The Environment, International Relations, and U.S. Foreign Policy

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It is now common to argue that Earth is experiencing important and harmful environmental changes, but this was not always so. Only in recent decades have the connections between human actions and environmental change become widely known. Beginning especially with Rachel Carlson's 1962 book, *Silent Spring*, in which she showed that chemicals introduced into the environment were harming songbirds (and more), Americans started to recognize their impact on the natural world.[1] Subsequently, the U.S. government passed and implemented historically unprecedented legislation that has been effective in reducing and even reversing much of the damage Americans do to their own environment.[2] More recently, Americans have come to realize that adverse environmental changes beyond their borders can threaten environmental protection efforts at home or even dwarf domestic environmental problems in their proportions and consequences. Much more belatedly, they have started to recognize that what they do—in their daily lives, in their industry, and even in their diplomacy—has great impact on the environments of other countries and on the planet as a whole. Thus, environmental issues have, at least on occasion in recent years, moved to the front burner of U.S. foreign policy. They have garnered the attention of policymakers at the highest levels of the U.S. government, including the president and key members of Congress.

This book seeks to illuminate the environmental dimensions of U.S. foreign policy. The contributors highlight some of the areas of environmental change in which the United States has been active, explain why the United States has behaved the way it has in dealing with these issues, and evaluate U.S. international environmental policy from practical and normative perspectives.

For those interested in U.S. foreign policy—that is, the "goals that the nation's officials seek to attain abroad, the values that give rise to those objectives, and the means or instruments used to pursue them"[3]—the value of undertaking such a mission is perhaps obvious. In examining environmental foreign policy, this volume illuminates foreign policy generally. But those interested in the environment, both within the United States and abroad, will also find this project worthwhile. Why? One important reason is that the United States is the world's

greatest polluter. For example, its emissions of pollutants that scientists believe contribute to global warming and to the climatic changes that result from global warming surpass those of any other country.[3] Indeed, on a per capita basis, U.S. emissions of these "greenhouse gases" are among the highest in the world. With less than one-twentieth of the world's population, the United States produces nearly one-fourth of the world's greenhouse gases.[4] By reducing its emissions of greenhouse gases, and similarly by reducing its impact on the global environment in countless other ways, the United States can have a vastly disproportionate positive impact on international environmental problems. What is more, with the world's largest economy, it has considerable financial resources that can be directed at environmental problems abroad, and its technological leadership has tremendous potential in this respect.

The United States can also set an example for much of the world. If it leads in the area of international environmental protection efforts, other countries will likely follow.[5] If it fails to lead by acting more robustly to protect the global environment, many other countries will mirror its failure. Thus, the United States can be a leader on international environmental issues, or it can be a "veto state," often determining the success or failure of international environmental cooperation and affecting whether that cooperation leads to effective environmental protection on the ground throughout the world. Finally, many believe that the United States has an ethical obligation—as the world's largest polluter and as the world's wealthiest country—to act both at home and abroad to protect the earth's natural environment and to help those people (and perhaps even other species) adversely affected by environmental changes.

For these and no doubt other reasons, understanding U.S. international environmental policy is central to the entire project of global environmental protection. But understanding the foreign policies of the United States toward the environment is a complex undertaking, not least because the problems are so many and so complex, and because very many actors and forces are involved in shaping those policies. Understanding U.S. foreign policy and the ways in which it affects and is affected by global environmental change is a prerequisite for understanding the larger international environmental debate and the intricacies of global collective action on environmental change. What is more, examining the role of the environment in U.S. foreign policy gives us a better understanding of the foreign policy of the U.S. government generally, which is beneficial for those hoping to understand the role of the United States in other issues that will confront the world in the twenty-first century.

Challenges for U.S. Foreign Policy: Environmental Issues in International Diplomacy

The number of environmental issues directly and indirectly affecting U.S. national interests (and arguably the sentiments of many Americans) is large. This section

looks briefly at some of the history of the more prominent issues. Subsequent chapters examine many of these issues in greater historical detail.

Walter Rosenbaum has identified two "eras" in U.S. environmental policy.[7] The first "environmental era" began in the 1960s and extended into the late 1980s, encompassing the Environmental Decade of the 1970s, which saw the most new environmental legislation. Concern for domestic environmental issues rose in the United States during the 1960s, resulting in legislation to improve water quality and to protect wild areas, such as the Clean Air Act of 1963 and the Wilderness Act of 1964. Public concern about environmental issues increased further in the 1970s, and the resulting pressure on politicians and policymakers led to more laws to protect the environment in the United States. During the 1970s, landmark legislation was passed in the areas of air and water pollution, pesticides, endangered species, hazardous and toxic chemicals, ocean pollution, land degradation, wilderness protection, and energy use.[8]

As Rosenbaum argues, the Environmental Decade

> created the legal, political, and institutional foundations of the nation's environmental policies. It promoted an enduring public consciousness of environmental degradation and fashioned a broad public agreement on the need for governmental restoration and protection of environmental quality that has become part of the American public policy consensus. It mobilized, organized, and educated a generation of environmental activists. The environmental movement prospered in a benign political climate assured by a succession of White House occupants tolerant, if not always sympathetic, to its objectives.[9]

However, environmentalists were forced to go on the defensive following the election of Ronald Reagan in 1980. The Reagan administration sought to reduce federal regulations, particularly environmental ones. Although the administration was unable to dismantle the work of the environmental movement in the 1970s, it was able to thwart robust implementation of existing legislation. Furthermore, few new environmental protections were put into place, although the decade is noteworthy for U.S. involvement in international negotiations toward a treaty protecting the earth's stratospheric ozone layer. Reagan's successor, George Bush, was more sympathetic to environmental regulations, having pledged to become the "environmental president." The Bush administration supported environment friendly amendments to the Clean Air Act, and it acceded to amendments strengthening the ozone treaty. In the end, however, the Bush administration's initiatives toward environmental protection were lackluster and few.

The 1990s saw the emergence of a second environmental era. After three decades of trying to combat most environmental problems with their own resources, Americans—and indeed people in other countries—recognized that many of the most pressing environmental issues were ones with causes, consequences, and remedies beyond the sovereign control of the U.S. government or

of any other government. This recognition of interdependence among countries meant that international environmental issues became highly salient domestic political issues.[10] Many of the environmental and resource issues that came to prominence domestically in the 1960s and 1970s were also those that moved onto the international agenda in the late 1980s and 1990s. However, rather than focusing on air quality in U.S. cities, activists and policymakers began to look at the consequences of air quality for developing countries and turned their attention to impacts from industrialization on the earth's atmosphere. Rather than remain concerned only with the quality of water in rivers in the United States, concerned individuals focused attention on the quality of water—and the availability of water—in riparian systems covering many countries, and they became much more concerned about the consequences of national river pollution for the world's oceans. Similarly, other formerly domestic concerns spread to international affairs, or at least had close analogies there. According to Rosenbaum, "No transformation in the domestic political conception of environmentalism has more profound future implications than this internationalization of ecological issues."[11]

This transformation was reflected in the intentions and policies of the Clinton administration. Indeed, Clinton and his vice president, Al Gore, campaigned on the environmental theme, and Gore's book, *Earth in the Balance*, demonstrated his sentiments in favor of very strong international environmental regulations.[12] Shortly after Clinton took office, then State Department counselor Timothy Wirth (who was soon to be undersecretary of state for global affairs) declared that the new administration would reestablish the United States as the world's environmental leader: "the United States once again resum[es] the leadership that the world expects of us. . . . [S]ee the changes that we have made related to environmental policy coming out of the disastrous events in Rio just one year ago at the UNCED [United Nations Conference on Environment and Development]. . . . Just a year ago, the United States was viewed as a country not fulfilling its responsibilities, and now we are, on these most difficult issues, once again out in the lead."[13] This assertion was made in repudiation of the preceding decade, in which Republicans in the White House acted to thwart most international action to address global environmental problems. Of course, although many members of Congress—usually Democrats—during the Reagan and Bush administrations supported international environmental protection measures, during the tenure of the Clinton administration many members—usually Republicans—opposed such measures. The upshot is that Clinton was unable to go as far as he and his policy advisors had promised.

Highpoints in International Environmental Diplomacy: Stockholm and Rio

Until the 1980s and 1990s, the focus of American concern for the environment was largely domestic. Nevertheless, the United States has participated in international environmental diplomacy for much of this century, with the most extensive involvement coming in the last three decades. It is party to more than 150 international environmental agreements and treaties, but it joined two-thirds of those since 1970.[14] Much of this new attention to international environmental issues and international efforts to address them arose because environmental issues increasingly were caused—and seen by scientists to be caused—by pollution or its consequences crossing borders and by the realization that international cooperation was needed to address these issues effectively.[15]

Environmental issues truly emerged on the international agenda with the 1972 Stockholm Conference on the Human Environment. The governments of 114 countries sent representatives to Stockholm, although only two heads of state attended. The U.S. government under Richard Nixon was active in pushing the agenda at Stockholm. Governments agreed that their environmental fortunes were interconnected and that they shared a single global commons. Among the important products of the Stockholm conference were the Stockholm Declaration, the establishment of the United Nations Environment Program (UNEP), and the surrounding attention that contributed to the creation of domestic environmental protection ministries.[16] Although the conference was largely devoted to environmental matters, reflecting the preferences of the industrialized developed countries, it also brought attention to questions of development that would be even more salient in future international environmental conferences. The Stockholm Declaration was a set of sometimes conflicting principles—some reasserting sovereignty, others highlighting the need to compromise sovereignty to deal effectively with environmental issues. UNEP soon encountered resistance from developed countries, which wanted to avoid paying for new environmental programs, and from developing countries, which feared that environmental concerns would divert attention away from economic development. Other UN institutions also resisted making UNEP a strong body within the United Nations. They did not want to cede their own new environment-related programs to UNEP.[17] Thus, the Stockholm conference initially had little favorable impact on the earth's environment. Nevertheless, UNEP would eventually take on an important role in international environmental deliberations, and the Stockholm conference raised awareness among publics and governments, including within the United States, about the importance of international environmental cooperation.[18]

Twenty years after the Stockholm conference, diplomats from nearly 180 countries attended the 1992 United Nations Conference on Environment and Development in Rio de Janeiro, making it the largest international conference to that date. Indeed, 118 heads of state spoke at this "Earth Summit," reflecting the growing international interest in environmental issues since Stockholm. The Earth Summit was also noteworthy for the extensive unofficial involvement of nongovernmental organizations, which tried to influence diplomats from the sidelines. Among the products of the Rio summit were the Rio Declaration, a statement of twenty-seven principles that governments agreed to consider as

part of efforts to foster sustainable development (the concept of sustainable development is introduced later in this introduction); agreement on conventions dealing with climate change (global warming) and biodiversity (see below), issues that would remain highly contentious and subject to ongoing diplomacy after Rio; establishment of a United Nations Commission on Sustainable Development (CSD), which was intended to promote sustainable development across the UN system and to foster international funding of related programs; Agenda-21, a voluminous statement of UNCED's objectives on all manner of issues related to environment and development; and a weak statement of principles for protecting and managing the world's forests.[19] Permeating UNCED was the demand by developing countries that "new and additional" funds be provided by the developed countries for the purposes of environmentally sustainable development. At Earth Summit II, held in New York in 1997, the focus was whether the Rio summit was a success. It was agreed that UNCED was successful in giving new energy to the goals of the Stockholm conference and that it provided important guidance for environmental programs and stimulated ongoing negotiations on specific important issues such as climate change. But new action on protecting the global environment was incremental, and the commitment by developed countries to provide new aid to the developing world went unfulfilled. Diplomats and environmentalists realized that environmental protection would be a slow, ongoing process.[20]

