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Introduction: A Long Way from Earth Day

The third Conservation movement was summoned to life between Rachel Carson's *The Silent Spring* (1962) and the Santa Barbara Oil Spill at the end of the movement-spawning Sixties, and would be called by a more nature-evoking term—environmentalism. Looking back from there, those of us with some historical memory were struck by how far we had come from the first Conservation crusade led by John Muir, Theodore Roosevelt, and Gifford Pinchot, or the second led by FDR in the 1930s. In those early days they thought the problem was loss of forests, soil erosion, water and air pollution, and that the solutions were National Parks and National Forests watched over by civil servants in their gray or tan-brown uniforms, along with a Soil Conservation Service for farmers.

In the Sixties we had a wider conception of the problems, which were the familiar ones, but expanded to include the human-made poisons—especially, as we learned from Rachel Carson, pesticides—whose daily distribution upon the land and waterways was imbedded in our agricultural system. We were wiser about the culprits, too, who turned out to be not only the rapacious mining and manufacturing corporations but also our own federal government—patron of DDT and other pesticides, eager auctioneer of logging rights, sponsor of river-disfiguring dams and roads for tourists wanting a few hours of "wilderness" experience camped next to the van. Our sophistication extended to the growing realization that we, too, were accessories to crimes against Nature (and ourselves), as consumers and heedless disposers of better things for a better life through chemistry.

Now we look back from the end of the century, and how long ago seems the environmentalist moment of the Sixties, and how much they had yet to learn! Their agenda of wilderness and wetland preservation, environmental

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inventory prior to development, and cleanup of urban air and national waterways remains important, battles never fully won. But the slowly emerging ecological crisis ran deeper and wider than they could imagine. National magazines carried colorful ads announcing the good news that "science helps build a new India" with a chemical plant bringing jobs to Bhopal, and they recorded no premonitions that industrial development might carry heavy costs for the Third World. Environmentalists thirty years ago would think a sheep named Dolly the unexceptional daughter of a ram and a ewe. Drought or hurricane to them was simply bad weather, as they gave no thought to the theory of global warming or planetary climate change.

Through the 1970s and 1980s and especially the globalizing 1990s, we have moved into new territory, land-mined with large and increasingly transborder, even planetary environmental troubles. Some are discouragingly familiar, old problems still with us and taking on new edges. A widespread "forest health" crisis was seen in the 1990s, and environmentalists by then had lost confidence in Teddy Roosevelt and Gifford Pinchot's solution to the protection of public forests, the U.S. Forest Service (FS). Commercial logging was allowed on forest reserves in public lands beginning in 1897. A century later the FS, created in 1905 to balance economic gains from harvesting with other public goals, was under intense fire from conservationists to end a logging-dominated "100 years of terrible waste and destruction," in the words of a full-page *New York Times* ad by sixteen environmental groups in June 1997.[1] FS Chief Michael Dombeck offered a new management plan subordinating timber harvesting to wildlife habitat and recreation, igniting a fierce end-of-century battle that TR and Pinchot would have understood. On private lands, in response to surging national and international demand, pulp and paper corporations in the second half of the century bought vast acreage in the Southeast especially, converting nearly half of all forest land in the region from biologically diverse ecosystems to tree-farming monocultures. There are more trees than a century earlier, but hardwoods and the few remaining long-leaf pines had been clear-cut and replanted in fast-growing slash pine to feed the insatiable appetites of the chip mills which feed the papermills which supply the newsprint and toilet paper for a global population rising through 6 billion.

