IDAHO'S ATMOSPHERIC TRUST RESPONSIBILITY

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I. Introduction

I feel very privileged to address all of you this afternoon and I want to thank the Green LEEDers for organizing this forum. I imagine most of you are already quite concerned about climate, or you would not be here, but at the same time I find that even the most concerned and informed people are often shocked when they see the science presented all at once. The media gives us bits and pieces, metered out over a long time. But when people see the data all at once they often come up to me just stunned and say, "I had no idea it was this bad." As I think you will see in the next few minutes, there is an urgency – climate thinkers say "emergency" – in this issue that has so far escaped even the most well-informed public. And frankly, the stakes could not be higher.

To give you an idea, scientists actually describe Earth as being a "different planet" if we don't begin slashing our carbon pollution very soon. They are now using every forum they can find to warn Humanity about the urgency of our climate imbalance.

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¹ James Hansen et al., *Climate Change and Trace Gases*, Phil. Trans. R. Soc. A, 1925, 1939 (2007) [hereinafter *Climate Change and Trace Gases*], *available at* http://www.planetwork.net/climate/Hansen2007.pdf.

A year ago, the leading climate scientists published a report stating that Earth is in "imminent peril," and that we must control greenhouse gas emissions today in order to "preserv[e] a planet resembling the one on which civilization developed."

In Idaho we hear a lot about salmon habitat and wolf habitat, but if I can be blunt, this is Humanity's big habitat issue. At stake is not whether our children or grandchildren will see historic runs of fish – they won't – it's actually whether our children and grandchildren will even have the natural habitat and resources they will need to survive. Mark Lynas, the author of Six Degrees 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." James Speth, the Dean of the Yale School of Forestry, has written in his new book, Bridge at the Edge of the World: "If we continue to do exactly what we are doing, [even] with no growth in the human population or the world economy, the world in the latter part of this century will be unfit to live in." If you are anything like me, it's a haunting prospect to think that, if we just live our lives tomorrow as we did yesterday, we create a world that our own young children can't survive in by the time they reach middle age. For the leagues of people around the world now engaged in climate defense, it's that thought that wakes them up in the middle of the night and drives them every day to work as hard as they can on

² *Id.* at 1949.

³ *Id.* at 1926.

climate issues.

At the same time, it's natural to be overwhelmed by all of this. Climate is such a huge and all-encompassing issue, we individuals tend to retreat into our daily lives rather than take on a piece of it. That seems to me the most insidious aspect of this crisis. The author Ross Gelbspan has said, climate heating is not an environmental issue, it's a "civilizational issue." It's truly going to take all of us working in our various capacities to achieve climate stability. We can't afford to have too many people on the sidelines. It is often said that throughout history "ordinary people have considered it their responsibility to do something extraordinary." This time we live in calls us all to do something extraordinary – mobilize a country to save a planet.

The purpose of my talk is to bring climate crisis to a conceptual level that I hope will help citizens and civic leaders of Idaho to find their role in this huge problem. There is a framework of responsibility that we can bring to bear even in a crisis of global proportions. I'd like to start by explaining climate emergency in more detail, and then talk about our government's obligation. I will then introduce a legal principle that I hope citizens and businesspeople like the Green LEEDers can use to catalyze the kind of paradigm shift society needs to confront this crisis.

II. THE PRECIPICE

Let's start with a global view of the problem.

Carbon levels in the atmosphere are now higher than they have been for the last 650,000 years. Every day, humans release another 70 million tons of carbon into the atmosphere.⁴ The world's carbon emissions are rising nearly three times faster than they did in the 1990s, increasing by about 3% every year.⁵ Once in the atmosphere, carbon persists for 100 to 1,000 years.⁶ There's no magic vacuum cleaner to suck it out. This means generations to come will be trapped under the greenhouse roof of our making.

The Earth has already heated nearly 1.8°F from pre-Industrial average temperatures.⁷ And because of the carbon already in the atmosphere, a total average 3.6°F rise is now inevitable.⁸ Now that may not sound like much to you, but this irrevocable temperature rise is what scientists consider to be the threshold of catastrophic, runaway heating.⁹ Exceeding this would make it warmer on Earth than it has been for half a million years, and scientists believe, at that point, "Many things could become unstoppable."¹⁰

The UN projects that this irrevocable temperature rise will put up to 30% of plant and animal species at risk of extinction.¹¹ This week, an article in the Proceedings of the

⁴ See Al Gore, Moving Beyond Kyoto, NEW YORK TIMES (July 1, 2007), http://www.nytimes.com/2007/07/01/opinion/01gore.html.

⁵ Peter N. Spotts, *Global Carbon Emissions in Overdrive*, The Christian Science Monitor (May 22, 2007), http://www.csmonitor.com/2007/0522/p01s03-wogi.html.

⁶ Email from Jim Hanson, Jan. 23, 2008, regarding correspondence with the Chancellor of Germany, http://www.columbia.edu/~jeh1/mailings/20080122 DearChancellor.pdf.

⁷ U.S. Geological Survey, *Sea Level and Climate*, http://pubs.usgs.gov/fs/fs2-00/.

⁸ Cahal Milmo, "*Too Late to Avoid Global Warming," Say Scientists*, The Independent UK September 19 2007), http://www.independent.co.uk/environment/climate-change/too-late-to-avoid-global-warming-say-scientists-402800.html.

⁹ Id.

Jim Hansen, *Climate Change: On the Edge*, The Independent, Feb. 17, 2006, http://environment.independent.co.uk/article345926.ece.

¹¹ See Milmo, supra note 8 (estimate calibrated to stabilization at 1.5C to 2.5C).

