



Discussion Paper

Global Nonviolent Law-Enforcing Insurgency: A Plausible Strategy for Climate Protection?

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Introduction

The 2013 Fifth Assessment Report of the Intergovernmental Panel on Climate Change confirmed that humans are destroying the earth's climate, but it also revealed something that should be even more alarming: Twenty-five years of human effort to protect the climate have failed even to slow the forces that are destroying the climate. On the contrary, the rate of increase in carbon emissions from burning fossil fuels tripled between the release of the first IPCC report in 1988 and today.

When scientists first established that human burning of fossil fuels was causing global warming, the solution seemed obvious and at hand. National governments needed to agree to make modest annual reductions in the total amount of greenhouse gasses (ghgs) that were emitted into the atmosphere. Global negotiations had recently agreed to phase out another pollutant, chlorinated hydrocarbons, that had been causing a hole in the ozone layer. Greenhouse gasses seemed controllable through similar measures taken by the same kind of institutions.

Twenty-five years later there is no binding agreement to limit ghgs; emissions have reached a level that guarantees a 2-degrees Celsius warming at least. Despite extreme storms, floods, droughts, arctic melting, desertification, fires, and other indicators of apocalyptic climate change, emissions of carbon and other greenhouse gasses continue to rise and are projected to go on rising, leading to still more devastating climate change. Yet there is no significant limitation on further emissions, inadequate analysis of the reasons for this failure, and little plausible strategy to overcome it.

Advocates of climate protection have been repeatedly defeated or forced to accept inadequate measures by visible opponents. These are generally collections of fossil fuel producers and users, politicians influenced by them, and rightwing ideologues who oppose climate protection on the grounds that it requires public interference with the private economy.

But why can a straightforward solution to a problem that promises such devastation for every person on earth be blocked by such a relatively narrow collection of forces? Are there deeper structural factors that make climate protection so difficult? And if so, how can they be overcome? These are the questions explored in this discussion paper.

The failures of the past quarter century are not what most climate protection advocates expected. From the scientific confirmation of global warming in the 1980s, they had laboriously built institutions like the United Nations Framework Convention on Climate Change [UNFCCC] and the Intergovernmental Panel on Climate Change [IPCC] and had laboriously constructed a consensus among scientists, government leaders, and UN officials around the policies defined as necessary by the IPCC. The UN "framework agreement" was followed by the Kyoto Protocol and the "Bali roadmap" for the Copenhagen climate summit. Based on the compelling arguments of the British Government's Stern report on the economics of climate change, many global business leaders signed on to climate protection policies. Many national governments initiated policies and passed legislation to reduce ghgs. The world seemed to be proceeding on a rational, if tardy, course to address climate change.

With the collapse of the Copenhagen climate summit it became evident that the entire process had been little more than a charade in which world leaders, governments, and business pretend to address climate change while pursuing policies that pour ever more ghgs into the atmosphere. Copenhagen revealed a collection of greedy, advantage-seeking institutions whose leaders were unable to cooperate even for their own survival.

It is doubtful that in the course of twenty-five years the official climate protection process has led to any significant reductions in greenhouse gas emissions. A UN analysis showed that, in the unlikely event that all nonbinding national pledges to cut emissions were fulfilled, the result would be a devastating 3-degree Celsius warming of the earth.¹ In 2013 carbon in the atmosphere reached 400 parts per million (ppm) – already far above the 350 ppm level that climate scientists regard as the safe upper limit.

In response to the failures of the official climate protection process, an independent climate protection movement has emerged. It is not controlled by any national or special interest. It has organized globally and demonstrated capacity to act globally, exemplified by the first "International Day of Climate Action" in 2009 that CNN called, "the most widespread day of political action in our planet's history." It has made a global icon of what needs to be done — reduce carbon in the atmosphere to less than 350 parts per million. It has broken out of the constraints of lobbying and demonstrating within a legal framework set by the state and those behind it by adopting civil disobedience as an important and legitimate part of its strategy. It has challenged the governments that permit climate destruction, the fossil fuel producing and using industries that conduct it, and the corporations and other institutions around the world that collude with it.

In spite of these advances, the movement's ability to sharply reduce ghg emissions and establish climate-safe levels of carbon in the atmosphere has so far proven miniscule. So there is a search under way to develop more effective strategies for climate protection. Some have advocated some kind of national or global revolution to overthrow the powers that perpetuate climate destruction. Others have called for building resilient local communities that can withstand climate change. Some have advocated an ecological socialism as the solution; others a purer market that charges polluters for the social cost of their emissions.



This discussion paper proposes one possible strategy for climate protection that it characterizes as a global nonviolent law-enforcing insurgency. It takes a developmental approach, based on a self-transformation of today's global climate protection movement. I do not claim that this is the only or even the best such strategy. Rather, I offer it in the spirit of a "thought experiment." I will be delighted if its proposals are rejected as long as they help stimulate a successful search for better ones.

Chapter 1, "The obstacles to climate protection," examines some of the barriers that have prevented us from meeting the obvious necessity of radically reducing ghg emissions. Some are widely recognized, like the power of the fossil fuel industry. But some are more difficult to perceive because they are deeply embedded in a world order we often take for granted. Identifying these deeper forces is crucial for understanding and overcoming our current climate protection impasse.

Chapter 2, "Global nonviolent law-enforcing insurgency," indicates an alternative to either functioning as a pressure group within existing political frameworks or some kind of violent revolution. It proposes that the global climate protection movement become a global insurgency using nonviolent direct action to challenge the legitimacy of existing authorities. It argues that such an insurgency can be justified not only morally, but also as a means to contest the authority of governments that are failing to perform their most fundamental duties to those they claim to represent.

Chapter 3, "Climate protection as a legal duty," explains the basis for asserting that governments have a legal duty to prevent destruction of the earth's climate, based on the legal principle known as the "public trust doctrine." This principle states that the atmosphere is part of the "common heritage of humanity," for which governments are not owners but trustees. Lawsuits are currently being brought asking courts to define the public trust obligations of state and national governments and to require them to meet their public trust duties. But whether or not courts agree, the public trust doctrine can provide a basis for a popular insurgency to demand that governments meet those responsibilities.

Chapter 4, "Making a country climate-safe," looks at how countries could actually meet their responsibilities to reduce ghgs to safe levels. While various policy approaches have been endlessly debated, sufficient ghg reduction is likely to require a combination of different approaches, including market mechanisms like carbon taxes and cap-and-trade systems; direct government planning, investment, regulation, and enforcement; and massive participation in local grassroots initiatives. The transition will require powerful government agencies to direct and enforce change, in some ways similar to those that led the conversion to war production during World War II. That in turn will require vehicles of accountability to make sure such powers are used to achieve their intended purpose without being perverted to other ends. And it will require policies that ensure climate protection will mean a better life for ordinary people, thereby assuring continuing popular support.

Chapter 5, "A global trust fund for the global public trust," examines changes that will be necessary at the global level to make the transition. These include means to gather and allocate resources for climate change globally; vehicles for ensuring effective national climate protection policies; and ways to make climate protection acceptable by using it to support a prosperous, job-creating global economy.

Chapter 6, "Movement enforcement of public trust duties," looks at how a climate protecting insurgency can implement its goals. It discusses how the movement can redefine climate destruction as committing waste against the public trust; develop the independent power to protect the global atmospheric commons; work cooperatively with non-insurgent allies; and reverse the climate-destroying dynamics of the world order.

Chapter 7, "Overcoming the obstacles to climate protection," reviews how the strategy presented here can help overcome the forces described in Chapter 1 that have so far perpetuated destruction of our climate.

The Conclusion aims to describe the strategy as a coherent whole.

I hope readers will examine the strategy proposed here critically. But I also hope they will either correct its flaws or develop a better alternative. Climate protection can't wait for a perfect strategy; all of us have a duty to find the best strategy we can -- and act on it.



Chapter 1: Obstacles to Climate Protection

Scientists and climate protection advocates once expected that rational leaders and institutions would respond appropriately to the common threat of climate change. As Bill McKibben said of Jim Hansen and himself, “I think he thought, as did I, If we get this set of facts out in front of everybody, they’re so powerful — overwhelming — that people will do what needs to be done.”²

What went wrong? Why has the world’s obvious long-term common interest been so hard to realize?

The disturbing answer is that the measures we need to protect the global ecosphere threaten the power of the world’s most powerful institutions. National governments will have to accept international controls. Corporations will have to forego opportunities to make money at the expense of the environment. Military establishments will have to abandon programs that threaten the air and water. Beyond that, virtually everyone will have to adjust to substantial change — though not necessarily deterioration — in lifestyle.

Governments, corporations, and other dominant institutions are not evolved to provide for either the long-term interests nor the common interests of the world’s people. They have grown and prospered by pursuing the short-term interests of their citizens and stockholders (or often just a small, dominant elite among them) in competition with the citizens and stockholders of other companies and countries. They are not designed or structured to pursue any wider human or global interest. And their time horizon is determined not by the lifetimes of our children and grandchildren but by the next election cycle or quarterly report. To their leaders, sustainability means getting through the next couple of years without loss of elections or profits.

Climate protection advocates had erroneous expectations because these institutions and leaders were willing to give lip service to climate protection, and even use its advocacy to advance their own competitive position. But when it came to actually doing something to protect the global climate, their own short-term national and corporate interests came first.

Conversely, the institutions supposed to represent global common interests, for example the UN, proved weak and dependent on governments, which ultimately retain formal or de facto veto power over their actions. Even the IPCC, ostensibly a scientific organization, is made up overwhelmingly of government-employed scientists, has its reports reviewed by government officials, and requires the wording of its *Summary for Policymakers* to be approved line-by-line by all of the more than 120 participating governments. Most governments, in turn, are subject to the de facto veto power of private economic interests driven to pursue short term private gain above all else.

While great powers and corporations are the dominant factors in this process, many other people and institutions pursue short-term self-interest at the expense of climate protection, often in pursuit of their own economic survival. Local communities and workers dependent on fossil fuel industries, for example, have campaigned to weaken climate protection legislation and block international climate agreements. Developing countries have fought to maintain their right to expand their use of coal. Such allies have helped enable the major ghg emitters and their supporters to pursue a hypocritical path, talking the climate protection talk while walking the ghg walk.

WORLD ORDER OBSTACLES TO CLIMATE PROTECTION

Climate destruction is not the result of action by people whose aim is to destroy the climate. Rather, it results from people operating within institutional structures in which they pursue goals and practices the effect of which — whether they know it or not — is climate destruction. Such structures include:

Fossil fuel producing industry The most obvious perpetuator of climate destruction is the fossil fuel industry. Climate protection means abolishing the fossil fuel industry as we know it and rendering its primary asset — fossil fuels — worthless. The industry understands that and spends billions of dollars to corrupt politicians; dominate elections; and brainwash the public. It also knows that at present almost all human purposes depend on fossil fuels; it uses that dependence to wield hegemony over nations, peoples, and institutions. It implicitly and explicitly threatens that if it doesn’t get its way we will all end up shivering in the dark.

Network of support for fossil fuels Surrounding the fossil fuel producing industry is a wide swath of forces that advocate for its interests. They are often interpenetrated with it, dominated by it, and dependent on it. They include fossil fuel using industries; the financial industry; anti-climate protection corporations; politicians and political parties; much of organized labor; and people and institutions who believe they are dependent on fossil fuels to meet their daily needs.

Neoliberalism Neoliberalism is an ideology that argues that global market forces should determine human fate and that governments and other public institutions should interfere only to support private profitmaking. Neoliberal ideology is not just a theory propounded by economists; it guides the action of the dominant economic institutions of the world order, including the major banks, corporations, the US and other treasury departments, the IMF, the World Bank, and the WTO. It is used to argue against taxes, regulation, public investment, and other use of public authority for any purposes except promoting private profit and to oppose



"interference" with corporations doing whatever they choose — including destroying the earth's atmosphere. It thereby plays a crucial role in preventing effective climate protection.

Nation state system Under the established system of nation state sovereignty the government of each nation is legally authorized to decide its actions without interference. Under this theory no larger or longer-term interest can be imposed on nations except by their own consent. This doctrine, embodied in the practice of states and the structure of the United Nations, has allowed nations to lay waste to the atmosphere and the common future of humanity. Further, a competitive nation state system generates conflict and competition among nation states. States generally are driven to win in the competition with other states. Accumulation of economic power is a crucial form of this competition, driving expansion of GDP even where the consequence for a country's own citizens, let alone the rest of the world and future generations, are horrendous. Finally, this system allows corporations and other private actors to pursue their destruction of the earth's atmosphere behind the shield of national sovereignty.

