PART I

Environmental Law: Hospice for a Dying Planet

Introduction

"You Can't Negotiate with a Beetle"

You can't negotiate with a beetle. You are now dealing with natural law. And if you don't understand natural law, you will soon.

Oren Lyons

Oren Lyons's statement refers to 4 million acres of Canadian forest wiped out by beetles now thriving in warmer winter temperatures as a result of planetary heating. Lyons has a knack for putting environmental problems into terms that are hard to argue with. A member of the Onondaga Nation Council of Chiefs and professor of American studies, he emphasizes "natural law," a principle that has guided the indigenous approach to ecological management for thousands of years. As Lyons once put it in an interview:

> The thing that you have to understand about nature and natural law is, there's no mercy.... There's only law. And if you don't understand that law and you don't abide by that law, you will suffer the consequence. Whether you agree with it, understand it, comprehend it, it doesn't make any difference. You're going to suffer the consequence, and that's right where we're headed right now.[1]

THE NEW ECOLOGICAL AGE

The planet we inhabit seems suddenly and violently out of balance. The consequences of humanity's disregard for Nature's laws find glaring reflection through the prism of ocean life. Four hundred "dead zones" now murk the world's seas, collectively spanning tens of thousands of square miles. Off the coast of Oregon, a dead zone the size of Rhode Island resembles an underwater graveyard, with thousands of crab skeletons drifting in lifeless waters. In Moreton Bay, Australia, toxic fireweed can spread across the sea floor at a rate covering a football field every hour. When fishermen touch it, their skin breaks out into blistering welts, and their eyes burn and swell shut. Thousands of miles away on the Florida Gulf coast, a dreaded

red tide visits once a year and persists for months. Ocean breezes carry toxic wafts inland to waterfront communities, sending victims to the hospital with pneumonia, asthma, and bronchitis.[2]

Halfway between North America and Japan, the corpses of 200,000 dead albatross chicks speckle a rookery at Midway Atoll, their little gullets filled with plastic Legos, bottle caps, and Styrofoam balls that their parents plucked from the water and fed them. A garbage continent composed of plastic bottles, wrappers, and bags stretches twice the size of Texas in the Pacific Ocean.[3]

In New England, families that fished for generations have retired their boats because the oyster fishery has plummeted. Once providing a catch of millions of pounds of oysters a year, more than eight out of ten oyster reefs have vanished. Worldwide, nearly one-third of the sea fisheries have collapsed, and big fish populations have dropped 90 percent. Marine biologists project the complete loss of wild seafood just four decades from now: that would be the end of an entire food group that humans have relied on since time immemorial. Yet far out to sea, ocean fishing trawlers still scrape the bottom of the ocean in half-acre swaths. They haul in catches indiscriminately as if the marine life remained inexhaustible.[4]

All over the world, nitrogen and phosphorous compounds wash into the bays from septic tanks, farms, and sewers. Bulldozers chew up fragile wetlands along the coasts to create destination resorts and subdivisions. Every day, ocean water absorbs carbon dioxide emitted from industrial chimneys, coal-fired plants, and cars. Some ocean water has become so acidic from this pollution that the shells of sea creatures dissolve in it. Twenty percent of the coral reefs have disappeared, and the number could climb to 60 percent by 2030. Scientists warn of "potentially catastrophic consequences" for ocean life.[5]

Humans have toppled the oceans' chemical balance. Ancient forms of bacteria now thrive and proliferate, as if the seas have reverted to a primeval state. *Los Angeles Times* reporter Kenneth Weiss describes a "virulent pox" afflicting the world's oceans. In the words of one scientist, the seas now succumb to "the rise of slime," regressing to "a half-billion years ago when the oceans were ruled by jellyfish and bacteria."[6] As Oren Lyons would point out, you cannot negotiate with slime.

No one ever guaranteed that a lifestyle of colossal waste and resource consumption could continue indefinitely without consequences to our own species. But mass consumerism lulls people into assuming that good collateral exists behind a soaring ecological debt on the planet. Society seems mesmerized by an image of resilient Nature that cannot unravel before our very eyes. Even if it did unravel, leaders assure us, technology will develop in the nick of time to save civilization.

