



**SPECIAL  
SECTION**

# NATURE'S TRUST: A Legal, Political, Economic, and Moral Frame for Global Warming

*A lecture by University of Oregon Law Professor Mary Christina Wood<sup>1</sup>, presented at the 2007 Southwest Renewable Energy Conference in Boulder, Colorado on August 2, 2007.*

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## I.

In June 2007, leading climate scientists warned that Earth is in “imminent peril” from carbon emissions that cause global heating. In 2005, 48 Nobel-Prize winning scientists stated: “By ignoring scientific consensus on . . . climate change, [our government is] threatening the Earth’s future.” The series of UN reports issued over the past several months make clear that global heating is a threat to civilization as we know it. It is leagues beyond what Humanity has ever faced before. British commentator Mark Lynas, author of *HIGH TIDE*, puts it this way:

If we go on emitting greenhouse gases at anything like the current rate, most of the surface of the globe will be rendered uninhabitable within the lifetimes of most readers of this article.

Time is not on our side. Jim Hansen, the leading climate scientist for NASA, warns that “we are on the precipice of a tipping point beyond which there is no redemption.”<sup>2</sup>

According to scientists, we must cap our rising greenhouse gas emissions in the next 8-10 years and bring them downward. 8-10 years. If we fail, we effectively lock the doors of our heating greenhouse and throw out the keys, trapping ourselves



*Prof. Mary Christina Wood, with 2007 Idaho mega-fire in background.*

and future generations inside as disaster unfolds across the planet over the long term.

## II.

And yet, in the face of this emergency, we are embroiled in political chaos: all sorts of various proposals and half-measures on the state, and international level. And on the federal level, we have industry lobbyists swarming the

halls of Congress to fight climate legislation, and we have a person sitting in the highest office in this country steadfastly rejecting any mandatory carbon reduction.

This is a recipe for disaster. But amidst all of this there is also hopeful simplicity. There is only one law that is relevant: the law of Nature. Either this law is complied with, or all of Humanity will endure climate punishment for generations to come.

I was invited to speak at this conference to provide a broad framework for climate crisis with the hope that it will help ground discussions about renewable energy in the sessions ahead. I would like to begin my remarks by describing Nature's Mandate. Then I will address why our current expectation of government will likely block us from meeting Nature's Mandate. But I hope to offer a different way of thinking to address climate crisis.

### III.

Let's begin with what scientists have called Business as Usual. Under Business as Usual, our society is spewing out greenhouse gases at a rate that is increasing by 2% a year.

We now have higher levels of carbon in the atmosphere than at any time in the past 650,000 years, and carbon persists in the atmosphere for centuries. These gases trap heat, as if we were to put blankets over the planet that it can't shake off. As you have probably heard, rising temperatures on Earth are melting the Polar Ice Caps, Greenland, and every major glacier in the world. Scientists are clear that any climate heating beyond 1 degree C. more than what is already in the pipeline is dangerous. So this is Nature's Mandate—to not go beyond 1 degree C.

To achieve a cap at 1 degree C, atmospheric carbon levels may not exceed 450 parts per million (ppm). And to maintain carbon levels below 450 ppm, the total atmospheric load of carbon may not exceed 935 billion tons.<sup>3</sup> We are now at 880 billion tons. We have 55 billion tons to go before plunging the planet over that danger threshold. We are putting out

8.2 billion tons a year. As you can see, Nature's Mandate is really a matter of carbon math. But it's math in a minute glass, because Nature has kicked in its own feedback loops that are now accelerating carbon emissions.

To address global warming, we have to acknowledge that Nature's Mandate doesn't come from any political processes. It's just out there as law, applied to the whole world, and it's unyielding. The climate scientists are the legislative reporters for this law. They're not out there lobbying Nature, trying to get compromises or loopholes. There's an old Italian saying, "arithmetic is not opinion."

The scientists are clear that we still have a window of hope, but it's closing fast. To stay below the dangerous threshold of 450 ppm, we need to: 1) bring rising carbon levels down within the next 8-10 years; and 2) continue bringing them down until they are 80% below 1990 levels by 2050. You can think of it in this way: it's as if we've mortgaged our Earth home. We have to make a big down payment within the next 8-10 years by capping and then reversing carbon emissions. If we fail at this, we don't get a shot at the rest. But even after we accomplish this, we have to keep reducing carbon through regular installments—think of carbon amortization—until we reach the final payoff by 2050. Only then will we have a chance of getting our planet back on the path of climate equilibrium. Renewable energy is one of those crucial installments in paying off the mortgage.