Within this system, however, effective power is concentrated in a few dominant nations, often leading coalitions of other countries. While the US and its allies dominated this system during the 20th century, their hegemony is now being challenged by China and other rapidly developing nations. The result at present is a de facto alliance of the largest ghg emitters, led by the US and China, who starting with Copenhagen have cooperated to defeat efforts at effective climate protection.

Dependence on fossil fuels, neoliberalism, the nation state system, and great power struggle for hegemony are not primarily features of one or another nation. Rather, they are properties of the world order — the overall patterns by which our species has organized its life on earth. As Richard Falk put it on the eve of the Copenhagen climate summit, the inability of governments to cooperate to protect global public interests is compounded of "statism, neoliberal capitalism, hegemonic geopolitics, presentism, militarism, and nationalism."³

OBSTACLES IN HUMAN HEARTS AND MINDS

In addition to these institutional, structural obstacles, there are obstacles that impede the coming together of individuals and social groups to take collective action to halt climate change, even though it is in their individual and collective interest. They include:

Denialism Denial of global warming can take the form of directly rejecting the science and evidence for it, based on pseudoscience or ignorance. But it also can take the form of simply ignoring it or distraction through paying much more attention to other things. Denial has been deliberately promoted by the fossil fuel industry and its allies and supporters (including the political right wing in the US) as a weapon against climate protection policies — taking a leaf from the tobacco industry's long denial of the health effects of smoking. But it is also an almost ubiquitous practice of almost all of us, trying to disattend to something that is too overwhelming to contemplate without losing our equilibrium and becoming unable to go on with our lives.

Incrementalism Many people, including many politicians and leaders of businesses, unions, and other institutions, admit the reality of climate change, but do not support the kinds of "extreme" measures necessary to halt it now. Some downplay the significance of climate change as a universal, existential threat and a clear and present danger not just to polar bears but to humanity. Some say it is not politically realistic to address it aggressively, that we need to start slowly and put off serious reductions in ghgs until long in the future. There is even such misleading incrementalism within the climate movement itself, taking the form of an unfounded optimism that inadequate but politically acceptable solutions will suffice.⁴

Economic consequences of climate protection Many people believe that serious efforts to protect the climate will lead to economic catastrophe for themselves and/or society as a whole. They may feel their jobs depend on the production and use of affordable fossil fuels. And they may believe that restrictions or higher prices for fossil fuels will lead to unemployment and economic crisis. Such fears are fed by a powerful propaganda machine promoting the idea that environmental protection is a threat to prosperity and a "job killer."

Let another country pay Global climate protection would be in the interest of almost everyone, far outweighing its collective costs. But the system of sovereign nation states with highly uneven contributions to and effects from global warming generates a struggle for each country to shift the cost of protecting the climate onto others so as to get the benefits without the costs. Any nation that invests in cutting its own emissions pays the cost, but the benefit is shared among all countries, including those that continue emitting ghgs at breakneck speed.⁵ International climate negotiations have come to grief over how the costs and benefits of climate protection should be distributed. And opposition to climate protection in domestic politics often focuses on the demand that "other countries" cut their emissions first. Since the wealth and power of countries and their past, present, and likely future contribution to climate change vary so widely, there is often conflict over the just distribution of the costs of climate protection — resulting in no climate protection at all.

Legitimacy of the status quo In most situations, people accept the legitimacy of the authorities under which they live. Even if they perceive policies like those leading to climate destruction as detrimental to their interests, they don't normally challenge the right of the established authorities to pursue them — and to punish those who attempt to interfere with them.

Fear of social movements While some people are thrilled by popular upheavals, many are frightened when they see media images of crowds clashing with police, Molotov cocktails flying through the air, and economies in a



tailspin in the wake of social upheaval. Many people also observe that in the aftermath of social upheaval ordinary people often have less freedom and worse economic conditions than they had before. They fear the consequences of social movements both for their personal wellbeing and for their society as a whole.

Individualism The belief in individual rather than collective action forms a barrier to all kinds of social movements. It may take the form of a fear that participation will restrict individual liberty; that a person can and/or should look out for themselves; or that looking out for oneself is likely to be more beneficial than social action in the short and/or long run.

Hopelessness It is easy to despair that there is anything we can do about climate change. The problem is so devastating and the obstacles to fixing it seem so insurmountable. Even many of us who are devoting our lives to climate protection feel a deep despair about forestalling climate catastrophe. Our efforts seem too little and too late.

The strategy proposed in this discussion paper is designed to address these obstacles. The final chapter, "Overcoming the obstacles to climate protection," returns to these obstacles to review how the proposed strategy might surmount them.

Chapter 2: A Global Nonviolent Law-Enforcing Insurgency

The global climate movement has laid the groundwork for countering the underlying obstacles to climate protection. It has established a flexible network form of organization that can facilitate rapid coordination and mass mobilization on a global scale. It has drawn tens of millions of people into grassroots self-organization. It has established its independence of any nation state and of any corporate interest. It has established a common interpretive frame and a common objective: the reduction of atmospheric carbon to a climate-safe level, currently estimated at 350 ppm or less. It has related that frame to issues of social justice. It has projected its frame and objective to hundreds of millions of people. It has moved beyond the limits of lobbying to mass civil disobedience. It has become one of the power actors of the world order, able to challenge states, corporations, and other central institutions.

To realize its objectives, the climate protection movement must now use the capacities it has created to overcome the obstacles to climate protection offered by the organization of our current world order. It must limit the blind pursuit of self-interest and self-aggrandizement by states and corporations. It must nurture means for formulating and pursuing the global common interest in protecting the climate. It must overcome the ghg-protecting hegemony imposed by the Great Powers, above all by the US. It must develop a strategy for political, economic, and social transformation that protects the climate while protecting people's livelihoods and wellbeing. This doesn't require transforming the world order into some kind of global utopia. But it does mean changing the world order sufficiently to allow effective climate protection.

WHY A NONVIOLENT INSURGENCY?

Insurgencies are social movements, but movements of a special type: They reject current rulers' claims to legitimate authority. Insurgencies often develop from movements that initially make no such challenge to established authority, but eventually conclude it is necessary to realize their objectives. To effectively protect the earth's climate and our species' future the climate protection movement may have to become such an insurgency.

The term "insurgency" is generally associated with an armed rebellion against an established government. It rejects and resists the authority of the state. Its aim may be to overthrow the existing government, but it may also aim to change it or simply to protect people against it. Whatever its means and ends, its hallmark is to deny that established state authority is legitimate and to assert that its own actions are.

A nonviolent insurgency pursues similar objectives by different means. Like an armed insurgency, it does not accept the limits on its action imposed by the powers that be. But unlike an armed insurgency it eschews violence and instead expresses power by mobilizing people for various forms of nonviolent mass action.

After closely following the massive strikes, general strikes, street battles, peasant revolts, and military mutinies of the Russian Revolution of 1905 that forced the Czar to grant a constitution, Mohandas (not yet dubbed "Mahatma") Gandhi concluded, "Even the most powerful cannot rule without the cooperation of the ruled."⁶ Shortly thereafter he launched his first civil disobedience campaign, proclaiming "We too can resort to the Russian remedy against tyranny."

The powers that are responsible for climate change could not rule for a day without the acquiescence of those whose lives and future they are destroying. They are only able to continue their destructive course because others enable or acquiesce in it. It is the activity of people – going to work, paying taxes, buying products, obeying government officials, staying off private property – that continually re-creates the power of the powerful. A nonviolent climate insurgency can be powerful if it withdraws that cooperation from the powers-that-be.



WHY A LAW-ENFORCING INSURGENCY?

It is often pointed out that electoral politics, lobbying, and similar forms of “legitimate” political action accept the established “rules of the game” and operate within their limits. Even if the rules are rigged, participants must accept the outcome of any given round and resign themselves to simply trying again.

The climate protection movement, by adopting civil disobedience, has moved beyond conventional political and lobbying “pressure group” activity to a protest movement prepared to violate the law. Civil disobedience, while generally recognizing the legitimacy of the law, refuses to obey it. Civil disobedience represents moral protest, but it does not in itself challenge the legal validity of the government or other institutions against which it is directed. Rather, it claims that the obligation to oppose their immoral actions — whether discriminating against a class of people or conducting an immoral war or destroying the climate — is more binding on individuals than the normal duty to obey the law.

A law-enforcing insurgency goes a step further. It declares a set of laws and policies themselves illegal and sets out to establish law through nonviolent self-help. But it is not formally a revolutionary insurgency because it does not challenge the legitimacy of the fundamental law; rather, it claims current officials are in violation of the very laws that they themselves claim provide the justification for their authority. Such insurgents view those who they are disobeying as merely persons claiming to represent legitimate authority -- but who are themselves violating the law under color of law. Their “civil disobedience” is actually obedience to law and a form of law enforcement.⁷

Social movements that engage in civil disobedience often draw strength from the claim that their actions are not only moral, but that they represent an effort to enforce fundamental legal and constitutional principles that the authorities they are disobeying are flouting. Such legal justifications strengthen participants by making them clear in their own minds that they are not just promoting personal policy preferences by criminal means but rather performing a legal duty. And they strengthen a movement’s appeal to the public by presenting its action not as wanton lawbreaking but as an effort to rectify governments and institutions that are themselves in violation of the law.⁸

Existing legal, political, and economic arrangements seem to support the right of those who are conducting and permitting the destruction of the climate to go on doing so. Their authority to do what they do appears legitimate, even though it is leading to species catastrophe.⁹

However, there are powerful legal arguments that governments are in violation of their most fundamental legal and constitutional duties as long as they permit the destruction of the world’s atmosphere. In the next chapter we will explore one of the most promising, the legal principle known in the US as the “public trust doctrine.” The public trust doctrine provides a basis for maintaining that the destruction of the earth’s atmosphere, and the collusion of all governments in it, is illegal. It thereby provides one possible basis of legitimacy for a global movement that rejects the claims to legitimate authority of existing governments. No doubt there are others, ranging from fundamental human rights to national and international environmental law.¹⁰ Many of the proposals made here for utilizing the public trust doctrine could draw on them as well.

The significance of the public trust principle and other legal claims for climate protection is that they define those claiming authority as illegitimate usurpers as long as they persistently fail to fulfill their duty to protect the atmosphere. The history of social movements shows that such legitimations can play an important role in making change.

For the civil rights movement, the Constitution’s guarantee of equal rights meant that sit-inners and freedom riders were not criminals but rather upholders of Constitutional law. For the struggle against apartheid, racism was a violation of internationally guaranteed human rights. For war resisters from Vietnam to Iraq, the national and international law forbidding war crimes defined civil disobedience not as interference with legal, democratic governments, but rather as a legal obligation of citizens. For the activists of Solidarity, the nonviolent revolution that overthrew Communism in Poland was not criminal sedition, but an effort to implement the international human and labor rights law ratified by their own government. As Jonathan Schell put it in the Introduction to Adam Michnik’s *Letters from Prison*, these agreements meant that the actions of Michnik and his associates were perfectly legal, “while the means used by the police and judiciary apparatus in Poland” were “in flagrant violation of international agreements.”¹¹

These examples seem paradoxical. On the one hand, the movement participants appear to be resisting the constituted law and the officials charged with implementing it. On the other, they are claiming to act on the basis of law, in fact to be implementing the law themselves against the opposition of lawless states.

Law professor and historian James Gray Pope has developed a concept of “constitutional insurgency” to understand such cases.¹² Constitutional insurgencies — or what might be called “law-enforcing insurgencies” -- are social movements that reject current constitutional doctrine, but that “rather than repudiating the Constitution altogether, draws on it for inspiration and justification.” Such an insurgency “unabashedly confronts official legal institutions with an outsider perspective that is either absent from or marginalized in official constitutional discourse.” On the basis of its own interpretation of the Constitution, such an insurgency “goes outside the formally recognized channels of representative politics to exercise direct popular power, for example through extralegal assemblies, mass protests, strikes, and boycotts.” It may hold such actions legal, even though the established courts condemn and punish them.