The other of the original twin federal conservationist agencies, the National Park Service (NPS), was equally under fire for failing in its core mission to "conserve the scenery, natural and historic objects, and wildlife . . . unimpaired for the enjoyment of future generations." Throughout the 375-unit park system, but especially at the popular crown jewels such as Yellowstone, Yosemite, Everglades, Grand Canyon, Sequoia, and Great Smoky Mountains, a 1997 special report in *U.S. News and World Report* found

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"underfunding, overcrowding, pollution, encroaching commercial development, invasion of exotic species, and the decline of natural, historical, and cultural treasures."[2] The underfunding was Republican party budget-cutting politics in the 1990s. Yet, even if provided adequate support, many parks were ecologically too small as human populations encroached around them. "Everglades National Park is dying," concluded *National Geographic* in 1994, the life-giving sheet of water under its "river of grass" (in Marjorie Stoneman Douglas's phrase) diverted for urban and agricultural expansion along its boundaries.[3] As for wilderness areas, "we have only a fraction of the wilderness we're going to need" according to Gaylord Nelson, former Senator from Wisconsin and father of Earth Day: "Our public lands are being overwhelmed by population pressures" with "half a billion people in this country by 2075" (he was optimistic; half a billion are possible by 2050).[4]

These were problems in the preservation of forests and special national places that TR and Pinchot had faced, but the 80 million Americans in their day had become 296 million at the end of the century—motorized, affluent, with longer vacations and a liking for visits to national parks and for products such as paper and furniture that are made out of wood. The problems on public lands thus persisted, since the basic cause of the problems had been allowed to expand faster than remedial efforts.

Polluted rivers were another distress signal understood by the earliest conservationists. One river, a polluted Potomac, helped to galvanize LBJ into environmental repair. In places, the three decades after the first Earth Day had seen progress on such problems. The Potomac was cleaner, and the oil and garbage-clogged Cuyahoga River in downtown Cleveland, Ohio, which became infamous for catching fire in June 1969, was by the mid-1990s odorless enough to be graced at its mouth by cafés and trendy shops. Some degree of control had been achieved over point-source pollution out of factory pipes and municipal sewage plants. But nonpoint pollution from farms, city streets, and suburbs still invisibly leached pollutants into America's creeks, rivers, and lakes. When the rivers reached the sea, especially on the East and Gulf coasts, they emptied into estuaries and bays ringed with wetlands vital to the cycle of marine life.

And as the rivers carried more pollution, wetlands were being drained and paved for settlement by America's growing and coast-attracted population. In the 1980s only fishermen and a few informed environmentalists or coastal scientists were aware that the waterways were becoming sick. The canaries that stopped singing as a warning of the ecological damage included the fourteen million fish going belly-up in the summer of 1995 in the Neuse River near its mouth on Pamlico Sound, North Carolina. It was not the first fish kill, but the expanse of rotting green fish bodies spotted with red sores

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made national television news, and similar kills reoccurred in subsequent years, from Maryland's eastern shore southward to Myrtle Beach, South Carolina. The proximate cause of the Maryland and North Carolina fish kills was thought to be a mysterious microbe called pfisteria, but the real cause of pfisteria's toxic cycle and of the oxygen-depleting eutrophication of eastern waterways was nutrient overload from human waste, fertilizer runoff, and a huge expansion of poultry and hog factory-farming in Maryland, Virginia, and North and South Carolina. The Chesapeake Bay was a virtual war zone between human pressures and marine life from the 1970s on. Overharvesting and pollution cut the oyster harvest by nine-tenths across the 1990s, and the blue-crab catch in the summer of 1998 was the lowest in history. On the west coast, the *New York Times* in early 1999 declared that "the decline of the once-great salmon runs of the Pacific Northwest ranks high among the ecological blunders committed in the name of economic growth."[5] The 75,000 dams across America's rivers, the largest of them proud products of federal agencies associated with conservation, were increasingly seen as environmental disasters and in 1999 the long road toward restoration was taken when the Edwards dam in Maine became the nation's first dam demolished by a federal order.[6]

In the Gulf of Mexico, fishermen told of a perpetual "dead zone" that spread off the Louisiana coast every summer, "a huge swath of oxygen-starved, nearly lifeless ocean . . . a graveyard of strangled clams, starfish, and marine worms" unable to flee the area, reported *Science* magazine in 1998.[7] The zone, one of fifty found worldwide when first noticed half a century ago, had doubled in size since 1993, and threatened the Gulf's fishing industry. The toxic, oxygen-poor water was a gift of the Mississippi River, which drained nearly half of the lower forty-eight states. Here, as on the East Coast, farms and cities blamed each other, and both were right. Scientists were not sure what was causing the mass die-off of tropical coral along the Florida coast (and elsewhere around the globe), and guessed that local pollution stresses combined with steadily rising oceanic temperatures were to blame.