National Academy of Sciences said that Earth now faces the sixth mass extinction in its entire history of the planet. Coral reefs worldwide are bleaching and dying. Climate heating is driving relentless drought in Australia and the Southwest. It's shrinking the Great Lakes, reservoirs in the West, and Lake Chad in Africa. It's causing severe water shortages in Tibet and Tennessee, floods in Texas and Jakarta, mega-fires in California, Greece and Idaho, and killer hurricanes in New Orleans and Honduras. In the forests of British Columbia, beetle infestations have killed millions of acres of trees, and U.S. foresters now predict that every large, mature lodge-pole pine forest in Colorado and southern Wyoming will be essentially dead within five years. Climate change is delivering heat waves that killed 35,000 people in Europe in 2003, and sent thousands of Americans to cooling centers in 2006 and 2007. It's spiking summer temperatures in Death Valley to 125°F16 and warming New York City to 72°F in the middle of winter. As one UN scientist put it: "Ten years ago we were talking about these impacts affecting our children and our grandchildren. Now it is happening to us."

Things are accelerating. A year and a half ago scientists made a stunning

¹²John Boitnott, <u>Scientists Say World is in 'Mass Extinction Spasm'</u>, NBC 11 (San Francisco), August 12, 2008.

 $^{^{\}rm 13}$ Sean Markey, Global Warming Has Devastating Effect on Coral Reefs , Study Shows , National Geographic (May 16, 2006), http://news.nationalgeographic.com/news/2006/05/warming-coral_2.html.

¹⁴Researchers estimate a 50 percent chance Lake Mead, which supplies water to millions of people in the southwestern United States, will be dry by 2021 if climate changes as expected and future water usage is not curtailed. http://www.sciencedaily.com/releases/2008/02/080212141424.htm.

¹⁵ Todd Hartman, *Deaths of Trees 'Catastrophic,' Lodge-Pole Die Offs Imperil Recreation, Supplies of Water*, Rocky Mountain News (Jan. 15, 2008), http://www.rockymountainnews.com/news/2008/jan/15/beetle-infestation-get-much-worse/.

¹⁶ Jennifer Steinhauer, *Nation Sweats as Heat Hits Triple Digets*, The New York Times (July 8, 2006), http://www.nytimes.com/2006/07/18/us/18sizzle.html.

¹⁷ Manny Fernandez, 72 Degree Day Breaks Record in New York, The New York Times (Jan. 7, 2007), http://www.nytimes.com/2007/01/07/nyregion/07heat.html.

¹⁸ Milmo, *supra* note 8.

prediction that the Arctic might have no summer ice left by 2040.¹⁹ Six months ago, when scientists looked at the most recent ice melt data, they revised that date to 2012.²⁰ Sea levels are rising.²¹ The new head of Britain's Environmental Agency has just announced that stretches of Britain's coastline will soon have to be abandoned due to the rising tides.²² The head of the UN's climate panel (IPCC) has asked scientists to look at what he called the "frightening" possibility that ice sheets in Greenland and Antarctica could melt rapidly at the same time.²³ Melting of the West Antarctic and Greenland ice sheets would add up to a sea level rise of 10 or more meters.²⁴ A 10-meter rise would flood about 25 percent of the U.S. population.²⁵ If the entire Antarctic ice sheet and

¹⁹ See Seth Borenstein, Artic Sea Ice Gone in Summer within Five Years? Associated Press (Dec. 12, 2007), http://news.nationalgeographic.com/news/2007/12/071212-AP-arctic-melt.html. See also Holland, M. M., C. M. Bitz, & B. Tremblay (2006), Future Abrupt Reductions in the Summer Arctic Sea Ice, Geophys. Res. Lett., 33, L23503, doi:10.1029/2006GL028024, (Dec. 12, 2006), http://www.agu.org/pubs/crossref/2006/2006GL028024.shtml; Doug Struck, At Poles, Melting Occurring at an Alarming Rate, Washington Post (Oct. 22, 2007), http://www.washingtonpost.com/wp-dyn/content/article/2007/10/21/AR2007102100761.html (The artic sea ice now reaches only half as far as it did just 50 years ago).

²⁰ Borenstein, *supra* note 19. *See also* Stroeve, J., M. M. Holland, W. Meier, T. Scambos, and M. Serreze (2007), *Arctic Sea Ice Decline: Faster Than Forecast*, Geophys. Res. Lett., 34, L09501, doi:10.1029/2007GL029703 (2007), http://www.agu.org/pubs/crossref/2007/2007GL029703.shtml (abstract). In West Antarctica, ice loss increased by 59 percent over the past decade. Marc Kaufman, *Scientists See Rapid Ice Loss in Western Antarctica*, The Washington Post (Jan. 14, 2008). In Greenland, ice loss doubled over about the same period. *Greenland Ice Melting Faster than Thought* (Feb. 17, 2006), http://www.physorg.com/news10948.html; *Greenland Melt "Speeding Up"* http://news.bbc.co.uk/2/hi/science/nature/4783199.stm (Aug. 11, 2006) (discussing period between 1996 and 2005).

²¹ See U.S. Environmental Protection Agency, Coastal Zones and Sea Level Rise, http://www.epa.gov/climatechange/effects/coastal/index.html#ref (summarizing UN IPCC conclusions). See also Glaciers and Ice Caps to Dominate Sea Level Rise This Century, Says Study, Science Daily (July 20, 2007) (noting that one foot sea level rise typically causes retreat of 100 feet or more of shoreline).

Tamara Cohen, *Rising Seas Forcing Britain to Plan Coastal Evacuations*, *Daily Mail (UK)*, (Aug. 18, 2008).

²³ Kaufman, *supra* note 20. Many scientists are focusing on the West Antarctic ice sheet, which is especially vulnerable, because much of it is grounded below sea level. As the U.S. Geological Survey states, "Small changes in global sea level or a rise in ocean temperatures could cause a breakup of . . . ice shelves. The resulting surge of the West Antarctic ice sheet would lead to a rapid rise in global sea level." *Sea Level and Climate*, *supra* note 7.

²⁴ *Id*.

²⁵ *Id*.