If we fail to meet Nature's Mandate fully, all our efforts will be useless. If we go beyond the 450 ppm tipping point, we're looking at what scientists call—in their words—a "transformed planet." It won't matter that we tried hard. It won't matter that we met Nature part way. A rescue rope that is too short is no good at all.

The nice thing is, you can apply this mandate to every nation of the world and create a framework for carbon responsibility. If each industrialized nation complies fully with Nature's Mandate—that is, each one brings its emissions down within a decade, and gets to 80% below 1990 levels by 2050—then the planet as a whole will comply. (Now that's



assuming that the developing nations do not add to the problem—we'll need to come back to that.) You can imagine the planetary carbon load as one big pie. You've heard of pie in the sky. Even though industrialized nations come in different sizes, if each reduces carbon proportionately by the same amount—the carbon pie as a whole will reduce by that amount. So you can take this one planetary mandate and make it into a uniform national mandate for any industrialized nation on Earth. That's what the Kyoto Protocol tried to do. Now the contrary is also true: if even one major industrialized nation does not accept its share of carbon reduction, does not reduce its slice of the pie, it will sink all other planetary efforts. The carbon pie won't shrink by the amount it needs to.

Let's put this principle into a familiar environmental context. In hazardous waste cleanups, we talk about orphan shares. If 20 different companies contribute waste to a toxic dump, all 20 are liable for the cleanup costs. If one company has gone bankrupt, it leaves an orphan share that the others must pick up if the site is to be cleaned up.

The U.S. is responsible for 30% of the greenhouse gas emissions on the planet. Our emissions are increasing every year. We are putting a huge orphan share out there. Now, in the hazardous waste context, orphan shares aren't so much of a problem, because the solvent companies can pick them up simply by paying out more money than their share for the cleanup. The problem is, this doesn't work with carbon. No other industrialized nation on earth is positioned, much less obligated, to adopt an orphan share left by a deadbeat sovereign—especially a share as large as ours, 30%. By refusing our planetary share of responsibility, we are consigning all other nations on Earth to disaster.

#### IV.

**N**ow, this is clearly a matter for our government. Individuals can make changes to reduce their carbon, and some are, and those efforts are very important, but at



Photo courtesy of Diane Ensign.

the same time, those reductions are quickly nullified by the carbon emissions of others. Just one Hummer negates the carbon savings of a hard-peddling bicycle commuter.

If you notice, the number of Americans making changes is still pretty insignificant. Look around. You see SUVs, RVs, ATVs everywhere, massive waste in businesses—it's called convenience—and families still making an average of 9 trips a day in their cars. Our society is nowhere near decarbonizing. The carbon math is simply not going to add up unless we have massive change, which can only be achieved through government leadership.

The fact that so many Americans are trying make small changes on their own tells us that we are lacking such leadership. Where is government during this crisis? We have plenty of government at the local, state and federal level. In fact, we have more agencies than any other country in the world. If every one of these agencies made climate a priority we might stand a chance of meeting Nature's Mandate head on. One would think that, in face of a planetary emergency, every elected body and every agency in America, at the local, state, and federal level, would be convening climate task forces to achieve carbon lockdown within a decade.

But aside from Gov. Schwarzenegger and a handful of others, our government is driving this country towards *runaway* greenhouse gas emissions. County commissioners are approving trophy home subdivisions and destination resorts as if global warming didn't exist. State environmental agencies are approving air permits as if global warming didn't exist. The Forest Service is approving timber sales as if global warming didn't exist. And the electric power industry is racing to build more than 150 new coal-fired power plants across the United States, banking on EPA approval and federal subsidies as if global warming didn't exist.

The heart of the problem is this: Americans have lost their sense of government obligation towards Nature. How has this happened? Unfortunately, I believe the answer resides in our system of environmental law.

## V.

Environmental law consists of thousands of statutes and regulations passed since the 1970s to protect our natural resources. Had environmental law worked, we would not have this ecological crisis on our hands. The core of the problem is this: while the purpose of every local, state, and federal environmental law is to protect natural resources, nearly every law authorizes the agencies to permit the very pollution or damage that the statutes were designed to prevent. Of course, the permit systems were never intended

to subvert the goals of environmental statutes. But most agencies today spend nearly all of their resources to *permit*, rather than prohibit, environmental destruction.