Distress signals from the oceans also increased in the 1990s. Off the New England coast, once-abundant stocks of cod, haddock, and yellow-tail flounder declined sharply. Tanker transport of petroleum meant the chance of accidental spills, such as the 11 million gallons of oil spilled by the Exxon Corporation tanker *Valdez* on 24 March 1989, in Alaska's Prince William Sound. In the Gulf of Mexico, overfishing and the wasteful trawling methods of shrimpers virtually eliminated the red snapper, while on the West Coast several stocks of salmon were on the edge of extinction due (chiefly) to destruction of their riverine spawning habitat by dams. The UN Food and Agriculture Organization (FAO) reported in 1995 that demand for fish

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protein due to the world's growing population, abetted by a dramatic increase in the numbers and technological sophistication of the ocean fishing fleet, has "decimated natural stocks and jeopardizes the future of the seas as a source of food."[8] Seventy percent of the world's stocks of commercial fish are at or beyond peak harvesting, and nine of the globe's seventeen major fisheries are in serious decline. Of the world's two hundred chief fish stocks relied upon as food for humans, 35 percent were classified by an international team of scientists in 1998 as overfished and thus on the way to extinction.[9] The ocean commons was relentlessly and very quickly being biologically undermined by overharvesting: "Too Many Boats Are in Pursuit of Too Few Fish," ran a newspaper headline in 1995. And as overfishing depleted the prized species such as swordfish, tuna, and cod, fishermen moved down the oceanic food chain to harvest squid, shrimp, menhaden, and Norway pout, human technology thus not only decimating the stocks of prized species through fishing but also competing for their food supplies.

"None of this was supposed to happen," commented the *Chronicle of Higher Education* in a mid-1990s review of the gathering fisheries crisis. Environmentalists in the 1960s and 1970s had been aware of human pressures on fresh and salt-water ecosystems and had put in place an extensive system of laws, councils, and regulations directed toward the protection of the nation's waterways, coasts, and aquatic resources.[10] Yet the decades after the 1960s saw localized, partial progress overwhelmed by a larger tide of ecological deterioration.

Abatement of air pollution has been since the Sixties a somewhat more positive story. The Los Angeles air basin, routinely a soup of brownish smog blotting out the encircling mountains, was by the 1990s infrequently so. The average number of days in urban areas nationwide where the air was designated "unhealthy" dropped from twenty in the early 1980s to six in the mid-1990s. The Clean Air Act of 1970 and its subsequent toughening amendments had prodded industry and automakers toward heartening gains. Emissions of sulfur dioxide, a chief cause of acid rain, have been cut in half, easing the pressure of posited acidity on lakes, streams, and forests. The EPA reported that in 1997 the nation's air was the cleanest since it began record-keeping in 1970. Overall emissions of six major pollutants measured by the government were down 31 percent, smog levels dropped 16 percent, carbon monoxide dropped 38 percent, and sulfur dioxide dropped 39 percent. Tailpipe and factory emissions of particulates dropped from 25 million tons to 10 tons annually in the twenty years after 1970, lead was almost entirely gone from the atmosphere, and toxic emissions of 112 targeted substances had been reduced by almost 90 percent. The gradual phase-out of produc-

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tion of stratospheric ozone-depleting chlorofluorocarbons (CFCs) launched by the 1987 Montreal Protocol appears to have stabilized ozone loss and, if the EPA's scientists are right, prevented a sharp rise in the cases of skin cancer. All this in the teeth of a 30 percent increase in U.S. population from Earth Day to the mid-1990s, and over 60 percent more vehicles on the road.

