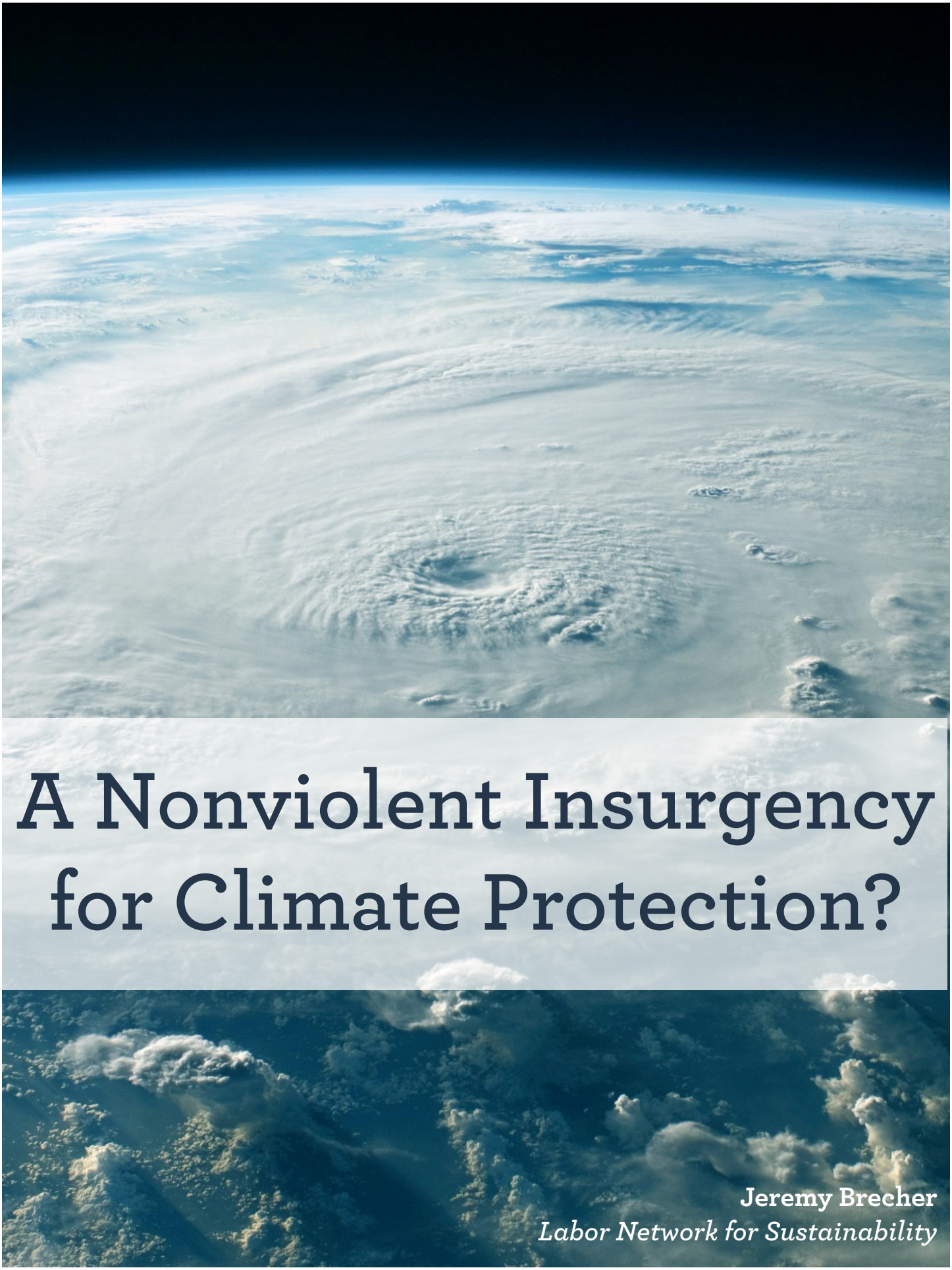

A Nonviolent Insurgency for Climate Protection?