As part of the problem, industrialization has estranged people from their own survival. Many citizens live so detached from food production, water collection, and shelter provision that they remain oblivious to the basic connection between

ecological health and human need. Neon indicators of environmental collapse attract little notice in mainstream society. Elizabeth Kolbert writes in *Field Notes from a Catastrophe*, "It may seem impossible to imagine that a technologically advanced society could choose, in essence, to destroy itself, but that is what we are now in the process of doing."[7]

Cascading calamities have prompted a body of "collapse scholarship." These writers no longer concern themselves with isolated problems such as a polluted river or a threatened species. Instead, they focus on a big picture that shows society now exhausting life-sustaining natural resources at a pace that threatens the future of civilization. James Speth inventories accumulating evidence in his book, *The Bridge at the Edge of the World*. Submitting that society faces a future of "catastrophes, breakdowns, and collapses," he asserts, "[W]e're headed toward a ruined planet." Jared Diamond carries a similar message in his book, *Collapse*. Observing no fewer than a dozen environmental time bombs with short fuses – crises relating to water, soil, toxics, overpopulation, deforestation, habitat destruction, overhunting, overfishing, introduction of nonnative species, climate change, energy shortages, and Earth's photosynthetic capacity – he notes, "If we solved 11 of the problems, but not the 12th, we would still be in trouble, whichever was the problem that remained unsolved. *We have to solve them all*." This generation of humanity has clearly traveled into a new ecological era. As Bill McKibben submits in his book, *Eaarth*, it is as if humans now inhabit a different planet – one far less hospitable to our own survival.[8]

Presses are running at full speed to disseminate new ideas and transformative models to restructure society in a way that will allow humans to survive in the years ahead. It looms as a massive task. As Paul Hawken says in the film *The 11th Hour*, "There isn't one single thing that we make that doesn't require a complete re-make."[9] One would think that environmental law would lead visionary reform. Instead, environmental lawyers and regulators still do things very much the same way they did forty years ago. This book aims to bring environmental law face to face with the new ecological age unquestionably bearing down on us. It presents a transformative framework – Nature's Trust – to fundamentally redirect government's environmental policy from its present course of legalizing colossal damage to a project of epic restoration.

THE LEGAL MEMBRANE

Throughout most of human history, societies have governed their relationship to the environment through a series of customs, codes, and rules. Even during Justinian times, for example, the Roman Empire issued legal edicts on the taking of fish, the ownership of eroded soil, and the cultivation of bees.[10] No matter how simple or complex the rules may be, environmental law creates a legal membrane through

which individuals act in relation to Nature. The efficacy of this law should be of utmost concern to citizens: any government that fails to protect its natural resources consigns its citizens to misery – and often death.

In *Collapse*, Jared Diamond studies why notably flourishing societies throughout history collapsed precipitously. These societies, he notes, often exhibited a characteristic mismatch between the society's consumption and the resources available. Less obvious is why the governing structure of the society sometimes allowed consumption to reach disastrous proportions grossly exceeding Nature's limits. Diamond attributes this in part to a conflict of interest between the short-term interests of the decision-making elite and the long-term interests of the society as a whole. As he describes, when members of the ruling elite pursue goals that become "good for themselves but bad for the rest of the group," they lead society on an unsustainable track, heading it toward collapse.[11] Today, the decision-making elite includes thousands of environmental agencies in nations across the world. Collectively, they rule over Earth's natural resources. Like the collapsed societies Diamond inventories, these officials now make decisions that are good for themselves but bad for society and future generations. Behind a veil of environmental law, their decisions push the entire world toward collapse.

Unique in the law, environmental regulation remains accountable to a supreme set of mandates – the laws of Nature, or Natural Law, as Oren Lyons and many indigenous leaders call it. Environmental law's primary function seeks to bring society into compliance with these natural laws, which, in the end, determine whether citizens prosper or perish. As Professor Richard Lazarus writes, "[E]cological catastrophe and human tragedy can occur when human laws fictionalize or otherwise ignore the laws of nature."[12] If environmental law, no matter how seemingly complex or sophisticated, becomes too detached from Nature's own laws, it will become irrelevant. If the hundreds of thousands of bureaucrats and legislators dispersed across the world today make decisions aimed to promote their own short-term interests as in the ruined societies Diamond describes, our collective future rests in dangerous hands.

The United States boasts the most elaborate environmental laws in the world. They exist as a convoluted morass of statutes, regulations, court decisions, and other legal instruments. Basic environmental law principles arose early in the country's history, but they morphed into statutory form only in the 1970s. This era gave rise to the Clean Water Act, the Clean Air Act, the Endangered Species Act, the National Environmental Policy Act, the Toxic Substances Control Act, the National Forest Management Act, and a multitude of others. Each statute spawned a cottage industry of lawyers and environmental consultants.[13]

Although directed at different problems, nearly all environmental statutes share one thing in common: they rely on agencies to carry out their mandates. Nature, in

its entirety, has been partitioned among various bureaucracies – many thousands in all – spanning the federal, state, and local levels. Vast authority vests in these agencies to control or manage discrete parts of the environment. In the U.S., for example, state environmental agencies generally handle air and water pollution. Federal forests are the responsibility of the U.S. Forest Service. Endangered species fall to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service. State water agencies issue water rights. Land use matters go to local agencies. The U.S. Environmental Protection Agency (EPA) regulates toxics and pesticides. Wetlands regulation is within the jurisdiction of the U.S. Army Corps of Engineers. And so on. These jurisdictional webs have vastly different reaches and regulatory strands, but they all reflect one thing: agencies are exerting tremendous dominion over Nature.