And, the EPA went on, the air was not clean enough.[11] Hundreds of pollutants were still not controlled at all, nor were their health effects understood, and nitrogen oxide stubbornly continues to rise. Acid rain and ozone created from sulfur and nitrogen emissions "remain a serious problem in the Adirondacks and are a growing threat in the southern Appalachians, Colorado's front range, and elsewhere," noted the *New York Times*, summarizing a 1999 report by a federal panel on acid rain.[12] Worsening air pollution problems in the eastern national parks, from Acadia National Park in Maine across the Shenandoah National Park in Virginia, led the EPA to demand cleanup strategies from the states that would return parks and wild areas to "clean air," but it gave them until 2064 to achieve the goal.[13]

The Endangered Species Act of 1973 marked a broad public and elite recognition that many wildlife species were in crisis. Humans had already extinguished the prized and formerly numerous species such as the Carolina parakeet and the passenger pigeon, almost lost the American bison, and in the 1960s saw the bald eagle, whooping cranes, California condors, red wolves, and the peregrine falcon headed toward oblivion. These and other animal species have rebounded, aided by federal policies (augmented by the work of wildlife conservationists, including hunters and anglers) that have been heatedly criticized as too much intervention in property rights. Writer Gregg Easterbrook, in *A Moment on The Earth* (1996), drew up a mixed picture: delta smelt and kangaroo rat Down, swans and sea lions Up, most subspecies of Pacific Coast Salmon and yellowfin tuna and sharks Down, wild turkey Up and deer "really, really Up."[14] But the prospect for endangered plant and animal species remains broadly threatening due to habitat destruction or disturbance, a challenge that U.S. environmental policy has not successfully met. A 1996 Nature Conservancy study of twenty thousand of America's native species of plants and animals found one-third were rare or imperiled.

One could make a longer list of environmental-damage zones known to and addressed by the environmentalist-scientific-political communities in the 1960s–1970s' springtime of environmental policy and consciousness, and still with us three decades later either in slightly diminished or, more often, in a more aggravated form. Rachel Carson's *The Silent Spring* indicted indiscriminate use of pesticides and, as all textbooks now report, ended the use of DDT within the United States. But the pesticide issue would not end. In

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1996 *Our Stolen Future*, by Theo Colborn, Diana Dumanoski, and John P. Meyers, gained wide publicity for the claim that even small amounts of pesticides and other manufactured chemicals act as "endocrine disrupters" leading to decreased sperm counts, developmental problems, and some cancers in wildlife and, presumably, in humans.[15] Congress tightened pesticide regulation in 1996 in a climate of great scientific and regulatory uncertainty about the risks involved.

As to hazardous wastes, the problem had been vastly underestimated in putting together the Superfund Act of 1980 and subsequent amendments. The number of "priority sites of contamination" climbed to more than 1,300 by the mid-1990s with only 79 cleaned up, and the eventual price plotted out to $500 billion, probably again an underestimate. The good news is that emissions of such wastes, enormous as they are, have entered a decline after federal legislation shifted the costs back toward the original polluters and, through the annual Toxic Release Inventory published by the EPA, exposed to the public their identity and volumes of emission. Manufacturing industry leaders who protested that hazardous waste regulation would bankrupt them have shown astonishing technological skill in designing production processes and products that are increasingly "green." Industry is required to report on emissions of 316 different chemicals (the EPA proposes to double that number and to expand the industries covered), and annual levels keep dropping—1993 toxic emissions down 12.5 percent from 1992, a trend that began in the 1980s and continues today.

Depletion of energy resources, a concern to Teddy Roosevelt's generation as forest and coal reserves seemed to be rapidly shrinking, was not a central issue in the Sixties environmental awakening. The 1972–73 OPEC oil embargo and subsequent price increases and lines of autos outside gas stations changed this, especially when the scenario was repeated in 1979 with another doubling of the price of a barrel of oil. In one sense, it could be claimed that Americans very quickly solved that particular natural resource problem. Rising petroleum prices forced citizens, businesses (most notably the auto industry, spurred by rising sales of small Japanese cars), and other large institutions to become more energy-efficient. And the OPEC cartel collapsed, allowing the large discovered petroleum reserves around the world to be brought to market. Gasoline and oil prices started a long slide downward in the 1980s, and *Harper's* magazine captured the mood of the nation in 1980 with a cover article announcing "The Energy Crisis Is Over." As the century ended, gasoline was selling in parts of the country for just over a dollar a gallon, thought to be the lowest (adjusting for inflation) in American history.

