It is almost forty years since the 1972 United Nations Conference on the Human Environment, when the Stockholm Declaration on the Human Environment was concluded. The declaration is recognized by international lawyers as the beginning of international environmental law. But progress has been slow. Notwithstanding four decades of international environmental lawmaking, the fraught negotiations and limited results of the Copenhagen Climate Change Conference of December 2009 demonstrate just how complex the environmental agenda has become. The ink is barely dry on the Copenhagen documents, so it is premature to analyze the success of that round of international lawmaking. There is, however, a clear link between climate change and deforestation, and analysis of international forest law (a largely uncharted area of international law) offers guidance to international lawmakers who struggle to align a desire for environmental protection with the commitment to economic growth that underpins democratic systems of government.

The relationship between international law, climate change, and forests is now widely recognized. Forests first appeared on the international legal agenda in the 1960s, as part of the newly emerging environmental movement, much of the impetus of which was derived from Rachel Carson’s book *Silent Spring*, which described the effect of DDT on U.S. birdlife. During the 1970s and 1980s, forest management became an increasingly regulated activity, since access to forest resources or to the land on which forests were located was often the key to economic development. While U.S. state and federal forests were generally well-regulated, elsewhere in the world in the late 1980s and early 1990s there were fundamental changes in the forest sector. These were caused by the expansion of commercial logging, particularly in South America and the Asia-Pacific region, by increasing recognition of the rights of indigenous peoples dependent on forests and by changing patterns of land ownership, particularly in the newly emerging republics of the former Soviet Union.

**International Forest Law**

The U.N. is the obvious source of an organized system of relations between states. It is, however, increasingly clear that the U.N. is not well-equipped to deal with complex forest issues. And much of the complexity of these environmental issues arises from issues of sovereignty, which itself has a troubled history. The Peace of Westphalia, a 1648 settlement that ended the Thirty Years’ War, is recognized by many lawyers as the origin of the nation state and of the modern system of international law. The Treaty of Westphalia established a system of sovereign states that, while not without ambiguities, served Europe and, following the granting of independence to Europe’s colonies, the world for at least three hundred years. Revolutions in sovereignty result from prior revolutions in ideas about justice and legal authority. New ideas challenge the legitimacy of the existing legal order and gain popular support. This leads to protest, to political
upheaval, and eventually to the birth of a new legal order. In early modern Europe, for example, the Protestant Reformation led to a century of war, which culminated in the Peace of Westphalia. In the twentieth century, a new understanding of nationalism triggered protest and revolt that by the early 1960s had led to widespread decolonization. For both revolutions, agreement on sovereignty was the term on which the crisis was settled. Such agreement has not yet been reached for many international environmental issues, and it is now clear that the complex issues that underpin the environmental crisis were beyond the capacity of the system of international law on which the world relied in the 1990s.

At the U.N. Conference on Environment and Development (UNCED) at Rio in 1992, it was assumed that a binding forest treaty was likely to be the most effective path forward, but records of the UNCED debates (at which the non-legally binding—and thus toothless—Forest Principles were agreed) confirm that forest issues were poorly defined, the parties polarized, and the future uncertain and deeply problematic. Almost seventeen years later, notwithstanding the creation of a smorgasbord of inconsistent laws, poorly coordinated institutions, and defective policies and programs, little progress has been made. Nations have agreed in principle that more effective international environmental law is a worthy ideal, and numerous instruments have emerged to counter deforestation. These include new treaties, technologies, taxes, incentives, and tradable allowances. Legal scholars have written about the design, negotiation, and implementation of a new forest agreement, and political scientists have analyzed forest negotiations. Meanwhile, many foresters have conceded defeat as the conjunction of legal, political, and economic forces works in favor of continuing forest loss and degradation. Those forces include the absence of good governance (manifested particularly but not only in illegal logging), continuing pressure from the agricultural frontier, market distortions that arise from the lack of valuation of environmental services, and the lack of effective law enforcement agencies in many key forested countries. The most recent U.N. Food and Agriculture Organization figures confirm that deforestation continues at a disturbing rate, particularly in the Amazon, Central Africa, and Asia-Pacific regions. Indeed, countries in which deforestation rates have fallen have achieved this outcome simply because they have no forest left to destroy. The development of international forest law has become a race to the bottom.

The conceptual development of international forest law corresponds closely with the progress of the U.N.’s environmental agenda. In 1992, forests were among the most controversial issues discussed at the UNCED. The failure of delegates to negotiate an international forest treaty demonstrated the complexity of the challenge. The prevailing north-south polarization prevented a consensus between developed nations who were in favor of a new treaty, and developing nations who resented western intervention in issues within their sovereign territory. The results were the Rio Declaration on Environment and Development, the United Nations Framework Convention on Climate Change (to which the Kyoto Protocol was later added); the Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (Forest Principle); and Agenda 21, a three-hundred-page plan for achieving sustainable development in the twenty-first century.

