

*A Framework of China-U.S. Partnership
to Address Global Warming*

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I. INTRODUCTION

In June, 2007, leading climate scientists issued a report concluding that the Earth is in “imminent peril.”¹ They warn that runaway climate heating will impose catastrophic conditions on generations to come. It threatens to destroy major planetary fixtures, including the polar ice sheets, Greenland, the coral reefs, and the Amazon forest. It will bring floods, hurricanes, heat waves, fires, disease, crop losses, food shortages, droughts, and cause extinctions of up to 70% of the world’s species.² It could kill millions of Earth’s citizens, force massive human refugee migrations, and pose an unending threat to world security. In the words of leading scientists, our continued carbon pollution will cause a “transformed planet.”³

The world has only a narrow window of time to begin reversing global emissions of carbon before our planet passes a “tipping point” whereby dangerous feedback loops will unravel the planet’s climate system -- despite any subsequent carbon reductions achieved by Humanity. Many climate scientists now warn that continued use of coal will destroy the very conditions that have supported human civilization for the last 10,000 years.

As nations enter a new chapter in climate negotiations, they search for a framework of

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¹ James Hansen *et al.*, *Climate Change and Trace Gases*, PHIL. TRANS. R. SOC. A, 1925, 1949 (2007).

² Geoffrey Lean, *A World Dying, But Can We Unite to Save It?* THE INDEPENDENT UK (Nov. 18, 2007).

³ Jim Hansen, *The Threat to the Planet*, 53 THE NEW YORK REVIEW 12 (July 13, 2006).

international obligation that is clear, compelling, and responsive to the urgency facing the world, yet one that can build upon the United Nations Framework Convention on Climate Change (UNFCCC) signed in 1992. A deeply rooted principle manifest in most countries of the world provides the beacon for such a framework. Under the public trust doctrine, the atmosphere is a natural asset that all nations share as common property. All nations are “trustees” with a duty to protect the atmosphere for present and future generations.

United Nations Secretary-General Ban Ki-Moon has called upon the United States and China – the world’s two biggest polluters – to take bold action to reduce carbon.⁴ This article urges a partnership between China and the United States in which the two nations join as sovereign trustees of the atmosphere to lead the world in an urgent energy transformation on the scale of the Industrial Revolution. It proposes a world-wide moratorium against coal development, and recovery of natural resource damages from private corporations that have polluted the atmosphere with greenhouse gases. Such damages should be used for immediate investment into alternative energy systems and technology for the developing nations as partial compensation for their disproportionate conservation burden.

Part II of this Article describes the threat of global warming. Part III confronts the reality that coal is no longer a viable long-term source of fuel. Part IV presents the trust obligation that defines government’s responsibility to protect the atmosphere. Part V brings this trust responsibility within the UNFCCC framework. Part VI proposes world-wide moratorium against coal development and recovery of natural resource damages for atmospheric pollution.

II. THE PRECIPICE

A. BUILDUP OF CARBON

Through its greenhouse gas emissions, Humanity is literally creating a heat trap on Earth. By burning massive quantities of fossil fuels, humans have changed the composition of the atmosphere so that less heat can escape into space. Carbon dioxide, the gas emitted from cars, coal fire plants, and gas heating, has climbed to levels unknown in the past

⁴ Arthur Max, *UN Panel Offers Dire Warming Forecast*, SCIENCE NEWS (Nov. 17, 2007).

650,000 years, and emissions are increasing over 2% per year. According to the United Nations Intergovernmental Panel on Climate Change (IPCC), the average surface temperature on Earth could rise as much as 6 degrees Celsius above pre-Industrial levels by the end of this century if emissions growth continues.⁵

The United States and China are the two largest polluters in the world. While the United States has historically pumped more greenhouse gas pollution into the atmosphere than any other country, China overtook the United States as the world's biggest emitter in 2007. There is no immediate remedy for the Earth's temperature rise, because carbon dioxide persists in the atmosphere for up to a few centuries.

B. THE TIPPING POINT

Scientists warn that we are fast approaching a climate "tipping point" beyond which we cannot prevent runaway heating and global catastrophe. The massive greenhouse gas pollution already in the atmosphere has triggered "feedbacks" in nature that exacerbate the planet's heating.⁶ For example, permafrost is melting, causing massive releases of carbon and methane. Natural "sinks," such as oceans and forests that historically have absorbed carbon, are turning into sources of carbon.⁷ A recent scientific report states, "Earth [is] perilously close to dramatic climate change that could run out of our control. . . ."⁸

C. IMPACTS TO CHINA FROM GLOBAL WARMING

Leading commentators conclude that global warming is a threat to human civilization.⁹ As Mark Lynas states: "[I]f we go on emitting greenhouse gases at anything like the current rate, most of the surface of the globe will be rendered inhabitable within the lifetimes of most readers of this article."¹⁰

⁵ UN IPCC SYNTHESIS REPORT OF THE FOURTH ASSESSMENT REPORT, Summary 21 (2007).

⁶ See FRED PEARCE, *WITH SPEED AND VIOLENCE* (Beacon Press 2007).

⁷ *First Ever State of the Carbon Cycle Report Finds Troubling Imbalance*, TERRADAILY (Nov. 16, 2007).

⁸ *Hansen et al, supra* note 1, at 1925.

⁹ ROSS GELBSPAN, *BOILING POINT 1* (Basic Books, 2004).

¹⁰ Mark Lynas, *Why We Must Ration the Future*, NEWSTATSMAN (Oct. 23, 2006).

A recent United Nations Report details the extraordinary threat to Asia, which holds over 60 per cent of the world's population (approximately four billion people). Half of the population lives in coastal areas that are "directly vulnerable" to sea-level rise. The report warns of disruption to food supplies, more extreme rainfall in places, and more extreme droughts in others. It predicts increased frequency and magnitude of tropical cyclones.¹¹ Disappearance of glaciers from global warming will cause western China to experience annual water shortages of 20 billion cubic meters by as early as 2010.