So the "energy shortage" issue has all but disappeared from the agenda of governments and environmentalists. In an Epilogue looking toward the fu-

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ture, we shall consider the evidence that the inevitable end of the petroleum era will begin to be felt in the first half of the twenty-first century, and the time to prepare for it has been poorly used. It is likely that a symposium of this sort three decades from now will conclude that no resource/environmental issue of the second half of the twentieth century was so deceptive, and so mishandled, as energy.

In the decades following the 1960s, with the OPEC challenge broken by 1980 and oil cheap once again, the only extensive public discussion over energy had to do with nuclear power. As modern environmentalism gathered its forces in the 1960s, nuclear power had been at the margins of thought. A new industry and technology, it was to environmentalists who thought of it at all a sort of ally, cleaner than fossil fuels. But it was a sinister ally, producing radioactive wastes whose storage was a technological and political puzzle. Then nuclear power jumped to the top of the list of super-pollutants, owing chiefly to two particular events. On 28 March 1979, the core of Unit 2 of the Metropolitan Edison nuclear reactor at Three Mile Island, in Pennsylvania, malfunctioned, melted, and released radioactive steam into the atmosphere. In 1986, a far more serious reactor accident at the Chernobyl plant in the Soviet Union north of Kiev released an immense toxic radioactive cloud that killed thirty-one people at the site (the official total; hundreds more probably died as well, with cancer deaths predicted for forty- to fifty thousand), then spread westward to contaminate central, southern, and western Europe. These events, widely reported, intensified public concern over reactor failure. The nuclear energy industry, once touted as having the potential of producing electricity "too cheap to meter," entered a long decline—burdened not only by public fears over reactor safety, but by increasing energy efficiency, low oil prices, and the problem of radioactive waste disposal. No new orders for nuclear reactors were placed after 1978, and many building plans were later canceled. Thus as the energy crisis sank from sight in the second half of the century, the nuclear power industry in the United States—operating 107 aging reactors and producing 20 percent of the country's electricity in 1997—stopped growing in the country, except for growing old. Both the energy shortage and nuclear energy, surely, will one day have another life—together.

The public concern over the contaminating potential from nuclear reactors in the electricity-generating business was not entirely misplaced, but it should have been more widely distributed. The nuclear age and the Cold War have piled up more than thirty thousand nuclear weapons in the American arsenal alone, but also nuclear wastes from the bomb-production process, from naval reactors' spent fuel, and eventually from the decommissioned radioactive reactors themselves. More than thirty thousand metric

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tons of high-level radioactive waste lie in temporary storage at U.S. nuclear power plants, awaiting a permanent storage (planned for Yucca Mountain, Nevada, but delayed by controversy). The Cold War generated, and left for disposal, a lot of very hot trash.

And how could the start-up environmentalists of the Sixties era have known that a certain half-humorous problem of Americans in the South—the expanding acreage covered by the imported Japanese vine, kudzu—would by the end of the century be seen as the most visible precursor of a very serious new environmental threat—invasive alien species. Since the seventeenth century, according to an Office of Technology Assessment report, at least 4,500 foreign animal, plant, and insect species have made their home in the United States.[16] They came across the Mexican border like the fire ant or the boll weevil, and in recent times, with the increase in international trade and travel, the pace of the invasion has accelerated. Now they come to the United States (and leave our shores in the same ways) in the luggage of tourists bringing South American water hyacinths for their fishponds, or like the Formosan termite packaged with wood products from Asia, or, like the zebra mussel, in the 21 billion gallons of ballast water pumped out of foreign vessels into American ports and coastal waters each year. Noxious weeds alone, said Secretary of the Interior Bruce Babbitt in 1998, "wreak a level of havoc on America's environment and economy that is matched only by the damage caused by floods, earthquakes, mud slides, hurricanes, and fire," and he pledged "to beat this silent enemy."[17] Especially vulnerable was Hawaii, where the invasion of non-native pest species is "the single greatest threat to Hawaii's economy and environment, and to the health and lifestyle of Hawaii's people," concluded a 1996 report, "The Silent Invasion."[18] The environmental threat involved was complex, but it included the extinction of indigenous species that could not compete with the outsiders—something the native Americans could have warned modern environmentalists about. This emerging problem, another on a global scale, was still in the stage of discovery, not solution, at the century's close.