You can think of environmental law, with all of its statutes and regulations, as one big picture. The agencies have constructed a frame for that picture. The four sides of that frame are discretion, discretion, discretion, and discretion—to allow damage to our natural resources. All of environmental law is carried out through that frame. And so, though our statutes were passed to protect the air, water, farmland, wildlife, and other resources, when the laws are carried out through the discretion frame, they are used as tools to openly legalize damage. Most officials are good, dedicated, hardworking individuals, but as a group, they dread saying no to permits. Essentially, our agencies have used the discretion in the law to destroy Nature, including its atmosphere. That is why we have species extinctions, rivers running dry, dead zones in our oceans, and global warming.

Why would public servants whose salaries are funded by tax dollars use their discretion to allow destruction of public resources? It is because the discretion frame never characterizes natural resources as quantified property assets. Instead, the environment is portrayed as a nebulous feature of our world. So when private parties come to agencies seeking permits to pollute or destroy resources, they almost always carry the day because their property rights are clear and tangible.

Our federal government uses this discretion frame to justify inaction in the face of climate crisis. Protecting our atmosphere is characterized as a political choice. EPA claims *discretion* to permit pollution by the oil, gas, coal, and automobile industries—no matter that this legalized pollution will degrade the atmosphere so much that it will no longer support human civilization as we know it.

And courts aggravate this problem because they defer to the agency discretion. They fail to examine whether the agency decision is politicized. They operate on the false assumption that all agency decisions are neutral. This



neutrality of course is often a charade. Do we really believe, for example, that the former chief of staff of the White House Council on Environmental Quality, who was a former climate lobbyist with the American Petroleum Institute—do we really believe he was neutral when he edited government climate reports to emphasize doubts about climate change? He is now with Exxon.

Government discretion is to industry, what honey is to bears. When you have legislatures, agencies, and courts all saying the government has *discretion* whether or not to protect the environment, it attracts corruptive influence. The danger is this: we have relegated climate to the political playing field. There's no umpire on this field. There's just discretion. To even have a voice, the public has to spend enormous amounts of time and energy chasing the ball up and down the field—many people feel that they have assumed a second career (without pay) just trying to convince government to protect the environment and prevent global warming!

Now, of course, on this playing field, Nature bats last. Unless we can view our government as having a firm, clear obligation and one tied directly and mathematically to Nature's Mandate, we don't stand a chance of complying with Nature's laws.

## VI.

So how can the public break this death spiral of environmental discretion and create a sense of national obligation? The public has to find a new frame for viewing government's role towards Nature. As author George Lakoff said: "Reframing is changing the way the public sees the world. It is changing what counts as common sense." This new way of looking at government's role must engage all agencies and officials in the country in climate defense as the supreme national priority.

Unbelievable as it may seem, the future of Humanity rests on our ability to reframe government's obligation towards Nature.

## VII.

Reframing environmental law does not mean throwing out our environmental statutes. Those statutes give us a tremendous bureaucracy that we can steer back on course. They simply have to be infused with clear principles. The reframing I suggest draws on Supreme Court jurisprudence that has been around since the beginning of this country. It characterizes all of the resources essential to human survival—including the waters, wildlife, and air—as being packaged together in a legal endowment which I call Nature's Trust. A trust is a fundamental type of



Photo courtesy of Diane Ensign.

ownership whereby one manages property for the benefit of another—similar to you managing a college account for your niece. Long ago, the Supreme Court said that government, as the only enduring institution with control over human actions, is a trustee of Nature’s resources. In other words, government holds this great natural trust for all generations of citizens. We, along with the future generations, are the beneficiaries. We all hold a common property interest in Nature’s Trust.

Our imperiled atmosphere is one of the assets in that trust. Back in 1907, the Supreme Court said: “[T]he state has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain.”<sup>4</sup> The Supreme Court recently underscored that statement in *Massachusetts v. EPA*.

With every trust there is a core duty of protection. The trustee must defend the trust against injury. When we call upon government to safeguard our atmosphere, we are invoking principles that are engrained in government itself. These principles are enforceable in court through what we call the public trust doctrine. Trustees don’t have discretion to give away the trust. In other words, government can’t give away our vital resources to private interests that happen to be knocking on government’s door this generation. Back in 1892, our Supreme Court said: “The state can no more abdicate its trust over property in which the whole people are interested . . . than it can abdicate its police powers in the administration of government . . . .” In contrast to the discretion frame, the four sides of the trust frame are: obligation, obligation, obligation, obligation—to protect Nature’s Endowment as property for future generations to inherit.

