

# AN UNCOMMON PEACE

## ENVIRONMENT, DEVELOPMENT, AND THE GLOBAL SECURITY AGENDA

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In 1988, nuclear war was “undoubtedly the gravest” threat facing the environment, according to *Our Common Future*, commonly known as the Brundtland report.<sup>1</sup> The possible environmental consequences of thermonuclear war—radioactive contamination, nuclear winter, and genetic mutations—were widely feared during the Cold War, especially by citizens of the United States and the Soviet Union, which the report called “prisoners of their own arms race.”<sup>2</sup>

Thankfully, these nightmare scenarios did not come to pass, and, aside from the 1986 Chernobyl disaster, our environment has largely escaped the impact of radioactive fallout. However, in the 20 years since the report’s publication, the specter of nuclear destruction has not yet been “removed from the face of the Earth,”<sup>3</sup> as the report called for, but has merely changed scale: the threat of the mushroom cloud has been replaced by the threat of the dirty bomb—a crude device that a terrorist cell could fashion out of pilfered nuclear material. Setting off such a bomb in a world city—a major hub in the global economy—could create more disruption than the paradigm-shifting attacks of September 11, 2001, although the radioactivity would impact far fewer people than the feared global nuclear winter of old.

Since the end of the Cold War in 1989, the security community’s focus has shifted from the global clash of superpowers to fragmented groups of stateless actors fomenting civil war and terrorism. The end of the Cold War also opened greater political space for analyzing a range of diverse threats to both individuals and the world beyond using the traditional state-centered approach. The environment—along with the related challenges of health and poverty—has become a key area of focus within that new space.

Our understanding of the links between environment and security has evolved in the last 20 years to reflect these changing threat scenarios. Today, “environmental security” has become a popular phrase used to encompass everything from oil exploration to pollution controls to corn subsidies. The Brundtland report, in an

underappreciated chapter entitled “Peace, Security, Development, and the Environment,” set the agenda for understanding these multiple links between environment and security.

In this chapter, the Brundtland commissioners flagged both the environment’s implications for security and security’s impact on the environment. They highlighted the contributions of natural resources to violent conflict and their link to the well-being of humans and ecosystems. At the same time, the arms culture of superpower military confrontation and the subsequent war on terror have presented tremendous impediments to achieving sustainable development. The report even previewed the recent efforts to capture the power of environmental issues to build peace instead of conflict. “Some of the most challenging problems require cooperation among nations enjoying different systems of government, or even subject to antagonistic relations,” wrote the commissioners.<sup>4</sup> Twenty years later, that statement still rings true, outlining the pathway to one facet of our common future: environmental peacemaking.

### REDEFINING SECURITY IN OUR COMMON FUTURE

*Our Common Future*, produced by the World Commission on Environment and Development (WCED), is best known for its definition of sustainable development.<sup>5</sup> Yet the so-called Brundtland Commission, named after its chair, former Norwegian Prime Minister Gro Harlem Brundtland, also called for a broader conception of security that included instability caused in part by environmental factors. Conflict, attendant military spending, and the ultimate threat of nuclear exchange were highlighted as direct and indirect impediments to achieving sustainable development. As was to become the habit of many subsequent environmental security advocates, *Our Common Future* called for fundamentally broadening security definitions to accommodate these wider threats while simultaneously employing environment and conflict arguments that fell comfortably within the traditional confines of security.<sup>6</sup>

In the introductory chapter, the commissioners stated, “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.”<sup>7</sup> While acknowledging these linkages were “poorly understood,” the commission held that “a comprehensive approach to international and national

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security must transcend the traditional emphasis on military power and armed competition."<sup>8</sup> Before WCED, Brundtland had served on the Olof Palme Commission, where environment and security were broadly linked under the notion of "common security." This tenure gave her direct experience with international, nontraditional security discussions and was an important influence on her subsequent work. Johan Jørgen Holst, Brundtland's close confidant and eventual defense and foreign minister, was a key contributor to the arguments in the "Peace, Security, Development, and the Environment" chapter.<sup>9</sup> In 1985, he enunciated these perspectives from his post as head of the prestigious Norwegian Institute of International Affairs (NUPI), where he worked when not serving in government.