Pope detailed how the American labor movement long insisted that the right to strike was protected by the 13th



amendment to the US Constitution, which forbade any form of “involuntary servitude.” Injunctions to limit strikes were therefore unconstitutional. While courts disregarded this claim, the radical Industrial Workers of the World told its members to “disobey and treat with contempt all judicial injunctions,” and the “normally staid” American Federation of Labor maintained that a worker confronted with an unconstitutional injunction had an imperative duty to “refuse obedience and to take whatever consequences may ensue.”

Such insurgencies do not fit neatly into either the idea of a revolutionary overthrow of the government or of reforms conducted within the limits of legally permissible action as courts currently interpret them. In practice, social movements have long enacted a middle way between the constitutional discontinuity of revolution on the one hand and reform that fails to challenge the legitimacy of current legal structures on the other. The concept of constitutional insurgency explains how this can be.

The idea of a constitutional or law-enforcing insurgency fits well with the practice of nonviolent direct action, which is extra-constitutional and yet not aimed at overthrowing the government per se. Indeed, when Gandhi said during the civil disobedience campaign that “sedition has become my religion,” it might have been more apt to say that he had become a constitutional insurgent, fighting for rights that English law guaranteed but that its practice was denying. (As conservative historians are wont to point out, the American revolution too began as a struggle for “the rights of Englishmen.”)

WHY A GLOBAL INSURGENCY?

The destruction of the climate by greenhouse gasses is produced in specific locations throughout the earth; it affects specific locations in every part of the globe; it can only be corrected through global solutions implemented in specific locations. The world order that perpetuates climate destruction is global, but it is produced and reproduced in specific locations around the world. The whole must be changed in order to change the parts; changing the parts is necessary to change the whole.

A global insurgency is not so much an effort to overthrow one or another government as to transform the world order. That may seem like a tall order. But in some ways transforming the world order is easier than transforming the social and political order of individual nations. World orders are notoriously disorderly and fluid; their structure is maintained primarily by the mutual jostling of independent power centers. They change all the time: Where is the division of the world between two cold-war rivals or the global Keynesian economic regulation of fifty years ago? And, unlike national governments operating under constitutions with officials chosen by elections, the world order has not the slightest claim to legitimacy. No electorate has ever consented to superpower rivalry or global neoliberalism — or destruction of the earth’s climate.

It is against this illegitimate but mutable world order that a climate protection insurgency is ultimately aimed.

Chapter 3: Climate protection as a legal duty

The climate protection movement has had no difficulty in articulating the moral dimensions of climate destruction, but it has had a harder time finding a legal frame to define its objectives and legitimate its actions. Existing environmental laws and treaties have proven inadequate to meet the challenge of climate change.¹³ Recently, however, an ancient legal principle known in the US as the public trust doctrine may be emerging to play that role. The application of public trust principles to climate protection is laid out in a series of recent lawsuits against national and state governments. But whether or not courts decide to enforce them, public trust principles can provide a powerful basis for a law-enforcing insurgency.

The principle underlying the public trust doctrine has roots and analogues in ancient societies in Europe, East Asia, and Africa, and from Islamic to Native American cultures.¹⁴ It was codified in the *Institutes of Justinian*, issued by the Roman Emperor in 535 A.D. The code defined the concept of “res communes” (common things). “By the law of nature these things are common to mankind — the air, running water, the sea and consequently the shores of the sea.” The right of fishing in the sea from the shore “belongs to all men.”¹⁵ The Justinian code distinguished such “res communes” from “res publicae,” things that belong to the state.

Based on the Justinian Code’s protection of “res communes,” governments have long served as trustees for rights held in common by the people. In American law this role is defined by the public trust doctrine under which the state serves as public trustee on behalf of present and future generations. The rationale is that the unorganized public has sovereign ownership interests. Even if the state holds title, the public is the “beneficial owner.” As trustee, the state has a “fiduciary duty” to the owner — a legal duty to act solely in the owners’ interest with “the highest duty of care.”¹⁶ The principle is recognized today in both common law and civil law systems in countries ranging from South Africa to the Philippines and from the United States to India.

International law, furthermore, recognizes geographical areas that lie outside of the political reach of any one nation state — specifically, the high seas, the atmosphere, Antarctica, and outer space — as “global commons” governed by the principle that they are “the common heritage of humankind.”¹⁷ But there has been no effective vehicle for asserting our right not to have our common environment destroyed.



ATMOSPHERIC PUBLIC TRUST LITIGATION

On Mother's Day, 2011 the youth organization Kids vs. Global Warming organized the "iMatter March" of young people in 160 communities in 45 countries, including the US, Russia, Brazil, New Zealand, and Great Britain.¹⁸ Concurrently, the Atmospheric Trust Litigation Project brought suits and petitions on behalf of young people in all fifty US states and the Federal government to require them to fulfill their obligation to protect the atmosphere as a common property.¹⁹ Speaking to one of the rallies, sixteen-year-old Alec Looz, founder of Kids v. Global Warming and lead plaintiff in the Federal lawsuit, said,

"Today, I and other fellow young people are suing the government, for handing over our future to unjust fossil fuel industries, and ignoring the right of our children to inherit the planet that has sustained all of civilization."

"The government has a legal responsibility to protect the future for our children. So we are demanding that they recognize the atmosphere as a commons that needs to be preserved, and commit to a plan to reduce emissions to a safe level."

"The plaintiffs and petitioners on all the cases are young people. We are standing up for our future."²⁰

The suits argue that the atmosphere belongs in common to all people of current and future generations. Governments serve them as trustees but do not themselves own the atmosphere. "The State government may not manage the atmospheric trust resource in a manner that substantially impairs the public interest in a healthy atmosphere."²¹ Governments have a sovereign duty to prevent substantial impairment of crucial public resources. The suits seek declarative judgment applying the public trust doctrine to the earth's atmosphere and asks the courts to issue injunctions ordering federal and state governments to reduce carbon emissions to fulfill their duty to protect it.²² Similar suits are projected for countries around the world.

While so far the courts have turned down most of these atmospheric public trust suits, the decisions are being appealed. On October 3, 2013, the Supreme Court of Alaska became the first state supreme court to hear such an appeal.²³

University of Oregon law professor Mary Christina Wood lays out the basis for such atmospheric trust litigation in an extensive legal article.²⁴ The public trust doctrine is

"A declaration of public property rights as originally and inherently reserved through the peoples' social contract with their sovereign governments. Under this principle, the public holds a perpetual common property interest in crucial natural resources. Government, as trustee, must act in a fiduciary capacity to protect such natural assets for the beneficiaries of the trust, which include both present and future generations of citizens."²⁵

According to the US Supreme Court in the key case *Geer v. Connecticut*, "The power or control lodged in the State, resulting from this common ownership, is to be exercised, like all other powers of government, as a trust for the benefit of the people, not as a prerogative for the advantage of the government, as distinct from the people, or for the benefit of private individuals as distinguished from the public good. . . . The ownership is that of the people in their united sovereignty."²⁶

The trustee has "an active duty of vigilance to 'prevent decay or waste' to the asset." "Waste" means "permanently damage." If the asset is wasted in the interest of one generation of beneficiaries over future generations, it is in effect an act of "generational theft."²⁷

When a trust asset crosses the boundaries of sovereign governments, all sovereigns with jurisdiction over the natural territory of the asset have legitimate property claims to the resource. So all nations on Earth are "co-tenant trustees" of the global atmosphere. They have a duty not to commit waste to the common property.²⁸

Two legal duties arise from this relationship. First is "the sovereign duty that each government, as trustee, has towards its own citizens to protect the atmospheric asset and prohibit waste of their natural inheritance." Second is "the duty owed by each nation towards all other nations, arising from the sovereign co-tenancy relationship, to prevent waste to their common asset, the atmosphere."²⁹

Violation of these duties can lead to two legal claims. "Citizen beneficiaries" can bring actions against their governmental trustees for "failing to protect their natural trust." And one sovereign trustee can bring actions against others "for committing waste to common property."³⁰

FAIR REMEDIES

If a court upheld such claims against the co-tenant trustees — the nations of the world — what could it order them to do? The prime questions on which international negotiations for climate protection have faltered are how much ghg emissions should be cut how fast and how the burden of protection shall be distributed. Mary Christina Wood approaches these questions on the basis of the principles that courts normally apply to public trust obligations.

According to leading climate scientists such as Dr. James Hansen, reducing atmospheric carbon to 350 ppm or



less is necessary to avoid catastrophic climate change. Taking 2012 as a baseline, an annual global decline of six percent in fossil fuel emissions, combined with the extraction of 100 gigatons of carbon dioxide through reforestation and improved forestry and agriculture, would lower the atmospheric concentration of carbon dioxide to 350 ppm by the end of the century.³¹ This probably will require reaching near-zero carbon emissions, probably by around 2050. So courts must impose a timeline with an endpoint of near-zero emissions.

While these scientific calculations indicate what the world as a whole must do, different countries are very different both in their contribution to wasting the atmosphere and in its probable effect on them. When waste of a common asset occurs, courts apportion “fair shares” of the costs of remediation to the various responsible parties. Mary Christina Wood identifies five factors that courts would need to weigh in assigning countries fair shares to remedy global warming:³²

- Global share of current carbon emissions.
- Historical share of emissions.
- Per capita emissions. Each American uses nearly 20 metric tons of carbon dioxide emissions on average, compared to 1.16 for each Indian.
- Purpose of the emissions. Priority should be given to meeting basic human needs; then to creating new infrastructure for a low-carbon society; and least to non-essential and frivolous luxuries.
- Recalcitrance of the sovereign in taking responsibility for its carbon pollution.

A widely-cited study called the *Greenhouse Development Rights Framework* (GDRE), prepared by the Stockholm Environmental Institute and EcoEquity, has already quantified the first four of these factors. It evaluates the responsibility and capacity of every country for ghg reduction. *Responsibility* is measured by the country's cumulative ghg emissions since 1990. Capacity is based on the ability of a country to reduce emissions without threatening the basic survival of its people. It is derived from the national income, but it doesn't count income demanded by the necessities of daily life. It thus takes into account the unequal distribution of income within countries, assuring that the very poor don't have to pay for a problem they have done little to create. The bottom line is an evaluation of the fair share of ghg reduction for each country. Taken together, the shares add up to the cuts scientists estimate are necessary to reach 350 ppm by the end of the 21st century.³³

If courts find the co-tenant trustees wasting the atmospheric public trust in violation of their fiduciary duty to protect it, what remedies should they offer? First, they should issue a declaratory judgment expressing the fiduciary obligation of all governments to protect the atmosphere as a commonly shared asset, to be realized in a scientific prescription for carbon reduction to levels below 350 ppm.

Second, courts should issue injunctions requiring all agencies of government to take the measures necessary to realize this duty. Those injunctions may require “carbon accountings” which quantify carbon emissions and track their reduction over time. They may include “enforceable carbon budgets” that set quantifiable mileposts. And they may require periodic progress reports.

A court need not tell the government how to realize its duty, but it can require it to present a plan demonstrating how it will do so.³⁴ If the plan is not carried out, a court can itself issue injunctions prohibiting specific wasting activities, such as issuing of permits for new coal-fired power plants or excessive air pollution quotas. Ultimately it can find disobedient government officials in contempt of court.

Waste of the atmosphere is largely conducted by private businesses. In trust law, “trustees have the affirmative duty to recoup monetary damages against third parties that destroy trust assets.” In a public trust, “all sovereigns theoretically have grounds for recovering damages from third parties who destroy the trust.” Requiring fossil fuel companies to pay damages for the colossal waste they have committed on the public trust would go a long way toward paying for the transition to a low-carbon economy.³⁵

AN INSURGENCY TO PROTECT THE ATMOSPHERIC PUBLIC TRUST?

As compelling as the logic of the atmospheric public trust argument may be, it is easy to imagine that many American courts will refuse to force governments to meet such obligations. In a brief to dismiss the Kansas suit, lawyers called the claim “a child's wish for a better world,” which is not something a court can do much about. “No order issued by the District Court of Shawnee County can hold back global warming, any more than King Canute could order the tide to recede.” “It's Hail Mary pass litigation,” according to Michael Gerrard, director of the Center for Climate Change Law at Columbia University law school.³⁶ The sad fact is that virtually all the governments on earth – and their legal systems -- are deeply corrupted by the very forces that gain from destroying the global commons. They exercise illegitimate power without regard to their obligations to those they claim to represent, let alone to the common rights beneficiaries of other lands and future generations to whom they also owe “the highest duty of care.”