Plainly, a "Report Card" on the United States' effort in the second half of the twentieth century to engage and bring remedies to the broad environmental crisis must be a complex mix of good and bad news. One trend is unmistakable: widening circles of engagement. Environmental concern in the Sixties was found exclusively among well-educated, relatively affluent whites. As Martin Melosi's essay in this issue relates, it spread to working-class black and brown populations as they discovered their exposure to hazardous wastes. Rippling farther out, environmental problems—and their solutions—have over the last three decades become increasingly globalized. Acid

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rain appeared at first to be an internal national problem, but it flowed across national borders and forced intergovernmental engagement. When the North American Free Trade Agreement (NAFTA) was signed in 1993, an unprecedented supplemental agreement on environmental protection was added because of environmentalist pressure, just one example of the recent penetration of environmental issues into international trade politics, which is the topic of David Vogel's essay in this volume. Ocean fisheries problems eventually led to multinational forums in search of remedies, as did species loss, oceanic waste dumping, ozone-depleting chemicals in the upper atmosphere, and much else. The global scale of the effort at environmental protection is suggested by a short honor roll of international meetings and agreements: the 1972 UN Conference on the Human Environment in Stockholm, leading to the Vienna Convention for Protection of the Ozone Layer in 1985; the Montreal Protocol on Substances that Deplete the Ozone Layer in 1987; the 1987 World Commission on Environment and Development (or Bruntland Commission, which issued the historic report "Our Common Future"); the Earth Summit in Rio de Janeiro in 1992. The largest and most encompassing of the newly internationalized environmental problems addressed in these forums has been global warming.

In the summer of 1998, when the worst fires in seven decades burned out of control in the normally humid jungles of Oaxaca and Chiapas in Mexico, sending choking clouds across Houston and New Orleans, we knew why those jungles were tinder dry. Innocence was gone. We had a macro explanation for all bad weather—the "Greenhouse Effect," global climate change. A strong scientific consensus had formed around the theory that a heat-trapping accumulation of human-generated "greenhouse gases" in the upper atmosphere, combined with the poorly understood natural forces that have always driven climate cycles, was producing a global warming that would raise ocean levels, generate more violent and unpredictable weather, and wrench all ecosystems with changed temperatures and rainfall patterns. At the Kyoto Conference in late 1997 and in Buenos Aires in 1998—the latter the hottest year on record in the hottest decade on record—many nations shared the bad news that humanity's half-completed industrial leap into the good life has burned enough fossil fuels to have a heat-trapping, environment-altering side effect that spelled disrupting trouble for every ecosystem and the human societies sustaining life within them. The Framework Convention on Climate Change, first signed by 160 nations during the Earth Summit in Rio de Janeiro in 1992, modified at Kyoto and again at Buenos Aires, established the long-term objective of limiting greenhouse gas emissions so as to return to 1990 levels, and launched what has been a contentious and will surely be an unending global debate over when and how na-

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tions will voluntarily begin to alter basic consumption habits in the interests of a more stable global climate. We exit the century having at least discovered what is surely our largest environmental problem (since we avoided a potentially larger one, nuclear war): global climate change. And we have glimpsed the costs to be paid whether we choose to change life habits or whether we choose not to (thus choosing a different set of costs). In many ways, a new era between humanity and environment seems to have arrived in the United States, and internationally, with the twenty-first century.

Thus the story of environmental problems and policy from the Sixties to the end of the century is in part a continuing narrative of old and familiar battles to protect the natural heritage of America—in the old-growth forests of the Pacific Northwest, in vehicle-jammed Yosemite, in the parched grasses of the Everglades. But in the 1990s the picture was also much changed, reflecting, among other things, the globalization of everything.