While by no means the first advocate for this expanded notion of security,<sup>10</sup> the Brundtland Commission was a key legitimizing voice. Its influence was felt in the United Nations Development Programme's (UNDP) "human security" frame, which gained traction in UN forums and was championed by select national leaders such as Canada's Foreign Minister Lloyd Axworthy.<sup>11</sup> Even as it called for altering the security paradigm, the Brundtland Commission made arguments firmly ensconced in a traditional statist security perspective. The report flagged "environmental stress as both a cause and an effect of political tension and military conflict" and recognized that "environmental stress is seldom the only cause of major conflicts within or among nations" but could be "an important part of the web of causality associated with any conflict and can in some cases be catalytic."<sup>12</sup>

The commissioners identified climate change, loss of arable land, fisheries, and water as factors likely to contribute to conflict and spur other security-related problems, such as migration and economic dislocation. It also highlighted poverty, inequality, and lost development opportunities as key factors in creating insecurity. However, these factors were not consistently addressed in the early research on environmental stress and conflict that followed in the early 1990s, possibly due to relatively low levels of developing-country participation in these research efforts. Had more researchers adopted the Brundtland Commission's broader lens, analyses of environment-conflict links might have better integrated more robust analysis of poverty concerns and the physically remote, yet highly relevant role of international markets for natural resources.<sup>13</sup>

The Brundtland Commission also identified political capacity as an important element in environment-conflict links 10 years before it was hailed "the missing ingredient" by the field's researchers.<sup>14</sup> The commissioners stated that environmental stress could contribute to interstate or subnational conflict "when political processes are unable to handle the effects of environmental stress resulting, for example, from erosion and desertification."<sup>15</sup> *Our Common Future's* focus on environment and conflict provided a legitimizing foundation for what, just a few years later, became an explosion of analytical work within and outside governments.<sup>16</sup> During the 20 years that followed the release of *Our Common Future*, scholarly and policy interest in the linkages it highlighted has risen, fallen, and risen again.<sup>17</sup>

Not only did the Brundtland Commission point out the environment's contribution to conflict and insecurity, it also highlighted the negative impacts of conflict and the military on the environment. It reminded governments that the costs of conflict and militaries present direct and indirect tradeoffs to investing in sustainable development: "Arms competition and armed conflict may stimulate an ethos that is antagonistic towards cooperation among nations whose

ecological and economic interdependence requires them to overcome national or ideological antipathies." Even "a state of 'peace' might well entail the diversion into armament production of vast resources that could, at least in part, be used to promote sustainable forms of development."<sup>18</sup> This resource-diversion or opportunity-cost argument has been repeated time and again in both expert and public discourses on environmental security.<sup>19</sup> The commissioners went so far as to identify tropical forest, water, desertification, and population priorities that could be funded with one month's share of the global military spending budget.

### NO ROOM FOR ENVIRONMENTAL SECURITY ON THE RIO AGENDA

The environment, peace, and security chapter of *Our Common Future* did not receive extensive formal treatment at the 1992 UN Conference on Environment and Development in Rio de Janeiro. The developing world did not endorse a global dialogue on environmental issues within the context of conflict and security, reacting negatively to formal environmental security proposals in UN forums.<sup>20</sup> The coalition of developing nations, the Group of 77, perceived the security frame as a Pandora's box that, once opened, could dilute their claims of absolute sovereign control over their resources. The United States was equally wary, fearing environmental issues might dilute and undermine military-focused security definitions in the midst of the Cold War. More practically, the environment, conflict, and security issues raised in *Our Common Future* did not easily lend themselves to resolution in a multilateral environmental treaty, the preferred mechanism at Rio and of the international environmental community in general.<sup>21</sup>

The Soviet Union attempted—and failed—to institutionalize environment and security links at the United Nations prior to the Rio conference. In October 1987, in the wake of the Chernobyl accident, Mikhail Gorbachev launched his "Murmansk Initiatives" in a speech in that northern city on the Kola Peninsula.<sup>22</sup> Calling for *glasnost* and greater cooperation (particularly among the Arctic states) in trade, environment, culture, and arms control, he proposed "ecological security" as a top global priority for both bilateral relationships and international institutions.<sup>23</sup> While aimed at environmental challenges, the Murmansk Initiatives were a de facto forum for moving beyond environmental goals to broader confidence-building efforts across the Cold War divide.

Gorbachev and then-Soviet Foreign Minister Eduard Shevardnadze, in speeches to the United Nations in 1988 and 1989, proposed creating ecological security institutions because, in Shevardnadze's words, "Overcoming the global threat to the environment and ensuring universal environmental security through prompt and effective action is an imperative of our times."<sup>24</sup> In early May 1989, Shevardnadze called for the creation of a "UN Center for Emergency Environmental Assistance," commonly referred to as the "Green Helmets," to be headed by a UN undersecretary-general.