With few exceptions, statutes authorize agencies to issue permits to damage Nature. Such permit provisions form a common denominator to environmental and natural resource statutes, and a vast portion of the agencies' work today flows from them. Agencies regularly decide whether to permit harm to air, water, soils, forests, grasslands, wetlands, riparian areas, species, and other natural resources. The agencies enjoy tremendous discretion in making these decisions; in fact, agency discretion forms the crux of all modern environmental law. Such discretion rests on a presumption that agencies remain expert bodies that unfailingly exercise their judgment objectively, for the good of the public, and in accordance with protective statutory goals. That presumption now collides with reality.

Agency discretion drives the demise of Nature. For decades, environmental professionals working within this legal system have assumed it to be functional, and many other nations have modeled their environmental approach after the U.S. legal system. But the ancient membrane of law that supposedly functions as a system of community restraint now stretches tattered and pocked with holes. Our destruction of Nature threatens to create what scientists call a fundamentally "different planet."[14]

Two unavoidable questions loom large over environmental law. First, does this field of law work to keep society in compliance with Nature's own laws? Second, can it be effective in confronting the ecological challenges now coming at us with horrifying speed? These questions are of crucial importance not only for the United States but also for other nations confronting ravenous pressure to industrialize (as well as all other nations that must endure the planetary damage wrought by overconsuming nations). If the answer to either question is no, legal scholars must set their sights on a transformative legal paradigm.

Many litigators, scholars, and decision makers will claim that the environmental statutes work. They point to isolated successes in every statutory context. Rivers do not catch fire any more. Gasoline does not contain lead. The pesticide DDT no longer poisons eagles. Industries cleaned up their toxic mess at Love Canal. Influenced

by these perceptions of success, when new problems come along, lawyers tend to turn to the old way of doing things. For example, lawyers responded initially to global warming by filing a petition to regulate carbon dioxide under the Clean Air Act.[15] Yet, well more than a decade after filing the petition, the federal government has still not acted to comprehensively control greenhouse gas pollution – even though scientists clearly warn of perilous planetary heating. Success, as we all know, remains relative. Over just the last few decades, industry has jumped from a white belt to a black belt in Earth-destroying capability, but the law has not changed. Despite entrenched presumptions that environmental law remains effective, the proof lies in the health of the ecosystems themselves. Society now violates Nature's laws not only at the level of species and individual ecosystems but also at the level of atmospheric function, ocean health, and biodiversity – a truly global level.

ECOLOGICAL BANKRUPTCY

Today's ecological losses reside in a different realm than the problems prompting passage of the environmental statutes forty years ago. When the Endangered Species Act was enacted, for example, overhunting and poaching were predominant threats to wildlife, and extinctions remained quite rare. Today, pollution, habitat loss, and climate change decimate wildlife. Imperiled species now show up ubiquitously, in nearly every kind of habitat system. Where one species struggles to survive, others usually do too, for when an ecosystem starts to unravel, its full weave of species frays.[16]

Historic problems of overharvest now stand utterly eclipsed by threats to the web of life itself. Today's major wildlife reports do not dwell so much on individual species. Instead, they talk about entire classes of life on Earth threatened. The International Union for Conservation of Nature (IUCN), which compiles data on the world's threatened species, estimates that more than a third (38 percent) of all species face possible extinction. Interpreting this statistic cannot be a matter of seeing a glass a third empty or two-thirds full. Because ecology embodies connectedness, 38 percent becomes the pull-engine on a death train. Leading conservation biologists now conclude that humanity has triggered the sixth mass extinction in Earth's history. As James Speth grimly reports, "The planet has not seen such a spasm of extinction in sixty-five million years, since the dinosaurs disappeared."[17]

Some characterize the sheer scale of this destruction by pointing out that humanity would need *two planets by 2030* to support its demand for goods and services. Society now exhausts resources at a breakneck pace. In the tropics, chainsaws have axed the rainforest at a rate of an acre every second, by some estimates. Half of the world's original forest has been obliterated (another 30 percent is degraded or fragmented). Half of the world's wetlands lay destroyed, and a third of the mangroves have disappeared.[18]

Despite its elaborate environmental laws, the United States has wiped out more than half (53 percent) of its wetlands and nearly all (90 percent) of its old-growth forests. At least 9,000 species face risk of extinction in the United States, according to the Council on Environmental Quality. Pollution fouls America, too; industry annually releases more than 4 billion pounds of toxic chemicals into waters, air, and soils. According to EPA, 95 percent of all Americans have an increased risk of lung cancer just from breathing toxins in outdoor air, and one in four Americans lives next to a toxic waste dump. Nearly half (44 percent) of all rivers and streams are unfit for fishing, recreation, and other public uses. Fish advisories for toxic contamination exist for about one out of every four rivers (24 percent). Mercury – a poison to humans – now shows up ubiquitously in fish.[19] Even babies are born polluted, harboring a cocktail of toxins in their bloodstreams.