Greenland melt, the world faces a sea-level rise of about 80 meters.²⁶

As climate disaster strikes various areas, people start to move in desperate search of survival resources. The UN has alerted nations to prepare for 50 million environmental refugees by 2010.²⁷ A world security report co-authored by a former head of the CIA, a former Chief of Staff, a former Deputy Assistant Secretary of Defense and others, describes the scenario of a 2.6 C° average increase in global temperature by 2040. In their words:

[N]ations around the world will be overwhelmed by the scale of change. . . . The social consequences range from increased religious fervor to outright chaos. 28

The darkest outlook comes from James Lovelock, long thought of as a prophet of climate science, who predicts, by the end of the century, most of Earth's current population of 6.6 billion people will be wiped out, leaving only about 500 million hanging on at the far latitudes of the planet.²⁹ We can only hope he is dead wrong.

The question is whether we will cut our carbon emissions in time to prevent runaway heating. NASA scientist Jim Hansen, widely regarded as the "preeminent climate scientist of our time," has said, "We are now on the hairy edge."

While we are in a different world than we were in even five years ago, not everyone perceives it. There are various perceived realities operating in the world today.

²⁶ *Id*.

²⁷Millions Will Flee 'Degradation,' BBC News (Oct. 11, 2005), http://news.bbc.co.uk/2/hi/science/nature/4326666.stm.

²⁸ Center for Strategic an International Studies, *The Age of Consequences: The Foreign Policy and National Security Implications of Global Climate Change* 9 (Nov. 2007).

²⁹Fiddling With Figures While the Earth Burns, The Sunday Times (May 6, 2007), http://www.timesonline.co.uk/tol/news/uk/science/article1751509.ece; Jeff Goodell, The Prophet of Climate Change, James Lovelock, Rolling Stones Magazine, (Oct. 17, 2007) http://www.rollingstone.com/politics/story/16956300/the_prophet_of_climate_change_james_lovelock/2.

³⁰ Mark Bowen, CENSORING SCIENCE 3 (2008).

The perception here in Idaho, for example, is much different than the one in Alaska, where entire native villages are forced to move from their homelands because of melting permafrost, or in Australia, where five-thousand people gathered last week to hold a two-minute silence to mourn the death of a river that supplies the country's most important agricultural region.³¹

There is no doubt that Humanity is in for much more severe climate punishment from the heating already in the pipeline that we can no longer call back. But the consequences will be unthinkably worse if we don't slash emissions now. If we continue on the present course, the UN projects an average temperature rise of up to 11° F by century's end.³² That's not habitable. To understand the excruciating consequences every degree would bring to our children, you can read a book entitled Six Degrees, by Mark Lynas.

We are now dangerously near a climate tripwire -- a point of no return that climate scientists call the tipping point.³³ At such point, our enormous carbon pollution could kick in powerful feedbacks in Nature that are capable of unraveling the planet's climate system, causing runaway heating despite any subsequent carbon reductions achieved by Humanity.³⁴ There are several dangerous feedbacks. One is the albedo flip. When ice melts and turns to water, like it is doing rapidly now at the poles, this causes

³¹ Thousands Rally to Mark 'Death' of Australian River, AFP (Aug.10 2008).

³² UN Intergovernmental Panel on Climate Change, Fourth Assessment Report, Climate Change 2007: Synthesis Report: Summary for Policymakers (hereafter Synthesis Report), Table SPM.1, http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf. The UN predicts runaway heating will put 70% of the world's species into extinction. Arthur Max, *UN Panel Gives Dire Warming Forecast*, Associated Press (Nov. 17, 2007), http://news.nationalgeographic.com/news/2007/11/071119-AP-climate-change_2.html.

³³ For general explanation, *see* Goddard Institute for Space Studies, *Research Finds that Earth's Climate is Approaching 'Dangerous' Point* (May 30, 2007), http://www.nasa.gov/centers/goddard/news/topstory/2007/danger_point.html.

 $^{^{\}rm 34}$ See Fred Pearce, With Speed and Violence (Beacon Press 2007).

further heating, because water absorbs heat and ice reflects heat.³⁵ So, melting begets more melting. Another feedback is the failure of Earth's natural sinks to absorb more carbon to compensate for our pollution.³⁶ The Amazon Rainforest is drying and burning, releasing more carbon that its remaining vegetation can absorb.³⁷ The oceans are becoming saturated with carbon.³⁸ Many of these places are now on the verge of turning from carbon sink to carbon source. Another feedback results from vast expanses of permafrost melting in Siberia and Alaska. This alone has the capacity to release enormous amounts of carbon and methane – a scenario described by one science writer as an "atmospheric tsunami."³⁹

These feedbacks all lead us closer to a precipice.⁴⁰ Even two years ago it was thought that we might have 8-10 years left before the climate tipping point, but more recent data shows we are on its doorstep now.⁴¹ To quote a leading study, "Earth [is] perilously close to dramatic climate change that could run out of our control. . . ."⁴² The head of the UN's climate panel recently told the world, "What we do in the next two to three years will determine our future. This is the defining moment."⁴³

Two-three years. This deadline has not registered with Americans, though many other countries are taking extraordinary action to cut carbon emissions. The United States continues to produce nearly 30% of the world's greenhouse pollution. Our society

³⁵ See Steve Connor, The Earth Today Stands in Imminent Peril, The Independent (June 22, 2007).

³⁶ Synthesis Report, *supra* note 31 at 7 ("Warming reduces terrestrial and ocean uptake of atmospheric CO2, increasing the fraction of anthropogenic emissions remaining in the atmosphere.").

³⁷ Pearce, *supra* note 34, at 65.

³⁸ *Id.* at 87.

³⁹ *Id.* at 78.

⁴⁰ Id. at xxiv.

⁴¹ Milmo, *supra* note 8.

⁴² Climate Change and Trace Gases, supra note 1, at 1925.

⁴³ UN Panel: World Has 5 Years to Avert Climate 'Disaster,' New York Times (Nov. 18, 2007).

is nowhere near decarbonizing.