The foreign minister asked all member states to discuss this idea, in which a group of environmental experts would comprise a rapid-response force, "at a time when countries are starting preparation for a UN-sponsored conference on environment and development planned for 1992."<sup>25</sup> He also called on the UN General Assembly to create a UN Environmental Security Council. These specific proposals were predicated on the more fundamental premise that security had to be redefined: "For the first time we have understood clearly what we just guessed: that the traditional view of national and universal security based primarily on military

means of defense is now totally obsolete and must be urgently revised."<sup>26</sup> Linking other environment and security data points together, Shevardnadze cited a Pugwash appeal and the Brundtland Commission's *Our Common Future* as "assets" in the effort to make "responsible decisions."

The reaction to the Murmansk Initiatives and the subsequent UN proposals was mixed. The U.S. government response was "reserved," perceiving the Soviet ideas as posturing and rhetoric designed to play to the developing country galleries at the UN General Assembly.<sup>27</sup> Environment was not yet widely linked with security in U.S. diplomatic circles, with then-U.S. Senator Al Gore one of the few politicians regularly promoting the connection.<sup>28</sup> With the concurrent collapse of communism in Central and Eastern Europe, the rest of the world glimpsed the massive toxic legacy lurking behind the Iron Curtain, which damaged the credibility of Soviet environmental decisionmaking. Shevardnadze's 27 September 1988 call for the United States and others to transfer funds from military programs to environmental efforts echoed similar efforts in the 1970s and 1980s by the Soviets to slow or constrain NATO weapons development by promoting international environment regimes.<sup>29</sup>

The Green Helmets proposal was highly unpopular with developing countries and became a political nonstarter. Countries such as Brazil feared (and continue to fear) developed-country intervention seeking to stop exploitation of natural resources such as those in the Brazilian Amazon.<sup>30</sup> The sovereign right of nonintervention was employed as an argument against the Green Helmets proposal, cutting off UN General Assembly discussion of further ecological security proposals. This dynamic repeated itself 10 years later in the UN context when then-UN Environment Programme Executive Director Klaus Toepfer reintroduced the Green Helmets idea, which was once again quickly rejected by the Group of 77 countries due to sovereignty concerns.

### ENVIRONMENTAL SECURITY TAKES ROOT

This failure to achieve high-profile traction on environmental security linkages at the United Nations in the 1990s did not imply a commensurate lack of interest among certain individual nations and regional organizations. The end of the Cold War did not produce the expected peace dividends, as hostilities held in check by the superpower competition were unleashed and the number of conflicts actually spiked in the 1990s. For some, such as Al Gore, by then U.S. vice president, the rise in civil conflicts—such as those in Liberia, Somalia, Rwanda, and Haiti—indicated that governments should pay greater attention to the underlying demographic, environmental, and distributional origins of these conflicts. These concerns led to a raft of analytical and policy initiatives which were prominent in, but by no means limited to, the United States.<sup>31</sup>

While environmental advocates and security actors remained wary of each other's focus, means, and ends, both analysts and policymakers sought to understand these linkages. Journalist Robert Kaplan captured the policy community's attention (and fears) in his 1994 *Atlantic Monthly* article entitled "The Coming Anarchy."<sup>32</sup> Kaplan held up demographic and natural resource pressures as primary explanations for West Africa's failing states, drawing heavily on the work of peace researcher Thomas Homer-Dixon from the University of Toronto. Many critics thought Kaplan oversold the environment as the national security issue of the twenty-first century, and his claims that West Africa's fundamental challenges were widely applicable to other regions of the world provoked an analytical and policy backlash when

environmental scarcity did not prove to be the ultimate threat in the post-Cold War era. Environmental security would not provide an all-encompassing alternative security paradigm. Nevertheless, the contributions of natural resource scarcity and abundance to conflict—as well as larger environmental challenges to traditional definitions of security—became institutionalized concerns for foreign, development, and security communities.

In 1994—a key year in our understanding of the links between environment, development, and security—the UNDP dedicated its annual *Human Development Report* to human security, suggesting that environmental security was one of seven areas that should constitute a new global security paradigm.<sup>33</sup> Japan, Canada, and a wide range of UN bodies now commonly use this frame, and small island states commonly invoke it to dramatize the threat to survival posed by climate change-induced sea-level rise. Although its critics bemoan its lack of precision,<sup>34</sup> human security was prominently deployed in nonenvironmental successes such as the establishment of the 1997 Convention to Ban Landmines and the International Criminal Court in 2002.