D. THE SCIENTIFIC IMPARATIVE

Scientists have warned that the only way to stave off the worst of climate change is to cap temperature increases at 2 degrees Celsius above pre-Industrial average.¹² Exceeding this limit would make it warmer on Earth than it has been for half a million years, and, in the words of NASA's leading climate scientist, Jim Hansen, "many things could become unstoppable."¹³ To achieve the 2 degree Celsius cap, society must keep the atmospheric concentration of carbon dioxide below 450 parts per million (ppm).¹⁴ The UN recently reported that worldwide greenhouse gas emissions must stabilize by 2015 in order for society to achieve a 2 degree Celsius cap.¹⁵

III. ENERGY RELIANCE AND POLITICAL DELUSION

Once considered the engine of economic growth, fossil fuel is now the engine of planetary destruction. Scientists make clear that climate heating will run out of control if Humanity uses the Earth's remaining coal and petroleum reserves. In June, 2007, leading climate scientists published a report concluding: "Given the estimated size of fossil fuel reservoirs, the chief implication is that we, humanity, cannot release to the atmosphere all, or even most, fossil fuel CO₂. To do so would guarantee dramatic climate change, yielding a different planet than the one

¹¹ UNIPCC, *UP IN SMOKE? ASIA AND THE PACIFIC*, Executive Summary, at 4 (2007).

¹² See Mark Tran, *10 Years to Change Our Ways, Warns UN Report*, THE GUARDIAN UNLIMITED (Nov. 27, 2007).

¹³ Jim Hansen, *Climate Change: On the Edge*, THE INDEPENDENT (Feb. 17, 2006).

¹⁴ *Hansen et al*, *supra* note 1, at 1937.

¹⁵ Max, *supra* note 4.

on which civilization developed. . . .”¹⁶

NASA scientist Jim Hansen has testified, “[T]he most critical action for saving the planet at this time” is preventing construction of more coal-fired power plants.¹⁷ In other testimony he has stated 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” and plunges the planet past the “ice sheet tipping point.”¹⁸ He cautioned:

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. . . .¹⁹

The lethal reality of coal has not sunk into the economic realm. The United States still has plans for 120 new coal-fired plants.²⁰ China is building an average of one coal-fired plant a week.²¹ It already has more coal-fired CO₂ emissions than any country in the world, and emissions have more than doubled since 2000, climbing to 2.7 billion tons a year.²² Over just the past eight years, China has constructed 603 coal-fired generators.²³ A recent report issued by the International Energy Agency (IEA) shows a trajectory of nearly “unfettered growth” leading to a global demand for coal in 2030 that is 55% higher than today.²⁴ The report projects that China and India together will account for 45% of this demand increase.²⁵

The IEA has concluded that “immediate policy action and technological transformation on an unprecedented scale” is necessary to meet the IPCC’s cap on worldwide emissions by 2015. The only possible way to arrest the growth of worldwide carbon emissions in the

¹⁶ *Hansen et. al, supra* note 1, at 1939.

¹⁷ James Hansen, Testimony Before U.S. House of Representatives (April 26, 2007).

¹⁸ 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](http://plainsjustice.org/files/GCU-07-1_Sutherland_Filing/Hansen%20Direct%20Testimony%20(Public).pdf) (2007).

¹⁹ *Id.* at 8.

²⁰ Editorial, *Montana and Kansas Take on Big Coal*, NEW YORK TIMES (Oct. 23, 2007).

²¹ *Id.*

²² Alan Zarembo, *Coal Addiction Hinders Climate Cleanup*, LA TIMES (Nov. 18, 2007).

²³ *Id.*

²⁴ Keith Bradsher, *China to Pass US in 2009 in Emissions*, NEW YORK TIMES (Nov. 7, 2006).

²⁵ INTERNATIONAL ENERGY AGENCY, WORLD ENERGY OUTLOOK 2007.

next seven years is to halt new coal-fired plants and begin phasing out existing ones, replacing them with renewable sources of energy such as wind power, solar energy, electric power and tidal power. While carbon sequestration may offer future promise, the technology is in an infant stage and ultimately relies on an administrative enforcement framework that has failed systematically in the past.

. The idea of a ban on new coal-fired plants initially strikes many policymakers as unrealistic given that the industrial economy currently relies so heavily on coal, and that the developing world is developing coal at a break-neck pace. This notion of political and economic realism, however, is highly selective. It fails to account for a competing and unforgiving realism that the climate will spin out of control if the world continues to rely on carbon-based energy sources. It is clearly time for the political reality to take shape around the climate reality, because the reverse is impossible. As long as commentators cling to a selective political and economic “reality” to bar innovative solutions, climate disaster will be a self-fulfilling prophesy. Society now needs bold proposals rooted in a firm sense of government responsibility.

IV. THE TRUST FRAME

Foundational principles reflected in legal systems throughout the world clearly define government’s responsibility towards nature and towards future generations. An ancient, yet enduring, principle holds that every sovereign government owns vital natural resources in “trust” for the public.²⁶ A trust is a fundamental type of ownership whereby one manages property for the benefit of another. The beneficiaries of the trust are present and future generations.²⁷ As trustee, government may not give away critical public resources to private interests.²⁸

²⁶ Ill. Cent. R.R. v. Illinois, 146 U.S. 387, 455 (1892); *Geer v. Connecticut*, 161 U.S. 519, 525-29 (1896). For public trust sources see LAITOS, ZELLMER, WOOD, & COLE, *NATURAL RESOURCES LAW*, Chapter 8.II (2006).

²⁷ See Peter H. Sand, *Sovereignty Bounded: Public Trusteeship for Common Pool Resources*, 4 *GLOBAL ENVIRONMENTAL POLITICS* 47, 55 (2004) (defining global beneficiaries as “future humanity.”).

²⁸ *Geer*, 161 U.S. at 529.

Public trust jurisprudence makes clear that government officials are not at liberty to disclaim their fiduciary obligation to the citizens. As the Supreme Court has 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 and the preservation of the peace. . . .”²⁹ Another court stated: “The trust is of such a nature that it can be held only by the sovereign, and can only be destroyed by the destruction of the sovereign.”³⁰

A. A DOCTRINE ORGANIC TO THE WORLD’S GOVERNMENTS

The public trust is most appropriately viewed as a fundamental attribute of sovereignty, organic to all governmental bodies.³¹ As one scholar describes, “The real headwaters of the public trust doctrine . . . arise in rivulets from all reaches of the basin that holds the societies of the world.”³² The doctrine reaches back to Justinian times and Roman law³³ and is evident in the ancient societies of Europe, the Orient, Africa, Moslem Countries and Native America. In the United States, the doctrine is evident in hundreds of judicial decisions, including landmark Supreme Court opinions. Today, the doctrine is particularly vibrant in India.³⁴

Despite differences in manifestation through various legal systems of the world, government’s principle obligation to protect natural resources for present and future generations is said to exist “from the inception of humankind.”³⁵ Enforcing the people’s trust to halt logging, the Philippines Supreme Court explained:

[E]very generation has a responsibility to the next to preserve that . . . harmony [of Nature] [The] right [to a balanced ecology] concerns nothing less than self-

²⁹ *Illinois Central*, 146 U.S. at 460.