III. AN IDLE GOVERNMENT

So let's review the big picture. We face a problem that is unprecedented in terms of its consequences; a problem that is caused by virtually everyone on Earth; a problem that, to solve, requires us to overhaul our sectors and lifestyles; and, as if that were not enough, a problem that requires us to act before Nature passes a critical tipping point looming right in front of us. Climate thinkers agree: nothing less than a massive, global effort surpassing the scale of World War II will provide hope of stabilizing climate at this point.

This is no time to get discouraged. We must save despair for better times.

We have tremendous ability to mount an atmospheric defense effort. The biggest limiting force is our imagination of what is possible. We must remember the great wartime mobilization of WWII.⁴⁴ Communities planted victory gardens to grow food locally so that the commercial food supplies could be sent to the troops. Consumers and families made do with the bare minimum. States lowered their speed limits to conserve gas. And the business sector transformed nearly overnight. From the sheer patriotism and courage of business leaders, the economy remade itself to support national defense. All manufacturing was re-geared to the war effort. The auto industry stopped making cars for three years so that it could make defense vehicles. A toy company made compasses. A Corset manufacturer produced grenade belts.⁴⁵ The financial world sold war bonds.

Speakers Bureaus formed in cities across the country, drawing 100,000

⁴⁴ Lester Brown, Plan B 3.0: Mobilizing to Save Civilization 279-80 (2008).

⁴⁵ Brown, supra, at 280 (citing Doris Kearns Goodwin, No Ordinary Time).

volunteers. These Victory Speakers, as they were called, were key to mobilizing the nation quickly. They would give five-minute speeches at theatres, clubs, town halls, schools -- any forum they could find -- to explain the nature of the threat and the need for citizen 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, and school teacher.

People did not just sit by. They took initiative. And their leaders inspired urgent action. Roosevelt told America: "Let no man say it cannot be done Speed will save lives; speed will save this Nation which is in peril; speed will save . . . our civilization-- . . . slowness has never been an American characteristic."

Generations later, how is this same country responding to the urgency of climate crisis?

The reality today is that most Americans are too busy to make time for global warming. Where are the parents for example? We are so consumed with taking our children to soccer games and piano lessons that we don't stop to think how our children will fare in 2040 if we leave them a world of runaway heating with relentless natural disasters and scarce supplies of food and water. By living out the American dream today, we are essentially signing our own children up for a draft for their lifetimes in an unending war for survival. But this war will be the scariest, because it has no end, not even for their descendants.

To be sure, there are some Americans responding with changes in their lives.

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⁴⁶President Roosevelt, 1942 State of the Union Address, http://janda.org/politxts/state%20of%20union%20addresses/1934-1945%20Roosevelt/FDR42.html.

They ride the bus more often, they refuse to buy bottled water, they purchase locally grown food, and they turn off the lights. These people are important models, but national defense cannot be put on the backs of a few good soldiers. Most of these concerned citizens are doing nothing to enlist the rest of society in climate defense. There are few Victory Speakers for climate crisis.

Small progress can give us a dangerous sense of security. Climate defense entails carbon math. We lose the world we know if we can't get our total planetary carbon levels down before the tipping point. Each day that passes, our window of opportunity closes that much more.

Here is the hopeful part. We have the human imagination, the resources, the legal tools, and the bureaucracy to cut carbon. We can do so without harming our citizens – in fact these efforts could vastly improve our quality of life. But this is clearly a task for government, not just individuals. And this is exactly why we have government – to address broad threats to society and organize a response. We have thousands of agencies —more than any other nation in the world. If every one of them made global warming a top priority, we might stand a chance of meeting this crisis head on. But all of our regulatory authority and taxpayer money is locked up in government. We need those resources to be put to use immediately in curbing greenhouse gas emissions.

In World War II, new agencies and commissions sprang up overnight to amass a national defense effort. Looking back, Hurricane Katrina was the Pearl Harbor of climate crisis. Yet, do you see mayors, city councils, state legislatures, Congress, and the President convening task forces and meeting daily and working late to address this

problem? No, in fact, many parts of our government are *driving* this world towards runaway greenhouse gas emissions. County commissioners are approving trophy home subdivisions and destination resorts. State environmental agencies, including Idaho's DEQ, are still approving air permits with carbon emissions. The Forest Service is approving huge timber sales.⁴⁷ And the U.S. Environmental Protection Agency is still permitting coal-fired plants.

There presently exists a deep gulf between what we should be doing and what we are doing. We must remember that in a system of democracy, citizens do hold the levers of government. Government will act if citizens demand it. But our leaders will not act if citizens do not demand them to. Abraham Lincoln once said, "Public sentiment is everything. With [it], nothing can fail. Without it, nothing can succeed."⁴⁸ The heart of the problem is this: Americans seem to have lost their understanding that government is obligated to protect their natural resources. And when the public loses its sense of government responsibility, of course government officials quickly lose their sense of responsibility towards the public.

There is no better evidence of this than the position taken by the federal government with respect to climate change. One high-ranking environmental official in the Bush administration who resigned recently told Congress that Vice President Chaney's office suppressed critical testimony by the head of the Center for Disease Control regarding the deadly effects of climate heating on American citizens. And the former chief of staff of the

⁴⁷ For discussion of forest harvest impacts on climate, *see* Union of Concerned Scientists, *Recognizing Forests Role in Climate Change*, http://www.ucsusa.org/global_warming/solutions/recognizing-forests-role-in-climate-change.html.

⁴⁸ See http://www.brainyquote.com/quotes/authors/a/abraham_lincoln.html.

White House Council on Environmental Quality, who was a former climate lobbyist with the American Petroleum Institute, edited government climate reports to emphasize doubts about climate change. After doing that, he left government to join Exxon. The head of the federal Environmental Protection Agency -- the only agency charged by Congress to protect the air and atmosphere – has spent the taxpayers' money to resist protecting the atmosphere. EPA lawyers went all the way to the United States Supreme to argue that the agency did not have to regulate carbon dioxide pollution. ⁴⁹ The lawyers characterized the protection of our atmosphere as a political choice. It is as if our home is on fire, twenty fire trucks are in the driveway with hoses drawn, and the fire chief claims discretion to sit idle and watch our house burn down.

