

**Global Environmental Democracy Project**

University of Oregon Environmental and Natural Resources Law Center

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**An Atmospheric Recovery and Implementation Plan Funded by Natural Resource Damage Actions Against Fossil Fuel Corporations**

As our world moves rapidly towards climate tipping points, leading scientists agree that the climate stabilization strategy must have two parts: 1) emissions reduction; and 2) natural removal of carbon dioxide from the atmosphere. An international team led by Dr. James Hansen, formerly the Director of NASA’s Goddard Institute for Space Studies, quantified these two parts by developing a prescription for restoring equilibrium at 350 parts per million of carbon dioxide in the atmosphere. The prescription calls for two measures: 1) a global pathway of 6% annual carbon dioxide emissions reductions (beginning in 2013); and 2) a drawdown of 100 Gigatons of carbon from the atmosphere through reforestation and soil sequestration methods.

**Carbon Dioxide Emissions Reduction**

As to the first measure, it will be essential over the long term to reduce emissions to nearly zero, but political gridlock in the legislative and executive branches of the United States (and in many other nations) blocks progress. Judicial intervention is necessary on the domestic level to force leaders to act before climate tipping points set in motion irreversible heating, thereby nullifying the opportunity to thwart catastrophe.

A global litigation strategy called Atmospheric Trust Litigation (ATL) is underway to define sovereign legal obligations towards the global atmosphere and force governments to lower carbon emissions within their jurisdictions. The approach draws upon the public trust doctrine, which is manifest in many nations throughout the world. This principle requires that sovereigns (nations and their subdivisions) act as trustees towards crucial natural resources and protect such resources against substantial impairment. The principle characterizes both present and future generations of citizens as beneficiaries holding inalienable public property rights -- of constitutional character -- in life-sustaining resources. The judiciary has enforced public trust protections in other contexts (such as waterways and wildlife). ATL asks courts to apply the same logic to the atmosphere.

As sovereign co-trustees of the atmospheric trust, all nations on earth owe corollary and reciprocal responsibilities to other co-trustees, as well as to their own citizen beneficiaries, to protect the Earth’s climate function. ATL cases have been brought by the non-profit organization, Our Children’s Trust, in various states in the United States, against the federal government (Obama and now Trump Administration), and in other countries as well. ATL seeks a judicial remedy in domestic courts requiring governments to develop climate recovery plans that reduce emissions within their jurisdictions by 6% annually (a figure that increases with delay). By characterizing climate crisis as a matter of sovereign constitutional obligation and by offering a uniform remedy linked to a global climate prescription, ATL envisions discernable rules enforceable in domestic courts that can help promote a common plan of global protection – even in a world governed by multiple sovereigns with fragmented jurisdiction over the planet.

While there is no panacea, domestic courts have the power to order swift and decisive relief responsive to the urgency of the crisis. In the landmark case, *Juliana v. United States*, the federal district court of Oregon found a federal constitutional public trust duty, as well as a duty grounded in the due process clause of the U.S. Constitution, to protect a stable climate system capable of supporting human life. Likewise, in *Foster v. Department of Ecology*, a court in Washington State found a state-based constitutional public trust right to a stable climate system.

**Atmospheric Carbon Drawdown**

The public trust principle can also promote the other side of the Hansen *et. al.* prescription, which calls for projects across the globe to draw down atmospheric carbon through natural methods. Research by UN scientific committees, university institutes, and non-profit research entities shows the potential for strategic natural drawdown measures. Four categories of projects potentially situated to accomplish major drawdown are: 1) reforestation; 2) soil sequestration through improved (non-chemical) agricultural processes; 3) mangrove and wetlands restoration; and 4) regenerative grazing practices. These methods carry significant co-benefits by restoring and stimulating soil productivity, increasing food production, and boosting local economies. They would also restore ecosystem services such as water source protection, storm buffering, flood control, pollution filtration, and species habitat.