The U.S. government was active in the Stockholm negotiations, but it took an even greater interest in deliberations surrounding the Rio conference. However, although the United States generally supported the *environmental* agenda at Stockholm, it was much less supportive of the combined environment *and* development agenda at Rio. This weakened support was demonstrated, for example, by the Bush administration's effort to have the Rio Declaration called instead the "Earth Charter," a name that would emphasize the environment objectives of the United States over the development objectives of many other countries, especially those countries in the developing world. The U.S. government was thwarted in other ways at the conference. For example, one of Bush's goals was agreement on a forest convention, but in the end his plans were stifled by developing countries that did not want to relinquish sovereignty over their forest resources. The Bush administration was also opposed to many provisions planned for the biodiversity convention, fearing that they would threaten access of U.S. multinationals to genetic resources abroad and possibly force American corporations to relinquish patent rights. Similarly, the Bush administration opposed the climate convention insofar as it might require the United States to reduce its emissions of heat-trapping greenhouse gases. In the end, it agreed to a relatively weak framework convention that contained only voluntary commitments for the United States and other developed countries to reduce their greenhouse gas emissions to 1990 levels by 2000.[21]

The upshot is that the strong U.S. interest in the Rio conference was frequently directed toward preventing more international regulation in the environmental issue area—notwithstanding President Bush's assertion that he would be the "environmental president." The United States, far from acting as a leader at UNCED, used its influence at Rio to limit the impact of the conference on the U.S. economy. With the advent of President Clinton to the White House, many people expected new, stronger efforts by the United States to implement the objectives of the Earth Summit and of the conventions signed there. Although some movement was clear, it was far from what environmentalists expected and fell well short of the promises made during the Clinton-Gore campaign for the presidency.

Of course, many international efforts were made between Stockholm and Rio—and since—to address environmental issues. Many of these efforts are introduced below, and several are examined in detail in subsequent chapters.[22]

The Atmosphere

Changes to the air and atmosphere threaten human health, national economies, and the natural environment. These problems can be regional, such as air pollution and acid rain that cross national borders, or global, as in the case of stratospheric ozone depletion. Acid rain was one of the prominent early international environmental concerns. Indeed, one reason the UN Conference on the Human Environment was held in Stockholm was the Swedish experience with acid rain that originated in other countries. Acid rain is caused by sulfur dioxide and nitrogen oxide emissions from the burning of fossil fuels and from certain industrial processes. The emissions can travel for hundreds of miles, in the process contributing to reactions in the air that result in rain with high acidity, causing harm to lakes, rivers, and forests. Because the burning of fossil fuels and other common activities causes acid rain, it is a problem in many areas of the world. In 1979, countries signed the Geneva Convention on Long-Range Transboundary Air Pollution, which, along with related agreements and protocols, has met with some success in reducing pollutants that contribute to acid rain, particularly in Western Europe. However, because nitrogen oxide emissions originate largely from motor vehicles, they have been much more difficult to regulate.[23]

Acid rain was prominent on the U.S. environmental foreign policy agenda particularly in the 1980s when the Reagan administration was confronted by the Canadian government over the causes and consequences of acid deposition from smokestack emissions. The Canadians argued that their environment and particularly their eastern lakes were being harmed by sulfur and nitrogen oxide emissions originating in the industrial midwest of the United States. People in the U.S. northeastern states made similar claims. The Reagan administration initially used a delaying tactic—calling for more scientific study to determine the causes of acid rain—but eventually relented by agreeing to enact measures to reduce

polluting emissions in the United States. It also signed an international protocol for controlling emissions of nitrogen oxides, which mandated that the United States reduce its emissions of these chemicals to 1987 levels by 1994. Later, the Bush administration agreed in 1990 to amendments to the U.S. Clean Air Act that would substantially reduce sulfur dioxide emissions, and it signed a bilateral agreement with Canada reaffirming these reductions.

Whereas acid rain is a problem facing certain regions of the world, stratospheric ozone depletion has potentially global consequences. Scientists surmised in the 1960s that chlorofluorocarbons (CFCs) and other human-made chemicals could harm the earth's protective ozone layer. Potential consequences of ozone depletion include skin cancers and eye damage in humans. This problem garnered a great deal of attention in the United States in the 1970s and 1980s, contributing to domestic legislation mandating controls on CFCs. Concerns about ozone depletion spread to other countries, and the U.S. government eventually became an advocate of severe restrictions and even elimination of CFCs and other chemicals contributing to ozone depletion. This advocacy resulted in international agreement on the 1985 Vienna Convention for the Protection of the Ozone Layer and the much more robust 1987 Montreal Protocol on Substances that Deplete the Ozone Layer.[24] The Montreal Protocol has been very successful in achieving its objectives, in large measure owing to the willingness of parties to the treaty to strengthen it over time.[25] (See chapters 5 and 7.)

Perhaps the most pressing long-term environmental issue is that of global climate change, variously referred to as global warming or the "greenhouse effect."[26] Climate change results from emissions of greenhouse gases such as carbon dioxide (CO_2) and methane. The most damaging greenhouse gas (in aggregate) is CO_2, which is produced by the use of energy from fossil fuels (e.g., coal, petroleum, and natural gas). Most activities in industrialized countries require the use of energy, most of which derives from fossil fuel sources; thus, most activities contribute to climate change. The vast number and variety of stakeholders with an interest in international regulations related to climate change pose dizzying challenges to policymakers who want to make the changes to transport, industry, and lifestyle that will be required if they are to deal effectively with climate change.[27] Because the potential effects of climate change are great, the need for action is manifest to most knowledgeable scientists. Among the possible effects are increased frequency of severe weather events (e.g., floods, droughts, hurricanes, heat waves), sea-level rise and inundation of coastal areas,[28] and the spread of infectious diseases to areas not previously affected (including the United States).[29]

Concerns about climate change resulted in the 1992 Framework Convention on Climate Change (FCCC), signed at the Earth Summit, in which parties agreed to reduce their greenhouse gas emissions to 1990 levels by 2000.[30] The climate change convention has yet to result in substantial change in state behavior and seems likely to have only small impacts on the problem in the near future,

although negotiations to do more have been ongoing. Toward that end, governments agreed to the 1997 Kyoto Protocol to the FCCC in which the developed countries agreed to reduce their emissions of greenhouse gases by about 5 percent by 2008–12.[31] Following their 1998 Buenos Aires Plan of Action, parties to the FCCC pledged in 1999 to agree by November 2000 on the details of implementing the Kyoto Protocol. For its part, the United States has been slow to act on climate change. During the Reagan and Bush administrations, it often sought to prevent mandatory international regulation of greenhouse gas emissions. The Clinton administration was initially more supportive of action, at least rhetorically, but U.S. action toward reducing emissions of gases causing climate change has been incremental at best.[32] Meanwhile, U.S. greenhouse gas emissions continue to rise, already surpassing pledges made at the Earth Summit.

Marine Resources and the Diversity of Species

Marine natural resources have been at risk for decades because of overexploitation and pollution. This fact is reflected at the international level in the many international agreements designed to manage and protect marine resources. Pollution from municipal, agricultural, and industrial wastes dumped into the oceans is addressed by agreements such as the London Dumping Convention and the International Convention for the Prevention of Pollution from Ships (MARPOL).[33] (See chapter 6.) Of particular concern for many environmentalists and governments is the pollution of regional seas, with the Mediterranean being the most visible example. This concern has resulted in negotiation of international agreements under the auspices of the United Nations Regional Seas Program.[34] Most of the world's fisheries are in drastic decline because of overfishing and in some cases because of pollution. Some areas once bountiful in fish are utterly depleted. Hence, governments have endeavored to address these problems with bilateral fishing agreements and broader agreements, notably a 1995 UN-sponsored agreement on straddling and highly migratory fish stocks.

Most prominent of the agreements to protect and manage the oceans is the tortuously negotiated 1982 UN Convention on the Law of the Sea (LOS).[35] This convention establishes parameters for control of maritime territory. Importantly, fish, minerals, and other things found in the sea have traditionally been viewed as resources that exist for the exploitation of humans. This view generally prevails today. Toward this end, the LOS designates 200-nautical-mile exclusive economic zones (EEZs) that give coastal states ownership of the vast majority of the world's fisheries and most of the easily accessible natural resources, specifically petroleum and natural gas. The LOS also clarifies rights of access to resources of the deep seabed beyond EEZs. Those resources are considered the "common heritage of mankind." Although the LOS brought consistency to the management of most ocean natural resources, it failed to mandate extensive protections of natural species, and it did not account fully for migrating fish and marine mammals that move into, out of, and between EEZs. The U.S. government had

mixed views on the LOS. It wanted clear rules on access to territorial seas and international straits (a central concern of the U.S. Navy) and sovereignty over resources off its extensive coastlines. However, it did not want to relinquish control of deep seabed resources to "mankind," instead preferring that those resources be exploited to the exclusive benefit of U.S. companies. The U.S. government finally signed the LOS in 1994, but only after the Clinton administration's renegotiation of provisions to give businesses greater access to deep seabed resources.

Any discussion of international cooperation regarding ocean-living resources, even an introductory one such as this, would be incomplete without mentioning whales, dolphins, and sea turtles, three groups of marine animals that have garnered the most public attention and indeed have been the subject of U.S. foreign policy. For centuries, whales were viewed primarily as a marine resource to be exploited. When their numbers declined, countries agreed to the 1946 International Convention for the Regulation of Whaling. However, whale numbers continued to decline, a decline accompanied by increasing public concern about the welfare of these animals. Many people began to think that it was wrong to kill whales at all. As a consequence, a moratorium on whaling was declared by the International Whaling Commission, and the whaling regime has largely moved toward conservation. However, as whale numbers have recovered, pressure has increased from traditional whaling countries (e.g., Iceland, Japan, and Norway) to permit the restart of commercial whaling. The United States, mirroring the concerns of U.S. environmental groups, continues to oppose a return to commercial whaling. (See chapter 10.)

The U.S. government has also pushed for international protection of dolphins and porpoises. In an internationalization of the Marine Mammal Protection Act, it has restricted the imports of tuna caught in ways that do harm to dolphins, leading to major disputes with trading partners and leading to U.S. losses in the tribunal of the General Agreement on Tariffs and Trade (GATT, now the World Trade Organization). Similarly, the United States has placed restrictions on the imports of shrimp caught with nets that do not have turtle excluder devices, mechanisms that prevent endangered turtles from being trapped and drowned in the nets. As in the dolphin case, shrimp-exporting states have challenged these restrictions in international trade tribunals.