Indeed, the effort to halt global warming by suing in governmental courts to enforce the public trust doctrine would seem to run up against the entire world order and face all the obstacles we explored in the previous chapter.

But protecting the atmosphere is not just a matter for governments. The failure of governments to protect the



global commons is currently leading the climate protection movement to turn to mass civil disobedience, as witnessed by the campaigns against the Keystone XL pipeline, mountaintop removal coal mining, and coal-fired power plants. Looked at from the perspective of the public trust doctrine, these actions are far from lawless. Indeed, they embody the effort of people around the world to assert their right and responsibility to protect the global commons. They show people acting in an emergency situation on an evident necessity. They represent people stepping in to provide law enforcement where corrupt and illegitimate governments have failed to meet their responsibility to do so.

As Alec Looz said, "We will not only stand up in the courts. We will stand up in the streets as well."³⁷

Ultimately, protecting the public trust is a duty we all as members of the public owe each other and future generations. As the Supreme Court of India put it, "Today, every person exercising his or her right to use the air, water, or land and associated natural ecosystems has the obligation to secure for the rest of us the right to live or otherwise use that same resource or property for the long term and enjoyment by future generations."³⁸ Mary Christina Wood writes that the fiduciary obligation of all governments, as trustees, to protect the atmosphere as a commonly shared asset is "enforceable by the citizen beneficiaries of the trust representing present and future generations."³⁹ If the courts fail to provide such protection, have not "citizen beneficiaries" a right and duty to enforce that obligation by other means?⁴⁰

Chapter 4: Making a country climate-safe

The climate protection movement has had little trouble portraying the evils of climate change and attempting to block it. But it has had far more difficulty providing a credible answer how to make the transition to a climate-safe economy without mass unemployment and economic catastrophe. One thoughtful and well-known climate activist, asked what would happen if protestors managed to shut a coal plant down permanently, replied, "If the question is, 'What do we do after we shut it down tomorrow,' somebody else will have to figure that out."⁴¹ Facile assurances that climate protection will produce more jobs than it destroys have not filled the need for a concrete pathway that protects people as well as the climate.

This reticence is due in part to mindsets that discourage a realistic alternative vision. Rapid reduction of ghg emissions cannot be achieved without breaking out of the neoliberal shibboleths that have dominated public policy for the past thirty years. Nor can it be realized simply by local initiatives to create resilient communities or by persuading individuals to make do with less. Revolutions producing new climate-protecting regimes in each of the world's countries seem unlikely in the timeframe necessary to forestall devastating climate change. Are other, feasible visions conceivable?

Suppose a compelling force — legal or popular — required governments to fulfill their duty to the atmospheric public trust. If — through some combination of political decision making, legal compulsion, public demand, international pressure, and insurgent challenge, a country decided to reduce its greenhouse gas emissions to a level compatible with reaching 350 ppm globally, how could it do so? Let's look at the US as an example. What kind of climate action plan could realize its public trust duties?

As we have seen, to reach 350 ppm by the end of the century, starting from 2012 as a baseline, will require a global reduction of six percent per year in fossil fuel emissions, combined with the extraction of 100 gigatons of carbon dioxide from the atmosphere.⁴² Global carbon emissions will need to be near zero by around 2050. The fair share of reduction would be substantially higher for wealthy countries like the US that have contributed large amounts of ghgs in the past.

Studies show that such a reduction is technically feasible and suggest various pathways to achieve it.⁴³ It can be accomplished based on commercially available technologies, but rapid expansion of research and markets will likely lead to very rapid improvement in technology along the way. Reduction can be based on renewable energy technologies and reduced energy demand. It will not require nuclear energy, geo-engineering, or carbon capture and storage, each of which is likely to be far slower, more costly, and environmentally dangerous than renewables and demand reduction. Because rapidly reaching 350 ppm requires rapid conversion to renewables and reduced demand, there is only a small need for gas as a transitional fuel.

The most important targets for ghg reduction are electricity, transportation, and buildings. Electricity produced by fossil fuels, the largest single producer of ghgs, can be replaced by renewable energy, energy efficiency, conservation, new transmission lines, and new energy storage technologies. Petroleum-based private transportation can be replaced with public transport and cars fueled with renewable energy and biofuels. Freight transportation can be converted to rail transport and electric and biofuel vehicles. Virtually all buildings can be made much more efficient through insulation, weatherization, cogeneration, and solar and geothermal heating, cooling, and hot water. Many other strategies, ranging from industrial redesign to integrating urban and transportation planning and from expanding forests to reducing fossil fuel use in farming, will also contribute.

There are three main approaches to ghg reduction. The first, which has dominated climate legislation and treaty negotiation, consists of "putting a price on carbon emissions" to discourage carbon emissions through taxation, fees, cap-and-trade systems with markets for emission quotas, or similar means. The second, which is widely discussed and frequently implemented on a small scale, consists of local, often community-based initiatives designed to produce renewable energy and reduce energy consumption on a decentralized basis. The third, perhaps less often delineated by its proponents than excoriated by its opponents, consists of a government led, centralized approach based on economic planning, public investment, resource mobilization, and direct government intervention in economic decisions. While these are often presented as alternative choices, rapid



reduction of ghg emissions will undoubtedly require all three.

MOBILIZATION — THE WORLD WAR II MODEL

The government-led approach often uses the economic mobilization for World War II as a touchstone — either to show the feasibility of rapid and massive economic change, or to reveal the evils of a “command economy” that interferes radically with the private market. While Al Gore and others have cited World War II mobilization as a possible model for climate protection, there have been few serious presentations of how such an approach might work in practice. Fortunately, two recent papers by Laurence L. Delina and Mark Diesendorf examine the World War II mobilization and suggest what lessons — positive and negative — can be drawn from it for rapid reduction of ghg emissions.⁴⁴ They argue climate protection may well require government-led mobilization on the scope and scale of World War II to solve many similar problems, but that the particular form such mobilization takes will need to be different both because of the differences in purpose and because the projects raise different problems.

The scale and scope of US economic mobilization for World War II was truly impressive.⁴⁵ US military spending rose from less than \$2 billion in 1940 to more than \$90 billion in 1944 — an increase of more than \$1 trillion in 2010 dollars. In the five years of the war, the US produced 300,000 planes, 100,000 ships, and 20 million rifles. Investment in research and development produced radically new technologies; the US spent more than \$20 billion in 2008 dollars and directly and indirectly employed more than 100,000 people on the Manhattan Project alone — thereby producing the first atomic bomb.

War production was based on strategies for finance, labor, and governance.

Finance: The huge and rapidly growing US military expenditure was paid for primarily by taxes and borrowing. US government tax collections grew from less than \$9 billion in 1941 to \$45 billion in 1945.⁴⁶ 85 million Americans bought \$185 billion war bonds and similar securities — more than \$2 trillion in 2010 dollars.

Labor: The number of Americans employed outside the military rose by 7.7 million between 1939 and 1944. Government boards redirected workers to military production, sometimes by threatening to draft them otherwise. Women entered the industrial workforce on an unprecedented scale. Government provided training for millions of workers. The War Labor Board set wages and required employers to bargain collectively with their employees’ unions. Government built housing and provided healthcare and childcare for war workers.

Governance: The US government established the War Production Board, chaired by a “war czar,” which, along with more than 160 other war agencies, took over direction of much of the US economy, functionally replacing much of the private market. The US government directly controlled more than 40% of the country’s production of goods and services. It set production goals, supervised and managed industry, and determined which producers could get essential materials. It operated important industries and even paid for and owned war plants. It could force companies to agree to government contracts and requisition private property. It could halt production that interfered with military needs: from 1942 to 1944 the government simply halted production of private cars. It established financial and banking controls and regulated the economy through fiscal and monetary policy, wage and price controls, and rationing. It provided highly profitable contracts, subsidies, and tax rebates to private companies, but it also imposed an excess profits tax on them.

MOBILIZATION FOR CLIMATE PROTECTION

The scale and scope of change necessary to reach 350 ppm is surely comparable to that of mobilization for World War II. It will involve a great deal of new production, and some current production will need to be halted. But the nature of the task is rather different. The purpose is not just to ramp up the quantity of production, or just to shift it to a new set of products. While that is necessary, the task goes far beyond that to a qualitative transformation to an economy — and society — based on very different technologies. The task will take far longer; will require longer-term planning; and must be accomplished in a way that is permanently sustainable. However, like war mobilization it will require strategies for finance, labor, and governance.⁴⁷

Finance: The starting context of climate protection mobilization is the massive failure of private markets to invest in renewable energy and energy demand reduction, which will require major public investment to correct.⁴⁸ Such mobilization will also require large-scale, long-term planned development of new infrastructure and other systems far beyond the capacity of private corporations. Over time the cost of economic transformation will fall, both because renewable energy capacity is expensive to construct but cheap to run, and because its costs will inevitably fall due to economies of scale of mass production and improved production technologies. The initial costs of transformation, however, will be high.

The US will start such an effort, as it did mobilization for World War II, with a very large underused physical and human capacity. Simply to fully employ those resources will, as in World War II, provide much of the basis for the necessary expanded production. However, such a full-employment economy will require fiscal and monetary policies designed to mobilize those underused resources by Keynesian techniques of regulating demand, possibly combined with wage and price controls to limit inflation.



Within a context of growing productive capacity, taxation can play a major role in securing the resources necessary for rapid investment in renewables and use reduction. Taxation of carbon emissions — whether called taxes, fees, or cap-and-trade quotas — have the added benefit of providing market incentives for conversion to lower ghg emissions. Such devices as energy pricing incentives, user fees, and on-bill financing for utility conversion can also play a role. Progressive taxation, particularly on carbon-wasting luxury goods, can prevent perverse impoverishment effects on the population. Public borrowing through bond sales can provide substantial and inexpensive funds due to low government borrowing rates and the high long-term return on clean energy investment. Public purpose banks, credit unions, and investment and loan funds can provide more decentralized financial resources, especially for smaller-scale and community-based projects.

Another source for funding a transition to climate safety could be legal damages collected from corporations for the waste they have committed on the atmospheric public trust. Governments as trustees for the public trust may take legal action to recover “Natural Resource Damages” — the settlements for the Exxon Valdez and BP oil spills, for example. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA — known as the “Superfund” law) provides broad federal authority to clean up hazardous substance releases and authorizes the EPA to compel the parties responsible to pay for the cleanup — even if the releases happened long before the legislation was passed. Comparable legislation could hold major fossil fuel producers and emitters responsible for their colossal damage to the atmosphere — and the colossal cost of remediating it.

Labor: Nearly 12 million Americans are officially unemployed today; more than 8 million want full time work but are only employed part time; 2.6 million want to work and have sought work within the past year but are not currently looking for work.⁴⁹ So a labor reserve of more than twenty million workers is available to go to work protecting the climate. However, ways will be needed to redirect workers to the growing employment sectors. During World War II this was done by the War Labor Board, which actively recruited workers to regions and industries where they were most needed and controlled wages to limit competitive bidding for scarce labor. Government will have to take the leading role in the rapid expansion of education and training for the new workforce.⁵⁰

New labor policies will need to be developed both to protect the relatively small number of workers who will lose jobs in fossil-fuel related industries and to ensure popular support for the transformation by providing improving conditions of life for the population. As in World War II, a process to be generally accepted as fair will require an incomes policy. A Nordic-style welfare state system, based on full employment, that provides a high level of income for the unemployed combined with strong support for retraining and new jobs, will be necessary to answer fears that change will lead to disaster for workers.⁵¹ Public planning, investment, and incentives for new employment opportunities in affected regions, industries, and occupations can play a similar role. As in World War II, the right of workers to organize and bargain collectively with their employers will be essential to ensure popular participation in the mobilization and protect workers from abuse.

Governance: Government action will be necessary to implement many of these transformations. Delina and Diesendorf list establishing financial incentives and disincentives; raising capital; implementing labor strategies; organizing funding for infrastructure such as transmission lines, railways, and pipelines; funding R&D; setting and monitoring energy efficiency standards for buildings, appliances, and equipment; training and retraining professionals and trades people; and setting industrial location policies. Further, the multifaceted activities of Federal agencies, state and municipal governments, corporations, and civil society groups will need to be coordinated to capture synergisms and prevent them from undermining each other.

Such coordination, as in World War II, will require a central governmental authority. However, because of the extended period of transition, measures are necessary to prevent such an authority from deviating from its intended purpose either for its own aggrandizement or that of other social forces.