Unless we Americans quickly gain a fierce national sense that our leaders are responsible for protecting our atmosphere, we won't force them to take the bold action necessary within that narrow two year window of time we have left. Our leaders will continue to fiddle in Rome as this country is pulled over the tipping point into a terrifying world of runaway heating. Should this be a concern to business? Well, as one kid put it on a sign he held up at a climate rally, "There's nothing worse for business than the end of civilization."

IV. Environmental Law Gone Astray

In order to solve the problem, we must understand its cause. How have

Americans lost sight of their government's basic obligation to protect our crucial natural

⁴⁹ Massachusetts v. EPA, 127 S.Ct. 1438, 1454 (2007).

resources? Ironically, the explanation lies in an unintended consequence of our modern environmental law. In the 1970s, at the height of the environmental movement, Congress passed a set of ambitious environmental statutes, among them the Clean Water Act, the Clean Air Act, the Endangered Species Act, and many others. These statutes gave us more environmental law than any other country in the world. They provide tremendous authority to federal, state, and local officials to control just about any environmental harm you can think of. The problem is that, along with this authority, these laws also gave discretion to agencies to permit the very pollution or land destruction that the statutes were designed to prevent. Of course, the permit systems were never intended to subvert the goals of the environmental statutes. But the majority of agencies now spend nearly all of their resources to permit, rather than prohibit, environmental destruction. They have used their discretion to enshrine a permit system that inevitably sinks the statutory goals. Whether you are talking about the EPA, or the U.S. Fish and Wildlife Service, a state water agency, or a city planning agency, most agencies simply are not saying no.⁵⁰ And now, the overarching mindset of nearly all agencies is that permits are there to be granted.

⁵⁰ The problem is not limited to the United States. As the former Executive Director of the United Nations Environment Program noted:

The field of law has, in many ways, been the poor relation in the world-wide effort to deliver a cleaner, healthier and ultimately fairer world. We have over 500 international and regional agreements, treaties and deals covering everything from the protection of the ozone layer to the conservation of the oceans and seas. Almost all, if not all, countries have national environmental laws too. But unless these are complied with, unless they are enforced, then they are little more than symbols, tokens, paper tigers. This is an issue affecting billions of people who are effectively being denied their rights and one of not only national but regional and global concern.

Klaus Topfer, Executive Director of the United Nations Environment Program on the adoption of the Judges' Johannesburg Principles on the Role of Law and Sustainable Development (Aug. 2002), at http://www.climatelaw.org (viewed 10.31.06).

Because of these permit systems, society has lapsed into assuming that government must have nearly unbridled discretion to destroy our natural assets. The danger is this: we have relegated climate to the political playing field. There is no umpire on this field. There's just discretion. Citizens now find it normal to have to go lobby government for their own survival!

The public has to find a new frame for viewing government's role towards Nature. As author George Lakoff says, "Reframing is changing the way the public sees the world. It is changing what counts as common sense." Let's now look at an ancient yet enduring legal framework designed to hold government accountable.

V. A New Frame: Government's Trust Obligation

A. THE BEDROCK OF ENVIRONMENTAL DUTY

The bedrock principle of this framework is that government is trustee of our natural assets, including the waters, wildlife, and air. A trust is a fundamental type of ownership whereby one manages property for the benefit of another – similar to you managing a college account for your niece. We all hold a common property interest in Nature's Trust.⁵² We, along with future generations, are the rightful beneficiaries of this natural endowment, and we need our trust to be productive in order to sustain human survival and promote human welfare. Our imperiled atmosphere is the most crucial asset in our trust.

⁵¹ George Lakoff, Don't Think of an Elephant! Know Your Values and Frame the Debate xv (2004).

⁵² Geer v. Connecticut, 161 U.S. 519 (1896) ("The power . . . resulting from this common ownership is to be exercised, like all other powers of government, as a trust for the benefit of the people, and not as a prerogative for the benefit of private individuals as distinguished from the public good."). For discussion of the Nature's Trust paradigm as it applies to environmental law, *see* Mary Christina Wood, *Nature's Trust: Reclaiming An Environmental Discourse*, 25 VIRGINIA L. J. 431 (2007), http://www.law.uoregon.edu/faculty/mwood/docs/ntreclaiming.pdf.

With every trust, there is a core duty of protection. The trustee must defend the trust against injury. Our government trustees do not have discretion to allow irrevocable damage to the trust. As our Supreme Court said back in 1892: "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"⁵³

This obligation to protect Nature's Trust lies at the very heart of government's purpose. A government that fails to protect its natural resources sentences its people to misery. When we call upon our government to defend our atmosphere, we are invoking principles engrained in sovereignty itself. These trust principles have been said to "exist from the inception of humankind."⁵⁴

In this country, Nature's Trust principles were penned by judges long ago as the first environmental law of this nation.⁵⁵ The trust principle underlies all of our modern environmental statutes.⁵⁶ We can take those environmental laws, and without changing a word of them, reframe our government's role with respect to Nature. By reframing, we can turn the government's claimed discretion to *destroy* Nature into an obligation to *protect* Nature. Looking back in the history of this country, reframing was essential to

⁵³ Ill. Cent. R.R. Co. v. Illinois, 146 U.S. 387, 453 (1892). The Court also said: "Every legislature must, at the time of its existence, exercise the power of the state in the execution of the trust devolved upon it." *Id.* at 460.

Oposa v. Factoran, G.R. No. 101083 (July 30, 1993) (Supreme Court of the Philippines), *excerpted in* Jan G. Laitos, Sandra B. Zellmer, Mary C. Wood, & Dan H. Cole, Natural Resources Law, Ch. 8.II, at 441–44 (West Publishing 2006).

⁵⁵See Illinois Central Railroad v. Illinois, 146 U.S. 387, 393 (1892). The body of law known as the "public trust doctrine" is compiled and analyzed in Latros, Zellmer, Wood, & Cole, Natural Resources Law, supra note 57, at ch. 8.II.