In the late 1990s, climate change and the 1997 Kyoto Protocol captured the attention of most of the global environmental community. Climate change had not featured prominently in the debates over whether the environment is a contributing cause of conflict, and it had not yet been framed as an existential global security threat. The heavy focus on the multilateral environmental treaty mechanism and the all-country negotiations to reach a global agreement was not well suited to addressing the intertwined and site-specific social, political, economic, and environmental challenges of climate change. Scholars were mired in a set of testy methodological logjams that have only begun to break up in recent years due to innovative qualitative and quantitative work. In the policy realm, program implementation suffered from the reluctance of donors to integrate conflict considerations into their anti-poverty or livelihoods efforts. At the same time, many developing countries and donors remained suspicious of environmental issues, considering them luxury items for wealthy countries rather than life-and-death livelihood problems for the world's poor. However, by the early twenty-first century, many overcame their hesitation to integrate environment, development, and conflict efforts, as evidenced by greater willingness to analyze these natural resource linkages and address them with local, field-based programs.

The reaction to the September 11 attacks certainly set back efforts to address environment and security linkages. Just as the superpower confrontation of the Cold War provided little political space for a broader array of security concerns, the "war on terror" kicked other threats off policymakers' priority lists. The environmental angle suffered another blow in 2003 when the UN-constituted Commission on Human Security, a blue-ribbon panel cochaired by Amartya Sen and Sadako Ogata and similar to WCED, inexplicably dropped natural resources from its analysis.<sup>35</sup> And the antipathy of U.S. President George W. Bush's administration to anything dubbed "environmental" set back efforts in international forums and pushed much of the official U.S. work on environmental security behind the scenes, or forced it to be relabeled as disaster relief. Yet interest in environment, peace, and security linkages continues to grow within the UN system, the bilateral development and security communities, and in countries experiencing conflict. As the "force-only" responses to the September 11 attacks have fallen short of achieving either military or human security objectives, policymakers and practitioners have been returning to more inclusive notions of security.<sup>36</sup>

Diversifying the portfolio of approaches to gain security, however, has not yet led the security community to embrace the idea that massive defense spending incurs sustainability opportunity costs, a key component of the Brundtland Commission's argument. These debates continue in 2008 with all-or-nothing advocacy rather than grounded analysis dominating efforts to reduce military spending.

Today, the research community continues to debate links between environmental scarcity, resource abundance, and violent conflict.<sup>37</sup> Although U.S. policy attention was greatest when Al Gore was an internal advocate, environmental security garnered attention both before and after the Clinton-Gore administration. European policy attention to these links—particularly those between climate and security—has perhaps never been so great as it has in 2008.<sup>38</sup>

### THE FUTURE OF ENVIRONMENT, PEACE, AND SECURITY

The Brundtland Commission mapped out complex cause-and-effect connections linking environmental issues with development, peace, and security. The sheer diversity of environment-security links, as complex today as they were 20 years ago, will continue to frustrate those in the policy and analytical realms who want more analytical precision and a narrower lens for a term as broad as "environmental security." Yet the failure of one set of environment and security linkages to achieve dominance has guaranteed that no avenues have been prematurely closed off. The temptation to crown one set of linkages the top priority or the only legitimate definition of environmental security ignores the diversity of valid concerns that arise in different contexts and sets up a false all-or-nothing choice.

Efforts to broaden the definition of security are again gaining traction, boosted by the widespread concern with the potential impacts of climate change and the perception that using force as the only approach to conflict is counterproductive. A few prominent scientists even claim that climate change is a bigger threat than terrorism.<sup>39</sup> These environment and security links have helped break down the stereotype that environmental issues are the province of wealthy advocates interested in saving charismatic wildlife. Instead, policymakers and practitioners are increasingly viewing these natural resources as critical to the day-to-day livelihoods of literally billions of people. By awarding recent peace prizes to Al Gore and the Intergovernmental Panel on Climate Change, as well as environmental activist Wangari Maathai, the Nobel Committee has helped push environmental security back into the limelight, 20 years after the Brundtland Commission brought it to the fore. A few areas, discussed below, illustrate the field's budding progress and the great potential for meaningful analytical development and practical action.

### DOWN ON THE GROUND: SUBNATIONAL ANALYSIS

Although there has been a dramatic decline in the number of conflicts over the past decade, persistent ones—including those in the Democratic Republic of the Congo, Nigeria, the Philippines, the Horn of Africa, and Nepal—often have strong environmental components.<sup>40</sup> Whether it is the abundance of valuable resources such as oil, forests, or minerals, or the scarcity of resources such as land or water, these underlying factors are increasingly viewed as central to spurring, prolonging, ending, and resolving these conflicts.<sup>41</sup> Analyzing the multiple roles environmental factors play before,

during, and after conflict supports a much more robust research and policy agenda than does focusing exclusively on the environment's potential to cause conflict. This wider lens also helps address the misperception that environment is *the* factor causing conflict; those who analyze environment, conflict, and security issues seek only to be included in the larger conflict discussion.