This colossal damage to Earth had its genesis in the Industrial Revolution, but the real acceleration occurred during the modern era of environmental law. In the last thirty years, Earth's natural ecosystems have declined by 33 percent, and one-third of the planet's natural resources has been consumed. Has environmental law worked? If the health of the planet stands as any indicator, the answer must be clearly no. The law can claim small successes, but overall, destruction from industrial activity has far outpaced the ability of environmental law to protect resources. As political scientist Richard Andrews observes, environmental law has "only selectively, modestly, and temporarily held back" the larger forces responsible for resource collapse. Rather than safeguarding ecology, today's environmental law serves as the cane on which humanity leans as it walks the plank toward its own destruction.[20]

THE ILLUSION OF ENVIRONMENTAL LAW

U.S. agencies have turned environmental law inside out. Whereas Congress passed environmental statutes with the overriding goal of *protecting* the environment, the environmental agencies now use the statutes to legalize *destruction* of the environment. Under the Clean Air Act alone, nearly 15,000 permits (pending or in effect) allow the poisoning of American air sheds with harmful pollution, including highly toxic compounds. In just the seven years between 2001 and 2007, industries released 31.7 billion pounds of toxins into the environment in U.S. territory.[21] Other permits and regulatory loopholes allow harm to imperiled species, destruction of wetlands, leveling of forests, and gouging of landscapes. Granted, most permits carry mitigating conditions that lessen the damage that would otherwise occur, but the cumulative effect tallies inexorable, mounting losses. While undoubtedly some agencies remain loyal guardians of the public's natural assets, the bureaucratic mindset of most agencies today aligns all too closely with the industries they regulate.

Diamond's examination of collapsed societies shows that we should be wary of decision makers who make decisions to further their own short-term interests. The pursuit of self-interest by some agency heads surely rivals that of the ancient lords in *Collapse*. As Part I of this book shows, political appointees in agencies regularly hijack their administrative discretion to benefit their allied industries. Because political motives lie concealed behind a thick morass of complexity created by the agencies themselves, it remains exceedingly difficult to untangle corruption or misuse of office.[22]

To make matters worse, the judiciary has largely relinquished its role as an institutional check on environmental agencies, regularly invoking the administrative deference doctrine to give weight to agency decisions. The deference principle assumes that expert agencies act as unbiased decision makers, ever faithful to statutory goals. This approach insulates agency decisions from rigorous judicial examination of inappropriate political motivations that regularly influence the agencies. Through the deference doctrine, courts unwittingly create a judicial prop for an administrative facade that conceals political influence and, at times, outright corruption.[23]

For the most part, environmental law scholarship ignores these systemic problems. Most scholars confine their criticism to one statute's failure or one program's failure. The problem reaches much deeper and far beyond these isolated instances. Dysfunction permeates the entire structure of the administrative environmental state, both in the United States and in the many other nations that have replicated the U.S. environmental law system. Much like a manufacturer might put faulty and dangerous wiring in 100,000 separate products, the U.S. legal system has put out hundreds of thousands of regulations that no longer function as intended. Worse, they now operate in electrocution mode.

CLIMATE EMERGENCY AND THE BIG ADAPTATION

Even setting aside past failures, we should ask whether current environmental law can effectively confront the monumental challenges ahead. Planetary heating looms as a harbinger of death on a nearly unimaginable scale. In June 2007, a team of leading climate scientists warned that carbon dioxide and other greenhouse gas emissions have placed the Earth in "imminent peril" – literally on the verge of an irreversible tipping point that would impose catastrophic conditions on generations of humanity to come. Climate change from continued greenhouse gas pollution threatens to melt ice sheets over Greenland and at both poles, wipe out the coral reefs, turn the Amazon forest into savannah, and obliterate 40 percent to 70 percent of the world's species. Floods, hurricanes, killer heat waves, fires, disease, crop losses, food shortages, and droughts would arrive with unimaginable magnitude and regularity. Rising sea levels that inundate coastal areas worldwide would trigger