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About

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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 even more alarming: Twenty-five years of human effort to protect the climate have failed even to slow the forces that are destroying it. 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. Negotiators had recently agreed — in 1987 — 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 ensures a global temperature increase of 2 degrees Celsius at least, guaranteeing that significant global warming is already irreversible. 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, insufficient analysis of the reasons for this failure, and little plausible strategy to overcome it.

The failures of the past quarter century are not what most climate protection advocates expected. Following 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 in 2009, it became evident that the entire process has been little more than a charade in which world leaders, governments, and businesses have pretended 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.

Even in the unlikely event that all nonbinding national pledges to cut emissions were fulfilled, according to a UN analysis, the result would still be a devastating 3-degree Celsius warming of the earth. 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.

Advocates of climate protection have been repeatedly defeated or forced to accept inadequate measures by opponents. These are generally collections of fossil fuel producers and users, politicians influenced by them, and right-wing ideologues who oppose climate protection on the

grounds that it requires public interference with the private economy. How 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?

An independent climate protection movement has emerged in response to the failures of the official climate protection process. 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, which CNN called "the most widespread day of political action in our planet's history." The movement 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 legal limits 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 reduce GHG emissions and establish climate-safe levels of carbon in the atmosphere has so far proven miniscule. So there is a search underway 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.

Here's another possible strategy for climate protection: a global nonviolent law-enforcing insurgency. No doubt it is far from perfect. But 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.

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."

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 would have to accept international controls. Corporations would have to forgo opportunities to make money at the expense of the environment. Military establishments would have to abandon programs that threaten the air and water. Beyond that, virtually everyone will have to adjust to substantial change — though not necessarily a deterioration — in lifestyle.

Governments, corporations, and other dominant institutions are not evolved to provide for either the long-term interests or 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 countries and companies. 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 such 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 influential *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.

Although great powers and corporations are the dominant factors in this process, many other people and institutions seek 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

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 that — whether they know it or not — cause climate destruction. Such structures include:

The 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, and 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.

The 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 outcomes 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 world's dominant economic institutions, including the major banks, corporations, the U.S. Treasury and other treasury departments, the IMF, the World Bank, and the WTO. It is used to argue against taxes, regulation, economic planning, 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.

The 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. It encourages competition among states for the accumulation of economic power. 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. Although the United States and its allies dominated this system during the 20th century, China and other rapidly developing nations are now challenging their hegemony. The result at present is a *de facto* alliance of the largest GHG emitters, led by the United States 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 the 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 by "statism, neoliberal capitalism, hegemonic geopolitics, presentism, militarism, and nationalism."

Obstacles in human hearts and minds

In addition to these institutional and 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 paying much more attention to other things. The promotion of denial by the fossil-fuel industry and its allies and supporters (including the political right wing in the United States) resembles the tobacco industry's long denial of the health effects of smoking. It is also an

almost ubiquitous practice, as almost all of us avert our eyes from something 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 "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.

Cost: 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."

Expectation that another country should 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 climate change — and vulnerability to it — 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. 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 those policies — and to punish those who attempt to interfere with them.

Fear of social movements: While some people are thrilled by popular upheavals, many others 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 unrest. Many people also observe that in the aftermath of social upheaval, ordinary people often have less freedom and endure worse economic conditions than they did before. They fear the consequences of social movements both for their personal wellbeing and for their society as a whole. The belief in individualism rather than collective action also forms a barrier to all kinds of social movements.

Given these challenges, 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.

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 flexible networks 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 from any nation-state and 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 these capacities 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 United States. 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. Ultimately, however, they conclude that such a challenge 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. Its aim may be to overthrow the existing government, but it may also aim to change it or simply to protect people against it. 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." 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 ordinary 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?