New analytical developments are bolstering policymakers and practitioners' interest in practical ways to break the links between environment and conflict. In particular, the increasing ability to analyze georeferenced environmental and conflict data at much more local levels will improve the historically limited quantitative evaluations of these linkages. Preliminary research funded by the National Science Foundation, for example, has found statistically significant correlations between rainfall and civil conflict, strongly suggesting the value of robust analytical work.<sup>42</sup> And while violent conflict continues to garner the most attention, broadening the definition of "conflict" to include nonviolent or less organized violent conflict has increased the range of cases under discussion. For example, the social protests that have met water privatization megaprojects (such as large dams), international markets for natural resources, or conservation areas that limit community usage, expand the range (and relevance) of environmental security analysis.<sup>43</sup>

### CLIMATE CHANGE AND SECURITY

The recent rise of concern over climate change has both spurred—and been spurred by—climate-security connections. Prominent reports in the European Union, United States, United Kingdom, and Germany aimed at garnering more policy attention to climate change have emphasized its security linkages.<sup>44</sup> With a push from the United Kingdom, the UN Security Council devoted an April 2007 session to climate change, peace, and security, the first Security Council session on an environmental topic.<sup>45</sup> UN Secretary-General Ban Ki-moon subsequently linked UN efforts to battle climate change with its mission to address the underlying causes of conflict in Darfur, Sudan.<sup>46</sup> In March 2008, European Union High Representative for the Common Foreign and Security Policy Javier Solana presented to the European Council a short climate change and security paper responding to pressure (particularly from Germany) to raise the profile of climate-security connections. Mirroring some of the language used in prominent reports from German, British, and U.S. nongovernmental organizations, the brief called climate change a "threat multiplier which exacerbates existing trends, tensions and instability" that could "overburden states and regions which are already fragile and conflict prone," posing "political and security risks that directly affect European interests."<sup>47</sup>

The 2007 Nobel Peace Prize, awarded to Al Gore and the Intergovernmental Panel on Climate Change, most prominently linked climate change and security. In announcing the award, the Norwegian Nobel Committee called climate change both a fundamental threat to human well-being and a contributing factor to more traditional violent conflict. In 1987, the Brundtland Commission argued, "Slowing, or adapting to, global warming is becoming an essential task to reduce the risks of conflict."<sup>48</sup> In 2007, the Norwegian Nobel Committee echoed those words:

Extensive climate changes may alter and threaten the living conditions of much of mankind. They may induce large-scale migration and lead to greater competition for the earth's resources. Such changes will place particularly heavy burdens on the world's most vulnerable countries. There may be increased danger of violent conflicts and wars, within and between states.<sup>49</sup>

The heightened attention to climate change boosts the prospects for constructively addressing environment, development, and security linkages. The wide range of potential climate impacts is reenergizing broader debates over human security that suggest redefining security beyond purely militaristic terms. At the same time, the traditional security community's concern with climate change (and the social reactions it may produce, such as migration) has helped garner wider attention. For example, examining its implications for desertification, precipitation, and crops in vulnerable areas such as the Sahel may also help illuminate the preexisting but neglected connections between these environmental variables and social conflict. Ironically, climate change mitigation efforts, such as increasing the use of biofuels, are arguably creating new natural resource and conflict links, as more forests are cleared for palm oil plantations and food prices are rising as we choose to grow our fuel supplies. These "knock-on effects" present a new research agenda for environment, development, and conflict scholars and practitioners.

### ENVIRONMENTAL PEACEMAKING

Although the Brundtland Commission discussed the environment's role in conflict, it devoted little attention to environmental management's potential to be a powerful peacemaking tool. A growing number of conflict-prevention and post-conflict scholars and practitioners argue that natural resource management can be a key tool for helping prevent or end conflict and for building peace in a post-conflict setting.<sup>50</sup> The cooperation imperative spurred by environmental interdependence and the long-term need for iterated interaction can be used as the basis for confidence building rather than merely engendering conflict.<sup>51</sup>