The Nature’s Trust concept is so basic to governance that it is found in many other countries today. For example, thirteen years ago, the Philippines Supreme Court invoked the trust to halt logging the last of the ancient rainforest there, saying: “[E]very generation has a responsibility to the next to preserve that . . . harmony [of Nature] . . . [These principles] are assumed to exist from the inception of humankind.”

## VIII.

When we invoke the trust to call upon government to protect our natural resources, we are not creating anything new. We are simply awakening government to an ancient principle that has been buried by the morass of regulations and statutes that have proliferated across the legal landscape over the past three decades. The public trust doctrine is the bedrock layer of all of our modern environmental statutes. We can take the very same set of environmental laws, and without changing a word of them, reframe government’s *discretion* to destroy Nature into an *obligation* to protect Nature. But this principle works in reverse as well. We can pass any new law we want, and no matter what it says, if it is pressed through the discretion frame, the government will continue to impoverish natural resources until our society can no longer sustain itself.

Let’s now look at how the trust frame changes our outlook on climate policy. The discretion frame gives no hint of environmental loss. Because air and other natural resources are not defined assets, we never imagine that they could be all spent down, all used up. And under the discretion frame, citizens must go lobby their government for their own survival. We seem unbothered that our government is leading us, along with the rest of the world, into global environmental catastrophe. But when we portray Nature as a trust rather than an ill-defined commons, we vest citizens with expectations of enduring property rights to a defined, bounded asset. We start thinking, “Hey, that’s my air, even if I share it with others.” Pollution of that air becomes an infringement on American property. Government is obligated to defend that property. The failure to mount a national climate defense becomes as absurd a proposition as the idea of government sitting idle during an attack on American soil.

Under the trust frame, all government agencies at every level—local, state, and federal—are burdened with a strict fiduciary responsibility to protect the atmosphere, as one of the assets in the trust. And, moreover, you have a standard



Photo courtesy of Diane Ensign.

of care against which to evaluate government. You see, you don't just vest trustees with priceless assets and have no measure of their performance. If you have a million dollars in a retirement account and a bank is your trustee, you wouldn't just say, "Here's the account to manage on my behalf. I don't so much care whether you get 15% or 2% or lose money, or even give it away—do what you want and don't report back to me. I'll just take whatever is left after you manage or mismanage my trust account." No, a private trustee of a financial trust would be accountable for

gaining a reasonable yield according to market conditions. That yardstick is called the fiduciary standard of care.

The standard of care for managing the atmospheric trust must come directly from Nature's Mandate. It means taking on the share of carbon reduction necessary so that the atmosphere continues to provide climate conditions needed by Humanity for survival. Therefore, each sovereign—whether it's the federal government, states, or cities—has the fiduciary duty to take action necessary to bring down their jurisdiction's carbon emissions within 8-10 years and reduce them 80% below 1990 levels by 2050. This becomes their planetary carbon liability, or their share of the mortgage.

Citizens, the beneficiaries of this trust, can evaluate their government's management using carbon accountants that can do the carbon math and calculate progress on each jurisdictional level. Wouldn't you like to know how your government measured up? And it's not beyond the imagination to think of citizens enforcing this fiduciary duty, by bringing atmospheric trust litigation in the courts. Courts play a very important role in our constitutional democracy by serving as a check on the other two branches of government. Judges may soon realize that their failure to step up could leave a deadly orphan share of carbon on the doorstep of our world.

## IX.

I have talked about the legal force of the trust frame, but it is also important to see how trust principles resonate across other realms of society. When we ask Americans to change their lifestyles and business practices, we must have some encompassing way of thinking that unifies all aspects of life. Our Business as Usual practices that have put us on such a deadly course are cemented in entrenched mindsets. Albert Einstein once said: "We cannot solve our problems with the same thinking we used when we created them." So we are in need of a new way of thinking that can spread quickly and turn all aspects of

society towards a unified climate defense. Nature's Trust can be an encompassing framework for the political, economic, and moral realms.