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 "pressure group" activity to become 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 that current officials violate the very laws that they themselves claim provide the justification for their authority. Such insurgents view those whom they are disobeying as merely persons claiming to represent legitimate authority — but who are themselves violating the law under what's known as "color of law," or the false pretense of authority. Their "civil disobedience" is actually obedience to law and a form of law enforcement.

Social movements that engage in civil disobedience often draw strength from the claim that their law breaking is not only moral but actually an effort to enforce fundamental legal and constitutional principles flouted by the authorities they are disobeying. 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 law breaking but as an effort to rectify governments and institutions that are themselves in violation of the law.

For the civil rights movement, the Constitution's guarantee of equal rights meant that sit-in protestors 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, national and international laws 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 agreements ratified by their own government. As Jonathan

Schell put it in his 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."

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. A constitutional insurgency — or what might be called a "law-enforcing insurgency" — is a social movement that rejects current constitutional doctrine, but "rather than repudiating the Constitution altogether, draws on it for inspiration and justification." Pope detailed how the American labor movement long insisted that the right to strike was protected by the 13th amendment to the Constitution, which forbade any form of "involuntary servitude." Injunctions to limit strikes were therefore unconstitutional. Although 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 framework 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 accepts the legitimacy of current legal structures on the other. The concept of constitutional insurgency provides the legal and theoretical underpinning for this middle way.

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 his 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 in practice was denying.

Why a global insurgency?

The world order that perpetuates climate destruction is global, but it is produced and reproduced in specific locations around the world. Global solutions must be implemented in these specific locations.

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 of 25 years ago, or the global Keynesian economic regulation of 50 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.

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. Recently, however, an ancient legal principle known in the United States 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. It was codified by the Roman Emperor Justinian 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." 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. 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." 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." 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 United States, Russia,

Brazil, New Zealand, and the United Kingdom. Concurrently, the Atmospheric Trust Litigation Project brought suits and petitions on behalf of young people in all 50 U.S. states and the federal government to require them to fulfill their obligation to protect the atmosphere as a common property. Speaking to one of the rallies, 16-year-old Alec Loorz, 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," he added. "We are standing up for our future."

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. 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 ask the courts to issue injunctions ordering federal and state governments to reduce carbon emissions to fulfill their duty to protect it. Similar suits are projected for countries around the world.

Although 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.

A trustee has "an active duty of vigilance to 'prevent decay or waste' to the asset," according to University of Oregon law professor Mary Christina Wood, whose new book *Nature's Trust: Environmental Law for a New Age* lays out the legal basis for the suits. "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."

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. Governments therefore have a legal duty toward their own citizens and toward other countries as well to protect the atmospheric asset. Both citizen beneficiaries and other sovereign states can bring legal action against those who are "committing waste to common property." The public trust doctrine thus establishes global obligations to protect the global commons, even in the absence of treaties or international climate law.

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? A remedy would have to address the primary questions on which international negotiations for climate protection have faltered: How much GHG emissions should be cut how quickly, and how the burden of protection shall be distributed.

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 6 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. 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:

- Global share of current carbon emissions: the United States and China are each responsible for about 20 percent of current GHG emissions.

- Historical share of emissions: the United States is responsible for about 30 percent of historical carbon emissions.

- Per capita emissions: the United States produces nearly 20 metric tons of carbon dioxide emissions for each American, compared to India's 1.16 for each Indian.

- Purpose of the emissions: first priority should be given to meeting basic human needs; then to creating new infrastructure for a low-carbon society; and last 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* (GDRF), 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.
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.

The courts need not tell the government how to realize its duty, but they can require it to present a plan demonstrating how it will do so. If the plan is not carried out, courts can themselves issue injunctions prohibiting specific wasting activities, such as issuing of permits for new coal-fired power plants or excessive air pollution quotas. Ultimately they 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.

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 U.S. 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. "It's Hail Mary pass litigation," according the Michael Gerrard, director of the Center for Climate Change Law at Columbia University law school.

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.

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 previously mentioned obstacles.

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 their common property. 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 Loorz said, "We will not only stand up in the courts. We will stand up in the streets as well."