³⁰ *U.S. v. 1.58 Acres of Land*, 523 F. Supp. 120, 124 (D. Mass. 1981).

³¹ *Geer*, 161 U.S. at 528 (referring to the trust as an “attribute of government”).

³² Charles F. Wilkinson, *The Headwaters of the Public Trust: Some of the Traditional Doctrine*, 19 ENVTL. L. REV. 425, 431 (1989).

³³ *Id.*

³⁴ See http://en.wikipedia.org/wiki/M._C._Mehta_v._Kamal_Nath.

³⁵ *Oposa v. Factoran*, G.R. No. 101083 (July 30, 1993) (Phil.), excerpted in LAITOS, *supra* note 26, at 441–44.

preservation and self-perpetuation[,] . . . the advancement of which may even be said to predate all governments and constitutions.³⁶

B. THE ATMOSPHERIC ASSET AND SOVEREIGN CO-TENANCY

The atmosphere is the most crucial asset in the trust because it drives the climate, which supports all other natural infrastructure. Atmospheric damage can unravel virtually all other assets in the trust, including species, waterways, coastlines, oceans, and forests. Not surprisingly, air has been considered a public asset since Roman times.³⁷

The trust framework creates logical rights to shared assets that are not confined within any one jurisdictional border. It is well established that all sovereigns with jurisdiction over the natural territory of a transboundary asset have legitimate property claims to the resource. In China, for example, provinces located along the Yellow River have shared rights to the water. Similarly, states that share waterways in the United States have correlative rights to the water.³⁸ States and tribes have co-existing property rights in a fishery passing through their borders.³⁹

In the United States, such shared interests have been described as a sovereign “co-tenancy.”⁴⁰ A co-tenancy arises when there are common owners of property. Among individuals, for example, a co-tenancy describes the relationship of several family members who own a house together. Applying this construct to nations of the world, it may be said that all nations are sovereign “co-tenants” of the atmosphere. Their ownership is in trust, and their trust interest is shared with other nations in an undivided manner. This relationship gives rise to organic duties on the part of all governments -- duties towards their own citizens and duties towards their co-tenant nations.

³⁶ *Id.*

³⁷ *See Geer*, 161 U.S. at 525.

³⁸ *State of Ariz. v. State of Cal.*, 373 U.S. 546, 601 (1963).

³⁹ *Washington v. Washington State Commercial Passenger Fishing Vessel*, 443 U.S. 658 (1979).

⁴⁰ *United States v. Washington*, 520 F.2d 685, 686, 690 (9th Cir. 1975).

C. THE FIDUCIARY DUTIES: ASSET PROTECTION, DUTY AGAINST WASTE, RECOVERY FOR DAMAGES

1. THE DUTY OF PROTECTION

With every trust, there is a core duty of protection. The governmental trustee bears a fiduciary obligation to protect the assets of the trust from damage.⁴¹ In other words, the trustee must defend the trust against injury and may not sit idle in face of threatened damage to the assets.⁴²

2. THE DUTY AGAINST WASTE

Cotenants stand in a fiduciary relationship towards one another and share the obligation not to waste the common asset.⁴³ Waste is the impairment of property so as to permanently destroy its value to the detriment of the cotenants.⁴⁴ Waste includes the failure to take necessary action to protect the property for future cotenants.

3. THE RECOVERY OF NATURAL RESOURCE DAMAGES

Trustees have the affirmative duty to recoup monetary damages against third parties that destroy trust assets.⁴⁵ In the United States, statutory law provides a basis for recovering damages for common types of pollution. Huge monetary awards have been gained for damage caused by oil spills to coastlines and wildlife, and damage from mining to vast watersheds. Under public trust theory, the sovereign must pursue damages in order to make the public –the beneficiaries – whole again and to restore the asset for future generations, who are entitled to benefit from the asset as much as present generations. Failure to seek damages is an abdication of trust responsibility.

D. PRINCIPLES OF NATURAL CAPITALISM AND ECO-SOCIALISM

⁴¹ RESTATEMENT (SECOND) OF TRUSTS § 176 (1957).

⁴² GEORGE T. BOGERT, *Trusts*, 6th Ed. § 99 (West 1987).

⁴³ *Washington*, 520 F.2d at 685.

⁴⁴ *Id.*

⁴⁵ RESTATEMENT (SECOND) OF TRUSTS § 177 (1959).

Public trust principles reinforce an economic approach that commentators in the United States refer to as “natural capitalism.”⁴⁶ This approach recognizes the atmosphere, water, floodplains, wildlife, air, wetlands, forests and other elements of nature as the “natural capital” that provides irreplaceable infrastructure for the human economy. Currently, most corporate actors in the United States industrial economy operate on principles of “conventional capitalism,” which accords no value to natural assets. Businesses have been able to destroy these assets without paying any price. Many visionary economic thinkers predict a new Industrial revolution, one that requires businesses to build profits by using Earth’s interest, not the capital.

One of the leading environmental thinkers in China, Pan Yue (Deputy Director of the State Environmental Protection Agency), suggests a compatible approach called “eco-socialism.”⁴⁷ Pan Yue has urged China to turn away from the unsustainable practices and lifestyles learned from the United States and Europe and instead forge a new direction that will benefit both the economy and the environment, a “path of clean production, a circular economy with new energy sources.” As he points out, the current system allows corporate actors to “take all of the benefits of polluting industries, but pay nothing towards the clean-up costs.” Pan Yue directs attention to the parts of Marxism that urge “the integrated development of humanity” and notes that principles of eco-socialism “aim to create a new model of development, which can meet people’s needs while also reducing waste.” He states, “Instead of aiming for the highest possible levels of production and consumption, we should be aiming to improve quality of life and levels of happiness.” The Chinese government has initiated a “Green GDP” accounting system that reflects some of these economic principles by assessing, for the first time ever, environmental costs of production.⁴⁸

V. TRUST PRINCIPLES IN THE UNFCCC FRAMEWORK

⁴⁶ PAUL HAWKEN ET. AL., *NATURAL CAPITALISM: CREATING THE NEXT INDUSTRIAL REVOLUTION* (1999).

⁴⁷ Pan Yue, *Green China and Young China* (Part One), CHINADIALOGUE (July 17, 2007); (Part Two), CHINADIALOGUE (July 18, 2007).