One of the biggest international environmental concerns in recent years has been the declining biodiversity of species and the related protection of and access to genetic resources, which are increasingly valuable for the development of new chemicals and pharmaceuticals.[36] Of course, many people are also concerned about the loss of species because they view them as having intrinsic value[37]—hence the visible public campaigns to protect whales, dolphins, sea turtles, panda bears, and so forth. International concerns about endangered species led to the 1973 Convention on International Trade in Endangered Species (CITES). But many threatened species are not well known—or indeed yet known at all to

scientists—and many are plants or microbes with potential benefits to humans as chemicals or pharmaceuticals. Concerns about these less-visible aspects of biodiversity resulted in the 1992 Convention on Biological Diversity.[38] Although much work remains, the biodiversity convention started governments, corporations, and other actors on a path to protect the world's biological diversity. A related concern is deforestation, not only the well-publicized cutting of tropical rain forests, but also the decline of diverse forest cover in the developed world.[39] Deforestation sometimes has severe adverse local effects (e.g., loss of topsoil, siltation of rivers, changes to local weather), but it is of particular concern internationally because forests—particularly tropical forests—are rich sources of biodiversity, with many as yet undiscovered or understudied species anticipated to provide the genetic resources for new medicines. Forests of all kinds also act as sinks for CO_2, the chief greenhouse gas, and improve air quality at the local level. Governments are also concerned about the international implications of agricultural practices, soil erosion, and desertification. Indeed, in 1994, many countries agreed to the United Nations Convention to Combat Desertification.[40]

In most of these cases, particularly that of biodiversity, the U.S. government has supported conservation efforts but adamantly defended the rights of American corporations to have access to biological resources and to own and control patents on products produced from those resources.

Hazardous Wastes and Nuclear Pollution

Hazardous wastes, such as toxic industrial materials and low-level radioactive wastes, and questions of how to limit and dispose of them, are important questions for international diplomats. The 1984 Bhopal disaster in India dramatized the potential dangers to human health and the environment posed by hazardous chemicals. Toxic wastes are produced in vast quantities, particularly in the industrialized countries, with the United States far and away the largest producer.[41] These materials were once routinely exported to developing areas of the world, where there are few protections for local inhabitants and environments. This practice continues, although the 1989 Basel Convention and the 1991 Bamako Convention on the transboundary movement of hazardous wastes demonstrate international efforts to limit the movement of hazardous wastes across borders—particularly from the industrialized North to the developing South.[42] Importantly, the largest producers—the United States and Western European countries—have resisted the restrictions of these agreements, and the notion of simply regulating exports of hazardous wastes—instead of stopping them altogether—is abhorrent to many environmentalists and to the governments of developing countries.

Among the most hazardous wastes are those associated with nuclear energy and weapons. Since the early development of nuclear energy and nuclear weapons, governments have been concerned with radioactive fallout and pollution related to nuclear weapons. Although the management of nuclear weapons and related

wastes is controlled by the nuclear states themselves, the 1963 partial test ban, which prohibits the testing of nuclear weapons in the atmosphere, oceans, and outer space, has been quite successful in limiting these sorts of tests and associated nuclear fallout.[45] More adversely, fifty years of nuclear weapons development have left vast amounts of nuclear waste in the United States and the former Soviet republics. These wastes pose massive challenges for these countries, particularly for the ones with limited resources for managing the wastes and for surrounding countries potentially affected by them. Governments are also concerned about the disposal or long-term storage of spent nuclear fuel—much of it now crossing international borders to be reprocessed or stored. These issues and related problems fall within the mandate of the International Atomic Energy Agency. Also of great concern are aging nuclear plants of questionable design, particularly plants in eastern and central Europe and the former Soviet republics. Some of these facilities are similar to the plant at Chernobyl, Ukraine, which experienced a meltdown in 1986, spreading radioactive pollution to twenty-odd countries in Europe. Accidents such as the one at Chernobyl and at Three Mile Island, Pennsylvania, led to the 1986 Convention on Early Notification of a Nuclear Accident and the 1986 Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency. With other Western governments and international organizations, the United States has been concerned that nuclear wastes from weapons development and energy production be managed in a safe manner, and it has provided assistance to former communist countries toward that end.

Population and Consumption

To understand problems of environmental change it is important to consider the related issues of human population and consumption. The concern is with the effects that humans have on the natural environment. More people usually correlate with more environmental damage. By the 1960s, it was recognized that the Earth's population was growing at rates seldom experienced in human history, and authors began warning of a "population bomb" and impending "limits to growth."[46] Although their concerns about the immediate effects of population growth may have been premature, the human population did grow at phenomenal rates in the twentieth century. Indeed, the increased numbers of people on the earth just between the 1992 Earth Summit and the end of the century exceeded the entire human population at the time of the Roman Empire![47] Diplomats—and increasingly nongovernmental organizations interested in population issues—have met on many occasions in an effort to develop international solutions to the problem of population. Among the more prominent meetings was the 1994 Cairo International Conference on Population and Development. The Cairo conference, like other environment-related conferences before it, was characterized by the conflicting goals of developed and developing countries. The former sought limits on population, particularly in the South; the latter sought increased development assistance, which would reduce incentives for large families, and accused the North of a racist campaign to limit the number of nonwhites in the world.[48]

The vast majority of population growth has and will occur in the less-developed countries. It has therefore been common for concerned individuals and politicians to demand that developing countries reduce their sometimes extraordinarily high rates of population growth. Indeed, such efforts have been underway for decades and have begun to bear fruit, particularly in countries that have experienced modest or substantial economic progress in recent years. Although the population will continue to rise by almost one hundred million people per year in coming decades owing primarily to the large numbers of young people in the world, the rate of growth is dropping as countries develop, as family-planning services become widely available, and as women are accorded rights to make decisions about how many children to bear.

The United States became actively involved in population issues in the 1960s, directing foreign aid to international programs designed to limit family size in the developing world. It became the largest contributor of financial assistance to population programs. These efforts continued into the 1980s, but the Reagan administration, equating family-planning programs with abortion, withdrew U.S. support for population-control programs abroad, although much of the assistance continued. President Clinton reversed this opposition to population control in the developing world, at least in the White House, although Congress resisted efforts to fund population-related programs abroad.[49]

But environmental problems are not simply problems of too many people; they are also critically problems of consumption and lifestyle.[48] As the delegates of developing countries argued at the Cairo conference, population is not the only or even the greatest problem, but rather the high levels of often conspicuous consumption among the world's affluent. Vice President Al Gore succinctly identified this problem in a 1993 speech to the United Nations Commission on Sustainable Development. He said that the United States and other developed countries "have a disproportionate impact on the global environment. We have less than a quarter of the world's population, but we use three-quarters of the world's raw materials and create three-quarters of all solid waste. One way to put it is this: A child born in the United States will have 30 times more impact on the earth's environment during his or her lifetime than a child born in India."[50] This problem is not restricted to the United States and other industrialized countries. The world's middle classes are growing rapidly. Although this news is no doubt good in the short term, for it means less people living in poverty, in the longer term it could have devastating environmental consequences if governments do not agree to curb the damage done by the world's affluent people. Nevertheless, one might argue that the United States, as the world's greatest polluter overall and, with only a few rare exceptions, per capita—not to mention as the world's wealthiest country—has a special obligation to reduce American

consumption levels and the related environmental impacts, and indeed to help poorer countries cope with the international consequences of high U.S. consumption (see chapter 11).

Environmental Security

These problems of environmental change, as well as others, have led policymakers and analysts to view environment as a problem of security.[50] Conflicts can arise from environmental damage and inequitable distribution of environmental resources, leading to social and political unrest and to environmental refugees.[51] American policymakers and defense officials now perceive that some environmental changes can adversely affect U.S. national security, vital U.S. interests (e.g., access to oil reserves), and the stability of areas where the United States has geopolitical and economic interests.[52] For example, there is concern in some quarters that scarcities of freshwater from overuse and pollution could lead to conflict within and possibly between countries—which is especially the case in the Middle East, where water scarcity could exacerbate existing rivalries between Israel and neighboring Arab countries.[53] There is also concern that conflict could result from differences over how to share and protect water in rivers that pass through more than one country, such as those shared by Turkey, Syria, Iraq, and other countries in the region. Additionally, water shortages in developing countries contribute to internal conflict that harms the well-being of local people and affects the economic and political interests of other countries—including the United States.[54] Such concerns can contribute to U.S. action on international environmental issues. However, sometimes this view can be misdirected because of a tendency on the part of American officials to equate environmental security with national defense, as traditionally defined. Indeed, this attitude could do more harm than good from an environmental perspective. (See chapters 2, 3, and 11.)

Sustainable Development

How can a balance be achieved between environmental viability and economic and human development? Many have suggested that the best means is through actualization of "sustainable development," the theme of UNCED and of the agreements and conventions signed at the Earth Summit. The concept of sustainable development was popularized by the World Commission on Environment and Development (the Brundtland Commission), which was established by the UN General Assembly in 1983 as an outgrowth of the 1972 Stockholm conference. The 1987 report of the Brundtland Commission, *Our Common Future*, emphasized the links between environment, development, and poverty.[55] The report defined sustainable development as environmentally benign development that meets the needs of present generations without impeding future generations from meeting their own needs. The Brundtland Commission was explicit in arguing that the concept of sustainable development must encompass efforts to

meet the essential needs of the world's poor, "to which overriding priority should be given."[56] As the report stated, "many forms of development erode the environmental resources upon which they must be based, and environmental degradation can undermine economic development. Poverty is a major cause and effect of global environmental problems. It is therefore futile to attempt to deal with environmental problems without a broader perspective that encompasses the factors underlying world poverty and international inequality."[57]

Underlying the principle of sustainable development is the belief that economic development and related issues of poverty and human well-being cannot be separated from environmental protection. Environmental damage in the long run harms human well-being and contributes to poverty; in turn, people who are living in poverty and lack adequate levels of economic development do more harm to the environment, thereby creating a vicious cycle. By promoting development that simultaneously seeks to minimize harm to the environment, the reasoning goes, it is possible to lift people out of poverty while creating the conditions for long-term environmental protection. The developed countries can also implement sustainable development by making their industries and practices more environmentally benign. Part of the sustainable-development strategy, in which the United States is expected to take a central role, is the provision of new and additional financial and technological resources that will help developing countries raise their living standards while also protecting the natural environment.

Recurring Themes in U.S. Environmental Diplomacy

There are many recurring themes in U.S. involvement in international environmental diplomacy, similar to other areas of U.S. foreign policy. These themes are introduced here. They are elaborated on in subsequent chapters, as are the explanations for them.

The foreign policies of the United States are often directed at protecting the natural environment, a fact that mirrors the growth in concerns about environmental harm within the United States. Robust action by the United States is much more likely if there is clear scientific evidence that the health of Americans or the U.S. economy would be harmed or if there are clear signs that environmental changes are causing substantial human suffering abroad. However, most international environmental issues have rarely presented such acute evidence of immediate harm, at least in the public mind, which is often what counts for policymakers. As a consequence, there is usually a strong tendency for the U.S. government to advocate more research on environmental problems and the potential economic effects of proposed international regulations. This approach delays the formulation of international environmental institutions and associated requirements for national actions, but it can also have the positive effect of increasing certainty

surrounding environmental problems, thereby making it easier for politicians to advocate actions.