The period 1992–95 was characterized by emerging north-south partnerships. Throughout that period and subsequently, the focus of the U.N. in this area was on the development of coordinated policies at an international level to promote the management, conservation, and sustainable development of all types of forests. The emergence of a growing international consensus enabled the U.N. Economic and Social Council to establish an ad hoc Intergovernmental Panel on Forests (IPF) in 1995. In 1997, the panel concluded with more than one hundred negotiated proposals for action related to sustainable forest management. Matters requiring further consideration—either because consensus could not be reached or because further analysis was necessary—included legal instruments, institutions, and issues related to finance and transfer of technology, trade, and environment. Between 1997 and 2000, the Intergovernmental Forum on Forests (IFF) continued the work of the intergovernmental panel. The forum concluded in 2000 with a report that recommended that an international arrangement on forests be established and that included more than 270 proposals for action towards sustainable forest management. Since 2000, the U.N. Forum on Forests has continued the work of the intergovernmental panel and forum. Consistent with the objectives of its predecessors, the primary objective of the U.N.
forum was “to promote the management, conservation and sustainable development of all types of forests ... based on the Rio Declaration ...[,] the Forest Principles, Chapter 11 of Agenda 21 and the outcomes of the IPF/IFF ... in a manner consistent with and complementary to existing international legally binding instruments relevant to forests”16. In February 2006, the sixth session of the U.N. Forum on Forests requested that its next session “conclude and adopt a non-legally binding instrument on all types of forests”17 and decided that the effectiveness of the international arrangement on forests would be reviewed in 2015, at which time a full range of options, including a legally binding instrument, is to be considered.18 Consistent with this, in 2007 the seventh session of the U.N. forum concluded another non-legally binding forest instrument.

Lawyers not immediately familiar with the intricacies of public international law may query the value of a non-legally binding instrument. They have a point. Recall too that judgments of the International Court of Justice have no precedential value and are — at least in practical terms — unenforceable. One enters the murky world of non-binding agreements, advisory opinions and judgments that may have little long-term significance.

**Nuclear Weapons and Environmental Protection**

Indeed, the uncertainty that arises from the International Court of Justice’s 1996 Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons19 offers a timely and troubling reminder of the protection afforded the environment during international armed conflict by international environmental law.20 That advisory opinion held that environmental treaty obligations cannot have been intended to deprive a state of its right of self-defense under international law. Much research has been undertaken on this topic, and scholars agree that international law provides some protection for the environment during armed conflict. Limitations on methods of warfare and the infliction of unnecessary suffering or damage are well-established. The 1868 Declaration of St. Petersburg, the 1899 and 1907 Hague Conventions (the provisions of which were held to be declaratory of customary international law by the Nuremberg Tribunal), and the 1949 Geneva Conventions all prohibit wanton destruction. The 1868 Declaration of St. Petersburg, for example, asserts “the only legitimate object which States should endeavour to accomplish during war is to weaken the military forces of the enemy.” This prohibition is echoed in the 1907 Hague Convention that prohibits the infliction of destruction which is not “imperatively demanded by the necessities of war.” Environmental protection per se entered the international legal agenda in the late 1960s, a date which corresponds broadly with the use of Agent Orange in Vietnam. Subsequently, Additional Protocol I (of 1977) to the 1949 Geneva Conventions prohibits methods of warfare “which are intended, or may be expected to cause, widespread, long-term and severe damage to the natural environment.”23

The protocol also limits the circumstances in which “works or installations containing dangerous forces,” including nuclear power plants, may be made the object of attack.24 Also in 1977, the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques prohibited the use of environmental modification techniques “having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party.”25

Following the first Gulf conflict, the International Committee of the Red Cross discussed the creation of a fifth Geneva Convention, intended to provide protection for the environment during armed conflict. It concluded that an additional convention was not needed because protection already exists in international agreements. Some protection is provided by customary international law, and violations of the U.N. Charter entail responsibility under international law to make reparation. Security Council Resolution 687 (1991), for example, holds Iraq liable for “direct loss, damage, including environmental damage and depletion of natural resources” arising from its conflict with Kuwait. A year later, Principle 24 of the 1992 Rio Declaration said, “States shall … respect international law providing protection for the environment in times of armed conflict and cooperate in its further development, as necessary.” Principle 2 of that declaration echoed Principle 21 of the 1972 Stockholm Declaration, asserting that states have a duty “to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction,” and U.N. General Assembly Resolution 47/37 (1992) states that “destruction of the environment not justified by military necessity and carried out wantonly is clearly contrary to existing international law.”
In the 1996 Nuclear Weapons Advisory Opinion the International Court of Justice referred to several instruments of international law and stated, “while the existing international law … does not specifically prohibit the use of nuclear weapons it indicates important environmental factors that are properly to be taken into account in the context of the implementation of the principles and rules of the law applicable in armed conflict.”26 Shortly afterwards, the 1996 Statute of the International Criminal Court categorized certain acts of serious and intentional harm to the environment as war crimes and provided for individual responsibility.27