⁴⁸ *The Greening of China*, THE ECONOMIST (Oct. 20, 2005).

The United Nations Framework Convention on Climate Change (UNFCCC) was signed in 1992 and has 190 nation signatories, including the United States and China. It was designed to set forth a framework within which nations of the world would cooperate to reduce greenhouse gas emissions that posed a threat to natural ecosystems and humankind.⁴⁹ The UNFCCC embraces the trust principle as its overriding beacon of governmental responsibility, calling upon nations to “protect the climate system for the benefit of present and future generations of humankind.” The UNFCCC also calls upon parties to promote “sustainable” economic growth and development.⁵⁰

In presenting a framework of international obligation, the UNFCCC recognizes the “common but differentiated responsibilities” of developed nations and developing nations.⁵¹ These responsibilities are best understood by reference to a property framework.

A. COMMON RESPONSIBILITIES

The UNFCCC states that the sovereign’s right to exploit its resources is limited by a “responsibility to ensure that [such] activities . . . do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”⁵² This mandate expresses the common obligation to prevent waste to shared natural resources. Such obligation is supreme over economic interests.

1. THE CONSERVATION DUTY: A CONTROLLING PRINCIPLE

Case law arising from the United States clearly prioritizes the duty to prevent waste over the economic ambition of individual sovereigns. In one landmark treaty fishing dispute between tribes and states, the United States Supreme Court declared:

Rights can be controlled by the need to conserve a species; and the time may come when the life of a steelhead is so precarious in a particular stream that all fishing should be

⁴⁹ UNFCCC, Preamble, at 1.

⁵⁰ UNFCCC, Article 3, Principle 5.

⁵¹ UNFCCC, Article 3, Principle 1.

⁵² UNFCCC, Preamble at 2.

banned until the species regains assurance of survival. . . .”⁵³

Similarly, the Ninth Circuit stated in another treaty fishing dispute:

Cotenants stand in a fiduciary relationship one to the other. Each has the right to full enjoyment of the property, but must use it as a reasonable property owner. A cotenant is liable for waste if he destroys the property or abuses it so as to permanently impair its value. . . . By analogy, neither the treaty Indians nor the state on behalf of its citizens may permit the subject matter of these treaties to be destroyed.⁵⁴

The duty to not commit waste is as forcefully applied to the atmosphere as to a shared fishery. By stating that nations have “a right to *sustainable* development,” the UNFCCC makes clear that no nation has a right to pursue economic development that harms the atmosphere. Common statements emphasizing the right of developing nations to pursue a higher standard of living must be understood in light of this fundamental conservation duty. While it is undoubtedly true that this conservation duty will have a harsher impact on the developing world, the legal remedy for that impact is not relieving developing nations of their conservation duty, but rather to recognize the unfair allocation of the conservation burden and equitably adjust for it. Because the conservation duty amounts to a supreme, organic encumbrance on any property right, it cannot be extinguished.

2. THE FIDUCIARY DUTY APPLIED TO THE ATMOSPHERE

The duty to protect the atmosphere against waste means little unless it can be detailed in a clear and enforceable fiduciary obligation. In September 2007, the Union of Concerned Scientist (UCS) developed a straightforward prescription of carbon reduction for the industrialized nations with the goal of “avoiding dangerous climate change.”⁵⁵ The prescription is designed to achieve the objective of limiting warming to 2 degrees Celsius above pre-industrial levels and stabilizing carbon equivalents at 450 ppm.

⁵³ *Washington Game Dept. v. Puyallup Tribe*, 414 U.S. 44, 49 (1973).

⁵⁴ *Washington*, 520 F.2d at 685.

⁵⁵ UNION OF CONCERNED SCIENTISTS, HOW TO AVOID DANGEROUS CLIMATE CHANGE 5 (2007), http://www.ucsusa.org/global_warming/science/emissionstarget.html.

Under the prescription, the United States must: 1) peak greenhouse gas emissions by 2010; 2) reduce emissions 4 percent per year thereafter; and 3) reduce emissions at least 80 percent by 2050. These targets are consistent with the IPCC's recent report calling for a worldwide emissions peak by 2015 and reductions approaching 80% by 2050.⁵⁶ As quantitative measures of the fiduciary obligation, they are potentially enforceable in United States courts through an approach called atmospheric trust litigation.⁵⁷

While the UCS report focuses on the industrialized world, the developing world is also held to a duty against waste. The report assumes that the developing world can peak its carbon emissions as early as 2020.⁵⁸ Absent fail-proof technology that captures and stores carbon from coal, it is seemingly impossible for either the industrialized world or the developing world to protect the atmosphere while continuing to use coal as the primary engine of economic growth.

B. DIFFERENTIATED RESPONSIBILITIES

While all nations of the world are held to the "common" duty of protecting the atmosphere against waste, the UNFCCC also recognizes the "differentiated" positions of nations.⁵⁹ This arises from the fact that the developed nations have already industrialized, and in the process of doing so, have "spent" nearly all of the Earth's carbon allowance. While the UNFCCC recognizes the right to "sustainable development," coal is no longer a "sustainable" engine for economic growth in the developing world. This leads to an unjust result for developing nations, which never benefited from a substantial "share" of the planet's carbon allowance. The crux of the "differentiated" status is this: absent an *equitable remedial framework*, the developing world would bear an unfair conservation burden for protecting the shared atmosphere.

⁵⁶ See IPCC REPORT, *supra* note 5.

⁵⁷ Mary Christina Wood, *Atmospheric Trust Litigation*, <http://www.law.uoregon.edu/faculty/mwood/docs/ATLDraft1005.pdf>.

⁵⁸ UCS REPORT, *supra* note 55, at 10.

⁵⁹ UNFCCC Article 3, Principle 1 (calling upon nations to protect the atmosphere "on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.").

Unfortunately, establishing an equitable remedial framework has not been accomplished. This is largely because current political rhetoric has trained public focus in a largely extraneous direction. It is often said that developing nations have a right to pursue a higher standard of living.⁶⁰ The implicit assumption is that developing countries should be allowed to build their economies on coal, no matter how destructive such a course of action is to the future of the planet. This argument contravenes the basic principle that the pursuit of economic growth is limited by the universal duty not to harm the atmosphere. Just as fundamentally, a nation's "right" to a standard of living cannot rein superior to its own citizens' right to survival.