One of the primary goals of U.S. foreign policy in the environmental issue area (and in others) is to protect or promote the U.S. economy. The U.S. government seeks to limit requirements for the United States to meet internationally mandated regulations, thereby protecting U.S. independence and limiting harm to American businesses. It also prefers that other countries act first, that international actions have limited or no negative impact on Americans, and that these actions not require noticeable changes in American lifestyles and consumption patterns. When the U.S. government does advocate international environmental regulation, the primary goal may not be environmental protections abroad. Instead, it may be trying to create a "level playing field" that requires foreign businesses to operate under the same environmental restrictions as those in the United States. Alternatively—but with similar effect—U.S. foreign policy can be directed at "exporting" U.S. domestic environmental regulations, as in its efforts to protect dolphins and turtles (see chapter 9).

These sometimes conflicting goals—environmental protection versus freedom of action for U.S. businesses—help explain another theme of U.S. foreign environmental policy: North-South differences. U.S. foreign policy seeks to promote environmental or commercial goals favorable to the United States, whereas the countries of the global South, although desirous of clean environments, have their own development and the promotion of North-South economic equity as their central goals. The United States also consistently opposes international environmental agreements that require it to transfer funds to developing countries or that require American businesses to compromise their patent rights.

More broadly, the United States seeks to maintain its sovereignty and to retain its ability to act unilaterally. It resists mandates from international organizations, and it is skeptical of following what it sees as the potential decrees of international bureaucrats. U.S. foreign policy always endeavors to protect U.S. national interests, particularly the most vital ones. Increasingly, however, the global environment has become part of those interests. This change may help explain the incremental embrace of environmental protections by the United States as part of its foreign policy agenda. There is also much evidence in U.S. international environmental policy of the traditional impulse in U.S. foreign policy to help others and to "do good" in the world. The upshot is, however, that U.S. leadership in the international environmental issue area has not been consistent. Sometimes it leads—as in the case of ocean dumping and stratospheric ozone depletion; at others, it resists action, despite possibly severe consequences—as in the case of climate change. Nevertheless, in looking broadly at international environmental diplomacy in recent decades, one can see a gradual U.S. engagement with the world in an increasingly multilateral approach to environmental protection. Thus, as Rosenbaum explains, "on the threshold of the twenty-first century, the U.S. diplomatic trajectory from Stockholm to Kyoto was leading the United States steadily, if unevenly, toward a broadening and deepening commitment to international environmental governance."[18]

Actors and Forces Shaping the International Environmental Policies of the United States

The contributors to this volume highlight the key actors, institutions, and forces shaping U.S. foreign policy on many of these environmental issues. Included among the actors and forces they examine, either directly or indirectly, are the U.S. Constitution, the presidency and executive branch agencies, Congress, the U.S. judiciary, political parties, businesses and nongovernmental organizations, science and economics, media and public opinion, foreign governments, and international institutions. Many other actors and forces prove to be important, depending on the specific environmental issue being addressed by U.S. policymakers. Some of these actors and forces are introduced in the following sections.

The U.S. Constitution

Perhaps the most important force in U.S. foreign policy is the U.S. Constitution. Although it is an eighteenth-century document, Americans and their political representatives constantly refer to it. Most important for our purposes, the Constitution describes the outline—and frequently the detail—of the U.S. government and the ways in which it must operate. Foremost in its prescriptions is the division of the U.S. government into three branches: the legislative branch (Congress), consisting of the House of Representatives and the Senate; the executive branch, headed by the president; and the judicial branch, overseen by the Supreme Court. All three branches of government have a role in the formulation and implementation of U.S. international environmental policy. The Constitution also gives power to the constituent states, which usually have a stake in environmental policy at home and abroad. As Robert Paarlburg points out,

> The U.S. government is particularly susceptible to having divergent international environmental policy preferences, because power is shared across three separate branches (executive, legislative, and judicial) at the federal level, and below that level enormous power remains in the hands of autonomous state and local authorities. Only after executive branch leaders in Washington have developed a sufficiently unified and supportive domestic policy consensus—across all branches and levels of government at home—will they be well positioned to offer effective environmental policy leadership abroad.[19]

The most important impact of the Constitution, however, is the pluralist form of government it created. The American form of democracy is among the most open in the world, providing a myriad of interested individuals and other actors with access to the policy process.

The Congress

Beyond underlying constitutional forces and the existence of the environmental changes themselves, arguably the most important force shaping U.S. international environmental policy is the Congress. It is here that legislation is debated, and it is to the Congress that most stakeholders, both inside and outside the federal government, go to influence policy. Many people believe that the president has prerogative in foreign policy, including that dealing with environmental issues. However, executive branch intentions in the environmental issue area frequently matter much less than legislative branch preferences and support.[60] Congress, after all, passes legislation; it has the ability to tax and spend and to control the president's access to funds; it approves international agreements, and the Senate in particular must ratify all international treaties before they can become part of U.S. law. Ultimately, Congress (usually) mirrors the collective will of the American people.[61] As Paarlburg notes, "it is Congress, not the executive branch or the president, that has final say over U.S. environmental policy, both at home and abroad."[62] (Most of the following chapters examine the impact of Congress on U.S. international environmental policies.)

Party Affiliation

The positions that American policymakers take on international environmental issues are frequently associated with their party affiliation. Although legislators and presidents are free, once in office, to ignore the party's preferences, they often will not do so to ensure that party resources can be brought to bear when they seek reelection. Broadly speaking, one can say that Republican politicians lean toward an anti-environmental approach. They are particularly sensitive to the concerns of businesses, which usually oppose new environmental regulations. (Like party affiliation, the positions of businesses are not always this clearly cut, however.) In contrast, Democratic politicians tend to be more assertive toward environmental regulations, or at least more sympathetic. Environmentalists are generally among their constituents. Although Democrats also want to keep businesses on their side, they must also cater to constituents who favor international environmental agreements and associated national regulations. This being said, Republican administrations—usually viewed as anti-environment and more generally antiregulation (especially if regulation comes from an international organization)—can be proactive in pushing for international environmental action, as was true of the Nixon administration with regard to ocean dumping and of the Reagan and Bush administrations in the case of ozone depletion (see chapters 5 and 6). Many people were not surprised that the Reagan and Bush administrations were often opposed to American action on many international environmental issues, but they were surprised when these administrations were proactive. Alternatively, many people expected the Democratic Clinton administration to favor and actively support international agreements and domestic regulation geared toward environmental protection, but these people were perhaps surprised (some were pleased and some were disappointed) when that administration did not do more.

The President and Executive Branch Agencies

Many of the proposals for environmental legislation, both domestic and international, originate in the White House and in the executive branch more broadly. The president and the agencies he oversees are also responsible for the implementation of federal government policies related to global environmental change. The president can take a lead in proposing international environmental protection efforts or in trying to promote U.S. participation in international environmental instruments and institutions. Indeed, sometimes the executive branch and the president lead the country in this respect (see chapter 6).[63] However, the president must achieve a consensus at home before he or she can lead abroad—despite what many foreigners hope and believe about the president's power to formulate and implement environmental regulations in the United States and to be a leader of international environmental protection efforts.

Many executive branch agencies are involved in U.S. international environmental policymaking and implementation. The most obvious is the Department of State, which has an office of the undersecretary of state for "global affairs," which includes environmental issues, and other branches concerned with international environmental cooperation. The Environmental Protection Agency (EPA) is of course intimately involved in U.S. foreign policy in this area. But less obvious are other agencies, including the Commerce Department and the Department of Defense—among many, if not most, other executive branch agencies. Frequently these agencies have environmental protection in mind, but they are understandably most often concerned with promoting U.S. national interests more broadly defined. Thus, national interests that are perceived to be more important—access to petroleum, economic interests and foreign markets, geostrategic calculations—can distract the United States from using its influence to protect the natural environment abroad (see chapter 4). Executive branch agencies might also be concerned with promoting their own narrow interests. International environmental issues may be seen as vehicles for promoting new programs that justify funding and staffing levels.

The Courts

The legislative and executive branches are not the only core branches of government to become involved in U.S. international environmental policy. Because there is frequently disagreement between Congress and the executive branch agencies charged with implementing statutes, the U.S. courts are frequently called on to interpret U.S. statutes and regulations related to international environmental matters.[64] These disagreements may be about goals, but they may also

be simply about interpreting the intent of laws passed by Congress. (Frequently, statutes are ambiguous and give little guidance to executive branch agencies.) The courts may also be called in when industry sues to limit the effects of environmental regulations or when environmental groups sue to make regulations more stringent or to pressure the government to enforce them more rigorously. At these times, the courts decide the degree and nature of U.S. implementation of international environmental agreements or determine the international ramifications of domestic environmental laws and regulations.[65] Thus, the U.S. courts, perhaps surprisingly to many, become important actors in U.S. foreign policy on environmental matters.

Public Opinion

One cannot neglect the role played by the American people. The pluralist nature of American democracy affords people, like other actors mentioned here, substantial access to the policy process. The opinion of the public on issues is perhaps the most important consideration for policymakers. Politicians are interested above all in being reelected. If enough of their constituents are concerned about an issue, they will usually work to promote those concerns in policy. But even unelected bureaucrats are sensitive to public opinion. The views of the public can affect the resources of their agencies, and the bureaucrats are, in the end, beholden to elected officials. For these and additional reasons, the American media has an important role to play. By publicizing adverse global environmental changes, it raises public awareness and thereby shapes the views of the electorate, which can work to stimulate U.S. international environmental activism or to stifle it, depending on the views conveyed by journalists and the effect they have on the public and decision makers. The upshot is that when the media argues that environmental changes adversely affect the interests of Americans, and especially that those changes are also felt by or perceived to harm Americans, policymakers are stimulated to act.

Business Interests

As already indicated, businesses and industry actors (both powerful individual corporations and industry groups) are intimately interested in—and actively try to influence—U.S. international environmental policy. Some of these businesses favor environmental regulation, but more often they are opposed to action on environmental issues. Businesses are potentially very powerful because they have, among other resources, political connections and money to support the election campaigns of politicians. They also have great influence on the U.S. economy and the prosperity of Americans, and they possess (understandably biased) expertise in what are usually complex environmental issue areas. When businesses can credibly point to adverse effects of environmental regulations on jobs and on the overall U.S. economy, members of Congress and the president tend to take their views into account, often to the exclusion of environmental considerations.

However, the influence of businesses can be diluted or constrained when they conflict. Some businesses want international environmental regulation to level the playing field internationally, to bolster demand for their products (e.g., energy-saving equipment), or to protect resources they need (e.g., genetic diversity for biotechnology industries), among myriad other reasons. Many more businesses want to prevent international environmental regulation because they prefer to continue business as usual, delay transitioning to environmentally friendly behavior, or avoid the costs of meeting regulatory requirements. That is, the goal of business (and often of the government) is to force outsiders to comply with environmental restrictions that obtain inside the United States—either for environmental reasons (e.g., in the cases of whales and dolphins) or for economic reasons (to create the level playing field, thereby making other countries' industries subject to the same environmental restraints and costs of U.S. industries). Conflicts that arise among the pro- and anti-environmental goals of industry can stand in the way of their taking a united front against international environmental protection efforts. But when there is little conflict, businesses can have a profound effect on U.S. policy, either for or against environmental protection and associated regulation—depending on their collective and unified preferences (see chapter 7).