Delina and Diesendorf propose two agencies, independent of each other, to lead the transition to a low ghg economy. The first, following the general model of the War Production Board, would have overall responsibility for carbon mitigation. It would “conduct technical requirement studies, set and enforce production goals for RETs [renewable energy technologies], institute efficient contracting procedures, cut through inertia and ‘red tape’ inhibiting institutional changes, and serve as the coordinating agency for all transition activities.”

A separate, countervailing institution would be established to play a planning and watchdog role. It would be independent of the executive branch and above the transition agency; it would report to the legislature and the public. It would set time limits on executive authority; provide checks and balances; scrutinize government actions; and “ensure that the government/executive sticks to its transition mandate.”

Although government will have a leading role, markets will have a crucial role as well. Most economic activities will continue to be coordinated through markets, albeit ones affected by new public policies. Market-based approaches, such as energy price incentives, carbon taxes, fees, and/or quotas, will help redirect production and investment to low-ghg technologies and products in the myriad areas not covered by direct government policies.

Finally, civil society organization will have at least as critical a role. Today, a large swath of community-based, local, and regional programs initiated from below are already engaged in promoting the transition to a climate-safe economy and society. Even in a government-led transition, they can on their own initiative implement community-based renewables, energy use reduction, mobilization of funding, and new patterns of consumption. Perhaps most important, they can provide both popular support for transition and a means to hold the institutions of transition accountable.

Many such climate protecting activities are already underway, albeit in unconcerted form. The US government



reorganized the auto industry in a way that produced cars with sharply reduced carbon emissions. Public mobilization, combined with EPA regulation and economic forces, has virtually ended the building of new coal-fired power plants and led to the closing of more than 140 existing ones.⁵² In Germany, energy pricing policies have led to massive expansion of renewables -- twenty-five percent of Germany's electricity now comes from solar, wind and biomass.⁵³ And decentralized civil society initiatives are weatherizing houses, installing solar collectors, and pressuring governments and businesses at every level to transition to a low-carbon basis. These activities provide a seedbed from which more extensive climate protection measures can grow. They also initiate a learning curve that will continue — facilitating continuing course correction — until a safe ghg level is reached.

Chapter 5: A global trust fund for the global public trust

The issue on which international climate negotiations have visibly foundered is the distribution of the costs of climate protection between developed and developing countries. This includes “development space” — whether and how much developing countries should have to restrict their ghg emissions, given the “free ride” developed countries have had to emit greenhouse gases without restriction for the past two centuries. It also includes the closely connected issue of whether and how much developed countries should contribute toward ghg reduction in developing countries.

These discussions take place in the context of an on-going crisis in the global economy. Neoliberal doctrine has called for a global austerity that generates massive unemployment of human and material resources as well as causing sovereign debt crises and a race to the bottom in working, living, and environmental conditions in countries around the world. The paradox of our economic downturn is that the world's human and material resources are being placed “out of service” at the very time they are desperately needed to fight global warming. The current world order blocks the mobilization for climate protection of resources that currently lie dormant. A central goal of a law-enforcing insurgency should be to correct the wasting of the atmospheric public trust by requiring the mobilization of the underutilized global human and material resources needed to reduce atmospheric ghgs below 350 ppm.

Many of the flaws of the current world order have converged around the question of paying for poor country climate protections. The sovereignty of individual nations makes it impossible to impose global taxes to meet common global needs. The absence of strong institutions representing global interests makes it nearly impossible to come to a workable consensus on climate policy, even though it would be in the interest of all to do so. Competition among states means what is interpreted as a gain for one is experienced as a loss for others. The hegemony of the richest and most powerful, and the drive of others to challenge it, reduces questions of global justice to a power struggle among coalitions of interests. The dominant neoliberal ideology opposes any effort to invest for the long-term public interest at the expense of short-term private profit. A global economy with no means to regulate global economic growth makes expenditures for global climate protection appear a drain on individual and national wellbeing. Meanwhile, vast resources are squandered by military spending and war to aggrandize the wealth and power of sovereign states and coalitions.

The atmospheric public trust approach laid out in “Climate protection as a legal duty” above, whether imposed by courts, democratic public pressure, or nonviolent insurgency, includes a way of allocating global rights and responsibilities for climate protection based on the legal principles governing public trusts. This allocation has been spelled out in the Greenhouse Development Rights Framework, which evaluates countries on the basis of both their historical responsibility for the problem and their capability to help solve it. The GDRF goes beyond allocation to rich versus poor countries by considering the distribution of income within countries, factoring in the responsibility and capability of rich and poor individuals within each country.

International negotiations have proposed the mechanism of a global fund to pay for the costs to poor countries of investing in climate protection and compensating for the benefits they forego by not polluting. Negotiations on such a fund have broken down over the questions of how big it should be, how the money should be used, how it should be paid for, who should control it, and how it would work.

How big should such a trust fund be? At the least it should be big enough to mobilize all the unused human and material resources that can be applied to climate protection. According to the ILO, 200 million workers were unemployed worldwide in 2013 and the number continues to rise years after the start of the so-called economic recovery. Unspent cash in the accounts of large enterprises had reached \$5 trillion.⁵⁴ While estimates vary, a rough idea of the scale needed for rapid climate change mitigation is given by a 2013 study sponsored by the World Economic Forum: It concluded that at least \$7 trillion needs to be invested annually beyond current levels “to limit the global average temperature increase to 2 degrees C above pre-industrial levels.”⁵⁵ So let us assume that at the least \$7 trillion — somewhere between one and two percent of global GDP — can be effectively invested yearly in climate protection worldwide.

How should the money be used? The \$7 trillion proposed by the WEF study includes investment needed for “clean-energy infrastructure, sustainable and low-carbon transport, energy efficiency in buildings and industry, and for forestry.” Other investment, including for adapting to climate change, would be in addition to that.⁵⁶

Where can the money come from? As with funding for national programs, global funding can come from taxing, borrowing, recovery of damages, and a global equivalent to fiscal policy. Here again the primary barriers have



been the unwillingness of national governments to spend their money for a common global purpose, even one that is essential to their and their populations' survival, and the neoliberal austerity policies that demand social resources be left to languish if they cannot be used for debt repayment or private profit.

A tax on carbon emissions would provide an most obvious source of funds; it would provide an incentive to reduce ghgs at the same time that it helped finance the effort to do so. A financial transactions tax (FTT), aka the Robin Hood Tax, would impose a small charge, perhaps one half of one percent, on all financial transactions. It could be instituted by individual countries, by international agreement, or by an international institution. Such a tax has been widely advocated not only for the funds it could raise for climate protection and other public purposes, but as a means to reduce the bubbles and busts generated by unrestrained financial speculation and to provide a basis for regulating the "shadow banking system."

The sale of climate bonds, perhaps guaranteed by a consortium of national governments, represents another source of funds. Investors could include ordinary citizens, governments, corporations, and other organizations. As activists demand disinvestment from fossil fuels, that can simultaneously demand that the liberated money be reinvested in such climate protection funds.

As we saw in the previous chapter, governments can seek damages from corporations for the waste their ghg pollution has inflicted on the atmospheric trust. Such damages could be a significant source of revenue for a global climate protection fund.

Another source of funds could be a little-known international financial vehicle known as Special Drawing Rights (SDRs), often referred to as "Paper Gold."⁵⁷ In 1969, after a string of liquidity crises, the world's major governments agreed to create SDRs to increase global liquidity. Former World Bank chief economist Joseph Stiglitz explains that SDRs are "a kind of global money" which "countries agree to accept and exchange for dollars or other hard currencies." If countries acquire SDRs to add to the gold and foreign currency in their national reserves, those reserve funds can be put to use for other purposes instead of sitting idle.

Stiglitz proposed that SDRs or a new "global greenback" along similar lines be used to supplement other reserve currencies. They would be issued for investment in developing countries and for "global public goods" like environmental projects, health initiatives, and humanitarian assistance. They would have the added benefit of checking global deflation and would help countries with trade deficits avoid ruinous devaluations and runs on their currencies.

Until the Great Recession, such proposals received little public attention – indeed, few except international economists even knew SDRs existed. But for a brief period beginning in 2009, world economic leaders advocated massive stimulus to the global economy. The IMF called for a global stimulus of 2 percent of the world's total product to sustain global demand in the economic downturn – about \$1.2 trillion.⁵⁸ In this context, discussion of paper gold exploded. George Soros called for "trillions of dollars" in SDRs to be issued to fight the recession. British Prime Minister Gordon Brown campaigned for a new allocation of SDRs and the US seemed to be warming to the idea.⁵⁹ SDRs could provide a global economic stimulus in much the same way that increasing a nation's money supply does nationally, a global equivalent to "quantitative easing."⁶⁰

As paying for developing countries' climate protection costs became more obviously central to a climate agreement, the idea of using SDRs to finance climate protection came to the fore. As the 2009 climate summit was foundering on the question of who would pay for developing country ghg restriction, George Soros arrived in Copenhagen and proposed issuing US\$100 billion in SDRs for a special green fund. The idea was advocated on behalf of the G-77 organization of developing countries in a passionate speech by Lumumba Di-Aping of Sudan, the negotiator for the G-77. After the failure of Copenhagen, the IMF itself briefly toyed with the idea of using SDRs for a "Green Fund."⁶¹ The idea went nowhere, however, as global economic leaders shifted their goal from recovery to austerity. Surely it is an idea whose time should come again.

Who should control a climate protection trust fund and how should it be administered? Such a fund should be controlled by a body specifically devoted to climate protection. The UNEP's authoritative scientific committee, the Intergovernmental Panel on Climate Change (IPCC), could play a major role in setting criteria and evaluating the results.

How might it work? Countries would apply to the trust fund for SDRs and other financing that can be used solely to implement their national plans to reduce greenhouse gas emissions. The funds would be allocated based on what help countries need to pay for their own climate protection costs and the importance of their efforts to global climate protection targets. In order to qualify, each country would be required to meet its obligation to reduce greenhouse gases. This would make the trust fund resources an incentive for countries to meet their public trust duties. Complete transparency in allocating and contracting can be a further condition for receiving trust fund resources. Funds could also be allocated, as Stiglitz has suggested, by competition among countries for the most worthwhile projects.

In addition to funding climate protection, such a fund in effect provides a vehicle for a countercyclical global macroeconomic policy. It provides needed stimulus for the global economy; a carbon-reducing rather than carbon-expanding form of economic growth; mobilization of underutilized human and material resources; and part of the solution to the festering sovereign debt crisis and the economic, social, and political disorder it provokes. Without some such global Keynesian regulation, national and corporate beggar-your-neighbor policies will drive countries to trade and military wars, perpetuating mass unemployment and the race to the bottom. A global climate protection fund can provide the growth point for broader global economic cooperation and regulation. It can provide a framework for meeting human needs and wants and therefore maintaining popular support for climate protection.



To achieve its goals, a climate-protecting insurgency will have to transform the world order to make such economic cooperation possible.

Chapter 6: Movement enforcement of public trust duties

How can the transformation of the world order necessary to protect the climate be brought about? A plausible means, we have argued, is a global nonviolent insurgency enforcing the duty of governments to protect the atmospheric public trust. How can such an insurgency be created and how can it realize its goals?

Today's climate protection movement provides a starting point. With its global organization and civil disobedience challenge to established authorities it may already be on the way to becoming a global nonviolent insurgency. And while it has not yet defined its actions as law enforcement protecting the public trust, that is in fact what they are doing.

Charting the future of a climate insurgency must be the on-going work of many hands and many brains. This chapter aims not to lay out a comprehensive action program, but rather provide just a sketch of how an emerging global insurgency might go about protecting the atmospheric public trust.

DEFINING CLIMATE PROTECTION AS PUBLIC TRUST PROTECTION

A first step to a law-enforcing insurgency is to define climate action as protection of the public trust. It can be taken by any individual or group engaged in civil disobedience and other climate-protecting activities. They can argue that they are actually acting to enforce fundamental legal principles that protect the atmosphere as a public trust against the far greater harm being perpetrated by those who are committing waste against it. They can argue that they are protecting a common property right that they share with present and future generations. They can make a "necessity defense" that their action — say, blocking coal shipments — is necessary to prevent a far greater offense with far more serious consequences. They can make this case to judges, juries, and in what they say and write about their actions to the public. While no one should expect that courts will be ready to accept such an argument, it can be an effective way to redefine what climate action is all about.