The "right to a standard of living" argument often used by the developing nations has not resonated with the American public. Instead, it has left an impression that China and India are rushing to build new coal-fired plants in seeming disregard of climate crisis. President Bush has capitalized on the paralyzing force of the "standard of living" rhetoric by asserting that the United States should not take action until China commits to action. This position has shielded the huge American oil, gas, and coal industry from any accountability for the world's carbon pollution inequity – a result that satisfies President Bush, who has persistently elevated corporate interests over the best interests of the American people. What is urgently needed is a logical characterization of the developing world's needs and rights that the American public can grasp in order to hold their leaders accountable for achieving an equitable international climate regime.

This frame most logically suited to the United States political context is one grounded in property law. The "differentiated" status of nations as used in the UNFCCC invokes the principle that property owners should not bear a disproportionate conservation burden to protect public assets.⁶¹ In terms Americans can understand, the developing nations stand in the same position as the small property owner prohibited from cutting trees to build a house after nearly all of the forest was clearcut by timber corporations who profited while bringing the forest-dwelling species to the edge of extinction. The U.S. Supreme Court has recognized that

⁶⁰ *IEA Predicts "Shocking" Rise in Global Energy Demand*, ENVIRONMENTAL FINANCE (Nov. 8, 2007) (statement of IEA economist); Marta Falconi, *Despite Pressure, China and India Sticking with Coal*, ASSOCIATED PRESS (Nov. 17, 2007); Richard McGregor, *China Urges Rich Nations to Lead on Climate*, FINANCIAL TIMES (June 4, 2007).

⁶¹ UNFCCC Article 3, Principle 2.

property owners should not be forced to bear a “disproportionate burden” of conserving public assets.⁶² While these principles find their primary grounding in the takings clause of the United States Constitution, they can be extrapolated to the international arena. The conclusion flowing from this principle is not that the property owner may engage in environmentally destructive behavior with abandon, but rather that the owner should be monetarily compensated for his inability to make reasonable use of his property due to public conservation necessity. The focus, therefore, turns to just compensation in the form of money or equivalent goods.

A focus on compensation will direct international diplomatic energy towards the sources of financing that are necessary to spur renewable energy in the developing world. There is no world government that can provide this compensation to the developing nations, but there is a legally rooted basis for each nation to receive compensation from the appropriate parties -- the private corporations that profited from carbon emissions. As explained below, nations of the world may seek natural resource damages from large corporate polluters and apply such damages to renewable energy technology. Nations should pursue such compensation while at the same time taking immediate measures to prevent waste to the atmosphere. The most crucial anti-waste measure at this time is a moratorium against new coal-fired plants.

VI. AN INTERNATIONAL ATMOSPHERIC TRUST INITIATIVE

A. JOINT U.S.-CHINA COAL MORATORIUM

As noted, scientists warn that continued coal development in the absence of fail-proof capture technology will push the planet beyond the ice-sheet tipping point. A world-wide moratorium on new coal-fired plants is unavoidable for a world that seeks to thwart planetary catastrophe. NASA scientist Jim Hansen has urgently called for such a moratorium. Internationally, there are a number of initiatives, including New Zealand’s 10-year moratorium against new coal plants.

Nevertheless, the United States and China have both indicated that neither will take dramatic climate action without a commitment by the other. The United Nations’ top climate official recently warned world governmental leaders that ignoring the urgency of global warming

⁶² Dolan v. City of Tigard, 512 U.S. 374 (1994).

would be “criminally irresponsible.”⁶³ For the reasons below, several dynamics combine to make a coal moratorium increasingly feasible in both U.S. and China.

1. THE UNITED STATES: A DE FACTO COAL MORATORIUM

Though there are still 120 proposed coal-fired plants in the United States, a de facto coal moratorium may be forming. Nationally, political resistance to coal is rising not just among environmental groups, but also among non-traditional groups, such as Western Republican ranchers worried about their water supplies evaporating from global warming.⁶⁴ Several climate groups have made a coal moratorium the centerpiece of their call to climate action. The New York Times has called upon the U.S. to take the lead in alternative energy development, stating, “Unless ways can be found to replace coal as an energy source or to capture its emissions, the global warming game is essentially lost.”⁶⁵ Senate Majority Leader Harry Reid has called for a world-wide moratorium against new coal-fired plants.⁶⁶ Senators John Edwards and John Kerry have also called for a moratorium. Representative Henry A. Waxman, chairman of the House Committee on Oversight and Government Reform, has announced he will initiate legislation for a national moratorium. He has also subjected the U.S. Environmental Protection Agency to a Congressional oversight hearing and investigation for its recent approval of a permit for a new coal-fired plant.⁶⁷ The conservative state of Idaho enacted a two-year moratorium against new coal-fired plants. Many states are enacting climate legislation that requires public utilities to provide more of their energy through renewable sources, thus shrinking the market for coal. Growing political momentum towards a national moratorium will also undoubtedly be fueled by a new computer database compiled by the Center for Global Development that allows citizens to identify the biggest coal plant polluters across the world.⁶⁸

⁶³ Arthur Max, *UN Official Warns of Ignoring Warming*, ASSOCIATED PRESS (Nov. 12, 2007).

⁶⁴ See Rainforest Action Network, *Moving Closer to a Moratorium on Coal*, http://ran.org/fileadmin/materials/global_finance/publications/Coal_Victories.pdf, *supra* note 20.

⁶⁵ See *id.*

⁶⁶ Martin Griffith, *Reid Opposes New Coal Fired Plants Worldwide*, LOS VEGAS SUN (Aug. 18, 2007).

⁶⁷ See <http://video.energypolicytv.com/displaypage.php?channel=Congress&vkey=83e7a52ce5e8d6f0fed3>.

⁶⁸ Juliet Eilperin, *World's Power Plant Emissions Detailed*, WASHINGTON POST (Nov. 15, 2007).

Legal barriers to coal development are also mounting. The Supreme Court has held that carbon dioxide emissions from coal plants can be regulated under the Clean Air Act.⁶⁹ In Kansas, state environmental officials recently denied an air permit for a proposed coal-fired plant, stating, "It would be irresponsible to ignore . . . the contribution of . . . greenhouse gases to climate change and the potential harm to our environment and health if we do nothing."⁷⁰ Other states are denying permits for coal-fired plants using other laws.⁷¹ Water pollution and hazardous waste laws may pose another hurdle, as the mercury emitted from coal-fired plants poisons fish and triggers fish advisories in nearly every state.