Environmental Interests: Nongovernmental Organizations

Nongovernmental organizations (NGOs), both for and against environmental activism, can play an intimate and influential part in U.S. foreign policy on the environment. They are most frequently seen to shape policy from "outside" government. Perhaps their greatest asset is their often large memberships (which for environmental organizations have been stagnant or falling in recent years). By pointing to their members as potential voters who are often willing to vote based largely on environmental questions, environmental NGOs can persuade legislators and the president to listen to their concerns. They actively lobby politicians, frequently asking their members to flood Congress and the White House with mail (these days largely electronic mail). Legislators sometimes go to environmental NGOs for their expertise on particular issues. Indeed, perhaps for this reason, some NGOs are transforming themselves from public advocacy groups into primarily sources of expertise.

NGOs can also influence policy from the "inside." During the 1990s, NGO representatives have increasingly participated in U.S. delegations to international environmental deliberations, sitting alongside American diplomats. Although it would be absurd to believe that they dictate U.S. policy on these occasions, it would also be wrong for us to underestimate the importance of being able to whisper in a delegate's ear during late-night negotiating sessions—or perhaps even to threaten to expose diplomats who are being disingenuous in their public statements in support of environmental goals. Additionally—and very importantly—former members of NGOs, sometimes high-ranking ones, have been

appointed to executive branch agencies dealing with international environmental issues. For example, Rafe Pomerance—former environmental activist, former president of Friends of the Earth, and a senior associate of the World Resources Institute (WRI)—was appointed to head the Clinton administration's climate change delegations as deputy assistant secretary of state for environment and development. While at WRI, Pomerance pushed assiduously to persuade the international community that climate change posed a serious threat.[66] Many other individuals with activist environment and development backgrounds became part of the Clinton administration and were active in formulating its climate change policy.

Science and Scientists

The importance of science in initiating and shaping U.S. international environmental policy is inestimable. Although some environmental problems are visible or clearly felt, most are unknown or indeterminate until scientists make the public or policymakers aware of them. And once made aware, policymakers and publics require scientists to inform them of the progress of environmental changes and their impacts (by measuring what has happened or is happening, or by predicting what might happen in the future). For example, the hole in the stratospheric ozone layer over Antarctica was unknown before scientists detected its existence. Similarly, scientists have made the likely causes and possible impacts of climate change a matter of public discourse.[67] Individual scientists can be particularly influential, as, for example, when they testify before Congress or when important politicians read their publications.[68] Groups of scientists—epistemic communities—can influence policy because frequently they have connections to policymakers and bureaucrats.[69] Sometimes scientists can make the government aware of adverse environmental changes, only to find politicians going beyond the scientists' understandings. For example, the Montreal Protocol on ozone depletion was agreed on before there was definitive evidence to support hypotheses about the Antarctic ozone hole.[70] At other times, scientists can present findings only to have them ignored or belittled by politicians, as has been the Republican response to findings of the Intergovernmental Panel on Climate Change. In all cases, scientific findings can be politicized to serve the interests of politicians, businesses, environmentalists, or other actors.[71]

Economics, Trade, and Economists

The U.S. government and Americans are profoundly interested in the vitality of the U.S. economy. Thus, economists are usually involved in all aspects of policy formulation, not least in the area of environmental change.[72] As occurs with the advice of scientists, however, the recommendations of economists regarding environmental issues are often contradictory, and they are frequently focused on economic conditions apart from environmental change per se (short of the extent

to which environmental change can be seen as a measurable cost to the economy or to business). Politicians can usually point to economic predictions that support or oppose international environmental regulation. When they do so, as is often the case, they will act on the predictions they believe or those that conform with their other objectives. When the U.S. economy is doing well, U.S. action on international environmental issues is usually more likely; alternatively, when it is doing poorly, U.S. action is usually less likely. This trend of course begs why the Bush administration signed the climate treaty during a recession and why the Clinton administration did little to implement that treaty during perhaps the most extended economic "boom" in contemporary U.S. history. In the end, the United States will prefer action that costs it very little or that even benefits it financially for a time, which largely explains its proactive stance in the late 1980s on international regulation of ozone-destroying chemicals and helps us understand why it is so eager to impose environmental sanctions on other countries (see chapter 9).

Increasingly, changes to the natural environment are tied to trade issues.[73] Environmentalists see economic globalization and the spread of free trade as threats to the environment. They would argue that many developing countries maintain minimal environmental protection regulations in order to attract multinational corporations seeking the lowest production costs. Labor groups fear the export of jobs to countries with minimal environmental protections. Hence, both environmental and labor groups in the United States have pushed for environmental conditions on international trade agreements, notably in the North American Free Trade Agreement (NAFTA) and, as manifested by public demonstrations in Seattle in 1999, in trade agreements associated with the World Trade Organization (WTO).

International Organizations and Foreign Governments

International organizations, institutions, and regimes can influence U.S. foreign policy on the environment. For example, the United Nations has ushered environmental issues onto the international agenda, acting as the stimulus and forum for international deliberations. Simply by making the issues more visible, it can raise the awareness of the American public—witness the hoopla that surrounded the 1992 UNCED Earth Summit in Rio de Janeiro. Also, through agencies such as UNEP and the relatively new CSD, it pushes governments toward implementation of international environmental agreements.[74] International institutions (frequently associated with the United Nations), such as the International Monetary Fund and the World Bank, have become more active in international environmental issues. Sometimes they do so because of U.S. pressure, or, alternatively, they do so and then pull the United States along. A noteworthy example is that of the World Bank, which has grudgingly started to integrate environmental considerations into its funding programs.[75] Other international funding institu-

tions have taken similar steps (see chapter 8). And international "regimes," some formed with the help of U.S. leadership, affect and are affected by U.S. international environmental policy.[76] Examples include the whaling regime surrounding the International Whaling Commission, and the climate change regime, codified in the Framework Convention on Climate Change.[77]

In a somewhat similar vein, foreign governments can influence U.S. international environmental policy. They are of course active in international environmental negotiations, and they sometimes set precedents or goals that the U.S. government finds difficult to oppose actively and visibly. Former prime minister Margaret Thatcher has been credited with pushing the Bush administration to agree to more robust restrictions on the emissions of ozone-destroying chemicals, resulting in the 1990 London amendments to the Montreal Protocol,[78] and the government of Prime Minister Tony Blair helped push the United States to agree to larger cuts in greenhouse gas emissions than it wanted in the 1997 Kyoto Protocol to the climate change convention.

Global Forces

When trying to understand and explain U.S. foreign policy on the environment, one must also consider the impact of several broad forces, chief among which are the environmental changes themselves. Many of these changes are beyond the control of the United States alone and indeed beyond the control of any one set of actors. Regardless of what countries do in the near future, for example, climate change will occur and will affect the interests of the United States as well as the sentiments and the lives of Americans. Its effects will be wide-ranging and cross-cutting, affecting other issue areas and other countries. Similarly, economic globalization is an important force in U.S. international environmental policy. The decay of borders and the challenges to state authority engendered by globalization are intimately connected to global environmental changes. Indeed, one might argue that global environmental change is one of the most profound manifestations of globalization. Furthermore, the spread of free-market economies is having a major impact on the environment; the so-called free hand may be doing much good for people the world over (many will argue this point, of course), but in the long term people may suffer because of the environmental damage that seems inherent in the global spread of capitalism.[79] And there are the "forces" of nascent international norms that bear on questions of U.S. policy toward the global environment, including those norms with ethical content that place limits on the extent to which the United States can continue to place a disproportionate burden on the global environment—and thus hold disproportionate blame for the adverse effects on human well-being that accrue from environmental changes. In the end, it is the very international and global nature of environmental issues that compel the involvement of the U.S. foreign policy establishment.

Simplifying U.S. International Environmental Policy

Explaining and understanding cases of U.S. foreign environmental policy require consideration of a myriad of actors, institutions, and forces. How can we get our minds around these complex cases? How can we organize and manage all the possible variables and explanations? To help us in this task we can turn to theories of international relations and foreign policy. Theory is "a way of making the world or some part of it more intelligible or better understood," or we can define theory a bit more rigorously as "an intellectual construct that helps one to select facts and interpret them in such a way as to facilitate explanation and prediction concerning regularities and recurrences or repetitions of observed phenomena."[80] Thus, theory helps us understand U.S. international environmental policy by simplifying reality and focusing our attention on the actors, institutions, and, indeed, the broader forces that may be most useful for improving our understanding or for explaining a specific case.[81]

Theoretical approaches to foreign policy can be organized into three categories: (1) systemic theories, which emphasize the influence of the international system and the distribution of power within it; (2) societal theories, which focus our attention on U.S. domestic politics and American culture; and (3) state-centric theories, which find answers to questions about foreign policy within the state and within the individuals who work therein.[82] How might these theoretical approaches help explain U.S. international environmental policy? From the perspective of systemic theory, one can argue that the United States joined the UN Convention on the Law of the Sea because it feared that to do otherwise might erode its power. If it did not join the convention, coastal countries might limit access to U.S. Navy ships and submarines, thereby threatening U.S. military flexibility and power vis-à-vis the Soviet Union or other potential enemies. From the perspective of societal theory, when looking at U.S. foreign policy on whaling, one could focus on domestic politics, particularly the influence of NGOs opposed to whaling and the widespread opposition to whaling among the American people. From the perspective of state-centric theory, U.S. policy on climate change could be a function of bargaining and power brokering among interested government agencies, the president and White House, and the Congress.

Other theoretical approaches focus on the roles of regimes and international institutions or on the influence of norms and ideas in explaining U.S. international environmental policy. There can also be ethical considerations in our understandings of that policy, both from human-centered perspectives (e.g., sustainable development as well as human well-being and suffering related to environmental change) and Earth- or environment-centered perspectives (e.g., environmental ethics and "deep ecology"). One could apply these theoretical categories and approaches in different ways, and there are of course many other ways of approaching U.S. foreign policy analytically.

Different analytical approaches to questions of foreign policy, international relations, and environmental change highlight different actors, forces, and processes. It is therefore appropriate that the contributors to this book take many different perspectives to illuminate U.S. international environmental policy. They have their own preferred theoretical frameworks. The upshot is that there are many environmental issues and many actors and forces that influence and are influenced by U.S. foreign policy. What explains the relationships between these issues and actors? Or, what explains U.S. international environmental policy? The contributors to this volume help us answer these questions.

Explanations and Interpretations of U.S. International Environmental Policy

In this volume, contributors look at various environmental issues to illustrate how U.S. foreign policy operates. More specifically, they highlight explanations and causes of U.S. international environmental policy. Many of them also attempt, to varying degrees, to evaluate U.S. policy from practical and normative perspectives.

National Security and Geopolitics: Environmental Issues on the Policy Agenda

Part 2 of the book examines *Realpolitik* in U.S. international environmental policy. Chapters 2 and 3 examine the concept of "environmental security" from practical and critical perspectives, and chapter 4 uses a case study to demonstrate how environmental security and geopolitical considerations influence U.S. foreign environmental policy.