Lawyers who have lived through conflict, served in the military, or visited Hiroshima or Nagasaki may suspect that this analysis overlooks the realpolitik of international law. First, international law is a voluntary system, so states that do not wish to be bound by a new treaty can usually ignore it — and there is no reason to believe that states that routinely breach other aspects of international law would honor international environmental agreements. Second, the International Court of Justice already has stated that obligations deriving from environmental treaties are not intended to deprive states of their right to self-defense. Any act of self-defense is subject to the well-established requirements of necessity, proportionality, and discrimination. Ultimately, acts that meet these requirements are likely to be lawful. Third, a range of dispute resolution mechanisms already exists in international law. Each has advantages and disadvantages, but it is difficult to see how international law on environmental protection would prevent or limit the use of nuclear weapons, in the event that such use was deemed necessary on the grounds of self-defense by a nuclear state.

The question that should have been asked is not whether international law on environmental protection permits the use of nuclear weapons, but what role international law on environmental protection will play in the post-Cold War era. Patricia Birnie, Alan Boyle, and Catherine Redgwell suggest that the law of armed conflict is one of the least sophisticated parts of contemporary international law.28 In contrast, despite repeated failures to reach binding agreement on issues such as climate change and deforestation, international environmental law is developing rapidly. Environmental protection is now an established element of public international law; more than twenty cases have reached international courts since 2000, courts no longer shy away from arguments based on environmental protection, and there is no doubt that extensive protection for the environment exists in international law, albeit in an uncoordinated collection of legal instruments.

While legal scholars may argue about the intricacies of environmental protection, it is unlikely that pirates in the Gulf of Aden, warlords in the Horn of Africa or those charged with managing the nuclear technology of rogue states are well-versed in international law on environmental protection, and it is difficult to argue that causing them to become so should be the priority of the international community. Our most powerful weapons are unique in their capacity to cause widespread, long-term and severe damage that extends beyond national boundaries, so it is right that such weapons should be regulated on an international basis. But to argue that the use of such weapons may be prohibited on the grounds of international environmental obligations stretches credibility. The “just war” theory has a long and noble history, the principles of necessity, proportionality, and discrimination have long been recognized as customary international law and the Hague and Geneva conventions serve the international community well. Until such time as implementation of international environmental obligations improves, it is doubtful that an analysis of the lawfulness of the use of nuclear weapons, undertaken by reference to environmental obligations, will be fruitful.

In his recent book, published posthumously, Michael Quinnan argues that nuclear weapons have made major armed conflict between advanced states almost impossible, and that this fact is an inestimable benefit to humanity that must not be lost.29 Clearly environmental considerations must be given serious consideration in military decision making, but the international agenda has changed. Most conflicts are now intrastate, not interstate, and the parties are no longer the two superpowers of the Cold War but rogue states and clandestine warlords. At stake are issues of terrorism, arms control, and human security. It is no longer far-fetched to suggest that within the next few years the Chapter VII powers of the U.N. Security Council, designed to deal with threats to and breaches of international peace and security may be used to intervene in an environmental crisis.

Paths Forward
Light is, however, shining through the trees. International environmental law has matured sig-
nificantly since the heady days of the 1992 U.N. Council on Environment and Development at Rio and the 1996 ICJ Advisory Opinion. Most lawmakers in this area now accept that the creation of further international treaties — unless underpinned by identifiable adequate funding, long-term political commitment, and an effective international dispute settlement mechanism — is neither feasible nor desirable. Rather, environmental degradation is best mitigated by a combination of legal, financial, and scientific instruments and processes.

This has enabled lawyers to identify key questions in this area of law and to begin to formulate answers based not on grandiose U.N. documents but on gritty experience. Of those questions, three are likely to interest lawyers dipping their toes into international environmental law for the first time. First, what is the proper role of international law in this area? Why, for example, should the International Court of Justice rule on the current Pulp Mills case between Uruguay and Argentina involving the operation of a pulp mill on banks of the shared River Uruguay? Is this no more than a regional matter best resolved according to local custom and practice, or does it raise fundamental issues about the role of science in international lawmaking? Second, what are the aims of international environmental law? Is it really sensible to “conserve biodiversity,” as the 1992 Convention on Biodiversity states, rather than eradicating malaria-carrying mosquitoes? Third, what makes an international environmental agreement work? Why, for example, did the Montreal Protocol on Substances Which Deplete the Ozone Layer work while the Kyoto Protocol on Climate Change had limited success? These questions challenge the current generation of international environmental lawyers. To resolve them, attorneys must respond in the robust tradition of the common law, rather than pitting themselves against the environmental lobby.