More broadly, the climate protection movement can incorporate the public trust argument as a central part of its message and its campaigns. When it attacks the XKL pipeline or demands conversion to renewable energy, it can justify its action in part by the authorities' dereliction of their duty to protect the public trust and the ultimate right and duty of the people to prevent the wasting of the common heritage of humanity.

An important role could be played by one or a series of civil society tribunals which would hear and weigh evidence and argument on the duty not to commit or allow waste to the atmospheric public trust. They might be composed of senior retired judges and other respected figures from various backgrounds and countries. Legal and scientific experts could provide testimony in support of the same propositions that the Atmospheric Trust Litigation Project is presenting in state and national courts. The tribunals could similarly be asked to issue declaratory judgments and injunctions. But they could also be asked to make findings on the rights and responsibilities of global citizens to protect the public trust and their legal rights vis-à-vis governments that try to subdue them. Large numbers of people, especially young people and people victimized by the effects of climate change, could testify and participate in other ways in person and virtually.

Such civil society tribunals have played an important role in anti-war movements since the famous International War Tribunal convened by philosophers Bertrand Russell and Jean-Paul Sartre during the Vietnam war. More than twenty independent international tribunals were held in countries around the world to examine the criminality of the Iraq war. As international lawyer Richard Falk put it, such tribunals represent the struggle of "global civil society" to "extend the reach of criminal accountability to include those leaders acting on behalf of dominant states."⁶² In the Opening Speech of the Istanbul tribunal, Falk observed that, "When governments and the UN are silent, and fail to protect victims of aggression, tribunals of concerned citizens possess a law-making authority."⁶³ The same could be said when governments fail to protect victims of climate change.

DEVELOPING THE POWER TO PROTECT THE PUBLIC TRUST

Independently or in tandem with such tribunals, citizens can monitor violations of public trust rights and halt them through direct action. We are familiar with participatory environmental monitoring efforts like the Audubon Society's Christmas Bird Count that mobilize thousands of volunteers to collect environmental data.⁶⁴ We are also familiar with transnational teams monitoring elections around the world. Citizen plane spotters identified the



secret CIA airplanes that carried captives to rendition and torture centers. Less familiar are a number of “citizen weapon inspection teams” that have attempted to investigate nuclear weapons sites from Bangor, Maine to Kleine Brogel in Belgium – sometimes being halted when they tried to cross national borders.⁶⁵ Similar local and transnational teams can monitor and expose ghg pollution as a violation of the atmospheric public trust. If they are arrested for trespass while investigating, it is ipso facto civil disobedience in defense of the public trust. Since they are attempting to exercise functions that are the duty of governments, their action is ipso facto part of a law-enforcing insurgency. Yet their actions are simply an attempt to protect communities and humanity against destruction of the basis of life.

Forcing governments and other actors to mend their ways will take global action on a large scale. Fifteen million people around the world joined a day of protest against the US attack on Iraq, but the attack went forward anyway. Ultimately a climate insurgency will require perhaps ten or twenty times that many participants worldwide. For that reason, its actions will need to be conducted in a way that can win and maintain wide public support over the long haul. It may need to fill the jails and make societies ungovernable through sustained disruption, but it will need to do so through nonviolent action that is increasingly perceived by the public as embodying its own deepest needs and interests.

Such a nonviolent insurgency will need to isolate and overcome specific climate-threatening institutions and practices. It will need to undermine their power by utilizing their dependence on their “pillars of support” -- ranging from universities and municipalities that invest their money in fossil fuel corporations to the legal authorities that order the arrest of protestors blocking pipeline construction. It will need to draw together and coordinate multiple constituencies across boundaries of nations, cultures, and beliefs. It will need to start by forcing incremental changes, but keep expanding the process, consolidating and broadening the changes and rallying wider support. Ultimately it will need to change the dynamics both of individual nations and of the world order.

NON-INSURGENT ALLIES

Many individuals and institutions may oppose climate change but decline to join a climate insurgency, especially at first. Some may reject its means or ends; others may agree with it but choose instead to work “within the system.” Both can nonetheless be crucial allies for a climate insurgency and play a critical role in protecting both the atmosphere and the movement. A climate insurgency needs to make synergistic coordination with non-insurgent allies a strategic objective.

“Secondary institutions” like schools, universities, religious congregations, unions, parent groups, municipal governments, neighborhoods, and workplaces can be crucial venues for such alliances. The campaign for divestment from fossil fuel companies is an example of how people can organize for climate protection within their institutions without having to themselves take an insurgent stand. Such action nonetheless undermines the legitimacy of climate destruction and those who support and permit it. It thereby lays the groundwork for the sudden crystallization of a radically new consensus for climate protection.

Those who work directly to make their own communities and institutions climate safe are also important allies. They show at a grassroots level that climate-protecting change, far from being something threatening, can contribute here and now to a better life. And they provide experiments in what will make ghg reduction really work for ordinary people.⁶⁶

An insurgent movement can also find *de facto* allies within national political arenas and even within governments. As people react to the enormity of climate change — and to the moral challenge emanating from insurgents’ acts of conscience — some individuals in all walks of life and social positions will grasp the necessity of countering it. The insurgency needs to recognize the importance of their efforts. That does not mean it needs to compromise with halfway measures that do not solve the problem. Indeed, it can best support their work by holding up the standard of what is truly necessary, even while encouraging those who are taking lesser measures.⁶⁷

WORLD ORDER DYNAMICS

A core strategic objective for climate protection should be to foment a competition among countries and corporations to radically reduce their ghg emissions. The movement against nuclear weapons and testing provides a significant parallel. The “peace race” is described at length in Lawrence Wittner’s magisterial three-volume history *The Struggle Against the Bomb*. According to Wittner, “Most government officials — and particularly those of the major powers — had no intention of adopting nuclear arms control and disarmament policies. Instead, they grudgingly accepted such policies thanks to the emergence of popular pressure.” Confronted by “a vast wave of popular resistance” they concluded, reluctantly, that “compromise had become the price of political survival.” Consequently “they began to adapt their rhetoric and policies to the movement’s program.”

The “ban the bomb” movement demanded more of cold war rivals than lip service or courtship. It demanded -- from both sides -- unilateral initiatives for peace, an end to nuclear testing, a halt to the arms buildup, and binding disarmament agreements. As Wittner massively documents, the international movement and world



public opinion forced rival nations and blocs to accept the nuclear test ban treaty, détente, arms control, and the unacceptability of using nuclear weapons.

Indeed, the anti-nuclear movement created a bidding war among the world's leading powers. For example, as antinuclear demonstrations swelled in America and Europe in the early 1980s, arch-Cold Warrior President Ronald Reagan told his astonished secretary of state, "If things get hotter and hotter and arms control remains an issue, maybe I should go see [Soviet leader] Andropov and propose eliminating all nuclear weapons." The US thereupon agreed to forego deployment of medium-range missiles in Western Europe if Russia would remove its medium-range missiles from Eastern Europe.

When Gorbachev came to power he met with world peace movement leaders and unexpectedly agreed to support the peace movement's proposal for a nuclear freeze. The US thereupon cut back on its proposed MX missiles from 200 to 50; abandoned plans to deploy the neutron bomb in Western Europe; and accepted the limits of the unratified SALT II arms control treaty. Ultimately the superpowers negotiated the Strategic Arms Reduction Treaty (START), which resulted in the removal of about 80 percent of all existing strategic weapons. While these results were not fully adequate to protect the world from nuclear holocaust, they illustrate the dynamics that an independent global movement can use to force governments to move toward the long-term common interests of humanity.

The international climate protection movement seemed to be creating momentum for a similar competition among nations to cut ghg emissions. A dramatic example was the last-minute reversal, under tremendous pressure from countries and people around the world, of US opposition to the "Bali roadmap" for reaching a global agreement. But at Copenhagen the world's two largest carbon emitters, the US and China, joined hands to say no to the global clamor for a climate agreement, and to take climate negotiations out of the UN venue where global pressure could be directly applied.

With the downgrading of the UN climate negotiating process there are now few venues where such global pressure can be applied. A leaf might be taken here from the annual and biennial International AIDS Conferences, which bring thousands of scientists, public health officials, healthcare providers, advocates, affected communities, and people with AIDS together in cities around the world. In addition to releasing new scientific information and policy proposals, the highly publicized conferences set goals, targets, and standards for national AIDS policies, provide independent evaluations, shame violators, and lend international support for activists. An international climate conference modeled on the International AIDS Conference could be a key way to reestablish the bidding war among climate players.⁶⁸

A related strategic objective for a climate insurgency is the construction of a "coalition of the willing" — an alliance of countries that are prepared to take effective climate action themselves and pressure others to do the same. Such coalitions have been effective in the past, for example the alliance of hundreds of NGOs and many governments that in 2002 created the International Criminal Court. Such a coalition was clearly visible at Copenhagen, led by the G-77 of developing nations, NGOs, and social movements from around the world, with ambiguous support from the EU. A global insurgency and its allies can pressure countries to participate in such a climate protection coalition. The enforcement of public trust duties might serve as a guiding principle for such a coalition. The UN General Assembly might serve as a possible venue for endorsing the public trust framework. Ultimately countries which continue to commit waste against the global public trust can be made the target of nonviolent sanctions, implemented by willing countries and by the insurgency itself.

The goal of this process should be not just changes in national policies, but global agreements embodying the principle of protecting the global commons and the policies necessary to realize it. Unlike past climate negotiations, however, such agreements will embody changes that already have been fought for, won public support, and been at least partially realized at a national level. They will embody a de-facto transformation of the world order to recognize and embody the overriding authority of common human preservation.

Chapter 7: Overcoming the obstacles to climate protection

The global climate protection movement has initiated many of the elements necessary to overcome the obstacles to climate safety we identified in chapter 1. Others have been suggested in the preceding chapters. Now we will look at how they might work together as a strategy.

OVERCOMING THE WORLD ORDER OBSTACLES

Fossil fuel producing industry The climate protection movement has begun to take on the fossil fuel industry. It has campaigned to shut down coal plants; opposed fossil fuel subsidies; blockaded fracking, tar sands, and off-shore drilling sites; and organized a fossil fuel divestment campaign to stigmatize fossil fuel companies and those who invest in them.

There are several additional steps that will be crucial. First, we need the public trust framework or an equivalent to provide legal grounds to challenge the right of the fossil fuel companies to lay waste to the public trust.



Second, we need concrete plans for a just transition for those who are directly affected by the rapid contraction of the fossil fuel industry. Third, we need a strategy for energy alternatives to counter dependence on fossil fuels. This involves short-term rapid replacement like that already going on in Germany. And it requires national climate action plans like those described in “Making a country climate-safe” above that shut down fossil fuel production and use while directing massive resources into replacing them.

Network of support for fossil fuels There are a variety of ways in which the “pillars of support” for the fossil fuel industry can be undermined. The 350.org divestment campaign uses a classic tactic to force universities, governments, religious organizations, and civil society groups to face up to their own contribution to global climate destruction and begin dissociating themselves from it. Organizations like Ceres and the Global Reporting Initiative establish standards for progressive greenhouse gas reduction which the movement and allies can demand individual corporations must meet. Companies that talk the climate protection talk but don’t walk the walk must be pressured to go beyond a public relations response. Pro-fossil fuel corporations and business organizations like the US Chamber of Commerce must be pressured to break away from fossil fuel industry hegemony and act on their own interest in reversing climate catastrophe.

Some unions are deeply dependent on fossil fuels and in the US they have exercised hegemony over the labor movement as a whole. But both the immediate interests of most unions and the general interest of the working class as a whole lies with climate protection. Ending labor’s support for the fossil fuel industry will withdraw a crucial pillar of political support. A program like that laid out in Chapter 4, providing a just transition to protect fossil fuel producing and using workers, a Nordic-style safety net, a massive expansion of climate-protecting jobs, and a full-employment economy, can be the basis for union and working class support for climate protection.

Neoliberalism Neoliberal ideology can be undermined by making clear its role in creating and perpetuating climate destruction. If global warming is, as Lord Stern put it, the greatest market failure in world history, then neoliberalism’s promotion of unregulated markets must hold much of the blame. Neoliberalism has promoted the proliferation of ghg-promoting industries and carbon-intensive consumption around the world on a historic scale. Most important, it forms a barrier to effective climate action in the present and future. The tenets of neoliberalism must be systematically transgressed to protect our species’ future.