The Nile Basin is an unlikely example of conflict prevention. Many of the countries in the volatile region are beset by high levels of civil conflict, and their widespread dependence on the Nile's waters have led many to flag this river basin as the most likely to experience international water wars.<sup>52</sup> Yet for the past nine years, the basin's riparian states—Burundi, the Democratic Republic of the Congo, Egypt, Eritrea, Ethiopia, Kenya, Rwanda, Sudan, Tanzania, and Uganda—have convened the ministerial-level Nile Basin Initiative (NBI) to develop a shared vision of sustainable use of those waters.<sup>53</sup> The initiative centers around eight "Shared Vision" projects—including the Regional Power Trade, Water Resources Management, and Efficient Water Use for Agriculture projects—meant to foster trust and encourage investment. While formally framed as a development enterprise,<sup>54</sup> these efforts also implicitly serve as a means to prevent conflict predicated on environmental interdependence.<sup>55</sup> However, the NBI process is not without its critics, and issues of transparency and wider stakeholder participation remain concerns.<sup>56</sup>

In times of active conflict, management of a shared natural resource across lines of conflict can serve as a communication lifeline when other aspects of the relationship remain highly volatile. The "Picnic Table Talks"—in which Israeli and Jordanian water managers met at a picnic table to jointly manage their water resources while their countries were formally at war—are a vivid example. These technical exchanges helped build trust and personal connections that contributed to achieving the larger peace treaty between the countries in 1994.<sup>57</sup> More recently, Friends of the Earth launched the Good Water Makes Good Neighbors Middle East initiative to promote cooperation among Israelis, Palestinians, and Jordanians on shared water problems.

In this fashion, environmental management serves as a way to develop confidence that may carry over to other aspects of a rela-

tionship. Transboundary protected areas or "peace parks" are also an emerging—if still controversial—means to capitalize on shared ecological boundaries to build trust between parties in conflict.<sup>58</sup>

Finally, assessing post-conflict environmental conditions can serve as a necessary first step to building a sustainable peace. The UN Environment Programme's Post-Conflict and Disaster Management Branch (PCDMB) is leading the way on this post-conflict stage with what it calls "environmental diplomacy."<sup>59</sup> PCDMB's objective scientific assessments of wartime environmental damage in countries as diverse as Bosnia, Sudan, Liberia, Iraq, and Afghanistan (and forthcoming, in Nigeria, Nepal, Rwanda, and the Democratic Republic of the Congo) have become a foundation for efforts to strengthen environmental management institutions in ways that contribute to reconciliation and capacity building across lines of conflict. These steps toward "environmental diplomacy," like most efforts to capitalize on environmental peacemaking, are modest, small-scale, and remain to be fully tried and tested. Yet this robust analysis may soon be possible, as other parts of the United Nations focused on development and conflict issues move to capitalize on the environmental confidence building that can be fostered by addressing natural resource and pollution connections to livelihoods in post-conflict settings. Bilateral aid agencies are also pursuing similar practical steps by incorporating natural resource management into their peacemaking toolboxes.

Many hurdles remain, beginning with the imposing bureaucratic and institutional impediments to collaboration facing environment, development, and security actors, who speak different languages, use different tools, and often have very different bottom-line goals. But pushed by on-the-ground realities, researchers and practitioners are trying to navigate these complex linkages and find ways to work together. Environmental peacemaking efforts have limited use for unwieldy multilateral environmental agreements, the UN's go-to tool, which are poorly matched to the day-to-day intersections of environment, peace, and security issues at the intrastate level. Instead, parties seeking to break the negative links between environment and conflict must focus on local, national, and regional instruments that can grapple more effectively with the integrated problems of poverty, environment, and conflict.

Twenty years after the release of the Brundtland Report, our common future still depends on the health of our environment. It is increasingly clear that our common peace may rely on it as well. Preparing for and waging war often destroys the environment and diverts resources better deployed for sustainability. And a devastated environment can spur new conflicts over resources. Climate change threatens to destabilize not only our atmosphere, but also nations. But it is also garnering the attention of the wide range of actors necessary to tackle these fundamental challenges. Even as we become more attentive to the ways in which the environment can contribute to conflict, we must remain open to opportunities for environmental peacemaking to help us secure our environment—and ourselves.

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### NOTES

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3. *Ibid.*, page 304.