Throughout the last decade, international law was challenged repeatedly. In 1948, the three-hundredth anniversary of the Peace of Westphalia, Leo Gross wrote of the Westphalian system of international law:

Such an international law, rugged individualism of territorial and heterogeneous states, balance of power, equality of states, and toleration — these are among the legacies of the settlement of Westphalia. That rugged individualism of states ill accommodates itself to an international rule of law reinforced by necessary institutions.30

In the same article, Gross predicted the need to find a way “of harmonizing the will of major states to self-control with the exigencies of international society which, by and large, yearns for order under law”31. Writing in 1948, Gross was referring to the collapse of the League of Nations, the establishment of the United Nations, the jurisdiction of the Nuremberg and Tokyo tribunals that tried those charged with offences against Allied prisoners of war, and the reconstruction of postwar Europe. More than fifty years later, the tension between the will of major states and the need for order under law remains unresolved. By the beginning of the twenty-first century, globalization had forced the “rugged individualism” of states into an uneasy compromise within the U.N. system, but events of the last decade demonstrate that the U.N. is poorly equipped to deal with complex issues of climate change and deforestation, particularly as some of those issues challenge the principles of sovereignty on which international law is premised.

For an international environmental instrument to be effective, countries must engage fully with that instrument. Engagement requires long-term commitment from the whole country, including politicians and crony businesses — not just from industry, local communities, and citizens. Each of those groups has an important role to play, but the effectiveness requires all of them to be involved. Long-term commitment will develop only when parties can see that their interests are being served. For issues such as the protection of a single species, this is challenging. For matters as complex and diverse as climate change and deforestation, this has been almost impossible. Protection for the environment already exists in international law, albeit in an uncoordinated collection of legal instruments. There are gaps in that protection, but events of the last decade confirm that the biggest challenges are the development of the rule of law in turbulent regions of the world and the identification of a means by which existing law — national and international — can be implemented effectively on a global scale, not the creation of further international environmental agreements. This does not negate the need for law, but suggests that better implementation of existing national and international environmental law is likely to be more effective than the creation of new law.

Clearly, environmental protection is central to security, peace, and justice. Forests provide livelihoods both for a significant number of U.S. citizens and for millions of impoverished people in developing countries. Any diminution in forests may result in a reduction in basic livelihood resources. This, in turn, causes migration into already hard-pressed urban areas or across borders into the sovereign territory of equally impoverished neighboring states. Forced migration separates communities from their livelihoods, their support systems, and their roots, and may lead to the spread of disease, pressure on already fragile ecosystems, and conflict over scarce resources. All too often, the result is civil war and dependence on short term assistance of aid agencies. Consequently, deforestation may be a threat to the territorial integrity and political and economic independence of a state, since it may dislocate communities and force migration and consequential dependence on short-term aid. It follows that the failure to avert deforestation is a threat to sovereignty, to “political independence and territorial integrity”32 that is just as important as more visible threats and of much longer-term significance, since the consequences affect the global system for generations to come. The challenge now for all U.S. lawyers — not simply the environmental lobby — is to engage with the international environmental agenda to recognize the contribution environmental protection makes to the
development of international peace and security and to legislate within the best traditions of American lawmaking.

Endnotes:

3 The settlement included the Treaty of Westphalia of 24 October 1648 between Ferdinand III, the Holy Roman Emperor, and Louis XIV of France and their respective allies, and the Treaty of Osnabruck, also of 24 October 1648, between the Holy Roman Emperor and Sweden.
4 The U.N.C.E.D. also considered proposals for the creation of a new international environmental court and for comprehensive reform of the international legal system, neither of which were agreed.
7 These include the Intergovernmental Panel on Forests, Intergovernmental Forum on Forests, United Nations Forum on Forests, World Commission on Forests and Sustainable Development, Interagency Task Force on Forests, Collaborative Partnership on Forests, the forestry sections of the Food and Agriculture Organization, United Nations Environment Program, United Nations Development Program, the World Bank and the regional development banks, and the World Trade Organization.
8 These include the World Bank Forest Strategy, the EU Forest Law Enforcement and Governance Program, regional forest law programs, and forest certification and labeling.
20 An earlier version of this section of this article is published in 21 Journal of Environmental Law 518 (2009).
21 Preamble.
22 Article 23 (1)(g).
23 Article 35(3).
24 Articles 55(1) and 56(1).
27 Article 8(b)(iv).
31 Gross, 41.