In chapter 2, Braden Allenby argues that environmental security can be defined as the intersection of environmental and security considerations at the national policy level. A relatively new and still somewhat contentious concept, environmental security may be understood as the outcome of several important trends. One is the breakdown of the bipolar geopolitical structure that characterized the Cold War period from the 1940s to the fall of communism in Eastern Europe and the Soviet Union. Another trend, less visible to many in the policy community, is the shift of environmental considerations from "overhead" to "strategic." This process is occurring at many different levels, from individuals and private firms to the national, state, regional, and global policy levels. Taken together, according to Allenby, these trends suggest that environmental security may signal an important evolution of national and international policy systems. If this evolution is to solidify, however, the concept—which has been used to mean different things by different stakeholder communities—must be defined with sufficient rigor to support its operationalization in policy programs.

In chapter 3, Jon Barnett undertakes a highly critical examination of U.S. policy pronouncements that have been informed by the notion of environmental security. His chapter briefly outlines the concept of environmental security and discusses pronouncements on the subject in the U.S. National Security Strategy and from the Department of Defense and the Department of State. According to Barnett, these pronouncements conform to a narrow and nation-centered account of environmental security, consistent with political realism. He argues that the United States selectively interprets environmental security as a means to justify traditional approaches to foreign policy. As such, environmental issues have been co-opted by agency actors hoping to perpetuate roles and their agencies' traditional activities. Nevertheless, Barnett finds some positive ecological potential in the U.S. government's incorporation of environmental security concerns into its foreign policy. It may be an important step toward greater consideration for the environment in the making of foreign policy.

The Caspian Sea is the site of large, newly discovered oil and gas deposits. It is also bedeviled by ecological problems—including pollution, fisheries depletion, and a rising sea level—which are likely to be exacerbated by extensive development of hydrocarbon reserves. In chapter 4, Douglas Blum shows how these changes have posed a dilemma for U.S. foreign policy toward the littoral countries of the Caspian: Is it better to promote collective "environmental security," or should the United States focus on energy extraction for more explicitly self-interested and geopolitical ends? The United States has also taken various steps to address environmental degradation elsewhere in the former Soviet Union and Eastern Europe. In the Caspian, however, despite a number of programmatic statements endorsing environmental protection, U.S. policy has strongly emphasized other objectives: energy security, autonomy for non-Russian actors in the region, isolation of Iran, and projection of American influence. For these reasons, the pursuit of energy exploitation and geopolitically preferable transportation routes has dominated the U.S. agenda. Meanwhile, regional and international efforts to address the Caspian environment have gathered strength. Blum reviews the prospects for multilateral environmental cooperation surrounding the Caspian and suggests that such cooperation offers hope for political stability and economic development in the region. U.S. policy remains malleable and may be responsive to significant changes in global energy markets and regional politics, which tend to support the priority of multilateral cooperation for sustainable development in the Caspian basin.

Domestic and International Politics Shaping U.S. Global Environmental Policies

The chapters in part 3 examine U.S. international environmental policies by focusing on domestic politics and international influences. Following the broad historical look at local, national, and international aspects of policy regarding

stratospheric ozone depletion in chapter 5, subsequent chapters use case studies to focus on the presidency and Congress, business influences, nongovernmental organizations, the courts, and changing bargaining environments in international regimes.

In chapter 5, Srini Sitaraman examines many of the factors that are instrumental in facilitating interstate cooperation on the environment. Realist and neoliberal theories of international relations have focused on the structural causes of interstate cooperation. Relative versus absolute gains, anarchy, issue domains, and international regimes and institutions have received a disproportionate amount of scholarly attention, whereas domestic political processes and factor endowments have not been given sufficient attention. Sitaraman's chapter shows how domestic political processes and different factor groupings in the United States interacted with transnational alliances to influence the negotiation, shape, and structure of the 1987 Montreal Protocol on stratospheric ozone depletion. The U.S. government internationalized the ozone problem by enabling the extension of scientific discourse to the interstate level. Sitaraman shows how domestic political processes and bureaucratic politics affected the final shape and outcome of the Montreal treaty. His chapter demonstrates that the state is a disaggregated entity and that domestic political processes are linked to the external world through a network of intermediary organizations. Sitaraman reveals how U.S. domestic political processes and intragovernmental politics contribute to the formulation of major international environmental agreements. In his analysis, he examines the domestic sources of international environmental policy; the U.S. "internationalization" of ozone depletion; the contested science of ozone depletion; domestic politics and its influence on the shape, structure, and outcome of the Montreal Protocol; and the importance of local, national, and international levels of analysis for our understanding of U.S. international environmental policy and of international environmental cooperation more generally.

In chapter 6, John Barkdull argues that executive branch leadership, specifically the initiative of White House staff, has contributed to U.S. involvement in efforts to prevent ocean pollution. Barkdull's case study sheds light on this matter by focusing on the Nixon administration's negotiation of the 1972 treaty on ocean dumping. The Nixon administration, led by the chairman of the Council on Environmental Quality, Russell Train, transformed a domestic issue—the regulation of dumping of military and commercial wastes in coastal waters by U.S. agencies and citizens—into a matter for international negotiations. Once engaged in international negotiations, the question became whether the United States could achieve a treaty it would accept and how closely the treaty would conform to American preferences. The secret negotiating position of the United States, which Barkdull found in the Nixon Materials at the National Archives, reveals that the United States was highly concerned that the U.S. military retain maximum freedom of action. This goal and others were largely attained, even when the United States would have accepted considerably less. Thus, it appears

that U.S. leadership—and particularly leadership by the executive branch—can make a significant difference in the outcome of international environmental treaty negotiations. Furthermore, Barkdull's historical analysis shows that the environmental record of the Nixon administration (if not that of Nixon himself) has been mischaracterized and that the administration was forward looking and proactive in undertaking international environmental legislation—which is not what casual observers expect from a Republican administration. As such, the chapter offers valuable insights for U.S. international environmental policy in the future.

In chapter 7, Robert Falkner argues that state-centric explanations of U.S. foreign environmental policy, which emphasize the autonomy of policymakers, fail to get at the important role corporations play. Falkner discusses various approaches to the study of corporate influence in foreign policy and presents evidence to demonstrate the role of businesses in the making of foreign policy. He examines three environmental cases: ozone-layer protection, climate change, and biotechnology. The "business conflict" model, which emphasizes the fragmentation of and conflicts within the business sector, is contrasted with traditional pluralist and neo-Marxist or structuralist accounts of interest-group politics. Falkner argues that a modified version of the business conflict model best explains corporate influence. It reflects the privileged position of business interests in environmental politics, but it avoids deterministic accounts of corporate dominance by emphasizing competition between opposing business interests. Political alliances between dominant business sectors and the state are identified as essential factors in the evolution of U.S. foreign environmental policy. Most important, the nature of these alliances helps explain why American businesses can alternatively support international environmental regulation, as happened in the ozone case, and oppose such regulation, as evidenced by the response of businesses to international efforts to deal with the problems of climate change and biodiversity.

The community of NGOs has emerged, particularly during the last decade, as an important actor in international environmental relations. NGOs have built public awareness about the environment through conferences and other public activities. More important from the point of view of international relations are their activities aimed at shaping international institutions and international law. In chapter 8, Morten Bøås addresses this issue by looking at NGOs in the United States and their involvement in congressional hearings on multilateral development bank (MDB) activity. Bøås shows how this involvement led to a campaign aimed at making it impossible for U.S. executive directors in MDBs to support projects that could have a major impact on the environment unless an environmental impact assessment (EIA) was made available at least 120 days before the project. The NGO campaign culminated with the Pelosi amendment, which made an EIA in advance of MDB board consideration of projects a requirement for U.S. support. Little more than a year after what originally started

as a national campaign in the United States, this procedure was turned into de facto international law when all MDBs made an EIA requirement their standard operating procedure. The chapter documents this process to highlight the transnationalization of U.S. environmental policies, specifically the internationalization of the Pelosi amendment. Bøås also asks the question: What right do interest-based organizations, specifically U.S. NGOs, have to make decisions that affect not only their domestic constituencies, but also people in Africa, Asia, and Latin America?

In chapter 9, Elizabeth DeSombre examines environmental sanctions in U.S. foreign policy. The United States has threatened import restrictions for environmental reasons more often than any other country, with good success generally in accomplishing its stated goals. What appears to be a simple and effective foreign policy tool, however, represents in origin and implementation a number of domestic battles. The sanctions that resulted take a form that, although predictable, no individual proponent would have designed. DeSombre's chapter examines the conflicts present at three stages of U.S. environmental sanctions: their origin, application, and effects. Each of these stages represents a conflict between a set of actors, the outcome of which influences the shape of the sanctions. At the initial stage, the conflict is between environmentalists and industry actors, each of whom wants foreign environmental policy to be used for different ends. Resulting policy takes the form of import restrictions that deny access to U.S. markets to those countries that act in ways the United States deems environmentally unfriendly. This approach protects U.S. industries from products made in ways that do not require the same regulations Americans must follow. Although Congress passes these sanctions, executive branch agencies typically drag their feet when implementing trade restrictions, often interpreting their mandate as narrowly as possible or even refusing to implement the restrictions at all. As a result, a number of the environmental sanctions have been fought in U.S. courts. Congress will sometimes modify its original legislation to limit the discretion agencies have in imposing sanctions. Once the sanctions have been threatened or imposed, the struggle is with the target countries that resist taking the action demanded of them. DeSombre shows that some of the domestic characteristics that influenced the shape of the sanctions also relate to the likelihood that the sanctions will achieve U.S. goals.

In 1946, the United States joined fifteen nations in signing the International Convention for the Regulation of Whaling. Under the convention, the International Whaling Commission (IWC) was created to regulate an industry facing declining demand for whale oil and severe depletion of some whale populations. By the mid-1960s, the focus of the IWC became increasingly preservation oriented, with fewer nations engaged in whaling and with the addition of new nonwhaling members to the convention. This focus led to the polarization of member nations within the IWC—those favoring protection of whales conflicting with those in favor of conservation measures and continued consumptive and nonconsumptive uses. By the mid-1980s, these conflicts peaked when the IWC placed a ban on commercial whaling. That ban is still in effect, although the IWC, with U.S. support, permits whaling by aboriginal groups. In chapter 10, Kristen Fletcher shows how the United States has maintained a stance against commercial whaling, seeking a permanent ban even though international support and science seem to be swaying toward sustainable commercial harvests. She argues that as whale populations improve and the world's whaling policies change, U.S. foreign policy must evolve with them. This conclusion is extremely disturbing for those who wish to see whales protected in perpetuity. Nevertheless, her chapter shows how the U.S. reaction to these international challenges illuminates U.S. whaling policy in particular and its other international environmental policies more generally.

National Interests and International Obligations: A Prescription for U.S. International Environmental Policy

The final part of this book is less analytical than most preceding chapters. Instead, it takes a normative and prescriptive approach to U.S. international environmental policy, recommending a shift in priorities among policymakers so that both U.S. interests and broader normative objectives might be promoted.