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18. WCED, note 1 above, pages 290 and 294.
19. UN Secretary-General, *Potential Uses of Military-Related Resources for Protection of the Environment*, Report A/46/364 (New York: UN Office for Disarmament Affairs, 1993). This same argument against the "arms culture" was voiced in the Rio+10 forum of the 2002 Johannesburg World Summit on Sustainable Development where public interventions at IUCN's 3 September environmental security forum repeatedly focused on diverting U.S. military largesse to more productive and sustainable ends (Environmental Resources and Social Conflict Dialogue, Sandton, South Africa, 3 September 2002).
20. J. M. Trollalden, *International Environmental Conflict Resolution: The Role of the United Nations* (Washington, DC: World Foundation for Environment and Development, 1992).
21. The 1976 Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (ENMOD) and subsequent international law aimed at reducing the intentional use of the environment as a tool of war are exceptions to the global level agreement in this area. See J. E. Austin and C. E. Bruch, *The Environmental Consequences of War: Legal, Economic, and Scientific Perspectives* (Cambridge: Cambridge University Press, 2000).
22. See D. Scrivener, *Gorbachev's Murmansk Speech: The Soviet Initiative and Western Response* (Oslo: The Norwegian Atlantic Committee, 1989) for a discussion of Gorbachev's 1987 Murmansk Initiatives and the Western response.
23. "Ecological security" as opposed to "environmental security" is a closer translation of the Russian *ekologicheskaja bezopastnost*. It appears to be used interchangeably with no special distinction between "ecological" and "environmental." Others do use the term "ecological security" to connote the balance between *Homo sapiens* and other species. See D. Pirages and T. M. DeGeest, *Ecological Security: An Evolutionary Perspective on Globalization* (Lanham, MD: Rowman & Littlefield Publishers, 2003).
24. "Soviet Union Proposes Center for Emergency Environmental Aid," Reuters, 5 May 1989.
25. "Shevardnadze Calls for Steps to Protect Environment," Information Telegraph Agency of Russia (ITAR-TASS), 3 May 1989.
26. E. Shevardnadze, Speech to the 43rd session of the UN General Assembly, 27 September 1988.
27. Jancar-Webster and Sokolov, note 25 above, page 131. See National Security Strategy (Washington, DC: U.S. Government Printing Office, 1988) for the Reagan administration's sentiment of judging Soviet actions and not words in White House.
28. F. Lewis, "Environment Is Security," *New York Times* (24 May 1989).
29. This call for the transfer of funds is also found in Trollalden, note 20 above.
30. T. G. da Costa, "Brazil's SIVAM: Will It Fulfill Its Human Security Promise?" *Environmental Change and Security Project Report* 7 (2001): 47-58.
31. Dabelko, note 5 above; G. D. Dabelko and P. J. Simmons, "Environment and Security: Core Ideas and U.S. Government Initiatives," *SAIS Review* 17, no. 1 (1997): 127-46; R. Floyd, "Typologies of Securitisation and Desecuritisation: The Case of US Environmental Security 1993-2006," PhD diss., University of Warwick, 2007; and D. C. Esty et al. *State Failure Task Force Report: Phase II Findings* (McLean, VA: Science Applications International Corporation, 31 July 1998).
32. R. D. Kaplan, "The Coming Anarchy," *Atlantic Monthly* 273, no. 2 (February 1994): 45-76.
33. UNDP, note 11 above. The seven securities were economic, food, health, environmental, personal, community, and political.
34. Paris, note 11 above.
35. Commission on Human Security, *Human Security Now* (New York: United Nations, 2003). See <http://www.humansecurity-chs.org/index.html>.
36. J. Wolfensohn, Speech at the Woodrow Wilson International Center for Scholars, Washington, DC, 6 March 2002.
37. See note 16.
38. For examples of how environmental security concerns are institutionalized in a variety of national settings, see Institute of Environmental Security, *Inventory of Environmental Security Policies and Practices* (The Hague: Institute of Environmental Security, 2006).
39. U.K. Science Adviser Sir David King claimed, "[C]limate change is the most severe problem that we are facing today—more serious even than the threat of terrorism." D. A. King, "Climate Change Science: Adapt, Mitigate, or Ignore?" *Science* 303, no. 5655 (9 January 2004): 176.
40. Uppsala Conflict Data Program, Uppsala Conflict Database, <http://www.pcr.uu.se/database/>
41. UNEP, *Sudan Post-Conflict Environmental Assessment* (Geneva: UNEP, 2007); U.S. Agency for International Development (USAID), *Forests and Conflict: A Toolkit for Intervention* (Washington, DC:

USAID, 2005); and USAID, *Land and Conflict: A Toolkit for Intervention* (Washington, DC: USAID, 2005).

42. M. A. Levy, "Is the Environment a National Security Issue?" *International Security* 20, no. 2 (1995): 35–62; and M. Levy, C. Thorkelson, C. Vörösmarty, E. Douglas, and M. Humphreys, "Freshwater Availability Anomalies and Outbreak of Internal War: Results from a Global Spatial Time Series Analysis," paper presented at Human Security and Climate Change, Oslo, Norway (21–23 June 2005).

43. K. Conca, *Governing Water: Contentious Transnational Politics and Global Institution Building* (Cambridge, MA: MIT Press, 2005).