## A. Political Realm

First, the political realm. On the international level, we deal with a political, not legal, realm, simply because there is no world authority with power to enforce laws across all countries. The trust frame positions all nations of the world in a logical relationship towards Nature. The atmosphere is shared as property among sovereign nations on Earth. They are sovereign co-tenant trustees of that atmosphere. They are all bound by the same duties that organize, for example, the relationship of family members who own a cabin together as co-tenants. Property law has always imposed a responsibility on co-tenants to not degrade, or waste, the common asset. The fact that there is not enforcement against all contributors to a problem at a particular time does not absolve any one contributor. As the Supreme Court once said: "It is no requirement . . . that all evils of the same genus be eradicated or none at all."

This property-based construct lends definition to international climate responsibilities. China and India and other developing nations, as co-tenants of this planetary atmosphere, do not have the right to waste the asset, any more than a co-tenant of a mountain cabin has the right to burn down the house. This becomes a political expectation on the international level, but it also may become a legal requirement within those countries using their own domestic systems. The same trust doctrine enforceable in United States courts might be enforceable by citizens of India in domestic courts there—in fact, that country has a strong tradition of the public trust doctrine.

## B. Economic Realm

Turning to the economic realm, we find that these trust principles have synergy with a principle called "natural capitalism" discussed by Paul Hawken, and Amory and Hunter Lovins of Rocky Mountain Institute. In their book,

*Natural Capitalism*, these authors point out that natural capital provides infrastructure that supports the entire human economy. Natural capital includes the atmosphere, water, floodplains, wildlife, air, wetlands, forests, and so forth. In other words, all of the assets in Nature's Endowment form the natural capital for our economy.

Our industrial economy, which is premised on what the authors call "conventional capitalism," has ignored these natural assets, giving them no value. Businesses have been able to destroy these assets without paying any price. These authors write: "[I]ndustrial capitalism' . . . liquidates its capital and calls it income. It neglects to assign any value to the largest stocks of capital it employs—the natural resources and living systems. . . ." These authors predict that we are on the verge of a new Industrial revolution, one that requires—in their words—a "fundamental rethinking of the structure and the reward system of commerce." This rethinking requires businesses to build profits by using Earth's interest, not the capital. When we invoke that principle, for the first time ever we design our economic structure to harmonize with government's timeless duty to protect the assets in our Trust.

When the engine of our economy is fueled by oil, gas, and coal we degrade our most valuable natural capital, the atmosphere. Yet government agencies, as trustees, overwhelmingly give subsidies to coal and oil development. I don't know of any other trustee that pays third parties to destroy its trust. Scientists are clear that Humanity cannot release to the atmosphere all, or even most, of the remaining fossil fuel CO<sub>2</sub>. As Jim Hansen put it in a recent paper: "To do so would guarantee dramatic climate change, yielding a different planet than the one on which civilization developed. . . ." Renewable energy uses the Earth's interest, not its capital. It is inherently a superior energy source because it neither depletes nor degrades Nature's Trust.

## C. Moral Realm

Finally, let's consider how Nature's Trust fits into the moral realm. In *An Inconvenient Truth*, Al Gore presents climate



crisis as a “moral and spiritual challenge” for our generation. We have to define a moral backing to government’s role in climate crisis. To not do this is to set a huge ship adrift with no compass, which is what we do when we give government discretion. We know this: there simply would not be an entire field of trust and estates law were it not for the strong inclination of humans to hand things down to the next generation. No one forces us to pass family treasures down to our children—we simply feel compelled to do so. Nature’s Trust characterizes the natural assets as part of the Endowment that future generations are entitled to inherit just as we inherited them. By speaking of the atmosphere as an asset to which coming generations have a legitimate moral claim, we have crystallized our sense of ethical obligation more so than we do when we reduce climate crisis to polar bear extinctions and flooded coastlines. Failure to protect natural inheritance amounts to generational theft. The trust obligation springs from the heart of all humanity. The same trust principles that flow through a judge’s pen can be preached from a pulpit or spoken as the last words from a grandmother to her grandchildren anywhere in the world.

## X.

**Y**ou might now be asking yourselves: is it possible to turn a country around in short order with a new way of thinking? We know it is. Let’s reflect back to when citizens across this country rose in solidarity behind a clear national purpose. The attack on Pearl Harbor galvanized America in a way that we desperately need today. Almost overnight, businesses retooled and overhauled production lines. The auto industry scaled down car sales and produced defense vehicles. Banks sold war bonds. Communities planted Victory Gardens to grow food locally so that the commercial



Photo courtesy of Diane Ensign.

food could be sent to the troops. States lowered their speed limits to conserve gas. Families everywhere made do with the bare minimum.

