.
- Lazar, O. K., and W. Dixon. 2006. Elusive grievances: The intuition and reality of the explanatory power of economic inequality and social fractionalization for the onset of civil war. Paper presented at the annual meeting of the International Studies Association, San Diego, CA.
- Le Billon, P. 2003. Buying peace or fuelling war: The role of corruption in armed conflicts. *Journal of International Development* 15 (4): 413–426.
- Le Billon, P., and E. Nicholls. 2007. Ending “resource wars”: Revenue sharing, economic sanction, or military intervention? *International Peacekeeping* 14 (5): 613–632.
- Levy, M. A. 1995. Is the environment a national security issue? *International Security* 20 (2): 35–62.
- Lichbach, M. I. 1989. An evaluation of “Does economic inequality breed political conflict?” studies. *World Politics* 41 (4): 431–470.
- Licklider, R. 1995. The consequences of negotiated settlements in civil wars, 1945–1993. *American Political Science Review* 89 (3): 681–690.
- Lietzmann, K. M., and G. D. Vest, eds. 1999. *Environment and security in an international context*. NATO Committee on the Challenges of Modern Society Report No. 232. Bonn, Germany: Nature Conservation and Nuclear Safety; Washington, D.C.: United States Department of Defense; Brussels, Belgium: Committee on the Challenges of Modern Society.
- Lipschutz, R. D. 1997. Environmental conflict: A values-oriented approach. In *Conflict and the environment*, ed. N. P. Gleditsch. Dordrecht, Netherlands: Kluwer Academic.
- Mack, A. 2007. *Global trends in political violence*. New York: International Peace Academy.
- Malone, D., and H. Nitzschke. 2005. *Economic agendas in civil wars: What we know, what we need to know*. Tokyo: United Nations University.
- Mancini, L. 2005. Horizontal inequalities and communal violence: Evidence from Indonesian districts. Centre for Research on Inequality, Human Security and Ethnicity Working Paper No. 22. Oxford, UK: Oxford University.
- Manning, C. L. 2002. *The politics of peace in Mozambique: Post-conflict democratization, 1992–2000*. Westport, CT: Praeger.
- Mason, T. D., M. Gurses, P. Brandt, and J. M. Quinn. 2005. When and why civil wars recur: Conditions for a durable peace after civil wars? Unpublished paper. University of North Texas.
- Meadows, D. H., D. L. Meadows, J. Randers, and W. W. Behrens III. 1972. *The limits to growth: A report for the Club of Rome's project on the predicament of mankind*. New York: Universe Books. www.donellameadows.org/wp-content/userfiles/Limits-to-Growth-digital-scan-version.pdf.