44. Military Advisory Board, *National Security and the Threat of Climate Change* (Washington, DC: CNA Corporation, 2007); German Advisory Council on Global Change, *World in Transition: Climate Change as a Security Risk* (London: Earthscan, 2007); J. W. Busby, *Climate Change and National Security: An Agenda for Action*, Council Special Report no. 32 (New York: Council on Foreign Relations Press, 2007); and K. M. Campbell et al., *The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change* (Washington, DC: Center for Strategic and International Studies and Center for a New American Security, 2007).

45. See "Security Council Holds First-Ever Debate on Impact of Climate Change on Peace, Security, Hearing Over 50 Speakers," UN Security Council press release SC/9000, 17 April 2007, <http://www.un.org/News/Press/docs/2007/sc9000.doc.htm>.

46. K. Ban, "A Climate Culprit in Darfur," *Washington Post* (16 June 2007).

47. EU Commission and the Secretary-General/High Representative, *Climate Change and International Security* (Brussels, Belgium: Council of the European Union, 3 March 2008), 2.

48. WCED, note 1, page 294.

49. The text of the announcement of the 2007 Nobel Peace Prize winners is available at [http://nobelpeaceprize.org/eng\\_lau\\_announce2007.html](http://nobelpeaceprize.org/eng_lau_announce2007.html).

50. K. Conca and G. D. Dabelko, eds., *Environmental Peacemaking* (Washington, DC, and Baltimore, MD: Woodrow Wilson Press and Johns Hopkins University Press, 2002); and K. Conca, A. Carius, and G. D. Dabelko, "Building Peace Through Environmental Cooperation," *State of the World 2005: Redefining Global Security* (Washington, DC: Worldwatch Institute, 2005); E. Weinthal, "From Environmental Peacekeeping to Environmental Peacemaking," *Environmental Change and Security Program Report* 10 (2004): 19–23; and A. Carius, "Environmental Peacebuilding: Conditions for Success," *Environmental*

*Change and Security Program Report* 12 (2006–2007): 59–75.

51. K. Conca, "The Case for Environmental Peacemaking," in K. Conca and G. D. Dabelko, eds., *Environmental Peacemaking* (Washington, DC, and Baltimore, MD: Woodrow Wilson Press and Johns Hopkins University Press, 2002): 1–22.

52. For example, World Bank Vice President Ismail Serageldin claimed in 1995 that "the wars of the next century will be about water," and Egyptian President Anwar Sadat said in 1979, "The only matter that could take Egypt to war again is water." Egyptian Minister of State for Foreign Affairs Boutros Boutros-Ghali echoed this statement when he predicted in 1985, "The next war in the Middle East will be fought over water, not politics." See "Talking Point: Ask Boutros Boutros-Ghali," BBC News, 10 June 2003, [http://news.bbc.co.uk/2/hi/talking\\_point/2951028.stm](http://news.bbc.co.uk/2/hi/talking_point/2951028.stm).

53. See Nile Basin Initiative at [www.nilebasin.org](http://www.nilebasin.org).

54. C. W. Sadoff and D. Grey, "Beyond the River: The Benefits of Cooperation on International Rivers," *Water Policy* 4, no. 5 (2002), 389–404.

55. Anecdotally, policy efforts from a range of geographical settings (Central Asia, the Caucasus, and East Africa) suggest that making the conflict prevention or post-conflict reconciliation goals of environmental peacemaking implicit or unstated is advantageous. Stating the conflict prevention goals explicitly makes the environmental and security cooperation more difficult to achieve in some settings, suggesting practitioners must find a way to capitalize on the peacemaking gains without overtly framing the goal of such efforts as peace rather than environmental sustainability.

56. P. Kameri-Mbote, "Water Conflict and Cooperation: Lessons from the Nile Basin Initiative," Navigating Peace Initiative Policy Brief 4 (Washington, DC: Environmental Change & Security Program, Woodrow Wilson International Center for Scholars, 2007), available at <http://www.wilsoncenter.org/topics/pubs/NavigatingPeaceIssuePKM.pdf>.

57. See A. Wolf, *Hydropolitics along the Jordan River: The Impact of Scarce Water Resources on the Arab-Israeli Conflict* (Tokyo: United Nations University Press, 1995).

58. Peace parks are also highlighted as means to (re)open political boundaries and stimulate economic growth from tourism in post-conflict environments. Early peace park efforts in southern Africa in particular have been widely criticized for not sharing benefits with local people and actually creating new human-animal conflicts. For an overview of perspectives, see S. Ali, ed., *Peace Parks: Conservation and Conflict Resolution* (Cambridge, MA: MIT Press, 2007).

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