⁵⁶ In the opening provision of the National Environmental Policy Act (NEPA), Congress declared a national duty to "fulfill the responsibilities of each generation as trustee of the environment for succeeding generations." National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §4331(b)(1). Federal pollution laws also designate sovereigns (federal, tribal and state governments) as trustees of natural resources for purposes of collecting natural resource damages.

the Civil Rights Movement, the Women's Rights Movement, and FDR's New Deal.

When we portray Nature as a trust, we vest citizens with expectations of lasting 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. The failure to mount a national climate defense is as absurd a proposition as the idea of government sitting idle during an attack on American soil. 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 our natural resources until society can no longer sustain itself.

B. THE ECONOMIC AND MORAL REALMS

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. 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, premised on "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. When developers tear up forests and soils, they destroy vital carbon sinks. Yet government agencies, our trustees, overwhelmingly give direct subsidies to coal and oil companies, and to developers through roads, sewer systems and favorable tax breaks. No other trustee that pays third parties to destroy its trust! Scientists are clear that Humanity cannot continue to build the economy from fossil fuels, and that society must protect the Earth's remaining carbon sinks. Renewable energy, the kind that forms the basis of much green development, uses the Earth's interest, not its capital. Green construction and renewable energy ventures are inherently superior economic endeavors because they neither deplete nor degrade Nature's Trust.

When we read about a huge new wind power project, or a new mega solar facility, or a zero-carbon building, these developments represent a piece of Industrial Capitalism converting to Natural Capitalism. Of course if these green industries continue to grow, they will snuff out a major part of the fossil fuel industry. As well they should. After all, the heart of American capitalism is innovation. Economic dinosaurs and dirty industries should perish and make way for cleaner industries that won't damage or drain the natural capital that we all rely on.

And in our focus on economics, let us not neglect the spiritual and moral ramifications of our choices. Climate change has struck a deep chord with churches worldwide. Last year the leaders of virtually all of the major religions of the world came together in Greenland to take a hard stand against carbon pollution, and to voice a moral imperative demanding stewardship of the Earth. Nature's Trust resonates with these moral and spiritual approaches to climate change because it characterizes the natural assets as part of the Endowment that future generations are entitled to inherit just as we inherited them. Failure to protect natural inheritance amounts to generational theft. The duty towards future generations is an imperative that speaks universally to all cultures, all ages, and all classes. This obligation springs from the heart of all Humanity.

VI. Three Principles Governing Atmospheric Trust Protection

Next, I've tried to break this trust framework down into three general principles that civic leaders and citizens such as yourselves can take to the city councils, the county commissioners, the mayor's offices, the state legislators, the Governor's offices and the

federal government.

A. THE SCIENTIFIC IMPERATIVE: CARBON MATH

The first principle is that the laws of Nature, not politics, must define the necessary action. This is really a matter of carbon math. We must realize that if various political measures do not add up to the required carbon math in time, they will be futile. A rescue rope that is too short is no good at all. The atmospheric concentration of carbon dioxide is presently 383 parts per million. Climate scientists say that we have to bring that down to 350 parts per million (ppm) to achieve climate stability.⁵⁷ We can think of this 350 number as Nature's "climate imperative."

B. The Climate Prescription

The second principle builds on the first. Trustees have specific fiduciary duties that serve as standards of performance. We don't just vest trustees with priceless assets and have no accountability. 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 a 15% yield or 2%, or even give it away –I'll just take whatever is left." You certainly would not take that approach with a trustee that manages the assets you rely on for survival. The trustee has to measure up to a fiduciary standard of care.

So what is the fiduciary standard of care for protecting the atmosphere? In

⁵⁷ See James Hansen, Makiko Sato, Pushker Kharecha, David Beerling, Valerie Masson-Delmotte, Mark Pagani, Maureen Raymo, Dana L. Royer & James C. Zachos, Target Atmospheric CO2: Where Should Humanity Aim? (2008), http://arxiv.org/abs/0804.1126; Bill McKibben, Remember This: 350 Parts Per Million, Washington Post (Dec. 28, 2007), http://www.washingtonpost.com/wp-dyn/content/article/2007/12/27/AR2007122701942.html.

September, 2007, the Union of Concerned Scientists issued an emissions target for stabilizing the climate.⁵⁸ This is a clear, quantitative prescription for action to get our planet back on the path to climate equilibrium⁵⁹ – and it is therefore a yardstick for government's fiduciary obligation. There are three things the U.S. must do: 1) arrest the growth of emissions by 2010; 2) reduce greenhouse gas emissions by 4% each year thereafter; and 3) ultimately bring emissions down to 80% below 2000 levels by 2050. The deadline to arrest the growth of emissions by 2010 is directly in line with a call by the UN to halt worldwide emissions growth by 2015.⁶⁰ The world-wide date is set out five years farther than the U.S. date because the developing nations like China and India are going to take more time to arrest emissions.

C. THE INEXCUSABILITY OF ORPHAN SHARES

The third principle has to do with the responsibility of each nation, and each state within each nation, to reduce carbon. The sovereign nations of Earth share the atmosphere as their common property. They are sovereign co-tenant trustees of the atmosphere, 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, their common asset.

You can apply this mandate to every nation of the world and create a framework for carbon responsibility. You can imagine the industrialized world's planetary carbon load

⁵⁸ See Union of Concerned Scientists, A Target for U.S. Emissions Reductions (Sept. 2007), available at http://www.ucsusa.org/global_warming/science/emissionstarget.html.

⁵⁹ Because the prescription is calibrated to the 450 ppm threshold, which recent data suggest may be too high to achieve climate stability, even this prescription may be too little too late. One leading thinker asserts that the United States needs to cut carbon 80% by 2020 and sets forth a plan to achieve this goal without additional reliance on nuclear energy. Lester Brown, Plan B 3.0: Mobilizing to Save Civilization (Earth Policy Institute 2008).