People did not just sit by. Individuals took initiative without being asked. Men signed up for active duty. Women took their place in the work force. Speakers Bureaus formed in cities across the country, drawing volunteer Victory Speakers who would give five-minute speeches at theatres, club meetings, town halls, schools—any forum they could find—to explain the nature of the threat and the need for national support. Victory Speakers were not chosen for their outstanding oratory skills, but rather were the “trusted and familiar voices” in the community—the banker, carpenter, mother, or school teacher.

There was a high moral standard backing all the individual sacrifices. You surely wouldn’t have seen Hummers roaring down the streets of America when people were trying to conserve gas for the troops. Any waste on the home front was a direct affront to the families that had sent their sons into war and might never see their return. Americans saw a direct connection between the need to conserve and the

welfare of their children whose lives were on the line in defense of our nation.

Today, we need to recognize that same connection between our waste and the welfare of our sons and daughters because, by living out the American dream, we are signing our own children up for the draft of their lifetimes, in an unending war for survival resources. Nature won't recognize our children as conscientious objectors to climate crisis.

Americans must wake up to this reality. It will not happen on its own. In World War II, it took 100,000 Victory Speakers to mobilize the nation in a short time.

We need Victory Speakers for climate crisis—people who can convey that the threat to American soil this time is carbon loading of the atmosphere, that the enemy is us, that the bomb is a time bomb, that the victims are our children, that the battleground is a greenhouse of our own making. We need Victory Speakers from this room who can take the promise of renewable energy to every city and state across America, as well as to China, and India, and other countries where citizens are so desperate for a higher standard of living today that they are jumping in with industries that will bring about their demise tomorrow. They need hope. They need Victory Speakers to hold investment doors open.

Climate Victory Speakers are emerging from all walks of life. A young Harvard student named Allison Rogers entered the Miss America pageant and put on a swimsuit to bring attention to global warming. Two weeks ago, a British lawyer also donned a swimsuit for global warming, but he dove into waters at the North Pole—waters that, on that day thirty years ago, consisted of ice 11 feet thick. Author Bill McKibben organized Step It Up rallies. Laurie David wrote a book. Sheryl Crow did a college tour. A producer named Kevin Wall put on Live Earth concerts held last month on every continent in the world. A 9-year old boy and his 7-year old brother in Eugene, Oregon planted a victory garden with free, local vegetables for their neighborhood. A former vice president created a film.

This world today needs such can-do people—millions of them. We have too many can't-do people—passive bystanders to climate crisis. They are useless. When their grandchildren demand to know why they did so little at this crucial time, the can't-do people will say, "I didn't know, I didn't have the time, we couldn't control China's emissions, I had too much going on, no one else did anything, I couldn't have made a difference, it was everyone else's fault." These responses will be ashes in the wind. The can-do people will save this planet, and they will tell their grandchildren how they answered the call of a generational mission. There are can-do people in every corner of the globe, and there are can-do people in every corner of this room.

Whatever your position is in life, do something, anything. Just don't do nothing. If you are a teacher, bring global warming to the classroom. If you are a mother or father, bring it to the PTA. If you are a lawyer, bring global warming to court. If you are a business person, bring it to the bank. If you are a governmental official, a trustee of nature's assets, we need you to start tomorrow to meet your fiduciary duty to protect our atmosphere against global warming.

If we Americans take the lead through all of these walks of life, we can reframe what is currently government's discretion to lead us into global catastrophe, into an obligation to defend our atmosphere, as a commonly held asset in the Endowment we must hand down to our children, and their children, for their survival. If we succeed in defining that one *obligation*, we may soon find every other nation in the world engaged with us, not against us, in a massive, urgent defense effort to secure the systems of life on Earth for all generations to come. That will be the dawn of a planetary patriotism. ❖

1 Philip H. Knight Professor of Law, Morse Center for Law and Politics Resident Scholar (2006-07), University of Oregon School of Law. For citations and references to many of the quotes and statistics, see *Nature's Trust: A Legal, Political and Moral Frame for Global Warming*, 34 *Boston College Environmental Affairs Law Review* 577 (2007), available at [www.law.uoregon.edu/faculty/mwood](http://www.law.uoregon.edu/faculty/mwood) (under "global warming outreach").

2 Fred Pearce, *With Speed and Violence* (Beacon Press, 2007).

3 For discussion of these numbers, see Fred Pearce, *With Speed and Violence*

4 *Georgia v. Tennessee Copper Company*, 206 U.S. 230, 238 (1907).