We thus have much need for history here at the hinge of centuries twenty and twenty-one, for a pulling together of the story/stories of environment and environmental policy in the United States and all that connects to those narratives. Positioning ourselves and our dilemmas in time has at the very least the promise of establishing that cherished lens called historical perspective. Much has changed since the Sixties in our population's relation to the natural environment. An imposing and complex framework of law and regulation has been built and modified, studied and heatedly debated. We need to look back and build an analytical narrative of from there to here, for at least two reasons. One, that ignorance of history is always a bad idea. Two, that policy improvements and corrections are facilitated when you know not only what worked and did not work (and why), but gain a sense of where the parts of the problem are positioned in the stream of time.

This symposium is a contribution toward a historical perspective on environmental politics and policy since the seminal Sixties. As with any collection of essays, it attempts to pull together some of the important substories of the journey from the birth of modern environmentalism to the end of the century. Not all, obviously, could be addressed.

We begin with an essay by Michael Kraft that offers an overview of environmental politics and policy since the 1960s. The evolving cluster of "green" issues of course did not escape the sharp turns of American politics generally, moving from expansive beginnings under liberals (and the conservative Richard Nixon) into a climate of criticism and redirection in the Reagan Eighties with pragmatic adjustments and global entanglements closing out the century. Kraft suggests that dramatic changes may lie just ahead, as policy

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grapples with the implications of the goal of "sustainability."

Environmental policy soon became entangled in other issues—no surprise to those who know Muir's remark about everything being connected to everything else. Martin Luther King Jr. said little about environmental matters, but the civil rights movement he helped to launch energized minority communities to protest discrimination wherever it showed its face. The trail led from the schools to higher education to voting to the job site—and, some charged, to the selection of places to dump our wastes. The charge that "they" are dumping hazardous wastes in Dixie and elsewhere in minority communities unable to protect themselves galvanized an "environmental racism" (or "environmental justice") activism and scholarship. Martin Melosi's essay assesses this development, which is also an aspect of the changing political coalitions around the environmental issue.

If there is a central theme in these years, it is the spread of environmental damage, and thus awareness and political mobilization, across borders, to different social groups formerly little involved, and onto other agendas. Environmental concerns began to surge into the national security and foreign policy communities and debates in the late 1980s, just as the Soviet Union dissolved, opening an opportunity to consider new threats to American security. It was soon evident that environmental problems inadequately addressed could be—indeed already were—destabilizing forces undermining regimes and generating large refugee flows. Richard Matthew describes the emergence of environmental issues in the national security arena and their implications for policymaking.

Another zone of expansion for environmental issues is international trade. The relentless, transformative, and intensely controversial progress of globalization reflects the trade expansion driven upward since World War II by diminishing transportation and communication costs and the GATT rounds of tariff reductions. Trade issues seemed to run in a very different channel than environmental ones, and any relationship between the two was never glimpsed by Teddy Roosevelt, or his cousin Franklin, or Rachel Carson, or David Brower of the Sierra Club. But the entanglement of trade and environment is now a reality, in ways and around issues described by David Vogel. Will foreign challenges to American trade-related policies, brought to bear through the new trade system headed by the World Trade Organization (WTO), generate irresistible pressure to dismantle or weaken American environmental regulations accused as a form of protectionism? Or can the dynamics of global trade be managed by governments and the machinery of world trade negotiations be modified to permit (or even encourage) countries to maintain strict environmental protection without being charged with "ecoprotectionism"?

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Finally, what is the population-environment connection, and what role could population policy play in the broad conservation effort? In the 1960s, the link between environmental damage and growing human populations was taken for granted, as it had been in the influential books of the postwar era—Fairfield Osborne, *Our Plundered Planet* (1948), and William Vogt, *Road to Survival* (1948). After an American campus lecture in the troubled year 1968, British scientist C. P. Snow was asked by the students "What was the cause?" He spoke for many in the Sixties when he replied: "Peace. Food. No more people than the earth can take."[19] The best-selling *Limits to Growth* (1972), by a team of Massachusetts Institute of Technology researchers for the Club of Rome, described the environmental problem as a triad of "population-resource-environment" interactions, which the researchers called by the French phrase "the problematique," or problem-cluster. To avoid the onrushing global resource-environment crisis required a transition to what they called "an equilibrium state"—a concept discussed by Plato, Aristotle, and many others, and distinguished from stasis in the observation by John Stuart Mill that "a stationary condition of capital and population implies no stationary state of human improvement. There would be as much scope as ever for all kinds of mental culture, and moral and social progress; as much room for improving the Art of Living and much more likelihood of its being improved."[20]