Making a country climate-safe

The climate protection movement has had little trouble portraying the evils of climate change. But it has had far more difficulty providing a credible answer for how to make the transition to a climate-safe economy without mass unemployment and economic catastrophe. One thoughtful and well-known climate activist, when 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." Facile assurances that climate protection will produce more jobs than it destroys are not enough.

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 30 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, more 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 United States 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. 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 United States that have contributed large amounts of GHGs in the past.

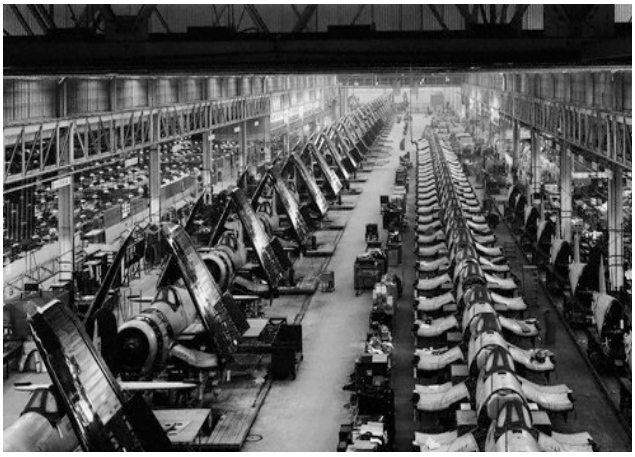
Studies show that such a reduction is technically feasible and suggest various pathways to achieve it. It can be accomplished based on commercially available technologies, but rapid expansion of research and markets will likely lead to very rapid improvement in technology along the way. Reduction can 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 renewable energy and demand reduction. (And 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. Fossil fuels can be phased out of electricity production — the largest single source of GHGs — by renewable energy sources, energy efficiency technologies, conservation measures, 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 and cooling. 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 economic mobilization for World War II is often used as a touchstone for the government-led approach — 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. Although Al Gore and others have cited World War II mobilization as a possible model for climate protection, there have been few in-depth presentations of how such an approach might work in practice. Fortunately, two recent papers by Laurence L. Delina and Mark Diesendorf examine World War II economic mobilization and suggest what lessons — positive and negative — can be drawn from it for rapid reduction of GHG emissions. They argue that climate protection may well require government-led mobilization on the scope and scale of World War II, 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 U.S. economic mobilization for World War II was truly impressive. U.S. 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 United States produced 300,000 planes, 100,000 ships, and 20 million rifles. Investment in research and development produced radically new technologies; the United States 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.

The huge and rapidly growing U.S. military expenditure was paid for primarily by taxes and borrowing. U.S. government tax collections grew from less than $9 billion in 1941 to $45 billion in 1945. 85 million Americans bought war bonds and similar securities worth $185 billion — more than $2 trillion in 2010 dollars.

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. The government provided training for millions of workers. The War Labor Board set wages and required employers to bargain collectively with their employees' unions. The government built housing and provided healthcare and childcare for war workers.

The U.S. government established the War Production Board, chaired by a "war czar," which, along with more than 160 other war agencies, took over the direction of much of the U.S. economy, functionally replacing much of the private market. The U.S. government directly controlled more than 40 percent 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. Although 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.

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. 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 United States will start such an effort, as it did the mobilization for World War II, with substantial but 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 the collection of damages 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" — take the settlements for the Exxon Valdez and BP oil spills, for example. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (or 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. So a labor reserve of more than 20 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. The government will have to take the leading role in the rapid expansion of education and training for the new workforce.

New labor policies will be needed 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 improved conditions of life for the population. As in World War II, for economic change to be generally accepted as fair will require an incomes policy. A Nordic-style welfare state system that combines full employment, a high level of income for the unemployed, and strong support for retraining and new jobs will be necessary to answer fears that change will lead to disaster for workers. 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 encourage cooperation.