⁶⁰ Milmo, *supra* note 8.

as one big pie. You have 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. But 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 leave an orphan share that will sink all other planetary efforts. The carbon pie will not shrink by the amount it needs to. The U.S. is responsible for 30% of the greenhouse gas emissions on the planet. No other 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.

So this third principle means that, as co-tenant trustees of the atmosphere, all industrial nations must carry out their share of carbon reduction as set forth in the prescription that scientists have provided. Scaling down to another level, this also means that all states, and all cities and counties within states, must carry their burden. It is their fiduciary obligation as trustee. In order to save this planet, we must not excuse any orphan shares.

Last winter I gave a talk to a class of high school students in McCall, Idaho, and I told them, the fate of the entire planet rests on McCall, Idaho, because if you don't take your share of carbon reduction, who will? Do you expect those of us in Eugene, Oregon to take it? We have enough of a challenge with our own share. And unless every share is accounted for, we're not going to decrease the carbon pie enough in the time we have left. That point hit home with those students. There was a sober moment when they realized that their future depends on *their* town accepting carbon responsibility – and on

everyone else in the world thinking the same way.

Here in Idaho, many cities, including Boise, have joined a national Mayor's climate agreement that sets a goal of limiting carbon emissions. And regionally, there is the Western Climate Initiative, which is a rather remarkable effort that includes every Western state and Canadian province -- except Idaho. This is an ambitious trans-border scheme to control carbon, but there's one gaping hole – one significant orphan share –and that's the state of Idaho.

VII. Arresting the Growth of Emissions: Getting There in Two Years

In sum, the three climate fiduciary principles are: 1) Nature, not politics, must define our response; 2) We have to arrest the growth of emissions within the next two years and then reduce carbon 4% a year thereafter; 3) every single jurisdiction, including the State of Idaho, must take on this responsibility.

As a society, can we do this? Yes. We have the legal tools available to arrest the growth of emissions. Subsidies can be switched to encourage green industries.

Consumers can get tax credits for sustainable choices. A carbon tax could achieve dramatic emissions reductions. But government also needs to regulate. That's one of the functions of government. Agencies need to stop new sources of greenhouse gas emissions or they won't level the playing field for green industries. And we can't on one hand permit new carbon emitting activities and on the other hand hope to get our carbon emissions heading down in the next two years. The most urgent national moratorium is one against new coal fired plants. NASA scientist Jim Hansen testified in an Iowa coal

plant proceeding that even one more coal plant with emissions of nearly 6 million tons of CO2 per year over 50 years could be the "straw that breaks the camel's back."⁶¹ We are that close.

In addition to curbing emissions, it is imperative to protect the natural resources we still have. We must safeguard any remaining carbon sinks that have capacity to cleanse the atmosphere of carbon. That means a halt to extractive forestry, wetland destruction, suburban sprawl, and industrial farming that damages soils. Moreover, we have to look at all of our natural resources in a different light, because they are now much more valuable functioning in their natural way than being destroyed to profit singular interests. Due to the heating already "in the pipeline," society is not going to have all of the forests, the water, the species, and the productive soils that we inherited from past generations. In the new world of climate heating, all remaining natural resources carry a premium.

We also have to transform the entire infrastructure that supports society. This may seem overwhelming at first, but the United Nations has broken this down into a very straightforward sector-by-sector approach. The sectors are: energy supply, transport, buildings, industry, agriculture, forests and waste. Climate thinkers often say that the global warming crisis isn't going to be solved with a silver bullet, but rather with silver buckshot. In other words, it's going to take millions of separate actions to transform

If we cannot stop the building of more coal-fired power plants, those coal trains will be death trains – no less gruesome than if they were boxcars headed to crematoria, loaded with uncountable irreplaceable species. . . . " *Id.* at 8.

⁶¹ James E. Hansen, Testimony before the Iowa Utilities Board 7, http://plainsjustice.org/files/GCU-07-1_Sutherland_Filing/Hansen%20Direct%20Testimony%20(Public).pdf (2007). He added:

society worldwide. If we take the sector-by-sector approach, however, we find some organization in this picture. We can think of sectors creating different "wedges" of carbon reduction. Each wedge brings the trajectory of rising carbon downward by a certain amount. Again, these wedges must all add up to the required climate math in time.

A special word on the energy wedge in Idaho. In the rush to find carbon-free energy, let us not foolishly jump from the fire into the frying pan by pursuing nuclear energy. The nuclear industry is eager to exploit the global warming crisis and manipulate the public into believing this is a replacement for fossil fuel energy. At least one nuclear plant is still proposed for Idaho. We should not forget that, no matter what the technological advances this industry touts, nuclear is never sustainable or safe for the simple reason that its radioactive waste lasts for thousands of years. We have already committed countless future generations to a legacy of lethal waste. We don't even have a safe place to store the radioactive waste we've already created. Even apart from these concerns, many of the leading energy analysts conclude that nuclear is not at all feasible due to its huge cost and technological failings. With the right investment choices, society can have both a carbon-free and nuclear-free society. Energy experts have mapped out this promising future in concrete terms.⁶² Idaho citizens, businesses, and community groups should extend their welcome to the solar, wind, and geothermal industries and take a strong preemptive stand against nuclear power before dangerous proposals develop any further.

 $^{^{\}rm 62}$ See Arjun Makhijani, Carbon-Free and Nuclear-Free: A Roadmap for U.S. Energy Policy (2007).

For those Green LEEDers who are here today, note that your businesses could lead the wedge development in one major sector – the building sector. For example, in this sector alone, there are huge opportunities for solar roofs, living roofs, improved insulation, use of recycled building materials, natural light, edible landscaping, and countless other changes. But creating the legal mechanisms to encourage and even force carbon reduction doesn't just happen by itself. It takes time and energy on the part of the lawmakers. We need the lawmakers in every agency and at every level of government taking initiative to create those wedges that will add up to their jurisdiction's fair share of carbon reduction. In other words, this is no time to have passive lawmakers in office. They must be innovators, initiators, and catalysts themselves.