68 Governance, natural resources, and post-conflict peacebuilding

- Miguel, E., S. Satyanath, and E. Sergenti. 2004. Economic shocks and civil conflict: An instrumental variables approach. *Journal of Political Economy* 112 (4): 725–753.
- Moser, C. 2004. Urban violence and insecurity: An introductory roadmap. *Environment and Urbanization* 16 (2): 3–16.
- Murshed, M. S., and S. Gates. 2005. Spatial-horizontal inequality and the Maoist insurgency in Nepal. *Review of Development Economics* 9 (1): 121–134.
- Nafziger, W. E., and J. Auvinen. 2000. The economic causes of humanitarian emergencies. In *War, hunger, and displacement: The origins of humanitarian emergencies*, ed. W. E. Nafziger, F. Stewart, and R. Väyrynen. Oxford, UK: Oxford University Press.
- Nkidumana, L. 2005. Distributional conflict, the state, and peace-building in Burundi. Paper presented at the UNU/WIDER (United Nations University/World Institute for Development Economics Research) conference “Making Peace Work,” Helsinki, Finland.
- Noble, L. G. 1981. Muslim separatism in the Philippines, 1972–1981: The making of a stalemate. *Asian Survey* 21 (11): 1,097–1,114.
- Nordås, R., and N. P. Gleditsch. 2007. Climate change and conflict. *Political Geography* 26 (6): 627–638.
- Østby, G. 2006. Horizontal inequalities, political environment, and civil conflict: Evidence from 55 developing countries. Centre for Research on Inequality, Human Security and Ethnicity Working Paper No. 28. Oxford, UK: Oxford University.
- Paris, R. 2004. *At war's end: Building peace after civil conflict*. Cambridge, UK: Cambridge University Press.
- Percival, V., and T. Homer-Dixon. 1998. Environmental scarcity and violent conflict: The case of South Africa. *Journal of Peace Research* 35 (3): 279–298.
- Peters, K., P. Richards, and K. Vlassenroot. 2003. *What happens to youth during and after wars? A preliminary review of literature on Africa and an assessment of the debate*. The Hague: Netherlands Development Assistance Research Council.
- Reno, W. 2000. Liberia and Sierra Leone: The competition for patronage in resource-rich economies. In *War, hunger, and displacement: The origin of humanitarian emergencies*, ed. W. E. Nafziger, F. Stewart, and R. Väyrynen. Oxford, UK: Oxford University Press.
- Repetto, R. 1992. Earth in the balance sheet. *Environment* 34 (7): 12–20.
- Richani, N. 2007. *Systems of violence and their political economy in post-conflict situations*. Union, NJ: Kean University.
- Richardson, K., W. Steffen, H. J. Schellnhuber, J. Alcamo, T. Barker, D. M. Kammen, R. Leemans, D. Liverman, M. Munasinghe, B. Osman-Elasha, N. Stern, and O. Wæver. 2009. Synthesis report from “Climate Change: Global Risks, Challenges, and Decisions,” Copenhagen, March 10–12. Copenhagen, Denmark: University of Copenhagen.
- Ross, M. 2004. What do we know about natural resources and civil war? *Journal of Peace Research* 41 (3): 337–356.
- Sait, S. 2013. Unexplored dimensions: Islamic land systems in Afghanistan, Indonesia, Iraq, and Somalia. In *Land and post-conflict peacebuilding*, ed. J. Unruh and R. C. Williams. London: Earthscan.
- Sambanis, N. 2004. *Poverty and the organization of political violence: A review and some conjectures*. New Haven, CT: Yale University Press.
- Schubert, R., H. J. Schellnhuber, N. Buchmann, A. Epiney, R. Griefßhammer, M. Kulessa, D. Messner, S. Rahmstorf, and J. Schmid. 2008. *Climate change as a security risk*. London: German Advisory Council on Global Change.
- Sindico, F. 2007. Climate change: A security (council) issue? *Climate Change Law Review* 1 (1): 29–34.