Neoliberalism has many other destructive consequences besides destruction of the climate. It has aggravated the world’s growing inequality, deepening economic stagnation, environmental degradation, and democracy deficit. In the past few years, neoliberalism and its austerity economic policies have been the target of popular upheavals around the world. But these movements have had little ability to reshape the global economy because they are largely limited to individual countries and lack a strategy for transforming the world order in which neoliberalism is embedded. The alternative to neoliberalism proposed in Chapters 4 and 5 are oriented first of all to climate protection, but they can open a pathway toward a confluence of the climate movement and other opponents of neoliberalism.

Nation state system The key to challenging the system of absolute nation-state sovereignty is the emergence of a global climate protection movement independent of any nation or combination of nations. Such a movement does not need to abolish nations. But it does need to impose limits on the freedom of nations to destroy the common heritage of humanity. Its independence lets it define standards that all nations must follow, and its willingness to disobey established law through civil disobedience gives it a means to impose global human interests against the will of existing states. It can thereby initiate a competitive bidding war among nations, a race-to-the-top in which nations must take effective measures for climate protection or face delegitimization and disruption from both their own and the world’s people.

The public trust doctrine can be a crucial vehicle for challenging the right of nations to lay waste to the atmosphere. It establishes duties to a nation’s own people, to future generations, and to other governments and their peoples. It therefore contradicts the basic premises of absolute nation state sovereignty.

While the movement must remain independent of any combination of nations, it can have as a strategic objective the construction of a coalition of countries that are dedicated to climate protection both through their own actions and actions they impose on other countries. As they reduce their own ghg emissions, they can function as a shadow UN, imposing nonviolent sanctions on nations that continue to lay waste to the common heritage of humanity. Climate protection can thus open a pathway that can be extended to impose the global human interest in other areas as well.

OVERCOMING THE OBSTACLES TO CLIMATE PROTECTION IN HUMAN HEARTS AND MINDS

Denialism The chain that connects the release of greenhouse gasses to the warming of the atmosphere to a strange assortment of devastating and sometimes paradoxical effects — including both floods and droughts and both icemelt and blizzards — is not intuitively obvious. Nor is the driving of the whole process by political and economic forces and structures. Challenging the denial of climate change requires more than simply asserting the authority of climate scientists. It requires making these connections in people’s minds. The 350.org “connecting the dots” campaign with educational events at diverse sites affected by climate change — and at institutions perpetuating it — represented a good example of how to do so. Connecting the dots gets easier as



the science gets clearer and facts are directly experienced. This process is cumulative: many who didn't "get it" about Katrina got it after Sandy.

There are several grounds for encouraging people to move beyond climate denialism: That climate change denial is a deliberate strategy of manipulation by the fossil fuel companies and their allies to prevent us from protecting ourselves against their depredations. That denying the problem prevents us from taking measures to address it. And that it leaves us in perpetual fear, not only of climate change but of having our climate-change-denying worldview collapse in the face of reality. Facing up to climate change, recognizing it and acting on that recognition, will feel better in the end than living a life of denial.

Incrementalism As Bill McKibben has pointed out, we are used to dealing with a political system based on gradualism and negotiations to reach compromise with opponents. But the laws of physics don't negotiate. Climate change will continue on its devastating course until ghg emissions are sharply reduced. "Compromise" between the sharp reductions in ghg emissions that are necessary and continuation of the status quo will lead only to catastrophe.

Twenty-five years ago a gradualist approach might have had some credibility. But having frittered away a quarter of a century, we are like people racing toward a cliff whose only option for survival is to slam on the brakes whatever the risks.

Economic consequences of climate protection The climate protection movement has tended to answer concerns about negative economic effects of climate protection with the general argument that "clean energy" produces more jobs than fossil fuels. While the evidence for this position is strong, it often fails to allay the fears.

Overcoming these fears requires action on several levels. First, climate protection advocates must also become advocates for a "just transition" for those who may be negatively affected by the policies they advocate. Instead of simply saying there will be more jobs, we must support specific plans to provide for the livelihoods and wellbeing of those in the fossil fuel producing and dependent industries who our policies may put at risk.

Second, we need to incorporate concrete plans for job creation in our short-term work. Energy policies in Federal, state, and municipal governments and civil society need to be jobs programs as well.

Third, our plans for conversion to a climate-safe economy must include the kinds of plans for full employment, rapid training, and a Nordic-style safety net described above in chapter 4. To win wide public support, climate protection must create a better life for ordinary people at the same time it is protecting the planet.

Let another country pay Many of the proposals we have made in this study are designed to transform the dynamic that tempts each country to offload the costs of climate protection onto others. The crucial starting point is a global movement independent of any nation or alliance of nations. Such a movement can uphold consistent standards and make consistent demands on every nation. By participating in it you are pressuring every other government as well as your own.

The public trust principle also helps undermine the impulse to "let another country pay." Each government has an obligation to its own people to prevent waste to the atmosphere within its sphere of control. But it has an obligation to its people to prevent such waste by other governments and private parties as well. And each government, as co-trustee, has an obligation to the people of every other country as well. So the question is changed from the cost-benefit equation for each country to what each country must do to meet the obligation it owes to both its own people and the people of the rest of the world.

The Greenhouse Development Rights Framework, when combined with the public trust approach, provides another part of the solution to the "let other countries pay" problem. Using the principles that would apply in a public trust law case, it lays out the share of the remedy for waste that each country is legally responsible for. It apportions that cost according to widely accepted principles of justice, rather than through the jostle of international power politics.

Finally, the proposed "global Keynesian" regime of international economic cooperation is designed to reduce "beggar your neighbor" competition and increase win-win mutual benefit in the global economy. By creating adequate global demand (especially for climate protecting goods and services) it reduces the need for countries to compete by imposing austerity on their own people or other countries. It thereby reduces the saliency of economic rivalry and gives countries an interest in each others' economic wellbeing. At the same time it provides all countries the opportunity to benefit economically from the transition to a climate-safe economy.

Legitimacy of the status quo A law-enforcing constitutional insurgency is designed to undermine acceptance of illegitimate authority. It focuses attention on the failure of the current authorities to obey the law and fulfill their duties. In the case of climate protection, the duties of governments to protect the public trust — and their failure to do so — is the basis for challenging the authority of those who are destroying our world.

Fear of social movements The climate protection movement has consistently followed the path of nonviolence. This maximizes its ability to appeal to a wider public while minimizing fears of disruption.

One of the advantages of a nonviolent movement is that it reduces the physical threat of disruption to the wider public and those who think of themselves as bystanders, while increasing the political and emotional pressure for people to take a stand. It minimizes the ability of the authorities to portray protesters as a violent or terrorist threat. Conversely, it means that when the authorities do turn to repressive violence, they are likely to



undermine their own legitimacy with their own population — to paint their own portrait as threatening, violent disruptors. It was the nonviolence of civil rights protestors that made Bull Connor into an international symbol of racist oppression.

Defining a movement as a law-enforcing insurgency also provides a vehicle for allaying public fears of out-of-control disruption. It defines the objectives of the movement as in accord with the basic principles of democracy and constitutionalism, even while making a forthright challenge to governments that have strayed from these principles. It also embodies a promise that the movement itself recognizes and is bound by fundamental principles of justice, democracy, and human rights and will avoid violating them in its own actions.

Individualism The climate protection movement can help counter fear of and opposition to collective action in several ways. First, it can make clear that no individual by themselves can protect themselves, their families, and whatever else they hold dear from the effects of climate change — self-protection is an illusion. Second, the movement needs to maintain a quality of welcoming friendliness and respect for individual freedom and difference that reduces the threat felt by people who are not natural “joiners.” Third, it needs to demonstrate efficacy, even if at first only in small ways. It needs to manifest enough self-discipline to belie the idea that movements represent a kind of disorder than can never realize anything worthwhile. Finally, it needs to provide short-term benefits that make life better for its participants. These may be as simple as a friendly social atmosphere, informal transportation or childcare, entertainment, opportunities to utilize and expand personal capacities, good food and good fellowship. We need to demonstrate that being in a movement means a better life.

Hopelessness It is easy to despair that there is anything we can do about climate change. The problem is so devastating and the obstacles to surmounting it seem so insurmountable. Even many of us who are devoting our lives to climate protection feel a deep despair about forestalling climate catastrophe. Our efforts seem too little and too late.

An effective climate movement must start from a recognition, rather than a denial, of the realities that generate such despair. At the same time it proposes fellowship in action rather than moping in isolation as the best antidote to such despair. By giving people a chance to participate in meaningful action it facilitates an alternative attitude. The strategies laid out in this study, while they by no means provide a guaranteed path to climate safety, do challenge the view that climate protection is no longer worth pursuing. There is indeed much of value that it is already too late to save. But there is too much left worth saving to make the struggle for climate protection futile or irrational.



Conclusion

The starting point for climate protection is the recognition that climate change poses an existential threat to our species, to every individual, and to all that any of us hold dear. Climate protection is a universal existential necessity. But it is blocked by the way we organize our life on earth — by our world order. Conventional strategies based on the institutions of the existing world order have failed for quarter of a century.

In response, an independent global climate movement has arisen. It pursues the objectives and presses the demands of human survival without subservience to the interests of any one nation or coalition of nations. It is based on grassroots self-organization around the world. When conventional approaches fail it is prepared to use mass civil disobedience.

The public trust doctrine can provide a strong legal underpinning for this movement. It maintains that the atmosphere is the common property of present and future generations. All governments have the highest level of duty to protect it as a public trust and prevent its being wasted either by other governments or by third parties. The public trust doctrine, combined with the Greenhouse Development Rights Framework, provides a way to clearly define the just duties of each country. The climate protection movement can validly argue that governments are in violation of this duty and that citizens have the right and responsibility to enforce the protection of the atmosphere against climate destruction. Civil disobedience to protect the planet against global warming is an act of law enforcement against governments that are complicit with wasting of the atmosphere.

The effort to enforce the law against unlawful governments by means of nonviolent civil disobedience constitutes a global law-enforcing insurgency. It challenges the legitimacy of all governments on the basis of their failure to meet their highest duty, to protect the public trust. And it refutes the claims of polluters that their legal property rights permit them to go on destroying the earth's climate.

Such insurgent actions can be mutually supportive with other forms of action. They can stimulate those who choose to work within established channels like electoral politics and lobbying to recognize what is necessary for genuine climate protection even while they fight for measures that go only a small way toward solving the problem. They can encourage people who are acting here and now in civil society to convert their own lives and communities to a climate-safe basis. These "inside" and "outside" forces can be linked by coordinating networks that make their efforts synergistic and focus their power on institutions that need to be changed.

As nations are forced to recognize and act on their public trust duties, they will require climate action plans for the transformations they must realize. These will require a wide array of techniques for change, including market-based incentives, decentralized civil society initiatives, and government planning, investment, and regulation. They will also need broader changes in employment, social safety net, and other policies. Such changes will require powerful government agencies, adapted to national circumstances, to implement and oversee them. Such government authority in turn will require effective vehicles of legal, institutional, and popular power to ensure these agencies fulfill their mission while remaining accountable to democratic institutions and the people.

While each nation must meet its own public trust responsibilities, protection of the atmosphere is inherently global. Each nation, in order to meet its own public trust responsibilities to its own people, must also ensure that all other nations, as co-trustees, also halt waste to the atmosphere. The global climate protection movement provides a vehicle by which the people of the world can insist that not only their own nation but all nations meet their obligations.

These changes do not require the abolition of nation states or capitalism, however desirable or undesirable that might be. But they do require radical change in their current form. They require significant limits on the absolute freedom of states to do whatever they wish. They require significant limits on the property rights of economic actors. Ultimately these changes will need to be embodied in binding agreements expressing public trust principles. They will require pan-human institutions that can impose common human interests and necessities on all parties. To realize and protect these changes, they require a continuing organization and mobilization of global people power. Taken together, these changes embody a necessary transformation of the world order.



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2 Elizabeth Kolbert, "The Catastrophist," New Yorker, June 29, 2009.