In chapter 11, Paul G. Harris argues that the United States can more effectively achieve its foreign policy goals in the environmental issue area, and thereby protect and promote its national interests, by treating other countries, particularly the developing countries, more equitably. Such policies would also promote ethical aims, such as acceptance of American responsibility for the disproportionate adverse impact of the United States on the global environment. Although there has been some movement toward recognition of this idea in its stated policy and behavior, the United States has yet to comprehend fully the extent to which equity may be a fungible power resource in the context of contemporary international affairs. U.S. foreign policy is critical because the United States has the financial, technological, and diplomatic resources that can be brought to bear on environment and development problems. The United States is also the world's greatest polluter. It therefore has the greatest ethical obligation to redress the wrongs of historical and ongoing global pollution. With regard to environmentally sustainable development, it can further its national interests and, coincidentally, promote ethical goals by meeting many of the demands from developing countries for greater international equity. With the foregoing in mind, Harris's chapter examines some of the practical and normative implications of adopting and embracing equity as an objective of U.S. global environmental policy—particularly policy on global climate change—for the United States itself and for the world. It also looks at the implications that such a policy would have for American global power in this new century.

Conclusion

The natural environment is undergoing change, and much of that change is adverse for humans (and for other species). Americans are not immune to these adverse effects. The U.S. government has come to realize that global environmental changes—such as climate change and ozone depletion—can directly affect the interests of the American people. It has also recognized to varying degrees that regional and local environmental problems—such as acid rain, depleted fisheries, and water scarcities—can directly or indirectly affect the economic, political, and security interests of the United States, and that environmental destruction and related human suffering abroad can affect the sentiments of Americans. Environmental changes that reach beyond the borders of countries can seldom be addressed effectively by any one nation, including the United States. These problems require international and even global action if they are to be reduced and mitigated. The world's governments and other important actors cannot deal effectively with environmental changes if the United States does not play an active role. Because the U.S. economy is so large, its diplomatic influence so great, and its contributions to environmental problems so extensive (in short, because it pollutes so much), the United States must be part of international solutions to environmental change. Thus, environmental changes have become a major subject and feature of U.S. foreign policy.

Scholars, practitioners, and activists will therefore want to understand how and why the United States takes the positions that it does on international environmental changes, how these positions can be altered, and whether they deserve to be supported or opposed. Many explanations and interpretations of U.S. international environmental policy can be offered, as the authors of this book demonstrate. Their research and assessments of U.S. international environmental policy not only get us closer to understanding the underlying dynamics of U.S. policy, but also highlight the issues and actors toward which concerned individuals and organizations might wish to focus their energies to protect the natural environment, to promote related U.S. interests, and indeed to promote the interests of other countries and peoples abroad. What is more, these chapters tell us much about U.S. foreign policy more generally, thereby helping us to understand the role that the United States plays in other global issues that concern Americans and people everywhere.

The short conclusion of this book is that there are many actors and forces shaping U.S. international environmental policy. Arguably the best way to understand these actors and forces is to look at how the U.S. foreign policy machine deals with different environmental problems and to undertake such examinations from different theoretical and analytical perspectives. Perhaps foremost among the conclusions of this volume is this: the highly pluralistic nature of U.S. foreign policymaking results in an inevitably large number of players, ranging from

individuals to businesses to nongovernmental organizations. The number of local, state (i.e., U.S. "states"), regional, national, and international stakeholders involved in these issues is vast. But the number of actors is not the end of it; the U.S. Constitution created a contentious, multibranch government that does not resolve issues quickly, smoothly, or easily. This convoluted democratic system is compounded by the number and complexity of the problems themselves. Thus, the foreign policies that emanate from Washington are almost inevitably unsatisfactory to all those involved. But understanding the process may help us to raise the level of satisfaction, at least for those on one side of the debate.

When evaluating U.S. international environmental policy (and perhaps U.S. foreign policy more generally), one ought to bear these issues in mind. Neither the president nor any other single actor can have its way without considering the interests and objectives of other actors. Deals must be made, and a consensus must be forged. Neither is easy to do, nor is it always easy to understand.

Notes

1 See Rachel Carlson, *Silent Spring* (New York: Houghton Mifflin, [1962] 1994).

2 Much more remains to be done, of course. Americans continue to do great harm to their own national environment.

3 Charles W. Kegley and Eugene R. Wittkopf, *American Foreign Policy* (New York: St. Martin's, 1996), 7.

4 For the authoritative work on climate change and global warming, see J. T. Houghton, L. G. Meiro Filho, B. A. Callander, N. Harris, A. Kattenberg, and K. Maskell, eds., *Climate Change 1995: The Science of Climate Change* (New York: Cambridge University Press, 1996).

5 Energy Information Administration, *Emissions of Greenhouse Gases in the United States 1996* (Washington, D.C.: Energy Information Administration, 1997); Energy Information Administration, *Annual Energy Review 1996* (Washington, D.C.: Energy Information Administration, 1997).

6 Some countries are way out in front of the United States in the area of international environmental protection, to be sure. And, it should be added, many people and governments do not like it—or at least say as much—when the United States adopts a leadership role on almost any issue, although even they frequently follow that leadership.

7 Walter A. Rosenbaum, *Environmental Politics and Policy*, 4th ed. (Washington, D.C.: Congressional Quarterly, 1998), 11–12.

8 Michel E. Kraft and Norman J. Vig, "Environmental Policy from the 1970s to 2000: An Overview," in *Environmental Policy*, 4th ed., ed. Norman J. Vig and Michael E. Kraft (Washington, D.C.: Congressional Quarterly, 2000),

12–13. See generally Vig and Kraft, eds., *Environmental Policy*, and Samuel P. Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955–85* (New York: Cambridge University Press, 1987).

9 Rosenbaum, *Environmental Politics*, 11.

10 Cf. Ibid., 14.

11 Ibid.

12 Al Gore, *Earth in the Balance* (New York: Houghton Miffiin, 1992).

13 Timothy Wirth, "World Conference on Human Rights," press briefing, Washington, D.C., 2 June 1993, *U.S. Department of State Dispatch* 4, no. 23 (7 June 1993), available at <http://www.dosfan.lib.uic.edu/ERC/briefing/dispatch/index.html>.

14 Rosenbaum, *Environmental Politics*, 336.

15 The history of international environmental diplomacy through the 1980s is examined in Lynton K. Caldwell, *International Environmental Policy: Emergence and Dimensions* (Durham, N.C.: Duke University Press, 1990), and John E. Carroll, *International Environmental Diplomacy: The Management of Transfrontier Environmental Problems* (New York: Cambridge University Press, 1988).

16 See "Declaration of the United Nations Conference on the Human Environment," UN Doc. A/CONF.48/14 (1972), reprinted in United Nations, *Report of the United Nations Conference on the Human Environment* (New York: United Nations, 1973).

17 Lorraine Elliott, *The Global Politics of the Environment* (London: Macmillan, 1998), 12–13, 108.

18 Mark A. Gray, "The United Nations Environment Programme: An Assessment," *Environmental Law* 20, no. 2 (1990): 291–319.

19 United Nations Conference on Environment and Development, *Report of the UN Conference on Environment and Development: Annex I, Rio Declaration on Environment and Development*, UN Doc. A/CONF.151/26, vol. 1, 12 August 1992; United Nations Conference on Environment and Development, *Report of the UN Conference on Environment and Development: Annex II, Agenda-21*, UN Doc. A/CONF.151/26, vol. 1, 12 August 1992; United Nations Conference on Environment and Development, *Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation, and Sustainable Development of All Types of Forests*, UN Doc. A/CONF.151/26, vol. 3, 14 August 1992; United Nations Intergovernmental Negotiating Committee, Framework Convention on Climate Change Secretariat, *United Nations Framework Convention on Climate Change* (Bonn: Climate Change Secretariat, 1992); United Nations Environment Programme, *Convention on Biological Diversity* (Nairobi: UNEP/CBD Secretariat, 1992).

20 Derek Osborn and Tom Bigg, *Earth Summit II: Outcomes and Analysis* (London: Earthscan, 1998).

21 At the time of this writing in early 2000, the United States was anticipated to exceed this target by 13 percent.

22 What follows in the chapter is only a sampling of the most prominent issues. For a more detailed discussion, see, for example, Elliott, *Global Politics*; Gary Bryner, *From Promise to Performance: Achieving Global Environmental Goals* (New York: W.W. Norton, 1997); and Norman J. Vig and Regina S. Axelrod, eds., *The Global Environment: Institutions, Law, and Policy* (Washington, D.C.: Congressional Quarterly, 1999).

23 Rosenbaum, *Environmental Politics*, 352–55.

24 *Montreal Protocol on Substances that Deplete the Ozone Layer, Final Act* (Nairobi: United Nations Environment Program, 1987).

25 See Richard Elliott Benedick, *Ozone Diplomacy*, enlarged ed. (Cambridge, Mass.: Harvard University Press, 1998).

26 See Houghton et al., eds., *Climate Change 1995*.

27 See, for example, William D. Nordhaus, ed., *Economics and Policy Issues in Climate Change* (Washington, D.C.: Resources for the Future, 1998); Ian H. Rowlands, *The Politics of Global Atmospheric Change* (Manchester: Manchester University Press, 1995).

28 Coastal areas of the United States are particularly threatened. During debate on U.S. participation in the climate regime, Senator John Kerry cited the threat posed by climate change to U.S. coastal areas: "between now and the middle of the next century oceans will rise one to three feet and . . . the impact of that will be devastation on the coast of Florida." *Congressional Record*, 25 July 1997, S8119. President Clinton and Vice President Gore made similar statements during visits to Florida in 1997.

29 On potential health implications of climate change, see, for example, A. J. Michael et al., eds., *Climate Change and Human Health* (Geneva: World Health Organization, 1996).

30 "Framework Convention on Climate Change," *International Legal Materials* 31 (1992): 849–73.

31 Of particular note is the 1997 Kyoto Protocol to the FCCC and subsequent international negotiations on its implementation. *Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 10 December 1997, UN Doc. FCCC/CP/1997/L.7/Add.1, available at <http://www.unfccc.de/resources/docs/convkp/kpeng.html>. The Kyoto Protocol is examined in detail in Michael Grubb, *The Kyoto Protocol: A Guide and Assessment* (London: Earthscan, 1999).

32 See Lamont C. Hempel, "Climate Policy on the Installment Plan," in Vig and Kraft, eds., *Environmental Policy*, 281–302. The Project on Environmental Change & Foreign Policy has devoted an entire book to examining climate change in the context of U.S. foreign policy. That book is intended to compliment this one, so we do not go into this topic in great detail in the

present volume. See Paul G. Harris, ed., *Climate Change and American Foreign Policy* (New York: St. Martin's, 2000).

33 The many international agreements to limit or prevent ocean pollution are summarized in Bryner, *From Promise to Performance*, 48–56.

34 For an analysis of how one of these agreements was crafted, see Peter M. Haas, *Saving the Mediterranean: The Politics of International Environmental Cooperation* (New York: Columbia University Press, 1992).

35 For a current summary of the provisions of the United Nations Convention on the Law of the Sea, see R.R. Churchill and A.V. Lowe, *The Law of the Sea*, 2d ed. (Manchester: Manchester University Press, 1999).