The National Environmental Policy Act (NEPA) will undoubtedly prove a formidable barrier to any coal development that involves federal approval.⁷² NEPA requires federal agencies to develop environmental analysis for actions that could affect the environment. The level of required NEPA analysis has likely deepened as a result of Dr. Jim Hansen's recent testimony in an Iowa coal plant proceeding, where he opined that long-term emissions from just one more coal-fired plant could be the "straw that breaks the camel's back" in terms of the planet's ice sheet tipping point.⁷³ Dr. Hansen has been found to be a credible witness on atmospheric climate matters by a federal court in another climate proceeding.⁷⁴ NEPA requires federal agencies to study the "effects" of their action, including "cumulative effects." In light of Dr. Hansen's testimony, it is now seemingly incumbent on federal agencies to explore the extensive realm of ice sheet science when determining the environmental effects of coal development action. This inquiry may be nearly unending, as NEPA requires agencies to supplement their analysis with significant new information. The NEPA hurdle is likely to delay federal action related to coal indefinitely.

Diplomatic stances, however, may not reveal this changing U.S. political and legal context. This is because foreign policy is exclusively committed to President George W. Bush as a

⁶⁹ *Massachusetts v. EPA*, 127 S.Ct. 1438, 1454 (2007).

⁷⁰ Steven Mufson, *Power Plant Rejected Over Carbon Dioxide for First Time*, WASHINGTON POST (Oct. 19, 2007).

⁷¹ *See supra* note 64.

⁷² National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. § 4331 *et seq.* (2006).

⁷³ Hansen Testimony, *supra* note 18.

⁷⁴ *Green Mtn. Chrysler v. Crombie*, 2007 WL 2669444 (D. Vermont 2007).

matter of Constitutional law. President Bush, a former oilman with strong loyalty to the fossil fuel industry, has shown persistent recalcitrance in accepting climate responsibility and is unlikely to endorse a national moratorium on coal plants. The views of Al Gore, former U.S. Vice President and 2007 Nobel Peace Prize winner, may better reflect the emergent disposition of the American public towards climate policy. Gore has called for a world-wide moratorium on new coal-fired plants.

In charting a course for their own nation, Chinese diplomats may determine to look forward to future, rather than past, American policy, particularly since President Bush has just one year remaining in office. This is particularly advisable since the Bush climate policy is rapidly losing legitimacy, tainted by mounting allegations that his appointed officials suppressed climate science and changed climate reports to serve the fossil fuel industry.⁷⁵ The scandal has been the subject of a 2007 investigation by the U.S. House Committee on Oversight and Government Reform as part of a broad inquiry into the Bush administration's political interference with climate science.⁷⁶

2. CHINA: THE INTOLERABLE REALITY OF COAL AND THE GLIMMER OF RENEWABLES

Though Chinese officials still advance coal development, they too face rapidly changing political and economic dynamics. One of the most pressing factors is the widespread death and illness caused by coal-related pollution. The New York Times recently concluded an investigative series on Chinese industrial growth in which it reported that public health is "reeling" from pollution.⁷⁷ According to the World Bank, seven of the 10 most polluted cities in the world are in China.⁷⁸ Air pollution largely from coal-fired plants is blamed for hundreds of thousands of deaths each year.⁷⁹ Chinese cities

⁷⁵ John Vidal, *Revealed – How Oil Giant Influenced Bush*, *Guardian* (June 8, 2006); see also http://en.wikipedia.org/wiki/Philip_Cooney.

⁷⁶ See <http://oversight.house.gov/story.asp?ID=1162>.

⁷⁷ Joseph Kahn and Jim Yardley, *As China Roars, Pollution Reaches Deadly Extremes*, *NEW YORK TIMES* (Aug. 26, 2007).

⁷⁸ Rhett Butler, *Renewable Energy in China, A Strategic Future?* *MONGABAY.COM* (Aug. 2, 2005).

⁷⁹ Kevin Holden Platt, *Chinese Air Pollution Deadliest in World*, *NATIONAL GEOGRAPHIC NEWS* (July 9, 2007).

“often seem wrapped in a toxic gray shroud,”⁸⁰ and acid rain from coal-fired plants is eroding China’s cultural monuments.⁸¹ During the 2008 Olympics, the world’s eyes will be on Beijing, where smog is so problematic that major sports events may have to be delayed or postponed.⁸² China’s coal burning pollution is now perceived to be a global problem, not only because of the threat it poses to climate, but also because the pollution migrates and directly damages resources in nations across the world.⁸³ In China, pollution has already caused social unrest, and some observers say it presents an “acute political challenge to the ruling Communist party.”⁸⁴

Another looming predicament involves water. China’s exploding growth has rapidly depleted groundwater supplies, and experts predict that the aquifer supplying China’s North Plain will be depleted within thirty years.⁸⁵ Increased reliance on coal for energy would dramatically worsen the water shortage. An average 500-megawatt coal-fired plant uses an average of 2.2 billion gallons of water each year from nearby water bodies such as lakes, rivers, and streams.⁸⁶

The Chinese pollution crisis carries severe economic costs. The World Bank has estimated the cost of pollution to be 8-13% of China’s GDP.⁸⁷ As Pan Yue has stated, “The contradiction between the population on one side, and resources and the environment on the other, is a time bomb with the power to stop our rise.”⁸⁸ The economic losses resulting from runaway global heating must also enter into the calculation of China’s future economic health. On a global scale, British Government’s Stern Review estimates that climate disaster will cost up to 20 percent of the world’s GNP, yet actions to reduce

⁸⁰ Kahn and Yardley, *supra* note 77.

⁸¹ Michael Casey, *Pollution Ruining China’s Ancient Historic Sites*, THE ASSOCIATED PRESS (Nov. 5, 2007).

⁸² Keith Bradsher & David Barboza, *Pollution Risk for Olympic Events*, BBC SPORT (Aug. 8, 2007).

⁸³ *Pollution From Chinese Coal Casts a Global Shadow*, NEW YORK TIMES (June 11, 2006)

⁸⁴ Kahn and Yardley, *supra* note 77.

⁸⁵ Jim Yardley, *Beneath Booming Cities, China’s Future is Drying Up*, NEW YORK TIMES (Sept. 28, 2007).

⁸⁶ UNION OF CONCERNED SCIENTISTS, ENVIRONMENTAL IMPACTS OF COAL POWER: WATER USE, [HTTP://WWW.UCSUSA.ORG/CLEAN_ENERGY/COALVSWIND/C02B.HTML](http://www.ucsusa.org/clean_energy/coalvswind/c02b.html).

⁸⁷ Pan Yue, *supra* note 47.