<http://thingsbreak.files.wordpress.com/2009/06/hansennewyorker.pdf>

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This approach is problematic for several reasons. Whether the abolition of capitalism would be a good or a bad thing, it should not be seen as a necessary or sufficient condition for climate protection. Rapid and effective climate protection measures can be taken in capitalist societies, for example the transformation of much of Germany's electrical power system to renewable sources. Historically capitalism has been able to live within limits, for example the abolition of slavery, rule by democratic governments, trade unionism, and the welfare state. Neoliberal ideology notwithstanding, restriction of external costs to prevent market failures is not incompatible with capitalism in theory or in practice. The competition of states in a system based on nation state sovereignty is a crucial cause of climate change that cannot be reduced to capitalism per se. Nor should it be assumed that replacing capitalist states with socialist ones will automatically fix climate change; socialist states in practice have engaged in severe environmental destruction and sovereign socialist states would still have incentives to continue ghg emissions. Even the most optimistic timeframe for the abolition of capitalism will leave a world devastated by climate change. While putting limits on capitalist dynamics is clearly essential for climate protection, maintaining that capitalism must be abolished before effective climate protection can be implemented is not only false but also discourages effective action to protect the climate before it is destroyed entirely.

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14 "The Headwaters of the Public Trust," 19 Environmental Law 425 (1989)

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16 Weston and Bollier, *ibid* p. 239.

17 United Nations Environment Program, Division of Environmental Law and Conventions, "IEG of the Global Commons: Background,"

<http://www.unep.org/delc/GlobalCommons/tabid/54404/Default.aspx>

18 <http://www.yesmagazine.org/planet/why-im-suing-the-federal-government>

19 The Atmospheric Trust Litigation Project is coordinated by Our Children's Trust <http://www.ourchildrenstrust.org>

20 Wood, "Atmospheric Trust Litigation," 153.

21 Amended complaint, http://www.eenews.net/assets/2012/06/29/document_pm_02.pdf

22 Weston and Bollier, 242.

23 Jeremy Hsieh, "Alaska's High Court First Supreme Court In The Nation To Hear Climate Change Case," Alaska Public Media, October 4, 2013.

<http://www.alaskapublic.org/2013/10/04/alaskas-high-court-first-supreme-court-in-the-nation-to-hear-climate-change-case/>

24 Wood, "Atmospheric Trust Litigation," op cit. For more on the concept of the atmospheric public trust, see Mary Christina Wood's just-published book Nature's Trust: Environmental Law for a New Ecological Age (Cambridge: Cambridge University Press, 2013).

25 Wood, "Atmospheric Trust Litigation" 106.

26 Wood, *ibid*, 109.

27 Wood, *ibid*, 110.

28 Wood, *ibid*, 124-5.

29 Wood, *ibid*, 126.

30 Wood, *ibid*, 132.

31 James Hansen et al, "The Case for Young People and Nature: The Path to a Healthy, Natural, Prosperous Future," 12, available at



http://www.columbia.edu/~jeh1/mailings/2011/20110505_CaseForYoungPeople.pdf

32 Wood, op cit, 135ff.

33 Paul Baer, Tom Athanasiou, Sivan Kartham and Eric Kemp-Benedictm Greenhouse Development Rights Framework, (Berlin: 2008)

<http://www.ecoequity.org/docs/TheGDRsFramework.pdf>

34 Wood, "Atmospheric Trust Litigation," 142-5.

35 Wood, op cit, 147-8.

36 Lawrence Hurley, "The mother behind kids' long-shot legal crusade," Greenwire, December 19, 2012. <http://www.eenews.net/stories/1059974030>

37 Wood, op cit, 153.

38 Wood, op cit, 118-19.

39 Wood, op cit, 142.

40 Gandhi's celebrated salt march can be seen as a constitutional insurgency against abuse of a public trust — access to the resources of the sea. The British colonial government forbade Indians from harvesting salt from the sea, established a salt monopoly, and imposed a heavy tax a natural resource had imposed a heavy tax on its production and sale. In 1930, Gandhi led a march to the sea to harvest salt. Millions of Indians engaged in civil disobedience by harvesting salt in violation of British law; 80,000 of them were jailed. The campaign marked a turning point in the campaign for Indian independence.

41 Wen Stephenson, "The New Climate Radicals," The Nation, August 5-12, 2013. <http://www.thenation.com/article/175316/new-climate-radicals?page=full#axzz2cimwsrRq>

42 James Hansen et al, op cit, 12.

43 For a review of such studies see Laurence L. Delina and Mark Diesendorf, "Is wartime mobilization a suitable policy model for rapid national climate mitigation?" Energy Policy, July 2013, section 2. Available at <http://www.sciencedirect.com/science/article/pii/S0301421513002103> See also Robert Pollin, Heidi Garrett-Peltier, and James Heintz, Green Growth: A Program for Controlling Climate Change and Expanding U.S. Job Opportunities (Washington, DC: Center for American Progress, forthcoming).

44 Ibid and Laurence L. Delina and Mark Diesendorf, "Governing Rapid Climate Change," January, 2013. Available at http://tokyo2013.earthsystemgovernance.org/wp-content/uploads/2013/01/0134-DELINA_DIESENDORF.pdf

45 Unless otherwise noted, this discussion is based on Delina and Diesendorf "Is wartime mobilization" Section 3.

46 In many countries indirect taxes were levied on consumer goods that competed with military production for resources.

47 This discussion is based on Delina and Diesendorf, "Is wartime mobilization" Section 3 and additional sources as noted.

48 Private investment in fossil fuel reducing activities has not been forthcoming even in many cases where such investments would have paid for themselves or even made a profit. A 2007 study by the McKinsey consulting firm found that the U.S. could rapidly cut 28 percent of its greenhouse gasses at fairly modest cost and with only small technological innovations. According to director of the study Jack Stephenson, "These types of savings have been around for 20 years." But, according to another research team member, "There is a lot of inertia, and a lot of barriers." To give but one example, if tenants pay for their heat, landlords have no incentive to buy any but the cheapest, least energy efficient furnaces. Matthew L. Wald, "Study Details How U.S. Could Cut 28% of Greenhouse Gases," New York Times, November 30, 2007.

http://www.nytimes.com/2007/11/30/business/30green.html?_r=3&oref=slogin& These findings raise doubts that policies that rely on charges for carbon emissions will in fact promote massive investment in climate protecting activities.

49 <http://www.bls.gov/news.release/pdf/empst.pdf> The labor force participation rate in the US is below 64%, indicating a vast further labor reserve that could be tapped given conditions of continuing full employment.

50 Massive job creation for climate protection need not wait for such retraining, however. An emergency climate protection program will require a wide range of activities drawing on diverse skills from planting trees to developing new energy-conserving software to installing solar panels. Climate protection can learn a lesson from the New Deal's Works Progress Administration (WPA), which was able to rapidly employ millions and substantially reduced unemployment because of its emphasis on putting people to work doing things that utilized their existing skills.

51 For the "Nordic model," see Labor Network for Sustainability, "Labor, Sustainability, and Justice," August 17, 2011, "The Nordic Model." Available at:

<http://www.labor4sustainability.org/wp-content/uploads/2011/09/labor-sustainability-and-justice.pdf>

52 Mark Drajem, "Sierra Club Says 142 Coal-Fired Plants Shut During Drive," Bloomberg, March 1, 2013.

<http://www.bloomberg.com/news/2013-03-01/sierra-club-says-142-u-s-coal-fired-plants-during-drive.html>

53 Osha Gray Davidson, "Germany Has Built Clean Energy Economy That U.S. Rejected 30 Years Ago," Inside Climate News, November 13, 2012.

<http://insideclimatenews.org/news/20121113/germany-energielwende-clean-energy-economy-renewables-solar-wind-biomass-nuclear-renewable-energy-transformation?page=2>

54 Katie Allen, "ILO report warns unemployment 'a major global challenge' for years," The Guardian, June 3, 2013.

<http://www.guardian.co.uk/business/2013/jun/03/ilo-report-unemployment-global-challenge>

55 The Green Investment Report, World Economic Forum, 2013.

<http://reports.weforum.org/green-investing-2013/view/green-investment-current-flows-and-future-needs/> The study was oriented toward expanding private sector investment.

56 The Green Investment Report.

57 See Brendan Smith, Tim Costello, and Jeremy Brecher "Green Paper Gold," Foreign Policy in Focus, December 9, 2008 http://fpif.org/green_paper_gold/ and Jeremy Brecher, "How to Pay for a Global Climate Deal," Inside Climate News, March 20, 2009 <http://insideclimatenews.org/blog/523>.

58 "IMF head worried about lack of fiscal stimulus," Reuters, December 22, 2008. <http://uk.reuters.com/article/2008/12/22/business-us-financial-imf-stimulus-idUKTRE4BL3WN20081222>

59 Jeremy Brecher, "How to Pay for a Climate Deal."

60 Former IMF chief economist Simon Johnson explained the proposal thus: "The principle behind it is that everyone would get bonus dollars. The objective is to create a windfall of cash." Edmund Conway, "IMF poised to print billions of dollars in 'global quantitative easing,'" The Telegraph, March 13, 2009

<http://www.telegraph.co.uk/finance/recession/4986287/IMF-poised-to-print-billions-of-dollars-in-global-quantitative-easing.html>

As in a stimulus measure applied to a national economy (for example, America's Recovery and Reinvestment Act of 2009), if the windfall of cash is used to generate economic activity, then the value created by the new activity is what pays for the initial spending over time. The global recession has put millions of people and productive resources out of service. If they could be mobilized effectively, these vast unused productive capacities could help rebuild the global economy on a low-carbon basis.

Neoliberal opinion warned that paper gold would cause inflation, but in the midst of a historic crisis of deflation the IMF, the US, and the great majority of economists called for economic stimulus to counter deflation. Further, if SDRs are used to stimulate work and production through green public works using material and human resources that would otherwise lie idle, they will create new value at least as great as their own value, forestalling any inflationary effect. Even if there were an inflationary effect, it would affect all countries approximately equally, so that one of the main downsides of inflation — exchange rate volatility — would not occur.

It is easy to agree in principle that all countries should coordinate their economies to provide their fair share of the needed global economic stimulus, but in practice, they often pursue their own national interests — or those of their most politically powerful constituencies. That's why national stimulus spending carries a risk. The stimulus will create new spending at home — but in a globalized economy it may primarily benefit the economies of other nations that supply cheap exports and do not stimulate their own economies. As Tom Vosa, head of economic research at NAB Capital in London explained, "If one or two countries do fiscal packages, that's simply going to boost the export market for countries which haven't." Paper gold, however, overcomes this because it stimulates the global economy as a whole, and therefore benefits the global economy as a whole. John W. Schoen, "Fault lines open in talks over global crisis fixes," NBC News, March 13, 2009. <http://www.nbcnews.com/id/29666007/wid/22224893/page/2/#.Ukw4nOD3DF0>



61 "IMF proposes 'Green Fund' for Climate Change Financing," IMF Survey online, January 30, 2010. <http://www.imf.org/external/pubs/ft/survey/so/2010/NEW013010A.htm>

See also Soren Ambrose and Bhumika Muchhala, "Fruits of the Crisis: Leveraging the Financial & Economic Crisis of 2008-2009 to Secure New Resources for Development and Reform the Global Reserve System," ActionAid International and Third World Network.

62 Richard Falk, "The Accountability of Leaders: A Challenge to Governments and Civil Society," in Jeremy Brecher, Jill Cutler, and Brendan Smith, eds., *In the Name of Democracy* (New York: Metropolitan Books, 2005) p. 307.

63 Richard Falk, "Opening Speech at the World Tribunal on Iraq," June 24, 2005, http://www.wagingpeace.org/articles/2005/06/24_falk_opening-speech-wti.htm

64 See Weston and Bollier, p. 163-4, for additional examples.

65 See "Citizen Weapons Inspections," Free Library. <http://www.thefreelibrary.com/CITIZENS+WEAPONS+INSPECTIONS.-a053683039>

66 Such actions are the equivalent of what Gandhi called his "constructive program" for grassroots social development that was the complement to his campaigns of mass civil disobedience.

67 As Adam Michnik pointed out during the rise of Solidarity in Poland in his *Letters from Prison*, the best way for an independent movement to support reformers in government is to put pressure on the regime — thereby strengthening the hand of those who would make greater concessions to the insurgents. The fear that they may lose their legitimacy to insurgent challengers often provides authorities their greatest motivation for reform.

68 See Jeremy Brecher and Kevin Fisher, "What climate protection can learn from the AIDS movement," *Nature Climate Change*, September 25, 2013.

<http://www.nature.com/nclimate/journal/v3/n10/full/nclimate1986.html>