And we, the public, must start thinking and acting like beneficiaries in order to hold our government trustees accountable. We should demand our government trustees to undertake and make public carbon accountings that disclose the results of these climate initiatives. Carbon accountants are now able to measure the carbon emissions of any jurisdiction, which means they can track progress in reducing emissions by 4 percent a year as called for by the Union of Concerned Scientists. Without such a carbon accounting, we would have to simply assume our trustee is doing its job, and no smart beneficiary would do that. As citizens, we are as entitled to an accounting of our atmospheric assets just as we are entitled to a quarterly statement of our financial assets from the bank. With carbon accounting tools, Eugene, Seattle, Portland, and other cities have already been able to meet the short-term imperative of arresting the growth of emissions for their jurisdiction. So, it can be done, but it takes focused government

attention. Many jurisdictions are still free-riding across the atmosphere as if we haven't slipped into a very different world.

What is holding back the government initiative that we need? Unfortunately, many elected officials make policy out of fear rather than courage. They fear that their constituents will resent measures that cut into their lifestyle. And that is so much of what holds back progress here in Idaho. But this thinking is exactly backwards. Today's life of convenience will lock us into a future where there is no convenience. Where is the convenience in wildfire raging through Idaho forests? Where is the convenience in crop losses, drought, and food shortages? Or in flooded rivers and massive landslides from winter snow melt? Or in West Nile and collapsing salmon runs? These all face Idaho. We have to take action now to preserve any semblance of the security and predictability in life that we now take for granted.

The choice for government is disaster prevention or disaster relief. This is a chance for politicians to become true leaders, to explain clearly the nature of the threat, and to connect in Americans' minds the need for immediate investment in green infrastructure in order to avoid long-term calamity. True leaders know how to do that.

But at this point, I'll bet many of you are still thinking, it's not politically feasible to take all of the actions we need to in order to achieve these carbon targets. And you are quite right. The only politically feasible course of action is to send this world into disaster.

A thirteen year-old Canadian girl once led a delegation of children to the United Nations and addressed world leaders on global environmental collapse.⁶³ She said:

Coming here today I have no hidden agenda. I am fighting for my future. Losing my future is not like losing an election or two points on a stock market. We are your own children. You are deciding what kind of a world we are growing up in. Parents should be able to comfort their children by saying, "Everything's going to be all right. It's not the end of the world, and we're doing the best we can. But I don't think you can say that any more. . . . What you do makes me cry at night."

When I first heard those words last week on U-Tube, they really resonated with me, because so many times over the past two years reading endless scientific reports on Arctic melting, species extinctions, food shortages, and dying oceans, I've awakened in the middle of the night haunted by the horror of what my own children will endure in their lives if our generation cavalierly pulls this world over the climate tipping point. The only way I can look my own children in the eye is if I know that I am doing everything possible, every day, to secure a livable future for them. In World War II, it took 100,000 Victory Speakers to mobilize the nation to secure the future of America. Today, we need Victory Speakers for climate crisis. We need all of the citizens, entrepreneurs, and leaders we can find to voice a new political paradigm, one that offers real hope for the next generation.

VIII. THE GREEN ENTREPRENEURS

63 http://www.youtube.com/watch?v=xH4YCXBSz2Y&feature=email.

So let me close by offering some thoughts about your role in this, first some thoughts for the Green LEEDers who organized this forum. Green LEEDers, you are remarkably situated to voice a new vision for the state of Idaho, because your economic pursuits represent, at their best, a new form of business that takes responsibility for its pollution and offers the infrastructure citizens need to live sustainably. You are ideally positioned to go to your local and state leaders with an economic platform that both outlines the State of Idaho's atmospheric trust responsibility and creates one of the significant wedges the State needs to meet its fair share of carbon reduction.

I urge you to go even beyond your own businesses and be the voices for the new economy of Idaho. To solve climate crisis we need people thinking big, not small. Your businesses will prosper most if the consumers, the clients, the suppliers, the distributors, the service-providers, and everyone in the chain of economic activity all re-gear their activity to natural capitalism. I encourage you to present an encompassing vision that can reach across all of Idaho's economic sectors.

You are uniquely positioned to urge leaders to create a role for Idaho in the Green Industrial Revolution that is already underway. The entire economy has to be remade to achieve zero carbon emissions. Most other states are jumping on this incredible economic opportunity --- but not Idaho. The passivity of Idaho lawmakers will mean that Idaho will lose out on economic opportunities. You are positioned to urge leaders to create the thousands of green jobs that come with retooling the tanking fossil fuel economy. You can urge businesses to become zero-waste and zero-carbon producers, which will increase their efficiency. You are positioned to build those crucial economic

coalitions between the fishermen, the foresters, the farmers, the ski operators, the real estate industry and the service industries. And you can voice a new ethic to the business community of Idaho, an ethic that emphasizes corporate responsibility, an ethic that builds profits using the Earth's interest, not its capital, an ethic that even dares to reawaken the economic patriotism of the business sector that was so crucial to this nation's victory in World War II.

IX. The Dawn of Planetary Patriotism

And for all of you in this room know that the world today urgently needs you — the "can do people" — to activate your government. We have too many "can't-do" people — passive bystanders to climate crisis. 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, this is *the time* to do something, anything. Just don't do nothing. Teachers, bring global warming to the classroom. Parents, bring it to the PTA. Lawyers, bring global warming to court. Business-people, bring it to the bank.

Somehow fate has delivered all of us into this pivotal moment on Earth. We did

not live 100 years ago, when it was too early to even imagine the collapse upon us, and we will not be here 100 years from now when it will be too late to save what we still can. We can only claim our moment.

But if we Americans take the lead through all walks of life, we can reframe what is currently government's *discretion* to destroy our atmosphere, into an *obligation* to defend our atmosphere, as a commonly held asset in the Endowment we must hand down to our children, for their survival. If we succeed in defining that one *obligation* on the part of our government, 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. When that dawn unfolds, Victory Speakers around the world will know this -- during our moment on Earth, we ignited planetary patriotism.

Thank you.