- Smith, A., and A. Stam. 2004. Bargaining and the nature of war. *Journal of Conflict Resolution* 48 (6): 783–813.
- Sommers, M. 2006. *Youth and conflict: A brief review of available literature*. Washington, D.C.: United States Agency for International Development.
- Stedman, S. J. 1997. Spoiler problems in peace processes. *International Security* 22 (2): 5–53.
- Stedman, S. J., D. Rothchild, and E. M. Cousens, eds. 2003. *Ending civil wars: The implementation of peace agreements*. Boulder, CO: Lynne Rienner.
- Steiner, A. 2009. *Africa's natural resources key to powering prosperity*. Arendal, Norway: United Nations Environment Programme / GRID-Arendal.
- Stewart, F. 2002. *Horizontal inequalities: A neglected dimension of development*. Oxford, UK: Oxford University.
- . 2005. Policies towards horizontal inequalities in post-conflict reconstruction. Centre for Research on Inequality, Human Security, and Ethnicity Working Paper No. 7. Oxford, UK: Oxford University.
- Stewart, F., and G. K. Brown. 2009. Fragile states. Centre for Research on Inequality, Human Security, and Ethnicity Working Paper No. 51. Oxford, UK: Oxford University.
- Suhrke, A. 2007. What's a figure? Estimating recurrence of civil war. *International Peacekeeping* 14 (2): 195–203.
- Tiffen, M., M. Mortimore, and F. Gichuki. 1994. *More people, less erosion: Environmental recovery in Kenya*. Chichester, UK: Wiley.
- Turner, M. 2003. The management of violence in a conflict organization: The case of the Abu Sayyaf. *Public Organization Review* 3 (4): 387–401.
- UNDP (United Nations Development Programme). 2000. *National human development report: Bosnia and Herzegovina*. New York.
- . 2006. *Youth and violent conflict: Society and development in crisis?* New York.
- . 2008. *Post-conflict economic recovery: Enabling local ingenuity*. New York.
- UNGA (United Nations General Assembly). 2005. *In larger freedom: Towards development, security and human rights for all; Report of the Secretary-General*. A/59/2005. New York. www.who.int/hdp/publications/4ai.pdf.
- Urdal, H. 2004. The devil in the demographics: The effect of youth bulges on domestic armed conflict, 1950–2000. Washington, D.C.: Conflict Prevention and Reconstruction Unit, World Bank.
- . 2005. People vs. Malthus: Population pressure, environmental degradation, and armed conflict revisited. *Journal of Peace Research* 42 (4): 417–434.
- . 2006. A clash of generations? Youth bulges and political violence. *International Studies Quarterly* 50 (3): 607–629.
- U.S. (United States) Senate Committee on Foreign Relations. 2009. Climate change and global security: Challenges, threats and diplomatic opportunities; Hearing before the Committee on Foreign Relations. 111th Cong., 1st sess., July 21. www.gpo.gov/fdsys/pkg/CHRG-111shrg54243/pdf/CHRG-111shrg54243.pdf.
- Walter, B. F. 1999. Designing transitions from civil war: Demobilization, democratization, and commitments to peace. *International Security* 24 (1): 127–155.
- . 2004. Does conflict beget conflict? Explaining recurrence in civil war. *Journal of Peace Research* 41 (3): 371–388.
- Ward, B., and R. Dubos. 1972. *Only one earth: The care and maintenance of a small planet*. An unofficial report commissioned by the Secretary-General of the United Nations Conference on the Human Environment. London: André Deutsch.

70 Governance, natural resources, and post-conflict peacebuilding

- WCED (World Commission on Environment and Development). 1987. *Our common future*. Oxford, UK: Oxford University Press.
- Webersik, C. 2005. Fighting for the plenty: The banana trade in southern Somalia. *Oxford Development Studies* 33 (1): 81–97.
- . 2008. Wars over resources? Evidence from Somalia. *Environment* 50 (3): 46–58.
- . 2010. *Climate change and security: A gathering storm of global challenges*. Westport, CT: Praeger Publishers.
- Webersik, C., and A. Crawford. 2015. Commerce in the chaos: Bananas, charcoal, fisheries, and conflict in Somalia. In *Livelihoods, natural resources and post-conflict peacebuilding*, ed. H. Young and L. Goldman. London: Earthscan.
- Weinstein, J. 2005. Autonomous recovery and international intervention in comparative perspective. Center for Global Development Working Paper No. 57. Palo Alto, CA: Stanford University.
- Wennmann, A. 2005. Resourcing the recurrence of intrastate conflict: Parallel economies and their implications for peacebuilding. *Security Dialogue* 36 (4): 479–494.
- . 2012. Sharing natural resource wealth during war-to-peace transitions. In *High-value natural resources and post-conflict peacebuilding*, ed. P. Lujala and S. A. Rustad. London: Earthscan.
- Woodward, S. 2007. Do the root causes of civil war matter? On using knowledge to improve peacebuilding interventions. *Journal of Intervention and Statebuilding* 1 (2): 143–170.