36 Dorothy H. Patent and William Munoz, *Biodiversity* (New York: Houghton Mifflin, 1996); Timothy Swanson, *Intellectual Property Rights and Biodiversity Conservation* (New York: Cambridge University Press, 1998); Lakshman D. Guruswamy and Jeffrey A. McNeely, eds., *Protection of Global Biodiversity* (Durham, N.C.: Duke University Press, 1998).

37 Robert Garner, *Animals, Politics, and Morality* (Manchester: Manchester University Press, 1993).

38 United Nations, Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, D.C., 3 March 1973, available at <http://www.cites.org/CITES/eng/index.shtml>; United Nations, Convention on Biological Diversity, Rio de Janeiro, 1992, available at <http://www biodiv.org/chm/conv/cbd_text_e.pdf>. Many other agreements related to species protection have been made. See Fridtjof Nansen Institute, *Green Globe Yearbook of International Cooperation on Environment and Development* (New York: Oxford University Press, 1996), 163–64.

39 Leslie E. Sponsel, Thomas N. Headland, and Robert C. Bailey, eds., *Tropical Deforestation: The Human Dimension* (New York: Columbia University Press, 1996).

40 United Nations, Convention to Combat Desertification, Paris, 1994, available at <http://www.unccd.int/convention/text/convention.php>.

41 Elliott, *Global Politics*, 45.

42 Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Convention), 1989, available at <http:// www.unep.ch/basel/text/con-e.htm>; Convention on the Ban of the Import into Africa and the Control of Transboundary Movements and Management of Hazardous Wastes within Africa, 1991, available at <http://www.ifs.univie. ac.at/intlaw/konterm/vrkon_en/html/doku/waste-af.htm>.

43 The recent failure of the U.S. Senate to support ratification of comprehensive test ban treaty, which would prohibit all nuclear testing, demonstrates the paramount concern with national control and security in this issue area.

44 Paul Erlich, *The Population Bomb* (New York: Ballantine, 1968); D. H. Meadows, D. L. Meadows, J. Randers, and W. W. Behrens, *The Limits to Growth* (London: Earth Island, 1972).

45 As cited by Crispin Tickell, BBC Radio 4, 22 November 1999.

46 For a discussion of international population control efforts, see Barbara Crane, "International Population Institutions: Adaptation to a Changing World Order," in *Institutions for the Earth*, eds. Peter M. Haas, Robert O. Keohane, and Marc A. Levy (Cambridge, Mass.: MIT Press, 1993), 351–93.

47 Indeed, Republicans in Congress are so opposed to family-planning programs that might promote abortion that they have tied this issue to other foreign policy matters, often preventing U.S. action in other areas or preventing funding of completely unrelated programs. In a compromise with Congress regarding funding for the United Nations, the Clinton administration agreed in late 1999 to modest concessions to Republicans opposed to international assistance for family planning generally and for abortion-related programs in particular.

48 Laurie Ann Mazur, ed., *Beyond the Numbers: A Reader on Population, Consumption, and the Environment* (Washington, D.C.: Island, 1994); Garrett Hardin, *Living within Our Limits: Ecology, Economics, and Population Taboos* (New York: Oxford University Press, 1993); and Richard J. Tobin, "Environment, Population, and the Developing World," in Vig and Kraft, eds., *Environmental Policy*, 326–49.

49 Al Gore, "U.S. Support for Global Commitment to Sustainable Development," address to the Commission on Sustainable Development, United Nations, New York City, 14 June 1993, *U.S. Department of State Dispatch* 4, no. 24 (14 June 1993), available at <http://www.dosfan.lib.uic.edu/ERC/ briefing/dispatch/index.html>.

50 See, among the many works on environmental security, *Environmental Change and Security Project Report* (Washington, D.C.: Woodrow Wilson International Center for Scholars, annual); Geoffrey D. Dabelko and P. J. Simmons, "Environment and Security: Core Ideas and U.S. Government Initiatives," *SAIS Review* 17 (winter–spring 1997): 127–46; Jessica Tuchman Mathews, "Redefining Security," *Foreign Affairs* 67 (1989): 162–77; Thomas Homer-Dixon, "On the Threshold: Environmental Changes as Causes of Acute Conflict," *International Security* 16, no. 2 (1991): 76–116; Norman Myers, *Ultimate Security: The Environmental Basis of Political Stability* (New York: W. W. Norton, 1993); Thomas Homer-Dixon, "Environmental Scarcities and Violent Conflict: Evidence from Cases," *International Security* 19, no. 1 (summer 1994): 5–40.

51 Elliott, *Global Politics*, 219–41.

52 See White House, *The National Security Strategy* (Washington, D.C.: U.S. Government Printing Office, 1994), and subsequent summaries of national security strategy.

53 See Peter Gleick, "Water and Conflict," and Miriam Lowi, "West Bank Water Resources and the Resolution of Conflict in the Middle East," Occasional Paper 1, Project on Environmental Change and Acute Conflict (Sep-

tember 1992); Natasha Beschorer, *Water Instability in the Middle East* (London: International Institute for Strategic Studies, 1992); David Brooks and Stephen Lonergan, *Watershed: The Role of Fresh Water in the Israeli-Palestinian Conflict* (Ottawa: International Development Research Center, 1994).

54 See, for example, Aaron T. Wolf, *Hydropolitics along the Jordan River* (New York: United Nations, 1995); World Bank, *Fostering Riparian Cooperation in International River Basins* (Washington, D.C.: World Bank, 1997); Ben Crow, David Wilson, and Alan Lindquist, *Sharing the Ganges* (London: Sage, 1995).

55 World Commission on Environment and Development (the Brundtland Commission), *Our Common Future* (Oxford: Oxford University Press, 1987). See also United Nations, *Agenda-21 Earth Summit: United Nations Program of Action from Rio* (New York: United Nations, 1992). There are many evaluations of the notion of sustainable development in principle and practice. See, for example, Sharachchandra M. Lélé, "Sustainable Development: A Critical Review," *World Development* 19, no. 6 (June 1991): 607–21; and Gary Bryner, "Agenda 21: Myth or Reality," in Vig and Axelrod, eds., *The Global Environment*, 157–89.

56 Brundtland Commission, *Our Common Future*, 43.

57 Ibid., 3.

58 Rosenbaum, *Environmental Politics*, 338.

59 Robert Paarlburg, "Earth in Abeyance: Explaining Weak Leadership in U.S. International Environmental Policy," in *Eagle Adrift: American Foreign Policy at the End of the Century*, ed. Robert J. Lieber (New York: Longman, 1997), 149.

60 See Paarlburg, "Earth in Abeyance."

61 For highlights of recent actions by Congress in the environmental issue area, see Michael E. Kraft, "Environmental Policy in Congress: From Consensus to Gridlock," in Vig and Kraft, eds., *Environmental Policy*, 121–44.

62 Paarlburg, "Earth in Abeyance," 144.

63 See Norman J. Vig, "Presidential Leadership and the Environment: From Reagan to Clinton," in Vig and Kraft, eds., *Environmental Policy*, 98–120.

64 For a more detailed discussion of the role of the courts in U.S. environmental policy, see Lettie McSpadden, "Environmental Policy in the Courts," in Vig and Kraft, eds., *Environmental Policy*, 145–64.

65 See particularly chapter 9 in this volume, and, for a more general treatment, Richard Oliver Brooks and Thomas M. Hoban, eds., *Green Justice: Environment and the Courts* (Boulder, Colo.: Westview, 1996).

66 Philip Shabecoff, *A New Name for Peace: International Environmentalism, Sustainable Development, and Democracy* (Hanover, N.H.: University Press of New England, 1996), 152.

67 See S. George Philander, *Is the Temperature Rising? The Uncertain Science of Global Warming* (Princeton: Princeton University Press, 1998).

68 President Clinton is believed to have read a book citing the dangers of climate change while his administration's most crucial climate change policies were being formulated: Ross Gelbspan, *The Heat Is On: The High Stakes Battle over Earth's Threatened Climate* (New York: Addison-Wesley, 1997). The president was reportedly seen carrying the book during his 1997 summer holiday.

69 Epistemic communities are networks of knowledge-based experts "with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area." They help countries identify their interests, frame the issues for collective debate, propose specific policies, and identify salient points for negotiation. Peter M. Haas, "Introduction: Epistemic Communities and International Policy Coordination," *International Organization* 46, no. 1 (1992): 1–35, quote from 3.

70 See Benedick, *Ozone Diplomacy*.

71 On the complicated relationship between science and policy, see Sheila Jasenoff, *The Fifth Branch: Science Advisers as Policymakers* (Cambridge, Mass.: Harvard University Press, 1990).

72 See Thomas G. Ingersoll and Bradley R. Brockbank, "The Role of Economic Incentives in Environmental Policy," in *Controversies in Environmental Policy*, ed. Sheldon Kamieniecki, Robert O'Brien, and Michael Clarke (Albany: State University of New York Press, 1986), 210–22; Terry Anderson and Donald Leal, *Free Market Environmentalism* (Boulder, Colo.: Westview, 1991); A. Myrick Freeman III, "Economics, Incentives, and Environmental Regulation," in Vig and Kraft, eds., *Environmental Policy*, 190–209; and Rosenbaum, *Environmental Politics*.

73 See David Vogel, "International Trade and Environmental Regulation," in Vig and Kraft, eds., *Environmental Policy*, 350–69.

74 See, for example, Bryner, *From Promise to Performance*, chap. 4; Elliott, *Global Politics*, chap. 4; and Thomas G. Weiss, David P. Forsythe, and Roger A. Coate, *The United Nations and Changing World Politics* (Boulder, Colo.: Westview, 1997), part 3.

75 For critical assessments of World Bank environmental progress, see Bruce Rich, *Mortgaging the Earth: The World Bank, Environmental Impoverishment, and the Crisis of Development* (Boston: Beacon, 1994), and Kevin Danaher, ed., *50 Years Is Enough: The Case Against the World Bank and the International Monetary Fund* (Boston: South End, 1994).

76 International regimes can be defined as accepted principles, norms, rules, and decision-making procedures around which international actors' expectations converge in a given issue area. See Stephen D. Krasner, *International Regimes* (Ithaca: Cornell University Press, 1983), and, generally, Volker Rittsberger, *Regime Theory and International Relations* (Oxford: Clarendon, 1997).

77 See Harris, *Climate Change and American Foreign Policy*.

78 Benedick, *Ozone Diplomacy*, 169.
79 It is worth pointing out that the major alternative that has been tried—communism—has an even worse record of environmental destruction.
80 Paul R. Viotti and Mark V. Kauppi, *International Relations Theory* (Boston: Allyn and Bacon, 1999), 3.
81 On the differences between understanding and explaining, see Martin Hollis and Steve Smith, *Explaining and Understanding International Relations* (New York: Oxford University Press, 1991).
82 John Barkdull and Paul G. Harris, "Approaches to Understanding U.S. International Environmental Policy," unpublished paper for the Project on Environmental Change and Foreign Policy, 2000. Cf. G. John Ikenberry, David A. Lake, and Michael Mastanduno, eds., *The State and American Foreign Economic Policy*, special issue of *International Organization* 42, no. 1 (1988).

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National Security and Geopolitics