The Sixties stimulated much consideration of what population stabilization implied for the United States. Paul Ehrlich told a magazine interviewer that 50 million Americans seemed to him about right, but upon more thought he and Anne Ehrlich settled on 135 million Americans as an upper limit consistent with ending environmental degradation.[21] Harvard scientist Roger Revelle told a congressional committee that 100 million seemed to him the optimum American population. Cornell biologists David and Marcia Pimentel propose "less than 100 million." Recognizing that calculating an optimal population living within resource and environmental constraints depends upon how that population lives on the land, University of Maryland professor Robert Costanza calculated that 85 million Americans could be sustained if they maintained current (1992) consumption patterns, twice that with the more energy-efficient European lifestyles.[22] The Ehrlichs proposed to capture this population linkage with lifestyle by using the formula, Environmental Impact = Population X Affluence X Technology, or I = PAT.[23]

This serious attention to the population dimension received official endorsement just after the Sixties ended. Appointed in 1970, The National Commission on Population Growth and the American Future, chaired by John D. Rockefeller II, reported in 1972 to President Nixon, recommending that "in the long run, no substantial benefits will result from the further

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growth of the nation's population, rather that the gradual stabilization of our population would contribute significantly to the Nation's ability to solve its problems," and that the nation should "welcome and plan for a stabilized population."[24]

This conviction about the importance of the population-control aspect of environmentalism that the 1960s generation shared has gradually slipped—more accurately, has been pushed—from the center of environmental thought and discussion. Without population stabilization, every environmentalist project and aspiration faces a constant moving forward of the goalposts. Recycling and turning down thermostats and improving auto fuel efficiency are important steps, but as the Ehrlichs wrote in 1994, "If our focus is only on A and T, the P factor will always get us in the end."[25]

And so it has, across the three decades following the Sixties. The successes for the American environmental protection enterprise that I have briefly summarized are not as large as the losses. And while there are many reasons for these outcomes, a central one is that the demographic trajectory toward stabilization established by the mid-1970s was replaced by a new growth path driven upward chiefly by the government's 1965 decision to liberalize U.S. immigration policy and thus quadruple legal immigration.

Writer and environmentalist Roy Beck joins with forest and wildlife researcher Leon Kolankiewicz to present a unique essay, part memoir and part research review. They trace the trail of the debate over the population-immigration-environment connection since the 1960s, years in which the environmentalist communities acquiesced in government policies, allowing the U.S. to return to a rapid growth path at odds with environmentalist goals. Beck and Kolankiewicz offer suggestions to future historians as to the underlying causes as well as pivotal events, organizations, and decisionmakers within this debate and set of policy decisions.

The environmental project, ending humanity's abuse of surrounding Nature, shares two common features with other collective enterprises that mobilize human energy and commitment. The first is the task of reconciling the necessity of proclaiming the bad news in order to awaken support, with the requirement for achievable goals and an optimistic spirit to rally the troops. Critics of environmentalism frequently claim that the green crusade is mired in pessimism. In a concluding Epilogue, I address the running debate between Eco-optimists and Eco-pessimists, a blurry fault line that divides not only environmentalists from their outright enemies but that can be found within the environmental community itself.

The second persistent condition is the need for a mobilizing vision. Goals such as "clean air" and "clean water," the "preservation of Nature and wil-

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derness," will do for legislative language and speeches. But now that humanity is understood to have altered everything, and therefore is in charge of defining the Nature to be preserved or restored (as well as what is "clean"), what is or ought to be our larger aspiration? Toward the end of the century the term "sustainability" has come forward in national and international discussions of environmental aims. The Epilogue concludes with an examination of end-of-century thinking about where we ought to be trying to go.

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Notes

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