⁸⁸ *Id.*

greenhouse gas emissions would cost only 1% of the GNP.⁸⁹ World Bank economists have concluded, “Interventions to improve the environment in China are likely to yield positive net benefits.”⁹⁰

Severe market repercussions appear inevitable if China continues to grow its coal reliance. Approximately 23% of China’s emissions are associated with goods exported out of the country.⁹¹ American consumers are increasingly aware of the carbon emissions “embedded” in imports from China. One report found that, in 2004, the United States imported products with 1.8 billion tons of embedded CO₂, much of which came from China.⁹² Such information is likely to become ever more available to American consumers. The retail giant Wal-Mart just announced its intention to provide carbon accountings for major classes of consumer products. These factors combine with a budding cultural shift in the United States towards living simply, consuming less, and buying locally. Many of the imports from China are discretionary trinkets that American consumers are increasingly urged to do without.

Such consumer carbon concerns will undoubtedly be reinforced by two major Chinese market disasters that have caused widespread consumer wariness over China imports. In May 2007, a Chinese “food scare” resulted from the discovery that industrial chemicals and heavy metals had entered parts of the Chinese food supply and tainted a stream of food exports.⁹³ Pet food from China killed and sickened thousands of dogs and cats in the United States, producing one of the largest pet food recalls in U.S. history.⁹⁴ An even broader children’s toy scare continues to unfold as certain imports from China are found to contain lead and other chemicals, prompting massive product recalls.⁹⁵ These market scares have prompted heightened global concern about safety of Chinese products⁹⁶

⁸⁹ STERN REVIEW, THE ECONOMICS OF CLIMATE CHANGE vi (Cambridge University 2006).

⁹⁰ THE WORLD BANK & STATE ENVIRONMENTAL PROTECTION ADMINISTRATION (CHINA), COST OF POLLUTION IN CHINA, Executive Summary, xvii.

⁹¹ Jane Spencer, *Why China Could Blame its CO₂ on West*, WALL STREET JOURNAL (Nov. 12, 2007).

⁹² *Id.*

⁹³ David Barboza, *An Export Boom Suddenly Facing a Quality Crisis*, NEW YORK TIMES (May 18, 2007).

⁹⁴ *Id.*

⁹⁵ *Toys Recalled Over Chemical Scare*, ASSOCIATED PRESS (Nov. 8, 2007).

⁹⁶ *See Amid Fears, Fewer Toys Under the Christmas Tree?* WALL STREET JOURNAL (Nov. 14, 2007).

and may trigger some degree of consumer withdrawal from the Chinese export market.

Chinese national leadership realizes that the country is at an environmental crossroads and is undertaking environmental initiatives.⁹⁷ If the United States demonstrates a global warming commitment through a moratorium on new coal-fired plants, a historic window of opportunity may open between China and the United States to plan a mutually beneficial economic future built on renewable energy rather than coal.

B. NATURAL RESOURCE DAMAGES FROM INDUSTRIAL POLLUTERS

It is widely acknowledged that the developing world would more intensively pursue renewable sources of energy if it had the money and technology to do so. China unveiled an energy plan in June, 2007, in which it committed to modestly increase the amount of renewable energy it produces. But to truly curb carbon emissions to the necessary extent, a switch to renewable energy would have to be massive, given that China currently meets two-thirds of its energy needs from coal.⁹⁸ The developing nations cannot afford such an energy transition absent considerable support from the developed world. Some experts have estimated that \$300 billion a year for a decade is needed to “jumpstart” a shift to renewable energy in developing countries.⁹⁹ Though the industrialized nations made a commitment in the UNFCCC and the Kyoto Protocol to promote and finance transfer of environmental technologies to the developing world, it has not been fulfilled.

There may be many reasons for this failure, but two are crucial to confront in the next round of climate negotiations. First, the commitment suffers from the universal weakness of any international agreement -- it cannot be directly enforced. Unless a way is found to make international commitments binding through the domestic legal systems of the various signatory nations, commitments may amount to empty promises. Second, the UNFCCC and Kyoto commitments focus exclusively on the sovereign (state) level. As such, they fail to deal with the multinational corporations which have become, in effect, “quasi sovereigns” due to their sheer market force. These multinationals can no longer be ignored. Because they hold the lion’s share of aggregate global wealth, they are necessary “deep pockets” in the overall financing of

⁹⁷ Kahn & Yardley, *supra* note 77.

⁹⁸ *Id.*

⁹⁹ Ross Gelbspan, *Two Paths for the Planet*, THE AMERICAN PROSPECT 48 (2007).

renewable technology. Without looking to multinational corporations, governments are left with taxing their citizens, a choice that is both politically difficult and economically limited. Moreover, the multinationals drive the international economy through self-serving investment choices. If these corporations continue the path of fossil fuel use, they will cause the planet to pass the climate tipping point. Accordingly, the UNFCCC financing and technology commitment should be tied to a strategy that holds multinational corporations largely accountable for the transition to sustainable energy.

While there may be many innovative market mechanisms that can spur multinational corporate investment in renewable energy, one overlooked source of financing is the recovery of natural resource damages by nations for the irreparable harm that multinational corporations have caused to public assets. As noted earlier, sovereign trust responsibilities obligate governmental officials to seek monetary recovery for damage to public trust assets. In the United States, this duty arises out of both common law and statutory law. Other nations may have a basis for natural resource damages in their common law or may create a basis through legislation.

While, in theory at least, nations could recover for direct damage to the atmosphere, it would be nearly impossible to figure out each national “share” of monetary recovery given that the atmosphere is an undivided asset subject to full use and enjoyment by every nation. The more streamlined approach is to recover for damage caused to more tangible assets such as fisheries, coastlines, water supplies, forests, and the like. This approach recognizes that the atmosphere is a natural instrument through which carbon pollution causes damage. Arguably a corporation should not be immune from liability simply because the atmosphere acts as the natural medium through which pollution damage is delivered, any more than a corporation is immune for discharging toxic chemicals that enter a nearby waterway via a natural channel. In the United States, actors are strictly liable for natural resource damages, thereby obviating potentially massive arguments over fault. A primary, but not insurmountable challenge, is allocating the liability among various actors. The task is not unprecedented, as toxic torts and pharmaceutical injuries often involve many joint tortfeasors. Once liability is established, natural resource damages are computed using a variety of economic models.