Projects in these four categories can be planned in targeted areas throughout the world. A planning institute or entity envisioned as the Atmospheric Recovery Institute (ARI) can design projects, supervise implementation, and conduct a carbon accounting to verify predicted drawdown. Ideally situated in a top-flight research university, the ARI would be positioned to analyze terrestrial carbon processes and evaluate overall carbon drawdown from the atmosphere. A separate and independent financing entity, the Sky Trust, is necessary to receive money from liability judgments and disperse such funds into qualifying drawdown projects worldwide.

These restoration projects will be expensive in the aggregate, perhaps totaling over a trillion dollars. International negotiations have not discussed an atmospheric recovery plan, nor have they attempted to fund restoration efforts. The focus of monetary commitments has been primarily on compensating human communities for relocation and climate damage. Attention towards terrestrial measures has been aimed at abating the loss of valuable forests that provide carbon “sinks” to absorb ongoing pollution. These measures do nothing to draw down the *existing excess* of carbon dioxide in the atmosphere. Without such measures, the energy imbalance will continue to cause massive damage to human and ecological communities. Ultimately, the imbalance threatens uncontrollable heating that would render much of the planet uninhabitable to humans. Geo-engineering proposals, while targeted to planetary stability, are fraught with extreme risk. The natural methods of drawdown are both preferable and feasible if planning commences quickly.

A legal strategy can leverage the public trust principle to hold the major fossil fuel corporations liable for funding such atmospheric recovery. Public trust law holds polluters liable for damages to public trust assets and requires sovereign trustees to seek recovery of such natural resource damages and apply them towards restoration of the asset. Ample precedent exists for holding corporations that cause marine oil spills liable for natural resource damages. The same liability principle extends to the atmosphere, a global trust resource. The amount of aggregate damages can be assessed by the cost of the overall recovery plan that is necessary to drawdown 100 Gigatons atmospheric carbon, as provided in the Hansen *et. al* prescription.

The major fossil fuel corporations (“carbon majors”) bear primary liability for atmospheric natural resource damages. Their proportionate responsibility for carbon emissions since the Industrial Revolution has been determined in a study authored by Rick Heede. The largest fossil fuel corporations have collectively gained more than $1 trillion in profits since the millennium and stand as a significant deep-pocket funding source for atmospheric restoration. States are positioned, as co-trustees, to seek such damages either by invoking existing public trust principles or by formulating new statutes that allow recovery. Tribes may be positioned to sue based on their status as sovereign co-trustees and through the assertion of federal treaty rights. Nations around the world are also situated to render liability judgments in their own countries and then enforce such judgments in the countries that hold the assets of the corporations. The liability framework is set forth in a published article: Mary Christina Wood & Dan Galpern, *Atmospheric Recovery Litigation: Making the Fossil Fuel Industry Pay for Damages to the Atmosphere from Carbon Pollution*, ENVIRONMENTAL LAW (2015), pre-publication draft available at http://law.uoregon.edu/faculty/mwood/publications/. The Conservation Trust Project is developing a white paper setting forth conceptual “litigation pathways” to recovering NRDs.

In summary, the project of atmospheric drawdown must be accomplished through collaboration among various disciplines. The component steps are: 1) create and implement a litigation approach for state, tribal, and/or foreign nation co-trustees to recover atmospheric natural resource damages; 2) create an Atmospheric Recovery Institute to both formulate an atmospheric recovery plan consisting of high-yield projects situated in nations throughout the world, and to perform updated global carbon accountings assessing overall progress towards the necessary drawdown; 3) design an implementation structure (Sky Trust) that can receive natural resource damages, apply the funds to restoration projects, and monitor their completion. The Conservation Trust Project is developing white papers addressing all three components of this effort. While a global restoration effort on this scale is unprecedented, the underlying legal principles and approach are strikingly similar to those traditionally applied to discrete ecosystems.

In the end, the ambition of climate recovery must match the threat posed by climate disruption. As Winston Churchill famously declared, “It is not enough that we do our best; sometimes we must do what is required.”

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