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 implement community-based renewables, reduce energy use, mobilize funding, and promote new patterns of consumption on their own initiative. Perhaps most importantly, 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 U.S. government, for example, has reorganized the auto industry in a way that produces 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. In Germany, energy-pricing policies have led to massive expansion of renewables — 25 percent of Germany's electricity now comes from solar, wind, and biomass. 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 will also facilitate continuing course correction — until a safe GHG level is reached.

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 regime that generates massive unemployment of human and material resources as well as 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 neoliberal ideology blocks the mobilization of those resources for climate protection. 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 protection. 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 that a gain for one is perceived 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 public interest at the expense of 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 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 (GDRF), 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 from rich to 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 forgo 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 has reached $5 trillion.

Although estimates vary, a 2013 study sponsored by the World Economic Forum gives a rough idea of the scale needed for rapid climate change mitigation. It concludes that at least $700 billion needs to be invested annually beyond current levels "to limit the global average temperature increase to 2 degrees C above pre-industrial levels." So let us assume that at the least $700 billion — somewhere between one and two percent of global GDP —can be effectively invested yearly in climate protection worldwide.

The $700 billion 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.

As with funding for national programs, global funding can come from taxing, borrowing, recovery of damages, and the global equivalent of 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 populations' survival, and the neoliberal austerity policies that demand that social resources be left to languish if they cannot be used for debt repayment or private profit.

A tax on carbon emissions would provide the most obvious source of funds; it would provide an incentive to reduce GHGs at the same time that it helps 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 1 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 regulate 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, they 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." 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" that "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. For a brief period beginning in 2009, however, world economic leaders advocated a 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. 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 United States seemed to be warming to the idea. 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."

As paying for developing countries' climate protection costs became more obviously critical 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 $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." 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.

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.

Countries would apply to the trust fund for SDRs and other financing that could 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 would provide a vehicle for a countercyclical global macroeconomic policy. It would stimulate a carbon-reducing rather than carbon-expanding form of economic growth, mobilize underutilized human and material resources, and help address 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 wars and actual wars, perpetuating mass unemployment and the race to the bottom. A global climate protection fund can provide the growth point for broader post-neoliberal global economic cooperation and regulation. It can provide a framework for meeting human needs and wants while 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.

Movement enforcement of public trust duties

Today's climate protection movement, with its global organization and willingness to challenge established authorities, may already be on the way to becoming a global nonviolent insurgency. Although it has not yet explicitly defined its actions as law enforcement in protection of the public trust, that is in fact what the movement is doing.

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. Although no one should expect that courts will be ready to accept such arguments, they 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 Keystone XL pipeline or demands conversion to renewable energy, it can justify its actions 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 that would hear arguments 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 issue 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 20 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." 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." 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. Participatory environmental monitoring efforts like the Audubon Society's Christmas Bird Count mobilize thousands of volunteers to collect environmental data. Transnational teams monitor 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. 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 the 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 U.S. attack on Iraq, but the attack went forward anyway. Ultimately a climate insurgency will require perhaps 10 or 20 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 the public increasingly perceives 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 while 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 themselves taking 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.

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 come to realize 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.

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 reluctantly concluded 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. 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. 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 U.S. opposition to the "Bali roadmap" for reaching a global agreement. But at Copenhagen the world's two largest carbon emitters, the United States 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 effective. A lesson might be learned, however, 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 help reestablish the bidding war among climate players.

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. It cut across the North-South divide to advocate for the fair allocation of the costs of climate protection. 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 that continue to commit waste against the global public trust can be made the target of nonviolent sanctions, legitimated by at least some UN organs and 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 championed, 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.

It is easy to despair that we can do nothing 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, fellowship in action rather than moping in isolation is the best antidote to such despair. Participation in meaningful action 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.

For a longer, footnoted version of this report, see "Global Nonviolent Law-Enforcing Insurgency: A Plausible Strategy for Climate Protection?" on the Labor Network for Sustainability's website.