While recovery of natural resource damages cannot be relied upon as the sole mechanism for providing financial support to the developing nations, the strategy holds several advantages as

one shot in a global “buckshot” approach. First, it targets the financial burden of atmospheric recovery on the appropriate economic actors – the multinational corporations that caused the damage. In doing so, it directs focus on the entities that have been the most powerful drivers of climate policy, yet also the most ignored in international agreements. Multinationals have enormous assets to bring to the task of transitioning the world’s energy future. Exxon Mobil alone registered a market value of \$410.7 billion in 2006, a value larger than many sovereign governments.

Second, the natural resource damage approach provides a domestic hook for the international financing commitments. In theory, any sovereign trustee is capable of pursuing such damages. In the United States, recognized trustees are the federal government, each of the 50 states, the Indian tribes (over 500 in all) and foreign governments. The broad spectrum of national and subnational governments positioned to pursue such damages across the world increases the likelihood of success in at least some nations, though it is certainly predictable that a number of courts will reject the natural resource damage theory of recovery.

Third, any litigation victory -- and perhaps even the mere filing of litigation -- will send a market signal that reverberates across the energy sector. Liability for past carbon pollution would form a significant market deterrent to future pollution. Just as adverse court rulings have influenced market shifts in product safety and hazardous waste practices, so could the prospect of adverse natural resource damage rulings be a factor in motivating an energy transition on the part of multinational corporations.

Naturally, there are significant potential downsides and hurdles to this approach -- as there are with any approach to climate crisis. First, even in the United States, where natural resource damage awards are common, liability for climate damage will no doubt challenge the judicial imagination. The classic natural resource case involves the oil spill that causes direct damage to coastlines and fisheries. Because there are no statutes providing a basis for carbon liability, trustees would have to proceed under common law theories. Thus far, two American courts have demonstrated an unwillingness to entertain a public nuisance theory in climate litigation. Nevertheless, as courts begin to appreciate the unprecedented nature and magnitude of global warming and rise to their crucial role in protecting the rights of citizens to survival conditions, they will be more inclined to view carbon pollution as a hazardous substance and apply traditional liability theories under common law.

Second, some may fear that any litigation entails time that the world no longer has available. To be sure, litigation in many countries is notoriously slow. Nevertheless, once obtained, judicial injunctions provide immediate relief. Moreover, in the United States, natural resource damage claims are typically settled, often expeditiously. For example, the Exxon Valdez damages case was filed in March, 1991 and settled seven months later for a total award of \$900 million.

Third, there is a fairness concern with holding corporations responsible for damage that was legally permitted at the time. This concern, however, falls away when analogies are made to the hazardous waste realm. It is widely accepted in United States law that corporations may be held liable for damaging the environment even though their action was legally permissible at the time. Moreover, elevating the fairness concern to the public level, it is arguable that recovery of natural resource damages is the only “fair” approach. The citizens, as beneficiaries of the natural trust, stand to lose untold value from the damage wrought by corporations that have gained billions of dollars in profits and subsidies through their harmful actions. Recovery in the form of damages is the only approach geared towards compensating the public for such damage. To alleviate corporate fairness concerns, courts can employ equitable principles to limit recovery of past damages to an appropriate date, such as 1992, when the UNFCCC was crafted – an act that put corporations worldwide on notice of the consequences of their carbon pollution.

Fourth, there is a legitimate concern of the impact of such awards on the world economy. A large award would send the stocks of defendant corporations reeling. While true, many corporations can restructure operations towards renewable energy. In the hazardous waste realm, sophisticated consent decrees often provide investment incentives that keep the company financially afloat. It is projected that, over the long term, renewable energy will expand the overall wealth of the global economy.¹⁰⁰

A fifth obstacle involves the difficulty of funneling damage awards into renewable energy investment. Courts generally require natural resource damages to be used for restoration of the damaged asset. In the case of climate-caused damage, however, efforts to “restore” the damaged

¹⁰⁰ *Id.* at 47.

asset (for example, an eroded beachfront) in the short term are fruitless, because the climate conditions will continually impose damage for generations to come. Sovereign trustees will have to convince courts that investment in renewable energy in developing nations will mitigate climate heating overall and thereby help prevent further damage to the natural assets over the long term. Analogies may be made to penalties gained under pollution laws that are directed towards environmental education programs. Such programs, while not mitigating the actual damage caused by the pollution, presumably engender more widespread social responsibility and thereby reduce the probability of recurrent pollution over the long term.

Perhaps the most complex hurdle is ensuring that natural resource damages are invested in renewable energy that serves developing nations. The nations that make the first calls on the natural resource damages will benefit from early action, and those that wait may find their lawsuits directed at empty pockets. Arguably, the developed world should dedicate its recovery to funding renewable energy in the developing world, as contemplated by the UNFCCC commitments. This might be accomplished by partnering with an existing international governmental agency that can funnel the money into renewable energy projects in developing countries. Another option may be to use the settlement framework to structure an investment incentive whereby the defendant corporation can directly move investments from the fossil fuel sector to the renewable energy sector in the developing world.

In sum, natural resource damage awards for greenhouse gas pollution under common law theories may provide one lever to achieve part of the financing promised in the UNFCCC and the Kyoto Protocol. The strategy would be greatly facilitated by the cooperation of nations in establishing a framework set of principles that could provide direction for courts and legislatures operating in a challenging new realm.

VII. THE DAWN OF PLANETARY PATRIOTISM

Ross Gelbspan observes: “Humanity is standing at a crossroads between a more just, peaceful world and an increasingly chaotic, turbulent, and authoritarian future driven by a succession of climate-driven emergencies.”¹⁰¹ The world can choose the hopeful path only if its present leaders view themselves as trustees of priceless natural resources. Leaders must shift

¹⁰¹ *Id.* at 45.

their concept of reality from human-imposed constraints of economics and politics to the non-negotiable threat of climate crisis. In Pan Yue's stirring words, it is time to embrace "the spirit of trying to achieve things that seem impossible."¹⁰²

The United Nations has clearly warned the world to cap carbon emissions by 2015 and achieve dramatic reductions thereafter. This cannot possibly happen if China, the United States, and other nations of the world continue emitting massive pollution from coal-fired plants. This article has proposed a global moratorium on coal development, along with resort to natural resource damages as one measure to partially finance a necessary transition to renewable energy in the developing world.

A China-United States partnership will be a crucial step in forging a necessary alliance among all nation-trustees of the world to secure the systems of life on Earth. When that global alliance comes to pass, the world will wake to the dawn of a new kind of patriotism -- a planetary patriotism that unites Humanity on Earth in a common obligation extending through all of time.

¹⁰² *Supra* note 47.